METHODS FOR TREATING EYE DISORDERS

RELATED APPLICATION

This application claims priority of U.S. Provisional Patent Applications Nos. 61/196995 filed Oct. 22, 2008 and 61/198931 filed Nov. 11, 2008 and of International Patent Application No.PCT/IL2009/000179 filed Feb. 15, 2009, all of which are hereby incorporated by reference herein in their entirety.

REFERENCE TO SEQUENCE LISTING

The sequences described in the specification (SEQ ID NOS:1-33,596) are being submitted with this application via the USPTO electronic filing system (EFS) in a text file titled, "188-PCT2.ST25.txt" created on October 20, 2009, file size 5952 KB, and are hereby incorporated by reference herein in their entirety.

FIELD OF THE INVENTION

The present invention relates to a non-invasive method of treating an eye disorder in a subject in need thereof comprising the step of topically administering to the surface of the eye of the subject a pharmaceutical composition comprising a therapeutic oligonucleotide directed to a target gene associated with loss of the retinal ganglion cell in the retina of the subject. Furthermore, the invention relates to non-invasive method of promoting retinal ganglion cell survival in subject suffering from an ocular disease, disorder or injury.

BACKGROUND OF THE INVENTION

Delivery of nucleic acid compounds to retinal tissue and in particular to retinal ganglion cells presents a big drug delivery challenge. Hitherto, eye drops have been considered to be useful primarily in the treatment of anterior segment disorders since it is has been shown that nucleic acids do not pass the cornea and insufficient drug concentrations reach the posterior ocular tissue (reviewed in del Amo and Urtti, 2008. Drug Discov Today 13(3/4):135-143; Fattal and Bochot, 2006. Adv Drug Del Rev 56:1203-1223).

A retinal ganglion cell (RGC) is a type of neuron located near the inner surface of the retina of the eye. Retinal ganglion cells receive visual information from photoreceptors and collectively transmit visual information from the retina to several regions in the brain.

Further, there remains need for non-invasive method for inhibiting loss of retinal ganglion cells in a subject in need thereof. Various ocular diseases and disorders are characterized by death of retinal ganglion cells (RGCs). Accordingly, there remains a need for a non-invasive method for inhibiting loss of retinal ganglion cells (RGCs) in subjects that are suffering from an ocular disease, an ocular disorder or an ocular injury or are at risk of developing an ocular disease, an ocular disorder, or an ocular injury characterized and/or mediates by degeneration or death of retinal ganglion cells (RGCs).

SUMMARY OF THE INVENTION

The present invention is directed to non-invasive methods of treating ocular diseases, disorders and injuries that are associated with degeneration or death of retinal ganglion cells (RGCs) and to compositions useful in the methods. The methods of the invention comprise topically administering to the surface of the eye of a subject a therapeutic oligonucleotide composition useful in promoting survival of retinal ganglion cells in a subject. Hitherto, oligonucleotides have been delivered to retinal ocular tissue by systemic delivery or intravitreal injection, methods associated with detrimental side effects and poor patient compliance, respectively. The present invention provides topical ophthalmic compositions comprising an oligonucleotide, and non-invasive methods of use thereof for down regulating expression of a target gene associated with loss of the retinal ganglion cell in the retina of a subject, for rescuing retinal ganglion cells from apoptosis and for treating eye disorders.

Accordingly, in one aspect the present invention provides a method of non-invasive delivery of an oligonucleotide to a retinal tissue in a subject suffering from an eye disorder, disease or injury comprising topically applying an ophthalmic composition comprising the oligonucleotide to the surface of the eye of the subject.

In another aspect the present invention provides a method of non-invasive delivery of an oligonucleotide to a retinal ganglion cell in a subject suffering from an eye disorder comprising topically applying an ophthalmic composition comprising the oligonucleotide to the surface of the eye of the subject.

In yet another aspect, the present invention provides a method of attenuating expression of a target gene associated with loss of a retinal ganglion cell in the retina in a subject suffering from an ocular disease, disorder or injury, which comprises topically (non-invasively) administering to the surface of the eye of the subject a pharmaceutical

composition comprising at least one oligonucleotide directed to the target mRNA product of the target gene, in an amount and over a period of time effective to attenuate expression of the gene in the retina of the subject.

In a further aspect, the present invention provides a method of treating a subject suffering from retinal ganglion cell loss or retinal ganglion cell damage and providing ocular neuroprotection to a subject suffering from or at risk of developing an eye disease, disorder or injury. The method comprises topically administering to the surface of the eye of the subject an ophthalmic pharmaceutical composition comprising at least one oligonucleotide directed to a target gene in the retina of the subject, in an amount and over a period of time effective to inhibit retinal ganglion cell loss or retinal ganglion cell damage in the subject.

In various embodiments the ophthalmic pharmaceutical composition is formulated as a cream, a foam, a paste, an ointment, an emulsion, a liquid solution including an eye drop, a gel, spray, a suspension, a microemulsion, microspheres, microcapsules, nanospheres, nanoparticles, lipid vesicles, liposomes, polymeric vesicles, a patch, or a contact lens. In some embodiments the pharmaceutical composition is formulated as an eye drop. In preferred embodiments the ophthalmic composition is administered to the eye, for example, by instillation of an eye drop or by administration of a mist.

In certain embodiments the at least one target ocular mRNA is selected from an mRNA polynucleotide set forth in any one of SEQ ID NOS:1-58. In certain embodiments the at least one target gene is selected from a gene transcribed into an mRNA polynucleotide set forth in any one of SEQ ID NOS:1-58.

In some embodiments the at least one oligonucleotide is selected from chemically modified siRNA, unmodified siRNA, antisense, ribozyme, miRNA and shRNA. In preferred embodiments the at least one oligonucleotide is a chemically modified siRNA. In some embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36, set forth in SEQ ID NOS:59-33,596.

In some embodiments the eye disorder, disease or injury is selected from glaucoma, dry eye, diabetic retinopathy (DR), diabetic macular edema (DME) or age related macular degeneration (AMD). In other embodiments the ocular disorder, disease or injury is optic neuritis, central retinal vein occlusion, brunch retinal vein occlusion (BRVO). In further

embodiments the eye disorder, disease or injury is retinitis pigmentosa (RP), ischemic optic neuropathy or optic nerve injury. In further embodiments ocular disorder, disease or injury is retinopathy of prematurity (ROP) retinal ganglion degeneration, macular degeneration, hereditary optic neuropathy, metabolic optic neuropathy, optic neuropathy due to a toxic agent or neuropathy caused by adverse drug reactions or vitamin deficiency. In yet another embodiment the disorder is vision loss associated with a tumor.

In various embodiments the at least one siRNA compound is delivered to the eye of a subject as a liquid solution, including an eye drop. In various embodiments the present invention provides a method for attenuating expression of a target ocular gene associated with loss of a retinal ganglion cell in a subject suffering from an ocular disease, disorder or injury, comprising topically applying to the surface of the eye of the subject an ophthalmic pharmaceutical composition formulated as an eye drop.

In various embodiments expression of a target ocular mRNA is attenuated in an ocular cells in the retina of a subject suffering from an eye disease, disorder, or injury. In various embodiments the ocular cell includes but is not limited to an acinar cell of the lacrimal gland, a ductal cell of the lacrimal gland, a retinal ganglion cell (RGC), a retinal pigment epithelial (RPE) cell, a choroidal cell, a corneal cell, a cell of the ciliary process or a cell of the trabecular meshwork or a combination thereof.

The present invention provides a method for inhibiting loss of a retinal ganglion cell in a subject, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA which down regulates expression of a target gene associated with loss of the retinal ganglion cell in the retina of the subject, thereby inhibiting loss of a retinal ganglion cell. In certain embodiments two or more target genes are down regulated by the method according to the invention. In certain embodiments attenuating expression of at least one target gene (ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject confers upon the eye neuroprotective properties. In various embodiments the at least one ocular target gene is selected from the list in Tables A1 to A4, set forth in SEQ ID NO:1-58.

In one embodiment the eye disorder is glaucoma. Thus the present invention provides a method of inhibiting loss of a retinal ganglion cell in a subject suffering from glaucoma comprising topically (non-invasively) applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one

siRNA which down regulates a target gene (target ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject, thereby inhibiting loss of a retinal ganglion cell in the subject's eye. In preferred embodiments the siRNA is chemically modified. In some embodiments the chemically modified siRNA attenuates expression of gene (target ocular mRNA) in the retina of the subject's eye. In other embodiments the chemically modified siRNA attenuates expression of target ocular mRNA in the optic nerve of the subject's eye. In certain embodiments attenuating expression of at least one target gene (ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject is effective to treat glaucoma. In certain embodiments the at least one target gene is selected from the list in Table A1 set forth in SEQ ID NO:1-35. In certain preferred embodiments the target gene is selected from CASP2 (SEQ ID NO:1-2), ASPP1 (SEQ ID NO:4), TP53BP2 (SEQ ID NO:6-7), BNIP3 (SEQ ID NO:12), RTP801L (SEQ ID NO:14), ACHE (SEQ ID NO:19-20), ADRB1 (SEQ ID NO:21) and CAPNS1 (SEQ ID NO:28-29). In various embodiments the gene is set forth in SEQ ID NOS:1-2. In some embodiments the siRNA sense and antisense strands are selected from pairs of oligonucleotide sequences set forth in SEQ ID NOS:8515-9516.

In another embodiment the eye disorder is dry-eye. Thus the present invention provides a method of inhibiting loss of a retinal ganglion cell in a subject suffering from dry-eye. The method comprises topically (non-invasively) administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA which down regulates a target gene (target ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject, thereby inhibiting loss of a retinal ganglion cell in the subject's eye. In preferred embodiments the siRNA is chemically modified. In certain embodiments attenuating expression of at least one target ocular mRNA is effective to treat dry-eye disorder. In certain embodiments attenuating expression of at least one target gene associated with loss of retinal ganglion cells is effective to reduce the symptoms of dry-eye. In certain embodiments the at least one target gene (ocular target mRNA) is expressed in retinal ganglion cell in the eye of the subject. In certain embodiments the at least one target gene (ocular target mRNA) is expressed in the lacrimal gland in the eye of the subject. In certain embodiments the at least one target gene is selected from Table A2 set forth in any one of SEQ ID NO: 5 (p53), SEQ ID NO:8 – 10 (LRDD), SEQ ID NO:26 – 27 (SHC1) and SEQ ID NO:30 – 44 (FAS and FAS ligand). In some embodiments the target gene is selected from FAS, FAS

ligand (FASL), p53, LRDD, PARP1, AIF (apoptosis inducing factor), NOS1, NOS2A, XIAP and SHC1-SHC. In certain preferred embodiments the target gene is set forth in any one of SEQ ID NO:36 - SEQ ID NO: 43 or SEQ ID NO:44. In some embodiments the siRNA sense and antisense strands are selected from pairs of oligonucleotide sequences set forth in SEQ ID NOS: 13,225-15,224.

In another embodiment the eye disorder is AMD, DR or DME. Thus, the present invention provides a method of inhibiting loss of a retinal ganglion cell in a subject suffering from AMD, DR or DME. The method comprises topically (non-invasively) administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA which down regulates a target gene (target ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject, thereby inhibiting loss of a retinal ganglion cell in the subject's eye. In preferred embodiments the siRNA is chemically modified. In certain embodiments attenuating expression of at least one target gene associated with loss of retinal ganglion cells is effective to treat AMD, DR or DME. In certain embodiments attenuating expression of at least one target gene associated with loss of retinal ganglion cells is effective to reduce the symptoms of AMD, DR or DME. In certain embodiments the administration of at least one siRNA attenuates expression of at least one target gene (ocular mRNA) in a retinal ganglion cell in the subject's eye. In certain embodiments the administration of at least one siRNA attenuates expression of at least one target gene (target ocular mRNA) in the choroid in the subject's eye. In certain embodiments the at least one target gene is listed in Table A3 set forth in any one of SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53. In certain preferred embodiments the siRNA targets CTSD, RTP801 and BNIP3. In certain preferred embodiments the disorder is DR and the siRNA targets mRNA set forth in SEQ ID NOS:48-53. In some embodiments the siRNA sense and antisense strands are selected from any one of sequences set forth in SEQ ID NOS:24575-29594. In certain preferred embodiments the disorder is AMD and the siRNA targets gene set forth in SEQ ID NO:3 and the siRNA sense and antisense strands are selected from any one of sequences set forth in SEQ ID NOS:11285-12224. In some embodiments the siRNA sense and antisense strands are selected from pairs of oligonucleotide sequences set forth in SEQ ID NOS:24575-29594.

In a further embodiment the eye disorder is Retinitis pigmentosa (RP). Thus, the present invention provides a method of inhibiting loss of a retinal ganglion cell in a subject

suffering from RP. The method comprises topically (non-invasively) administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA which down regulates a target gene (target ocular mRNA) associated with loss of the retinal ganglion cell in the retina of the subject, thereby inhibiting loss of a retinal ganglion cell in the subject's eye. In preferred embodiments the siRNA is chemically modified. In certain embodiments attenuating expression of at least one target gene associated with loss of retinal ganglion cells is effective to RP. In certain embodiments attenuating expression of at least one target gene associated with loss of retinal ganglion cells is effective to reduce the symptoms of RP. In certain embodiments the at least one target ocular mRNA is product of a gene selected from a gene listed in Table A4 which is transcribed into mRNA set forth in any one of SEQ ID NOS: 3, 14, 26-35, 54-57. In some embodiments the target ocular mRNA is product of a gene selected from the group consisting of CASP1, CASP3, CASP12, RTP801, RTP801L, CAPNS1, PARP1, AIF, NOS1, NOS2, XIAP and SHC1-SHC. In certain preferred embodiments the siRNA targets mRNA set forth in SEQ ID NOS:56-57.

In another aspect the invention features a method of rescuing a retinal ganglion cell from apoptosis in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby rescuing retinal ganglion cell from apoptosis in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotides shown in tables B1-B36 and set forth in SEQ ID NOS:59-33,596.

In another aspect, the invention provides method for promoting survival of a retinal ganglion cell in a subject displaying signs or symptoms of an ocular neuropathy, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby promoting survival of a retinal ganglion cell in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In certain embodiments the signs or symptoms of an ocular neuropathy are mediated by apoptosis. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense

oligonucleotides are selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596.

In yet another aspect, the invention is directed to a method for preventing, treating or alleviating the effects of an ocular disease associated with death of a retinal ganglion cell in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby preventing, treating or alleviating the effects of an ocular disease associated with death of a retinal ganglion cell in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tales B1-B36, set forth in SEQ ID NOS:59-33,596.

Another aspect of the invention provides for a method for treating or preventing retinal ganglion cell death in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic pharmaceutical composition which comprises: (a) a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof, and thereby treating or preventing retinal ganglion cell death in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596.

In another aspect, the present invention is directed to a method preventing retinal ganglion cell death mediated by elevated intraocular pressure (IOP) in the eye of a subject, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby preventing retinal ganglion cell death in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In a particular embodiment according to this method the subject is afflicted with glaucoma. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are

selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596.

The present invention further provides a method of delaying, preventing or rescuing a retinal cell from death in a subject suffering from elevated IOP comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene associated with death of the RGC in the retina of the subject, thereby delaying, preventing or rescuing the retinal cell from injury or death and wherein intraocular pressure (IOP) remains substantially elevated. In preferred embodiments the at least one siRNA is a chemically modified. In a particular embodiment according to this method the subject is afflicted with glaucoma. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596.

The present invention further provides a method of treating a subject suffering from retinal ganglion cell loss or retinal ganglion cell damage, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby treating the subject or reducing retinal ganglion cell death in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596.

The present invention further provides a method for lowering retinal ganglion cell loss and providing ocular neuroprotection to a subject in need thereof, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby lowering retinal ganglion cell loss and providing ocular neuroprotection to the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36, set forth in SEQ ID NOS:59-33,596.

The present invention further provides a method for preventing visual field loss associated with loss of retinal ganglion cells in a subject, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby preventing visual field loss in the subject. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36, set forth in SEQ ID NOS:59-33,596.

In another aspect, the present invention provides an ophthalmic composition for non-invasive treatment of an ocular disease associated with loss of a retinal ganglion cell in a subject, comprising: (a) a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36 , set forth in SEQ ID NOS:59-33,596.

In yet another aspect, the present invention provides a topical ophthalmic pharmaceutical composition for non-invasive treatment of an ocular disease associated with pathological abnormalities/changes in the tissues of the visual system, comprising: (a) a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, wherein the target gene is set forth in any one of SEQ ID NO:1- 58, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof. In preferred embodiments the at least one siRNA is a chemically modified. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36, set forth in SEQ ID NOS:59-33,596.

According to another aspect, the present invention is directed to a topical ophthalmic pharmaceutical composition for use in treating a subject afflicted with ocular disease associated with death of retinal ganglion cells, which comprises: (a) a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject,

wherein the target gene is set forth in any one of SEQ ID NO:1- 58, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof. In preferred embodiments the at least one siRNA is a chemically modified. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36, set forth in SEQ ID NOS:59-33,596.

In various embodiments the ocular disease is selected from a group comprising glaucoma, dry eye, diabetic retinopathy (DR), diabetic macular edema (DME), age related macular degeneration (AMD), optic neuritis, central retinal vein occlusion, brunch retinal vein occlusion, ischemic optic neuropathy, optic nerve injury, retinopathy of prematurity (ROP) or retinitis pigmentosa (RP),retinal ganglion degeneration, macular degeneration, hereditary optic neuropathy, metabolic optic neuropathy, neuropathy due to a toxic agent or that caused by adverse drug reactions or vitamin deficiency; and the composition is formulated as a cream, a foam, a paste, an ointment, an emulsion, a liquid solution, an eye drop, a gel, spray, a suspension, a microemulsion, microspheres, microcapsules, nanospheres, nanoparticles, lipid vesicles, liposomes, polymeric vesicles, a patch, a biological insert. In a preferred embodiment the composition is formulated as an eye drop.

In another aspect the invention is directed to a packaged pharmaceutical preparation, comprising: (a) a pharmaceutical composition according to the invention in a container; and (b) instructions for using the composition to treat an ocular disease. In various embodiments the pharmaceutical composition according to present invention comprises a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject suffering from an ocular disease. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotides set forth in SEQ ID NOS:59-33,596. In one particular embodiment according to this aspect of the invention, the pharmaceutical composition is for non-invasive treatment of an ocular disease associated with loss of a retinal ganglion cell in a subject. In another particular embodiment according to this aspect the invention, the pharmaceutical composition is for non-invasive treatment of an ocular disease associated with pathological abnormalities/changes in the tissues of the visual system. In yet another particular embodiment according to this aspect the invention, the pharmaceutical

composition is for use in treating a subject afflicted with ocular disease associated with death of retinal ganglion cells.

According to another aspect, the invention is directed to use of a pharmaceutical composition according to the invention in the manufacture of a medicament for promoting retinal ganglion cell survival in a subject. In various embodiments the pharmaceutical composition according to present invention comprises a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject suffering from an ocular disease. In preferred embodiments the at least one siRNA is a chemically modified. In some embodiments the target gene is set forth in any one of SEQ ID NO:1- 58. In various embodiments the siRNA sense and antisense oligonucleotides are selected from sense and corresponding antisense oligonucleotide pairs shown in Tables B1-B36 , set forth in SEQ ID NOS:59-33,596. In one particular embodiment according to this aspect the invention the pharmaceutical composition is for non-invasive treatment of an ocular disease associated with loss of a retinal ganglion cell in a subject. In another particular embodiment according to this aspect the invention the pharmaceutical composition is for non-invasive treatment of an ocular disease associated with pathological abnormalities/changes in the tissues of the visual system. In yet another particular embodiment according to this aspect the invention the pharmaceutical composition is for use in treating a subject afflicted with ocular disease associated with death of retinal ganglion cells.

In some embodiments the composition includes a viscosity enhancing agent. A viscosity enhancing agent is selected from for example a hydrophilic polymer including cellulose and cellulose derivatives methylcellulose and methylcellulose derivatives. Such agents include methylcellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, hydroxypropylmethyl cellulose, carboxymethyl cellulose, derivatives thereof, combinations thereof and and their salts. In some embodiments the viscosity enhancing agent is methylcellulose. In certain embodiments the viscosity enhancing agent is provided at a concentration of about 0.01% to about 4%, in other embodiments the viscosity enhancing agent is provided at a concentration of about 0.1% to about 3%, or at a concentration of about 0.5% to about 2%.

In some embodiments the composition includes an agent providing osmotic balance, or a surfactant. Such agents include glycerol, ethylene glycol, poly(ethylene glycol), propylene glycol, sorbitol, mannitol, monosaccharide, disaccharides and oligosaccharides.

The present invention further provides a method of treating glaucoma in a subject in need of treatment that comprises topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, in an amount effective to treat glaucoma. In certain preferred embodiments the siRNA chemically modified siRNA. In certain embodiments the at least one siRNA inhibits expression of at least one gene expressed in the retina of the subject's eye. In certain embodiments inhibition of at least one gene confers upon the eye neuroprotective properties. In certain embodiments the at least one gene is selected from a list in Table A1 transcribed into mRNA set forth in SEQ ID NO:1-35. In certain preferred embodiments the gene is selected from CASP2 (SEQ ID NO:1-2), ASPP1 (SEQ ID NO:4), TP53BP2 (SEQ ID NO:6-7), BNIP3 (SEQ ID NO:12), RTP801L (SEQ ID NO:14), ACHE (SEQ ID NO:19-20), ADRB1 (SEQ ID NO:21) and CAPNS1 (SEQ ID NO:28-29). In various embodiments the gene is set forth in SEQ ID NOS:1-2. In some embodiments the siRNA sense and antisense strands are selected from any one of sequences set forth in SEQ ID NOS:8515-9516.

The present invention further provides a method of treating dry-eye in a subject in need thereof, which comprises topically (non-invasively) applying to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA which inhibits expression of at least one gene expressed in the eye of the subject in an amount effective to reduce the symptoms of dry eye. In certain preferred embodiments the siRNA is chemically modified siRNA. In certain embodiments the at least one gene is expressed in the lacrimal gland in the subject. In certain embodiments the at least gene is selected from Table A2 set forth in any one of SEQ ID NO: 5, SEQ ID NO:8-10, SEQ ID NO:26 - 27 and SEQ ID NO:30 - 44. In some embodiments the gene is selected from FAS, FAS ligand (FASL), p53, LRDD, PARP1, AIF (apoptosis inducing factor), NOS1, NOS2A, XIAP and SHC1-SHC. In certain preferred embodiments the gene is transcribed into mRNA set forth in any one of SEQ ID NO:36 - SEQ ID NO:44. In some embodiments the siRNA sense and antisense strands are selected from any one of sequences in Tables 16-17 set forth in SEQ ID NOS: 13,225-15,224.

The present invention further provides a method of treating AMD, DR or DME in a subject in need thereof, which comprises topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA which inhibits expression of at least one gene expressed in the eye in the subject in an

amount effective to reduce the symptoms of AMD, DR or DME. In certain preferred embodiments the siRNA is chemically modified siRNA. In certain embodiments the at least one siRNA inhibits expression of at least one gene expressed in the choroid in the subject's eye. In certain embodiments the at least one target ocular mRNA listed in Table A3, set forth in any one of SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53 . In certain preferred embodiments the siRNA targets CTSD, RTP801 and BNIP3. In certain preferred embodiments the disorder is DR and the siRNA targets mRNA set forth in SEQ ID NOS:48-53.

In a further embodiment the eye disorder is Retinitis pigmentosa (RP). Thus, the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from RP. The method comprises topically (non-invasively) applying to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject. In certain preferred embodiments the siRNA is chemically modified siRNA. In certain embodiments attenuating expression of at least one target gene (target ocular mRNA) is effective to treat RP. In certain embodiments attenuation of at least one target ocular mRNA is effective to reduce the symptoms of RP. In certain embodiments the at least one target ocular mRNA is product of a gene selected from a gene listed in Table A4 which is transcribed into mRNA set forth in any one of SEQ ID NOS: 3, 14, 26-35, 54-57. In some embodiments the target ocular mRNA is product of a gene selected from the group consisting of CASP1, CASP3, CASP12, RTP801, RTP801L, CAPNS1, PARP1, AIF, NOS1, NOS2, XIAP and SHC1-SHC. In certain preferred embodiments the siRNA targets mRNA set forth in SEQ ID NOS:56-57.

In various embodiments the at least one siRNA is chemically modified. In various embodiments the at least one siRNA comprises a sufficient number of consecutive nucleotides having a sequence of sufficient homology to a nucleic acid sequence present within the target mRNA to hybridize to the mRNA and attenuate expression of the mRNA in the eye of the subject.

In various embodiments the at least one siRNA comprises a sufficient number of consecutive nucleotides having a sequence of sufficient homology to a nucleic acid sequence present within the gene to hybridize to the gene and reduce or inhibit expression of the gene in the eye of the subject.

BRIEF DESCRIPTION OF THE FIGURES

Figures 1A-1B: Representative images of Cy3 labeled DDIT4 siRNA incorporated into murine retina following eye drop administration.

Figures 2A-2C: Representative images of Cy3 labeled DDIT4 siRNA incorporated into ductal and acinar cells of the murine lacrimal gland following eye drop administration.

Figures 3A-3C: Time course of accumulation of Cy3-siRNA in rat choroid after administration of eye drops, following 1 and 4 hours post administration.

Figure 4: Cy3-siRNA delivery to the trabecular meshwork and ciliary body one hour after eye drop administration to the eye.

Figures 5A-5B: Confocal microscopy (magnification x60) of the retina 1 hour after eye drop administration of QM5 - siRNA targeted at the p53 gene. SiRNA in retina (retinal pigment epithelial cells, retinal ganglion cells) is shown by Cy3 fluorescence.

Figures 6A-6B are representative images of Cy3 labeled DDIT4 siRNA incorporated into mice retina. Figure 6B shows accumulation of DDIT4_1 Cy3-siRNA 1 hour post administration by eye drops. Choroid, outer nuclear layer, RPE and outer segment layer of photoreceptor cells show Cy3 staining.

Figure 7 shows accumulation of DDIT4_1 Dy-649/C6 -siRNA 1 hour post administration by eye drops in RGC cells by use of Dy-649/C6 staining.

Figure 8A-8C represent control siRNA FITC-CNL_1RD/CNL_1FD and scarmbled3'cy3-CNL_1 delivery to retinal tissues by different staining methods.

Figures 9A-9B show delivery of different structures of Casp2 to the mouse retinal tissues.

Figures 10A -10B show TGASEII-FAM and HNOEL-FAM delivery.

Figure 11 shows retinal delivery of siRNA against p53 in PBS as positive control group.

Figures 12A-12B show that in intact animals or when administering ED without siRNA no fluorescent signal is obtained in the retina.

Figures 13A-13D provide the results of an experiment showing knockdown of p53 in the retina. Figures 13A-13B show standard curves for measuring p53 protein levels. Figures 13C-13D show retinal p53 knockdown by eye drops.

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides topical oligonucleotide compositions and non-invasive methods of use thereof for treating various eye diseases and disorders. In particular, the invention provides methods for treatment of various eye diseases and disorders associated with gene expression in the eye of a subject suffering from the disease or disorder.

The present invention is based in part on the unexpected discovery that topical non-invasive administration of siRNA compositions targets certain ocular tissues and cell types and is active in those tissues and cells when delivered topically to the surface of the eye. The discovery is surprising in view of the known obstacles to siRNA delivery and provides non-invasive methods as a realistic alternative to intravitreal or systemic delivery.

For siRNA molecules to be effective in silencing mRNA of a target gene, the siRNA requires three levels of targeting: to the target tissue, to the target cell type and to the target subcellular compartment. The present invention now discloses non-invasive methods of treating eye diseases and disorders.

The present invention relates in general to compounds which down-regulate expression of genes expressed in ocular cells, particularly to novel small interfering RNAs (siRNAs), and to the use of these novel siRNAs in the treatment of a subject suffering from medical conditions associated with expression of those genes in eye tissues and cells.

Methods for attenuating expression of an ocular target mRNA and methods of treating disorders in the eye are discussed herein at length, and any of said molecules and/or compositions may be beneficially employed in the treatment of a subject suffering from any of said conditions.

The siRNAs of the present invention possess structures and modifications which may increase activity, increase stability, and or minimize toxicity; the novel modifications of the siRNAs of the present invention can be beneficially applied to double stranded RNA sequences useful in preventing or attenuating target gene expression, in particular the target genes discussed herein.

Details of a non-limited example of target genes per indication are presented in Tables A1- A4, hereinbelow.

Table A1: Target genes for treatment of glaucoma

Gene	Full name and Human Gene ID/SEQ ID NO. for mRNA polynucleotide
CASP2	caspase 2, apoptosis-related cysteine peptidase gi|39995058|ref|NM_032982.2 (SEQ ID NO:1) gi|39995060|ref|NM_032983.2 (SEQ ID NO:2)
RTP801	Homo sapiens DNA-damage-inducible transcript 4 (DDIT4), mRNA gi|56676369|ref|NM_019058.2 (SEQ ID NO:3)
ASPP1	protein phosphatase 1, regulatory (inhibitor) subunit 13B (PPP1R13B) gi|121114286|ref|NM_015316.2 (SEQ ID NO:4)
p53	tumor protein p53 gi:120407067, NM_000546.2 (SEQ ID NO:5)
TP53BP2	tumor protein p53 binding protein, 2 gi|112799848|ref|NM_001031685.2 (SEQ ID NO:6) gi|112799845|ref|NM_005426.2 (SEQ ID NO:7)
LRDD	leucine-rich repeats and death domain containing variant 2 gi|61742781|ref|NM_018494.3 (SEQ ID NO:8) variant 1 gi|61742783|ref|NM_145886.2 (SEQ ID NO:9) variant 3 gi|61742785|ref|NM_145887.2 (SEQ ID NO:10)
CYBA	cytochrome b-245, alpha polypeptide gi|68509913|ref|NM_000101.2 (SEQ ID NO:11)
BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3 gi|7669480|ref|NM_004052.2 (SEQ ID NO:12)
RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein) (gi|38505164|ref|NM_198829.1) (SEQ ID NO:13)
RTP801L	Homo sapiens DNA-damage-inducible transcript 4-like (DDIT4L), mRNA gi|34222182|ref|NM_145244.2 (SEQ ID NO:14)
SPP1	secreted phosphoprotein 1 variant 1 gi|91206461|ref|NM_001040058.1 (SEQ ID NO:15) variant 2 gi|38146097|ref|NM_000582.2 (SEQ ID NO:16) variant 3 gi|91598938|ref|NM_001040060.1 (SEQ ID NO:17)
SOX9	Homo sapiens SRY (sex determining region Y)-box 9 (campomelic dysplasia, autosomal sex-reversal) (SOX9), mRNA gi|37704387|ref|NM_000346.2 (SEQ ID NO:18)
ACHE	Homo sapiens acetylcholinesterase (Yt blood group) (ACHE), variant E4-E6, mRNA gi|88999567|ref|NM_000665.3 (SEQ ID NO:19) variant E4-E5, mRNA gi|88999566|ref|NM_015831.2 (SEQ ID NO:20)
ADRB1	Homo sapiens adrenergic, beta-1-, receptor (ADRB1), mRNA gi|110349783|ref|NM_000684.2 (SEQ ID NO:21)
HTRA2	Htra serine peptidase 2 v 1 gi:73747817, NM_013247 (SEQ ID NO:22) v 2 gi:73747818, NM_145074 (SEQ ID NO:23)
KEAP1	Kelch-like ECH-associated protein 1 v 1 gi:45269144 NM_203500 (SEQ ID NO:24) v 2 gi:45269143 NM_012289 (SEQ ID NO:25)

Gene	Full name and Human Gene ID/SEQ ID NO. for mRNA polynucleotide
SHC1-SHC	Src homology 2 domain containing transforming prot. 1 v 1 gi: 194239661 NM_183001 (SEQ ID NO:26) v 2 gi: 194239660 NM_003029 (SEQ ID NO:27)
CAPNS1	Homo sapiens calpain, small subunit 1 (CAPNS1), variant 1, mRNA gi|51599152|ref|NM_001749.2 (SEQ ID NO:28) variant 2, mRNA gi|51599150|ref|NM_001003962.1 (SEQ ID NO:29)
PARP1	Homo sapiens poly (ADP-ribose) polymerase 1 (PARP1), mRNA gi|156523967|ref|NM_001618.3 (SEQ ID NO:30)
AIF (AIFM1)	Homo sapiens apoptosis-inducing factor, mitochondrion-associated, 1 variant 4, mRNA gi|195927003|ref|NM_001130846.1 (SEQ ID NO:31) variant 5, mRNA gi|195927005|ref|NM_001130847.1 (SEQ ID NO:32)
NOS1	Homo sapiens nitric oxide synthase 1 (neuronal) (NOS1), mRNA gi|194239671|ref|NM_000620.2 (SEQ ID NO:33)
NOS2A	Homo sapiens nitric oxide synthase 2, inducible (NOS2), mRNA gi|206597519|ref|NM_000625.4 (SEQ ID NO:34)
XIAP	Homo sapiens X-linked inhibitor of apoptosis (XIAP), mRNA gi|32528298|ref|NM_001167.2| (SEQ ID NO:35)

Table A2: Target genes for treatment of dry eye

Gene	Full name and Human Gene ID
FAS	CD95, TNF receptor superfamily, member 6 v 1. gi|23510419|ref|NM_000043.3| (SEQ ID NO:36) v 3. gi|23510422|ref|NM_152872.1| (SEQ ID NO:37) v 2. gi|23510420|ref|NM_152871.1| (SEQ ID NO:38) v 4. gi|23510424|ref|NM_152873.1| (SEQ ID NO:39) v 8. gi|23510426|ref|NM_152874.1| (SEQ ID NO:40) v 5. gi|23510428|ref|NM_152875.1| (SEQ ID NO:41) v 7. gi|23510433|ref|NM_152877.1| (SEQ ID NO:42) v 6. gi|23510430|ref|NM_152876.1| (SEQ ID NO:43)
FAS ligand	TNF superfamily, member 6 (FASL) gi|4557328|ref|NM_000639.1| (SEQ ID NO:44)
p53	tumor protein p53 gi8400737, NM_000546.2 (SEQ ID NO:5)
LRDD	leucine-rich repeats and death domain containing gi|61742781|ref|NM_018494.3 (SEQ ID NO:8) gi|61742783|ref|NM_145886.2 (SEQ ID NO:9) gi|61742785|ref|NM_145887.2 (SEQ ID NO:10)
PARP1	Homo sapiens poly (ADP-ribose) polymerase 1 (PARP1), mRNA gi|156523967|ref|NM_001618.3 (SEQ ID NO:30)

Gene	Full name and Human Gene ID
AIF (AIFM1)	Homo sapiens apoptosis-inducing factor, mitochondrion-associated, 1 variant 4, mRNA gi|195927003|ref|NM_001130846.1 (SEQ ID NO:31) variant 5, mRNA gi|195927005|ref|NM_001130847.1 (SEQ ID NO:32)
NOS1	Homo sapiens nitric oxide synthase 1 (neuronal) (NOS1), mRNA gi|194239671|ref|NM_000620.2 (SEQ ID NO:33)
NOS2A	Homo sapiens nitric oxide synthase 2, inducible (NOS2), mRNA gi|206597519|ref|NM_000625.4 (SEQ ID NO:34)
XIAP	Homo sapiens X-linked inhibitor of apoptosis (XIAP), mRNA gi|32528298|ref|NM_001167.2| (SEQ ID NO:35)
SHC1-SHC	Src homology 2 domain containing transforming prot. 1 v 1 gi: 194239661 NM_183001 (SEQ ID NO:26) v 2 gi: 194239660 NM_003029 (SEQ ID NO:27)

Table A3: Target genes for treatment of DR, DME, AMD

Gene	Full name and Human Gene ID
LGALS3	lectin galactoside-binding soluble 3 v1 gi:115430222 NM_002306 (SEQ ID NO:45) v2 gi:115430224 NR_003225 (SEQ ID NO:46)
SLC2A1	solute carrier family 2 (facilitated glucose transporter), member 1 gi|166795298|ref|NM_006516.1 (SEQ ID NO:49)
SLC2A2	solute carrier family 2 (facilitated glucose transporter), member 2 gi|4557850|ref|NM_000340.1 (SEQ ID NO:50)
SLC2A3	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 3 (GLUT3) gi|221136810|ref|NM_006931.1 (SEQ ID NO:51)
SLC5A1	solute carrier family 5 (sodium/glucose cotransporter), member 1 gi|208973247|ref|NM_000343.2 (SEQ ID NO:52)
SORD	sorbitol dehydrogenase mRNA gi|156627570|ref|NM_003104.3 (SEQ ID NO:53)
CTSD	Homo sapiens cathepsin D (CTSD) gi|23110949|ref|NM_001909.3 (SEQ ID NO:47)
CASP2	caspase 2, apoptosis-related cysteine peptidase gi|39995058|ref|NM_032982.2 (SEQ ID NO:1) gi|39995060|ref|NM_032983.2 (SEQ ID NO:2)
RTP801	Homo sapiens DNA-damage-inducible transcript 4 (DDIT4), mRNA gi|56676369|ref|NM_019058.2 (SEQ ID NO:3)
p53	tumor protein p53 gi8400737, NM_000546.2 (SEQ ID NO:5)
TP53BP2	tumor protein p53 binding protein, 2 gi|112799848|ref|NM_001031685.2 (SEQ ID NO:6) gi|112799845|ref|NM_005426.2 (SEQ ID NO:7)

Gene	Full name and Human Gene ID
LRDD	leucine-rich repeats and death domain containing gi|61742781|ref|NM_018494.3 (SEQ ID NO:8) gi|61742783|ref|NM_145886.2 (SEQ ID NO:9) gi|61742785|ref|NM_145887.2 (SEQ ID NO:10)
BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3 gi|7669480|ref|NM_004052.2 (SEQ ID NO:12)
RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein) (gi|38505164|ref|NM_198829.1) (SEQ ID NO:13)
AKR1B1	aldo-keto reductase family 1, member B1 (aldose reductase) gi|24497579|ref|NM_001628.2 (SEQ ID NO:48)
KEAP1	Kelch-like ECH-associated protein 1 v 1 gi:45269144 NM_203500 (SEQ ID NO:24) v 2 gi:45269143 NM_012289 (SEQ ID NO:25)
PARP1	Homo sapiens poly (ADP-ribose) polymerase 1 (PARP1), mRNA gi|156523967|ref|NM_001618.3 (SEQ ID NO:30)
AIF (AIFM1)	Homo sapiens apoptosis-inducing factor, mitochondrion-associated, 1 variant 4, mRNA gi|195927003|ref|NM_001130846.1 (SEQ ID NO:31) variant 5, mRNA gi|195927005|ref|NM_001130847.1 (SEQ ID NO:32)
NOS1	Homo sapiens nitric oxide synthase 1 (neuronal) (NOS1), mRNA gi|194239671|ref|NM_000620.2 (SEQ ID NO:33)
NOS2A	Homo sapiens nitric oxide synthase 2, inducible (NOS2), mRNA gi|206597519|ref|NM_000625.4 (SEQ ID NO:34)
XIAP	Homo sapiens X-linked inhibitor of apoptosis (XIAP), mRNA gi|32528298|ref|NM_001167.2| (SEQ ID NO:35)
SHC1-SHC	Src homology 2 domain containing transforming prot. 1 v 1 gi: 194239661 NM_183001 (SEQ ID NO:26) v 2 gi: 194239660 NM_003029 (SEQ ID NO:27)

Table A4: Examples of target genes for treatment of retinitis pigmentosa (RP)

Gene	Full name and Human Gene ID
CASP1	Homo sapiens caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase) (CASP1), mRNA variant epsilon, gi|73622117|ref|NM_033295.2 (SEQ ID NO:54) variant alpha, gi|73622114|ref|NM_033292.2 (SEQ ID NO:55)
CASP3	Homo sapiens caspase 3, apoptosis-related cysteine peptidase (CASP3), mRNA variant alpha, gi|73622121|ref|NM_004346.3 (SEQ ID NO:56) variant beta, gi|73622122|ref|NM_032991.2 (SEQ ID NO:57)
CASP12	Homo sapiens caspase 12 variant zeta (CASP12) mRNA, complete sequence; alternatively

Gene	Full name and Human Gene ID
	spliced gi|20069120|gb|AF486846.1| (SEQ ID NO:58)
RTP801	Homo sapiens DNA-damage-inducible transcript 4 (DDIT4), mRNA gi|56676369|ref|NM_019058.2 (SEQ ID NO:3)
RTP801L	Homo sapiens DNA-damage-inducible transcript 4-like (DDIT4L), mRNA gi|34222182|ref|NM_145244.2 (SEQ ID NO:14)
CAPNS1	Homo sapiens calpain, small subunit 1 (CAPNS1), variant 1, mRNA gi|51599152|ref|NM_001749.2 (SEQ ID NO:28) variant 2, mRNA gi|51599150|ref|NM_001003962.1 (SEQ ID NO:29)
PARP1	Homo sapiens poly (ADP-ribose) polymerase 1 (PARP1), mRNA gi|156523967|ref|NM_001618.3 (SEQ ID NO:30)
AIF (AIFM1)	Homo sapiens apoptosis-inducing factor, mitochondrion-associated, 1 variant 4, mRNA gi|195927003|ref|NM_001130846.1 (SEQ ID NO:31) variant 5, mRNA gi|195927005|ref|NM_001130847.1 (SEQ ID NO:32)
NOS1	Homo sapiens nitric oxide synthase 1 (neuronal) (NOS1), mRNA gi|194239671|ref|NM_000620.2 (SEQ ID NO:33)
NOS2A	Homo sapiens nitric oxide synthase 2, inducible (NOS2), mRNA gi|206597519|ref|NM_000625.4 (SEQ ID NO:34)
XIAP	Homo sapiens X-linked inhibitor of apoptosis (XIAP), mRNA gi|32528298|ref|NM_001167.2| (SEQ ID NO:35)
SHC1-SHC	Src homology 2 domain containing transforming prot. 1 v 1 gi: 194239661 NM_183001 (SEQ ID NO:26) v 2 gi: 194239660 NM_003029 (SEQ ID NO:27)

"Variant" or "v" refer to transcript variant.

Tables A1-A4 provide the gi (GeneInfo identifier) and accession numbers for an example of polynucleotide sequences of human mRNA to which the oligonucleotide inhibitors of the present invention are directed. ("v" refers to transcript variant)

Inhibition of the genes in Tables A1, A2, A3 and A4 is useful in treating, *inter alia*, glaucoma, dry eye, diabetic retinopathy (DR), diabetic macular edema (DME), age related macular degeneration (AMD) and retinitis pigmentosa (RP), respectively.

Definitions

For convenience certain terms employed in the specification, examples and claims are described herein.

It is to be noted that, as used herein, the singular forms "a", "an" and "the" include plural forms unless the content clearly dictates otherwise.

Where aspects or embodiments of the invention are described in terms of Markush groups or other grouping of alternatives, those skilled in the art will recognize that the invention is also thereby described in terms of any individual member or subgroup of members of the group.

An “inhibitor” is a compound which is capable of reducing the expression of a gene or the activity of the product of such gene to an extent sufficient to achieve a desired biological or physiological effect. The term "inhibitor" as used herein refers to one or more of an oligonucleotide inhibitor, including siRNA, antisense, shRNA, miRNA and ribozymes. Inhibition may also be referred to as attenuation of expression of mRNA, down-regulation, or for RNA interference (RNAi), silencing. The inhibitors disclosed herein are chemically modified siRNA compounds which incorporate modifications such as changes to the sugar moiety and/or the base moiety and/or the linkages between nucleotides in the oligonucleotide structure.

The term "inhibit" or “attenuate” as used herein refers to reducing the expression of a gene, a variant or product thereof or the activity of the product of such gene to an extent sufficient to achieve a desired biological or physiological effect. Inhibition may be complete or partial. For example “inhibition” of CASP2 gene means inhibition of the gene expression (transcription or translation) or polypeptide activity of one or more of the variants disclosed in any Table A1 or A3 or an SNP (single nucleotide polymorphism) or other variants thereof.

“Ocular tissue” referees to any tissue associated with structure of the eye and is intended to include, in a non-limiting manner, the sclera, the cornea, the choroid, the retina, the lacrimal gland, and the optic nerve.

“Ocular cell” refers to any cell associated with structures of the eye and lacrimal apparatus and is intended to include, in a non-limiting manner, retinal ganglion cell, a retinal pigment epithelial cell, a corneal cell, conjunctiva, anterior chamber, iris, ciliary process, retina, choroid and choroidal cells, trabecular meshwork, and the like. For example the trabecular meshwork includes the inner uveal meshwork, the corneoscleral meshwork and the juxtacanalicular tissue. The lacrimal gland includes the lacrimal gland per se, the inferior and superior lacrimal puncta, the inferior and superior lacrimal canal, the lacrimal sac and the like.

As used herein, the terms "polynucleotide" and "nucleic acid" may be used interchangeably and refer to nucleotide sequences comprising deoxyribonucleic acid (DNA), and ribonucleic acid (RNA). The terms should also be understood to include, as equivalents, analogs of either RNA or DNA made from nucleotide analogs. Throughout this application mRNA sequences are set forth as representing the corresponding genes. The terms "mRNA polynucleotide sequence" and mRNA are used interchangeably.

"Oligonucleotide", "oligoribonucleotide or "oligomer" refers to a deoxyribonucleotide or ribonucleotide sequence from about 2 to about 50 nucleotides. Each DNA or RNA nucleotide of the sequence may be independently natural or synthetic, and or modified or unmodified. Modifications include changes to the sugar moiety, the base moiety and or the linkages between nucleotides in the oligonucleotide. The compounds of the present invention encompass molecules comprising deoxyribonucleotides, ribonucleotides, modified deoxyribonucleotides, modified ribonucleotides and combinations thereof.

The present invention provides methods and compositions for inhibiting expression of a target gene *in vivo*. In general, the method includes topically administering oligoribonucleotides, in particular small interfering RNAs (i.e., siRNAs) or a nucleic acid material that can produce siRNA in a cell, to target an mRNA of the genes set forth in Tables A1-A4; in an amount sufficient to down-regulate expression of a target gene by an RNA interference mechanism. In particular, the method can be used to inhibit expression of the gene for treatment of a subject suffering from an eye disorder or disease related to expression of that gene in ocular tissue or cell. In accordance with the present invention, the siRNA molecules or inhibitors of the target gene are used as drugs to treat various ocular pathologies.

"Nucleotide" is meant to encompass deoxyribonucleotides and ribonucleotides, which may be natural or synthetic, and or modified or unmodified. Modifications include changes and substitutions to the sugar moiety, the base moiety and/or the internucleotide linkages.

As used herein, the terms "non-pairing nucleotide analog" means a nucleotide analog which comprises a non-base pairing moiety including but not limited to: 6 des amino adenosine (Nebularine), 4-Me-indole, 3-nitropyrrole, 5-nitroindole, Ds, Pa, N3-Me ribo U, N3-Me riboT, N3-Me dC, N3-Me-dT, N1-Me-dG, N1-Me-dA, N3-ethyl-dC, N3-Me dC. In some embodiments the non-base pairing nucleotide analog is a ribonucleotide. In other embodiments it is a deoxyribonucleotide.

All analogs of, or modifications to, a nucleotide / oligonucleotide may be employed with the present invention, provided that said analog or modification does not substantially adversely affect the stability and function of the nucleotide / oligonucleotide. Acceptable modifications include modifications of the sugar moiety, modifications of the base moiety, modifications in the internucleotide linkages and combinations thereof.

What is sometimes referred to in the present invention as an "abasic nucleotide" or "abasic nucleotide analog" is more properly referred to as a pseudo-nucleotide or an unconventional moiety. A nucleotide is a monomeric unit of nucleic acid, consisting of a ribose or deoxyribose sugar, a phosphate, and a base (adenine, guanine, thymine, or cytosine in DNA; adenine, guanine, uracil, or cytosine in RNA). A modified nucleotide comprises a modification in one or more of the sugar, phosphate and or base. The abasic pseudo-nucleotide lacks a base, and thus is not strictly a nucleotide.

The term “capping moiety” as used herein includes abasic ribose moiety, abasic deoxyribose moiety, modifications abasic ribose and abasic deoxyribose moieties including 2’ O alkyl modifications; inverted abasic ribose and abasic deoxyribose moieties and modifications thereof; C6-imino-Pi; a mirror nucleotide including L-DNA and L-RNA; 5’OMe nucleotide; and nucleotide analogs including 4',5'-methylene nucleotide; 1-(β-D-erythrofuranosyl)nucleotide; 4'-thio nucleotide, carbocyclic nucleotide; 5'-amino-alkyl phosphate; 1,3-diamino-2-propyl phosphate, 3-aminopropyl phosphate; 6-aminohexyl phosphate; 12-aminododecyl phosphate; hydroxypropyl phosphate; 1,5-anhydrohexitol nucleotide; alpha-nucleotide; threo-pentofuranosyl nucleotide; acyclic 3',4'-seco nucleotide; 3,4-dihydroxybutyl nucleotide; 3,5-dihydroxypentyl nucleotide, 5'-5'-inverted abasic moiety; 1,4-butanediol phosphate; 5'-amino; and bridging or non bridging methylphosphonate and 5'-mercapto moieties. A 2’-O-methyl sugar modified ribonucleotide is also referred to as 2’-OMe sugar modified or 2’-OMe modified ribonucleotide

Certain preferred capping moieties are abasic ribose or abasic deoxyribose moieties; inverted abasic ribose or abasic deoxyribose moieties; C6-amino-Pi; a mirror nucleotide including L-DNA and L-RNA.

The term “unconventional moiety” as used herein refers to abasic ribose moiety, an abasic deoxyribose moiety, a deoxyribonucleotide, a modified deoxyribonucleotide, a mirror nucleotide, a non-base pairing nucleotide analog and a nucleotide joined to an adjacent

nucleotide by a 2'-5' internucleotide phosphate bond; bridged nucleic acids including LNA and ethylene bridged nucleic acids.

Abasic deoxyribose moiety includes for example abasic deoxyribose-3'-phosphate; 1,2-dideoxy-D-ribofuranose-3-phosphate; 1,4-anhydro-2-deoxy-D-ribitol-3-phosphate. Inverted abasic deoxyribose moiety includes inverted deoxyriboabasic; 3',5' inverted deoxyabasic 5'-phosphate.

In the context of the present invention, a "mirror" nucleotide (also referred to as a spieglemer), is a nucleotide analog with reverse chirality to the naturally occurring or commonly employed nucleotide, i.e., a mirror image of the naturally occurring or commonly employed nucleotide. The mirror nucleotide is a ribonucleotide (L-RNA) or a deoxyribonucleotide (L-DNA) and may further comprise at least one sugar or base modification and/or a backbone modification, such as a phosphorothioate or phosphonate moiety. US Patent No. 6,602,858 discloses nucleic acid catalysts comprising at least one L-nucleotide substitution. Mirror nucleotide includes for example L-DNA (L-deoxyriboadenosine-3'-phosphate (mirror dA); L-deoxyribocytidine-3'-phosphate (mirror dC); L-deoxyriboguanosine-3'-phosphate (mirror dG); L-deoxyribothymidine-3'-phosphate (mirror dT) and L-RNA (L-riboadenosine-3'-phosphate (mirror rA); L-ribocytidine-3'-phosphate (mirror rC); L-riboguanosine-3'-phosphate (mirror rG); L-ribouracil-3'-phosphate (mirror dU)

Modified deoxyribonucleotide includes, for example 5'OMe DNA (5-methyl-deoxyriboguanosine-3'-phosphate) which may be useful as a nucleotide in the 5' terminal position (position number 1); PACE (deoxyriboadenine 3' phosphonoacetate, deoxyribocytidine 3' phosphonoacetate, deoxyriboguanosine 3' phosphonoacetate, deoxyribothymidine 3' phosphonoacetate.

Bridged nucleic acids include LNA (2'-O,4'-C-methylene bridged Nucleic Acid adenosine 3' monophosphate, 2'-O,4'-C-methylene bridged Nucleic Acid 5-methyl-cytidine 3' monophosphate, 2'-O,4'-C-methylene bridged Nucleic Acid guanosine 3' monophosphate, 5-methyl-uridine (or thymidine) 3' monophosphate); and ENA (2'-O,4'-C-ethylene bridged Nucleic Acid adenosine 3' monophosphate, 2'-O,4'-C-ethylene bridged Nucleic Acid 5-methyl-cytidine 3' monophosphate, 2'-O,4'-C-ethylene bridged Nucleic Acid guanosine 3' monophosphate, 5-methyl-uridine (or thymidine) 3' monophosphate).

In some embodiments of the present invention a preferred unconventional moiety is an abasic ribose moiety, an abasic deoxyribose moiety, a deoxyribonucleotide, a mirror nucleotide, and a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide phosphate bond.

According to one aspect the present invention provides inhibitory oligonucleotide compounds comprising unmodified and modified nucleotides. The compound comprises at least one modified nucleotide selected from the group consisting of a sugar modification, a base modification and an internucleotide linkage modification and may contain DNA, and modified nucleotides such as LNA (locked nucleic acid) including ENA (ethylene-bridged nucleic acid; PNA (peptide nucleic acid); arabinoside; PACE (phosphonoacetate and derivatives thereof), mirror nucleotide, or nucleotides with a 6 carbon sugar.

In one embodiment the compound comprises a 2' modification on the sugar moiety of at least one ribonucleotide ("2' sugar modification"). In certain embodiments the compound comprises 2'O-alkyl or 2'-fluoro or 2'O-allyl or any other 2' sugar modification, optionally on alternate positions.

Other stabilizing modifications are also possible (e.g. modified nucleotides added to a 3' or 5' terminus of an oligomer). In some embodiments the backbone of the oligonucleotides is modified and comprises phosphate-D-ribose entities but may also contain thiophosphate-D-ribose entities, triester, thioate, 2'-5' bridged backbone (also may be referred to as 5'-2'), PACE modified internucleotide linkage or any other type of modification.

Other modifications include additions to the 5' and/or 3' termini of the oligonucleotides. Such terminal modifications may be lipids, peptides, sugars or other molecules.

Possible modifications to the sugar residue are manifold and include 2'-O alkyl, locked nucleic acid (LNA), glycol nucleic acid (GNA), threose nucleic acid (TNA), arabinoside; altritol (ANA) and other 6-membered sugars including morpholinos, and cyclohexinyls.

LNA compounds are disclosed in International Patent Publication Nos. WO 00/47599, WO 99/14226, and WO 98/39352. Examples of siRNA compounds comprising LNA nucleotides are disclosed in Elmen et al., (NAR 2005. 33(1):439-447) and in International Patent Publication No. WO 2004/083430. Six-membered ring nucleotide analogs are disclosed in Allart, et al (Nucleosides & Nucleotides, 1998, 17:1523-1526; and Perez-

Perez, et al., 1996, Bioorg. and Medicinal Chem Letters 6:1457-1460) Oligonucleotides comprising 6-membered ring nucleotide analogs including hexitol and altritol nucleotide monomers are disclosed in International patent application publication No. WO 2006/047842.

Backbone modifications, such as ethyl (resulting in a phospho-ethyl triester); propyl (resulting in a phospho-propyl triester); and butyl (resulting in a phospho-butyl triester) are also possible. Other backbone modifications include polymer backbones, cyclic backbones, acyclic backbones, thiophosphate-D-ribose backbones, amidates, and phosphonoacetate derivatives. Certain structures include siRNA compounds having one or a plurality of 2'-5' internucleotide linkages (bridges or backbone).

The present invention also relates to compounds which down-regulate expression of various genes, particularly to novel small interfering RNA (siRNA) compounds, and to the use of these novel siRNAs in the treatment of various ocular diseases and medical conditions of the eye.

For each gene there is a separate list of 19-mer oligomer sequences, which are prioritized based on their score in the proprietary algorithm as the best sequences for targeting the human gene expression. 21- or 23-mer siRNA sequences can be generated by 5' and/or 3' extension of the 19-mer sequences disclosed herein. Such extension is preferably complementary to the corresponding mRNA sequence. Certain 23-mer oligomers were devised by this method where the order of the prioritization is the order of the corresponding 19-mer. Tables B1-B36 provide human sense and corresponding antisense oligonucleotides useful in preparing siRNA. The abbreviations for cross species are: Ms: Mouse, Rb: Rabbit, Chmp: chimpanzee, Mnk: Monkey, Chn: chinchilla, GP: guinea-pig.

Ocular Diseases

Topical delivery of therapeutic oligonucleotide compounds is useful in the treatment of a broad spectrum of eye diseases and disorders. Certain of the compounds of the invention are useful in treating patients suffering from diseases and disorders in which neuroprotection of the optic nerve would be of benefit, for example in:

1. open angle primary/secondary glaucoma

2. multiple sclerosis (optic neuritis)

3. central or brunch retinal vein occlusion

4. ischemic optic neuropathy (in status epilepticus, HIV-1 infection)

5. optic nerve injury

6. tumors extending into the suprasellar region (above the sella turcica)

7. juxta chiasmal tumors (the visual loss associated with compression of the optic chiasm by pituitary tumors may be transient or permanent, possibly related to the extent of irreversible retrograde degeneration to the retinal ganglion cells.

8. Retinoblastoma

Primary Open-Angle Glaucoma

The majority of the cases of glaucoma are the form known as primary-open-angle glaucoma POAG, also called chronic open-angle glaucoma). POAG results from a build up of aqueous humor fluid within the anterior chamber of the eye resulting in intraocular pressure (IOP). Elevated IOP, which can be measured by a "tonometry" test, results from fluid entering the eye and not enough fluid exiting the eye. Normally, fluid enters the eye by seeping out of the blood vessels in the ciliary body. This fluid eventually makes its way past the crystalline lens, through the pupil (the central opening in the iris), and into the irido-corneal angle, the anatomical angle formed where the iris and the cornea come together. Then the fluid passes through the trabecular meshwork in the angle and leaves the eye via the canal of Schlemm.

If excess fluid enters the eye, or if the trabecular meshwork "drain" gets clogged up (for instance, with debris or cells) so that not enough fluid is leaving the eye, the pressure builds up in what is known as "open angle glaucoma." Open angle glaucoma also can be caused when the posterior portion of the iris adheres to the anterior surface of the lens creating a "pupillary block", and preventing intraocular fluid from passing through the pupil into the anterior chamber.

If the angle between the iris and the cornea is too narrow or is even closed, then the fluid backs up, causing increased pressure in what is known as "closed angle glaucoma."

Untreated glaucoma eventually leads to optic atrophy and blindness.

Normal Tension Glaucoma

Intraocular eye pressure is normal (between 12 - 22 mmHg) in about 25 - 30% glaucoma cases in the US, a condition known as normal-tension glaucoma. (In Japan, the rates may

be as high as 70%.) Other factors are present that cause optic nerve damage but do not affect IOP.

Closed-Angle Glaucoma

Closed-angle glaucoma (also called angle-closure glaucoma) is responsible for 15% of all glaucoma cases. It is less common than POAG in the U.S., but it constitutes about half of the world's glaucoma cases because of its higher prevalence among Asians. The iris is pushed against the lens, sometimes sticking to it, closing off the drainage angle. This can occur very suddenly, resulting in an immediate rise in pressure. It often occurs in genetically susceptible people when the pupil shrinks suddenly. Closed-angle glaucoma can also be chronic and gradual, a less common condition.

Congenital Glaucoma

Congenital glaucoma, in which the eye's drainage canals fail to develop correctly, is present from birth. It is very rare, occurring in about 1 in 10,000 newborns. This may be an inherited condition and often can be corrected with microsurgery.

In one aspect the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from glaucoma, comprising topically (non-invasively) administering to the surface of the eye of the subject an effective amount of at least one chemically modified siRNA and a pharmaceutically acceptable carrier. In certain embodiments the at least one ocular target mRNA is a product of a gene selected from a list in Table A1 set forth in SEQ ID NOS:1-35. In certain preferred embodiments the target ocular mRNA is a product of a gene selected from CASP2, ASPP1, TP53BP2, BNIP3, RTP801L, ACHE, ADRB1 and CAPNS1. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In various embodiments the target ocular mRNA set forth in SEQ ID NOS:1-2.

In another aspect the present invention provides a method of treating glaucoma in a subject in need of treatment, comprising topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one chemically modified siRNA which inhibits expression of a target gene in the eye of the subject. In some embodiments the gene is a human gene selected from a list in Table A1, transcribed into mRNA set forth in any one of SEQ ID NOS:1-35. In certain preferred embodiments the gene is selected from CASP2, ASPP1, TP53BP2, BNIP3, RTP801L, ACHE, ADRB1 and CAPNS1. In a currently preferred embodiment the siRNA is

formulated for delivery as eye drops. In various embodiments the target ocular mRNA set forth in SEQ ID NOS:1-2.

Optic neuritis

Optic neuritis is an inflammation of the optic nerve that may affect the part of the nerve and disc within the eyeball (papillitis) or the portion behind the eyeball (retrobulbar optic neuritis). Optic neuritis may be caused by any of the following: demyelinating diseases such as multiple sclerosis or post infectious encephalomyelitis; systemic viral or bacterial infections including complications of inflammatory diseases (e.g., sinusitis, meningitis, tuberculosis, syphilis, chorioretinitis, orbital inflammation); nutritional and metabolic diseases (e.g., diabetes, pernicious anemia, hyperthyroidism); Leber's Hereditary Optic Neuropathy, a rare form of inherited optic neuropathy which mainly affects young men; toxins (tobacco, methanol, quinine, arsenic, salicylates, lead); and trauma.

Optic atrophy

Optic atrophy is a hereditary or acquired loss of vision disorder that results from the degeneration of the optic nerve and optic tract nerve fibers. It may be acquired via occlusions of the central retinal vein or artery, arteriosclerotic changes, may be secondary to degenerative retinal disease, may be a result of pressure against the optic nerve, or may be related to metabolic diseases (e.g., diabetes), trauma, glaucoma, or toxicity (to alcohol, tobacco, or other poisons). Degeneration and atrophy of optic nerve fibers is irreversible, although intravenous steroid injections have been seen to slow down the process in some cases.

Papilledema

A swelling of the optic disc (papilla), most commonly due to an increase in intracranial pressure (tumor induced), malignant hypertension, or thrombosis of the central retinal vein. The condition usually is bilateral, the nerve head is very elevated and swollen, and pupil response typically is normal. Vision is not affected initially and there is no pain upon eye movement. Secondary optic nerve atrophy and permanent vision loss can occur if the primary cause of the papilledema is left untreated.

Ischemic optic neuropathy (ION)

A severely blinding disease resulting from loss of the arterial blood supply to the optic nerve (usually in one eye), as a result of occlusive disorders of the nutrient arteries. Optic neuropathy can be anterior, which causes a pale edema of the optic disc, or posterior, in which the optic disc is not swollen and the abnormality occurs between the eyeball and

the optic chiasm. Ischemic anterior optic neuropathy usually causes a loss of vision that may be sudden or occur over several days. Ischemic posterior optic neuropathy is uncommon, and the diagnosis depends largely upon exclusion of other causes, chiefly stroke and brain tumor.

Other diseases and conditions include dry eye, diabetic retinopathy, diabetic macular edema and retinitis pigmentosa.

Dry eye

Dry eye, also known as keratoconjunctivitis sicca or keratitis sicca, is a common problem usually resulting from a decrease in the production of tear film that lubricates the eyes. Most patients with dry eye experience discomfort, and no vision loss; although in severe cases, the cornea may become damaged or infected.

Dry eye is a multifactorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance, and tear film instability with potential damage to the ocular surface. It is accompanied by increased osmolarity of the tear film and inflammation of the ocular surface.

The lacrimal gland is a multilobular tissue composed of acinar, ductal, and myoepithelial cells. The acinar cells account for 80% of the cells present in the lacrimal gland and are the site for synthesis, storage, and secretion of proteins. Several of these proteins have antibacterial (lysozyme, lactoferrin) or growth factor (epidermal growth factor, transforming growth factor α, keratocyte growth factor) properties that are crucial to the health of the ocular surface. The primary function of the ductal cells is to modify the primary fluid secreted by the acinar cells and to secrete water and electrolytes. The myoepithelial cells contain multiple processes, which surround the basal area of the acinar and ductal cells, and are believed to contract and force fluid out of the ducts and onto the ocular surface.

Mechanisms of Lacrimal Gland Dysfunction

Apoptosis, hormonal imbalance, production of autoantibodies, alterations in signaling molecules, neural dysfunction, and increased levels of proinflammatory cytokines have been proposed as possible mediators of lacrimal gland insufficiency. One of the primary symptoms of Sjögrens Syndrome is dry eye. Apoptosis of the acinar and ductal epithelial cells of the lacrimal glands has been proposed as a possible mechanism responsible for the impairment of secretory function (Manganelli and Fietta, Semin Arthritis Rheum.

2003. 33(1):49-65). Without wishing to be bound by theory, apoptotic epithelial cell death may be due to activation of several apoptotic pathways involving Fas (Apo-1/CD95), FasL (FasL/CD95L), Bax, caspases, perforin, and granzyme B. Cytotoxic T cells through the release of proteases, such as perforin and granzyme B, or the interaction of FasL expressed by T cells with Fas on epithelial cells, can lead to apoptosis of the acinar cells.

The current treatment for dry eye is mainly local and symptomatic such as: tear supplementation with lubricants; tear retention with therapies such as punctal occlusion, moisture chamber spectacles or contact lenses; tear stimulation for example by secretagogues; biological tear substitutes; anti-inflammatory therapy (Cyclosporine, Corticosteroids, Tetracyclines); and dietary essential fatty acids.

In one aspect the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from dry-eye, comprising topically (non-invasively) administering to the surface of the eye of the subject an effective amount of at least one chemically modified siRNA and a pharmaceutically acceptable carrier. In some embodiments the target ocular mRNA is product of a human gene selected Table A2 set forth in SEQ ID NOS: 5, 8-10, 26-27, 30-44. In some embodiments the target ocular mRNA is selected from FAS, FAS ligand (FASL), p53, LRDD, PARP1, AIF (apoptosis inducing factor), NOS1, NOS2A, XIAP and SHC1-SHC. In certain preferred embodiments the target ocular mRNA is set forth in any one of SEQ ID NOS:36-44. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In various embodiments the subject is suffering from Sjögrens syndrome. In some embodiments the siRNA sense and antisense strands are selected from sequences in Tables 16-17, set forth in SEQ ID NOS: 13225-15224.

In another aspect the present invention provides a method of treating dry-eye in a subject in need of treatment, comprising topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one chemically modified siRNA which inhibits expression of a target gene in the eye of the subject. In some embodiments the target gene is a human gene selected from Table A2, whose mRNA is set forth in any one of SEQ ID NOS: 5, 8-10, 26-27, or 30-44. In some embodiments the target gene is selected from FAS, FAS ligand (FASL), p53, LRDD, PARP1, AIF (apoptosis inducing factor), NOS1, NOS2A, XIAP and SHC1-SHC. In certain preferred embodiments the target gene mRNA is set forth in any one of SEQ ID NOS:36-44. In a currently preferred embodiment the siRNA is formulated for delivery as

eye drops. In various embodiments the subject is suffering from Sjögrens syndrome. In some embodiments the siRNA sense and antisense strands are selected from sequences in Tables 16-17, set forth in SEQ ID NOS: 13225-15224.

Retinitis Pigmentosa

Retinitis pigmentosa (RP) represents a group of inherited disorders characterized by progressive peripheral vision loss and nyctalopia that can lead to central vision loss. There is currently no cure for retinitis pigmentosa, although the progression of the disease can be attenuated by dietary vitamin A supplementation.

Apoptosis in rod and cone photoreceptor cells is a critical process of retinal degeneration in RP and represent a major cause of adult blindness.

In one aspect the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from Retinitis pigmentosa (RP), comprising topically (non-invasively) administering to the surface of the eye of the subject an effective amount of at least one chemically modified siRNA and a pharmaceutically acceptable carrier. In some embodiments the target ocular mRNA is product of a gene selected from a gene listed in Table A4, the gene transcribed into mRNA set forth in any one of SEQ ID NOS: 3, 14, 26-35, 54-57. In some embodiments the target ocular mRNA is product of a gene selected from the group consisting of CASP1, CASP3, CASP12, RTP801, RTP801L, Calpain S1, PARP1, AIF, NOS1, NOS2, XIAP and SHC1-SHC. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiments the siRNA targets mRNA set forth in SEQ ID NOS:56-57. In some embodiments the siRNA sense and antisense strands are selected from sequences in Table 11, set forth in SEQ ID NOS: 9517-10516.

In another aspect the present invention provides a method of treating Retinitis pigmentosa (RP) in a subject in need of treatment, comprising topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one chemically modified siRNA which inhibits expression of a target gene in the eye of the subject. In some embodiments the target gene is a human gene listed in Table A4, transcribed into mRNA set forth in any one of SEQ ID NOS: 3, 14, 26-35, 54-57. In some embodiments the gene is a human gene selected from selected from the group consisting of CASP1, CASP3, CASP12, RTP801, RTP801L, Calpain S1, PARP1, AIF, NOS1, NOS2, XIAP and SHC1-SHC. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiments the siRNA targets

and inhibits mRNA set forth in SEQ ID NOS:56-57. In some embodiments the siRNA sense and antisense strands are selected from sequences in Table 11, set forth in SEQ ID NOS: 9517-10516.

Diabetic Retinopathy

Diabetic retinopathy is a complication of diabetes and a leading cause of blindness. It occurs when diabetes damages the tiny blood vessels inside the retina. Diabetic retinopathy has four stages:

- Mild Nonproliferative Retinopathy: microaneurysms in the retina's blood vessels.

- Moderate Nonproliferative Retinopathy. As the disease progresses, some blood vessels that nourish the retina are blocked.

- Severe Nonproliferative Retinopathy. Many more blood vessels are blocked, depriving several areas of the retina of a blood supply, which is overcome by the growth of new blood vessels.

- Proliferative Retinopathy. The new blood vessels grow along the retina and along the surface of the vitreous gel. When the vessels leak blood, severe vision loss and even blindness can result.

During pregnancy, diabetic retinopathy may be a problem for women with diabetes.

In one aspect the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from diabetic retinopathy, comprising topically (non-invasively) administering to the surface of the eye of the subject an effective amount of at least one chemically modified siRNA and a pharmaceutically acceptable carrier. In some embodiments the target ocular mRNA is product of a human gene listed in Table A3 having mRNA set forth in any one of SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiment the target ocular mRNA set forth in any one of SEQ ID NOS:48-53. In some embodiments the siRNA sense and antisense strands are selected from sequences in Tables 4, 28-32 set forth in SEQ ID NOS: 2669-3648 and 25575-29594.

In another aspect the present invention provides a method of treating diabetic retinopathy in a subject in need of treatment, comprising topically (non-invasively) administering to the surface eye of the subject a therapeutically effective amount of at least one chemically

modified siRNA which inhibits expression of a target gene in the eye of the subject. In some embodiments the target gene is a human gene listed in Table A3, having mRNA set forth in any one SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiment the target ocular mRNA set forth in any one of SEQ ID NOS:48-53. In some embodiments the siRNA sense and antisense strands are selected from sequences in Tables 4, 28-32 set forth in SEQ ID NOS: 2669-3648 and 25575-29594.

Without wishing to be bound to theory, blood vessels damaged from diabetic retinopathy can cause vision loss in two ways: Fragile, abnormal blood vessels can develop and leak blood into the center of the eye, blurring vision. This is proliferative retinopathy and is the fourth and most advanced stage of the disease. Fluid can leak into the center of the macula, resulting in blurred vision. This condition is called macular edema. It can occur at any stage of diabetic retinopathy, although it is more likely to occur as the disease progresses and is known as diabetic macular edema (DME).

Age related Macular Degeneration (AMD)

The most common cause of decreased best-corrected, vision in individuals over 65 years of age in the United States is the retinal disorder known as age-related macular degeneration (AMD). The area of the eye affected by AMD is the macula, a small area in the center of the retina, composed primarily of photoreceptor cells. As AMD progresses, the disease is characterized by loss of sharp, central vision. So-called "dry" AMD accounts for about 85% - 90% of AMD patients and involves alterations in eye pigment distribution, loss of photoreceptors and diminished retinal function due to overall atrophy of cells. "Wet" AMD involves proliferation of abnormal choroidal vessels leading to clots or scars in the sub-retinal space. Thus, the onset of "wet" AMD occurs because of the formation of an abnormal choroidal neovascular network (choroidal neovascularization, CNV) beneath the neural retina. The newly formed blood vessels are excessively leaky. This leads to accumulation of subretinal fluid and blood leading to loss of visual acuity. Eventually, there is total loss of functional retina in the involved region, as a large disciform scar involving choroids and retina forms. While dry AMD patients may retain vision of decreased quality, wet AMD often results in blindness. (Hamdi & Kenney, Frontiers in Bioscience, e305-314, May 2003).

In one aspect the present invention provides a method of attenuating expression of a target ocular mRNA in the eye of a subject suffering from AMD or DME, comprising topically (non-invasively) administering to the surface of the eye of the subject an effective amount of at least one chemically modified siRNA and a pharmaceutically acceptable carrier. In some embodiments the target ocular mRNA is product of a human gene listed in Table A3, having mRNA set forth in any one of SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiment the target ocular mRNA is product of a human CTSD, RTP801 and BNIP3.

In another aspect the present invention provides a method of treating AMD or DME in a subject in need of treatment, comprising topically (non-invasively) administering to the surface of the eye of the subject a therapeutically effective amount of at least one chemically modified siRNA which inhibits expression of a target gene in the eye of the subject. In some embodiments the target gene is a human gene listed in Table A3, having mRNA set forth in any one of SEQ ID NOS:1-2, 3, 5, 6-7, 8-10, 12, 13, 24-25, 26-27, 30-35, 45-53. In a currently preferred embodiment the siRNA is formulated for delivery as eye drops. In certain preferred embodiment the target human gene is a human CTSD, RTP801 and BNIP3.

Additional Ocular conditions to be treated by compounds of the present invention

Viral and bacterial conditions

Viral and bacterial conditions relating to ocular tissues can be treated by the compounds of the present invention. Conjunctivitis and other eyelid diseases or conditions can be treated, in particular by administering according to the methods of the present invention oligonucleotides such as siRNAs which target genes which are essential for replication and/or survival of the organisms which cause such conditions.

Vision Loss Associated with Tumors

In another aspect the present invention provides method of treating vision loss associated with a tumor in a subject in need thereof which comprises topically and non-invasively administering to the surface of the eye of the subject a therapeutically effective amount of at least one chemically modified siRNA which inhibits expression of at least one gene associated with the tumor in the subject in an amount effective to treat the vision loss.

Tumors that cause vision loss, according to the present invention, include both malignant neoplasms (cancers) and benign tumors. Tumors include tumors of any ocular tissue or

any type of ocular cell, including, but not limited to, Choroidal tumors, Conjunctival tumors, Eyelid tumors, Infiltrative Intraocular tumors, Iris tumors, Metastatic Ocular tumors, Optic Nerve tumors, Orbital tumors and Retinal tumors. More specifically, a non exhaustive list of tumors and cancers which the present invention aims to treat includes Choroidal Tumors such as Choroidal Hemangioma, Choroidal Melanoma, Choroidal Metastasis, Choroidal Nevus, Choroidal Osteoma, Ciliary Body Melanoma and Nevus of Ota; Conjunctival Tumors such as Conjunctival Kaposi's Sarcoma, Epibulbar Dermoid, Lymphoma of the Conjunctiva, Melanoma and PAM with Atypia, Pigmented Conjunctival Tumors, Pingueculum, Pterygium, Squamous Carcinoma and Intraepithelial Neoplasia of the Conjunctiva; Eyelid Tumors such as Basal Cell Carcinoma, Capillary Hemangioma, Hydrocystoma, Nevus at the Eyelid Margin, Seborrheic Keratosis, Malignant Melanoma of the Eyelid, Sebaceous Carcinoma of the Eyelid and Squamous Carcinoma of the Eyelid; Infiltrative Intraocular Tumors such as Chronic Lymphocytic Leukemia, Infiltrative Choroidopathy and Intraocular Lymphoma; Iris Tumors such as Anterior Uveal Metastasis, Iris Cysts, Iris Melanocytoma, Iris Melanoma and Pearl Cyst of the Iris; Metastatic Ocular Tumors such as Metastatic Choroidal Melanoma; Optic Nerve Tumors such as Choroidal Melanoma Affecting the Optic Nerve, Circumpapillary Metastasis with Optic Neuropathy, Optic Nerve Melanocytoma and Optic Nerve Sheath Meningioma; Orbital Tumors such as Adenoid Cystic Carcinoma of the Lacrimal Gland, Cavernous Hemangioma of the Orbit, Lymphangioma of the Orbit, Orbital Mucocele, Orbital Pseudotumor, Orbital Rhabdomyosarcoma, Periocular Hemangioma of Childhood and Sclerosing Orbital Pseudotumor; Retinal Tumors such as Retinal Pigment Epithelial (RPE) Hypertrophy, Retinal Pigment Epithelium (RPE) Tumors, Retinoblastoma and von Hippel Angioma.

Pharmaceutical Compositions

While it may be possible for the oligonucleotide compounds of the present invention to be administered as the raw chemical, it is preferable to administer them as a pharmaceutical composition. Accordingly the present invention provides a pharmaceutical composition comprising one or more of the compounds of the invention; and a pharmaceutically acceptable carrier. This composition may comprise a mixture of two or more different oligonucleotides / siRNAs.

The invention further provides a pharmaceutical composition comprising at least one compound of the invention covalently or non-covalently bound to one or more

compounds of the invention in an amount effective to inhibit one or more genes as disclosed above; and a pharmaceutically acceptable carrier. The compound may be processed intracellularly by endogenous cellular complexes to produce one or more oligoribonucleotides of the invention.

The invention further provides a pharmaceutical composition comprising a pharmaceutically acceptable carrier and one or more of the compounds of the invention in an amount effective to down-regulate expression in of a human gene in an eye of a subject suffering from an eye disease or disorder.

The present invention also provides for a process of preparing a pharmaceutical composition, which comprises:

providing one or more compounds of the invention ; and

admixing said compound with a pharmaceutically acceptable carrier.

The pharmaceutically acceptable carrier is preferably selected by one with skill in the art for ophthalmological administration.

In various embodiments the pharmaceutical composition of the invention comprises at least one siRNA compound of the invention, or salt thereof, up to 99% by weight, mixed with a physiologically acceptable ophthalmic carrier medium such as water, sodium chloride, buffer, saline (e.g. phosphate buffered saline (PBS)), mannitol, and the like, and combinations thereof, to form an aqueous, sterile ophthalmic suspension or solution.

The pharmaceutical composition further optionally comprises at least one ophthalmologically acceptable preservative, such as for example benzalkonium chloride. Further, the ophthalmic pharmaceutical composition may include an ophthalmologically acceptable surfactant to assist in dissolving the siRNA.

Ophthalmic pharmaceutical composition of the invention may be prepared by dissolving or admixing one or more of the interfering RNA with an ophthalmologically acceptable carrier, such as for example a physiologically acceptable isotonic aqueous buffer.

In a preferred embodiment, the siRNA compound used in the preparation of an ophthalmological composition is admixed with an ophthalmologically acceptable carrier in a pharmaceutically effective dose. In certain preferred embodiments the ophthalmologically acceptable carrier is PBS.

In some embodiments the pharmaceutical ophthalmic compositions of the invention further comprise additional pharmaceutically active agents or a combination of pharmaceutically active agent, such as non-steroidal anti-inflammatory drugs, corticosteroids, antibiotics, and the like.

Additionally, the invention provides a method of inhibiting the expression of a gene of the present invention by at least 20% as compared to a control comprising contacting an mRNA transcript of the gene of the present invention with one or more of the compounds of the invention. In some embodiments an active siRNA compound inhibits gene expression at a level of at least 20%, 30%, 40%, 50%, 60% or 70% as compared to control. In certain preferred embodiments inhibition is at a level of at least 75%, 80% or 90% as compared to control.

In one embodiment the oligoribonucleotide is inhibiting one or more of the genes of the present invention, whereby the inhibition is selected from the group comprising inhibition of gene function, inhibition of polypeptide and inhibition of mRNA expression.

In one embodiment the compound inhibits a polypeptide, whereby the inhibition is selected from the group comprising inhibition of function (which may be examined by an enzymatic assay or a binding assay with a known interactor of the native gene / polypeptide, *inter alia*), inhibition of protein (which may be examined by Western blotting, ELISA or immuno-precipitation, *inter alia*) and inhibition of mRNA expression (which may be examined by Northern blotting, quantitative RT-PCR, in-situ hybridization or microarray hybridization, *inter alia*).

Combination therapy

The compounds of the present invention can be administered alone or in combination with another therapeutic agent useful in treating an eye disorder or disease.

In some embodiments the pharmaceutical ophthalmic compositions of the invention further comprise additional pharmaceutically active agents or a combination of pharmaceutically active agent, such as oligonucleotide, e.g. siRNA, non-steroidal anti-inflammatory drug, corticosteroid, antibiotic, and the like.

In one embodiment, the co-administration of two or more therapeutic agents achieves a synergistic effect, i.e., a therapeutic affect that is greater than the sum of the therapeutic

effects of the individual components of the combination. In another embodiment, the co-administration of two or more therapeutic agents achieves an additive effect.

The active ingredients that comprise a combination therapy may be administered together via a single dosage form or by separate administration of each active agent. In certain embodiments, the first and second therapeutic agents are administered in a single dosage form. The agents may be formulated into a single solution for topical administration. Alternatively, the first therapeutic agent and the second therapeutic agents may be administered as separate compositions. The first active agent may be administered at the same time as the second active agent or the first active agent may be administered intermittently with the second active agent. The length of time between administration of the first and second therapeutic agent may be adjusted to achieve the desired therapeutic effect. For example, the second therapeutic agent may be administered only a few minutes (e.g., 1, 2, 5, 10, 30, or 60 min) or several hours (e.g., 2, 4, 6, 10, 12, 24, or 36 hr) after administration of the first therapeutic agent. In certain embodiments, it may be advantageous to administer more than one dosage of one of the therapeutic agents between administrations of the second therapeutic agent. For example, the second therapeutic agent may be administered at 2 hours and then again at 10 hours following administration of the first therapeutic agent. Alternatively, it may be advantageous to administer more than one dosage of the first therapeutic agent between administrations of the second therapeutic agent. In certain embodiments it is preferred that the therapeutic effects of each active ingredient overlap for at least a portion of the duration of each therapeutic agent so that the overall therapeutic effect of the combination therapy is attributable in part to the combined or synergistic effects of the combination therapy.

Delivery

The siRNA molecules as disclosed herein are delivered to the target tissue of the eye by direct application of the molecules prepared with a carrier or a diluent.

The term "naked siRNA" refers to siRNA molecules that are free from any delivery vehicle or formulation that acts to assist, promote or facilitate entry into the cell, including viral sequences, viral particles, liposome formulations, lipofectin or precipitating agents and the like. For example, siRNA in PBS or an acceptable ophthalmological formulation is "naked siRNA". In certain embodiments of the invention the siRNA is delivered as naked siRNA. For certain applications, a formulation that

increases the residence time of the siRNA in the eye or nasal passage may be desired, for example, by addition of a polymer or viscosity enhancing agent.

Delivery systems aimed specifically at the enhanced and improved delivery of siRNA into mammalian cells have been developed, (see, for example, Shen et al FEBS Let. 2003, 539:111-114; Xia et al., Nat. Biotech. 2002, 20:1006-1010; Reich et al., Mol. Vision 2003, 9: 210-216; Sorensen et al., J. Mol. Biol. 2003. 327: 761-766; Lewis et al., Nat. Gen. 2002, 32: 107-108 and Simeoni et al., NAR 2003, 31,11: 2717-2724).

The pharmaceutically acceptable carriers, solvents, diluents, excipients, adjuvants and vehicles as well as implant carriers generally refer to inert, non-toxic solid or liquid fillers, diluents or encapsulating material not reacting with the active ingredients of the invention and they include liposomes and microspheres. Examples of delivery systems useful in the present invention include US Patent Nos. 5,225,182; 5,169,383; 5,167,616; 4,959,217; 4,925,678; 4,487,603; 4,486,194; 4,447,233; 4,447,224; 4,439,196; and 4,475,196. Many other such implants, delivery systems, and modules are well known to those skilled in the art.

A review of the considerations to be taken into account in the preparation of a pharmaceutical composition for topical ocular delivery or intranasal delivery, can be found in Bar-Ilan and Neumann, in Textbook of Ocular Pharmacology, Zimmerman et al eds., Lippencott-Raven 1997.

Topical routes of administration are preferably employed for providing the subject with an effective dosage of the therapeutic siRNA compounds. Dosage forms may include dispersions, suspensions, solutions, ointments and the like. In certain preferred embodiments the pharmaceutical composition of the invention comprising at least one siRNA is delivered as eye drops. In another embodiment the pharmaceutical composition of the invention comprising at least one siRNA is delivered as a spray or mist. For example US Patent No. 4,052,985 discloses ophthalmic spray applicators.

In certain embodiments of the present invention the siRNA reaches its target cell locally, for example direct contact or by diffusion through cells, tissue or intracellular fluid. The siRNAs or pharmaceutical compositions of the present invention are administered and dosed in accordance with good medical practice, taking into account the clinical condition of the individual patient, the disease to be treated, scheduling of administration, patient age, sex, body weight and other factors known to medical practitioners.

The "therapeutically effective dose" for purposes herein is thus determined by such considerations as are known in the art. The dose must be effective to achieve improvement including but not limited to an improved course of disease, more rapid recovery, improvement of symptoms, elimination of symptoms and other indicators as are selected as appropriate measures by those skilled in the art. The siRNA of the invention can be administered in a single dose or in multiple doses.

In general, the active dose of compound for humans is in the range of from 1ng/kg to about 20-100 mg/kg body weight per day, preferably about 0.01 mg/kg to about 2-10 mg/kg body weight per day, in a regimen of one dose per day or twice or three or more times per day for a single dose or multiple dose regimen. In certain embodiments the siRNA compounds are formulated for topical application to the eye as eye drops and comprise about 5 μg/μl to about 60 μg/μl by volume of the composition, about 6.6 μg/μl by volume of the composition, about 25 μg/μl by volume of the composition, about 33.3 μg/μl by volume of the composition, about 50 μg/μl by volume of the composition.

The pH of the formulation is about pH 5 to about pH 8, or about pH 5 to about pH 7, or from about pH 5 to about pH 6. In certain embodiments the pH is about Ph 5.9, about pH 6.15, about pH 6.25, about pH 6.3, about pH 6.5, about pH 7.25. The compounds of the present invention can be administered topically to the surface of the eye. It should be noted that the compound is preferably applied as the compound or as pharmaceutically acceptable salt active ingredient in combination with pharmaceutically acceptable carriers, solvents, diluents, excipients, adjuvants and or vehicles. As disclosed herein the preferred method of delivery is topical application of an ophthalmic composition to the eye.

Liquid forms may be prepared for drops or spray. The liquid compositions include aqueous solutions, with and without organic co-solvents, aqueous or oil suspensions, emulsions with edible oils, as well as similar pharmaceutical vehicles.

These compounds may be administered to humans and other animals for therapy by any suitable route of administration to the eye, as by, for example, a spray or drops, and topically, as by ointments, or drops.

Methods of Treatment

In one aspect, the present invention relates to a method for the treatment of a subject in need of treatment for an eye disease or disorder associated with expression of a gene

listed in Tables A1-A4 in the eye of the subject, comprising topically and non-invasively administering to the subject an amount of a chemically modified siRNA which inhibits expression of at least one of the genes. In certain preferred embodiments more than one siRNA compound to one or more than one gene target is administered.

In preferred embodiments the subject being treated is a warm-blooded animal and, in particular, mammals including human.

The methods of the invention comprise topically and non-invasively administering to the eye of the subject one or more inhibitory compounds which down-regulate expression of the genes of Tables A1-A4; and in particular siRNA in a therapeutically effective dose so as to thereby treat the subject.

The term "treatment" refers to both therapeutic treatment and prophylactic or preventative measures, wherein the object is to prevent or slow down, attenuate the related eye disorder as listed above. Those in need of treatment include those already experiencing the disease or condition, those prone to having the disease or condition, and those in which the disease or condition is to be prevented. The compounds of the invention may be administered before, during or subsequent to the onset of the eye disease or condition or symptoms associated therewith. In cases where treatment is for the purpose of prevention, then the present invention relates to a method for delaying the onset of or averting the development of the disease or disorder.

Ocular disorders include Acute Zonal Occult Outer Retinopathy, Adie Syndrome, Age Related Macular Degeneration, Amblyopia, Aniridia, Anisocoria, Anophthalmos, Aphakia, Blepharitis, Blepharoptosis, Blepharospasm, Blindness, Cataract, Chalazion, Chorioretinitis, Choroideremia, Coloboma, Conjunctival Diseases, Conjunctivitis, Corneal Diseases, Corneal Dystrophies, Corneal Edema, Corneal Ulcer, Diabetic Macular Edema, Diabetic Retinopathy, Diplopia, Distichiasis, Dry Eye Syndromes, Duane Retraction Syndrome, Ectropion, Endophthalmitis, Entropion, Esotropia, Exfoliation Syndrome, Exotropia, Eye Abnormalities, Eye Neoplasms, General Fibrosis Syndrome, Glaucomas, Gyrate Atrophy, Hemianopsia, Hermanski-Pudlak Syndrome, Hordeolum, Horner Syndrome, Hyperopia, Hyphema, Iritis, Kearns-Sayer Syndrome, Keratitis, Keratoconus, Lacrimal Apparatus Diseases, Lacrimal Duct Obstruction, Lens Diseases, Macular Degeneration, Nystagmus, Pathologic, Ocular Motility Disorders, Oculomotor Nerve Diseases, Ophthalmoplegia, Optic Atrophies, Hereditary, Optic Nerve Diseases, Optic Neuritis, Ischemic Optic Neuropathy, Orbital Cellulitis, Papilledema, Presbyopia,

Pterygium, Pupil Disorders, Refractive Errors, Retinal Detachment, Retinal Diseases, Retinal Vein Occlusion, Retinal Blastoma, Retinitis Pigmentosa, Retinopathy of Prematurity, Retinoschisis, Scleritis, Scotoma, Strabismus, Sjögrens Syndrome, Thygeson's Superficial Punctate Keratitis, Trachoma, Uveitis.

Oligonucleotides

The oligonucleotides useful in the methods disclosed herein are preferably double stranded oligonucleotides and siRNA compounds and include unmodified and chemically and/ or structurally modified compounds.

The selection and synthesis of siRNA corresponding to known genes has been widely reported; see for example Ui-Tei et al., J Biomed Biotechnol. 2006; 65052; Chalk et al., BBRC. 2004, 319(1):264-74; Sioud & Leirdal, Met. Mol Biol. 2004, 252:457-69; Levenkova et al., Bioinform. 2004, 20(3):430-2; Ui-Tei et al., NAR. 2004, 32(3):936-48. For examples of the use and production of modified siRNA see for example Braasch et al., Biochem. 2003, 42(26):7967-75; Chiu et al., RNA. 2003, 9(9):1034-48; PCT Publication Nos. WO 2004/015107 and WO 02/44321 and US Patent Nos. 5,898,031 and 6,107,094.

The present invention provides double-stranded oligonucleotides (e.g. siRNAs), which down-regulate the expression of a desired gene. A siRNA of the invention is a duplex oligoribonucleotide in which the sense strand is derived from the mRNA sequence of the desired gene, and the antisense strand is complementary to the sense strand. In general, some deviation from the target mRNA sequence is tolerated without compromising the siRNA activity (see e.g. Czauderna et al., NAR. 2003, 31(11):2705-2716). An siRNA of the invention inhibits gene expression on a post-transcriptional level with or without destroying the mRNA. Without being bound by theory, siRNA may target the mRNA for specific cleavage and degradation and/ or may inhibit translation from the targeted message.

In some embodiments the siRNA is blunt ended, i.e. Z and Z' are absent, on one or both ends. More specifically, the siRNA may be blunt ended on the end defined by the 5'-terminus of the first strand and the 3'-terminus of the second strand, and/or the end defined by the 3'-terminus of the first strand and the 5'-terminus of the second strand.

In other embodiments at least one of the two strands may have an overhang of at least one nucleotide at the 5'-terminus; the overhang may consist of at least one

deoxyribonucleotide. At least one of the strands may also optionally have an overhang of at least one nucleotide at the 3'-terminus. The overhang may consist of from about 1 to about 5 nucleotides.

The length of RNA duplex is from about 18 to about 40 ribonucleotides, preferably 19, 21 or 23 ribonucleotides. Further, the length of each strand may independently have a length selected from the group consisting of about 15 to about 40 bases, preferably 18 to 23 bases and more preferably 19, 21 or 23 ribonucleotides. In some embodiments a 20 or 22-mer molecule may be contemplated.

In certain embodiments the complementarity between said first strand and the target nucleic acid is perfect (100%). In some embodiments, the strands are substantially complementary, i.e. having one, two or up to three mismatches between said first strand and the target nucleic acid. Substantially complementary refers to complementarity of greater than about 84%, to another sequence. For example in a duplex region consisting of 19 base pairs one mismatch results in 94.7% complementarity, two mismatches results in about 89.5% complementarity and 3 mismatches results in about 84.2% complementarity, rendering the duplex region substantially complementary. Accordingly substantially identical refers to identity of greater than about 84%, to another sequence.

The first strand and the second strand may be linked by a loop structure, which may be comprised of a non-nucleic acid polymer such as, *inter alia*, polyethylene glycol. Alternatively, the loop structure may be comprised of a nucleic acid, including modified and non-modified ribonucleotides and modified and non-modified deoxyribonucleotides.

Further, the 5'-terminus of the first strand of the siRNA may be linked to the 3'-terminus of the second strand, or the 3'-terminus of the first strand may be linked to the 5'-terminus of the second strand, said linkage being via a nucleic acid linker typically having a length between 2-100 nucleobases, preferably about 2 to about 30 nucleobases.

In preferred embodiments of the compounds of the invention having alternating ribonucleotides modified in at least one of the antisense and the sense strands of the compound, for 19-mer and 23-mer oligomers the ribonucleotides at the 5' and 3' termini of the antisense strand are modified in their sugar residues, and the ribonucleotides at the 5' and 3' termini of the sense strand are unmodified in their sugar residues. For 21-mer oligomers the ribonucleotides at the 5' and 3' termini of the sense strand are modified in their sugar residues, and the ribonucleotides at the 5' and 3' termini of the antisense

strand are unmodified in their sugar residues, or may have an optional additional modification at the 3' terminus. As mentioned above, it is preferred that the middle nucleotide of the antisense strand is unmodified.

Additionally, the invention provides siRNA comprising a double stranded nucleic acid molecule wherein 1, 2, or 3 of the nucleotides in one strand or both strands are substituted thereby providing at least one base pair mismatch. The substituted nucleotides in each strand are preferably in the terminal region of one strand or both strands.

According to one preferred embodiment of the invention, the antisense and the sense strands of the oligonucleotide / siRNA are phosphorylated only at the 3'-terminus and not at the 5'-terminus. According to another preferred embodiment of the invention, the antisense and the sense strands are non-phosphorylated. According to yet another preferred embodiment of the invention, the 5' most ribonucleotide in the sense strand is modified to abolish any possibility of *in vivo* 5'-phosphorylation.

Any siRNA sequence disclosed herein can be prepared having any of the modifications / structures disclosed herein. The combination of sequence plus structure is novel and can be used in the treatment of the conditions disclosed herein.

siRNA Structures

The selection and synthesis of siRNA corresponding to known genes has been widely reported; (see for example Ui-Tei et al., J Biomed Biotech. 2006; 2006: 65052; Chalk et al., BBRC. 2004, 319(1): 264-74; Sioud & Leirdal, Met. Mol Biol.; 2004, 252:457-69; Levenkova et al., Bioinform. 2004, 20(3):430-2; Ui-Tei et al., NAR. 2004, 32(3):936-48).

For examples of the use of, and production of, modified siRNA see, for example, Braasch et al., Biochem. 2003, 42(26):7967-75; Chiu et al., RNA, 2003, 9(9):1034-48; PCT publications WO 2004/015107 (atugen AG) and WO 02/44321 (Tuschl et al). US Patent Nos. 5,898,031 and 6,107,094, teach chemically modified oligomers. US Patent Publication Nos. 2005/0080246 and 2005/0042647 relate to oligomeric compounds having an alternating motif and dsRNA compounds having chemically modified internucleoside linkages, respectively.

Other modifications have been disclosed. The inclusion of a 5'-phosphate moiety was shown to enhance activity of siRNAs in Drosophila embryos (Boutla, et al., Curr. Biol. 2001, 11:1776-1780) and is required for siRNA function in human HeLa cells (Schwarz et al., Mol. Cell, 2002, 10:537-48). Amarzguioui et al., (NAR, 2003, 31(2):589-95)

showed that siRNA activity depended on the positioning of the 2'-O-methyl (2'-OMe) modifications. Holen et al (NAR. 2003, 31(9):2401-07) report that an siRNA having small numbers of 2'-OMe modified nucleosides gave good activity compared to wild type but that the activity decreased as the numbers of 2'-OMe modified nucleosides was increased. Chiu and Rana (RNA. 2003, 9:1034-48) teach that incorporation of 2'-OMe modified nucleosides in the sense or antisense strand (fully modified strands) severely reduced siRNA activity relative to unmodified siRNA. The placement of a 2'-OMe group at the 5'-terminus on the antisense strand was reported to severely limit activity whereas placement at the 3'-terminus of the antisense and at both termini of the sense strand was tolerated (Czauderna et al., NAR. 2003, 31(11):2705-16; WO 2004/015107). The molecules of the present invention offer an advantage in that they are non-toxic and may be formulated as pharmaceutical compositions for treatment of various diseases.

The nucleotides can be selected from naturally occurring or synthetic modified bases. Naturally occurring bases include adenine, guanine, cytosine, thymine and uracil. Modified bases of nucleotides include inosine, xanthine, hypoxanthine, 2- aminoadenine, 6-methyl, 2-propyl and other alkyl adenines, 5-halo uracil, 5-halo cytosine, 6-aza cytosine and 6-aza thymine, pseudo uracil, 4- thiouracil, 8-halo adenine, 8-aminoadenine, 8-thiol adenine, 8-thiolalkyl adenines, 8-hydroxyl adenine and other 8-substituted adenines, 8-halo guanines, 8-amino guanine, 8-thiol guanine, 8-thioalkyl guanines, 8- hydroxyl guanine and other substituted guanines, other aza and deaza adenines, other aza and deaza guanines, 5-trifluoromethyl uracil and 5- trifluoro cytosine. Molecules comprising one or more abasic moiety (unconventional or pseudonucleotide) are encompassed by the present invention, as well as molecules comprising alternating RNA and DNA nucleotides.

In addition, analogues of polynucleotides can be prepared wherein the structure of one or more nucleotide is fundamentally altered and better suited as therapeutic or experimental reagents. An example of a nucleotide analog is a peptide nucleic acid (PNA) wherein the deoxyribose (or ribose) phosphate backbone in DNA (or RNA) is replaced with a polyamide backbone which is similar to that found in peptides. PNA analogs have been shown to be resistant to enzymatic degradation and to have extended lives *in vivo* and *in vitro*.

Possible modifications to the sugar residue are manifold and include 2'-O alkyl, locked nucleic acid (LNA), glycol nucleic acid (GNA), threose nucleic acid (TNA), arabinoside,

altritol (ANA) and other, 6-membered sugars including morpholinos, and cyclohexinyls. Further, said molecules may additionally contain modifications on the sugar, such as 2' alkyl, 2' fluoro, 2'O allyl, 2'amine and 2'alkoxy. Additional sugar modifications are discussed herein.

LNA compounds are disclosed in International Patent Publication Nos. WO 00/47599, WO 99/14226, and WO 98/39352. Examples of siRNA compounds comprising LNA nucleotides are disclosed in Elmen et al., (NAR 2005. 33(1):439-447) and in PCT Patent Publication No. WO 2004/083430.

The compounds of the present invention can be synthesized using one or more inverted nucleotides, for example inverted thymidine or inverted adenine (for example see Takei, et al., 2002. JBC 277(26):23800-06).

Backbone modifications, such as ethyl (resulting in a phospho-ethyl triester); propyl (resulting in a phospho-propyl triester); and butyl (resulting in a phospho-butyl triester) are also possible. Other backbone modifications include polymer backbones, cyclic backbones, acyclic backbones, thiophosphate-D-ribose backbones, amidates, and phosphonoacetate derivatives. Certain structures include siRNA compounds having one or a plurality of 2'-5' internucleotide linkages (bridges or backbone).

Further, the inhibitory nucleic acid molecules of the present invention may comprise one or more gaps and/or one or more nicks and/or one ore more mismatches. Without wishing to be bound by theory, gaps, nicks and mismatches have the advantage of partially destabilizing the nucleic acid / siRNA, so that it may be more easily processed by endogenous cellular machinery such as DICER, DROSHA or RISC into its inhibitory components.

The molecules of the present invention may comprise siRNAs, synthetic siRNAs, shRNAs and synthetic shRNAs, in addition to other nucleic acid sequences or molecules which encode such molecules or other inhibitory nucleotide molecules.

The compounds of the present invention may further comprise an end modification. A biotin group may be attached to either the most 5' or the most 3' nucleotide of the first and/or second strand or to both ends. In a more preferred embodiment the biotin group is coupled to a polypeptide or a protein. It is also within the scope of the present invention that the polypeptide or protein is attached through any of the other aforementioned modifications.

The various end modifications as disclosed herein are preferably located at the ribose moiety of a nucleotide of the nucleic acid as disclosed herein. More particularly, the end modification may be attached to or replace any of the OH-groups of the ribose moiety,

including but not limited to the 2'OH, 3'OH and 5'OH position, provided that the nucleotide thus modified is a terminal nucleotide. Inverted abasic or abasic are nucleotides, either deoxyribonucleotides or ribonucleotides which do not have a nucleobase moiety. This kind of compound is, inter alia, described in Sternberger, et al., (Antisense Nucleic Acid Drug Dev, 2002.12, 131-43).

In the context of the present invention, a gap in a nucleic acid refers to the absence of one or more internal nucleotides in one strand, while a nick in a nucleic acid refers to the absence of an internucleotide linkage between two adjacent nucleotides in one strand. Any of the molecules of the present invention may contain one or more gaps and/or one or more nicks. Further provided by the present invention is an siRNA encoded by any of the molecules disclosed herein, a vector encoding any of the molecules disclosed herein, and a pharmaceutical composition comprising any of the molecules disclosed herein or the vectors encoding them; and a pharmaceutically acceptable carrier.

Particular molecules to be administered according to the methods of the present invention are disclosed below under the heading "structural motifs". For the sake of clarity, any of these molecules can be administered according to any of the methods of the present invention.

Structural motifs

As disclosed herein the siRNA compounds that are chemically and or structurally modified according to one of the following modifications set forth in Structures below or as tandem siRNA or RNAstar (see below) are useful in the methods of the present invention. Tables 1-36 provide sense and antisense oligonucleotide pairs, set forth in SEQ ID NOS:59-33596, useful in preparing corresponding siRNA compounds.

In one aspect the present invention provides a compound set forth as Structure (A):

(A) 5' $(N)_x - Z$ 3' (antisense strand)

3' $Z'-(N')_y$ 5' (sense strand)

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein each of x and y is an integer between 18 and 40;

wherein each of Z and Z' may be present or absent, but if present is 1-5 consecutive nucleotides covalently attached at the 3' terminus of the strand in which it is present; and

and wherein the sequence of $(N)_x$ comprises an antisense sequence substantially complementary to about 18 to about 40 consecutive ribonucleotides in the mRNA of a gene expressed in the retina and associated with an ocular disease or disorder. In some embodiments the mRNA is set forth in any one of SEQ ID NOS:1-58.

In certain embodiments the present invention provides a compound having structure B

(B) 5' (N)x 3' antisense strand

3' (N')y 5' sense strand

wherein each of $(N)_x$ and $(N')_y$ is an oligomer in which each consecutive N or N' is an unmodified ribonucleotide or a modified ribonucleotide joined to the next N or N' by a covalent bond;

wherein each of x and y =19, 21 or 23 and $(N)_x$ and $(N')_y$ are fully complementary

wherein alternating ribonucleotides in each of $(N)_x$ and $(N')_y$ comprise 2'-OMe sugar modified ribonucleotides;

wherein the sequence of $(N')_y$ is a sequence complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence substantially complementary to about 18 to about 40 consecutive ribonucleotides in the mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments each of $(N)_x$ and $(N')_y$ is independently phosphorylated or non-phosphorylated at the 3' and 5' termini.

In certain embodiments of the invention, alternating ribonucleotides are modified in both the antisense and the sense strands of the compound.

In certain embodiments wherein each of x and y =19 or 23, each N at the 5' and 3' termini of $(N)_x$ is modified; and

each N' at the 5' and 3' termini of $(N')_y$ is unmodified.

In certain embodiments wherein each of x and y =21, each N at the 5' and 3' termini of $(N)_x$ is unmodified; and each N' at the 5' and 3' termini of $(N')_y$ is modified.

In particular embodiments, when x and y =19, the siRNA consists of a 2'OMe sugar modified ribonucleotides on the first, third, fifth, seventh, ninth, eleventh, thirteenth, fifteenth, seventeenth and nineteenth nucleotide of the antisense strand $(N)_x$, and 2'-OMe sugar modified ribonucleotides in the second, fourth, sixth, eighth, tenth, twelfth, fourteenth, sixteenth and eighteenth nucleotide of the sense strand $(N')_y$. In various embodiments these particular siRNA compounds are blunt ended at both termini.

In some embodiments, the present invention provides a compound having Structure (C):

(C) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide independently selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein in (N)x the nucleotides are unmodified or (N)x comprises alternating 2' O Me sugar modified ribonucleotides and unmodified ribonucleotides; and wherein the ribonucleotide located at the middle position of (N)x being 2'OMe sugar modified or unmodified, preferably unmodified;

wherein (N')y comprises unmodified ribonucleotides further comprising one modified nucleotide at a terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a mirror nucleotide, a bicyclic nucleotide, a 2'-sugar modified nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein if more than one nucleotide is modified in (N')y, the modified nucleotides may be consecutive;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ comprises a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence substantially complementary to about 18 to about 40 consecutive ribonucleotides in the mRNA set forth in any one of SEQ ID NOS:1-58.

In particular embodiments, x=y=19 and in (N)x each modified ribonucleotide is a 2'-OMe sugar modified and the ribonucleotide located at the middle of (N)x is unmodified. Accordingly, in a compound wherein x=19, (N)x comprises 2'-O-methyl sugar modified ribonucleotides at positions 1, 3, 5, 7, 9, 11, 13, 15, 17 and 19. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 5. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 6. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 15. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 14. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 3, 7, 9, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 5. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 3, 5, 7, 9, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 6. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 3, 5, 7, 9, 11, 13, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 15. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 3, 5, 7, 9, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 14. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 6, 7, 9, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 5. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 4, 6, 7, 9, 11, 13, 15, 17 and 19 and may

further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 5 . In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 14, 16, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 15. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 1, 2, 3, 5, 7, 9, 11, 13, 14, 16, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 15. In other embodiments, (N)x comprises 2'-OMe modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 7. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 8. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 9. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 10. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 11. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 12. In other embodiments, (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 15, 17 and 19 and may further comprise at least one abasic or inverted abasic pseudo-nucleotide for example in position 13.

In yet other embodiments (N)x comprises at least one nucleotide mismatch relative to the target gene. In certain preferred embodiments, (N)x comprises a single nucleotide mismatch on position 5, 6, or 14. In one embodiment of Structure (C), at least two nucleotides at either or both the 5' and 3' termini of (N')y are joined by a 2'-5' phosphodiester bond. In certain preferred embodiments x=y=19 or x=y=23; in (N)x the nucleotides alternate between 2'-OMe sugar modified ribonucleotides and unmodified ribonucleotides, and the ribonucleotide located at the middle of (N)x being unmodified; and three nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester

bonds (set forth herein as Structure I). In other preferred embodiments, x=y=19 or x=y=23; in (N)x the nucleotides alternate between 2'-OMe sugar modified ribonucleotides and unmodified ribonucleotides, and the ribonucleotide located at the middle of (N)x being unmodified; and four consecutive nucleotides at the 5' terminus of (N')y are joined by three 2'-5' phosphodiester bonds. In a further embodiment, an additional nucleotide located in the middle position of (N)y is 2'-OMe sugar modified. In another preferred embodiment, in (N)x the nucleotides alternate between 2'-OMe sugar modified ribonucleotides and unmodified ribonucleotides, and in (N')y four consecutive nucleotides at the 5' terminus are joined by three 2'-5' phosphodiester bonds and the 5' terminal nucleotide or two or three consecutive nucleotides at the 5' terminus comprise 3'-O-methyl (3'-OMe)modifications.

In certain preferred embodiments of Structure C, x=y=19 and in (N')y, at least one position comprises an abasic or inverted abasic pseudo-nucleotide, preferably five positions comprises an abasic or inverted abasic pseudo-nucleotides. In various embodiments, the following positions comprise an abasic or inverted abasic: positions 1 and 16-19, positions 15-19, positions 1-2 and 17-19, positions 1-3 and 18-19, positions 1-4 and 19 and positions 1-5. (N')y may further comprise at least one LNA nucleotide.

In certain preferred embodiments of Structure C, x=y=19 and in (N')y the nucleotide in at least one position comprises a mirror nucleotide, a deoxyribonucleotide and a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide bond;.

In certain preferred embodiments of Structure C, x=y=19 and (N')y comprises a mirror nucleotide. In various embodiments the mirror nucleotide is an L-DNA nucleotide. In certain embodiments the L-DNA is L-deoxyribocytidine. In some embodiments (N')y comprises L-DNA at position 18. In other embodiments (N')y comprises L-DNA at positions 17 and 18. In certain embodiments (N')y comprises L-DNA substitutions at positions 2 and at one or both of positions 17 and 18. In certain embodiments (N')y further comprises a 5' terminal cap nucleotide such as 5'-O-methyl DNA or an abasic or inverted abasic pseudo-nucleotide as an overhang.

In yet other embodiments (N')y comprises at least one nucleotide mismatch relative to the target gene. In certain preferred embodiments, (N')y comprises a single nucleotide mismatch on position 6, 14, or 15 .

In yet other embodiments (N')y comprises a DNA at position 15 and L-DNA at one or both of positions 17 and 18. In that structure, position 2 may further comprise an L-DNA or an abasic pseudo-nucleotide.

Other embodiments of Structure C are envisaged wherein x=y=21 or wherein x=y=23; in these embodiments the modifications for (N')y discussed above instead of being on positions 15, 16, 17, 18 are on positions 17, 18, 19, 20 for 21 mer and on positions 19, 20, 21, 22 for 23 mer ; similarly the modifications at one or both of positions 17 and 18 are on one or both of positions 19 or 20 for a 21 mer and one or both of positions 21 and 22 for a 23 mer. All modifications in the 19 mer are similarly adjusted for the 21 and 23 mers.

According to various embodiments of Structure (C), in (N')y 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides at the 3' terminus are linked by 2'-5' internucleotide linkages In one preferred embodiment, four consecutive nucleotides at the 3' terminus of (N')y are joined by three 2'-5' phosphodiester bonds, wherein one or more of the 2'-5' nucleotides which form the 2'-5' phosphodiester bonds further comprises a 3'-O-methyl sugar modification. Preferably the 3' terminal nucleotide of (N')y comprises a 2'-O-methyl sugar modification. In certain preferred embodiments of Structure C, x=y=19 and in (N')y two or more consecutive nucleotides at positions 15, 16, 17, 18 and 19 comprise a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide bond. In various embodiments the nucleotide forming the 2'-5' internucleotide bond comprises a 3' deoxyribose nucleotide or a 3' methoxy nucleotide. In some embodiments the nucleotides at positions 17 and 18 in (N')y are joined by a 2'-5' internucleotide bond. In other embodiments the nucleotides at positions 16, 17, 18, 16-17, 17-18, or 16-18 in (N')y are joined by a 2'-5' internucleotide bond.

In certain embodiments (N')y comprises an L-DNA at position 2 and 2'-5' internucleotide bonds at positions 16, 17, 18, 16-17, 17-18, or 16-18. In certain embodiments (N')y comprises 2'-5' internucleotide bonds at positions 16, 17, 18, 16-17, 17-18, or 16-18 and a 5' terminal cap nucleotide.

According to various embodiments of Structure (C), in (N')y 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides at either terminus or 2-8 modified nucleotides at each of the 5' and 3' termini are independently mirror nucleotides. In some embodiments the mirror nucleotide is an L-ribonucleotide. In other embodiments the mirror nucleotide

is an L-deoxyribonucleotide. The mirror nucleotide may further be modified at the sugar or base moiety or in an internucleotide linkage.

In one preferred embodiment of Structure (C), the 3' terminal nucleotide or two or three consecutive nucleotides at the 3' terminus of (N')y are L-deoxyribonucleotides.

In other embodiments of Structure (C), in (N')y 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides at either terminus or 2-8 modified nucleotides at each of the 5' and 3' termini are independently 2' sugar modified nucleotides. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modification comprises a methoxy moiety (2'-OMe).

In one series of preferred embodiments, three, four or five consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-OMe modification. In another preferred embodiment, three consecutive nucleotides at the 3' terminus of (N')y comprise the 2'-O-methyl modification.

In some embodiments of Structure (C), in (N')y 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides at either or 2-8 modified nucleotides at each of the 5' and 3' termini are independently bicyclic nucleotide. In various embodiments the bicyclic nucleotide is a locked nucleic acid (LNA). A 2'-O, 4'-C-ethylene-bridged nucleic acid (ENA) is a species of LNA (see below).

In various embodiments (N')y comprises modified nucleotides at the 5' terminus or at both the 3' and 5' termini.

In some embodiments of Structure (C), at least two nucleotides at either or both the 5' and 3' termini of (N')y are joined by P-ethoxy backbone modifications. In certain preferred embodiments x=y=19 or x=y=23; in (N)x the nucleotides alternate between modified ribonucleotides and unmodified ribonucleotides, each modified ribonucleotide being modified so as to have a 2'-O-methyl on its sugar and the ribonucleotide located at the middle position of (N)x being unmodified; and four consecutive nucleotides at the 3' terminus or at the 5' terminus of (N')y are joined by three P-ethoxy backbone modifications. In another preferred embodiment, three consecutive nucleotides at the 3' terminus or at the 5' terminus of (N')y are joined by two P-ethoxy backbone modifications.

In some embodiments of Structure (C), in (N')y 2, 3, 4, 5, 6, 7 or 8, consecutive ribonucleotides at each of the 5' and 3' termini are independently mirror nucleotides, nucleotides joined by 2'-5' phosphodiester bond, 2' sugar modified nucleotides or bicyclic nucleotide. In one embodiment, the modification at the 5' and 3' termini of (N')y is identical. In one preferred embodiment, four consecutive nucleotides at the 5' terminus of (N')y are joined by three 2'-5' phosphodiester bonds and three consecutive nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester bonds. In another embodiment, the modification at the 5' terminus of (N')y is different from the modification at the 3' terminus of (N')y. In one specific embodiment, the modified nucleotides at the 5' terminus of (N')y are mirror nucleotides and the modified nucleotides at the 3' terminus of (N')y are joined by 2'-5' phosphodiester bond. In another specific embodiment, three consecutive nucleotides at the 5' terminus of (N')y are LNA nucleotides and three consecutive nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester bonds. In (N)x the nucleotides alternate between modified ribonucleotides and unmodified ribonucleotides, each modified ribonucleotide being modified so as to have a 2'-O-methyl on its sugar and the ribonucleotide located at the middle of (N)x being unmodified, or the ribonucleotides in (N)x being unmodified

In another embodiment of Structure (C), the present invention provides a compound wherein x=y=19 or x=y=23; in (N)x the nucleotides alternate between modified ribonucleotides and unmodified ribonucleotides, each modified ribonucleotide being modified so as to have a 2'-O-methyl on its sugar and the ribonucleotide located at the middle of (N)x being unmodified; three nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester bonds and three nucleotides at the 5' terminus of (N')y are LNA such as ENA.

In another embodiment of Structure (C), five consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-O-methyl sugar modification and two consecutive nucleotides at the 3' terminus of (N')y are L-DNA.

In yet another embodiment, the present invention provides a compound wherein x=y=19 or x=y=23; (N)x consists of unmodified ribonucleotides; three consecutive nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester bonds and three consecutive nucleotides at the 5' terminus of (N')y are LNA such as ENA.

According to other embodiments of Structure (C), in (N')y the 5' or 3' terminal nucleotide, or 2, 3, 4, 5 or 6 consecutive nucleotides at either termini or 1-4 modified

nucleotides at each of the 5' and 3' termini are independently phosphonocarboxylate or phosphinocarboxylate nucleotides (PACE nucleotides). In some embodiments the PACE nucleotides are deoxyribonucleotides. In some preferred embodiments in (N')y, 1 or 2 consecutive nucleotides at each of the 5' and 3' termini are PACE nucleotides. Examples of PACE nucleotides and analogs are disclosed in US Patent Nos. 6,693,187 and 7,067,641 both incorporated by reference.

In additional embodiments, the present invention provides a compound having Structure (D):

(D) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide or a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein (N)x comprises unmodified ribonucleotides further comprising one modified nucleotide at the 3' terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein (N')y comprises unmodified ribonucleotides further comprising one modified nucleotide at the 5' terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein in each of (N)x and (N')y modified and unmodified nucleotides are not alternating;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ is a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in the mRNA set forth in any one of SEQ ID NOS:1-58.

In one embodiment of Structure (D), x=y=19 or x=y=23; (N)x comprises unmodified ribonucleotides in which two consecutive nucleotides linked by one 2'-5' internucleotide linkage at the 3' terminus; and (N')y comprises unmodified ribonucleotides in which two consecutive nucleotides linked by one 2'-5' internucleotide linkage at the 5' terminus.

In some embodiments, x=y=19 or x=y=23; (N)x comprises unmodified ribonucleotides in which three consecutive nucleotides at the 3' terminus are joined together by two 2'-5' phosphodiester bonds; and (N')y comprises unmodified ribonucleotides in which four consecutive nucleotides at the 5' terminus are joined together by three 2'-5' phosphodiester bonds (set forth herein as Structure II).

According to various embodiments of Structure (D) 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N)x and 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N')y are linked by 2'-5' internucleotide linkages.

According to one preferred embodiment of Structure (D), four consecutive nucleotides at the 5' terminus of (N')y are joined by three 2'-5' phosphodiester bonds and three consecutive nucleotides at the 3' terminus of (N')x are joined by two 2'-5' phosphodiester bonds. Three nucleotides at the 5' terminus of (N')y and two nucleotides at the 3' terminus of (N')x may also comprise 3'-O-methyl modifications.

According to various embodiments of Structure (D), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides starting at the ultimate or penultimate position of the 3' terminus of (N)x and 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N')y are independently mirror nucleotides. In some embodiments the mirror is an L-ribonucleotide. In other embodiments the mirror nucleotide is L-deoxyribonucleotide.

In other embodiments of Structure (D), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N)x and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N')y are independently 2' sugar modified nucleotides. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modification comprises a methoxy moiety (2'-OMe).

In one preferred embodiment of Structure (D), five consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-O-methyl modification and five consecutive nucleotides at the 3' terminus of (N')x comprise the 2'-O-methyl modification. In another preferred embodiment of Structure (D), ten consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-O-methyl modification and five consecutive nucleotides at the 3' terminus of (N')x comprise the 2'-O-methyl modification. In another preferred embodiment of Structure (D), thirteen consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-O-methyl modification and five consecutive nucleotides at the 3' terminus of (N')x comprise the 2'-O-methyl modification.

In some embodiments of Structure (D), in (N')y 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N)x and 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N')y are independently a bicyclic nucleotide. In various embodiments the bicyclic nucleotide is a locked nucleic acid (LNA) such as a 2'-O, 4'-C-ethylene-bridged nucleic acid (ENA).

In various embodiments of Structure (D), (N')y comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

In various embodiments of Structure (D), (N)x comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

In embodiments wherein each of the 3' and 5' termini of the same strand comprises a modified nucleotide, the modification at the 5' and 3' termini is identical. In another

embodiment, the modification at the 5' terminus is different from the modification at the 3' terminus of the same strand. In one specific embodiment, the modified nucleotides at the 5' terminus are mirror nucleotides and the modified nucleotides at the 3' terminus of the same strand are joined by 2'-5' phosphodiester bond.

In one specific embodiment of Structure (D), five consecutive nucleotides at the 5' terminus of (N')y comprise the 2'-O-methyl modification and two consecutive nucleotides at the 3' terminus of (N')y are L-DNA. In addition, the compound may further comprise five consecutive 2'-O-methyl modified nucleotides at the 3' terminus of (N')x.

In various embodiments of Structure (D), the modified nucleotides in (N)x are different from the modified nucleotides in (N')y. For example, the modified nucleotides in (N)x are 2' sugar modified nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are mirror nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are nucleotides linked by 2'-5' internucleotide linkages and the modified nucleotides in (N')y are mirror nucleotides.

In additional embodiments, the present invention provides a compound having Structure (E):

(E) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide or a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein (N)x comprises unmodified ribonucleotides further comprising one modified nucleotide at the 5' terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent

nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein (N')y comprises unmodified ribonucleotides further comprising one modified nucleotide at the 3' terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein in each of (N)x and (N')y modified and unmodified nucleotides are not alternating;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ is a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in the mRNA set forth in any one of SEQ ID NOS:1-58.

In certain preferred embodiments the ultimate nucleotide at the 5' terminus of (N)x is unmodified.

According to various embodiments of Structure (E) 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N)x, preferably starting at the 5' penultimate position, and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N')y are linked by 2'-5' internucleotide linkages.

According to various embodiments of Structure (E), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides starting at the ultimate or penultimate position of the 5' terminus of (N)x, preferably starting at the 5' penultimate position, and 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive nucleotides starting at the ultimate or penultimate position of the 3' terminus of (N')y are independently mirror nucleotides. In some embodiments the mirror is an L-ribonucleotide. In other embodiments the mirror nucleotide is L-deoxyribonucleotide.

In other embodiments of Structure (E), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N)x, preferably starting at the 5' penultimate position, and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N')y are independently 2' sugar modified nucleotides. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modification comprises a methoxy moiety (2'-OMe).

In some embodiments of Structure (E), in (N')y 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 5' terminus of (N)x, preferably starting at the 5' penultimate position, and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides starting at the ultimate or penultimate position of the 3' terminus of (N')y are independently a bicyclic nucleotide. In various embodiments the bicyclic nucleotide is a locked nucleic acid (LNA) such as a 2'-O, 4'-C-ethylene-bridged nucleic acid (ENA).

In various embodiments of Structure (E), (N')y comprises modified nucleotides selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, a nucleotide joined to an adjacent nucleotide by a P-alkoxy backbone modification or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 3' terminus or at each of the 3' and 5' termini.

In various embodiments of Structure (E), (N)x comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 5' terminus or at each of the 3' and 5' termini.

In one embodiment where both 3' and 5' termini of the same strand comprise a modified nucleotide, the modification at the 5' and 3' termini is identical. In another embodiment, the modification at the 5' terminus is different from the modification at the 3' terminus of the same strand. In one specific embodiment, the modified nucleotides at the 5' terminus are mirror nucleotides and the modified nucleotides at the 3' terminus of the same strand are joined by 2'-5' phosphodiester bond.

In various embodiments of Structure (E), the modified nucleotides in (N)x are different from the modified nucleotides in (N')y. For example, the modified nucleotides in (N)x are 2' sugar modified nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are mirror nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are nucleotides linked by 2'-5' internucleotide linkages and the modified nucleotides in (N')y are mirror nucleotides.

In additional embodiments, the present invention provides a compound having Structure (F):

(F) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide or a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein each of (N)x and (N')y comprise unmodified ribonucleotides in which each of (N)x and (N')y independently comprise one modified nucleotide at the 3' terminal or penultimate position wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, a nucleotide joined to an adjacent nucleotide by a P-alkoxy backbone modification or a nucleotide joined to an adjacent nucleotide by a 2'-5' phosphodiester bond;

wherein in each of (N)x and (N')y modified and unmodified nucleotides are not alternating;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ is a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial

complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments of Structure (F), x=y=19 or x=y=23; (N')y comprises unmodified ribonucleotides in which two consecutive nucleotides at the 3' terminus comprises two consecutive mirror deoxyribonucleotides; and (N)x comprises unmodified ribonucleotides in which one nucleotide at the 3' terminus comprises a mirror deoxyribonucleotide (set forth as Structure III).

According to various embodiments of Structure (F) 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 3' termini of (N)x and (N')y are linked by 2'-5' internucleotide linkages.

According to one preferred embodiment of Structure (F), three consecutive nucleotides at the 3' terminus of (N')y are joined by two 2'-5' phosphodiester bonds and three consecutive nucleotides at the 3' terminus of (N')x are joined by two 2'-5' phosphodiester bonds.

According to various embodiments of Structure (F), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides independently beginning at the ultimate or penultimate position of the 3' termini of (N)x and (N')y are independently mirror nucleotides. In some embodiments the mirror nucleotide is an L-ribonucleotide. In other embodiments the mirror nucleotide is an L-deoxyribonucleotide.

In other embodiments of Structure (F), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 3' termini of (N)x and (N')y are independently 2' sugar modified nucleotides. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modification comprises a methoxy moiety (2'-OMe).

In some embodiments of Structure (F), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 3' termini of (N)x and (N')y are independently a bicyclic nucleotide. In various embodiments the bicyclic nucleotide is a locked nucleic acid (LNA) such as a 2'-O, 4'-C-ethylene-bridged nucleic acid (ENA).

In various embodiments of Structure (F), (N')y comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol

nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 3' terminus or at both the 3' and 5' termini.

In various embodiments of Structure (F), (N)x comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 3' terminus or at each of the 3' and 5' termini.

In one embodiment where each of 3' and 5' termini of the same strand comprise a modified nucleotide, the modification at the 5' and 3' termini is identical. In another embodiment, the modification at the 5' terminus is different from the modification at the 3' terminus of the same strand. In one specific embodiment, the modified nucleotides at the 5' terminus are mirror nucleotides and the modified nucleotides at the 3' terminus of the same strand are joined by 2'-5' phosphodiester bond.

In various embodiments of Structure (F), the modified nucleotides in (N)x are different from the modified nucleotides in (N')y. For example, the modified nucleotides in (N)x are 2' sugar modified nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are mirror nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are nucleotides linked by 2'-5' internucleotide linkages and the modified nucleotides in (N')y are mirror nucleotides.

In additional embodiments, the present invention provides a compound having Structure (

(G) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide or a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein each of (N)x and (N')y comprise unmodified ribonucleotides in which each of (N)x and (N')y independently comprise one modified nucleotide at the 5' terminal or penultimate position wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, a nucleotide joined to an adjacent nucleotide by a P-alkoxy backbone modification or a nucleotide joined to an adjacent nucleotide by a 2'-5' phosphodiester bond;

wherein for (N)x the modified nucleotide is preferably at penultimate position of the 5' terminal;

wherein in each of (N)x and (N')y modified and unmodified nucleotides are not alternating;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ is a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in the mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments of Structure (G), x=y=19.

According to various embodiments of Structure (G) 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 5' termini of (N)x and (N')y are linked by 2'-5' internucleotide linkages. For (N)x the modified nucleotides preferably starting at the penultimate position of the 5' terminal.

According to various embodiments of Structure (G), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides independently beginning at the ultimate or penultimate position of the 5' termini of (N)x and (N')y are independently mirror nucleotides. In some embodiments the mirror nucleotide is an L-ribonucleotide. In other embodiments the mirror nucleotide is an L-deoxyribonucleotide. For (N)x the modified nucleotides preferably starting at the penultimate position of the 5' terminal.

In other embodiments of Structure (G), 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate

position of the 5' termini of (N)x and (N')y are independently 2' sugar modified nucleotides. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modification comprises a methoxy moiety (2'-OMe). In some preferred embodiments the consecutive modified nucleotides preferably begin at the penultimate position of the 5' terminus of (N)x.

In one preferred embodiment of Structure (G), five consecutive ribonucleotides at the 5' terminus of (N')y comprise a 2'-O-methyl modification and one ribonucleotide at the 5' penultimate position of (N')x comprises a 2'-O-methyl modification. In another preferred embodiment of Structure (G), five consecutive ribonucleotides at the 5' terminus of (N')y comprise a 2'-O-methyl modification and two consecutive ribonucleotides at the 5' terminal position of (N')x comprise a 2'-O-methyl modification.

In some embodiments of Structure (G), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 5' termini of (N)x and (N')y are bicyclic nucleotides. In various embodiments the bicyclic nucleotide is a locked nucleic acid (LNA) such as a 2'-O, 4'-C-ethylene-bridged nucleic acid (ENA). In some preferred embodiments the consecutive modified nucleotides preferably begin at the penultimate position of the 5' terminus of (N)x.

In various embodiments of Structure (G), (N')y comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 5' terminus or at each of the 3' and 5' termini.

In various embodiments of Structure (G), (N)x comprises a modified nucleotide selected from a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage at the 5' terminus or at each of the 3' and 5' termini.

In one embodiment where each of 3' and 5' termini of the same strand comprise a modified nucleotide, the modification at the 5' and 3' termini is identical. In another embodiment, the modification at the 5' terminus is different from the modification at the

3' terminus of the same strand. In one specific embodiment, the modified nucleotides at the 5' terminus are mirror nucleotides and the modified nucleotides at the 3' terminus of the same strand are joined by 2'-5' phosphodiester bond. In various embodiments of Structure (G), the modified nucleotides in (N)x are different from the modified nucleotides in (N')y. For example, the modified nucleotides in (N)x are 2' sugar modified nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are mirror nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are nucleotides linked by 2'-5' internucleotide linkages and the modified nucleotides in (N')y are mirror nucleotides.

In additional embodiments, the present invention provides a compound having Structure (H):

(H) 5' (N)x -Z 3' antisense strand

3' Z'-(N')y 5' sense strand

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide or a modified deoxyribonucleotide;

wherein each of (N)x and (N')y is an oligomer in which each consecutive nucleotide is joined to the next nucleotide by a covalent bond and each of x and y is an integer between 18 and 40;

wherein (N)x comprises unmodified ribonucleotides further comprising one modified nucleotide at the 3' terminal or penultimate position or the 5' terminal or penultimate position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein (N')y comprises unmodified ribonucleotides further comprising one modified nucleotide at an internal position, wherein the modified nucleotide is selected from the group consisting of a bicyclic nucleotide, a 2' sugar modified nucleotide, a mirror nucleotide, an altritol nucleotide, or a nucleotide joined to an adjacent nucleotide by an

internucleotide linkage selected from a 2'-5' phosphodiester bond, a P-alkoxy linkage or a PACE linkage;

wherein in each of (N)x and (N')y modified and unmodified nucleotides are not alternating;

wherein each of Z and Z' may be present or absent, but if present is 1-5 deoxyribonucleotides covalently attached at the 3' terminus of any oligomer to which it is attached;

wherein the sequence of $(N')_y$ is a sequence substantially complementary to (N)x; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In one embodiment of Structure (H), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 3' terminus or the 5' terminus or both termini of (N)x are independently 2' sugar modified nucleotides, bicyclic nucleotides, mirror nucleotides, altritol nucleotides or nucleotides joined to an adjacent nucleotide by a 2'-5' phosphodiester bond and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive internal ribonucleotides in (N')y are independently 2' sugar modified nucleotides, bicyclic nucleotides, mirror nucleotides, altritol nucleotides or nucleotides joined to an adjacent nucleotide by a 2'-5' phosphodiester bond. In some embodiments the 2' sugar modification comprises the presence of an amino, a fluoro, an alkoxy or an alkyl moiety. In certain embodiments the 2' sugar modified ribonucleotide comprises a methoxy moiety (2'-OMe).

In another embodiment of Structure (H), 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive ribonucleotides independently beginning at the ultimate or penultimate position of the 3' terminus or the 5' terminus or 2-8 consecutive nucleotides at each of 5' and 3' termini of (N')y are independently 2' sugar modified nucleotides, bicyclic nucleotides, mirror nucleotides, altritol nucleotides or nucleotides joined to an adjacent nucleotide by a 2'-5' phosphodiester bond, and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive internal ribonucleotides in (N)x are independently 2' sugar modified nucleotides, bicyclic nucleotides, mirror nucleotides, altritol nucleotides or nucleotides joined to an adjacent nucleotide by a 2'-5' phosphodiester bond.

In one embodiment wherein each of 3' and 5' termini of the same strand comprises a modified nucleotide, the modification at the 5' and 3' termini is identical. In another embodiment, the modification at the 5' terminus is different from the modification at the 3' terminus of the same strand. In one specific embodiment, the modified nucleotides at the 5' terminus are mirror nucleotides and the modified nucleotides at the 3' terminus of the same strand are joined by 2'-5' phosphodiester bond.

In various embodiments of Structure (H), the modified nucleotides in (N)x are different from the modified nucleotides in (N')y. For example, the modified nucleotides in (N)x are 2' sugar modified nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are mirror nucleotides and the modified nucleotides in (N')y are nucleotides linked by 2'-5' internucleotide linkages. In another example, the modified nucleotides in (N)x are nucleotides linked by 2'-5' internucleotide linkages and the modified nucleotides in (N')y are mirror nucleotides.

In one preferred embodiment of Structure (H), x=y=19; three consecutive ribonucleotides at the 9-11 nucleotide positions 9-11 of (N')y comprise 2'-O-methyl modification and five consecutive ribonucleotides at the 3' terminal position of (N')x comprise 2'-O-methyl modification.

In one aspect the present invention provides a compound having Structure (**I**) set forth below:

(I) 5' (N)x – Z 3' (antisense strand)

3' Z'-(N')y- z" 5' (sense strand)

wherein each of N and N' is a ribonucleotide which may be unmodified or modified, or an unconventional moiety;

wherein each of (N)x and (N')y is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' may be present or absent, but if present is independently 1-5 consecutive nucleotides covalently attached at the 3' terminus of the strand in which it is present;

wherein z" may be present or absent, but if present is a capping moiety covalently attached at the 5' terminus of (N')y;

wherein x =18 to 27;

wherein y =18 to 27;

wherein (N)x comprises modified and unmodified ribonucleotides, each modified ribonucleotide having a 2'-O-methyl on its sugar, wherein N at the 3' terminus of (N)x is a modified ribonucleotide, (N)x comprises at least five alternating modified ribonucleotides beginning at the 3' end and at least nine modified ribonucleotides in total and each remaining N is an unmodified ribonucleotide;

wherein in (N')y at least one unconventional moiety is present, which unconventional moiety may be an abasic ribose moiety, an abasic deoxyribose moiety, a modified or unmodified deoxyribonucleotide, a mirror nucleotide, and a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide phosphate bond; and

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments x =y=19. In other embodiments x =y=23. In some embodiments the at least one unconventional moiety is present at positions 15, 16, 17, or 18 in (N')y. In some embodiments the unconventional moiety is selected from a mirror nucleotide, an abasic ribose moiety and an abasic deoxyribose moiety. In some preferred embodiments the unconventional moiety is a mirror nucleotide, preferably an L-DNA moiety. In some embodiments an L-DNA moiety is present at position 17, position 18 or positions 17 and 18.

In other embodiments the unconventional moiety is an abasic moiety. In various embodiments (N')y comprises at least five abasic ribose moieties or abasic deoxyribose moieties.

In yet other embodiments (N')y comprises at least five abasic ribose moieties or abasic deoxyribose moieties and at least one of N' is an LNA.

In some embodiments of Structure (IX) (N)x comprises nine alternating modified ribonucleotides. In other embodiments of Structure (I) (N)x comprises nine alternating modified ribonucleotides further comprising a 2'O modified nucleotide at position 2. In some embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at the odd

numbered positions 1, 3, 5, 7, 9, 11, 13, 15, 17, 19. In other embodiments (N)x further comprises a 2'-OMe sugar modified ribonucleotide at one or both of positions 2 and 18. In yet other embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17, 19.

In various embodiments z" is present and is selected from an abasic ribose moiety, a deoxyribose moiety; an inverted abasic ribose moiety, a deoxyribose moiety; C6-amino-Pi; a mirror nucleotide.

In another aspect the present invention provides a compound having Structure (**J**) set forth below:

(J) 5' (N)x – Z 3' (antisense strand)

3' Z'-(N')y-z" 5' (sense strand)

wherein each of N and N' is a ribonucleotide which may be unmodified or modified, or an unconventional moiety;

wherein each of (N)x and (N')y is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' may be present or absent, but if present is independently 1-5 consecutive nucleotides covalently attached at the 3' terminus of the strand in which it is present;

wherein z" may be present or absent but if present is a capping moiety covalently attached at the 5' terminus of (N')y;

wherein x =18 to 27;

wherein y =18 to 27;

wherein (N)x comprises modified or unmodified ribonucleotides, and optionally at least one unconventional moiety;

wherein in (N')y at least one unconventional moiety is present, which unconventional moiety may be an abasic ribose moiety, an abasic deoxyribose moiety, a modified or unmodified deoxyribonucleotide, a mirror nucleotide, a non-base pairing nucleotide analog or a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide phosphate bond; and

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments x =y=19. In other embodiments x =y=23. In some preferred embodiments (N)x comprises modified and unmodified ribonucleotides, and at least one unconventional moiety.

In some embodiments in (N)x the N at the 3' terminus is a modified ribonucleotide and (N)x comprises at least 8 modified ribonucleotides. In other embodiments at least 5 of the at least 8 modified ribonucleotides are alternating beginning at the 3' end. In some embodiments (N)x comprises an abasic moiety in one of positions 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 15.

In some embodiments the at least one unconventional moiety in (N')y is present at positions 15, 16, 17, or 18. In some embodiments the unconventional moiety is selected from a mirror nucleotide, an abasic ribose moiety and an abasic deoxyribose moiety. In some preferred embodiments the unconventional moiety is a mirror nucleotide, preferably an L-DNA moiety. In some embodiments an L-DNA moiety is present at position 17, position 18 or positions 17 and 18. In other embodiments the at least one unconventional moiety in (N')y is an abasic ribose moiety or an abasic deoxyribose moiety.

In various embodiments of Structure (X) z" is present and is selected from an abasic ribose moiety, a deoxyribose moiety; an inverted abasic ribose moiety, a deoxyribose moiety; C6-amino-Pi; a mirror nucleotide.

In yet another aspect the present invention provides a compound having Structure **(K)** set forth below:

(K) 5' $(N)_x$ -Z 3' (antisense strand)

3' Z'-$(N')_y$-z" 5' (sense strand)

wherein each of N and N' is a ribonucleotide which may be unmodified or modified, or an unconventional moiety;

wherein each of (N)x and (N')y is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' may be present or absent, but if present is independently 1-5 consecutive nucleotides covalently attached at the 3' terminus of the strand in which it is present;

wherein z" may be present or absent but if present is a capping moiety covalently attached at the 5' terminus of (N')y;

wherein x =18 to 27;

wherein y =18 to 27;

wherein (N)x comprises a combination of modified or unmodified ribonucleotides and unconventional moieties, any modified ribonucleotide having a 2'-O-methyl on its sugar;

wherein (N')y comprises modified or unmodified ribonucleotides and optionally an unconventional moiety, any modified ribonucleotide having a 2'OMe on its sugar;

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58; and wherein there are less than 15 consecutive nucleotides complementary to the mRNA.

In some embodiments x =y=19. In other embodiments x =y=23. In some preferred embodiments the at least one preferred one unconventional moiety is present in (N)x and is an abasic ribose moiety or an abasic deoxyribose moiety. In other embodiments the at least one unconventional moiety is present in (N)x and is a non-base pairing nucleotide analog. In various embodiments (N')y comprises unmodified ribonucleotides. In some embodiments (N)x comprises at least five abasic ribose moieties or abasic deoxyribose moieties or a combination thereof. In certain embodiments (N)x and/or (N')y comprise modified ribonucleotides which do not base pair with corresponding modified or unmodified ribonucleotides in (N')y and/or (N)x.

In various embodiments the present invention provides an siRNA set forth in Structure (L):

(L) 5' $(N)_x - Z$ 3' (antisense strand)

3' $Z'-(N')_y$ 5' (sense strand)

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' are absent;

wherein x=y=19;

wherein in (N')y the nucleotide in at least one of positions 15, 16, 17, 18 and 19 comprises a nucleotide selected from an abasic pseudo-nucleotide, a mirror nucleotide, a deoxyribonucleotide and a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide bond;

wherein (N)x comprises alternating modified ribonucleotides and unmodified ribonucleotides each modified ribonucleotide being modified so as to have a 2'-O-methyl on its sugar and the ribonucleotide located at the middle position of (N)x being modified or unmodified, preferably unmodified; and

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In some embodiments of Structure (L), in (N')y the nucleotide in one or both of positions 17 and 18 comprises a modified nucleotide selected from an abasic pseudo-nucleotide, a mirror nucleotide and a nucleotide joined to an adjacent nucleotide by a 2'-5' internucleotide bond. In some embodiments the mirror nucleotide is selected from L-DNA and L-RNA. In various embodiments the mirror nucleotide is L-DNA.

In various embodiments (N')y comprises a modified nucleotide at position 15 wherein the modified nucleotide is selected from a mirror nucleotide and a deoxyribonucleotide.

In certain embodiments (N')y further comprises a modified nucleotide or pseudo nucleotide at position 2 wherein the pseudo nucleotide may be an abasic pseudo-nucleotide analog and the modified nucleotide is optionally a mirror nucleotide. .

In various embodiments the antisense strand (N)x comprises 2'O-Me modified ribonucleotides at the odd numbered positions (5' to 3'; positions 1, 3, 5, 7, 9, 11, 13, 15,

17, 19). In some embodiments (N)x further comprises 2'O-Me modified ribonucleotides at one or both positions 2 and 18. In other embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17, 19.

Other embodiments of Structures (L), (I) and (J) are envisaged wherein x=y=21 or wherein x=y=23; in these embodiments the modifications for (N')y discussed above instead of being in positions 17 and 18 are in positions 19 and 20 for 21-mer oligonucleotide and 21 and 22 for 23 mer oligonucleotide; similarly the modifications in positions 15, 16, 17, 18 or 19 are in positions 17, 18, 19, 20 or 21 for the 21-mer oligonucleotide and positions 19, 20, 21, 22, or 23 for the 23-mer oligonucleotide. The 2'-OMe modifications on the antisense strand are similarly adjusted. In some embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at the odd numbered positions (5' to 3'; positions 1, 3, 5, 7, 9, 12, 14, 16, 18, 20 for the 21 mer oligonucleotide [nucleotide at position 11 unmodified] and 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23 for the 23 mer oligonucleotide [nucleotide at position 12 unmodified]. In other embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 10, 12, 14, 16, 18, 20 [nucleotide at position 11 unmodified for the 21 mer oligonucleotide and at positions 2, 4, 6, 8, 10, 13, 15, 17, 19, 21, 23 for the 23 mer oligonucleotide [nucleotide at position 12 unmodified].

In some embodiments (N')y further comprises a 5' terminal cap nucleotide. In various embodiments the terminal cap moiety is selected from an abasic pseudo-nucleotide analog, an inverted abasic pseudo-nucleotide analog, an L-DNA nucleotide, and a C6-imine phosphate (C6 amino linker with phosphate at terminus).

In other embodiments the present invention provides a compound having Structure (M) set forth below:

$$5' \quad (N)_x - Z \quad 3' \text{ (antisense strand)}$$

$$3' \quad Z'-(N')_y \quad 5' \text{ (sense strand)}$$

wherein each of N and N' is selected from a pseudo-nucleotide and a nucleotide;

wherein each nucleotide is selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' are absent;

wherein x =18 to 27;

wherein y =18 to 27;

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58;

wherein at least one of N is selected from an abasic pseudo nucleotide, a non-pairing nucleotide analog and a nucleotide mismatch to the mRNA of a target gene in a position of (N)x such that (N)x comprises less than 15 consecutive nucleotides complementary to the mRNA of a target gene.

In other embodiments the present invention provides a double stranded compound having Structure (N) set forth below:

(N) 5' $(N)_x - Z$ 3' (antisense strand)

3' $Z'-(N')_y$ 5' (sense strand)

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' are absent;

wherein each of x and y is an integer between 18 and 40;

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58;

wherein (N)x, (N')y or (N)x and (N')y comprise non base-pairing modified nucleotides such that (N)x and (N')y form less than 15 base pairs in the double stranded compound.

In other embodiments the present invention provides a compound having Structure (O) set forth below:

(O) 5' $(N)_x - Z$ 3' (antisense strand)

3' Z'-$(N')_y$ 5' (sense strand)

wherein each of N is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of N' is a nucleotide analog selected from a six membered sugar nucleotide, seven membered sugar nucleotide, morpholino moiety, peptide nucleic acid and combinations thereof;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' are absent;

wherein each of x and y is an integer between 18 and 40;

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In other embodiments the present invention provides a compound having Structure (P) set forth below:

(P) 5' $(N)_x - Z$ 3' (antisense strand)

3' Z'-$(N')_y$ 5' (sense strand)

wherein each of N and N' is a nucleotide selected from an unmodified ribonucleotide, a modified ribonucleotide, an unmodified deoxyribonucleotide and a modified deoxyribonucleotide;

wherein each of $(N)_x$ and $(N')_y$ is an oligonucleotide in which each consecutive N or N' is joined to the next N or N' by a covalent bond;

wherein Z and Z' are absent;

wherein each of x and y is an integer between 18 and 40;

wherein one of N or N' in an internal position of (N)x or (N')y or one or more of N or N' at a terminal position of (N)x or (N')y comprises an abasic moiety or a 2' modified nucleotide;

wherein the sequence of (N)x is substantially complementary to the sequence of (N')y; and wherein the sequence of $(N)_x$ comprises an antisense sequence having substantial complementarity to about 18 to about 40 consecutive ribonucleotides in mRNA set forth in any one of SEQ ID NOS:1-58.

In various embodiments (N')y comprises a modified nucleotide at position 15 wherein the modified nucleotide is selected from a mirror nucleotide and a deoxyribonucleotide.

In certain embodiments (N')y further comprises a modified nucleotide at position 2 wherein the modified nucleotide is selected from a mirror nucleotide and an abasic pseudo-nucleotide analog.

In various embodiments the antisense strand (N)x comprises 2'O-Me modified ribonucleotides at the odd numbered positions (5' to 3'; positions 1, 3, 5, 7, 9, 11, 13, 15, 17, 19). In some embodiments $(N)_X$ further comprises 2'O-Me modified ribonucleotides at one or both positions 2 and 18. In other embodiments (N)x comprises 2'-OMe sugar modified ribonucleotides at positions 2, 4, 6, 8, 11, 13, 15, 17, 19.

The Structural motifs (A)-(P) described above are useful with any oligonucleotide pair (sense and antisense strands) to a mammalian or non-mammalian gene. In some embodiments the mammalian gene is a human gene preferably selected from the genes provided in Tables A1-A4, with mRNA set forth in SEQ ID NOS:1-58. In certain preferred embodiments the sense and antisense oligonucleotides of the siRNA are selected from any one of siRNA pairs set forth in SEQ ID NOS:59-33,596. Table A5 below shows certain preferred sense and antisense oligonucleotide pairs.

Table A5

TARGET GENE	SENSE (N')y 5'-3'	ANTISENSE (N)x 5'-3'
P53	GAGAAUAUUUCACCCUUCA	UGAAGGGUGAAAUAUUCUC
CASP2	GCCAGAAUGUGGAACUCCU	AGGAGUUCCACAUUCUGGC
RTP801	GUGCCAACCUGAUGCAGCU	AGCAGCAUCAGGUUGGCAC
RTP801	UACUGUAGCAUGAAACAAA	UUUGUUUCAUGCUACAGUA
RTP801	CAGUACUGUAGCAUGAAAC	GUUUCAUGCUACAGUACUG
TP53BP2	CACCCAGAGAACAUUUAUU	AAUAAAUGUUCUCUGGGUG
CYBA	UGGGGACAGAAGUACAUGA	UCAUGUACUUCUGUCCCCA
RAC1	GAGUCCUGCAUCAUUUGAA	UUCAAAUGAUGCAGGACUC
SPP1	GUGCCAUACCAGUUAAACA	UGUUUAACUGGUAUGGCAC
SPP1	GCAAAAUGAAAGAGAACAU	AUGUUCUCUUUCAUUUUGC

ASPP1	CGAACUCAGAGAAAUGUAA	UUACAUUUCUCUGAGUUCG
ASPP1	GGAGAAAAACGUACUGAAA	UUUCAGUACGUUUUUCUCC
SOX9	CCUUCAUGAAGAUGACCGA	UCGGUCAUCUUCAUGAAGG

For all the above Structures (A)-(P), in various embodiments x = y and each of x and y is 19, 20, 21, 22 or 23. In preferred embodiments, x=y=19. In additional embodiments the compound comprises modified ribonucleotides in alternating positions wherein each N at the 5' and 3' termini of (N)x are modified in their sugar residues and the middle ribonucleotide is not modified, e.g. ribonucleotide in position 10 in a 19-mer strand, position 11 in a 21 mer and position 12 in a 23-mer strand.

In some embodiments where x = y =21 or x = y =23 the position of modifications in the 19 mer are adjusted for the 21 and 23 mers with the proviso that the middle nucleotide of the antisense strand is preferably not modified.

For all the above Structures (A)-(P), in some embodiments, neither (N)x nor (N')y are phosphorylated at the 3' and 5' termini. In other embodiments either or both (N)x and (N')y are phosphorylated at the 3' termini. In yet another embodiment, either or both (N)x and (N')y are phosphorylated at the 3' termini using non-cleavable phosphate groups. In yet another embodiment, either or both (N)x and (N')y are phosphorylated at the terminal 2' termini position using cleavable or non-cleavable phosphate groups. These particular siRNA compounds are also blunt ended and are non-phosphorylated at the termini; however, comparative experiments have shown that siRNA compounds phosphorylated at one or both of the 3'-termini have similar activity *in vivo* compared to the non-phosphorylated compounds.

For all the above Structures (A)-(P), in some embodiments, the compound is blunt ended, for example wherein both Z and Z' are absent. In an alternative embodiment, the compound comprises at least one 3' overhang, wherein at least one of Z or Z' is present. Z and Z' independently comprises one or more covalently linked modified or non-modified nucleotides, for example inverted dT or dA; dT, LNA, mirror nucleotide and the like. In some embodiments each of Z and Z' are independently selected from dT and dTdT. siRNA in which Z and/or Z' is present have similar activity and stability as siRNA in which Z and Z' are absent.

In certain embodiments for all the above-mentioned Structures, the compound comprises one or more locked nucleic acids (LNA) also defined as bridged nucleic acids or bicyclic

nucleotides. Preferred locked nucleic acids are 2′-O, 4′-C-ethylene nucleosides (ENA) or 2′-O, 4′-C-methylene nucleosides. Other examples of LNA and ENA nucleotides are disclosed in WO 98/39352, WO 00/47599 and WO 99/14226, all incorporated herein by reference.

In certain embodiments for all the above-mentioned Structures, the compound comprises one or more altritol monomers (nucleotides), also defined as 1,5 anhydro-2-deoxy-D-altrito-hexitol (see for example, Allart, et al., 1998. Nucleosides & Nucleotides 17:1523-1526; Herdewijn et al., 1999. Nucleosides & Nucleotides 18:1371-1376; Fisher et al., 2007, NAR 35(4):1064-1074; all incorporated herein by reference).

The present invention explicitly excludes compounds in which each of N and /or N' is a deoxyribonucleotide (D-A, D-C, D-G, D-T). In certain embodiments (N)x and (N')y may comprise independently 1, 2, 3, 4, 5, 6, 7, 8, or 9 deoxyribonucleotides. In certain embodiments the present invention provides a compound wherein each of N is an unmodified ribonucleotide and the 3' terminal nucleotide or 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides at the 3' terminus of (N')y are deoxyribonucleotides. In yet other embodiments each of N is an unmodified ribonucleotide and the 5' terminal nucleotide or 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14 consecutive nucleotides at the 5' terminus of (N')y are deoxyribonucleotides. In further embodiments the 5' terminal nucleotide or 2, 3, 4, 5, 6, 7, 8, or 9 consecutive nucleotides at the 5' terminus and 1, 2, 3, 4, 5, or 6 consecutive nucleotides at the 3' termini of (N)x are deoxyribonucleotides and each of N' is an unmodified ribonucleotide. In yet further embodiments (N)x comprises unmodified ribonucleotides and 1 or 2, 3 or 4 consecutive deoxyribonucleotides independently at each of the 5' and 3' termini and 1 or 2, 3, 4, 5 or 6 consecutive deoxyribonucleotides in internal positions; and each of N' is an unmodified ribonucleotide. In certain embodiments the 3' terminal nucleotide or 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 13 or 14 consecutive nucleotides at the 3' terminus of (N')y and the terminal 5' nucleotide or 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 13 or 14 consecutive nucleotides at the 5' terminus of (N)x are deoxyribonucleotides. The present invention excludes compounds in which each of N and/or N' is a deoxyribonucleotide. In some embodiments the 5' terminal nucleotide of N or 2 or 3 consecutive of N and 1,2, or 3 of N' is a deoxyribonucleotide. Certain examples of active DNA/RNA siRNA chimeras are disclosed in US patent publication 2005/0004064, and Ui-Tei, 2008 (NAR 36(7):2136-2151) incorporated herein by reference in their entirety.

Unless otherwise indicated, in preferred embodiments of the structures discussed herein the covalent bond between each consecutive N and N' is a phosphodiester bond.

An additional novel molecule provided by the present invention is an oligonucleotide comprising consecutive nucleotides wherein a first segment of such nucleotides encode a first inhibitory RNA molecule, a second segment of such nucleotides encode a second inhibitory RNA molecule, and a third segment of such nucleotides encode a third inhibitory RNA molecule. Each of the first, the second and the third segment may comprise one strand of a double stranded RNA and the first, second and third segments may be joined together by a linker. Further, the oligonucleotide may comprise three double stranded segments joined together by one or more linker.

Thus, one molecule provided by the present invention is an oligonucleotide comprising consecutive nucleotides which encode three inhibitory RNA molecules; said oligonucleotide may possess a triple stranded structure, such that three double stranded arms are linked together by one or more linker, such as any of the linkers presented hereinabove. This molecule forms a "star"-like structure, and may also be referred to herein as RNAstar. Such structures are disclosed in PCT patent publication WO 2007/091269, assigned to the assignee of the present invention and incorporated herein in its entirety by reference.

A covalent bond refers to an internucleotide linkage linking one nucleotide monomer to an adjacent nucleotide monomer. A covalent bond includes for example, a phosphodiester bond, a phosphorothioate bond, a P-alkoxy bond, a P-carboxy bond and the like. The normal internucleoside linkage of RNA and DNA is a 3' to 5' phosphodiester linkage. In certain preferred embodiments a covalent bond is a phosphodiester bond. Covalent bond encompasses non-phosphorous-containing internucleoside linkages, such as those disclosed in WO 2004/041924 *inter alia*. Unless otherwise indicated, in preferred embodiments of the structures discussed herein the covalent bond between each consecutive N and N' is a phosphodiester bond.

For all of the structures above, in some embodiments the oligonucleotide sequence of (N)x is fully complementary to the oligonucleotide sequence of (N')y. In other embodiments (N)x and (N')y are substantially complementary. In certain embodiments (N)x is fully complementary to a target sequence. In other embodiments (N)x is substantially complementary to a target sequence.

In some embodiments, neither (N)x nor (N')y are phosphorylated at the 3' and 5' termini. In other embodiments either or both (N)x and (N')y are phosphorylated at the 3' termini (3' Pi). In yet another embodiment, either or both (N)x and (N')y are phosphorylated at the 3' termini with non-cleavable phosphate groups. In yet another embodiment, either or both (N)x and (N')y are phosphorylated at the terminal 2' termini position using cleavable or non-cleavable phosphate groups. Further, the inhibitory nucleic acid molecules of the present invention may comprise one or more gaps and/or one or more nicks and/or one or more mismatches. Without wishing to be bound by theory, gaps, nicks and mismatches have the advantage of partially destabilizing the nucleic acid / siRNA, so that it may be more easily processed by endogenous cellular machinery such as DICER, DROSHA or RISC into its inhibitory components.

In the context of the present invention, a gap in a nucleic acid refers to the absence of one or more internal nucleotides in one strand, while a nick in a nucleic acid refers to the absence of an internucleotide linkage between two adjacent nucleotides in one strand. Any of the molecules of the present invention may contain one or more gaps and/or one or more nicks.

The structures disclosed herein, when integrated into antisense and corresponding sense nucleic acid sequences to any target gene, provides siRNA compound useful in reducing expression of that target gene. The target gene is a mammalian or non-mammalian gene. The methods of the invention comprise topically and non-invasively administering to the eye of the subject one or more siRNA compounds which inhibit expression of a target gene in the eye of the subject.

siRNA Synthesis

The compounds of the present invention can be synthesized by any of the methods that are well-known in the art for synthesis of ribonucleic (or deoxyribonucleic) oligonucleotides. Such synthesis is, among others, described in Beaucage and Iyer, Tetrahedron 1992; 48:2223-2311; Beaucage and Iyer, Tetrahedron 1993; 49: 6123-6194 and Caruthers, et. al., Methods Enzymol. 1987; 154: 287-313; the synthesis of thioates is, among others, described in Eckstein, Annu. Rev. Biochem. 1985; 54: 367-402, the synthesis of RNA molecules is described in Sproat, in Humana Press 2005 edited by Herdewijn P.; Kap. 2: 17-31 and respective downstream processes are, among others, described in Pingoud et. al., in IRL Press 1989 edited by Oliver; Kap. 7: 183-208.

Other synthetic procedures are known in the art e.g. the procedures as described in Usman et al., J. Am. Chem. Soc., 1987, 109:7845; Scaringe et al., NAR, 1990, 18:5433; Wincott et al., NAR 1995,. 23:2677-2684; and Wincott et al., Methods Mol. Bio., 1997, 74:59, and these procedures may make use of common nucleic acid protecting and coupling groups, such as dimethoxytrityl at the 5′-end, and phosphoramidites at the 3′-end. The modified (e.g. 2′-O-methylated) nucleotides and unmodified nucleotides are incorporated as desired.

The oligonucleotides of the present invention can be synthesized separately and joined together post-synthetically, for example, by ligation (Moore et al., Science 1992, 256:9923; International Patent Publication No. WO 93/23569; Shabarova et al., NAR 1991, 19:4247; Bellon et al., Nucleosides & Nucleotides, 1997, 16:951; Bellon et al., Bioconjugate Chem 1997, 8:204), or by hybridization following synthesis and/or deprotection.

It is noted that a commercially available machine (available, *inter alia*, from Applied Biosystems) can be used; the oligonucleotides are prepared according to the sequences disclosed herein. Overlapping pairs of chemically synthesized fragments can be ligated using methods well known in the art (e.g., see US Patent No. 6,121,426). The strands are synthesized separately and then are annealed to each other in the tube. Then, the double-stranded siRNAs are separated from the single-stranded oligonucleotides that were not annealed (e.g. because of the excess of one of them) by HPLC. In relation to the siRNAs or siRNA fragments of the present invention, two or more such sequences can be synthesized and linked together for use in the present invention.

The compounds of the invention can also be synthesized via tandem synthesis methodology, as described for example in US Patent Publication No. 2004/0019001 (McSwiggen), and in PCT Patent Publication No. WO 2007/091269 (assigned to the assignee of the present invention and incorporated herein in its entirety by reference) wherein both siRNA strands are synthesized as a single contiguous oligonucleotide fragment or strand separated by a cleavable linker which is subsequently cleaved to provide separate siRNA fragments or strands that hybridize and permit purification of the siRNA duplex. The linker can be a polynucleotide linker or a non-nucleotide linker.

The present invention further provides for a pharmaceutical composition comprising two or more siRNA molecules for the treatment of any of the diseases and conditions mentioned herein, whereby said two molecules may be physically mixed together in the

pharmaceutical composition in amounts which generate equal or otherwise beneficial activity, or may be covalently or non-covalently bound, or joined together by a nucleic acid linker of a length ranging from 2-100, preferably 2-50 or 2-30 nucleotides.

Thus, the siRNA molecules may be covalently or non-covalently bound or joined by a linker to form a tandem siRNA compound. Such tandem siRNA compounds comprising two siRNA sequences are typically about 38-150 nucleotides in length, more preferably 38 or 40-60 nucleotides in length, and longer accordingly if more than two siRNA sequences are included in the tandem molecule. A longer tandem compound comprised of two or more longer sequences which encode siRNA produced via internal cellular processing, e.g., long dsRNAs, is also envisaged, as is a tandem molecule encoding two or more shRNAs. Such tandem molecules are also considered to be a part of the present invention. A tandem compound comprising two or more siRNAs sequences of the invention is envisaged.

Additionally, the siRNA disclosed herein or any nucleic acid molecule comprising or encoding such siRNA can be linked or bound (covalently or non-covalently) to antibodies (including aptamer molecules) against cell surface internalizable molecules expressed on the target cells, in order to achieve enhanced targeting for treatment of the diseases disclosed herein. For example, anti-Fas antibody (preferably a neutralizing antibody) may be combined (covalently or non-covalently) with any of the siRNA compounds.

The compounds of the present invention can be delivered either directly or with viral or non-viral vectors. When delivered directly the sequences are generally rendered nuclease resistant. Alternatively the sequences can be incorporated into expression cassettes or constructs such that the sequence is expressed in the cell as discussed herein below. Generally the construct contains the proper regulatory sequence or promoter to allow the sequence to be expressed in the targeted cell. Vectors optionally used for delivery of the compounds of the present invention are commercially available, and may be modified for the purpose of delivery of the compounds of the present invention by methods known to one of skill in the art.

It is also envisaged that a long oligonucleotide (typically 25-500 nucleotides in length) comprising one or more stem and loop structures, where stem regions comprise the sequences of the oligonucleotides of the invention, may be delivered in a carrier, preferably a pharmaceutically acceptable carrier, and may be processed intracellularly by endogenous cellular complexes (e.g. by DROSHA and DICER as described above) to

produce one or more smaller double stranded oligonucleotides (siRNAs) which are oligonucleotides of the invention. This oligonucleotide can be termed a tandem shRNA construct. It is envisaged that this long oligonucleotide is a single stranded oligonucleotide comprising one or more stem and loop structures, wherein each stem region comprises a sense and corresponding antisense siRNA sequence of the genes of the invention.

RNA interference

A number of PCT applications have recently been published that relate to the RNAi phenomenon. These include: PCT publication WO 00/44895; PCT publication WO 00/49035; PCT publication WO 00/63364; PCT publication WO 01/36641; PCT publication WO 01/36646; PCT publication WO 99/32619; PCT publication WO 00/44914; PCT publication WO 01/29058; and PCT publication WO 01/75164.

RNA interference (RNAi) is based on the ability of dsRNA species to enter a cytoplasmic protein complex, where it is then targeted to the complementary cellular RNA and specifically degrade it. The RNA interference response features an endonuclease complex containing an siRNA, commonly referred to as an RNA-induced silencing complex (RISC), which mediates cleavage of single-stranded RNA having a sequence complementary to the antisense strand of the siRNA duplex. Cleavage of the target RNA may take place in the middle of the region complementary to the antisense strand of the siRNA duplex (Elbashir et al., Genes Dev., 2001, 15(2):188-200). In more detail, longer dsRNAs are digested into short (17-29 bp) dsRNA fragments (also referred to as short inhibitory RNAs, "siRNAs") by type III RNAses (DICER, DROSHA, etc.; Bernstein et al., Nature, 2001, 409(6818):363-6; Lee et al., Nature, 2003, 425(6956):415-9). The RISC protein complex recognizes these fragments and complementary mRNA. The whole process is culminated by endonuclease cleavage of target mRNA (McManus & Sharp, Nature Rev Genet, 2002, 3(10):737-47; Paddison & Hannon, Curr Opin Mol Ther. 2003, 5(3):217-24). (For additional information on these terms and proposed mechanisms, see for example Bernstein et al., RNA 2001, 7(11):1509-21; Nishikura, Cell 2001, 107(4):415-8 and PCT publication WO 01/36646).

Several groups have described the development of DNA-based vectors capable of generating siRNA within cells. The method generally involves transcription of short hairpin RNAs that are efficiently processed to form siRNAs within cells (Paddison et al. PNAS USA 2002, 99:1443-1448; Paddison et al. Genes & Dev 2002, 16:948-958; Sui et

al. PNAS USA 2002, 8:5515-5520; and Brummelkamp et al. Science 2002, 296:550-553). These reports describe methods to generate siRNAs capable of specifically targeting numerous endogenously and exogenously expressed genes.

The invention has been described in an illustrative manner, and it is to be understood that the terminology used is intended to be in the nature of words of description rather than of limitation.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention can be practiced otherwise than as specifically described.

Throughout this application, various publications, including United States Patents, are referenced by author and year and patents by number. The disclosures of these publications and patents and patent applications in their entireties are hereby incorporated by reference into this application in order to more fully describe the state of the art to which this invention pertains.

The present invention is illustrated in detail below with reference to examples, but is not to be construed as being limited thereto.

Citation of any document herein is not intended as an admission that such document is pertinent prior art, or considered material to the patentability of any claim of the present application. Any statement as to content or a date of any document is based on the information available to applicant at the time of filing and does not constitute an admission as to the correctness of such a statement.

EXAMPLES

Without further elaboration, it is believed that one skilled in the art can, using the preceding description, utilize the present invention to its fullest extent. The following preferred specific embodiments are, therefore, to be construed as merely illustrative, and not limitative of the claimed invention in any way.

Standard molecular biology protocols known in the art not specifically described herein are generally followed essentially as in Sambrook et al., Molecular cloning: A laboratory manual, Cold Springs Harbor Laboratory, New-York (1989, 1992), and in Ausubel et al., Current Protocols in Molecular Biology, John Wiley and Sons, Baltimore, Maryland

(1988), and as in Ausubel et al., Current Protocols in Molecular Biology, John Wiley and Sons, Baltimore, Maryland (1989) and as in Perbal, A Practical Guide to Molecular Cloning, John Wiley & Sons, New York (1988), and as in Watson et al., Recombinant DNA, Scientific American Books, New York and in Birren et al (eds) Genome Analysis: A Laboratory Manual Series, Vols. 1-4 Cold Spring Harbor Laboratory Press, New York (1998) and methodology as set forth in US Patent Nos. 4,666,828; 4,683,202; 4,801,531; 5,192,659 and 5,272,057 and incorporated herein by reference. Polymerase chain reaction (PCR) was carried out as in standard PCR Protocols: A Guide To Methods And Applications, Academic Press, San Diego, CA (1990). In situ PCR in combination with Flow Cytometry (FACS) can be used for detection of cells containing specific DNA and mRNA sequences (Testoni et al., Blood 1996, 87:3822.) Methods of performing RT-PCR are well known in the art.

Cell culture

HeLa cells (American Type Culture Collection) were cultured as described in Czauderna, et al. (NAR, 2003. 31:670-82). Human keratinocytes were cultured at 37°C in Dulbecco's modified Eagle medium (DMEM) containing 10% FCS. The mouse cell line, B16V (American Type Culture Collection), was cultured at 37°C in Dulbecco's modified Eagle medium (DMEM) containing 10% FCS. Culture conditions were as described in (Methods Find Exp Clin Pharmacol. 1997, 19(4):231-9).

In each case, the cells were subject to the experiments as described herein at a density of about 50,000 cells per well and the double-stranded nucleic acid according to the present invention was added at a concentration of 20 nM, whereby the double-stranded nucleic acid was complexed using 1 μg/ml of a proprietary lipid as described below.

In the histochemical/microscopic figures, arrows were added to draw attention to staining of the tissue.

Animal Models

Model systems of glaucoma and of Retinal Ganglion Cells (RGC) death

ONC model in rats

Various animal models are useful for studying the effect of siRNA therapeutics in treating glaucoma. In the optic nerve crush model in rats the orbital optic nerve (ON) of anesthetized rats is exposed through a supraorbital approach, the meninges severed and all axons in the ON transected by crushing with forceps for 10 seconds, 2 mm from the lamina cribrosa. Testing active inhibitors of the invention (such as siRNA) for treating or

preventing glaucoma is performed, for example, in the animal models described by Pease et al. (J. Glaucoma, 2006, 15(6):512-9. Manometric calibration and comparison of TonoLab and TonoPen tonometers in rats with experimental glaucoma and in normal mice).

Optic nerve crush (ONC) model in adult Wistar rats is also an accepted model for studying Retinal Ganglion Cells (RGC) death. The onset and kinetics of RGC death in this model are very reproducible; RGC apoptosis begins on day 4-5 after the ONC; massive RGC loss (about 50-60%) is observed on days 7-10 after the ONC; and 95% of the RGC loss is occurs by week 3-4 after the ONC. This model allows for establishment of the neuroprotective efficacy of test drugs in vivo.

In some non-limiting examples, siRNA compounds directed to genes shown in Tables A1-A4 are tested in this animal model which show that these siRNA compounds treat and/or prevent glaucoma and/or RGC death when topically and non-invasively delivered to the eye.

IOP model in rats

Intraocular pressure (IOP) is a measurement of the fluid pressure inside the eye. This fluid, called aqueous humor, is circulated and then drained out via specialized outflow pathways. If the drainage system does not function properly, as in prevalent forms of glaucoma, pressure inside the eye builds up. A model of ocular hypertension in Brown Norway rats developed by Dr. J. Morrison and collaborators at the Casey Eye Institute (Portland, Oregon) is used in this study. The Morrison model involves injection of hypertonic saline into an episcleral vein, leading to blockade of the aqueous humor outflow pathways. This procedure leads to gradual increase of eye pressure and progressive death of RGCs. Importantly, inner retinal atrophy, optic nerve degeneration, and optic nerve head remodeling observed in this model are similar to that seen in human glaucoma. Thus, the Morrison model is considered the best pre-clinical rodent model of glaucoma.

In vivo axotomy model in rats

In this model RGC apoptosis is induced by axotomy of the optic nerve (ON) in adult Sprague-Dawley rats. The onset and kinetics of RGC death in this model system are very reproducible and allow for the establishment of the neuroprotective efficacy of non-invasively administered siRNA compound *in vivo*. Using this method, the time course of

RGC death follows a predictable course: cell death begins on day 5 and proceeds to the rapid loss of more than 90% of these neurons by 2 weeks.

Vehicle Formulations and Exemplary Eye Drop Formulations

The aqueous eye drop formulation optionally contain various additives incorporated ordinarily, such as buffering agents (e.g., phosphate buffers, borate buffers, citrate buffers, tartarate buffers, acetate buffers, amino acids, sodium acetate, sodium citrate and the like), isotonicities (e.g., saccharides such as sorbitol, glucose and mannitol, polyhydric alcohols such as glycerin, concentrated glycerin, polyethylene glycol and propylene glycol, salts such as sodium chloride), preservatives or antiseptics (e.g., benzalkonium chloride, benzethonium chloride, p-oxybenzoates such as methyl p-oxybenzoate or ethyl p-oxybenzoate, benzyl alcohol, phenethyl alcohol, sorbic acid or its salts, thimerosal, chlorobutanol and the like), solubilizing aids or stabilizing agents (e.g., cyclodextrins and their derivative, water-soluble polymers such as polyvinyl pyrrolidone) surfactants such as polysorbate 80 (Tween 80)), pH modifiers (e.g., hydrochloric acid, acetic acid, phosphoric acid, sodium hydroxide, potassium hydroxide, ammonium hydroxide and the like), chelating agents (e.g., sodium edetate, sodium citrate, condensed sodium phosphate) and the like.

The eye drop formulation in the form of an aqueous suspension may also contain suspending agents (e.g., polyvinyl pyrrolidone, glycerin monostearate) and dispersing agents (e.g., surfactants such as tyloxapol and polysorbate 80, ionic polymers such as sodium alginate), in addition to the additives listed above, thereby ensuring that the eye drop formulation is a further uniform microparticulate and satisfactorily dispersed aqueous suspension.

The ophthalmic ointment may comprise a known ointment base, such as purified lanolin, petrolatum, plastibase, liquid paraffin, polyethylene glycol and the like.

Exemplary eye drop formulation 1:

Formulation of siRNA compounds in PBS ("naked siRNA formulation") is typically prepared by dissolving dry siRNA in PBS. The formulation comprises at least one siRNA compound typically present in an amount ranging from about 5 μg/μl to about 60 μg/μl by volume of the composition.

In a non-limiting example formulation of an siRNA compound in PBS was prepared as follows: Under sterile conditions, 500 mg of dry siRNA were dissolved in 25 ml of

sterile double distilled water (DDW), to achieve a clear 20 mg/ml solution. The solution was stored at -80°C until use. The 20 mg/ml stock solution in DDW was then brought to a working concentration of 100 μg/3μl, in PBS, as follows: 325 μl of 20 mg/ml stock of siRNA solution (6.5mg) were precipitates by 0.15M NaCl and EtOH, and dried under a tissue culture laminar (sterile conditions). 6.5 mg of dry siRNA were dissolved in 130μl PBS to form eye drop formulation 1.

Exemplary eye drop formulation 2:

In some embodiments at least one siRNA compound is formulated in tris(hydroxymethyl)aminomethane (TRIS) 1M, pH 8.0 (available e.g. from Sigma (catalog #T-1503)).

In a non-limiting example 121.1 g of TRIS base (Sigma # T1503) were dissolved in 700 ml of ddH_2O. Desired pH 8 was achieved with addition of concentrated HCl. DDW was added to have final 1L solution. Under sterile conditions, 42.426 mg of siRNA compound powder were dissolved in 2.1 ml of sterile double distilled water, to achieve a clear 20 mg/ml (1.5 mM) stock solution. The stock solution was stored at –80°C until use. Under sterile conditions, corresponding amounts of siRNA stock were lyophilized and re-suspended in corresponding amount of 1M TRIS pH 8.

Exemplary eye drop formulation 3:

The concentration of the viscosity-enhancing agents to be used is typically within the range of about 0.05 to about 5.0 % (w/v), and more desirably, from about 0.1 to about 3.0 % (w/v). One preferred ophthalmic composition comprises from about 0.01 to about 0.075 % (w/v) of an active ingredient; from about 0.15 to about 2.5 % (w/v) of polyoxyl 40 stearate; from about 0.1 to about 3.0 % (w/v) of a cellulose thickening agent selected from 25 hydroxypropyl methylcellulose or hydroxyethylcellulose; and from about 0.0001% to about 0.01 % (w/v) of an anti-oxidant selected from butylated hydroxytoluene or sodium thiosulfate.

The combination of the surfactants such as polyoxyl 40 stearate or polyoxyethylene cetyl ether or polyoxyethylene octylphenyl ether with siRNA yields an eye-drop preparation causing less irritation to the eyes, providing better distribution in the eyes and having higher stability. The inclusion of an anti-oxidant and a cellulose-thickening agent further improves the distribution of the active therapeutic agent (i.e. siRNA) in the eyes and the stability.

Other excipients may also be added, such as for example an isotonic agent, buffer, preservative, and or pH-controlling agent. Sterile purified water in appropriate amounts is present to obtain the desired eye-drop preparation.

The pH of the ophthalmic composition is within the range, which is normally used for ophthalmic preparations, as known in the art, but is desirably within the range of 5 to 8. The formulation further comprises at least one siRNA compound typically present in an amount ranging from about 6.6 μg/μl to about 50 μg/μl by volume of the composition.

Exemplary eye drop formulation 4:

In the topical delivery of drugs to the lens, drug retention on the eye surface is considered to be important. Without wishing to be bound to theory, increased retention on the ocular surface leads to increased ocular absorption of a drug through the cornea into the aqueous humor and subsequently the lens.

In some embodiments a topical suspension is preferred. Non-limiting examples of topical suspensions include:

(1) hydroxypropyl methylcellulose (HPMC, 0.5% w/v), (2) xanthan gum (0.5% w/v), (3) gellan gum (0.5% w/v), (4) carbopol (0.25% w/v), and (5) carbopol (0.25% w/v) - hydroxypropyl methylcellulose (HPMC) (0.25% w/v). Viscosity measurements are conducted with a viscometer.

The formulation further comprises at least one siRNA compound typically present in an amount ranging from about 5 μg/μl to about 60 μg/μl by volume of the composition.

Exemplary eye drop formulation 5:

In ophthalmic compositions, a chelating agent is optionally used to enhance preservative effectiveness. Suitable chelating agents are those known in the art, and, while not intending to be limiting, edetate (EDTA) salts like edetate disodium, edetate calcium disodium, edetate sodium, edetate trisodium, and edetate dipotassium are examples of useful chelating agents. It is understood that EDTA refers to a species having four carboxylic acid functional groups, and that these carboxylic acid groups may be protonated or deprotonated (i.e. in the salt form) depending upon the pH of the composition it is in.

Buffers are commonly used to adjust the pH to a desirable range for ophthalmic use. Generally, a pH of around 5-8 is desired, however, this may need to be adjusted due to

considerations such as the stability or solubility of the therapeutically active agent or other excipients.

Another commonly used excipient in ophthalmic compositions is a viscosity-enhancing, or a thickening agent. Thickening agents are used for a variety of reasons, ranging from improving the form of the formulation for convenient administration to improving the contact with the eye to improve bioavailability. The viscosity-enhancing agent comprises a polymer containing hydrophilic groups such as monosaccharides, polysaccharides, ethylene oxide groups, hydroxyl groups, carboxylic acids or other charged functional groups. While not intending to limit some examples useful viscosity-enhancing agents are sodium carboxymethylcellulose, hydroxypropylmethylcellulose, povidone, polyvinyl alcohol, and polyethylene glycol..

The formulation further comprises at least one siRNA compound typically present in an amount ranging from about 5 μg/μl to about 60 μg/μl by volume of the composition.

Exemplary eye drop formulation 6 ("Formulation A"):

Formulation "A": Prepare 2 solutions, A and B.

Preparation of Solution A: 4% solution of methylcellulose in water. 0.4 g of methylcellulose 25 (ScienceLab.com, Cat# SLM2050) dissolved in the final volume of 10ml of apyrogenic water for injections (WFI) in 50 mL sterile tube (Norbook, Cat# 7082-51). Put small sterile stirrer inside and close the cap. Keep in boiling water bath while stirring for at least 5 minutes until methylcellulose forms an opalescent solution.

Preparation of Solution B: 2% Glycerol; 0.02% (v/v) EDTA solution. Add 333.3 uL of 60% glycerol (Sigma, Cat# G6279) & 2 μl 0.5M EDTA, pH=8 (Sigma, Cat# E9884) (final - 100uM) to 9.665 ml WFI (Norbook, Cat# 7082-51). Final volume - 10 mL.

Prepare 2X (in regard to working concentration) solution of siRNA in Solution B. Note: if stock siRNA volume is substantially high, the final volume of Solution B is better kept lower than 10mL to allow volume adjustment later in 2X siRNA solution.

Preparation of working siRNA solution:

Cool solution A in hand ~ till 40-50°C (still liquid) and mix the desired volume with an equal volume of 2X solution of siRNA in Solution B.

Final siRNA formulation contains 2% methylcellulose, 1% glycerol and 0.01% (v/v) (50uM) EDTA in WFI. Final pH should be ~7.4 and osmomolarity - similar to human tear film. Concentration of siRNA in final formulation is 33.3 mg/ml.

Must be prepared fresh once a week and aliquoted into the portions for daily usage. The aliquots are kept at 4°C. Before application, the dose is warmed for 20-30 min at room temperature.

The final concentration of the methylcellulose is about 0.1% to about 3% w/v about 0.1% to about 2% w/v, about 0.1% - 1.5% w/v methylcellulose, preferably about 2% w/v. The final concentration of glycerol is about 0.1% to about 5% v/v, about 0.5% to about 2%, preferably about 1% v/v. The final concentration of EDTA is about 0.001% to about 0.05%, about 0.005% to about 0.01%, preferably about 0.01% w/v.

Exemplary eye drop formulation 7:

In some embodiments siRNA is formulated in a commercially available lubricant eye drop formulation. Non-limiting example of commercially available lubricant eye drop formulation is Systane® available from Alcon Inc. Such commercially available lubricant eye drop formulations typically comprise polyethylene glycol and/ or propylene glycol, an antiseptic and / or antiviral agent such as boric acid, a gelling agent such as hydroxypropyl guar, potassium chloride and / or sodium chloride and / or magnesium chloride and/or calcium chloride and/or zinc chloride, preservatives such as Polyquad® and purified water. Under sterile conditions, 300 mg of siRNA powder is dissolved in 15 ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution is stored at (-)80˚C until use. The 20 mg/ml stock solution in double distilled water is then brought to a working concentration of 100µg/3µl, in formulation, as follows:

To obtain a final formulated quantity of 1.7 mg siRNA: 85 µl of 20 mg/ml stock of siRNA (1.7 mg), is precipitated by 0.15M NaCl and EtOH, dried under the tissue culture laminar (sterile conditions).

To achieve a siRNA solution of 33.3 mg/ml 1.7 mg dry siRNA is dissolved in 51µL Systane®.

<u>siRNA Compounds Induce Knockdown (KD) of Target Genes</u>

Example 1: *In Vitro* Testing of siRNA Compounds

About 1.5-2x10^5 tested cells (HeLa cells and/or 293T cells for siRNA targeting human genes and NRK52 (normal rat kidney proximal tubule cells) cells and/or NMuMG cells (mouse mammary epithelial cell line) for siRNA targeting the rat/mouse gene) were seeded per well in 6 wells plate (70-80% confluent).

About 24 hours later, cells were transfected with siRNA compounds using the Lipofectamine™ 2000 reagent (Invitrogen) at final concentrations of 5 nM or 20 nM. The cells were incubated at 37°C in a CO_2 incubator for 72h.

As positive control for transfection phosphatase and tensin homolog (PTEN)-Cy3 labeled siRNA compounds were used. Various chemically modified blunt ended siRNA compounds having alternating modified and unmodified ribonucleotides (modified at the 2' position of the sugar residue in both the antisense and the sense strands, wherein the moiety at the 2' position is methoxy) and wherein the ribonucleotides at the 5' and 3' termini of the antisense strand are modified in their sugar residues, and the ribonucleotides at the 5' and 3' termini of the sense strand are unmodified in their sugar residues were tested. Another siRNA compound comprised a blunt ended structure having an antisense with an alternating pattern of methoxy moieties and a sense strand with three ribonucleotides linked by two 2'5' bridges at the 3' terminus; and another siRNA compound comprising antisense and sense strands having three ribonucleotides linked by 2'5' bridges at the 3' terminus was used. Some of the tested compounds comprised a blunt ended structure having an antisense with an alternating pattern of methoxy moieties and a sense strand with one or two L-nucleotides at the 3' terminal or 3' penultimate positions.

GFP siRNA compounds were used as negative control for siRNA activity. At 72h after transfection cells were harvested and RNA was extracted from cells. Transfection efficiency was tested by fluorescent microscopy. The percent of inhibition of gene expression using specific preferred siRNA structures was determined using qPCR analysis of a target gene in cells expressing the endogenous gene.

In general, the siRNAs having specific sequences that were selected for *in vitro* testing were specific for human and a second species such as non-human primate, rat or rabbit genes. Similar results are obtained using siRNAs having these RNA sequences and modified as described herein.

siRNAs targeted at genes related to apoptosis and neuroprotection were tested by a similar procedure and found active and able to induce knock down of their corresponding target genes.

siRNA Prepared for Non-Invasive Administration and Administered by Eye Drops is Delivered to the Target Retinal Tissue *in-vivo*

Example 2: Distribution of CY3-labeled siRNA in murine optic tissue (siRNA Formulated in PBS) as monitored by fluorescence microscopy and confocal microscopy

The current study showed siRNA delivery *in-vivo* to the lacrimal gland and ocular structures via a topical ocular route.

Abbreviations: E.D.= Eye Drops; ISH= In-situ Hybridization

The objective of this study was to test the delivery of DDIT4-Cy3 labeled siRNA (siRNA compound targeting the RTP801 gene) to the lacrimal gland via non-invasive topical ocular route. The topical ocular route has been evaluated for the delivery of siRNA into the lacrimal gland, anterior chamber of the eye, the retina and the optic nerve.

Materials and Methods

Table C1: Animals

Species/strain:	Mice/ ICR, males
Age:	6-10 weeks
Body Weight Range:	27-32 gr
Group Size:	2
Total number of animals:	26

DDIT4-Cy3 siRNA (siRNA against mouse RTP801) formulated as 20m-/ml stock solution in PBS and stored at –80°C until use.

Experimental Procedure

The study included 6 experimental groups as described in Table C2 hereinbelow: Mice were treated with a single siRNA DDIT4-Cy3 as follows:

Group V (A and B): dose regime: 50µg/mouse/3µl/eye, administration route: Right Eye drops (E.D.);

Group Am-V-A, Am3-VIII, Am3-IX: dose regime: 50µg/mouse/3µl/eye, administration route: both eyes, Eye drops (E.D.);

Group VI-A: dose regime: 20μg/mouse/3μl/eye, administration route: Right eye, Eye drops (E.D.);

Group VII, Am-VII: non-treated control.

Table C2. Study Design

Group	SiRNA Type	Dose μg/mouse	Injected Volume (μl)	Route	Time point (hrs)	Group Size
V-A	DDIT4-Cy3	50.00 Right Eye	3.00	E.D.	1	2
Am-V-A	DDIT4-Cy3	50.00 per eye / Both Eyes	3.00	E.D.	1	2
V-B	DDIT4-Cy3	50.00 Right Eye	3.00	E.D.	4	2
VI-A	DDIT4-Cy3	20.00 Right Eye	3.00	E.D.	1	2
VII	None	none	None	none		5
Am-VII	None	none	None	none		1
Am3-VIII	DDIT4-Cy3	50.00 per eye / Both Eyes	3.00	E.D.	4	2
Am3-IX	DDIT4-Cy3	50.00 per eye / Both Eyes	3.00	E.D.	24	2

The siRNA doses were prepared under sterile conditions. siRNA aliquots were thawed for at least 30 min at room temperature prior to administration. Total amount per aliquot (per each mouse) included an additional 20% of the calculated volume. The designated siRNA dose was delivered in 3μl (Experimental groups V-VI) volume per eye.

Anesthesia: Mice were anesthetized with Ketamine/Xylazine mix as follows: 0.85 ml Ketamine + 0.15 ml Xylazine + 0.9 ml Saline, 0.1 ml mix solution/20 gr body weight (BW).

Eye drop (E.D.) delivery: A 3 μl sample volume was slowly dropped in the treated eye (corneal surface) using a blunt pipette tip; the animals were placed in a warm environment to prevent anesthesia-induced hypothermia, and were returned to cages after regaining consciousness.

Scheduled euthanasia: Following treatment, mice from all groups were euthanized according to the study design (Table C2, Time point termination).

Termination step was accomplished by cardiac puncture and blood collection; collected serum/plasma was stored (-20°C) for further siRNA blood detection analysis.

Tissue Collection: Left and right eyes including optic nerve, lacrimal glands (left and right) from all animals were excised, brain (front and middle parts of the brain, frontal oriented sections) from animals of groups, V-A one from group VII, Am3-VIII, Am3-IX were excised, embedded in optimal cutting temperature (OCT) compound and sectioned with a cryostat into 8 μm slices that were placed on microscope slides (Superfrost/Plus™). Sections were fixed in 95% EtOH for 7 minutes then counter stained with DAPI (1 μg/ml), incubated for 1 minute in absolute EtOH, incubated for 5 minutes in xylene, air dried and mounted.

Tissue Evaluation: Delivery of siRNA was evaluated using light microscopy and digital imaging. A tissue fragment was considered positive (i.e., successful Cy3 DDIT4 siRNA intracellular incorporation) only where histological (microscopic) examination showed a clear fluorescence signal within specific cells or structures such as acinar alone or in combination with ductal cells of the lacrimal gland. Background DAPI staining assisted in identification of tissue structure: in the case of anterior eye chamber structures such as cornea, angle, ciliary body or posterior eye chamber such as retina (retinal pigmentum epithelium cells (RPE), retinal ganglion cells (RGC)). Delivery was considered positive if histological examination would show that all animals within one experimental group showed the same fluorescence signal within the investigated cell type/tissue. (i.e. time points or route administration).

Results & Discussion

All cryosections were analyzed under light microscopy (bright field, BF) and fluorescence confocal microscopy. The fluorescent signal was visualized in the following tissues:

Retina by E.D. delivery (retinal pigment epithelial cells, retinal ganglion cells) Figures 1A-1B: Representative images of Cy3 labeled DDIT4 siRNA incorporated into mice retina.

Figure 1A: Fluorescent microscopy (upper panel, magnification x40) of the retina 1 hour after E.D. administration. Right arrow identifies Cy3 stained retinal ganglion cells (RGC), left arrow identifies Cy3 stained retinal pigmentum epithelium cells (RPE). Confocal microscopy (lower panel, magnification x60) of the retinal ganglion cells layer. The lower set of 9 views show Cy3 labeled tissue (Left), bright filed (BF, center) and a merge of the two (M, right). Arrows point to the labeled RGCs.

Figures in 1B: Confocal microscopy of the retina 4 hours after E.D. administration (upper x40, lower x60). Cy3 staining of the RGC is prominent.

Eye drop delivery of siRNA to the lacrimal glands (acinar cells, ductal cells) Figures 2A-2D: Representative images of Cy3 labeled DDIT4 siRNA incorporated into ductal and acinar cells of the murine lacrimal gland.

Figure 2A: Fluorescent microscopy of the lacrimal gland 1 hour after E.D. administration (M=merged DAPI-Cy3 staining). Center arrow points to acinar cells, right arrow indicates ductal epithelial cells, the gray left arrow points to the lacrimal duct (magnification x60)

Figure 2B: Confocal microscopy of the lacrimal gland 1 hour after E.D administration (upper x40 and lower panel x60). Arrow in merged image M is pointing to lacrimal duct.

Figure 2C: Confocal microscopy of the lacrimal gland 1 hour E.D administration (x40). Arrows are pointing to acinar cells

Figure 2D: Confocal microscopy of the lacrimal gland 4 hours after E.D. (x60).

Figures 3A-3C show time course of accumulation of Cy3-siRNA in rat choroid after administration by eye drops, following 1 and 4 hours post administration. Choroid, outer nuclear layer, RPE and outer segment layer of photoreceptor cells show Cy3 staining.

Figure 4 shows Cy3-siRNA delivery to the trabecular meshwork end ciliary body one hour after administration by eye drops.

Different chemically modified siRNA (structural motives) were tested with mouse Cy3-labeled siRNA. Similar tissue distribution to that shown above was observed for all structures tested: Structure B having alternating natural ribonucleotides and 2'O-Me sugar modified ribonucleotides on both strands; Structure I having alternating natural ribonucleotides and 2'O-Me sugar modified ribonucleotides on the antisense strand and three ribonucleotides linked by 2'5' internucleotide linkages at the 3' end of the sense strand; and a structure having three ribonucleotides linked by 2'5' internucleotide linkages at the 3' end of each of the antisense and sense strands.

Example 3: Examination of Topical Ocular Route Delivery of Formulated siRNA in Rats (siRNA Formulated in PBS or in methyl cellulose 2% ("Formulation A"))

In the current study the ocular delivery of DDIT4-Cy3 siRNA formulated either in PBS or in Formulation A and applied by Eye Drops was studied in rats.

Table C3: Study Design

Group	siRNA	Dose µg/eye	Route of Adm. (Bilateral)	Adm. Volume (µl)	Formulation	Termi-nation time	Group Size
I	DDIT4_1-Cy3	100.00	E.D.	3.00	Formulated	30 min.	1
Ia	DDIT4_1-Cy3	100.00	E.D.	3.00	PBS	30 min.	1
II	DDIT4_1-Cy3	100.00	E.D.	3.00	Formulated	1 hour	1
IIa	DDIT4_1-Cy3	100.00	E.D.	3.00	PBS	1 hour	1
III	DDIT4_1-Cy3	100.00	E.D.	3.00	Formulated	3 hours	1
IIIa	DDIT4_1-Cy3	100.00	E.D.	3.00	PBS	3 hours	1
IV	DDIT4_1-Cy3	100.00	E.D.	3.00	Formulated	6 hours	1
Iva	DDIT4_1-Cy3	100.00	E.D.	3.00	PBS	6 hours	1
V	DDIT4_1-Cy3	100.00	E.D.	3.00	Formulated	24 hours	1
Va	DDIT4_1-Cy3	100.00	E.D.	3.00	PBS	24 hours	1
VI	N/A	N/A	E.D.	3.00	vehicle	1 hours	1
VII	N/A Intact control	N/A	N/A	N/A	N/A	N/A	1

Experimental Design:

1) Group I, II, III, IV, V: dose regime: siRNA formulated in Formulation A; 100µg/rat/3µl/eye, administration route: Bilateral Eye drops (E.D.);

2) Group Ia, IIa, IIIa, IVa, Va: dose regime: siRNA formulated in PBS; 100µg/rat/3µl/eye, administration route: Bilateral Eye drops (E.D.);

3) Group VI: control group treated with the formulation vehicle of Formulation A (no siRNA);100µg/rat/3µl/eye, administration route: Bilateral Eye drops (E.D.);

4) Group VII: intact control

The siRNA doses were prepared under sterile conditions. siRNA aliquots were thawed for at least 30 minutes at room temperature prior to administration. Total amount per aliquot (per each mouse) included an additional 20% of the calculated volume. The designated siRNA dose was delivered in 3µl volume per eye.

Anesthesia: Rats from groups I-VII were anesthetized with Equithesine (4ml/kg)

Termination step: At study termination, animals were deeply anesthetized by Equithesine (4ml/kg). Thereafter, rats were intracortically perfused with fresh 10% neutral buffered formalin using peristaltic pump standard regime.

Tissue Collection: Left and right eyes including optic nerve from all animals were enucleated, perforated and post fixed in 10% neutral buffered formalin for an additional 1 hour in room temperature with slow rotation, cryoprotected step-wise by sucrose gradient at 4°C overnight, following cryoprotection in optimal cutting temperature (OCT) compound at 4°C overnight with rotation, embedded in OCT compound and sectioned with a cryostat into 12 μm slices that were placed on microscope slides (Superfrost/Plus). Sections were counter stained with DAPI (1 μg/ml) and mounted.

Delivery of siRNA was evaluated using light microscopy and digital imaging. A tissue fragment was considered positive (i.e., a successful Cy3 DDIT4_1 siRNA transfer in anterior eye chamber, retina and optic nerve delivery was considered positive) if histological examination would show that all animals within one experimental group showed the same fluorescent signal within the specific tissue/cell type.

Results: All cryosections were analyzed under light microscopy (bright field, BF) and fluorescence confocal microscopy. The fluorescent signal was visualized in retinal pigment epithelial cells and retinal ganglion cells. Notably, compounds formulated in PBS reached maximum distribution in ocular tissues 3 hours after administration, and were cleared from said tissues at the 6 hour time point. However, compounds formulated in Formulation A were maximally distributed in ocular tissues at 24 hours after administration.

Example 4: Ocular Distribution of siRNA (formulated in PBS) in the Cynomolgus Monkey

Table C4: Experimental Design

Group	Animal number	Compound	Dose Volume	Termination after administration	Processing at termination
					Eyes
1	101	Cy3-DDIT4_1	500ug/20ul/eye	1 hour	4% PFA
2	251	DDIT4_1	500ug/20ul/eye	1 hour	Snap frozen in liquid nitrogen
3	351	Cy3-DDIT4_1	500ug/20ul/eye	5 hours	4% PFA
4	401	DDIT4_1	500ug/20ul/eye	5 hours	Snap frozen in liquid nitrogen

ED=Eye Drops, topically

The aim of this study was to investigate the tissue distribution of siRNA formulated in PBS following single topical ocular administration to the surface of the eye of the Cynomolgus Macaca fascicularis monkey. All tissues were snap frozen in triplicate ~1 to ~2 g samples or as a whole, as appropriate.

RNA purification

Frozen samples were grinded to a fine powder under liquid nitrogen. A small amount of the powdered tissue was used for RNA extraction. The rest of the tissues were stored at –80°C for further usage. PolyA RNA was extracted from each sample with MicroPoly(A)Purist mRNA purification Kit (#1919) and processed according to manufacturer's protocol for poly(A)RNA isolation from tissues or cells. The final yields and spectral characteristics of the RNA are summarized below in Table C5.

Table C5: polyA RNA from monkey

Tissue	260/280	260/230	Concentration µg/µl	Yield µg
Lymph Node	1.58	0.92	0.104	1.55
Spleen	1.74	1.27	0.175	2.62

One µg from the spleen and 0.7µg from the lymph node polyA RNA preparations were used for cDNA synthesis using random primer. Casp2 gene was successfully amplified from both cDNA preparations.

Results are summarized below in Table C6.

Table C6: Results

Treatment	Tissue analysed	Termination	Av	SD	Group size
ED(REDD14)	Neuronal Retina	1h	0.2	[+/-0]	1 (2 eyes)
ED(REDD14)	Neuronal Retina	5h	0.05	[+/- 0.03]	1 (2 eyes)
ED(REDD14)	RPE	1h	0.62	[+/-0.05]	1 (2 eyes)
ED(REDD14)	RPE	5h	0.1	[+/- 0.07]	1 (2 eyes)
ED(REDD14)	optic nerve	1h	8.9	[+/-2.6]	1 (2 eyes)
ED(REDD14):	optic nerve	5h	3	[+/-1.9]	1 (2 eyes)

Conclusion: SiRNA formulated in PBS following single topical ocular administration to the surface of the eye of the Cynomolgus Macaca fascicularis monkey reaches the neuronal retina and can be measured by the qPCR S&L method.

Example 5: Delivery of siRNA (formulated in TRIS) to target retinal tissue in mice

Examination of topical delivery of siRNA molecules labeled with different fluorophores.

Topical delivery to Mice of 20 ug of different fluorescently-labeled siRNAs formulated in tris(hydroxymethyl)aminomethane (TRIS) 1M, pH 8, 1 hr post-administration.

siRNAs tested:

Cy3-QM5; Cy3-DDIT4; Cy3.5-DDIT4; DDIT4_1 Dy-649/C6; FITC-CNL_1; 3'Cy3-CNL_1; Cy3-Casp2_4 L-DNA; Cy3-AS-Casp2_4; TGASEII-FAM; HNOEL-FAM. (QM5 is a rat/mouse siRNA that targets p53; CNL is control scrambled siRNA)

Exemplary chemically modified Casp2 siRNA compounds were as follows:

1. Sense: GCCAGAAUGUGGAACUC2pC2pU, 17 and 18 are 2'-5'-bridge
   Antisense: mAGmGAmGUmUCmCAmCAmUUmCUmGGmC-cy3

2. Sense: GCCAGAAUGUGGAACUC;LdC;LdT 18 and 19 are L-DNA

   Antisense: mAGmGAmGUmUCmCAmCAmUUmCUmGGmC-cy3

3. Sense: GCCAGAAUGUGGAACUC;LdC;U18 is an L-DNA moiety

   Antisense: mAGmGAmGUmUCmCAmCAmUUmCUmGGmC-cy3

LdC, LdT refer to L-DNA nucleotides, mA, mC, Mg, Mu refer to 2'O-methoxy ribonucleotides.

Formulated (formulated compound): siRNA in 1M Tris pH 8.0 Of the following siRNA's: QM5-Cy3#1, QM5-Cy3#10, DDIT4_1-Cy3, DDIT4_1Cy3.5, Redd14(DDIT4_1) Dy-649/C6, FITC-CNL_1RD/CNL_1FD, scarmbled3'Cy3CNL 1, Cy3-AS-CASP2_4-Struc-L-DNA-s(2 residues at 3' of sense)-plus-alt AS, Cy3AS- CASP2_4-Struc2-5-s(2 residues at 3' of sense)-plus-alt AS, TGASEII-FAM, HNOEL-FAM.

Table C7: Formulations

siRNA	IDO	Final	siRNA Stock	Preparation
QM5-Cy3#1	116937	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
QM5-Cy3#10	116938	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
DDIT4_1-Cy3	117821	40µg	20mg/ml	2ul stock were lyophilized and resuspended in 7µl 1M Tris pH8
DDIT4_1-Cy3.5	112206	40µg	20mg/ml	2ul stock were lyophilized and resuspended in 7µl 1M Tris pH8
Redd14(DDIT4_1) Dy-649/C6	114029	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
FITC-CNL_1RD/CNL_1FD	110357	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
scarmbled3'Cy3-CNL_1	110910	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
Cy3-AS-CASP2_4-Struc-L-DNA-s(2 residues at 3' of sense)-plus-alt AS	122994	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
Cy3-AS-CASP2_4-Struc2-5-s(2 residues at 3' of sense)-plus-alt AS	122979	40µg	20mg/ml	2µl stock were lyophilized and resuspended in 7µl 1M Tris pH8
TGASEII-FAM	75755	11.62µg	0.75µg/µl	15.5µl stock were lyophilized and resuspended in 2µl 1M Tris pH8
HNOEL-FAM	75757	4.48µg	1.4µg/µl	3.2µl stock were lyophilized and resuspended in 0.784µl 1M Tris pH8
DDIT4_1-Cy3	117821	40µg	20mg/ml	2µl stock+0.7ul PBSx10+4.3µl DDW

Description of the test material: Under sterile conditions, corresponding amount of siRNA stock were lyophilized and re-suspended in corresponding amount of 1M Tris pH8 (see Table C7).

Quantity supplied: One vile for each tested siRNA (Synthesized by Biospring, AG)

Storage Conditions: frozen until use. Prior to use, samples were thawed and kept at room temperature for 30 minutes.

CONTROL ARTICLE(S)

Positive Control – DDIT4_1-Cy3 in PBS, Batch # : 117821

Description of the test material: Under sterile conditions, 42.426 mg of DDIT4_1-Cy3 powder (BioSpring) were dissolved in 2.1 ml of sterile double distilled water, to achieve a clear 20 mg/ml (1.5mM) solution. The solution was stored at –80°C until use.

Vehicle - 1M Tris pH 8.0 - Outsourcing from Sigma (catalog #T-1503). 121.1 g of TRIS base (Sigma # T1503) were dissolved in 700 ml of ddH_2O. Desire pH 8 was achieved with concentrated HCl. DDW was added to have final 1L solution.

Vehicle - PBSX10 - Outsourcing from Biological Industries (catalog #02-023-5A; (For 10x PBS) Batch # :619113)

TEST SYSTEM

Animals:

Species: Mice; Strain: RTP-801WT; CMF-608WT

Source: Harlan Laboratories, Jerusalem, Israel.

Age: 8-12 weeks; Body Weight Range: 17-28 gr

Sex: males; Group Size: 1; Total number of animals: 14

Animal Husbandry: Diet: Animals were provided an *ad libitum* commercial rodent diet and free access to drinking water. Environment: (i) Acclimatization of at least 5 days. (ii) All the animals were confined in a limited access facility with environmentally-controlled housing conditions throughout the entire study period, and maintained in accordance with approved standard operating procedures (SOPs).

EXPERIMENTAL DESIGN

General: The study included 14 experimental groups as described in Table C8:

Experimental groups 1-12 siRNA delivered by eye drops, group 13 the vehicle [TRIS 1M pH8 treated control delivered by eye drops and group 14 (non-treated control). Mice were treated with a single siRNA as follows:

- Groups 1-9 and 12: dose regime: 20 μg/eye/3μl/SiRNA, group 10: dose regime 5.81 μg/eye/3μl/siRNA , group 11: dose regime 2.24 μg/eye/3μl/siRNA administration route: Eye Drop (E.D.);

- Group 13: vehicle (TRIS 1M pH8) 3μl/eye control

- Group 14: none treated control

Table C8. Study Design

Group	SiRNA type/bilateral	Dose µg/eye	Volume (µl)	Route	Time point (hrs)	Group Size
1	QM5-Cy3#1	20	3.00	E.D.	1	1
2	QM5-Cy3#10	20	3.00	E.D.	1	1
3	DDIT4_1-Cy3	20	3.00	E.D.	1	1
4	DDIT4_1-Cy3.5	20	3.00	E.D.	1	1
5	DDIT4_1 Dy-649/C6	20	3.00	E.D.	1	1
6	FITC-CNL_1RD/CNL_1FD	20	3.00	E.D.	1	1
7	scarmbled3'cy3-CNL_1	20	3.00	E.D.	1	1
8	Cy3-AS-CASP2_4-Struc-L-DNA-s(2 residues at 3' of sense)-plus-alt AS	20	3.00	E.D.	1	1
9	CY3-AS-CASP2_4-Struc2-5-s(2 residues at 3' of sense)-plus-alt AS	20	3.00	E.D.	1	1
10	TGASEII-FAM	5.81	3.00	E.D.	1	1
11	HNOEL-FAM	2.24	3.00	E.D.	1	1
12	DDIT4_1-Cy3 in PBS vehicle (positive control)	20	3.00	E.D.	1	1
13	Vehicle (TRIS 1M pH8) (negative control)	N/A	3.00	E.D.	1	1
14	Non treated (negative control)	N/A	3.00	E.D.	1	1

The siRNA doses for delivery were prepared under sterile conditions and stored at -20˚C. siRNA aliquots were thawed for at least 30 minutes at room temperature prior to administration. Total amount per aliquot (per each eye) included an additional 20% of the calculated volume. The designated siRNA dose was delivered in 3.5.µl (Experimental groups 1 to 9 and 12) volume per eye. The designated siRNA dose was delivered in 3.2.µl (Experimental groups 10 and 11) volume per eye.

Anesthesia: Mice were anesthetized with Ketamine/Xylazine mixture as follows (0.85ml Ketamine+0.15ml Xylazine + 0.9ml Saline, 0.1ml mix solution/20gr BW).

Eye drop delivery: A 3µl volume sample was slowly dropped in each eye (corneal surface) by blunt pipette tip; the animals were placed in a warm environment to prevent anesthesia-induced hypothermia, and were returned to its cage after it regaining consciousness.

Scheduled euthanasia: Mice from all groups were terminated according to the study design (Table C8, Time points termination).

Termination step was accomplished by cervical dislocation.

Tissue Collection: Left and right eyes including optic nerve, from all animals were enucleated, the retina was transversal dissected with the blade, the lens/vitreous were gently removed. The remaining eye cup was fixed with 4% PFA (in PBS pH 7.4) for 30 minutes, then infiltrated with 30% sucrose for 3 hours at 4°C. Washed 3X5 minutes with ice cold PBS pH7.4. It was then embedded in optimal cutting temperature (OCT) compound and sectioned longitudinal with a cryostat into 4 μm slices that were placed on microscope slides (Superfrost/Plus). Sections were counter stained with DAPI (1 μg/ml) and mounted.

A whole blood drop from all animals, was smeared on the slide with the cover slip, and covered. It was then glued with nail polish

EVALUATION

Delivery of siRNA was evaluated using light microscopy and digital imaging. A tissue fragment was considered positive (i.e., a successful siRNA transfer\ intracellular incorporation occurred) only if histological (microscopic) examination showed clear fluorescence signal within specific cells or structures of the anterior or posterior chamber, and retina. Background DAPI staining was assisted in identification of tissue structure. Delivery was considered positive if histological examination was consistent within the group (bilateral identical cell type or structural staining), i.e. the histological examination would show the same fluorescent signal in all cell types/tissues (anterior eye chamber, retina and optic nerve) of the same experimental group.

Results

Figures 5A-5B: Confocal microscopy (magnification x60) of the retina 1 hour after eye drop administration of QM5 - siRNA targeted at the p53 gene. SiRNA in retina (retinal pigment epithelial cells, retinal ganglion cells) is shown by Cy3 fluorescence.

Figures 6A-6B are representative images of Cy3 labeled DDIT4 siRNA incorporated into mice retina.

Figure 6B shows accumulation of DDIT4_1 Cy3-siRNA 1 hour post administration by eye drops. Choroid, outer nuclear layer, RPE and outer segment layer of photoreceptor cells show Cy3 staining.

Figure 7 shows accumulation of DDIT4_1 Dy-649/C6 -siRNA 1 hour post administration by eye drops in RGC cells by use of Dy-649/C6 staining.

Figure 8A - 8C represent control siRNA FITC-CNL_1RD/CNL_1FD and scarmbled3'cy3-CNL_1 delivery to retinal tissues by different staining methods. Figure 9A and 9B show delivery of different structures of Casp2 to the mouse retinal tissues.

Figures 10A and 10B show TGASEII-FAM and HNOEL-FAM delivery.

Figure 11 shows retinal delivery of siRNA against p53 in PBS as positive control group and

Figures 12A and 12B show that in intact animals or when administering ED without siRNA no fluorescent signal is obtained in the retina.

Conclusion: No sequence dependent differences, neither fluorophore nor gene dependent differences in the delivery to the retina were found. The study showed efficient delivery of Cy3 conjugated siRNA compounds directed to CASP2, RTP801, TIGASEII and p53 target genes, to ocular structures: RGC, RPE, photoreceptors, choroid.

Example 6: Quantification of Delivery of Casp2 siRNA (formulated in PBS or in MC 2% (Formulation "A")) to target retinal tissue in rats *in-vivo*

Examination of different eye Drop formulations for the delivery of siRNA to the retina. The objective of the study was the determination of CASP2_4_S510 siRNA quantity in rat retina at time points 1, 3, 6 & 24 hours following single topical administration in different eye drops (ED) formulations.

TEST ARTICLE

Substance (unformulated compound): CASP2_4_S510 (siRNA Against CASP2)

Supplied by Agilent (Manufacturer's catalog # QPI-1007, Batch #: Q02F08002N)

Description of the test material: CASP2_4_ S510: S- inverted-Abasic 5'-cap, L-DNA 18/AS-AL. A 19-mer chemically modified blunt-ended duplex having two separate strands, with a sense strand (SEN) comprising unmodified ribonucleotides (upper case letters), an L-deoxyribonucleotide at position 18 (bold, underlined) and inverted

deoxyabasic moiety (iB) present at the 5' terminus of the SEN strand; and with an antisense strand (AS) comprising unmodified ribonucleotides (upper case letters), and 2'OMe sugar modified ribonucleotides (lower case letters) at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 as shown in Formula I:

Formula I

SEN 5' iB-GCCAGAAUGUGGAACUCCU 3'

AS 3' cGgUcUuAcACcUuGaGgA 5'

Storage Conditions: -80°C

siRNA formulated in PBS : 33.3mg/ml CASP2_4_S510 in PBS (solution for eye drops)

Description of the test material: Under sterile conditions, 300 mg dry CASP2_4_S510 siRNA were dissolved in 15ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution was stored at –80°C until use. The 20mg/ml stock solution in DDW was then brought to a working concentration of 100µg/ 3µl, in PBS, as follows:

6.5mg CASP2_4_S510 siRNA: 325 µl of 20 mg/ml stock of CASP2_4 (6.5mg), were precipitated by 0.15M NaCl and EtOH, and dried under the tissue culture laminar (sterile conditions). siRNA solution 33.3mg/ml: 6.5mg dry siRNA were dissolved in 195µl PBSx1 Quantity prepared: 6.5mg / 195µl aliquoted into 4 tubes. Storage Conditions: freshly prepared

siRNA formulated in Formulation A : 33.3mg/ml solution of CASP2_4_S510 siRNA in 2% (w/v) methylcellulose & 1% (v/v) sterile glycerol & 0.01% (w/v) EDTA solution in pyrogen free water (solution for eye drops)

Description of the test material: Under sterile conditions, 300 mg dry CASP2_4_S510 siRNA were dissolved in 15ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution was stored at –80°C until use. The 20mg/ml stock solution in DDW was brought to a working concentration of 100µg/3µl, in formulation, as follows:

6.5mg CASP2_4_S510 siRNA: 325 µl of 20 mg/ml stock of CASP2_4 (6.5mg), were precipitated by 0.15M NaCl and EtOH, and dried under the tissue culture laminar (sterile conditions).

siRNA solution 33.3mg/ml: 6.5mg dry siRNA were dissolved in 195µl Formulation A solution

Quantity prepared: 6.5mg / 195µl aliquoted into 4 tubes

Storage Conditions: freshly prepared

CONTROL ARTICLE(S)

Methyl cellulose formulation (no siRNA) - 2% methylcellulose & 1% v/v sterile glycerol & 0.01% w/v EDTA solution in pyrogen free water, was prepared as follows:

Solution A: 0.4 g of methylcellulose 25 (ScienceLab.com, Cat# SLM2050) dissolved in final volume of 10ml of hot boiled water (80-90°C), (Norbrook), cooled down to room temperature and added in a proportion of 1:1 (final concentration 2%) to solution B.

Solution B: 332 µl of 60% glycerol (Sigma, Cat# G6279) & 2 µl EDTA solution pH8 (prepared from Sigma, Cat# E9884) in 9.66 ml WFI (Norbrook).

500 µL of Solution A mixed with 500 µL of Solution B to obtain: 2% methylcellulose & 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water (final pH was approximately 7.4 and osmolarity similar to human tear film).

PBS was supplied by Biological industries (Manufacturer catalog #02-023-5A (For 10x PBS); Batch # 619113)

TEST SYSTEM

Animals used: Species: Rats; Strain: Adult, Sprague-Dawley (SD)

Source: Harlan, Jerusalem Israel

Age: 8-10 weeks; Body Weight Range: 180-250gr

Sex: Male; Group Size: n=6/3; Total number of animals: 54

Animal Husbandry: Diet: Animals were provided an *ad libitum* commercial rodent diet and free access to drinking water.

Environment:

(i) Acclimatization of at least 5 days.

(ii) All animals were confined in a limited access facility with environmentally-controlled housing conditions throughout the entire study period, and maintained in accordance with approved standard operating procedures (SOPs). Animals were provided *ad libitum* a

commercial rodent diet (Harlan Teklad 2018S Global 18% Protein Rodent Diet) and filtered, chlorinated and acidified water.

Rats were kept in microisolator cages with filter top, 1-6 Rats / cage. The cages were maintained under controlled environmental- conditions of temperature (20-24 °C), relative humidity (30-70%), a 12- hr light / 12-hr dark cycle, monitored by the control computer, throughout the study period.

Experimental design

Study design: Retinal concentration of CASP2_4 siRNA following ED application of ocular formulation was determined by qPCR in study groups terminated at different time points after siRNA administration. Each experimental siRNA-treated group included 6 rats. ED was applied bilaterally as detailed in Study Design Table C9.

Termination time points post siRNA administration: Termination setup was performed according to the study design Table C9. Dosing and termination of experimental groups were performed on separate days.

Table C9: Study Design

Group Number	Group Size	Test Article	Dose of Bilateral ED [100 µg/eye/3ul]	Termin-ation [hrs]	Method of Analysis
1	6	CASP2_4_S510	PBS formulated siRNA	1	qPCR
2	6	CASP2_4_S510	MC formulated	1	qPCR
3	6	CASP2_4_S510	PBS formulated siRNA	3	qPCR
4	6	CASP2_4_S510	MC formulated	3	qPCR
5	6	CASP2_4_S510	PBS formulated siRNA	6	qPCR
6	6	CASP2_4_S510	MC formulated	6	qPCR
7	6	CASP2_4_S510	PBS formulated siRNA	24	qPCR
8	6	CASP2_4_S510	MC formulated	24	qPCR
9	3	N/A	Vehicle MC	1	qPCR
10	3	N/A	intact	N/A	qPCR

Anesthesia: In the course of the experiment, the animals were anesthetized with Equithesine (I.P. 4ml/kg) for ED application and/or before terminations.

Eye Drop Delivery: A 3µl sample volume of the test article or vehicle was applied to the corneal surface bilaterally to the anesthetized animals, by a blunt pipette tip (filter tips

10µl sterile (short)). The animals were placed in a warm environment to prevent anesthesia-induced hypothermia, and were returned to their cage after regaining consciousness (experimental Groups 7 and 8). Termination of animals from all study groups was according to study design. Tissues were collected according to study design.

Scheduled euthanasia: All animals were deeply anaesthetized and euthanized according to the study design (Table C9, Termination).

Perfusion setup: Rats were perfused transcardially with PBS (20-50 ml/min following 2-3 min).

Tissue Collection: After perfusion, both eyes (left and right) were enucleated and stored on ice. The eyes were dissected using a microscope, and optionally gross pathology was graded according to the sample grading scale. The cornea was dissected by a cut along the limbus, lens was gently removed, and the retina and vitreous were carefully separated from the sclera. Whole retinas and vitreous bodies (humor) were collected (Retina including: "neural retina" + Retinal Pigment Epithelium + Choroid) into two separate appropriate and properly marked test tubes. Dissected retinas were washed in a large volume of PBS (each retina in a separate tube with fresh PBS), extra liquid was removed with Kimwipe® and retinas were snap-frozen in liquid nitrogen. Retina and Vitreous body samples were s subjected to RNA extraction.

EVALUATION

RNA Extraction:

Retina: RNA was extracted from each retina sample individually (left and right) by double extraction. The RNA was transferred for cDNA preparation and qPCR analyses.

Vitreous: Material for Casp2_4 siRNA detection from vitreous was obtained using the following protocol:

Each rat vitreous was around 10µl. 500µl of reagent A EZ-RNA II (Biological Industries Cat no. 20-410-100) were added to each vitreous. The sample was homogenized, and 10µg tRNA (1µl from 10 mg/ml stock) were added. The sample was stored for 5 minutes at room temperature. Subsequently : EZ-RNA II B: 400 µl and EZ-RNA II C: 90 µl were added and Mixed well. The sample was stored for 10 min at room temperature then centrifuged 12000g for 15 min at 4˚C.

The upper phase was transferred to a fresh tube to which isopropanol: 500µl and Linear Acrylamide: 5µl were added. The sample was stored overnight at -20˚C, centrifuged at 12000g for 20 min at 4˚C, washed twice with 75% ethanol. The pellet was dissolved in 15 µl H_2O.

siRNA Quantification: The quantity of the siRNA in retinas and vitreous humor (siRNA quantification was performed per vitreous) was examined by qPCR siRNA quantification. qPCR was performed according to Quark's standard operating procedures. CASP2_4 siRNA and reference gene expression were tested. Results are summarized in Table C10.

Table C10: Results

Termination	Formulation	Eye	Group size	fmol siRNA/µg retinal RNA
1 hrs	Methyl Cellulose	Right	5	12.50
		Left	6	10.19
	PBS	Right	6	8.08
		Left	6	4.77
3 hrs	Methyl Cellulose	Right	5	1.76
		Left	5	2.47
	PBS	Right	6	6.48
		Left	6	7.80
6 hrs	Methyl Cellulose	Right	4	1.37
		Left	6	3.80
	PBS	Right	6	3.61
		Left	6	1.04
24 hrs	Methyl Cellulose	Right	6	0.11
		Left	6	0.21
	PBS	Right	6	0.03
		Left	6	0.04

Conclusion: The study showed efficient delivery of siRNA into retina 1 and 3 hours post administration. qPCR analysis showed that after application of 100 µg siRNA in Formulation A, in average 11 fMol/ug of total RNA was obtained in the retina after 1 hour and 2 fMol/ug siRNA after 3 hours. When administering the same concentration in PBS, an amount of 6 fmol/µg of siRNA was obtained after 1 hour and 8 fmol/µg of tot RNA was obtained after 3 hours.

Example 7: Quantification of non-invasively administered siRNA compound (formulated in various formulations) in target retinal tissue in rats.

Examination of different eye drop formulations for non-invasive delivery of siRNA to the retina in vivo.

The objective of this study was the assessment of CASP2_4_S510 siRNA quantity in normal rat retina at 3 hours following single topical application of different siRNA formulations prepared for administration as eye drops (ED).

Test Article

Substance (unformulated compound) CASP2_4_S510 (siRNA Against CASP2) Supplied by Agilent (Manufacturer's catalog # QPI-1007; Batch #: Q02F08002N).

Description of the test material: CASP2_4_ S510: S- inverted-Abasic 5'-cap, L-DNA 18/AS-AL. A 19-mer stabilized double strand RNA with inverted Abasic as 5'-cap, L-DNA at the 18 position of the sense strand and alternating 2'-OMe at positions 2, 4, 6, 8, 11, 13, 15, 17 & 19 on the antisense strand.

Storage Conditions: -80°C

siRNA formulated in PBS 33.3mg/ml CASP2_4_S510 in PBS (solution for eye drops) –

Description of the test material: Under sterile conditions, 300 mg dry CASP2_4_S510 siRNA were dissolved in 15ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution was stored at –80°C until use. The 20mg/ml stock solution in double distilled water was then brought to a working concentration of 100µg/ 3µl, in PBS, as follows:

1.7 mg CASP2_4_S510 siRNA: 85 µl of 20 mg/ml stock of CASP2_4 (1.7 mg), were precipitated by 0.15M NaCl and EtOH, and dried under the tissue culture laminar (sterile conditions).

siRNA solution 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in PBS x1 to achieve 51µl
Quantity prepared: 1 tube of 1.7 mg in 51µl of PBS
Storage Conditions: freshly prepared

siRNA formulated in commercial lubricant solution Systane® : 33.3mg/ml CASP2_4_S510 in Systane (solution for eye drops) – Group II. Purchased from Alcone Inc.; Batch #: Lot 165228F.

Description of the test material: Under sterile conditions, 300 mg of CASP2_4_S510 powder (Aligent, batch # Q02F08002N) were dissolved in 15 ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution was stored at –80°C until use. The 20 mg/ml stock solution in double distilled water was then brought to a working concentration of 100 µg/ 3µl, in formulation, as follows:

1.7 mg CASP2_4_S510 siRNA: 85 µl of 20 mg/ml stock of CASP2_4_S510 (1.7 mg), was precipitated by 0.15M NaCl and EtOH, and dried under the tissue culture laminar (sterile conditions).

siRNA solution 33.3 mg/ml: 1.7 mg dry siRNA was dissolved in 51µL commercial lubricant solution (i.e. Systane®).

Quantity prepared: 1 vial of 1.7 mg siRNA in 51µL Systane® solution.

SiRNA formulated in glycerol +EDTA solution and in methyl cellulose (MC) Solutions: 33.3 mg/ml solution of CASP2_4_S510 siRNA in Glycerol + EDTA formulation, and in 0.5%, 2% or 3% (w/v) methylcellulose & 1% (v/v) sterile glycerol & 0.01% (w/v) EDTA solution in pyrogen free water– Groups III - VI

Description of the test material: Under sterile conditions, 300 mg of CASP2_4_S510 powder (Aligent, batch # Q02F08002N) were dissolved in 15 ml of sterile double distilled water, to achieve a clear 20 mg/ml solution. The solution was stored at –80°C until use. The 20 mg/ml stock solution in double distilled water was then brought to a working concentration of 100µg/ 3µl, in formulation, as follows:

Seven vials of 1.7 mg CASP2_4_S510 siRNA: 85 µl of 20 mg/ml stock of CASP2_4_S510 (1.7 mg), was precipitated by 0.15M NaCl and EtOH, and dried under the tissue culture laminar (sterile conditions).

Group III: 0.5% MC formulation: 1:7 mixture of solution A and solution B [12.5µL of Solution A were mixed with 50 µL of Solution B and 37.5 µl WFI to obtain: 0.5% methylcellulose & 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water (final pH was approximately 7.4 and osmolarity similar to human tear film)]

siRNA formulated in 0.5% MC formulation 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in 0.5% MC formulation that was prepared as described to achieve a 51µL formulated solution of siRNA in 0.5% MC formulation.

Group IV: 1% MC formulation: 1:3 mixture of solution A and solution B [25 µL of Solution A were mixed with 50 µL of Solution B and 25 µl of WFI to obtain: 1% methylcellulose & 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water (final pH was approximately 7.4 and osmolarity similar to human tear film)]

siRNA solution formulated in 1% MC formulation 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in 1% MC formulation that was prepared as described to achieve a 51µL formulated solution of siRNA in 1% MC formulation.

Group V: 2% MC formulation: 1:1 mixture of solution A and solution B [50µL of Solution A were mixed with 50 µL of Solution B to obtain: 2% methylcellulose & 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water (final pH was approximately 7.4 and osmolarity similar to human tear film)]

siRNA solution formulated in 2% MC formulation 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in 2% MC formulation that was prepared as described to achieve a 51µL formulated solution of siRNA in 2% MC formulation.

Group VI: 3% MC formulation: 1:1 mixture of solution A and solution C [50 µL of Solution A were mixed with 50 µL of Solution C to obtain: 3% methylcellulose & 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water (final pH was approximately 7.4 and osmolarity similar to human tear film)]

siRNA solution formulated in 3% MC formulation 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in 3% MC formulation that was prepared as described to achieve a 51µL formulated solution of siRNA in 4% MC formulation.

Group VII: Glycerol + EDTA formulation: 50 µL WFI (Norbrook) were mixed with 50µL of Solution B to get: 1% v/v sterile Glycerol & 0.01% w/v EDTA solution in pyrogen free water.

siRNA solution formulated in Glycerol + EDTA formulation 33.3 mg/ml: 1.7 mg dry siRNA were dissolved in Glycerol + EDTA formulation that was prepared as described to achieve a 51µL formulated solution of siRNA in Glycerol + EDTA formulation.

Quantity prepared: 7 vials, as follows:
1 vial of 1.7 mg siRNA in 51µL PBS formulation
1 vial of 1.7 mg siRNA in 51µL Systane® formulation
1 vial of 1.7 mg siRNA in 51µL 0.5% MC formulation

1 vial of 1.7 mg siRNA in 51μL 1% MC formulation

1 vial of 1.7 mg siRNA in 51μL 2% MC formulation

1 vial of 1.7 mg siRNA in 51μL 3% MC formulation

1 vial of 1.7 mg siRNA in 51μL Glycerol + EDTA formulation

Storage Conditions: freshly prepared

Control Article(s)

1. PBS - Supplied by Biological industries (Manufacturer catalog #02-023-5A (For 10x PBS); Batch # 619113).

2. Systane® - commercially available eye drop solution ; Supplied by Alcon; Batch # : Lot 165228F; Quantity supplied: 15ml; Storage Conditions: RT; Expiration Date: 02/2011.

Formulation Solution A – methylcellulose solution in pyrogen free water Solution A) 0.4 g of methylcellulose 25 (ScienceLab.com, Cat# SLM2050) dissolved in final volume of 10ml of hot boiled water (80-90°C), (Norbrook), cooled down to room temperature.

Formulation Solution B - Sterile Glycerol & EDTA solution in pyrogen free water Solution B) 332 μl of 60% glycerol (Sigma, Cat# G6279) & 2 μl EDTA solution pH8 (prepared from Sigma, Cat# E9884) in 9.666 ml WFI (Norbrook).

Formulation Solution C – Concentrated methylcellulose solution in pyrogen free water Solution C) 0.6 g of methylcellulose 25 (ScienceLab.com, Cat# SLM2050) dissolved in final volume of 10ml of hot boiled water (80-90°C), (Norbrook), cooled down to room temperature.

Stability tests of siRNA compounds in the above Methyl Cellulose formulations:

The stability of Casp2_4 Q02F08002N siRNA was tested in Methyl cellulose formulations according to the following protocol:

siRNA was diluted in the different formulations containing Methyl cellulose, to a final concentration of 7μM siRNA. The 0%,0.5%,1%, 2% and 3% MC formulations were incubated at Room Temperature. In addition, the 3% MC formulation was also incubated at 37˚C with and without nuclease inhibitor.

A 5-μL aliquot of each solution was transferred to 15 μL of 10x TBE-loading buffer after incubation at the following time points: 0,10', 0.5, 1, 1.5,3, 6h. The solution was then frozen in liquid nitrogen, and stored at -20°C.

4 μL of each sample was loaded onto a non-denaturing 20% polyacrylamide gel and electrophoresis was performed at 80V for 2.5h.

For siRNA visualization the gel was stained with Ethidium bromide solution (1.0 μg/μL).

As a positive control for gel migration of a non-degraded siRNA, 5 μL of a 7 μM tested siRNA solution in PBS was transferred to 15 μL of 10x TBE-loading buffer and loaded onto the gel. Then, the sample was frozen in liquid nitrogen and stored at -20°C.

As a reference to the migration pattern of a degraded single strand (ss) siRNA, a non-relevant single strand siRNA was prepared.

Results: The Casp 2_4 siRNA compound was stable in all formulations.

The *in vivo* study:

Test System:

Animals used: Rats; Strain: Adult, Sprague -Dawley ; Modification: SD

Source: Harlan, Jerusalem Israel

Age: 8-10 weeks; Body Weight Range: 220-270 gr

Sex: Male; Group Size: n=6; Total number of animals: 54

Animal Husbandry: Diet: Animals were provided an *ad libitum* commercial rodent diet and free access to drinking water.

Environment:

(i) Acclimatization of at least 5 days.

(ii) All the animals were confined in a limited access facility with environmentally-controlled housing conditions throughout the entire study period, and maintained in accordance with approved standard operating procedures (SOPs). Animals were provided *ad libitum* a commercial rodent diet (Harlan Teklad 2018S Global 18% Protein Rodent Diet) and filtered, chlorinated and acidified water.

Rats were kept in microisolator cages with filter top, 1-6 Rats / cage. The cages were maintained under controlled environmental conditions of temperature (20-24 °C), relative

humidity (30-70%), a 12- hr light / 12-hr dark cycle, monitored by the control computer, throughout the study period.

Experimental design

Experimental setup included 9 experimental groups (6 rats per group). ED were applied bilaterally. Different formulations were used (Study Design Table C11). Termination time point (3hrs) post siRNA administration: Termination setup was performed according to the study design Table C11. Retinal concentration of CASP2_4 siRNA was determined by qPCR.

Table C11: Study Design

Group	Delivery Route	Formulation	siRNA Compound	Bilateral Application (dose/volume/eye)	Term. Time Point (hrs)	Group Size
I	ED	PBS	Casp2_4_S510	100 µg/3µl	3	6
II	ED	Systane	Casp2_4_S510	100 µg/3µl	3	6
III	ED	MC0.5%	Casp2_4_S510	100 µg/3µl	3	6
IV	ED	MC1%	Casp2_4_S510	100 µg/3µl	3	6
V	ED	MC2%	Casp2_4_S510	100 µg/3µl	3	6
VI	ED	MC3%	Casp2_4_S510	100 µg/3µl	3	6
VII	ED	Glycerol + EDTA *	Casp2_4_S510	100 µg/3µl	3	6
VIII	ED	PBS	-	-	3	6
IX	Intact	-	-	-	-	6

* Glycerol + EDTA formulation (MC free formulation) = 1% v/v sterile glycerol & 0.01% w/v EDTA solution in pyrogen free water

Anesthesia: In the course of the experiment, All ED treated animals were anesthetized with Equithesine (I.P. 4ml/kg).

Eye Drop Delivery A 3 µl sample volume of the test article or vehicle were applied to the corneal surface bilaterally to the anesthetized animals, by a blunt pipette tip (filter tips 10µl sterile (short)). The animals were placed in a warm environment to prevent anesthesia-induced hypothermia. Termination of animals from all study groups was according to study design (time point 3 hrs). Tissues were collected according to study design.

Scheduled euthanasia: All animals were deeply anaesthetized and euthanized according to the study design (Table C11, Termination).

Perfusion setup: Rats were perfused transcardially with PBS (20-50 rpm/min following 2-3 min).

Tissue Collection: After perfusion, both eyes (left and right) were washed with PBS, were enucleated and stored on ice. The eyes were dissected using a binocular microscope, and optionally gross pathology was graded according to the sample grading scale. The cornea was dissected by a cut along the limbus, lens was gently removed, and the retina and vitreous were carefully separated from the sclera. Whole retinas and vitreous bodies (humor) were collected into two separate appropriate and properly marked test tubes. Dissected retinas were washed in a large volume of PBS (each retina in a separate tube with fresh PBS), extra liquid was removed with Kimwipes and retinas were snap-frozen in liquid nitrogen. Retina and Vitreous body samples were subjected to RNA extraction.

Evaluation:

RNA Extraction: Retina: RNA was extracted from each retina sample individually (left and right) by double extraction. The RNA was transferred for cDNA preparation and qPCR analyses.

Vitreous: Material for Casp2_4_S510 siRNA detection from vitreous was obtained using the following protocol: Each rat vitreous was around 10µl. 500µl of reagent A EZ-RNA II (Biological Industries Cat no. 20-410-100) were added to each vitreous. The sample was homogenized, and 10µg tRNA (1µl from 10 mg/ml stock) were added. The sample was stored for 5 minutes at room temperature. Subsequently EZ-RNA II B: 400 µl and EZ-RNA II C: 90 µl were added and mixed well. The sample thus obtained was stored for 10 min at room temperature then centrifuged 12000g for 15 min at 4˚C.

The upper phase was transferred to a fresh tube to which isopropanol: 500µl and Linear Acrylamide: 5µl were added. The sample was stored overnight at -20˚C, centrifuged at 12000g for 20 min at 4˚C, washed twice with 75% ethanol. The pellet was dissolved in 15 µl DDW.

siRNA Quantification: The quantity of the siRNA in retinas and vitreous humor (siRNA quantification was performed per vitreous) was examined by qPCR siRNA according to Quark's standard operating procedures.

Results

The study showed that the following quantities of siRNA were detected in the rat retina three hours post application of siRNA non-invasively administered *in vivo* with the different formulations:

Table C12: CASP2 siRNA Normalized (miRNA) quantity in fmle/1µg RNA

Group	Abbreviation	N	Mean	Std
IX	I-N/A	6	0.005	0.005
VIII	P-PBS	6	0.056	0.124
VII	C-MC(0)	6	6.303	3.921
XA	C-MC(1/2)	4	17.831	16.628
XIA	C-MC(1)	6	5.677	4.235
V	C-MC(2)	6	6.963	8.042
VI	C-MC(3)	5	7.653	6.674
II	C-Systane	5	5.109	2.492
I	C-PBS	6	4.228	6.758

MC(0)-MC(3) – formulations including increasing concentrations from 0 to 3% of Methyl Cellulose.

Conclusion: All groups that were treated by CASP2 siRNA show positive quantities of the siRNA (>4 fmole) in target retinal tissue. No significant difference (P-value=0.8425) were found between the formulation groups.

Non-Invasively Administered siRNA Induces in-vivo Knockdown (KD) of Target Gene Associated with Apoptosis in Target Ocular Tissue

Example 8: Determination of in-Vivo Knockdown Activity of siRNA Against p53 prepared for Non-invasive Administration by Eye Drops in Rat Retina (siRNA compound formulated in MC 2% (Formulation "A")

Objective

The objective of the study was to determine knockdown activity of non-invasively delivered siRNA compound targeting p53 mRNA in the rat neural retina. The siRNA compound was formulated for non-invasive administration by eye drops. Knockdown activity was assessed by protein level determination using ELISA method.

Test article

a. Substance (unformulated siRNA compound): QM5 (siRNA Against Mouse/Rat p53)

b. Formulated siRNA compound for non-invasive (eye drop) delivery (groups 2 & 5 in Table C13): 100µg/3µl solution of QM5 siRNA in 2% (w/v) methylcellulose & 1% (v/v) sterile glycerol & 0.01% (w/v) EDTA solution in pyrogen free water.

c. Formulated siRNA compound for intravitreal injection (groups 1 & 4 in Table C13): 280 µg of QM5 siRNA in 140 µl of PBS

d. Formulated vehicle solution for non-invasive (eye drop) delivery (groups 3 & 6 in Table C13): 2% methylcellulose & 1% v/v sterile glycerol & 0.01% w/v EDTA solution in pyrogen free water.

Test System:

Adult Male, Sprague-Dawley (SD) Rats Harlan, Jerusalem Israel, 6-8 weeks old, 160-180 gr each.

Experimental Design

Study design: Unilateral axotomy (left eye, OS) was performed in each animal from groups 1-6.

Groups 2, 3, 5& 6: Test compound (100 µg test article in 3 µl of formulated vehicle - groups 2&5) or formulated vehicle alone (groups 3&6) were applied as eye drops every day starting on day 0 (immediately after axotomy). Experimental groups were terminated according to Table C13. Left and Right eye samples from group 7 served as an intact normal controls.

Groups 1 & 4: Three minutes following axotomy (at day 0), 20 µg of siRNA compound in 10 µl of PBS vehicle were applied by microinjection into the vitreous. The microinjection into the vitreous was performed perpendicular to the sclera, using an Insulin micro-injector (0.3 ml). Animals were terminated according to Table C13.

Table C13: Study Design:

Group	Group Size	Axotomy (unilat. OS)	Intravitreal injection (OS) (dose/volume/eye)	ED (OS) (dose/volume/eye)	Termination (days)
1	6	Yes	QM5 20µg/10 µl	N/A	1
2	6	Yes	N/A	QM5 100µg/3 µl	1
3	4	Yes	N/A	Formulated vehicle	1
4	6	Yes	QM5 20µg/10 µl	N/A	3
5	6	Yes	N/A	3x QM5 100µg/3 µl	3

6	4	Yes	N/A	3x Formulated vehicle	3
7	4	N/A	N/A	N/A	N/A

(see Tables C14-C17 hereinbelow and Figures 11A and 11B)

p53 signal according to Kidney W.C.E standard curve

Table C14: p53 signals values according to Kidney W.C.E standard curve

P53 Signal		retina	
Operation	Treatment	1 days	3 days
Axotomy	QM5 Intravitreal	1.00	1.84
Axotomy	QM5 Eye Drops	0.75	1.41
Axotomy	Vehicle Eye Drops	1.93	Missing
None	Non Treated	2.01	2.01

Table C15: % p53 signals ratio from non-treated animals

% signal ratio from non-treated		retina	
Axotomy	QM5 Intravitreal	50%	92%
Axotomy	QM5 Eye Drops	37%	70%
Axotomy	Vehicle Eye Drops	96%	0%

p53 signal according to GST-hp53

Table C16: p53 signal values according to GST-p53 standard curve

	P53 Signal	retina	
Operation	Treatment	1day	3days
Axotomy	QM5 Intravitreal	0.0159	0.0214
Axotomy	QM5 Eye Drops	0.0095	0.0149
Axotomy	Vehicle Eye Drops	0.0227	Missing
None	Non Treated	0.0233	0.0233

Table C17: % P53 signals ratio from non-treated animals

% Signal ratio from non-treated		retina	
Axotomy	QM5 Intravitreal	68%	92%
Axotomy	QM5 Eye Drops	41%	64%
Axotomy	Vehicle Eye Drops	97%	Missing

Conclusion: These studies showed that non-invasively delivered siRNA compound targeting p53 mRNA in the rat neural retina induces knock down of the p53 protein.

siRNA Compounds Induce Ocular Neuroprotection *In-Vivo* in Animal Models of Ocular Neuronal Injury

Example 9: Evaluation of ocular neuroprotective induction by siRNA compound targeting Caspase 2 in the ONC model after IVT injection

Study objectives: To evaluate ocular neuroprotective efficacy of siRNA targeting Caspase 2 in the ONC model following intravitreal injection(s)

Methods

Retrograde labelling of RGCs.

The Fluorogold tracer is transported retrogradely (from brain to eye) along RGC axons resulting in complete and specific labeling of all RGCs. For the purpose of this study, RGCs were labeled by application of the retrograde tracer FluoroGold (2%, Fluorochrome, Englewood, CO) in the superior colliculus. Briefly, a window was drilled in the scalp above the coordinates 6 mm rostral to the bregma and 1.2 mm lateral to the midline in both hemispheres. Using a Hamilton syringe, 3 μl of the FluoroGold was injected into superior colliculus 3.8 mm, 4 mm, and 4.2 mm below the bony surface at a rate 1 μl/min at each of the three depths. The needle was then slowly withdrawn and the skin was sutured. In adult rats, the time required to obtain full labeling of all RGCs following this procedure was ~ 1 week. For this reason, ONC was performed one week after retrograde labeling of RGCs.

Optic nerve crush. The orbital optic nerve (ON) of anaesthetized adults Wistar rats was exposed through a supraorbital approach, the meninges severed and all axons in the optic nerve (ON) transected by crushing with calibrated forceps for 10 seconds, 2 mm from the lamina cribrosa.

Intravitreal (IVT) injection. One or two 20 μg doses (in 10 μl of PBS) of test or control siRNAs or 10 μl of PBS vehicle were microinjected into the vitreous body 2 mm anterior to the nerve head, perpendicular to the sclera, using a glass micropipette. IVT administration is shown as a control and or for initial validation of a target gene.

Quantification of RGC survival. At termination, experimental animals were perfused transcardially with 4% paraformaldehyde. The eyes with the optic nerve were enucleated,

the cornea was dissected with the blade and lens/vitreous were gently removed. Both retinas were dissected out, fixed for an additional 30 min and flat-mounted vitreal side up on a glass slide for examination of the ganglion cell layer. RGCs were examined under the fluorescence microscope with an UV filter (365/420 nm). The number of retrogradely fluorescent RGCs were determined by two different, independent and "blinded" investigators counting them in 16 distinct areas (four areas per retinal quadrant at three different eccentricities of one-sixth, one-half, and five-sixths of the retinal radius). Microglia that may have incorporated FluoroGold after phagocytosis of dying RGCs was distinguished by their characteristic morphology and excluded from quantitative analyses.

Part 1

Test article: CASP2_4 siRNA – a double-stranded 19-mer oligonucleotide chemically modified by 2'O-methylation on both strands. Other compounds included siRNA chemically modified with L-DNA at the 3' terminus of the sense strand or 2'5' bridges at the 3' terminus. Targets the caspase2 gene in multiple species.

Control article: PBS

Design: Retinal ganglion cells (RGC) were selectively labeled first by application of the retrograde tracer FluoroGold to the superior colliculus. One week later, animals were subjected to optic nerve crush injury (ONC). The quantifications of surviving RGCs were carried out at 7 and 30 days after ONC by counting FluoroGold-labelled RGCs on flat-mounted retinas. Table C18 shows the groups treatments.

Table C18: Group Treatments

Groups	Right eye (n=4)	Left eye (n=4)	Termination
1 and 2	20 µg siCasp2_4 on day 0	20 µl PBS on day 0	Day 7
3 and 4	20 µg siCasp2_4 on days 0 and 10	20 µl PBS on days 0 and 10	Day 30

Results: The mean number of surviving RGCs in eyes treated with 20 µg Casp2_4 siRNA and subjected to optic nerve crush was 2040 ± 35 cells/mm2 at 7 days and 298 ± 25 cells/mm2 at 30 days post injury. These counts were significantly greater than the mean RGC counts in eyes treated with PBS and subjected to nerve crush, which was 941 ± 27 cells/mm2 at 7 days and 41 ± 7 cells/mm2 at 30 days. In the nonsurgical control eyes, the mean number of RGCs was 2253 ± 104 cells/mm2, which is comparable to the average number of RGCs reported in literature. Table C19 provides the results of this study.

Table C19: Mean numbers of survived RGC at the different time points post injury

Time post ONC	7 days		30 days	
Treatment	PBS	Casp2_4	PBS	Casp2_4
Mean survival RGC (cells/mm2)	941.347	2039.672	41.040	298.051
SD	27.038	34.766	7.219	25.401
% of RGC survival from total RGC	26.659	57.764	1.162	8.441
SD	0.766	0.985	0.204	0.719

All data are given as mean ± standard deviation. Values were compared using one-way analysis of variance (ANOVA) and considered as significantly different at $P < 0.02$.

Conclusions: The increased survival of the RGCs was not due to the neuroprotective effects of anesthesia (ketamine is an antagonist of the N-methyl-D-aspartate receptor, and xylazine is an α2-adrenergic receptor agonist), since identically anesthetized animals in the control group had significantly lower RGC counts than did animals in the Casp2_4 siRNA treated group, but due to neuroprotective effect of silencing pro-apoptotic Caspase 2 activation and up regulation following ONC injury, by treatment with siRNA compound targeting the Caspase 2 gene.

Part 2

Test article: CASP2_4L siRNA – a double-stranded 19-mer oligonucleotide chemically modified by 2'O-methylation on the antisense strand and L-DNA on the sense strand. Targets the caspase 2 gene of multiple species.

Control articles:

- PBS

- siRNA targeting GFP - a double-stranded 21-mer oligonucleotide stabilized by 2'O-methylation on both strands.

- CNL – siRNA with no match to any known mammalian transcript; a double-stranded 19-mer oligonucleotide chemically modified by 2'O-methylation on both strands.

Design. Retinal ganglion cells (RGC) were selectively labeled first by application of the retrograde tracer FluoroGold to the superior colliculus. One week later, animals were subjected to optic nerve crush injury (ONC). The quantifications of surviving RGCs were carried out at day 7 after ONC by counting FluoroGold-labelled RGCs on flat-mounted

retinas. Test or control articles were injected at the time of ONC. Similar experiments were performed in order to test activity and efficacy of siRNA administered via eye drops (see next example). Table C20 shows groups treatments.

Table C20: Groups Treatments

Groups	Right eye (n=4)	Left eye (n=4)	Termination
1 and 2	20 µg siCasp2_4 on day 0	20 µl PBS on day 0	Day 7
3 and 4	20 µg siGFP on day 0	20 µl siCNL_1 on day 0	Day 7

Results: The mean number of surviving RGCs in eyes treated with 20 µg Casp2_4 siRNA and subjected to optic nerve crush was 2085 ± 40 cells/mm2 at 7 days post injury. These counts were significantly greater than the mean RGC counts in eyes treated with either PBS or GFP siRNA or CNL_1 siRNA and subjected to nerve crush, which was 901 ± 50 cells/mm2, 922 ± 38 cells/mm2, 898 ± 42 cells/mm2 respectively, at 7 days. In the nonsurgical control eyes, the mean number of RGCs was 2196 ± 110 cells/mm2, which is comparable to the average number of RGCs reported in literature. Table C21 shows results. All data are given as mean ± standard deviation. Values were compared using one-way analysis of variance (ANOVA) and considered as significantly different at $P < 0.01$.

Table C21: Mean numbers of survival RGC 7 days post injury (n=4 retinas/group).

Treatment	PBS	siGFP	siCNL_1	siCasp2
Mean survival RGC (cells/mm2)	901.3338	922.3666	898.4268	2084.815
SD	49.74134	38.04059	42.12429	40.03638
% of RGC survival from total RGC	25.52577	26.12142	25.44345	59.04197
SD	1.408675	1.07731	1.19296	1.13383

Conclusions: The increased survival of the RGCs was due to neuroprotective effect of silencing pro-apoptotic Caspase 2 activation and up-regulation following ONC injury, by treatment with siRNA targeting Caspase 2 gene. The Casp2_4 siRNA molecules having

different structural modifications / motifs show similar neuroprotective effect on RGC survival range.

Example 10: Evaluation of ocular neuroprotective efficacy of siRNA compound targeting Caspase 2 in the IOP model

The objective of the current study was to establish the neuroprotective effect of a single injection of 20 μg of CASP2_4 compound or negative control GFP siRNAs in the pre-clinical rat glaucoma IOP model.

Study outline

In animals from all study groups, RGCs were retrograde labeled using the fluorescent tracer DiI (1,1'-dioctadecyl-3,3,3',3'-tetramethylindocarbocyanine) applied to both superior colliculi. A week later, IOP was unilaterally increased in the left eyes of animals from groups 2 to 5. IOP was monitored every other day in the operated (left) and contralateral (right) eyes during 2 weeks. Two weeks following hypertonic saline injection, vehicle (PBS) or siRNA (20 μg in PBS, either siRNA targeting Casp2 or a negative control siRNA targeting the non-mammalian gene, Green Fluorescent Protein), was administered by intravitreal (IVT) injection to the left (operated) eyes. The contralateral non-operated eyes received no IVT injection. In addition, two weeks after hypertonic saline injection, the animals from group 2 were sacrificed and DiI-labeled RGCs were counted in flat mounts of left retinas under fluorescence microscopy, in order to assess the extent of RGC loss at the time of siRNA injection. For all groups receiving IVT injection, IOP was measured once during the 3rd week of the experiment to confirm its increased state in the operated eyes. At 3 weeks of increased IOP, or at 1 week after the test and control article injections, the animals were sacrificed and DiI-labeled RGCs were counted in flat mounts of left retinas under fluorescence microscopy. Right retinas served as internal controls for labeling quality. A separate group of naïve rats in which RGC's were retrogradely labeled at the experiment commence was used as an intact control to provide a reference for normal RGC densities. 4 rats from this group were sacrificed at 2 weeks of ocular hypertension (together with group 2) and the remaining 9 rats – at 3 weeks (together with groups 3 to 5). The experimental design is shown in Table C22 below.

Animals

Species:	Rats	
Strain:	Brown Norway Rats	
Modification:	N/A	
Source:	Charles River (Canada)	
Age:	Adult ,retired breeders ,10-12 months of age	
Body Weight Range:	300-400g	
Sex:	Males	
Animal Husbandry:	Diet:	
	Environment:	All animal procedures were performed in accordance with the guidelines of the Canadian Council on Animal Care for the use of experimental animals (http://www.ccac.ca/).
	Environment:	(i) Acclimatization of at least 5 days.
		(ii) All the animals were confined in a limited-access facility with environmentally controlled housing conditions throughout the entire study period, and maintained in accordance with University of Montreal approved standard operating procedures (SOPs).

Materials and Equipment

Substance (unformulated compound) CASP2_4_S510 (CASP2_4; CASP2 SIRNA; siRNA Against Caspase2 mRNA)

Supplied by Agilent

Description of the test material: A 19-mer chemically modified blunt-ended duplex having two separate strands, with a sense strand (SEN) comprising unmodified ribonucleotides (upper case letters), an L-deoxyribonucleotide at position 18 (bold, underlined) and inverted deoxyabasic moiety (iB) present at the 5' terminus of the SEN strand; and with an antisense strand (AS) comprising unmodified ribonucleotides (upper case letters), and 2'OMe sugar modified ribonucleotides (lower case letters) at positions 2, 4, 6, 8, 11, 13, 15, 17 and 19 as shown in Formula I.

Quantity supplied: 300 mg

Storage Conditions: -80°C

Control Substance (unformulated compound) GFP_5_S763 (siRNA Against GFP mRNA)

Outsourcing (manufacturer's name): Agilent

Manufacturer's catalog # N/A

Quantity supplied: 220.8150 mg

Storage Conditions: -80°C; Expiration Date: ND

Test /Control Article (formulated) CASP2_4 / GFP_5 20μg/5μL of PBS

0.5 mg was diluted into 125μl to achieve a stock solution of 4μg/μl. These were subsequently aliquoted to 5μl per tube and stored at –80°C.

Vehicle – PBS.

Multicell Phosphate buffered saline, solution 1X, without calcium, without magnesium (CAT. No: 311-010-EL).

Fluorescence microscopy was performed using a Zeiss Axioskop 2 Plus microscope (Carl Zeiss Canada, Kirkland, QC), images were captured with a CCD camera (Retiga, Qimaging) and processed with Northern Eclipse image analysis software (Empix Imaging, Mississauga, ON). Microphotographs were taken at 25X magnification.

Experimental Procedure

Surgery was be performed in adult male Brown Norway rats, retired breeders, between 10-12 months of age (300-400g), under general anesthesia by intraperitoneal injection of 1 mL/Kg standard rat cocktail consisting of Ketamine (100 mg/mL), xylazine (20 mg/mL) and acepromazine (10 mg/ mL).

Ocular hypertension surgery: Unilateral and chronic elevation of IOP was induced by using the Morrison model, involving an injection of hypertonic saline into a episcleral vein, leading to a blockade of the aqueous humor outflow pathways. This procedure lead to gradual increase of eye pressure and progressive death of RGS .All the animals in this study received only a single saline vein injection. The eye selected for the procedure was adapted with a plastic ring applied to the ocular equator to confine the saline injection to the limbal plexus. A micro needle (30-50 μm in diameter) was used to inject 50 μL of

sterile 1.85 M NaCl solution through one episcleral vein. The plastic ring temporarily blocked off other episcleral veins forcing the saline solution into the Schlemm's canal to create isolated scarring. Animals were kept in a room with constant low fluorescent light (40-100 lux) to stabilize circadian IOP variation (8).

Measurement of intraocular pressure (IOP): IOP from glaucomatous and normal (contralateral) eyes was measured in awake animals using a calibrated tonometer (TonoPen XL,Medotronic Solan,Jacksonville,FL). IOP was measured every other day for the first two weeks after ocular hypertension surgery; and at least once between week 2 and week 3 after ocular hypertension surgery. Eyes become fragile after intraocular injections in conditions of high IOP, for this reason the number of IOP measurements was limited as this involves putting additional pressure on the cornea to get a reliable reading. The mean IOP (mmHg ± S.E.M) per eye was considered as the average of all IOP readings since the onset of pressure elevation. The maximum IOP measurements in each individual eye, glaucomatous or normal contralateral eye was defined as the peak IOP and this value was used to estimate the mean peak IOP for each group

Calculation of intraocular pressure (IOP): The mean IOP (mmHg ± S.E.M) per eye was considered as the average of all IOP readings since the onset of pressure elevation. The maximum IOP measurements in each individual eye, glaucomatous or normal contra lateral eye was defined as the peak IOP and this value was used to estimate the mean peak IOP for each group. The positive integral IOP was calculated as the area under the IOP curve in the glaucomatous eye minus that of the fellow normal eye from ocular hypertension surgery to euthanasia. Integral IOP represents the total, cumulative IOP exposure throughout the entire experiment.

Study Design:

One week prior to induction of glaucoma, RGCs were retrogradely labeled using the fluorescent tracer DiI applied to both superior colliculi.

One week later, unilateral elevation of IOP was induced by injection of a hypertonic saline solution into an episcleral vein. This procedure was referred to as ocular hypertension surgery.

In a first experiment, prior to efficacy studies, the status of RGC loss in "no injection" groups at 2 and 3 weeks after ocular hypertension surgery (4 rats/group, total = 8 rats) was assessed.

Exactly 2 weeks after ocular hypertension surgery, a single intravitreal injection of each siRNA was performed.

Animals were euthanized and retinas prepared for analysis of RGC survival at exactly 3 weeks after ocular hypertension surgery.

The density of surviving RGCs was quantified in 12 standard retinal areas.

Table C22: Study Design

Group	n	Increased IOP	IVT Injection (µL/eye) 2 weeks post IOP induction	Dose Volume	Termination (Weeks Post IOP)
1 (Intact)	13 (4+9)	No	No	N/A	N/A
2	4	Yes	No	N/A	2
3	6	Yes	PBS Vehicle	5 µL	3
4	6	Yes	Negative Control siRNA, 20 µg	5 µL	3
5	6	Yes	CASP2 SIRNA, 20 µg	5 µL	3

*NA – non-applicable, Group size: n=5

Quantification of surviving RGC soma: Quantification of RGC bodies was performed in duplicate and in a masked fashion. For RGC density counts, rats were deeply anesthetized and then perfused transcardially with 4% paraformaldehyde (PFA) in 0.1 M phosphate buffer and both eyes were immediately enucleated. Retinas were dissected and flat-mounted on a glass slide with the ganglion cell layer side up. Under fluorescence microscopy, DiI-labeled neurons were counted in 12 standard retinal areas as described.

RESULTS & DISCUSSION

Table C23: Percent RGC from intact inference table

Treat	N	Mean	Std	CV	Dunnett P-value
PBS	6	62.37	5.86	9.40	
CASP2_4	6	81.71	14.28	17.48	0.05
2wIOP	4	71.25	6.75	9.47	0.19
GFPsiRNA	6	65.75	4.97	7.57	0.68
intact	13	100.00	2.84	2.84	0.00

Comparisons to PBS treated group

Preservation of RGC in CASP2_4 siRNA-treated eyes with increased IOP was significantly better than in the PBS treated group (1.31 fold higher from the PBS result; p-value = 0.05). In GFP siRNA treated group no significant difference was found (p-value=0.68) with respect to PBS treated group.

No significant difference between IOP (2 weeks) to IOP (3 weeks) treated by PBS (p-value=0.19).

Comparisons to IOP (2 weeks) group

The intact group has significantly higher RGC density per mm2 than IOP (2w) group (p-value=0.00). No significant differences in RGC density per mm2 were found between IOP (2w) group and other IOP groups that were sacrificed after 3 weeks (p-value range from 0.16 to 0.44).

Comparisons to Intact group

The intact group has significantly higher RGC density per mm2 than IOP groups that were treated by PBS, GFP siRNA and IOP(2w) without treatment (p-value<0.01). No significant differences in RGC density per mm2 were found between IOP group treated by CASP2_4 siRNA compared to intact group (p-value=0.06).

These data demonstrate that a siRNA targeting Caspase2 provides protection of RGCs from damage induced by increased intraocular pressure and its administration at 2 weeks of increased IOP leads to cessation of further RGC loss.

IOP measurements were carried out as described above.

IOP: The Dunnett approach was used for comparison of the results to PBS treated group. Additional parameters were calculated and analyzed such as: AUC (area under the curve), Mean IOP and Max(IOP) along the duration of measurements.

Most animals show significant increase in IOP at 1-2 weeks after ocular hypertension surgery.

No significant differences in IOP levels were found among operated eyes in treated groups (0.7746). Likewise, no differences in IOP levels were found among contra lateral eyes in treated groups and intact eyes.

The results show that Casp2 siRNA induced neuroprotection even as IOP remained elevated in all treatment groups.

Results: No significant differences between groups were found in all three calculated IOP parameters

Example 11: Evaluation of ocular neuroprotective efficacy of siRNA compound targeting Caspase 2 in the axotomy model

The purpose of the present efficacy studies was to use a model of RGC apoptosis induced by axotomy of the optic nerve (ON) in adult Sprague-Dawley rats. The onset and kinetics of RGC death in this model system are very reproducible and allow for the establishment of the neuroprotective efficacy of Casp2_4 siRNA *in vivo*. Using this method, the time course of RGC death follows a predictable course: cell death begins on day 5 and proceeds to the rapid loss of more than 90% of these neurons by 2 weeks.

Methods

Retrograde labeling of RGCs: For the purpose of this study, RGCs were labeled by application of the retrograde tracer FluoroGold (2%, Fluorochrome, Englewood, CO) in the superior colliculus. Briefly, both superior colliculi were exposed and a small piece of gelfoam soaked in FluoroGold was applied to their surface. In adult rats, the time required to obtain full labeling of all RGCs following this procedure is ~ 1 week. For this reason, optic nerve axotomy and intraocular injection of siRNA molecules were performed one week after retrograde labeling of RGCs.

Optic nerve axotomy: The entire population of RGCs were axotomized by transecting the optic nerve close to the eye (0.5 to 1 mm). Retinal fundus examination was routinely performed after each axotomy to check the integrity of the retinal circulation after surgery. Animals showing signs of compromised blood supply were excluded from the study.

For intravitreal injection 10 μg in 5 μl of PBS each of the reagents, either Casp2_4 siRNA or GFP siRNA were microinjected into the vitreous body 2 mm anterior to the nerve head, perpendicular to the sclera, using a glass micropipette at the time of surgery, day 0, and then repeated at day 7.

Quantification of RGC survival: Experimental and control animals were perfused transcardially with 4% paraformaldehyde at 14 days after optic nerve axotomy. The left

retinas (treated) and the right retinas (untreated controls) were dissected out, fixed for an additional 30 min and flat-mounted vitreal side up on a glass slide for examination of the ganglion cell layer. RGCs backfilled with FluoroGold were counted in 12 standard retinal areas. Microglia that may have incorporated FluoroGold after phagocytosis of dying RGCs were distinguished by their characteristic morphology and excluded from our quantitative analyses.

Experimental design

Test article: CASP2_4L siRNA: a double-stranded 19-mer oligonucleotide chemically modified by 2'O-methylation of sugar residues on the antisense strand and L-DNA on the sense strand. Targets caspase2 gene in multiple species.

Control articles

PBS

siRNA targeting GFP - a double-stranded 21-mer oligonucleotide chemically modified by 2'O-methylation on both strands.

CNL – siRNA with no match to any known mammalian transcript; a double-stranded 19-mer oligonucleotide chemically modified by 2'O-methylation on both strands. Table C24 shows groups treatments.

Table C24: Groups Treatments

SiRNA	SiRNA Dose	Time of administration (post axotomy)	Time of analysis (post axotomy)	No. of animals per group	Sample preparation
SiGFP, axotomy (OS)	10 ug X 2	Time 0 1 week	2 weeks	8	Flat mount
SiCasp2_4 , Axotomy (OS)	10 ug X 2	Time 0 1 week	2 weeks	8	Flat mount

Results: The mean number of surviving RGCs in eyes treated with two intravitreal injections of 10 μg Casp2_4 siRNA and subjected to axotomy was 533 ± 24 cells/mm2 at 14 days post injury. These counts were significantly greater than the mean RGC counts in eyes treated with GFP siRNA at the similar regiment and subjected to axotomy, which was 130 ± 7 cells/mm2 at 14 days. In the nonsurgical control eyes, the mean number of RGCs was 2138 ± 91 cells/mm2, which is comparable to the average number of RGCs reported in literature.

Table C25: Mean numbers of survival RGC 14 days post injury (n=6 retinas/group)

Treatment	GFP	Casp2_4
Mean survival RGC (cells/mm2)	130	533
SE	7	24
% of RGC survival from total RGC	6	25
SE	0.32	1.12

Data analyses and statistics were performed using the GraphPad Instat software by one-way analysis of variance (ANOVA). All data are given as mean ± SE, significantly different at $P < 0.02$.

Conclusions: The increased survival of the RGCs was due to neuroprotective effect by silencing pro-apoptotic Caspase 2 activation and up regulation following axotomy by treatment with siRNA targeting Caspase 2 gene.

Discussion: In the present studies, the Casp2_4 siRNA was neuroprotective for at least 30 days in an optic nerve crush model and for 14 days in axotomy model of RGC loss. Optic nerve crush and axotomy experiments provide a realistic model of acute optic neuropathies.

Non-Invasive Administration of siRNA Compounds Induces Ocular Neuroprotection *In-Vivo* in Animal Models of Ocular Neuronal Injury

Example 12: Evaluation of ocular neuroprotective efficacy of non-invasively administered siRNA compound targeting Caspase 2 in the ONC model

Test article: CASP2_4 siRNA (compound of Formula I)

Control articles:

- Methyl Cellulose

- CNL – siRNA with no match to any known mammalian transcript; a double-stranded 19-mer oligonucleotide stabilized by 2'O-methylation on both strands.

Design: Retinal ganglion cells (RGC) were selectively labeled first by application of the retrograde tracer FluoroGold to the superior colliculus. One week later, animals were subjected to optic nerve crush injury (ONC). Eye drops were applied every other day during one week (3 times over all). 100µg/3µl CNL_1, or Casp2_4 siRNA or 3µl of MC

vehicle were applied, the first dose was applied 10 minutes after ONC. The quantifications of surviving RGCs were carried out at day 7 after ONC by counting FluoroGold-labelled RGCs on flat-mounted retinas.

Results: The mean number of surviving RGCs in eyes treated with 20 µg Casp2_4 siRNA and subjected to optic nerve crush was 445 ± 17 cells/mm2 at 7 days post injury. These counts were significantly greater than the mean RGC counts in eyes treated with either PBS or CNL_1 siRNA and subjected to nerve crush, which were 337 ± 11 cells/mm^2, 341.6 ± 13 cells/mm^2, respectively, at 7 days. Table C26 shows results. All data are given as mean ± standard deviation. Values were compared using one-way analysis of variance (ANOVA) and considered as significantly different at $P < 0.01$.

Table C26: Mean numbers of survival RGCs 7 days post injury.

	CNL_1	Casp2_4	MC vehicle
Average	341.625	445.4375	337.5
SD	13.03265	17.222331	11.3389342
cells/mm2	934.6785	1218.7073	923.392613
Sd	35.65705	47.119921	31.0230758
RGC/retina	26470.1	34513.789	26150.4788
SD	1009.808	1334.4362	878.573505
% total	26.4701	34.513789	26.1504788
SD	1.009808	1.3344362	0.87857351
Average	341.625	445.4375	337.5
SD	13.03265	17.222331	11.3389342

Conclusions: The increased survival of the RGCs was due to neuroprotective effect of silencing pro-apoptotic Caspase 2 following ONC injury by treatment with eye drops containing siRNA targeting Caspase 2 gene in a methyl cellulose formulation.

Example 13: Evaluation of ocular neuroprotective efficacy of non-invasively administered siRNA compound targeting Caspase 2 in the IOP model

Experimental setup:

Experimental animals: All animal procedures are performed in accordance with the guidelines of the Canadian Council on Animal Care for the use of experimental animals (http://www.ccac.ca/). Surgeries are performed in adult male Brown Norway rats, retired

breeders, between 10-12 months of age (300-400 g), under general anesthesia by intraperitoneal injection of 1 ml/kg standard rat cocktail consisting of ketamine (100 mg/ml), xylazine (20 mg/ml) and acepromazine (10 mg/ml).

Retrograde labeling of RGCs: For neuronal survival experiments, RGCs are retrogradely labeled with 3% DiI (1,1'-dioctadecyl-3,3,3',3'-tetramethyl-indocarbocyanine perchlorate; Molecular Probes, Junction City, OR), a fluorescent carbocyanine marker that persists for several months without fading or leakage and does not interfere with the function of labeled cells. For retrograde labeling, both superior colliculi, the main targets of RGCs in the brain, are exposed and a small piece of gelfoam (Pharmacia and Upjohn Inc., Mississauga, ON) soaked in DiI will be applied to their surface. Seven days after DiI application, the time required for labeling the entire RGC population, animals are subjected to ocular hypertension surgery as described below.

Ocular hypertension surgery: Unilateral and chronic elevation of IOP are induced using a method that involves injection of a hypertonic saline solution into an episcleral vein. All the animals involved in this study receive only a single saline vein injection. The eye selected for the procedure is adapted with a plastic ring applied to the ocular equator to confine the saline injection to the limbal plexus. A microneedle (30-50 μm in diameter) is be used to inject 50 μl of sterile 1.85 M NaCl solution through one episcleral vein. The plastic ring temporarily blocks off other episcleral veins forcing the saline solution into the Schlemm's canal to create isolated scarring. Animals are kept in a room with constant low fluorescent light (40-100 lux) to stabilize circadian IOP variation.

Measurement of intraocular pressure (IOP): IOP from glaucomatous and normal (contralateral) eyes is measured in awake animals using a calibrated tonometer (TonoPen XL, Medtronic Solan, Jacksonville, FL). IOP is measured every other day for the first two weeks after ocular hypertension surgery; and at least once between week 2 and week 3 after ocular hypertension surgery. Eyes become fragile after intraocular injections in conditions of high IOP (see below), so it is advisable to limit the number of IOP measurements as this involves putting additional pressure on the cornea to get a reliable reading. The mean IOP (mm Hg ± S.E.M.) per eye is considered as the average of all IOP readings since the onset of pressure elevation. The maximum IOP measured in each individual eye, glaucomatous or normal contralateral eye is defined as the peak IOP and this value is used to estimate the mean peak IOP for each group. The positive integral IOP is calculated as the area under the IOP curve in the glaucomatous eye minus that of the

fellow normal eye from ocular hypertension surgery to euthanasia. Integral IOP represents the total, cumulative IOP exposure throughout the entire experiment.

Intraocular injection of siRNA molecules: Intraocular injections are performed by infusing each siRNA compound at a concentration of 20 μg into the vitreous chamber of the left eye (total injection volume: 5 μl). The right eye serves as contralateral control. In addition, non-operated eyes from naïve rats are used as intact controls. Intravitreal injections are performed using a 10-μl Hamilton syringe adapted with a ~32-gauge glass needle. The needle tip is inserted into the superior hemisphere of the eye, at the level of the pars plana, at a 45° angle through the sclera into the vitreous body. This route of administration avoids retinal detachment or injury to eye structures, including the lens and the iris, which can release factors that induce RGC regeneration and survival. The injection is performed over a period of 2 min and the needle is kept in place for an additional 2 min, after which it is gently removed. Surgical glue (Indermill, Tyco Health Care, Mansfield, MA, USA) will be used to seal the site of injection.

Topical Eye Drop instillation of siRNA molecules:

Daily during week 3 after IOP induction a 3μl sample volume of 100μg of siRNA are applied to the corneal surface bilaterally to the anesthetized animals, by a blunt pipette tip (filter tips 10μl sterile (short)). The animals are placed in a warm environment to prevent anesthesia-induced hypothermia

Quantification of surviving RGC soma: Quantification of RGC bodies is performed in duplicate and in a masked fashion. For RGC density counts, rats are deeply anesthetized and then perfused transcardially with 4% paraformaldehyde (PFA) in 0.1 M phosphate buffer and both eyes are immediately enucleated. Retinas are dissected and flat-mounted on a glass slide with the ganglion cell layer side up. Under fluorescence microscopy, DiI-labeled neurons is counted in 12 standard retinal areas as described.

IOP (intra ocular pressure) is induced and followed for 2 weeks. Then, CASP2_4 or control siRNA are administered by either Eye Drop (siRNA in a 2% methyl cellulose formulation) or IVT (siRNA in PBS) as detailed in the study design in Table C27.

Table C27: Study Design

Group	Treatment	Intravitreal injection (5 uL)		Eye drops (3 uL/eye)		Termination
		Dose	Frequency	Dose	Frequency	
1	CASP2_4	20 ug	Once a week starting at 2 weeks after IOP induction (total 3 times during weeks 3, 4, 5)	NA*	NA	5 weeks after IOP induction
2	SiGFP	20 ug	Once a week starting at 2 weeks after IOP induction (total 3 times during weeks 3, 4, 5)	NA*	NA	5 weeks after IOP induction
3	CASP2_4	20 ug	Once after 2 weeks of IOP induction at the beginning of week 3	100 ug	Daily during weeks 4 and 5 after IOP induction	5 weeks after IOP induction
4	siGFP	20 ug	Once after 2 weeks of IOP induction at the beginning of week 3	100 ug	Daily during weeks 4 and 5 after IOP induction	5 weeks after IOP induction
5	CASP2_4			100 ug	Daily during week 3 after IOP induction	3 weeks after IOP induction
6	siGFP			100 ug	Daily during week3 after IOP induction	3 weeks after IOP induction

*NA – non-applicable, Group size: n=5

The results show that non-invasive delivery of siRNA formulated in a 2% methyl cellulose formulation provides neuroprotection and increases neuronal survival.

Example 14: Rat Optic Nerve Crush (ONC) Model: Comparison of intravitreal siRNA delivery to topical eye drop delivery

For optic nerve transsection the orbital optic nerve (ON) of anesthetized rats is exposed through a supraorbital approach, the meninges severed and all axons in the ON transected by crushing with forceps for 10 seconds, 2 mm from the lamina cribrosa.

The siRNA compounds are delivered alone or in combination in 5uL volume (20ug/uL) as eye drops. Immediately after optic nerve crush (ONC), 20 ug/10ul test siRNA or 10ul PBS is administered by IVT to one or both eyes of adult Wistar rats. After that, siRNA is applied to the eye by ED every other day and the levels of siRNA taken up into the dissected and snap frozen whole retinas at 5 hours and 1 day, and later at 2 days, 4 days, 7 days, 14 days and 21 days post injection is determined. Similar experiments are performed in order to test activity and efficacy of siRNA administered via eye drops.

Table C28 below shows an experimental procedure to determine efficacy of test siRNAs (siTEST1; siTEST2) alone or in combination, in the ONC model. Additional dosing parameters, concentrations, termination schedules, formulations and the like are contemplated.

Table C28: Study Design

Group (n=8)	Right eye (n=8)	Left eye (n=8)	termination
1 and 2	20 µg siTEST1 on days 0 and 7 (intravitreal)	20 µg siGFP on days 0 and 7 (intravitreal)	Day 21
3 and 4	20 µg siTEST1 on days 10 and 20 (intravitreal)	20 µg siGFP on days 10 and 20 (intravitreal)	Day 30
5 and 6	PBS (eye drops) every other day starting from day 0, 3 times/week)	PBS on days 0 and 7 (intravitreal)	Day 21
7 and 8	50µg siTEST1 (eye drops) every other day starting from day 0, 3 times/week)	50µg siGFP (eye drops) every other day starting from day 0, 3 times/week)	Day 10
9 and 10	50µg siTEST1 (eye drops) every other day starting from day 0, 3 times/week)	50µg siGFP (eye drops) every other day starting from day 0, 3 times/week)	Day 21
11 and 12	50µg siTEST2 (eye drops) every other day starting from day 0, 3 times/week)	50µg siGFP (eye drops) every other day starting from day 0, 3 times/week)	Day 21
13 and 14	20 µg siTEST1+ 20 µg siTEST2 (eye drops) every other day starting from day 0, 3 times/week)	40 µg siGFP on days 0, 7 and 20 (eye drops) every other day starting from day 0, 3 times/week)	Day 21
15 and 16	20 µg siTEST1+ 20 µg siTEST2 on days 0, and 10 (intravitreal) n=4	40 µg siGFP on days 0 and 10 (intravitreal) n=4	Day 21

Results: According to the results that are obtained in this study non-invasive delivery of siRNA compound designed for down regulation of a target gene provides neuroprotection and increases neuronal survival in the retina.

Tables B1-B26 disclose oligonucleotide pairs of sense and antisense nucleic acids useful in synthesizing unmodified or chemically modified siRNA compounds. The tables disclose the position of the sense strand along the mRNA fior at least one variant.

Table B 1 ACHE - acetylcholinesterase

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-88999567 :140-1984
1	CAGGCUUCAGCAAAGACAA	UUGUCUUUGCUGAAGCCUG	Rat,Ms	[1263-1281]
2	AGGACUGCCUGUACCUCAA	UUGAGGUACAGGCAGUCCU		[513-531]
3	CCUACAUGGUGCACUGGAA	UUCCAGUGCACCAUGUAGG	Rat,Rb,Ms	[1917-1935]
4	CUGUGCUGGUGUCCAUGAA	UUCAUGGACACCAGCACAG		[663-681]
5	AGCUGUAUAUACUAUUUAU	AUAAAUAGUAUAUACAGCU		[2027-2045]
6	GCUACGAGAUCGAGUUCAU	AUGAACUCGAUCUCGUAGC	Rb	[1575-1593]
7	GCUCGUAUUUUCUGGUUUA	UAAACCAGAAAAUACGAGC		[1236-1254]
8	CAGAGUGUCUGCUACCAAU	AUUGGUAGCAGACACUCUG		[428-446]
9	CGACAUCAGUGACGCUGUU	AACAGCGUCACUGAUGUCG		[813-831]
10	CUACGCCUACGUCUUUGAA	UUCAAAGACGUAGGCGUAG		[1507-1525]
11	UGGGUGUGGUGAAGGAUGA	UCAUCCUUCACCACACCCA	Rb	[1215-1233]
12	GGAGACUUCCUCAGUGACA	UGUCACUGAGGAAGUCUCC		[1145-1163]
13	GAAGGAUGAGGGCUCGUAU	AUACGAGCCCUCAUCCUUC		[1225-1243]
14	ACGCCUACGUCUUUGAACA	UGUUCAAAGACGUAGGCGU		[1509-1527]
15	CGGCAGAGGAGAAAAUCUU	AAGAUUUUCUCCUCUGCCG		[1629-1647]
16	CCAGAGUGUCUGCUACCAA	UUGGUAGCAGACACUCUGG		[427-445]
17	CACGUGCUGCCUCAAGAAA	UUUCUUGAGGCAGCACGUG		[1091-1109]
18	GGAAGAACCAGUUCGACCA	UGGUCGAACUGGUUCUUCC	Rat,Rb,Ms	[1932-1950]
19	GACGCUACAACCUUCCAGA	UCUGGAAGGUUGUAGCGUC		[413-431]
20	GAAACUACACGGCAGAGGA	UCCUCUGCCGUGUAGUUUC		[1620-1638]
21	UGCUGGUGUCCAUGAACUA	UAGUUCAUGGACACCAGCA		[666-684]
22	CCCUAGCUGUAUAUACUAU	AUAGUAUAUACAGCUAGGG		[2023-2041]
23	CCAAUAUGUGGACACCCUA	UAGGGUGUCCACAUAUUGG		[442-460]
24	CAAUGUGGGUCUCCUGGAU	AUCCAGGAGACCCACAUUG		[739-757]
25	AGGCUGUGGUCCUGCAUUA	UAAUGCAGGACCACAGCCU	Rat,Ms	[1359-1377]
26	AGUUCGACCACUACAGCAA	UUGCUGUAGUGGUCGAACU		[1941-1959]
27	AGAACCAGUUCGACCACUA	UAGUGGUCGAACUGGUUCU	Rat,Ms	[1935-1953]
28	CCAGGCUUCAGCAAAGACA	UGUCUUUGCUGAAGCCUGG	Rat,Ms	[1262-1280]
29	GCUGUAUAUACUAUUUAUU	AAUAAAUAGUAUAUACAGC		[2028-2046]
30	CGAGAUCGAGUUCAUCUUU	AAAGAUGAACUCGAUCUCG		[1579-1597]
31	GAACCAGUUCGACCACUAC	GUAGUGGUCGAACUGGUUC		[1936-1954]
32	GCUUCAGCAAAGACAACGA	UCGUUGUCUUUGCUGAAGC	Rb	[1266-1284]
33	CAGUUCGACCACUACAGCA	UGCUGUAGUGGUCGAACUG		[1940-1958]
34	GAGUGUCUGCUACCAAUAU	AUAUUGGUAGCAGACACUC		[430-448]
35	AACCAGUUCGACCACUACA	UGUAGUGGUCGAACUGGUU		[1937-1955]
36	GGAUGAGGGCUCGUAUUUU	AAAAUACGAGCCCUCAUCC		[1228-1246]
37	CUAGCUGUAUAUACUAUUU	AAAUAGUAUAUACAGCUAG		[2025-2043]
38	ACUACACGGCAGAGGAGAA	UUCUCCUCUGCCGUGUAGU		[1623-1641]

39	ACUGGAAGAACCAGUUCGA	UCGAACUGGUUCUUCCAGU	Rat,Rb,Ms	[1929-1947]
40	GGCUCAGCAGUACGUUAGU	ACUAACGUACUGCUGAGCC		[1750-1768]
41	GUAGAUGGAGACUUCCUCA	UGAGGAAGUCUCCAUCUAC		[1139-1157]
42	CAAUAUGUGGACACCCUAU	AUAGGGUGUCCACAUAUUG		[443-461]
43	AUGGAGACUUCCUCAGUGA	UCACUGAGGAAGUCUCCAU		[1143-1161]
44	UCAACGUGUGGACACCAUA	UAUGGUGUCCACACGUUGA		[528-546]
45	CAGCGACUGAUGCGAUACU	AGUAUCGCAUCAGUCGCUG		[1652-1670]
46	UCGAGUUCAUCUUUGGGAU	AUCCCAAAGAUGAACUCGA		[1584-1602]
47	CUGUCCUCGUCUGGAUCUA	UAGAUCCAGACGAGGACAG	Rb	[570-588]
48	AGCAGUACGUUAGUCUGGA	UCCAGACUAACGUACUGCU		[1755-1773]
49	CUCGAAACUACACGGCAGA	UCUGCCGUGUAGUUUCGAG		[1617-1635]
50	CUACACGGCAGAGGAGAAA	UUUCUCCUCUGCCGUGUAG		[1624-1642]
51	ACCACUACAGCAAGCAGGA	UCCUGCUUGCUGUAGUGGU		[1947-1965]
52	CCUAGCUGUAUAUACUAUU	AAUAGUAUAUACAGCUAGG		[2024-2042]
53	UCAGGGCUGGGCUAUAACA	UGUUAUAGCCCAGCCCUGA		[2047-2065]
54	AGGAGAAAAUCUUCGCCCA	UGGGCGAAGAUUUUCUCCU		[1635-1653]
55	CUUCGUGCCUGUGGUAGAU	AUCUACCACAGGCACGAAG		[1126-1144]
56	GCUGUGGUCCUGCAUUACA	UGUAAUGCAGGACCACAGC	Ms	[1361-1379]
57	CCCUAUACCCAGGUUUUGA	UCAAAACCUGGGUAUAGGG		[456-474]
58	AGAGUGUCUGCUACCAAUA	UAUUGGUAGCAGACACUCU		[429-447]
59	GUUCGACCACUACAGCAAG	CUUGCUGUAGUGGUCGAAC		[1942-1960]
60	ACACGGCAGAGGAGAAAAU	AUUUUCUCCUCUGCCGUGU		[1626-1644]
61	ACGAGAUCGAGUUCAUCUU	AAGAUGAACUCGAUCUCGU	Rb	[1578-1596]
62	CCUUCCAGAGUGUCUGCUA	UAGCAGACACUCUGGAAGG		[423-441]
63	CGUCUUUGAACACCGUGCU	AGCACGGUGUUCAAAGACG		[1516-1534]
64	CUACGUCUUUGAACACCGU	ACGGUGUUCAAAGACGUAG		[1513-1531]
65	CGUAUUUUCUGGUUUACGG	CCGUAAACCAGAAAAUACG		[1239-1257]
66	GGUCUACGCCUACGUCUUU	AAAGACGUAGGCGUAGACC		[1504-1522]
67	CUACAACCUUCCAGAGUGU	ACACUCUGGAAGGUUGUAG		[417-435]
68	CUGUGGUCCUGCAUUACAC	GUGUAAUGCAGGACCACAG	Ms	[1362-1380]
69	CACCCUAUACCCAGGUUUU	AAAACCUGGGUAUAGGGUG		[454-472]
70	UGGUGCACUGGAAGAACCA	UGGUUCUUCCAGUGCACCA	Rat,Rb,Ms	[1923-1941]
71	UGUGGACACCCUAUACCCA	UGGGUAUAGGGUGUCCACA		[448-466]
72	ACAUGGUGCACUGGAAGAA	UUCUUCCAGUGCACCAUGU	Rat,Rb,Ms	[1920-1938]
73	CCACUACAGCAAGCAGGAU	AUCCUGCUUGCUGUAGUGG		[1948-1966]
74	AUGUGGGUCUCCUGGAUCA	UGAUCCAGGAGACCCACAU		[741-759]
75	AAGGAUGAGGGCUCGUAUU	AAUACGAGCCCUCAUCCUU		[1226-1244]
76	UCUGCAUGUCUCAGGCUGA	UCAGCCUGAGACAUGCAGA		[2129-2147]
77	CAACGUGUGGACACCAUAC	GUAUGGUGUCCACACGUUG		[529-547]
78	CGCCUACGUCUUUGAACAC	GUGUUCAAAGACGUAGGCG		[1510-1528]
79	CAGCAAAGACAACGAGUCU	AGACUCGUUGUCUUUGCUG		[1270-1288]
80	UAGCUGUAUAUACUAUUUA	UAAAUAGUAUAUACAGCUA		[2026-2044]
81	CAAGAAAGCGUCUUCCGGU	ACCGGAAGACGCUUUCUUG		[1103-1121]
82	CUCAACGUGUGGACACCAU	AUGGUGUCCACACGUUGAG		[527-545]
83	GCAGUACGUUAGUCUGGAC	GUCCAGACUAACGUACUGC		[1756-1774]
84	UUUCAGGGCUGGGCUAUAA	UUAUAGCCCAGCCCUGAAA		[2045-2063]
85	GAUGGAGACUUCCUCAGUG	CACUGAGGAAGUCUCCAUC		[1142-1160]
86	GAGACUUCCUCAGUGACAC	GUGUCACUGAGGAAGUCUC		[1146-1164]
87	ACGGCAGAGGAGAAAAUCU	AGAUUUUCUCCUCUGCCGU		[1628-1646]
88	UGCCUGUGGUAGAUGGAGA	UCUCCAUCUACCACAGGCA		[1131-1149]
89	AAUAUGUGGACACCCUAUA	UAUAGGGUGUCCACAUAUU		[444-462]
90	CUCCUUGGACGUGUACGAU	AUCGUACACGUCCAAGGAG		[616-634]
91	AGAUGGAGACUUCCUCAGU	ACUGAGGAAGUCUCCAUCU		[1141-1159]
92	CUCUCGAAACUACACGGCA	UGCCGUGUAGUUUCGAGAG		[1615-1633]
93	ACGGCUACGAGAUCGAGUU	AACUCGAUCUCGUAGCCGU	Rb	[1572-1590]
94	GUACCUCAACGUGUGGACA	UGUCCACACGUUGAGGUAC		[523-541]

95	GGCUACGAGAUCGAGUUCA	UGAACUCGAUCUCGUAGCC	Rb	[1574-1592]
96	AAGACAACGAGUCUCUCAU	AUGAGAGACUCGUUGUCUU		[1275-1293]
97	GAAAAUCUUCGCCCAGCGA	UCGCUGGGCGAAGAUUUUC		[1639-1657]
98	GACAACGAGUCUCUCAUCA	UGAUGAGAGACUCGUUGUC		[1277-1295]
99	ACCAGUUCGACCACUACAG	CUGUAGUGGUCGAACUGGU		[1938-1956]
100	GGUAGACGCUACAACCUUC	GAAGGUUGUAGCGUCUACC		[409-427]
101	CAUCAGUGACGCUGUUUGG	CCAAACAGCGUCACUGAUG		[816-834]
102	CGCUACAACCUUCCAGAGU	ACUCUGGAAGGUUGUAGCG		[415-433]
103	GGCUCGUAUUUUCUGGUUU	AAACCAGAAAAUACGAGCC		[1235-1253]
104	GGGCUCGUAUUUUCUGGUU	AACCAGAAAAUACGAGCCC		[1234-1252]
105	UGUGGUAGAUGGAGACUUC	GAAGUCUCCAUCUACCACA		[1135-1153]
106	UGUCCUCGUCUGGAUCUAU	AUAGAUCCAGACGAGGACA		[571-589]
107	GGCAGAGGAGAAAAUCUUC	GAAGAUUUUCUCCUCUGCC		[1630-1648]
108	GUGCUGGUGUCCAUGAACU	AGUUCAUGGACACCAGCAC		[665-683]
109	UCAUCAACGCGGGAGACUU	AAGUCUCCCGCGUUGAUGA		[1176-1194]
110	GUGUCUGCUACCAAUAUGU	ACAUAUUGGUAGCAGACAC		[432-450]
111	AGAUCGAGUUCAUCUUUGG	CCAAAGAUGAACUCGAUCU		[1581-1599]
112	GUGGUAGACGCUACAACCU	AGGUUGUAGCGUCUACCAC		[407-425]
113	ACGUGCUGCCUCAAGAAAG	CUUUCUUGAGGCAGCACGU		[1092-1110]
114	UCUACGCCUACGUCUUUGA	UCAAAGACGUAGGCGUAGA		[1506-1524]
115	CUGCCUCAAGAAAGCGUCU	AGACGCUUUCUUGAGGCAG		[1097-1115]
116	GAUGAGGGCUCGUAUUUUC	GAAAAUACGAGCCCUCAUC		[1229-1247]
117	GCAAAGACAACGAGUCUCU	AGAGACUCGUUGUCUUUGC		[1272-1290]
118	UGGUAGACGCUACAACCUU	AAGGUUGUAGCGUCUACCA		[408-426]
119	GUUUUGAGGGCACCGAGAU	AUCUCGGUGCCCUCAAAAC		[468-486]
120	CAACGAGUCUCUCAUCAGC	GCUGAUGAGAGACUCGUUG		[1279-1297]
121	CCUAUACCCAGGUUUUGAG	CUCAAAACCUGGGUAUAGG		[457-475]
122	UGGAGACUUCCUCAGUGAC	GUCACUGAGGAAGUCUCCA		[1144-1162]
123	UACACGGCAGAGGAGAAAA	UUUUCUCCUCUGCCGUGUA		[1625-1643]
124	GGUAGAUGGAGACUUCCUC	GAGGAAGUCUCCAUCUACC		[1138-1156]
125	AAGAAAGCGUCUUCCGGUU	AACCGGAAGACGCUUUCUU		[1104-1122]
126	UGGUGUCCAUGAACUACCG	CGGUAGUUCAUGGACACCA		[669-687]
127	AGGCUUCAGCAAAGACAAC	GUUGUCUUUGCUGAAGCCU		[1264-1282]
128	CUACGAGAUCGAGUUCAUC	GAUGAACUCGAUCUCGUAG	Rb	[1576-1594]
129	AAAGACAACGAGUCUCUCA	UGAGAGACUCGUUGUCUUU		[1274-1292]
130	GAAAGCGUCUUCCGGUUCU	AGAACCGGAAGACGCUUUC		[1106-1124]
131	ACUGUGCUGGUGUCCAUGA	UCAUGGACACCAGCACAGU		[662-680]
132	GAAGAACCAGUUCGACCAC	GUGGUCGAACUGGUUCUUC	Rat,Ms	[1933-1951]
133	GUCUUUGAACACCGUGCUU	AAGCACGGUGUUCAAAGAC		[1517-1535]
134	UGGUAGAUGGAGACUUCCU	AGGAAGUCUCCAUCUACCA		[1137-1155]
135	GCUACAACCUUCCAGAGUG	CACUCUGGAAGGUUGUAGC		[416-434]
136	AUUUCAGGGCUGGGCUAUA	UAUAGCCCAGCCCUGAAAU		[2044-2062]
137	GAUCGAGUUCAUCUUUGGG	CCCAAAGAUGAACUCGAUC		[1582-1600]
138	UAGACGCUACAACCUUCCA	UGGAAGGUUGUAGCGUCUA		[411-429]
139	CUACAUGGUGCACUGGAAG	CUUCCAGUGCACCAUGUAG	Rat,Rb,Ms	[1918-1936]
140	CAUGGUGCACUGGAAGAAC	GUUCUUCCAGUGCACCAUG	Rat,Rb,Ms	[1921-1939]
141	AGGAUGAGGGCUCGUAUUU	AAAUACGAGCCCUCAUCCU		[1227-1245]
142	UCGACCACUACAGCAAGCA	UGCUUGCUGUAGUGGUCGA		[1944-1962]
143	ACGCUACAACCUUCCAGAG	CUCUGGAAGGUUGUAGCGU		[414-432]
144	AAAUCUUCGCCCAGCGACU	AGUCGCUGGGCGAAGAUUU		[1641-1659]
145	GAGGGCUCGUAUUUUCUGG	CCAGAAAAUACGAGCCCUC		[1232-1250]
146	CUGGAAGAACCAGUUCGAC	GUCGAACUGGUUCUUCCAG	Rat,Rb,Ms	[1930-1948]
147	GUCCUCGUCUGGAUCUAUG	CAUAGAUCCAGACGAGGAC		[572-590]
148	GGAGAAAAUCUUCGCCCAG	CUGGGCGAAGAUUUUCUCC		[1636-1654]
149	UCUCGAAACUACACGGCAG	CUGCCGUGUAGUUUCGAGA		[1616-1634]
150	CUCGUAUUUUCUGGUUUAC	GUAAACCAGAAAAUACGAG		[1237-1255]

151	AAACUACACGGCAGAGGAG	CUCCUCUGCCGUGUAGUUU		[1621-1639]
152	AUCGAGUUCAUCUUUGGGA	UCCCAAAGAUGAACUCGAU		[1583-1601]
153	GUCCUGGUGAACCACGAAU	AUUCGUGGUUCACCAGGAC		[1070-1088]
154	UGUGCUGGUGUCCAUGAAC	GUUCAUGGACACCAGCACA		[664-682]
155	UCCAGAGUGUCUGCUACCA	UGGUAGCAGACACUCUGGA		[426-444]
156	CUUUGAACACCGUGCUUCC	GGAAGCACGGUGUUCAAAG		[1519-1537]
157	UGCACUGGAAGAACCAGUU	AACUGGUUCUUCCAGUGCA	Rat,Rb,Ms	[1926-1944]
158	UGAAGGAUGAGGGCUCGUA	UACGAGCCCUCAUCCUUCA		[1224-1242]
159	CGAGUUCAUCUUUGGGAUC	GAUCCCAAAGAUGAACUCG		[1585-1603]
160	CCAAUAAACUGUUACAGCC	GGCUGUAACAGUUUAUUGG	Ms	[2185-2203]
161	CCUACGUCUUUGAACACCG	CGGUGUUCAAAGACGUAGG	Rb	[1512-1530]
162	UACAUGGUGCACUGGAAGA	UCUUCCAGUGCACCAUGUA	Rat,Rb,Ms	[1919-1937]
163	GCUGGUGUCCAUGAACUAC	GUAGUUCAUGGACACCAGC		[667-685]
164	GUACGUUAGUCUGGACCUG	CAGGUCCAGACUAACGUAC		[1759-1777]
165	GAGAUCGAGUUCAUCUUUG	CAAAGAUGAACUCGAUCUC		[1580-1598]
166	CUUCCAGAGUGUCUGCUAC	GUAGCAGACACUCUGGAAG		[424-442]
167	UCUGCUACCAAUAUGUGGA	UCCACAUAUUGGUAGCAGA	Rb	[435-453]
168	AGGGCUCGUAUUUUCUGGU	ACCAGAAAAUACGAGCCCU		[1233-1251]
169	UGCCUGUACCUCAACGUGU	ACACGUUGAGGUACAGGCA		[518-536]
170	ACCAAUAUGUGGACACCCU	AGGGUGUCCACAUAUUGGU	Rb	[441-459]
171	CUGUACCUCAACGUGUGGA	UCCACACGUUGAGGUACAG		[521-539]
172	CUGUGGUAGAUGGAGACUU	AAGUCUCCAUCUACCACAG		[1134-1152]
173	AACUACACGGCAGAGGAGA	UCUCCUCUGCCGUGUAGUU		[1622-1640]
174	AUGAGGGCUCGUAUUUUCU	AGAAAAUACGAGCCCUCAU		[1230-1248]
175	CACGGCAGAGGAGAAAAUC	GAUUUUCUCCUCUGCCGUG		[1627-1645]
176	CAAAGACAACGAGUCUCUC	GAGAGACUCGUUGUCUUUG		[1273-1291]
177	AGUACGUUAGUCUGGACCU	AGGUCCAGACUAACGUACU		[1758-1776]
178	AUAUGUGGACACCCUAUAC	GUAUAGGGUGUCCACAUAU		[445-463]
179	UUAUUUCAGGGCUGGGCUA	UAGCCCAGCCCUGAAAUAA		[2042-2060]
180	CUUCAGCAAAGACAACGAG	CUCGUUGUCUUUGCUGAAG		[1267-1285]
181	UGUCCAUGAACUACCGGGU	ACCCGGUAGUUCAUGGACA		[672-690]
182	CAGCAGUACGUUAGUCUGG	CCAGACUAACGUACUGCUG		[1754-1772]
183	AGACGCUACAACCUUCCAG	CUGGAAGGUUGUAGCGUCU		[412-430]
184	UACGAGAUCGAGUUCAUCU	AGAUGAACUCGAUCUCGUA	Rb	[1577-1595]
185	GUAUUUUCUGGUUUACGGG	CCCGUAAACCAGAAAAUAC		[1240-1258]
186	CAACCUUCCAGAGUGUCUG	CAGACACUCUGGAAGGUUG		[420-438]
187	GCCUCAAGAAAGCGUCUUC	GAAGACGCUUUCUUGAGGC		[1099-1117]
188	UCCUACAUGGUGCACUGGA	UCCAGUGCACCAUGUAGGA	Rat,Rb,Ms	[1916-1934]
189	UCUCUGCUUUCCUGGGCAU	AUGCCCAGGAAAGCAGAGA		[318-336]
190	GUGCACUGGAAGAACCAGU	ACUGGUUCUUCCAGUGCAC	Rat,Rb,Ms	[1925-1943]
191	CUCAAGAAAGCGUCUUCCG	CGGAAGACGCUUUCUUGAG		[1101-1119]
192	CUGCUACCAAUAUGUGGAC	GUCCACAUAUUGGUAGCAG	Rb	[436-454]
193	ACAACGAGUCUCUCAUCAG	CUGAUGAGAGACUCGUUGU		[1278-1296]
194	AGUGUCUGCUACCAAUAUG	CAUAUUGGUAGCAGACACU		[431-449]
195	UCAGCAGUACGUUAGUCUG	CAGACUAACGUACUGCUGA		[1753-1771]
196	AGACAACGAGUCUCUCAUC	GAUGAGAGACUCGUUGUCU		[1276-1294]
197	UCCUCGUCUGGAUCUAUGG	CCAUAGAUCCAGACGAGGA		[573-591]
198	ACUGCCUGUACCUCAACGU	ACGUUGAGGUACAGGCAGU		[516-534]
199	UCUUCCGGUUCUCCUUCGU	ACGAAGGAGAACCGGAAGA		[1113-1131]
200	UGAGGGCUCGUAUUUUCUG	CAGAAAAUACGAGCCCUCA		[1231-1249]
201	AGCGACUGAUGCGAUACUG	CAGUAUCGCAUCAGUCGCU		[1653-1671]
202	UACGCCUACGUCUUUGAAC	GUUCAAAGACGUAGGCGUA		[1508-1526]
203	UACCCAGGUUUUGAGGGCA	UGCCCUCAAAACCUGGGUA		[461-479]
204	ACAUCAGUGACGCUGUUUG	CAAACAGCGUCACUGAUGU		[815-833]
205	CACUGGAAGAACCAGUUCG	CGAACUGGUUCUUCCAGUG	Rat,Rb,Ms	[1928-1946]
206	AGACUUCCUCAGUGACACC	GGUGUCACUGAGGAAGUCU		[1147-1165]

207	GACACCCUAUACCCAGGUU	AACCUGGGUAUAGGGUGUC		[452-470]
208	UGCUGCCUCAAGAAAGCGU	ACGCUUUCUUGAGGCAGCA		[1095-1113]
209	ACAACCUUCCAGAGUGUCU	AGACACUCUGGAAGGUUGU		[419-437]
210	UUUGAACACCGUGCUUCCA	UGGAAGCACGGUGUUCAAA		[1520-1538]
211	UUUUGAGGGCACCGAGAUG	CAUCUCGGUGCCCUCAAAA		[469-487]
212	GACAUCAGUGACGCUGUUU	AAACAGCGUCACUGAUGUC		[814-832]
213	AAAGCGUCUUCCGGUUCUC	GAGAACCGGAAGACGCUUU		[1107-1125]
214	CUCAGCAGUACGUUAGUCU	AGACUAACGUACUGCUGAG		[1752-1770]
215	UGCUACCAAUAUGUGGACA	UGUCCACAUAUUGGUAGCA	Rb	[437-455]
216	CCUGUGGUAGAUGGAGACU	AGUCUCCAUCUACCACAGG		[1133-1151]
217	AGAAAAUCUUCGCCCAGCG	CGCUGGGCGAAGAUUUUCU		[1638-1656]
218	UUCAGGGCUGGGCUAUAAC	GUUAUAGCCCAGCCCUGAA		[2046-2064]
219	CCUCAAGAAAGCGUCUUCC	GGAAGACGCUUUCUUGAGG		[1100-1118]
220	AGUUCAUCUUUGGGAUCCC	GGGAUCCCAAAGAUGAACU		[1587-1605]
221	AUAUACUAUUUAUUUCAGG	CCUGAAAUAAAUAGUAUAU		[2033-2051]
222	UGUACCUCAACGUGUGGAC	GUCCACACGUUGAGGUACA		[522-540]
223	GUGGUAGAUGGAGACUUCC	GGAAGUCUCCAUCUACCAC		[1136-1154]
224	CUACCAAUAUGUGGACACC	GGUGUCCACAUAUUGGUAG	Rb	[439-457]
225	UCAAGAAAGCGUCUUCCGG	CCGGAAGACGCUUUCUUGA		[1102-1120]
226	CUGGUGUCCAUGAACUACC	GGUAGUUCAUGGACACCAG		[668-686]
227	UCCUUGGACGUGUACGAUG	CAUCGUACACGUCCAAGGA		[617-635]
228	GCACUGGAAGAACCAGUUC	GAACUGGUUCUUCCAGUGC	Rat,Rb,Ms	[1927-1945]
229	AAGAACCAGUUCGACCACU	AGUGGUCGAACUGGUUCUU	Rat,Ms	[1934-1952]
230	UAGAUGGAGACUUCCUCAG	CUGAGGAAGUCUCCAUCUA		[1140-1158]
231	UACUAUUUAUUUCAGGGCU	AGCCCUGAAAUAAAUAGUA		[2036-2054]
232	UCGAAACUACACGGCAGAG	CUCUGCCGUGUAGUUUCGA		[1618-1636]
233	UCCUGGUGAACCACGAAUG	CAUUCGUGGUUCACCAGGA		[1071-1089]
234	GUCUGCUACCAAUAUGUGG	CCACAUAUUGGUAGCAGAC	Rb	[434-452]
235	GCAGAGGAGAAAAUCUUCG	CGAAGAUUUUCUCCUCUGC		[1631-1649]
236	ACACCCUAUACCCAGGUUU	AAACCUGGGUAUAGGGUGU		[453-471]
237	UCGUAUUUUCUGGUUUACG	CGUAAACCAGAAAAUACGA		[1238-1256]
238	UUCAGCAAAGACAACGAGU	ACUCGUUGUCUUUGCUGAA		[1268-1286]
239	CAGAGGAGAAAAUCUUCGC	GCGAAGAUUUUCUCCUCUG		[1632-1650]
240	ACCCUAUACCCAGGUUUUG	CAAAACCUGGGUAUAGGGU		[455-473]
241	GCUACCAAUAUGUGGACAC	GUGUCCACAUAUUGGUAGC	Rb	[438-456]
242	ACUACAGCAAGCAGGAUCG	CGAUCCUGCUUGCUGUAGU		[1950-1968]
243	GUCUACGCCUACGUCUUUG	CAAAGACGUAGGCGUAGAC		[1505-1523]
244	UGUCUGCUACCAAUAUGUG	CACAUAUUGGUAGCAGACA		[433-451]
245	CUAUACCCAGGUUUUGAGG	CCUCAAAACCUGGGUAUAG		[458-476]
246	CACUACAGCAAGCAGGAUC	GAUCCUGCUUGCUGUAGUG		[1949-1967]
247	AUGUGGACACCCUAUACCC	GGGUAUAGGGUGUCCACAU		[447-465]
248	GCUCAGCAGUACGUUAGUC	GACUAACGUACUGCUGAGC		[1751-1769]
249	ACGUCUUUGAACACCGUGC	GCACGGUGUUCAAAGACGU		[1515-1533]
250	GGCUUCAGCAAAGACAACG	CGUUGUCUUUGCUGAAGCC	Rb	[1265-1283]
251	UUCGACCACUACAGCAAGC	GCUUGCUGUAGUGGUCGAA		[1943-1961]
252	UCAGCAAAGACAACGAGUC	GACUCGUUGUCUUUGCUGA		[1269-1287]
253	UACCUCAACGUGUGGACAC	GUGUCCACACGUUGAGGUA		[524-542]
254	UAUACUAUUUAUUUCAGGG	CCCUGAAAUAAAUAGUAUA		[2034-2052]
255	UGGAAGAACCAGUUCGACC	GGUCGAACUGGUUCUUCCA	Rat,Rb,Ms	[1931-1949]
256	CUAUUUAUUUCAGGGCUGG	CCAGCCCUGAAAUAAAUAG		[2038-2056]
257	UGCCUCAAGAAAGCGUCUU	AAGACGCUUUCUUGAGGCA		[1098-1116]
258	ACUAUUUAUUUCAGGGCUG	CAGCCCUGAAAUAAAUAGU		[2037-2055]
259	GCCUACGUCUUUGAACACC	GGUGUUCAAAGACGUAGGC	Rb	[1511-1529]
260	GAGAAAAUCUUCGCCCAGC	GCUGGGCGAAGAUUUUCUC		[1637-1655]
261	GUAGACGCUACAACCUUCC	GGAAGGUUGUAGCGUCUAC		[410-428]
262	UUUGAGGGCACCGAGAUGU	ACAUCUCGGUGCCCUCAAA		[470-488]

263	UACAGCAAGCAGGAUCGCU	AGCGAUCCUGCUUGCUGUA		[1952-1970]
264	CAGUACGUUAGUCUGGACC	GGUCCAGACUAACGUACUG		[1757-1775]
265	UUCUUGGUACAGGCCGAGA	UCUCGGCCUGUACCAAGAA		[641-659]
266	AACCUUCCAGAGUGUCUGC	GCAGACACUCUGGAAGGUU		[421-439]
267	UACGUCUUUGAACACCGUG	CACGGUGUUCAAAGACGUA		[1514-1532]
268	AGAGGAGAAAAUCUUCGCC	GGCGAAGAUUUUCUCCUCU		[1633-1651]
269	AACGUGUGGACACCAUACC	GGUAUGGUGUCCACACGUU		[530-548]
270	AACGAGUCUCUCAUCAGCC	GGCUGAUGAGAGACUCGUU		[1280-1298]
271	UAUUUCAGGGCUGGGCUAU	AUAGCCCAGCCCUGAAAUA		[2043-2061]
272	AGCAAAGACAACGAGUCUC	GAGACUCGUUGUCUUUGCU		[1271-1289]
273	GAGGAGAAAAUCUUCGCCC	GGGCGAAGAUUUUCUCCUC		[1634-1652]
274	AUGGUGCACUGGAAGAACC	GGUUCUUCCAGUGCACCAU	Rat,Rb,Ms	[1922-1940]
275	UUUAUUUCAGGGCUGGGCU	AGCCCAGCCCUGAAAUAAA		[2041-2059]
276	GAGUUCAUCUUUGGGAUCC	GGAUCCCAAAGAUGAACUC		[1586-1604]
277	UUGAACACCGUGCUUCCAC	GUGGAAGCACGGUGUUCAA		[1521-1539]
278	AAAAUCUUCGCCCAGCGAC	GUCGCUGGGCGAAGAUUUU		[1640-1658]
279	AUCAGUGACGCUGUUUGGG	CCCAAACAGCGUCACUGAU		[817-835]
280	AAUGUGGGUCUCCUGGAUC	GAUCCAGGAGACCCACAUU		[740-758]
281	AGCUCCUACAUGGUGCACU	AGUGCACCAUGUAGGAGCU	Rat,Rb,Ms	[1913-1931]
282	UAUGUGGACACCCUAUACC	GGUAUAGGGUGUCCACAUA		[446-464]
283	AGAAAGCGUCUUCCGGUUC	GAACCGGAAGACGCUUUCU		[1105-1123]
284	ACCUUCCAGAGUGUCUGCU	AGCAGACACUCUGGAAGGU		[422-440]
285	UUCCAGAGUGUCUGCUACC	GGUAGCAGACACUCUGGAA		[425-443]
286	UAUUUAUUUCAGGGCUGGG	CCCAGCCCUGAAAUAAAUA		[2039-2057]
287	UACGUUAGUCUGGACCUGC	GCAGGUCCAGACUAACGUA		[1760-1778]
288	AUACCCAGGUUUUGAGGGC	GCCCUCAAAACCUGGGUAU		[460-478]
289	UACCAAUAUGUGGACACCC	GGGUGUCCACAUAUUGGUA	Rb	[440-458]
290	AUACUAUUUAUUUCAGGGC	GCCCUGAAAUAAAUAGUAU		[2035-2053]
291	UACAACCUUCCAGAGUGUC	GACACUCUGGAAGGUUGUA		[418-436]
292	UCUUUGAACACCGUGCUUC	GAAGCACGGUGUUCAAAGA		[1518-1536]
293	UAUACCCAGGUUUUGAGGG	CCCUCAAAACCUGGGUAUA		[459-477]
294	UUCGUGCCUGUGGUAGAUG	CAUCUACCACAGGCACGAA		[1127-1145]
295	AUUUAUUUCAGGGCUGGGC	GCCCAGCCCUGAAAUAAAU		[2040-2058]

Table B 2 ADRB1 - adrenergic, beta-1-, receptor

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-110349783 :87-1520
1	GAGGCAAAAUAAAAAAAAA	UUUUUUUUUAUUUUGCCUC		[2094-2112]
2	GGAUGGAGGCAAAAUAAAA	UUUUAUUUUGCCUCCAUCC		[2089-2107]
3	GGGCAGAUCUUAAAUAAAA	UUUUAUUUAAGAUCUGCCC		[2543-2561]
4	CAGUGUUAGGAAUUACAAA	UUUGUAAUUCCUAACACUG		[2463-2481]
5	GGCAGAUCUUAAAUAAAAU	AUUUUAUUUAAGAUCUGCC		[2544-2562]
6	GAUGGAGGCAAAAUAAAAA	UUUUUAUUUUGCCUCCAUC		[2090-2108]
7	CAGAGAAAUUUCAUUUUAA	UUAAAAUGAAAUUUCUCUG		[2028-2046]
8	GGAGGCAAAAUAAAAAAAA	UUUUUUUUUAUUUUGCCUCC		[2093-2111]
9	GCCUCUUCGUCUUCUUCAA	UUGAAGAAGACGAAGAGGC	Rat,Ms	[1156-1174]
10	GAGAAAGGAUGGAGGCAAA	UUUGCCUCCAUCCUUUCUC		[2083-2101]
11	GGGCUGGGCAGAUCUUAAA	UUUAAGAUCUGCCCAGCCC		[2538-2556]
12	CACGGACCGUUGCACAAAA	UUUUGUGCAACGGUCCGUG		[1655-1673]
13	GAUGUUACUUGCACAAAAA	UUUUUGUGCAAGUAACAUC		[2492-2510]
14	GGGAAAAUACCUUUUUAUA	UAUAAAAAGGUAUUUUCCC		[2612-2630]
15	CUGGGCAGAUCUUAAAUAA	UUAUUUAAGAUCUGCCCAG		[2541-2559]
16	GGUCCAUGUGCAAUAAAUA	UAUUUAUUGCACAUGGACC		[2826-2844]
17	CCACAAUCCUCGUCUGAAU	AUUCAGACGAGGAUUGUGG		[1614-1632]
18	AAGGAUGGAGGCAAAAUAA	UUAUUUUGCCUCCAUCCUU		[2087-2105]

19	AGAUGUUACUUGCACAAAA	UUUUGUGCAAGUAACAUCU		[2491-2509]
20	GACAGUUUGUCAAGACAUA	UAUGUCUUGACAAACUGUC		[1994-2012]
21	CCUUUAUCAUGGUACUGUA	UACAGUACCAUGAUAAAGG		[2633-2651]
22	AGGAUGGAGGCAAAAUAAA	UUUAUUUUGCCUCCAUCCU		[2088-2106]
23	ACGUGAAUUUGCUGGUGAA	UUCACCAGCAAAUUCACGU		[2718-2736]
24	GCUUAUUUAUGUAUCAAUA	UAUUGAUACAUAAAUAAGC		[2279-2297]
25	CCCAGAAGCAGGUGAAGAA	UUCUUCACCUGCUUCUGGG		[838-856]
26	GGAGAAUGACAGUUUGUCA	UGACAAACUGUCAUUCUCC		[1987-2005]
27	CGUCCGUAGUCUCCUUCUA	UAGAAGGAGACUACGGACG		[769-787]
28	CAUGUGCAAUAAAUACCAA	UUGGUAUUUAUUGCACAUG		[2830-2848]
29	UGGGCAGAUCUUAAAUAAA	UUUAUUUAAGAUCUGCCCA		[2542-2560]
30	UGCAAUAAAUACCAAUGAA	UUCAUUGGUAUUUAUUGCA		[2834-2852]
31	CAUCCGAGGCAAAGAGAAA	UUUCUCUUUGCCUCGGAUG		[1633-1651]
32	UGCACAAAAAGAAAUUAAA	UUUAAUUUCUUUUUGUGCA		[2501-2519]
33	CUGCUGUUAUGAAAGCAAA	UUUGCUUUCAUAACAGCAG		[2064-2082]
34	GAUUUCUGCUGUUAUGAAA	UUUCAUAACAGCAGAAAUC		[2059-2077]
35	GCACAAAAAGAAAUUAAAU	AUUUAAUUUCUUUUUGUGC		[2502-2520]
36	UGAAGACAGGACAUUAAAA	UUUUAAUGUCCUGUCUUCA		[2353-2371]
37	GAGAAUGACAGUUUGUCAA	UUGACAAACUGUCAUUCUC		[1988-2006]
38	CGUGAAUUUGCUGGUGAAA	UUUCACCAGCAAAUUCACG		[2719-2737]
39	GCUAAUGAUUCAUUGGGAA	UUCCCAAUGAAUCAUUAGC		[2598-2616]
40	GAUAGCAGGUGAACUCGAA	UUCGAGUUCACCUGCUAUC		[1593-1611]
41	CACAGUGUUAGGAAUUACA	UGUAAUUCCUAACACUGUG		[2461-2479]
42	ACGGACCGUUGCACAAAAA	UUUUUGUGCAACGGUCCGU		[1656-1674]
43	GGAAUUGGUCCAUGUGCAA	UUGCACAUGGACCAAUUCC		[2820-2838]
44	CCAGAGAAAUUUCAUUUUA	UAAAAUGAAAUUUCUCUGG		[2027-2045]
45	ACAGUGUUAGGAAUUACAA	UUGUAAUUCCUAACACUGU		[2462-2480]
46	GACCGUUGCACAAAAAGGA	UCCUUUUUGUGCAACGGUC		[1659-1677]
47	GAAAGACUUGUUUAUAUUA	UAAUAUAAACAAGUCUUUC		[2256-2274]
48	CCCACCAGGUGGUUUUUGA	UCAAAAACCACCUGGUGGG		[1836-1854]
49	GAUAGAAAGACUUGUUUAU	AUAAACAAGUCUUUCUAUC		[2252-2270]
50	ACCAAUGAAGCACAAUCAA	UUGAUUGUGCUUCAUUGGU		[2844-2862]
51	AAAGGAUGGAGGCAAAAUA	UAUUUUGCCUCCAUCCUUU		[2086-2104]
52	CAGCUUAUUUAUGUAUCAA	UUGAUACAUAAAUAAGCUG		[2277-2295]
53	GUGGAAGAUGGGUGGGUUA	UAACCCACCCAUCUUCCAC		[1875-1893]
54	CCUCGGAAUCCAAGGUGUA	UACACCUUGGAUUCCGAGG		[1501-1519]
55	GAAGGGAGAAGCAUUAGGA	UCCUAAUGCUUCUCCCUUC		[1897-1915]
56	GGUUUUUGACACUCUCUGA	UCAGAGAGUGUCAAAAACC		[1846-1864]
57	CCGUUGCACAAAAAGGAAA	UUUCCUUUUUGUGCAACGG		[1661-1679]
58	UCAGGCUGAGGGAUUUCUA	UAGAAAUCCCUCAGCCUGA		[2208-2226]
59	AGUGUUAGGAAUUACAAAA	UUUUGUAAUUCCUAACACU		[2464-2482]
60	CGUGUGAUGCAUCUUUAGA	UCUAAAGAUGCAUCACACG		[1808-1826]
61	GUUACUUGCACAAAAAGAA	UUCUUUUUGUGCAAGUAAC		[2495-2513]
62	CUGAAUCAUCCGAGGCAAA	UUUGCCUCGGAUGAUUCAG		[1627-1645]
63	ACCGUUGCACAAAAAGGAA	UUCCUUUUUGUGCAACGGU		[1660-1678]
64	UGGAGGCAAAAUAAAAAAA	UUUUUUUAUUUUGCCUCCA		[2092-2110]
65	GGAAAGUUUGGGAAGGGAU	AUCCCUUCCCAAACUUUCC		[1675-1693]
66	CCAUGUGCAAUAAAUACCA	UGGUAUUUAUUGCACAUGG		[2829-2847]
67	CAGAGAGAGGAGAAUGACA	UGUCAUUCUCCUCUCUCUG		[1979-1997]
68	CACGUUUCAAGAAAUGUUA	UAACAUUUCUUGAAACGUG		[2114-2132]
69	AGAUAGAAAGACUUGUUUA	UAAACAAGUCUUUCUAUCU		[2251-2269]
70	AAAUACCAAUGAAGCACAA	UUGUGCUUCAUUGGUAUUU		[2840-2858]
71	GAGGGAUUUCUACCUCACA	UGUGAGGUAGAAAUCCCUC		[2215-2233]
72	AUGGAGGCAAAAUAAAAAA	UUUUUUAUUUUGCCUCCAU		[2091-2109]
73	ACUGUAUCCAUAUUAUAAA	UUUAUAAUAUGGAUACAGU		[2652-2670]
74	UUGGGAAAAUACCUUUUUA	UAAAAAGGUAUUUUCCCAA		[2610-2628]

75	CCUUUUGCUUUCCAGAGAA	UUCUCUGGAAAGCAAAAGG		[2016-2034]
76	GUAUCAAUAUUAGUUGGAA	UUCCAACUAAUAUUGAUAC		[2289-2307]
77	CUGUAUCCAUAUUAUAAAU	AUUUAUAAUAUGGAUACAG		[2653-2671]
78	GGCUGGGCAGAUCUUAAAU	AUUUAAGAUCUGCCCAGCC		[2539-2557]
79	CAGGCUGAGGGAUUUCUAC	GUAGAAAUCCCUCAGCCUG		[2209-2227]
80	CAAGAAAUGUUAAGCUCUU	AAGAGCUUAACAUUUCUUG		[2121-2139]
81	UGCGUGUGAUGCAUCUUUA	UAAAGAUGCAUCACACGCA		[1806-1824]
82	GUGUGAUGCAUCUUUAGAU	AUCUAAAGAUGCAUCACAC		[1809-1827]
83	UUGAAGACAGGACAUUAAA	UUUAAUGUCCUGUCUUCAA		[2352-2370]
84	UUAUGAAAGCAAAGAGAAA	UUUCUCUUUGCUUUCAUAA		[2070-2088]
85	CUAGUAUGUUAUUGAGCUA	UAGCUCAAUAACAUACUAG		[2583-2601]
86	UAGAAAGACUUGUUUAUAU	AUAUAAACAAGUCUUUCUA		[2254-2272]
87	ACAGCUUAUUUAUGUAUCA	UGAUACAUAAAUAAGCUGU		[2276-2294]
88	UGAUUUCUGCUGUUAUGAA	UUCAUAACAGCAGAAAUCA		[2058-2076]
89	GUGCAAUAAAUACCAAUGA	UCAUUGGUAUUUAUUGCAC		[2833-2851]
90	GCAGAUAGAAAGACUUGUU	AACAAGUCUUUCUAUCUGC		[2249-2267]
91	CAAAAAGGAAAGUUUGGGA	UCCCAAACUUUCCUUUUUG		[1669-1687]
92	AGAAGCAGGUGAAGAAGAU	AUCUUCUUCACCUGCUUCU		[841-859]
93	GUAACUGUAUCCAUAUUAU	AUAAUAUGGAUACAGUUAC		[2649-2667]
94	AACUGUAUCCAUAUUAUAA	UUAUAAUAUGGAUACAGUU		[2651-2669]
95	GAAUCAUCCGAGGCAAAGA	UCUUUGCCUCGGAUGAUUC		[1629-1647]
96	GCGUGUGAUGCAUCUUUAG	CUAAAGAUGCAUCACACGC		[1807-1825]
97	UCAUGGUACUGUAACUGUA	UACAGUUACAGUACCAUGA		[2639-2657]
98	GUUUUACCAAGUAUUUAUA	UAUAAAUACUUGGUAAAAC		[2775-2793]
99	GGUGAAAGUUAGCACUUGU	ACAAGUGCUAACUUUCACC		[2731-2749]
100	AUUGAAGACAGGACAUUAA	UUAAUGUCCUGUCUUCAAU		[2351-2369]
101	GACAGGACAUUAAAAGAGA	UCUCUUUUAAUGUCCUGUC		[2357-2375]
102	UGGGAAAAUACCUUUUUAU	AUAAAAAGGUAUUUUCCCA		[2611-2629]
103	AGCUAAUGAUUCAUUGGGA	UCCCAAUGAAUCAUUAGCU		[2597-2615]
104	UGCACAGCAGAUAGAAAGA	UCUUUCUAUCUGCUGUGCA		[2243-2261]
105	AGACGCUGGGCAUCAUCAU	AUGAUGAUGCCCAGCGUCU		[1057-1075]
106	AGAAAGACUUGUUUAUAUU	AAUAUAAACAAGUCUUUCU		[2255-2273]
107	ACGUUUCAAGAAAUGUUAA	UUAACAUUUCUUGAAACGU		[2115-2133]
108	UGGUCCAUGUGCAAUAAAU	AUUUAUUGCACAUGGACCA		[2825-2843]
109	AGAGAGCGAGAGAGAGAAA	UUUCUCUCUCUCGCUCUCU		[2371-2389]
110	CUACUUCUGUUGUCUAGUA	UACUAGACAACAGAAGUAG		[2570-2588]
111	GGACAUUAAAAGAGAGCGA	UCGCUCUCUUUUAAUGUCC		[2361-2379]
112	GAAGAUGUUACUUGCACAA	UUGUGCAAGUAACAUCUUC		[2489-2507]
113	GCUGGGCAGAUCUUAAAUA	UAUUUAAGAUCUGCCCAGC		[2540-2558]
114	CAUGGUACUGUAACUGUAU	AUACAGUUACAGUACCAUG		[2640-2658]
115	CCAUUUUUGCACAGUGUUA	UAACACUGUGCAAAAAUGG		[2452-2470]
116	CUUUAUCAUGGUACUGUAA	UUACAGUACCAUGAUAAAG		[2634-2652]
117	GUGUUUUACCAAGUAUUUA	UAAAUACUUGGUAAAACAC		[2773-2791]
118	CGAUAGCAGGUGAACUCGA	UCGAGUUCACCUGCUAUCG		[1592-1610]
119	GCAGAUCUUAAAUAAAAUU	AAUUUUAUUUAAGAUCUGC		[2545-2563]
120	GCGAGAGAGAGAAACAGUU	AACUGUUUCUCUCUCUCGC		[2376-2394]
121	UGUGACUCUGUCAAUUGAA	UUCAAUUGACAGAGUCACA		[2338-2356]
122	ACCUUUUUAUACUCCUUUA	UAAAGGAGUAUAAAAAGGU		[2620-2638]
123	UCAUCCGAGGCAAAGAGAA	UUCUCUUUGCCUCGGAUGA		[1632-1650]
124	AGAAAGGAUGGAGGCAAAA	UUUUGCCUCCAUCCUUUCU		[2084-2102]
125	GAGAGAGGAGAAUGACAGU	ACUGUCAUUCUCCUCUCUC		[1981-1999]
126	UACUGUAACUGUAUCCAUA	UAUGGAUACAGUUACAGUA		[2645-2663]
127	AAAAAAAAAUCACGUUUCA	UGAAACGUGAUUUUUUUUU		[2104-2122]
128	CGCCUCUUCGUCUUCUUCA	UGAAGAAGACGAAGAGGCG	Rat,Ms	[1155-1173]
129	GCACAAAAAGGAAAGUUUG	CAAACUUUCCUUUUUGUGC		[1666-1684]
130	AGUUCAGAUUACUGCACAU	AUGUGCAGUAAUCUGAACU		[2391-2409]

131	CGCUCACCAACCUCUUCAU	AUGAAGAGGUUGGUGAGCG	Rat,Ms	[358-376]
132	CCCACAAUCCUCGUCUGAA	UUCAGACGAGGAUUGUGGG		[1613-1631]
133	UUACUUGCACAAAAAGAAA	UUUCUUUUUGUGCAAGUAA		[2496-2514]
134	CGUUGCACAAAAAGGAAAG	CUUUCCUUUUUGUGCAACG		[1662-1680]
135	AAGACAGGACAUUAAAAGA	UCUUUUAAUGUCCUGUCUU		[2355-2373]
136	AGGAAAGUUUGGGAAGGGA	UCCCUUCCCAAACUUUCCU		[1674-1692]
137	GUUAUGAAAGCAAAGAGAA	UUCUCUUUGCUUUCAUAAC		[2069-2087]
138	CAGAUAGAAAGACUUGUUU	AAACAAGUCUUUCUAUCUG		[2250-2268]
139	UAACUGUAUCCAUAUUAUA	UAUAAUAUGGAUACAGUUA		[2650-2668]
140	AGAGCGAGAGAGAGAAACA	UGUUUCUCUCUCUCGCUCU		[2373-2391]
141	GAAAAUACCUUUUUAUACU	AGUAUAAAAAGGUAUUUUC		[2614-2632]
142	CAUUUGCACAGCAGAUAGA	UCUAUCUGCUGUGCAAAUG		[2239-2257]
143	GAUGCAUCUUUAGAUUUUU	AAAAAUCUAAAGAUGCAUC		[1813-1831]
144	CCAGGUGGUUUUUGACACU	AGUGUCAAAAACCACCUGG		[1840-1858]
145	CAGUUUGUCAAGACAUAUU	AAUAUGUCUUGACAAACUG		[1996-2014]
146	GACUUGUUUAUAUUAAACA	UGUUUAAUAUAAACAAGUC		[2260-2278]
147	UAAACAGCUUAUUUAUGUA	UACAUAAAUAAGCUGUUUA		[2273-2291]
148	GAGAGAGAGAAACAGUUCA	UGAACUGUUUCUCUCUCUC		[2378-2396]
149	CCUUUUUAUACUCCUUUAU	AUAAAGGAGUAUAAAAAGG		[2621-2639]
150	AUGUGACUCUGUCAAUUGA	UCAAUUGACAGAGUCACAU		[2337-2355]
151	GUGUUAGGAAUUACAAAAU	AUUUUGUAAUUCCUAACAC		[2465-2483]
152	AGAAGAUGUUACUUGCACA	UGUGCAAGUAACAUCUUCU		[2488-2506]
153	CAAUCCUCGUCUGAAUCAU	AUGAUUCAGACGAGGAUUG		[1617-1635]
154	CAGAAGCAGGUGAAGAAGA	UCUUCUUCACCUGCUUCUG		[840-858]
155	UCACCAACCUCUUCAUCAU	AUGAUGAAGAGGUUGGUGA	Rat,Ms	[361-379]
156	CGGACCGUUGCACAAAAAG	CUUUUUGUGCAACGGUCCG		[1657-1675]
157	AGAUUACUGCACAUGUGGA	UCCACAUGUGCAGUAAUCU		[2396-2414]
158	UGUUUUACCAAGUAUUUAU	AUAAAUACUUGGUAAAACA		[2774-2792]
159	CUUUUGCUUUCCAGAGAAA	UUUCUCUGGAAAGCAAAAG		[2017-2035]
160	UUUGCACAGCAGAUAGAAA	UUUCUAUCUGCUGUGCAAA		[2241-2259]
161	GAGAGAGAAACAGUUCAGA	UCUGAACUGUUUCUCUCUC		[2380-2398]
162	GAUUAAAAUCGAUCAUCGU	ACGAUGAUCGAUUUUAAUC		[1919-1937]
163	GAAUGACAGUUUGUCAAGA	UCUUGACAAACUGUCAUUC		[1990-2008]
164	UGUUAAGCUCUUCUUGGAA	UUCCAAGAAGAGCUUAACA		[2128-2146]
165	GAUUACUGCACAUGUGGAU	AUCCACAUGUGCAGUAAUC		[2397-2415]
166	UGACAUGUGACUCUGUCAA	UUGACAGAGUCACAUGUCA		[2333-2351]
167	AGAGAAACAGUUCAGAUUA	UAAUCUGAACUGUUUCUCU		[2383-2401]
168	AGCAGGUGAAGAAGAUCGA	UCGAUCUUCUUCACCUGCU		[844-862]
169	CCACCAGGUGGUUUUUGAC	GUCAAAAACCACCUGGUGG		[1837-1855]
170	AAUAAAUACCAAUGAAGCA	UGCUUCAUUGGUAUUUAUU		[2837-2855]
171	UCUGAAUCAUCCGAGGCAA	UUGCCUCGGAUGAUUCAGA		[1626-1644]
172	GUGACAUGUGACUCUGUCA	UGACAGAGUCACAUGUCAC		[2332-2350]
173	AAAAAAUCACGUUUCAAGA	UCUUGAAACGUGAUUUUUU		[2107-2125]
174	AUAGAAAGACUUGUUUAUA	UAUAAACAAGUCUUUCUAU		[2253-2271]
175	AUGUUAAGCUCUUCUUGGA	UCCAAGAAGAGCUUAACAU		[2127-2145]
176	UGCACAGUGUUAGGAAUUA	UAAUUCCUAACACUGUGCA		[2459-2477]
177	AGGAAUUGGUCCAUGUGCA	UGCACAUGGACCAAUUCCU		[2819-2837]
178	UACCAAUGAAGCACAAUCA	UGAUUGUGCUUCAUUGGUA		[2843-2861]
179	GGUGGUUUUUGACACUCUC	GAGAGUGUCAAAAACCACC		[1843-1861]
180	AGGAAUUACAAAAUCCACA	UGUGGAUUUUGUAAUUCCU		[2470-2488]
181	AGCUUAUUUAUGUAUCAAU	AUUGAUACAUAAAUAAGCU		[2278-2296]
182	AGUAUGUUAUUGAGCUAAU	AUUAGCUCAAUAACAUACU		[2585-2603]
183	GACAUGUGACUCUGUCAAU	AUUGACAGAGUCACAUGUC		[2334-2352]
184	UCUGUUGUCUAGUAUGUUA	UAACAUACUAGACAACAGA		[2575-2593]
185	CAGUUCAGAUUACUGCACA	UGUGCAGUAAUCUGAACUG		[2390-2408]
186	AAAUCACGUUUCAAGAAAU	AUUUCUUGAAACGUGAUUU		[2110-2128]

187	CUAAUGAUUCAUUGGGAAA	UUUCCCAAUGAAUCAUUAG		[2599-2617]
188	AAUGAUUCAUUGGGAAAAU	AUUUUCCCAAUGAAUCAUU		[2601-2619]
189	UGUUAUGAAAGCAAAGAGA	UCUCUUUGCUUUCAUAACA		[2068-2086]
190	AAAAAAAAUCACGUUUCAA	UUGAAACGUGAUUUUUUUU		[2105-2123]
191	GAGAGAAACAGUUCAGAUU	AAUCUGAACUGUUUCUCUC		[2382-2400]
192	GUGAACUCGAAGCCCACAA	UUGUGGGCUUCGAGUUCAC		[1601-1619]
193	CUGUAACUGUAUCCAUAUU	AAUAUGGAUACAGUUACAG		[2647-2665]
194	UGAAUUUGCUGGUGAAAGU	ACUUUCACCAGCAAAUUCA		[2721-2739]
195	GUGCAUUUGCACAGCAGAU	AUCUGCUGUGCAAAUGCAC		[2236-2254]
196	UGUGAUGCAUCUUUAGAUU	AAUCUAAAGAUGCAUCACA		[1810-1828]
197	AAUUGAAGACAGGACAUUA	UAAUGUCCUGUCUUCAAUU		[2350-2368]
198	GUGUUUACUUAAGACCGAU	AUCGGUCUUAAGUAAACAC		[1577-1595]
199	AAGAGAGCGAGAGAGAGAA	UUCUCUCUCUCGCUCUCUU		[2370-2388]
200	CUCUCUCUGUGACAUGUGA	UCACAUGUCACAGAGAGAG		[2324-2342]
201	UGGUCAGGCUGAGGGAUUU	AAAUCCCUCAGCCUGACCA		[2205-2223]
202	AAAAAGGAAAGUUUGGGAA	UUCCCAAACUUUCCUUUUU		[1670-1688]
203	GCAAUGUGCUGGUGAUCGU	ACGAUCACCAGCACAUUGC		[310-328]
204	AUUGGUCCAUGUGCAAUAA	UUAUUGCACAUGGACCAAU		[2823-2841]
205	GAGGAGAAUGACAGUUUGU	ACAAACUGUCAUUCUCCUC		[1985-2003]
206	CACCAGGUGGUUUUUGACA	UGUCAAAAACCACCUGGUG		[1838-1856]
207	UGCACAAAAAGGAAAGUUU	AAACUUUCCUUUUUGUGCA		[1665-1683]
208	CUUUCCAGAGAAAUUUCAU	AUGAAAUUUCUCUGGAAAG		[2023-2041]
209	GCAUCAUCAUGGGCGUCUU	AAGACGCCCAUGAUGAUGC		[1066-1084]
210	UUAGGAAUUACAAAAUCCA	UGGAUUUUGUAAUUCCUAA		[2468-2486]
211	AAGACCGAUAGCAGGUGAA	UUCACCUGCUAUCGGUCUU		[1587-1605]
212	AUGUUAUUGAGCUAAUGAU	AUCAUUAGCUCAAUAACAU		[2588-2606]
213	UGUUGUCUAGUAUGUUAUU	AAUAACAUACUAGACAACA		[2577-2595]
214	GGAAAAUACCUUUUUAUAC	GUAUAAAAAGGUAUUUUCC		[2613-2631]
215	AACAGUUCAGAUUACUGCA	UGCAGUAAUCUGAACUGUU		[2388-2406]
216	GGAUUAAAAUCGAUCAUCG	CGAUGAUCGAUUUUAAUCC		[1918-1936]
217	AAGGGAGAAGCAUUAGGAG	CUCCUAAUGCUUCUCCCUU		[1898-1916]
218	AUCCGAGGCAAAGAGAAAA	UUUUCUCUUUGCCUCGGAU		[1634-1652]
219	GAAAGGAUGGAGGCAAAAU	AUUUUGCCUCCAUCCUUUC		[2085-2103]
220	AGAGAGAAACAGUUCAGAU	AUCUGAACUGUUUCUCUCU		[2381-2399]
221	GCAAUAAAUACCAAUGAAG	CUUCAUUGGUAUUUAUUGC		[2835-2853]
222	GAAAGCAAAGAGAAAGGAU	AUCCUUUCUCUUUGCUUUC		[2074-2092]
223	ACAUUAAAAGAGAGCGAGA	UCUCGCUCUCUUUUAAUGU		[2363-2381]
224	UUGCACAAAAAGAAAUUAA	UUAAUUUCUUUUUGUGCAA		[2500-2518]
225	CACAGCAGAUAGAAAGACU	AGUCUUUCUAUCUGCUGUG		[2245-2263]
226	CUGAGGGAUUUCUACCUCA	UGAGGUAGAAAUCCCUCAG		[2213-2231]
227	CCUCGUCUGAAUCAUCCGA	UCGGAUGAUUCAGACGAGG		[1621-1639]
228	GUGCCCACGUGAAUUUGCU	AGCAAAUUCACGUGGGCAC		[2712-2730]
229	AGAGGAGAAUGACAGUUUG	CAAACUGUCAUUCUCCUCU		[1984-2002]
230	AGAGAAAGGAUGGAGGCAA	UUGCCUCCAUCCUUUCUCU		[2082-2100]
231	AAAAAUCACGUUUCAAGAA	UUCUUGAAACGUGAUUUUU		[2108-2126]
232	CUGUUGUCUAGUAUGUUAU	AUAACAUACUAGACAACAG		[2576-2594]
233	UGUGGUCCGGCCUUCUUUU	AAAAGAAGGCCGGACCACA		[1782-1800]
234	AAUAUUUUUUAAAGGGAGA	UCUCCCUUUAAAAAAUAUU		[2518-2536]
235	AGAGCCUCUCUCUGUGACA	UGUCACAGAGAGAGGCUCU		[2319-2337]
236	GCUUGCUGAUGUUCCUUGU	ACAAGGAACAUCAGCAAGC		[1703-1721]
237	ACUGUAACUGUAUCCAUAU	AUAUGGAUACAGUUACAGU		[2646-2664]
238	GAGUACGGCUCCUUCUUCU	AGAAGAAGGAGCCGUACUC	Rat,Ms	[459-477]
239	UUACAAAAUCCACAGAAGA	UCUUCUGUGGAUUUUGUAA		[2475-2493]
240	ACAGCAGAUAGAAAGACUU	AAGUCUUUCUAUCUGCUGU		[2246-2264]
241	UCAAGACGCUGGGCAUCAU	AUGAUGCCCAGCGUCUUGA		[1054-1072]
242	GCUUUCCAGAGAAAUUUCA	UGAAAUUUCUCUGGAAAGC		[2022-2040]

243	UGUGCAUUUGCACAGCAGA	UCUGCUGUGCAAAUGCACA		[2235-2253]
244	UGUUAUUGAGCUAAUGAUU	AAUCAUUAGCUCAAUAACA		[2589-2607]
245	UGUUACUUGCACAAAAAGA	UCUUUUUGUGCAAGUAACA		[2494-2512]
246	GCUGUUAUGAAAGCAAAGA	UCUUUGCUUUCAUAACAGC		[2066-2084]
247	UUAUUGAGCUAAUGAUUCA	UGAAUCAUUAGCUCAAUAA		[2591-2609]
248	UAAUGAUUCAUUGGGAAAA	UUUUCCCAAUGAAUCAUUA		[2600-2618]
249	ACUCCUUUAUCAUGGUACU	AGUACCAUGAUAAAGGAGU		[2630-2648]
250	ACUCUACUUCUGUUGUCUA	UAGACAACAGAAGUAGAGU		[2567-2585]
251	AGUGGAAGAUGGGUGGGUU	AACCCACCCAUCUUCCACU		[1874-1892]
252	AGACAUAUUUCCUUUUGCU	AGCAAAAGGAAAUAUGUCU		[2006-2024]
253	AUAUUAGUUGGAAGGACCA	UGGUCCUUCCAACUAAUAU		[2295-2313]
254	GAGCCUCUCUCUGUGACAU	AUGUCACAGAGAGAGGCUC		[2320-2338]
255	UGAACUCGAAGCCCACAAU	AUUGUGGGCUUCGAGUUCA		[1602-1620]
256	GAGAAACAGUUCAGAUUAC	GUAAUCUGAACUGUUUCUC		[2384-2402]
257	AUGAUUCAUUGGGAAAAUA	UAUUUUCCCAAUGAAUCAU		[2602-2620]
258	CUCACACUGUGCAUUUGCA	UGCAAAUGCACAGUGUGAG		[2228-2246]
259	UAAUGAUUUCUGCUGUUAU	AUAACAGCAGAAAUCAUUA		[2055-2073]
260	GCACAGUGUUAGGAAUUAC	GUAAUUCCUAACACUGUGC		[2460-2478]
261	UGUUUAUAUUAAACAGCUU	AAGCUGUUUAAUAUAAACA		[2264-2282]
262	GUUUAUAUUAAACAGCUUA	UAAGCUGUUUAAUAUAAAC		[2265-2283]
263	CCACCUUGCUUUCCUUGUG	CACAAGGAAAGCAAGGUGG		[2153-2171]
264	AGACUUGUUUAUAUUAAAC	GUUUAAUAUAAACAAGUCU		[2259-2277]
265	CACAAAAAGGAAAGUUUGG	CCAAACUUUCCUUUUUGUG		[1667-1685]
266	UUUUUAUACUCCUUUAUCA	UGAUAAAGGAGUAUAAAAA		[2623-2641]
267	UGUCUAGUAUGUUAUUGAG	CUCAAUAACAUACUAGACA		[2580-2598]
268	CAAUAUUAGUUGGAAGGAC	GUCCUUCCAACUAAUAUUG		[2293-2311]
269	GAUUCAUUGGGAAAAUACC	GGUAUUUUCCCAAUGAAUC		[2604-2622]
270	AAUUGGUCCAUGUGCAAUA	UAUUGCACAUGGACCAAUU		[2822-2840]
271	CAGGUGAAGAAGAUCGACA	UGUCGAUCUUCUUCACCUG	Rat	[846-864]
272	GUACUGUAACUGUAUCCAU	AUGGAUACAGUUACAGUAC		[2644-2662]
273	GCUGGUGAAAGUUAGCACU	AGUGCUAACUUUCACCAGC		[2728-2746]
274	ACAGUUUGUCAAGACAUAU	AUAUGUCUUGACAAACUGU		[1995-2013]
275	UCUGCUGUUAUGAAAGCAA	UUGCUUUCAUAACAGCAGA		[2063-2081]
276	CUUGCACAAAAAGAAAUUA	UAAUUUCUUUUUGUGCAAG		[2499-2517]
277	GAAAGUUUGGGAAGGGAUG	CAUCCCUUCCCAAACUUUC		[1676-1694]
278	AUUUGCACAGCAGAUAGAA	UUCUAUCUGCUGUGCAAAU		[2240-2258]
279	CAAGUAUUUAUACUCUGGU	ACCAGAGUAUAAAUACUUG		[2782-2800]
280	ACCGCCUCUUCGUCUUCUU	AAGAAGACGAAGAGGCGGU		[1153-1171]
281	AAUGAUUUCUGCUGUUAUG	CAUAACAGCAGAAAUCAUU		[2056-2074]
282	GGCUGAGGGAUUUCUACCU	AGGUAGAAAUCCCUCAGCC		[2211-2229]
283	GGACCGUUGCACAAAAAGG	CCUUUUUGUGCAACGGUCC		[1658-1676]
284	AAAAUCACGUUUCAAGAAA	UUUCUUGAAACGUGAUUUU		[2109-2127]
285	GUCAAUUGAAGACAGGACA	UGUCCUGUCUUCAAUUGAC		[2347-2365]
286	GGCAAAAUAAAAAAAAAUC	GAUUUUUUUUUAUUUUGCC		[2096-2114]
287	AUGUGCAAUAAAUACCAAU	AUUGGUAUUUAUUGCACAU		[2831-2849]
288	CUGUCAAUUGAAGACAGGA	UCCUGUCUUCAAUUGACAG		[2345-2363]
289	UGUUUACUUAAGACCGAUA	UAUCGGUCUUAAGUAAACA		[1578-1596]
290	GAAAUGUUAAGCUCUUCUU	AAGAAGAGCUUAACAUUUC		[2124-2142]
291	UUUUGCACAGUGUUAGGAA	UUCCUAACACUGUGCAAAA		[2456-2474]
292	AAGACGCUGGGCAUCAUCA	UGAUGAUGCCCAGCGUCUU		[1056-1074]
293	UUUGCACAGUGUUAGGAAU	AUUCCUAACACUGUGCAAA		[2457-2475]
294	UGCUGUUAUGAAAGCAAAG	CUUUGCUUUCAUAACAGCA		[2065-2083]
295	GGUGCAACUAACUACUGUG	CACAGUAGUUAGUUGCACC		[2798-2816]
296	CAUUGGGAAAAUACCUUUU	AAAAGGUAUUUUCCCAAUG		[2608-2626]
297	UCAGAUUACUGCACAUGUG	CACAUGUGCAGUAAUCUGA		[2394-2412]
298	GGGAUUUCUACCUCACACU	AGUGUGAGGUAGAAAUCCC		[2217-2235]

299	UUGUCUAGUAUGUUAUUGA	UCAAUAACAUACUAGACAA		[2579-2597]
300	AAAGAGAGCGAGAGAGAGA	UCUCUCUCUCGCUCUCUUU		[2369-2387]
301	GUGACUCUGUCAAUUGAAG	CUUCAAUUGACAGAGUCAC		[2339-2357]
302	AGGUGGUUUUUGACACUCU	AGAGUGUCAAAAACCACCU		[1842-1860]
303	AGGUGAAGAAGAUCGACAG	CUGUCGAUCUUCUUCACCU	Rat	[847-865]
304	UUAUCAUGGUACUGUAACU	AGUUACAGUACCAUGAUAA		[2636-2654]
305	UAUACUCUGGUGCAACUAA	UUAGUUGCACCAGAGUAUA		[2790-2808]
306	AGUUUGUCAAGACAUAUUU	AAAUAUGUCUUGACAAACU		[1997-2015]
307	UUGGUCCAUGUGCAAUAAA	UUUAUUGCACAUGGACCAA		[2824-2842]
308	GAGCGAGAGAGAGAAACAG	CUGUUUCUCUCUCUCGCUC		[2374-2392]
309	CGUUUCAAGAAAUGUUAAG	CUUAACAUUUCUUGAAACG		[2116-2134]
310	CACGUGAAUUUGCUGGUGA	UCACCAGCAAAUUCACGUG		[2717-2735]
311	ACUCGAAGCCCACAAUCCU	AGGAUUGUGGGCUUCGAGU		[1605-1623]
312	UGAUGCAUCUUUAGAUUUU	AAAAUCUAAAGAUGCAUCA		[1812-1830]
313	GUGAGGAAUUGGUCCAUGU	ACAUGGACCAAUUCCUCAC		[2816-2834]
314	UACAAAAUCCACAGAAGAU	AUCUUCUGUGGAUUUUGUA		[2476-2494]
315	UGACUCUGUCAAUUGAAGA	UCUUCAAUUGACAGAGUCA		[2340-2358]
316	CUUCUGUUGUCUAGUAUGU	ACAUACUAGACAACAGAAG		[2573-2591]
317	CCGUAGUCUCCUUCUACGU	ACGUAGAAGGAGACUACGG		[772-790]
318	AGACGCUCACCAACCUCUU	AAGAGGUUGGUGAGCGUCU	Rat,Ms	[355-373]
319	GUGUGCGUGUGAUGCAUCU	AGAUGCAUCACACGCACAC		[1803-1821]
320	AUGACAGUUUGUCAAGACA	UGUCUUGACAAACUGUCAU		[1992-2010]
321	GAAGACAGGACAUUAAAAG	CUUUUAAUGUCCUGUCUUC		[2354-2372]
322	AGCAGAUAGAAAGACUUGU	ACAAGUCUUUCUAUCUGCU		[2248-2266]
323	GAAUUACAAAAUCCACAGA	UCUGUGGAUUUUGUAAUUC		[2472-2490]
324	CAGCAGAUAGAAAGACUUG	CAAGUCUUUCUAUCUGCUG		[2247-2265]
325	CCAGAAGCAGGUGAAGAAG	CUUCUUCACCUGCUUCUGG		[839-857]
326	GGGAAGGGAGAAGCAUUAG	CUAAUGCUUCUCCCUUCCC		[1895-1913]
327	GUCUGAAUCAUCCGAGGCA	UGCCUCGGAUGAUUCAGAC		[1625-1643]
328	UCAUCGUGCUGCUCAUCGU	ACGAUGAGCAGCACGAUGA	Rat	[286-304]
329	AGUAAUGAUUUCUGCUGUU	AACAGCAGAAAUCAUUACU		[2053-2071]
330	CAAAAUCCACAGAAGAUGU	ACAUCUUCUGUGGAUUUUG		[2478-2496]
331	AGAAGAUCGACAGCUGCGA	UCGCAGCUGUCGAUCUUCU	Rat,Ms	[853-871]
332	AGCGAGAGAGAGAAACAGU	ACUGUUUCUCUCUCUCGCU		[2375-2393]
333	AUGCAUCUUUAGAUUUUUU	AAAAAAUCUAAAGAUGCAU		[1814-1832]
334	ACUCUGGUGCAACUAACUA	UAGUUAGUUGCACCAGAGU		[2793-2811]
335	GGAAUUACAAAAUCCACAG	CUGUGGAUUUUGUAAUUCC		[2471-2489]
336	UUUGGGAAGGGAUGGGAGA	UCUCCCAUCCCUUCCCAAA		[1681-1699]
337	UGGUGCAACUAACUACUGU	ACAGUAGUUAGUUGCACCA		[2797-2815]
338	GGUACUGUAACUGUAUCCA	UGGAUACAGUUACAGUACC		[2643-2661]
339	CUCUACUUCUGUUGUCUAG	CUAGACAACAGAAGUAGAG		[2568-2586]
340	GCAUUUGCACAGCAGAUAG	CUAUCUGCUGUGCAAAUGC		[2238-2256]
341	CUGUUAUGAAAGCAAAGAG	CUCUUUGCUUUCAUAACAG		[2067-2085]
342	UCACGUUUCAAGAAAUGUU	AACAUUUCUUGAAACGUGA		[2113-2131]
343	GAGAGGAGAAUGACAGUUU	AAACUGUCAUUCUCCUCUC		[1983-2001]
344	GUUGCACAAAAAGGAAAGU	ACUUUCCUUUUUGUGCAAC		[1663-1681]
345	GUGCGUGUGAUGCAUCUUU	AAAGAUGCAUCACACGCAC		[1805-1823]
346	GUAUUUAUACUCUGGUGCA	UGCACCAGAGUAUAAAUAC		[2785-2803]
347	CCAAGUAUUUAUACUCUGG	CCAGAGUAUAAAUACUUGG		[2781-2799]
348	UUUUAUACUCCUUUAUCAU	AUGAUAAAGGAGUAUAAAA		[2624-2642]
349	AAUUCAAACUCUACUUCUG	CAGAAGUAGAGUUUGAAUU		[2560-2578]
350	UAUUUAUACUCUGGUGCAA	UUGCACCAGAGUAUAAAUA		[2786-2804]
351	ACUUGUUUAUAUUAAACAG	CUGUUUAAUAUAAACAAGU		[2261-2279]
352	CAAUAAAUACCAAUGAAGC	GCUUCAUUGGUAUUUAUUG		[2836-2854]
353	CCAAGUGCCCACGUGAAUU	AAUUCACGUGGGCACUUGG		[2708-2726]
354	ACAUGUGACUCUGUCAAUU	AAUUGACAGAGUCACAUGU		[2335-2353]

355	CCAGAGAGAGGAGAAUGAC	GUCAUUCUCCUCUCUCUGG		[1978-1996]
356	CUGUGACAUGUGACUCUGU	ACAGAGUCACAUGUCACAG		[2330-2348]
357	UAAAAGAGAGCGAGAGAGA	UCUCUCUCGCUCUCUUUUA		[2367-2385]
358	UCUGGUGCAACUAACUACU	AGUAGUUAGUUGCACCAGA		[2795-2813]
359	GCCUCUCUCUGUGACAUGU	ACAUGUCACAGAGAGAGGC		[2322-2340]
360	GACCGAUAGCAGGUGAACU	AGUUCACCUGCUAUCGGUC		[1589-1607]
361	AGCUCUUCUUGGAACAAGC	GCUUGUUCCAAGAAGAGCU		[2133-2151]
362	GAAUUUGCUGGUGAAAGUU	AACUUUCACCAGCAAAUUC		[2722-2740]
363	GCAGGUGAAGAAGAUCGAC	GUCGAUCUUCUUCACCUGC		[845-863]
364	UGACAGUUUGUCAAGACAU	AUGUCUUGACAAACUGUCA		[1993-2011]
365	GCAUCUUUAGAUUUUUUUC	GAAAAAAAUCUAAAGAUGC		[1816-1834]
366	ACAGGACAUUAAAAGAGAG	CUCUCUUUUAAUGUCCUGU		[2358-2376]
367	UAAGCUCUUCUUGGAACAA	UUGUUCCAAGAAGAGCUUA		[2131-2149]
368	GGAAGGGAGAAGCAUUAGG	CCUAAUGCUUCUCCCUUCC		[1896-1914]
369	UGUCAAGACAUAUUUCCUU	AAGGAAAUAUGUCUUGACA		[2001-2019]
370	AAUUACAAAAUCCACAGAA	UUCUGUGGAUUUUGUAAUU		[2473-2491]
371	GUAUGUUAUUGAGCUAAUG	CAUUAGCUCAAUAACAUAC		[2586-2604]
372	GUGGUUUUUGACACUCUCU	AGAGAGUGUCAAAAACCAC		[1844-1862]
373	AGUUUGGGAAGGGAUGGGA	UCCCAUCCCUUCCCAAACU		[1679-1697]
374	CUCUUCGUCUUCUUCAACU	AGUUGAAGAAGACGAAGAG	Rat,Ms	[1158-1176]
375	CUGGUGAAAGUUAGCACUU	AAGUGCUAACUUUCACCAG		[2729-2747]
376	AUUCAUUGGGAAAAUACCU	AGGUAUUUUCCCAAUGAAU		[2605-2623]
377	ACAGAAGAUGUUACUUGCA	UGCAAGUAACAUCUUCUGU		[2486-2504]
378	UAGGAAUUACAAAAUCCAC	GUGGAUUUUGUAAUUCCUA		[2469-2487]
379	CAAGUGCCCACGUGAAUUU	AAAUUCACGUGGGCACUUG		[2709-2727]
380	GACAUAUUUCCUUUUGCUU	AAGCAAAAGGAAAUAUGUC		[2007-2025]
381	GUCAAGACAUAUUUCCUUU	AAAGGAAAUAUGUCUUGAC		[2002-2020]
382	CUAAGUAAUGAUUUCUGCU	AGCAGAAAUCAUUACUUAG		[2050-2068]
383	UCAAUUGAAGACAGGACAU	AUGUCCUGUCUUCAAUUGA		[2348-2366]
384	AUUUGCUGGUGAAAGUUAG	CUAACUUUCACCAGCAAAU		[2724-2742]
385	UACUUCUGUUGUCUAGUAU	AUACUAGACAACAGAAGUA		[2571-2589]
386	CACACUGUGCAUUUGCACA	UGUGCAAAUGCACAGUGUG		[2230-2248]
387	CGAGGCAAAGAGAAAAGCC	GGCUUUUCUCUUUGCCUCG		[1637-1655]
388	ACCUCUUCAUCAUGUCCCU	AGGGACAUGAUGAAGAGGU	Rat,Ms	[367-385]
389	UAUGUUAUUGAGCUAAUGA	UCAUUAGCUCAAUAACAUA		[2587-2605]
390	UAUUGAGCUAAUGAUUCAU	AUGAAUCAUUAGCUCAAUA		[2592-2610]
391	AUUAAAAGAGAGCGAGAGA	UCUCUCGCUCUCUUUUAAU		[2365-2383]
392	CAAUUGAAGACAGGACAUU	AAUGUCCUGUCUUCAAUUG		[2349-2367]
393	UGUAACUGUAUCCAUAUUA	UAAUAUGGAUACAGUUACA		[2648-2666]
394	CGAGAGAGAGAAACAGUUC	GAACUGUUUCUCUCUCUCG		[2377-2395]
395	ACUUGCACAAAAAGAAAUU	AAUUUCUUUUUGUGCAAGU		[2498-2516]
396	CAGAUUACUGCACAUGUGG	CCACAUGUGCAGUAAUCUG		[2395-2413]
397	AAGUGCUGCGACUUCGUCA	UGACGAAGUCGCAGCACUU		[726-744]
398	AAGAUGUUACUUGCACAAA	UUUGUGCAAGUAACAUCUU		[2490-2508]
399	UUGUGGUCCGGCCUUCUUU	AAAGAAGGCCGGACCACAA		[1781-1799]
400	AGGGAUUUCUACCUCACAC	GUGUGAGGUAGAAAUCCCU		[2216-2234]
401	GUCCAUGUGCAAUAAAUAC	GUAUUUAUUGCACAUGGAC		[2827-2845]
402	UAAAAUUCAAACUCUACUU	AAGUAGAGUUUGAAUUUUA		[2557-2575]
403	AAUUUGCUGGUGAAAGUUA	UAACUUUCACCAGCAAAUU		[2723-2741]
404	ACAAUCCUCGUCUGAAUCA	UGAUUCAGACGAGGAUUGU		[1616-1634]
405	UCCAAGUGCCCACGUGAAU	AUUCACGUGGGCACUUGGA		[2707-2725]
406	UACUCUGGUGCAACUAACU	AGUUAGUUGCACCAGAGUA		[2792-2810]
407	UCCUUUUGCUUUCCAGAGA	UCUCUGGAAAGCAAAAGGA		[2015-2033]
408	CCCACCUUGCUUUCCUUGU	ACAAGGAAAGCAAGGUGGG		[2152-2170]
409	CUCUGUCAAUUGAAGACAG	CUGUCUUCAAUUGACAGAG		[2343-2361]
410	UAGUAUGUUAUUGAGCUAA	UUAGCUCAAUAACAUACUA		[2584-2602]

411	CAAACUCUACUUCUGUUGU	ACAACAGAAGUAGAGUUUG		[2564-2582]
412	AUUCAAACUCUACUUCUGU	ACAGAAGUAGAGUUUGAAU		[2561-2579]
413	AAAUAUUUUUUAAAGGGAG	CUCCCUUUAAAAAAUAUUU		[2517-2535]
414	CCUCUUCGUCUUCUUCAAC	GUUGAAGAAGACGAAGAGG	Rat,Ms	[1157-1175]
415	GUAAUGAUUUCUGCUGUUA	UAACAGCAGAAAUCAUUAC		[2054-2072]
416	UCAUCAUGGGCGUCUUCAC	GUGAAGACGCCCAUGAUGA		[1069-1087]
417	AGCAAAGAGAAAGGAUGGA	UCCAUCCUUUCUCUUUGCU		[2077-2095]
418	GAAACAGUUCAGAUUACUG	CAGUAAUCUGAACUGUUUC		[2386-2404]
419	CUCGGAAUCCAAGGUGUAG	CUACACCUUGGAUUCCGAG		[1502-1520]
420	UAAGACCGAUAGCAGGUGA	UCACCUGCUAUCGGUCUUA		[1586-1604]
421	UGCAUUUGCACAGCAGAUA	UAUCUGCUGUGCAAAUGCA		[2237-2255]
422	UAUCAAUAUUAGUUGGAAG	CUUCCAACUAAUAUUGAUA		[2290-2308]
423	UUAAGCUCUUCUUGGAACA	UGUUCCAAGAAGAGCUUAA		[2130-2148]
424	UUGUCAAGACAUAUUUCCU	AGGAAAUAUGUCUUGACAA		[2000-2018]
425	AGAAACAGUUCAGAUUACU	AGUAAUCUGAACUGUUUCU		[2385-2403]
426	AUCAUCCGAGGCAAAGAGA	UCUCUUUGCCUCGGAUGAU		[1631-1649]
427	CACAGAAGAUGUUACUUGC	GCAAGUAACAUCUUCUGUG		[2485-2503]
428	AAGAGAAAGGAUGGAGGCA	UGCCUCCAUCCUUUCUCUU		[2081-2099]
429	AAAUCCACAGAAGAUGUUA	UAACAUCUUCUGUGGAUUU		[2480-2498]
430	UGAAAGCAAAGAGAAAGGA	UCCUUUCUCUUUGCUUUCA		[2073-2091]
431	GUUUGUCAAGACAUAUUUC	GAAAUAUGUCUUGACAAAC		[1998-2016]
432	GUCCGUAGUCUCCUUCUAC	GUAGAAGGAGACUACGGAC		[770-788]
433	UAAAUACCAAUGAAGCACA	UGUGCUUCAUUGGUAUUUA		[2839-2857]
434	AAAUUCAAACUCUACUUCU	AGAAGUAGAGUUUGAAUUU		[2559-2577]
435	UUUCCUUUUGCUUUCCAGA	UCUGGAAAGCAAAAGGAAA		[2013-2031]
436	AAGUAAUGAUUUCUGCUGU	ACAGCAGAAAUCAUUACUU		[2052-2070]
437	AUGAUUUCUGCUGUUAUGA	UCAUAACAGCAGAAAUCAU		[2057-2075]
438	UGAAGAAGAUCGACAGCUG	CAGCUGUCGAUCUUCUUCA	Rat	[850-868]
439	UACCAAGUAUUUAUACUCU	AGAGUAUAAAUACUUGGUA		[2779-2797]
440	GUAAAUUCUACUUCCUCUU	AAGAGGAAGUAGAAUUUAC		[2752-2770]
441	UCAAUAUUAGUUGGAAGGA	UCCUUCCAACUAAUAUUGA		[2292-2310]
442	CUCUCUGUGACAUGUGACU	AGUCACAUGUCACAGAGAG		[2326-2344]
443	AAGUAUUUAUACUCUGGUG	CACCAGAGUAUAAAUACUU		[2783-2801]
444	UGUAAAUUCUACUUCCUCU	AGAGGAAGUAGAAUUUACA		[2751-2769]
445	CAUUUUUGCACAGUGUUAG	CUAACACUGUGCAAAAAUG		[2453-2471]
446	UUUCCAGAGAAAUUUCAUU	AAUGAAAUUUCUCUGGAAA		[2024-2042]
447	AUACCUUUUUAUACUCCUU	AAGGAGUAUAAAAAGGUAU		[2618-2636]
448	UUCAAACUCUACUUCUGUU	AACAGAAGUAGAGUUUGAA		[2562-2580]
449	GUGUGAGGAAUUGGUCCAU	AUGGACCAAUUCCUCACAC		[2814-2832]
450	UCCAGAGAAAUUUCAUUUU	AAAAUGAAAUUUCUCUGGA		[2026-2044]
451	UUGUUUAUAUUAAACAGCU	AGCUGUUUAAUAUAAACAA		[2263-2281]
452	UUUGCUUUCCAGAGAAAUU	AAUUUCUCUGGAAAGCAAA		[2019-2037]
453	UGCAUCUUUAGAUUUUUUU	AAAAAAAUCUAAAGAUGCA		[1815-1833]
454	UUUUUGACACUCUCUGAGA	UCUCAGAGAGUGUCAAAAA		[1848-1866]
455	CUGUGCAUUUGCACAGCAG	CUGCUGUGCAAAUGCACAG		[2234-2252]
456	AGAGAGAGAAACAGUUCAG	CUGAACUGUUUCUCUCUCU		[2379-2397]
457	UGAUUCAUUGGGAAAAUAC	GUAUUUUCCCAAUGAAUCA		[2603-2621]
458	AAACAGCUUAUUUAUGUAU	AUACAUAAAUAAGCUGUUU		[2274-2292]
459	CGUAGUCUCCUUCUACGUG	CACGUAGAAGGAGACUACG		[773-791]
460	UGUUAGGAAUUACAAAAUC	GAUUUUGUAAUUCCUAACA		[2466-2484]
461	UACUUGCACAAAAAGAAAU	AUUUCUUUUUGUGCAAGUA		[2497-2515]
462	CUCUGGUGCAACUAACUAC	GUAGUUAGUUGCACCAGAG		[2794-2812]
463	UCGUCUGAAUCAUCCGAGG	CCUCGGAUGAUUCAGACGA		[1623-1641]
464	AAAAGGAAAGUUUGGGAAG	CUUCCCAAACUUUCCUUUU		[1671-1689]
465	AUUACAAAAUCCACAGAAG	CUUCUGUGGAUUUUGUAAU		[2474-2492]
466	UUGCACAGCAGAUAGAAAG	CUUUCUAUCUGCUGUGCAA		[2242-2260]

467	GUGAAAGUUAGCACUUGUG	CACAAGUGCUAACUUUCAC		[2732-2750]
468	CUUGCUGAUGUUCCUUGUU	AACAAGGAACAUCAGCAAG		[1704-1722]
469	UGUGCAAUAAAUACCAAUG	CAUUGGUAUUUAUUGCACA		[2832-2850]
470	AAUAAAAUUCAAACUCUAC	GUAGAGUUUGAAUUUUAUU		[2555-2573]
471	UGAGGGAUUUCUACCUCAC	GUGAGGUAGAAAUCCCUCA		[2214-2232]
472	AAUCAUCCGAGGCAAAGAG	CUCUUUGCCUCGGAUGAUU		[1630-1648]
473	CUCUGUGACAUGUGACUCU	AGAGUCACAUGUCACAGAG		[2328-2346]
474	UGUAUCAAUAUUAGUUGGA	UCCAACUAAUAUUGAUACA		[2288-2306]
475	UCAUUGGGAAAAUACCUUU	AAAGGUAUUUUCCCAAUGA		[2607-2625]
476	AUAAAAUUCAAACUCUACU	AGUAGAGUUUGAAUUUUAU		[2556-2574]
477	AGAAAUGUUAAGCUCUUCU	AGAAGAGCUUAACAUUUCU		[2123-2141]
478	CUCACCAACCUCUUCAUCA	UGAUGAAGAGGUUGGUGAG	Rat,Ms	[360-378]
479	GUGAUGCAUCUUUAGAUUU	AAAUCUAAAGAUGCAUCAC		[1811-1829]
480	CAAGACAUAUUUCCUUUUG	CAAAAGGAAAUAUGUCUUG		[2004-2022]
481	GAAGCAGGUGAAGAAGAUC	GAUCUUCUUCACCUGCUUC		[842-860]
482	AUUGGGAAAAUACCUUUUU	AAAAAGGUAUUUUCCCAAU		[2609-2627]
483	AGAGAGAGGAGAAUGACAG	CUGUCAUUCUCCUCUCUCU		[1980-1998]
484	UUCAGAUUACUGCACAUGU	ACAUGUGCAGUAAUCUGAA		[2393-2411]
485	GUCAGGCUGAGGGAUUUCU	AGAAAUCCCUCAGCCUGAC		[2207-2225]
486	CACAAUCCUCGUCUGAAUC	GAUUCAGACGAGGAUUGUG		[1615-1633]
487	UACUUAAGACCGAUAGCAG	CUGCUAUCGGUCUUAAGUA		[1582-1600]
488	UCAAGACAUAUUUCCUUUU	AAAAGGAAAUAUGUCUUGA		[2003-2021]
489	GGUGAAGAAGAUCGACAGC	GCUGUCGAUCUUCUUCACC	Rat	[848-866]
490	AAAUGUUAAGCUCUUCUUG	CAAGAAGAGCUUAACAUUU		[2125-2143]
491	GGAUUUCUACCUCACACUG	CAGUGUGAGGUAGAAAUCC		[2218-2236]
492	UCAAGAAAUGUUAAGCUCU	AGAGCUUAACAUUUCUUGA		[2120-2138]
493	CAUUAAAAGAGAGCGAGAG	CUCUCGCUCUCUUUUAAUG		[2364-2382]
494	UCUUCGUCUUCUUCAACUG	CAGUUGAAGAAGACGAAGA	Rat,Ms	[1159-1177]
495	UCCGAGGCAAAGAGAAAAG	CUUUUCUCUUUGCCUCGGA		[1635-1653]
496	GAAUUGGUCCAUGUGCAAU	AUUGCACAUGGACCAAUUC		[2821-2839]
497	UAUACUCCUUUAUCAUGGU	ACCAUGAUAAAGGAGUAUA		[2627-2645]
498	AAUACCAAUGAAGCACAAU	AUUGUGCUUCAUUGGUAUU		[2841-2859]
499	UGGUGAAAGUUAGCACUUG	CAAGUGCUAACUUUCACCA		[2730-2748]
500	AUACUCUGGUGCAACUAAC	GUUAGUUGCACCAGAGUAU		[2791-2809]

Table B 3 AIFM1 - apoptosis-inducing factor, mitochondrion-associated, 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-22202630 :179-1159	Human-22202628 :179-2008
1	CGGUGAGCAGCAUGAAGAU	AUCUUCAUGCUGCUCACCG		[1099-1117]	[1948-1966]
2	GCAUGAAGAUCUCAAUGAA	UUCAUUGAGAUCUUCAUGC		[1108-1126]	[1957-1975]
3	GGGUUAAGGUGAUGCCCAA	UUGGGCAUCACCUUAACCC		[396-414]	[1245-1263]
4	CAACAUUCAUGAAGACUGA	UCAGUCUUCAUGAAUGUUG		[1141-1159]	[1990-2008]
5	GGUAGAAACUGACCACAUA	UAUGUGGUCAGUUUCUACC	Rat,Ms	[481-499]	[1330-1348]
6	GCAGGAAGGUAGAAACUGA	UCAGUUUCUACCUUCCUGC		[474-492]	[1323-1341]
7	CGGGUGCUUUGAAGCAGAA	UUCUGCUUCAAAGCACCCG		[204-222]	[204-222]
8	GCAACUGGACCAUGGAAAA	UUUUCCAUGGUCCAGUUGC	Rat,Ms	[363-381]	[1212-1230]
9	CAUGCUUCUACGAUAUAAA	UUUAUAUCGUAGAAGCAUG		[636-654]	[1485-1503]
10	GGAACAUCUUUAACCGAAU	AUUCGGUUAAAGAUGUUCC		[1053-1071]	[1902-1920]
11	UCUGAUUCUUCUAAAUUAA	UUAAUUUAGAAGAAUCAGA		[1335-1353]	[2184-2202]
12	GCAGCAUGAAGAUCUCAAU	AUUGAGAUCUUCAUGCUGC		[1105-1123]	[1954-1972]
13	CUGAUUCUUCUAAAUUAAA	UUUAAUUUAGAAGAAUCAG		[1336-1354]	[2185-2203]
14	CAAGGAAGAUCAUUAAGGA	UCCUUAAUGAUCUUCCUUG	Ms	[1080-1098]	[1929-1947]
15	CGCUGUUGUGAGUGGAAGA	UCUUCCACUCACAACAGCG	Rat	[688-706]	[1537-1555]
16	GGUGUUUUUGCAAAAGCAA	UUGCUUUUGCAAAAACACC	Rat,Ms	[833-851]	[1682-1700]

17	CGAGAAAGGAAAUAUGGGA	UCCCAUAUUUCCUUUCUCG		[322-340]	[1171-1189]
18	CUAUGUAGGUAAAUUCUUA	UAAGAAUUUACCUACAUAG		[1294-1312]	[2143-2161]
19	CCGGGUAAAUGCAGAGCUA	UAGCUCUGCAUUUACCCGG		[580-598]	[1429-1447]
20	GGUAAAUUCUUAAUGUUCA	UGAACAUUAAGAAUUUACC		[1301-1319]	[2150-2168]
21	GCAAAGGUGUCAUCUUCUA	UAGAAGAUGACACCUUUGC	Rat,Ms	[999-1017]	[1848-1866]
22	GCCCAAUGCUAUUGUGCAA	UUGCACAAUAGCAUUGGGC		[409-427]	[1258-1276]
23	GUAUGAGUGUGAAUGAUCA	UGAUCAUUCACACUCAUAC		[1253-1271]	[2102-2120]
24	UGCUAUGGAACAUCUUUAA	UUAAAGAUGUUCCAUAGCA		[1047-1065]	[1896-1914]
25	AGAGGAAAGGGAAGGAGGA	UCCUCCUUCCCUUUCCUCU		[137-155]	[137-155]
26	GGGCACAGAAGUGAUUCAA	UUGAAUCACUUCUGUGCCC		[295-313]	[1144-1162]
27	GCUGCAUGCUUCUACGAUA	UAUCGUAGAAGCAUGCAGC		[632-650]	[1481-1499]
28	GAGGCCUCAGAAAUUACUA	UAGUAAUUUCUGAGGCCUC		[926-944]	[1775-1793]
29	UGAAGAUCUCAAUGAAGUA	UACUUCAUUGAGAUCUUCA	Ms	[1111-1129]	[1960-1978]
30	GCAUGCUUCUACGAUAUAA	UUAUAUCGUAGAAGCAUGC		[635-653]	[1484-1502]
31	CAGCAACUGGACCAUGGAA	UUCCAUGGUCCAGUUGCUG	Rat,Ms	[361-379]	[1210-1228]
32	AAAUUCUGAUUCUUCUAAA	UUUAGAAGAAUCAGAAUUU		[1331-1349]	[2180-2198]
33	GCCUGGAAAUAGACUCAGA	UCUGAGUCUAUUUCCAGGC		[549-567]	[1398-1416]
34	GGGUAAAUGCAGAGCUACA	UGUAGCUCUGCAUUUACCC		[582-600]	[1431-1449]
35	GUGCUAUGGAACAUCUUUA	UAAAGAUGUUCCAUAGCAC		[1046-1064]	[1895-1913]
36	GCACAGAAGUGAUUCAACU	AGUUGAAUCACUUCUGUGC		[297-315]	[1146-1164]
37	GGGUAAAGGAGCAUUUUUU	AAAAAAUGCUCCUUUACCC		[1213-1231]	[2062-2080]
38	UAGCAAGGAAGAUCAUUAA	UUAAUGAUCUUCCUUGCUA		[1077-1095]	[1926-1944]
39	AGUUGGUGUUUUUGCAAAA	UUUUGCAAAAACACCAACU	Rat,Ms	[829-847]	[1678-1696]
40	UGAUCAAGUCCUUUGUGAA	UUCACAAAGGACUUGAUCA		[1266-1284]	[2115-2133]
41	CACAGUUGGUGUUUUUGCA	UGCAAAAACACCAACUGUG	Rat,Ms	[826-844]	[1675-1693]
42	CACGCUGUUGUGAGUGGAA	UUCCACUCACAACAGCGUG	Rat	[686-704]	[1535-1553]
43	AGUUACUUAUCAAGCUGAA	UUCAGCUUGAUAAGUAACU		[450-468]	[1299-1317]
44	GUCCGAGGCCUCAGAAAUU	AAUUUCUGAGGCCUCGGAC		[922-940]	[1771-1789]
45	UGGUGUUUUUGCAAAAGCA	UGCUUUUGCAAAAACACCA	Rat,Ms	[832-850]	[1681-1699]
46	AAGGAAAUAUGGGAAAGAU	AUCUUUCCCAUAUUUCCUU		[327-345]	[1176-1194]
47	GGGAUUGUGCUAUGGAACA	UGUUCCAUAGCACAAUCCC		[1040-1058]	[1889-1907]
48	UGCGUAAUGUGCGUGUGAA	UUCACACGCACAUUACGCA		[64-82]	[64-82]
49	AAUUCUUAAUGUUCACAUA	UAUGUGAACAUUAAGAAUU		[1305-1323]	[2154-2172]
50	GAGAAAGGAAAUAUGGGAA	UUCCCAUAUUUCCUUUCUC		[323-341]	[1172-1190]
51	CCUGGAAAUAGACUCAGAU	AUCUGAGUCUAUUUCCAGG		[550-568]	[1399-1417]
52	UGCGUGAGAGGAAAGGGAA	UUCCCUUUCCUCUCACGCA		[131-149]	[131-149]
53	GGAAAUAGACUCAGAUUUU	AAAAUCUGAGUCUAUUUCC		[553-571]	[1402-1420]
54	GAGCAGUCAGGAACUGGUA	UACCAGUUCCUGACUGCUC	Rat,Ms	[881-899]	[1730-1748]
55	ACUGGACCAUGGAAAAAGU	ACUUUUUCCAUGGUCCAGU	Rat,Ms	[366-384]	[1215-1233]
56	CGGCAGGAAGGUAGAAACU	AGUUUCUACCUUCCUGCCG		[472-490]	[1321-1339]
57	UAUGAGUGUGAAUGAUCAA	UUGAUCAUUCACACUCAUA		[1254-1272]	[2103-2121]
58	UUCUGAUUCUUCUAAAUUA	UAAUUUAGAAGAAUCAGAA		[1334-1352]	[2183-2201]
59	GGUAAAGGAGCAUUUUUUU	AAAAAAAUGCUCCUUUACC		[1214-1232]	[2063-2081]
60	GUUCACAUAGUGAAAUAAA	UUUAUUUCACUAUGUGAAC		[1315-1333]	[2164-2182]
61	UAAUGUUCACAUAGUGAAA	UUUCACUAUGUGAACAUUA		[1311-1329]	[2160-2178]
62	CCUUGGGCACAGAAGUGAU	AUCACUUCUGUGCCCAAGG		[291-309]	[1140-1158]
63	AGGUGAUGCCCAAUGCUAU	AUAGCAUUGGGCAUCACCU		[402-420]	[1251-1269]
64	CGAGGCCUCAGAAAUUACU	AGUAAUUUCUGAGGCCUCG		[925-943]	[1774-1792]
65	AAGCAACUGCACAAGACAA	UUGUCUUGUGCAGUUGCUU	Rat,Ms	[846-864]	[1695-1713]
66	GACCAUGGAAAAAGUCAGA	UCUGACUUUUUCCAUGGUC		[370-388]	[1219-1237]
67	AAUUCUGAUUCUUCUAAAU	AUUUAGAAGAAUCAGAAUU		[1332-1350]	[2181-2199]
68	GGUAAAUGCAGAGCUACAA	UUGUAGCUCUGCAUUUACC		[583-601]	[1432-1450]
69	CUACAAGCACGCUCUAACA	UGUUAGAGCGUGCUUGUAG		[596-614]	[1445-1463]
70	GAAUAUUUUCAACUAUGUA	UACAUAGUUGAAAAUAUUC		[1282-1300]	[2131-2149]
71	GUGUAUGAGUGUGAAUGAU	AUCAUUCACACUCAUACAC		[1251-1269]	[2100-2118]
72	GCGUAAUGUGCGUGUGAAG	CUUCACACGCACAUUACGC		[65-83]	[65-83]

73	GAGGAGGUCGAAUGGGUAA	UUACCCAUUCGACCUCCUC		[1200-1218]	[2049-2067]
74	GUAGGUAAAUUCUUAAUGU	ACAUUAAGAAUUUACCUAC		[1298-1316]	[2147-2165]
75	AGACGGCAGGAAGGUAGAA	UUCUACCUUCCUGCCGUCU		[469-487]	[1318-1336]
76	CCUUUGUGAAUAUUUUCAA	UUGAAAAUAUUCACAAAGG		[1275-1293]	[2124-2142]
77	GUCAGGAACUGGUAUCCGA	UCGGAUACCAGUUCCUGAC		[886-904]	[1735-1753]
78	GAAUAGCGGUCGCCGAAAU	AUUUCGGCGACCGCUAUUC		[162-180]	[162-180]
79	CGGCAAAGGUGUCAUCUUC	GAAGAUGACACCUUUGCCG	Rat,Ms	[997-1015]	[1846-1864]
80	CAAUAGCAAGGAAGAUCAU	AUGAUCUUCCUUGCUAUUG		[1074-1092]	[1923-1941]
81	AGGUCGAAUGGGUAAAGGA	UCCUUUACCCAUUCGACCU		[1204-1222]	[2053-2071]
82	CAGUUGGUGUUUUUGCAAA	UUUGCAAAAACACCAACUG	Rat,Ms	[828-846]	[1677-1695]
83	GGAGGAGUCUGCGUAAUGU	ACAUUACGCAGACUCCUCC		[55-73]	[55-73]
84	UGGAACAUCUUUAACCGAA	UUCGGUUAAAGAUGUUCCA		[1052-1070]	[1901-1919]
85	GGUGAUGCCCAAUGCUAUU	AAUAGCAUUGGGCAUCACC		[403-421]	[1252-1270]
86	CUGCGUAAUGUGCGUGUGA	UCACACGCACAUUACGCAG		[63-81]	[63-81]
87	AGAGGAGGUCGAAUGGGUA	UACCCAUUCGACCUCCUCU		[1199-1217]	[2048-2066]
88	GACGGCAGGAAGGUAGAAA	UUUCUACCUUCCUGCCGUC		[470-488]	[1319-1337]
89	GGAGCAUUUUUUUAUUCAG	CUGAAUAAAAAAAUGCUCC		[1220-1238]	[2069-2087]
90	GCACCAUGAUCACGCUGUU	AACAGCGUGAUCAUGGUGC		[676-694]	[1525-1543]
91	UAUGUAGGUAAAUUCUUAA	UUAAGAAUUUACCUACAUA		[1295-1313]	[2144-2162]
92	GGAUUGUGCUAUGGAACAU	AUGUUCCAUAGCACAAUCC		[1041-1059]	[1890-1908]
93	CAACUGGACCAUGGAAAAA	UUUUUCCAUGGUCCAGUUG	Rat,Ms	[364-382]	[1213-1231]
94	CGUAAUGUGCGUGUGAAGA	UCUUCACACGCACAUUACG		[66-84]	[66-84]
95	AGUCCGAGGCCUCAGAAAU	AUUUCUGAGGCCUCGGACU		[921-939]	[1770-1788]
96	UUCACAUAGUGAAAUAAAU	AUUUAUUUCACUAUGUGAA		[1316-1334]	[2165-2183]
97	AGCAGCAUGAAGAUCUCAA	UUGAGAUCUUCAUGCUGCU		[1104-1122]	[1953-1971]
98	ACUGGUAUCCGAUCAGAGA	UCUCUGAUCGGAUACCAGU		[893-911]	[1742-1760]
99	AAGACGGCAGGAAGGUAGA	UCUACCUUCCUGCCGUCUU		[468-486]	[1317-1335]
100	GGAGAUGCUGCAUGCUUCU	AGAAGCAUGCAGCAUCUCC	Rat	[626-644]	[1475-1493]
101	AGAAAGGAAAUAUGGGAAA	UUUCCCAUAUUUCCUUUCU		[324-342]	[1173-1191]
102	GAUCAGAGAGUGAGACAGA	UCUGUCUCACUCUCUGAUC		[903-921]	[1752-1770]
103	UGGGCACAGAAGUGAUUCA	UGAAUCACUUCUGUGCCCA		[294-312]	[1143-1161]
104	UGGAGAAAAUAUGACUGGA	UCCAGUCAUAUUUUCUCCA	Rat	[712-730]	[1561-1579]
105	CAGAAGUGAUUCAACUCUU	AAGAGUUGAAUCACUUCUG		[300-318]	[1149-1167]
106	GGACCAUGGAAAAAGUCAG	CUGACUUUUUCCAUGGUCC		[369-387]	[1218-1236]
107	AAAGCAACUGCACAAGACA	UGUCUUGUGCAGUUGCUUU	Rat,Ms	[845-863]	[1694-1712]
108	AGUCCUUUGUGAAUAUUUU	AAAAUAUUCACAAAGGACU		[1272-1290]	[2121-2139]
109	GGAAGGUAGAAACUGACCA	UGGUCAGUUUCUACCUUCC	Rat,Ms	[477-495]	[1326-1344]
110	CAGGAAGGUAGAAACUGAC	GUCAGUUUCUACCUUCCUG		[475-493]	[1324-1342]
111	ACGGCAAAGGUGUCAUCUU	AAGAUGACACCUUUGCCGU	Rat,Ms	[996-1014]	[1845-1863]
112	UUUCAACUAUGUAGGUAAA	UUUACCUACAUAGUUGAAA		[1288-1306]	[2137-2155]
113	UGCAAAAGCAACUGCACAA	UUGUGCAGUUGCUUUUGCA	Rat,Ms	[841-859]	[1690-1708]
114	UCCGAGGCCUCAGAAAUUA	UAAUUUCUGAGGCCUCGGA		[923-941]	[1772-1790]
115	ACGGUGAGCAGCAUGAAGA	UCUUCAUGCUGCUCACCGU		[1098-1116]	[1947-1965]
116	GAGCUACAAGCACGCUCUA	UAGAGCGUGCUUGUAGCUC		[593-611]	[1442-1460]
117	AGCUGAAAGACGGCAGGAA	UUCCUGCCGUCUUUCAGCU		[462-480]	[1311-1329]
118	CUAUGAAGCUAUUGGUCUU	AAGACCAAUAGCUUCAUAG		[790-808]	[1639-1657]
119	GAACUGGUAUCCGAUCAGA	UCUGAUCGGAUACCAGUUC		[891-909]	[1740-1758]
120	CAAAAGCAACUGCACAAGA	UCUUGUGCAGUUGCUUUUG	Rat,Ms	[843-861]	[1692-1710]
121	CGAAAUGUUCCGGUGUGGA	UCCACACCGGAACAUUUCG	Rat,Ms	[175-193]	[175-193]
122	CAUGGAAAAAGUCAGACGA	UCGUCUGACUUUUUCCAUG		[373-391]	[1222-1240]
123	GGUGUCAUCUUCUACCUCA	UGAGGUAGAAGAUGACACC	Rat,Ms	[1004-1022]	[1853-1871]
124	AUCCGAUCAGAGAGUGAGA	UCUCACUCUCUGAUCGGAU		[899-917]	[1748-1766]
125	AGGCCUCAGAAAUUACUAU	AUAGUAAUUUCUGAGGCCU		[927-945]	[1776-1794]
126	GAAAGACGGCAGGAAGGUA	UACCUUCCUGCCGUCUUUC		[466-484]	[1315-1333]
127	CUGCAUGCUUCUACGAUAU	AUAUCGUAGAAGCAUGCAG		[633-651]	[1482-1500]
128	AAAGGAGCAUUUUUUUAUU	AAUAAAAAAAUGCUCCUUU		[1217-1235]	[2066-2084]

129	GGUCUUGUGGACAGUAGUU	AACUACUGUCCACAAGACC		[803-821]	[1652-1670]
130	AGAUCAUUAAGGACGGUGA	UCACCGUCCUUAAUGAUCU	Ms	[1086-1104]	[1935-1953]
131	UAGGUAAAUUCUUAAUGUU	AACAUUAAGAAUUUACCUA		[1299-1317]	[2148-2166]
132	GUUACUUAUCAAGCUGAAA	UUUCAGCUUGAUAAGUAAC		[451-469]	[1300-1318]
133	GAUCAAGUCCUUUGUGAAU	AUUCACAAAGGACUUGAUC		[1267-1285]	[2116-2134]
134	CCAAACUAUUCAACAUUCA	UGAAUGUUGAAUAGUUUGG		[1131-1149]	[1980-1998]
135	GCAAGUUACUUAUCAAGCU	AGCUUGAUAAGUAACUUGC		[447-465]	[1296-1314]
136	UAUUCAACAUUCAUGAAGA	UCUUCAUGAAUGUUGAAUA		[1137-1155]	[1986-2004]
137	GCCCACAGUUGGUGUUUUU	AAAAACACCAACUGUGGGC	Rat,Ms	[823-841]	[1672-1690]
138	CCGAUCAGAGAGUGAGACA	UGUCUCACUCUCUGAUCGG		[901-919]	[1750-1768]
139	CCCGAAUACCUCAGCAACU	AGUUGCUGAGGUAUUCGGG		[350-368]	[1199-1217]
140	CAAACUAUUCAACAUUCAU	AUGAAUGUUGAAUAGUUUG		[1132-1150]	[1981-1999]
141	UGGAAAAAGUCAGACGAGA	UCUCGUCUGACUUUUUCCA		[375-393]	[1224-1242]
142	AGAGUGAGACAGAGUCCGA	UCGGACUCUGUCUCACUCU		[909-927]	[1758-1776]
143	CUGGAAAUAGACUCAGAUU	AAUCUGAGUCUAUUUCCAG		[551-569]	[1400-1418]
144	UGGUCUUGUGGACAGUAGU	ACUACUGUCCACAAGACCA		[802-820]	[1651-1669]
145	ACUAUUCAACAUUCAUGAA	UUCAUGAAUGUUGAAUAGU		[1135-1153]	[1984-2002]
146	GGUCGAAUGGGUAAAGGAG	CUCCUUUACCCAUUCGACC		[1205-1223]	[2054-2072]
147	CCGAGGCCUCAGAAAUUAC	GUAAUUUCUGAGGCCUCGG		[924-942]	[1773-1791]
148	UCAGCAACUGGACCAUGGA	UCCAUGGUCCAGUUGCUGA	Rat,Ms	[360-378]	[1209-1227]
149	AAAGGAAAUAUGGGAAAGA	UCUUUCCCAUAUUUCCUUU		[326-344]	[1175-1193]
150	GGCACAGAAGUGAUUCAAC	GUUGAAUCACUUCUGUGCC		[296-314]	[1145-1163]
151	AACAUUCAUGAAGACUGAA	UUCAGUCUUCAUGAAUGUU		[1142-1160]	[1991-2009]
152	UGUGAAUGAUCAAGUCCUU	AAGGACUUGAUCAUUCACA		[1260-1278]	[2109-2127]
153	AGGUAGAAACUGACCACAU	AUGUGGUCAGUUUCUACCU	Rat,Ms	[480-498]	[1329-1347]
154	CAUGAAGAUCUCAAUGAAG	CUUCAUUGAGAUCUUCAUG	Ms	[1109-1127]	[1958-1976]
155	GAGUCUGCGUAAUGUGCGU	ACGCACAUUACGCAGACUC		[59-77]	[59-77]
156	CAAGCACGCUCUAACAUCU	AGAUGUUAGAGCGUGCUUG		[599-617]	[1448-1466]
157	UCAGGAACUGGUAUCCGAU	AUCGGAUACCAGUUCCUGA		[887-905]	[1736-1754]
158	GGCAAAGGUGUCAUCUUCU	AGAAGAUGACACCUUUGCC	Rat,Ms	[998-1016]	[1847-1865]
159	GAAUACCUCAGCAACUGGA	UCCAGUUGCUGAGGUAUUC	Rat	[353-371]	[1202-1220]
160	GAAAUAUGGGAAAGAUCCU	AGGAUCUUUCCCAUAUUUC		[330-348]	[1179-1197]
161	UAAUGUGCGUGUGAAGAGA	UCUCUUCACACGCACAUUA		[68-86]	[68-86]
162	AACUAUUCAACAUUCAUGA	UCAUGAAUGUUGAAUAGUU		[1134-1152]	[1983-2001]
163	UCAAGUCCUUUGUGAAUAU	AUAUUCACAAAGGACUUGA		[1269-1287]	[2118-2136]
164	GAAUGAUCAAGUCCUUUGU	ACAAAGGACUUGAUCAUUC		[1263-1281]	[2112-2130]
165	GUGUCAUCUUCUACCUCAG	CUGAGGUAGAAGAUGACAC	Rat,Ms	[1005-1023]	[1854-1872]
166	CCAAUAGCAAGGAAGAUCA	UGAUCUUCCUUGCUAUUGG		[1073-1091]	[1922-1940]
167	GAUAUAAAGUUGGGAAGGA	UCCUUCCCAACUUUAUAUC		[647-665]	[1496-1514]
168	GAGUGUGAAUGAUCAAGUC	GACUUGAUCAUUCACACUC		[1257-1275]	[2106-2124]
169	GGGUAGAGCACCAUGAUCA	UGAUCAUGGUGCUCUACCC		[669-687]	[1518-1536]
170	UAGUGAAAUAAAUUCUGAU	AUCAGAAUUUAUUUCACUA		[1322-1340]	[2171-2189]
171	GGCCUCAGAAAUUACUAUU	AAUAGUAAUUUCUGAGGCC		[928-946]	[1777-1795]
172	GUAAAGGAGCAUUUUUUUA	UAAAAAAAUGCUCCUUUAC		[1215-1233]	[2064-2082]
173	CUUCUACCUCAGGGACAAA	UUUGUCCCUGAGGUAGAAG	Rat,Ms	[1012-1030]	[1861-1879]
174	GAUCAUUAAGGACGGUGAG	CUCACCGUCCUUAAUGAUC	Ms	[1087-1105]	[1936-1954]
175	GGAGAAAAUAUGACUGGAG	CUCCAGUCAUAUUUUCUCC	Rat	[713-731]	[1562-1580]
176	UGAAAUAAAUUCUGAUUCU	AGAAUCAGAAUUUAUUUCA		[1325-1343]	[2174-2192]
177	GGCUGGAGAAAAUAUGACU	AGUCAUAUUUUCUCCAGCC	Rat	[709-727]	[1558-1576]
178	UACUUAUCAAGCUGAAAGA	UCUUUCAGCUUGAUAAGUA		[453-471]	[1302-1320]
179	UGUUCACAUAGUGAAAUAA	UUAUUUCACUAUGUGAACA		[1314-1332]	[2163-2181]
180	UGAGCAGCAUGAAGAUCUC	GAGAUCUUCAUGCUGCUCA		[1102-1120]	[1951-1969]
181	CUCAGAAAUUACUAUUCCU	AGGAAUAGUAAUUUCUGAG		[931-949]	[1780-1798]
182	GUGAGAGGAAAGGGAAGGA	UCCUUCCCUUUCCUCUCAC		[134-152]	[134-152]
183	GGUAGAGCACCAUGAUCAC	GUGAUCAUGGUGCUCUACC		[670-688]	[1519-1537]
184	CCCGAGAAAGGAAAUAUGG	CCAUAUUUCCUUUCUCGGG		[320-338]	[1169-1187]

185	CAUUAAGGACGGUGAGCAG	CUGCUCACCGUCCUUAAUG		[1090-1108]	[1939-1957]
186	UGGGUAAAGGAGCAUUUUU	AAAAAUGCUCCUUUACCCA		[1212-1230]	[2061-2079]
187	CAAUCCGUUGGAGUCAGCA	UGCUGACUCCAACGGAUUG		[425-443]	[1274-1292]
188	UCGAAUGGGUAAAGGAGCA	UGCUCCUUUACCCAUUCGA		[1207-1225]	[2056-2074]
189	AAGGAGGAGGUCCCGAAUA	UAUUCGGGACCUCCUCCUU		[148-166]	[148-166]
190	GAGCAGCAUGAAGAUCUCA	UGAGAUCUUCAUGCUGCUC		[1103-1121]	[1952-1970]
191	GAAAUAAAUUCUGAUUCUU	AAGAAUCAGAAUUUAUUUC		[1326-1344]	[2175-2193]
192	CUACGAUAUAAAGUUGGGA	UCCCAACUUUAUAUCGUAG		[643-661]	[1492-1510]
193	GGAAAAAGUCAGACGAGAG	CUCUCGUCUGACUUUUUCC		[376-394]	[1225-1243]
194	UGUGCUAUGGAACAUCUUU	AAAGAUGUUCCAUAGCACA		[1045-1063]	[1894-1912]
195	GUAAAUUCUUAAUGUUCAC	GUGAACAUUAAGAAUUUAC		[1302-1320]	[2151-2169]
196	CCAUGAUCACGCUGUUGUG	CACAACAGCGUGAUCAUGG		[679-697]	[1528-1546]
197	UCUUCUACCUCAGGGACAA	UUGUCCCUGAGGUAGAAGA	Rat,Ms	[1011-1029]	[1860-1878]
198	GAGGAGGAGUCUGCGUAAU	AUUACGCAGACUCCUCCUC		[53-71]	[53-71]
199	UACGAUAUAAAGUUGGGAA	UUCCCAACUUUAUAUCGUA		[644-662]	[1493-1511]
200	UAAGGACGGUGAGCAGCAU	AUGCUGCUCACCGUCCUUA		[1093-1111]	[1942-1960]
201	AUAAAUUCUGAUUCUUCUA	UAGAAGAAUCAGAAUUUAU		[1329-1347]	[2178-2196]
202	AAGCUAUUGGUCUUGUGGA	UCCACAAGACCAAUAGCUU		[795-813]	[1644-1662]
203	AGCAACUGGACCAUGGAAA	UUUCCAUGGUCCAGUUGCU	Rat,Ms	[362-380]	[1211-1229]
204	AUGUUCACAUAGUGAAAUA	UAUUUCACUAUGUGAACAU		[1313-1331]	[2162-2180]
205	GGUUAAGGUGAUGCCCAAU	AUUGGGCAUCACCUUAACC		[397-415]	[1246-1264]
206	UUGUGAAUAUUUUCAACUA	UAGUUGAAAAUAUUCACAA		[1278-1296]	[2127-2145]
207	GGACAGUAGUUUGCCCACA	UGUGGGCAAACUACUGUCC		[811-829]	[1660-1678]
208	ACAGUUGGUGUUUUUGCAA	UUGCAAAAACACCAACUGU	Rat,Ms	[827-845]	[1676-1694]
209	GCUUCCGGGUAAAUGCAGA	UCUGCAUUUACCCGGAAGC	Rat,Ms	[576-594]	[1425-1443]
210	CCGAGAAAGGAAAUAUGGG	CCCAUAUUUCCUUUCUCGG		[321-339]	[1170-1188]
211	UGUGAAUAUUUUCAACUAU	AUAGUUGAAAAUAUUCACA		[1279-1297]	[2128-2146]
212	UCAUCUUCUACCUCAGGGA	UCCCUGAGGUAGAAGAUGA	Rat,Ms	[1008-1026]	[1857-1875]
213	AAUAAAUUCUGAUUCUUCU	AGAAGAAUCAGAAUUUAUU		[1328-1346]	[2177-2195]
214	AAGGUGAUGCCCAAUGCUA	UAGCAUUGGGCAUCACCUU		[401-419]	[1250-1268]
215	AGGAGCAUUUUUUUAUUCA	UGAAUAAAAAAAAUGCUCCU		[1219-1237]	[2068-2086]
216	AGGACUACGGCAAAGGUGU	ACACCUUUGCCGUAGUCCU	Rat,Ms	[990-1008]	[1839-1857]
217	AGGAGGUCGAAUGGGUAAA	UUUACCCAUUCGACCUCCU		[1201-1219]	[2050-2068]
218	AGCAUUUUUUUAUUCAGCA	UGCUGAAUAAAAAAAAUGCU		[1222-1240]	[2071-2089]
219	GUGCAAUCCGUUGGAGUCA	UGACUCCAACGGAUUGCAC		[422-440]	[1271-1289]
220	AGUGAAAUAAAUUCUGAUU	AAUCAGAAUUUAUUUCACU		[1323-1341]	[2172-2190]
221	CAGUAGUUUGCCCACAGUU	AACUGUGGGCAAACUACUG		[814-832]	[1663-1681]
222	GUAUCCGAUCAGAGAGUGA	UCACUCUCUGAUCGGAUAC		[897-915]	[1746-1764]
223	GCUUCUACGAUAUAAAGUU	AACUUUAUAUCGUAGAAGC		[639-657]	[1488-1506]
224	CUUAAUGUUCACAUAGUGA	UCACUAUGUGAACAUUAAG		[1309-1327]	[2158-2176]
225	UUGUGCUAUGGAACAUCUU	AAGAUGUUCCAUAGCACAA		[1044-1062]	[1893-1911]
226	UCACAUAGUGAAAUAAAUU	AAUUUAUUUCACUAUGUGA		[1317-1335]	[2166-2184]
227	GCUGUUGUGAGUGGAAGAU	AUCUUCCACUCACAACAGC		[689-707]	[1538-1556]
228	AGGAAAUAUGGGAAAGAUC	GAUCUUUCCCAUAUUUCCU		[328-346]	[1177-1195]
229	AUAUGACUGGAGCUGCUAA	UUAGCAGCUCCAGUCAUAU	Rat	[720-738]	[1569-1587]
230	UGAUCACGCUGUUGUGAGU	ACUCACAACAGCGUGAUCA	Rat	[682-700]	[1531-1549]
231	UAGCGGUCGCCGAAAUGUU	AACAUUUCGGCGACCGCUA		[165-183]	[165-183]
232	AUAGUGAAAUAAAUUCUGA	UCAGAAUUUAUUUCACUAU		[1321-1339]	[2170-2188]
233	UGCCCAAUGCUAUUGUGCA	UGCACAAUAGCAUUGGGCA		[408-426]	[1257-1275]
234	ACGGCAGGAAGGUAGAAAC	GUUUCUACCUUCCUGCCGU		[471-489]	[1320-1338]
235	CUUGGGCACAGAAGUGAUU	AAUCACUUCUGUGCCCAAG		[292-310]	[1141-1159]
236	UGGACCAUGGAAAAAGUCA	UGACUUUUUCCAUGGUCCA	Rat,Ms	[368-386]	[1217-1235]
237	AUGGAACAUCUUUAACCGA	UCGGUUAAAGAUGUUCCAU		[1051-1069]	[1900-1918]
238	CGAAUGGGUAAAGGAGCAU	AUGCUCCUUUACCCAUUCG		[1208-1226]	[2057-2075]
239	CACAGAGCAGUCAGGAACU	AGUUCCUGACUGCUCUGUG	Rat,Ms	[877-895]	[1726-1744]
240	UUGCAAAAGCAACUGCACA	UGUGCAGUUGCUUUUGCAA	Rat,Ms	[840-858]	[1689-1707]

241	AUAGCAAGGAAGAUCAUUA	UAAUGAUCUUCCUUGCUAU		[1076-1094]	[1925-1943]
242	UGUUGUGAGUGGAAGAUUG	CAAUCUUCCACUCACAACA		[691-709]	[1540-1558]
243	AAGGUGUCAUCUUCUACCU	AGGUAGAAGAUGACACCUU	Rat,Ms	[1002-1020]	[1851-1869]
244	UGCAUGCUUCUACGAUAUA	UAUAUCGUAGAAGCAUGCA		[634-652]	[1483-1501]
245	ACAGUAGUUUGCCCACAGU	ACUGUGGGCAAACUACUGU		[813-831]	[1662-1680]
246	GAAGGUAGAAACUGACCAC	GUGGUCAGUUUCUACCUUC	Rat,Ms	[478-496]	[1327-1345]
247	CACGCUCUAACAUCUGGGU	ACCCAGAUGUUAGAGCGUG		[603-621]	[1452-1470]
248	CAGCAUGAAGAUCUCAAUG	CAUUGAGAUCUUCAUGCUG		[1106-1124]	[1955-1973]
249	GGAAGAUCAUUAAGGACGG	CCGUCCUUAAUGAUCUUCC	Ms	[1083-1101]	[1932-1950]
250	AGCAUGAAGAUCUCAAUGA	UCAUUGAGAUCUUCAUGCU		[1107-1125]	[1956-1974]
251	GAGGAGUCUGCGUAAUGUG	CACAUUACGCAGACUCCUC		[56-74]	[56-74]
252	AACUAUGUAGGUAAAUUCU	AGAAUUUACCUACAUAGUU		[1292-1310]	[2141-2159]
253	GAGAAAAUAUGACUGGAGC	GCUCCAGUCAUAUUUUCUC	Rat	[714-732]	[1563-1581]
254	CUUUGAAGCAGAAGCUGGU	ACCAGCUUCUGCUUCAAAG		[210-228]	[210-228]
255	GAUGCUGCAUGCUUCUACG	CGUAGAAGCAUGCAGCAUC		[629-647]	[1478-1496]
256	CGAUCAGAGAGUGAGACAG	CUGUCUCACUCUCUGAUCG		[902-920]	[1751-1769]
257	UUAAUGUUCACAUAGUGAA	UUCACUAUGUGAACAUUAA		[1310-1328]	[2159-2177]
258	CAGGAGAUGCUGCAUGCUU	AAGCAUGCAGCAUCUCCUG	Rat	[624-642]	[1473-1491]
259	AGAGCAGUCAGGAACUGGU	ACCAGUUCCUGACUGCUCU	Rat,Ms	[880-898]	[1729-1747]
260	CAACUAUGUAGGUAAAUUC	GAAUUUACCUACAUAGUUG		[1291-1309]	[2140-2158]
261	CAUCAGUCAAUGUUCUGGA	UCCAGAACAUUGACUGAUG	Rat,Ms	[749-767]	[1598-1616]
262	UGGAAAUAGACUCAGAUUU	AAAUCUGAGUCUAUUUCCA		[552-570]	[1401-1419]
263	GAACAUCUUUAACCGAAUG	CAUUCGGUUAAAGAUGUUC		[1054-1072]	[1903-1921]
264	CAAAGGUGUCAUCUUCUAC	GUAGAAGAUGACACCUUUG	Rat,Ms	[1000-1018]	[1849-1867]
265	UGAAUAUUUUCAACUAUGU	ACAUAGUUGAAAAUAUUCA		[1281-1299]	[2130-2148]
266	GGAACUGGUAUCCGAUCAG	CUGAUCGGAUACCAGUUCC		[890-908]	[1739-1757]
267	CAAUGUUCUGGAGUGAUUU	AAAUCACUCCAGAACAUUG	Rat,Ms	[756-774]	[1605-1623]
268	UAAAUUCUGAUUCUUCUAA	UUAGAAGAAUCAGAAUUUA		[1330-1348]	[2179-2197]
269	UUUUCAACUAUGUAGGUAA	UUACCUACAUAGUUGAAAA		[1287-1305]	[2136-2154]
270	GUAGAAACUGACCACAUAG	CUAUGUGGUCAGUUUCUAC	Rat,Ms	[482-500]	[1331-1349]
271	AUGUAGGUAAAUUCUUAAU	AUUAAGAAUUUACCUACAU		[1296-1314]	[2145-2163]
272	GGAAAUAUGGGAAAGAUCC	GGAUCUUUCCCAUAUUUCC		[329-347]	[1178-1196]
273	GAAAGGAAAUAUGGGAAAG	CUUUCCCAUAUUUCCUUUC		[325-343]	[1174-1192]
274	GGAGGUCGAAUGGGUAAAG	CUUUACCCAUUCGACCUCC		[1202-1220]	[2051-2069]
275	AAUGGGUAAAGGAGCAUUU	AAAUGCUCCUUUACCCAUU		[1210-1228]	[2059-2077]
276	AAAUAUGACUGGAGCUGCU	AGCAGCUCCAGUCAUAUUU	Rat	[718-736]	[1567-1585]
277	GACUACGGCAAAGGUGUCA	UGACACCUUUGCCGUAGUC	Rat,Ms	[992-1010]	[1841-1859]
278	CAUUCAUGAAGACUGAAGC	GCUUCAGUCUUCAUGAAUG		[1144-1162]	[1993-2011]
279	GAAAUGUUCCGGUGUGGAG	CUCCACACCGGAACAUUUC	Rat,Ms	[176-194]	[176-194]
280	GCAUUUUUUUAUUCAGCAG	CUGCUGAAUAAAAAAAUGC		[1223-1241]	[2072-2090]
281	CAAGUCCUUUGUGAAUAUU	AAUAUUCACAAAGGACUUG		[1270-1288]	[2119-2137]
282	GACAGUAGUUUGCCCACAG	CUGUGGGCAAACUACUGUC		[812-830]	[1661-1679]
283	AUGGGUAAAGGAGCAUUUU	AAAAUGCUCCUUUACCCAU		[1211-1229]	[2060-2078]
284	GAAAUUACUAUUCCUCCCA	UGGGAGGAAUAGUAAUUUC		[935-953]	[1784-1802]
285	GAAAUAGACUCAGAUUUUG	CAAAAUCUGAGUCUAUUUC		[554-572]	[1403-1421]
286	AGGAACUGGUAUCCGAUCA	UGAUCGGAUACCAGUUCCU		[889-907]	[1738-1756]
287	AGCAGUCAGGAACUGGUAU	AUACCAGUUCCUGACUGCU	Rat,Ms	[882-900]	[1731-1749]
288	ACCUCAGGGACAAAGUGGU	ACCACUUUGUCCCUGAGGU		[1017-1035]	[1866-1884]
289	CAUUUUUUUAUUCAGCAGA	UCUGCUGAAUAAAAAAAUG		[1224-1242]	[2073-2091]
290	GAAGAUCAUUAAGGACGGU	ACCGUCCUUAAUGAUCUUC	Ms	[1084-1102]	[1933-1951]
291	GUGCUUUGAAGCAGAAGCU	AGCUUCUGCUUCAAAGCAC		[207-225]	[207-225]
292	AGCUAUUGGUCUUGUGGAC	GUCCACAAGACCAAUAGCU		[796-814]	[1645-1663]
293	AGUCAAUGUUCUGGAGUGA	UCACUCCAGAACAUUGACU	Rat,Ms	[753-771]	[1602-1620]
294	GUGUGAAUGAUCAAGUCCU	AGGACUUGAUCAUUCACAC		[1259-1277]	[2108-2126]
295	AAUAGACUCAGAUUUUGGU	ACCAAAAUCUGAGUCUAUU		[556-574]	[1405-1423]
296	CUGUUGUGAGUGGAAGAUU	AAUCUUCCACUCACAACAG		[690-708]	[1539-1557]

297	UCACGCUGUUGUGAGUGGA	UCCACUCACAACAGCGUGA	Rat	[685-703]	[1534-1552]
298	AGCUACAAGCACGCUCUAA	UUAGAGCGUGCUUGUAGCU		[594-612]	[1443-1461]
299	AGAGCACCAUGAUCACGCU	AGCGUGAUCAUGGUGCUCU		[673-691]	[1522-1540]
300	CGAAUACCUCAGCAACUGG	CCAGUUGCUGAGGUAUUCG		[352-370]	[1201-1219]
301	AUGUGCGUGUGAAGAGACU	AGUCUCUUCACACGCACAU		[70-88]	[70-88]
302	GAGAUGCUGCAUGCUUCUA	UAGAAGCAUGCAGCAUCUC	Rat	[627-645]	[1476-1494]
303	AACUGGUAUCCGAUCAGAG	CUCUGAUCGGAUACCAGUU		[892-910]	[1741-1759]
304	AUGCUUCUACGAUAUAAAG	CUUUAUAUCGUAGAAGCAU		[637-655]	[1486-1504]
305	UAAGGUGAUGCCCAAUGCU	AGCAUUGGGCAUCACCUUA		[400-418]	[1249-1267]
306	AGAAGUGAUUCAACUCUUC	GAAGAGUUGAAUCACUUCU		[301-319]	[1150-1168]
307	AUGAAGAUCUCAAUGAAGU	ACUUCAUUGAGAUCUUCAU	Ms	[1110-1128]	[1959-1977]
308	CUUUGUGAAUAUUUUCAAC	GUUGAAAAUAUUCACAAAG		[1276-1294]	[2125-2143]
309	CAUGAUCACGCUGUUGUGA	UCACAACAGCGUGAUCAUG	Rat	[680-698]	[1529-1547]
310	UUCUUAAUGUUCACAUAGU	ACUAUGUGAACAUUAAGAA		[1307-1325]	[2156-2174]
311	AGAAAAUAUGACUGGAGCU	AGCUCCAGUCAUAUUUUCU	Rat	[715-733]	[1564-1582]
312	ACUAUGUAGGUAAAUUCUU	AAGAAUUUACCUACAUAGU		[1293-1311]	[2142-2160]
313	UAUUGUGCAAUCCGUUGGA	UCCAACGGAUUGCACAAUA		[418-436]	[1267-1285]
314	AAGGUAGAAACUGACCACA	UGUGGUCAGUUUCUACCUU	Rat,Ms	[479-497]	[1328-1346]
315	CUACGGCAAAGGUGUCAUC	GAUGACACCUUUGCCGUAG	Rat,Ms	[994-1012]	[1843-1861]
316	GUGGACAGUAGUUUGCCCA	UGGGCAAACUACUGUCCAC		[809-827]	[1658-1676]
317	CUACCUCAGGGACAAAGUG	CACUUUGUCCCUGAGGUAG		[1015-1033]	[1864-1882]
318	UAAAGGAGCAUUUUUUUAU	AUAAAAAAAUGCUCCUUUA		[1216-1234]	[2065-2083]
319	AUUGUGCUAUGGAACAUCU	AGAUGUUCCAUAGCACAAU		[1043-1061]	[1892-1910]
320	AGGAGAUGCUGCAUGCUUC	GAAGCAUGCAGCAUCUCCU	Rat	[625-643]	[1474-1492]
321	GAAUGGGUAAAGGAGCAUU	AAUGCUCCUUUACCCAUUC		[1209-1227]	[2058-2076]
322	AGAUCUCAAUGAAGUAGCC	GGCUACUUCAUUGAGAUCU		[1114-1132]	[1963-1981]
323	GGGUGCUUUGAAGCAGAAG	CUUCUGCUUCAAAGCACCC		[205-223]	[205-223]
324	UUAAGGACGGUGAGCAGCA	UGCUGCUCACCGUCCUUAA		[1092-1110]	[1941-1959]
325	AAAUGCAGAGCUACAAGCA	UGCUUGUAGCUCUGCAUUU		[586-604]	[1435-1453]
326	UCUUAAUGUUCACAUAGUG	CACUAUGUGAACAUUAAGA		[1308-1326]	[2157-2175]
327	GAUGCCCAAUGCUAUUGUG	CACAAUAGCAUUGGGCAUC		[406-424]	[1255-1273]
328	UGAGUGUGAAUGAUCAAGU	ACUUGAUCAUUCACACUCA		[1256-1274]	[2105-2123]
329	GCUAUGGAACAUCUUUAAC	GUUAAAGAUGUUCCAUAGC		[1048-1066]	[1897-1915]
330	AAAAGCAACUGCACAAGAC	GUCUUGUGCAGUUGCUUUU	Rat,Ms	[844-862]	[1693-1711]
331	CACAGAAGUGAUUCAACUC	GAGUUGAAUCACUUCUGUG		[298-316]	[1147-1165]
332	AUGAUCAAGUCCUUUGUGA	UCACAAAGGACUUGAUCAU		[1265-1283]	[2114-2132]
333	GCUACAAGCACGCUCUAAC	GUUAGAGCGUGCUUGUAGC		[595-613]	[1444-1462]
334	CCGAAUACCUCAGCAACUG	CAGUUGCUGAGGUAUUCGG		[351-369]	[1200-1218]
335	GUGUUUUUGCAAAAGCAAC	GUUGCUUUUGCAAAAACAC	Rat,Ms	[834-852]	[1683-1701]
336	CAGAGAGUGAGACAGAGUC	GACUCUGUCUCACUCUCUG		[906-924]	[1755-1773]
337	UCAACUAUGUAGGUAAAUU	AAUUUACCUACAUAGUUGA		[1290-1308]	[2139-2157]
338	AAGUCCUUUGUGAAUAUUU	AAAUAUUCACAAAGGACUU		[1271-1289]	[2120-2138]
339	CGGGUAAAUGCAGAGCUAC	GUAGCUCUGCAUUUACCCG		[581-599]	[1430-1448]
340	CAUAGUGAAAUAAAUUCUG	CAGAAUUUAUUUCACUAUG		[1320-1338]	[2169-2187]
341	GUAAUGUGCGUGUGAAGAG	CUCUUCACACGCACAUUAC		[67-85]	[67-85]
342	GUGAGCAGCAUGAAGAUCU	AGAUCUUCAUGCUGCUCAC		[1101-1119]	[1950-1968]
343	UGAAGCUAUUGGUCUUGUG	CACAAGACCAAUAGCUUCA		[793-811]	[1642-1660]
344	UGUUUUUGCAAAAGCAACU	AGUUGCUUUUGCAAAAACA	Rat,Ms	[835-853]	[1684-1702]
345	UAUGGAACAUCUUUAACCG	CGGUUAAAGAUGUUCCAUA		[1050-1068]	[1899-1917]
346	AUUGGUCUUGUGGACAGUA	UACUGUCCACAAGACCAAU		[800-818]	[1649-1667]
347	GGAGCCCAAUGUUGAGUUG	CAACUCAACAUUGGGCUCC		[517-535]	[1366-1384]
348	AUUCAACAUUCAUGAAGAC	GUCUUCAUGAAUGUUGAAU		[1138-1156]	[1987-2005]
349	CUGGUAUCCGAUCAGAGAG	CUCUCUGAUCGGAUACCAG		[894-912]	[1743-1761]
350	UGCUAUUGUGCAAUCCGUU	AACGGAUUGCACAAUAGCA		[415-433]	[1264-1282]
351	AAGUUACUUAUCAAGCUGA	UCAGCUUGAUAAGUAACUU		[449-467]	[1298-1316]
352	AUCCGUUGGAGUCAGCAGU	ACUGCUGACUCCAACGGAU		[427-445]	[1276-1294]

353	CUUCUCUGUCCAAUGCCCA	UGGGCAUUGGACAGAGAAG		[23-41]	[23-41]
354	UCUACCUCAGGGACAAAGU	ACUUUGUCCCUGAGGUAGA	Rat,Ms	[1014-1032]	[1863-1881]
355	UCAGAGAGUGAGACAGAGU	ACUCUGUCUCACUCUCUGA		[905-923]	[1754-1772]
356	ACGAUAUAAAGUUGGGAAG	CUUCCCAACUUUAUAUCGU		[645-663]	[1494-1512]
357	CUAUUGGUCUUGUGGACAG	CUGUCCACAAGACCAAUAG		[798-816]	[1647-1665]
358	GGCUAUGAAGCUAUUGGUC	GACCAAUAGCUUCAUAGCC	Rat,Ms	[788-806]	[1637-1655]
359	CAGAAAUUACUAUUCCUCC	GGAGGAAUAGUAAUUUCUG		[933-951]	[1782-1800]
360	AUGGAAAAAGUCAGACGAG	CUCGUCUGACUUUUUCCAU		[374-392]	[1223-1241]
361	AAGCUGAAAGACGGCAGGA	UCCUGCCGUCUUUCAGCUU		[461-479]	[1310-1328]
362	GAGCAUUUUUUUAUUCAGC	GCUGAAUAAAAAAAAUGCUC		[1221-1239]	[2070-2088]
363	AAAUUCUUAAUGUUCACAU	AUGUGAACAUUAAGAAUUU		[1304-1322]	[2153-2171]
364	UCUUGUGGACAGUAGUUUG	CAAACUACUGUCCACAAGA		[805-823]	[1654-1672]
365	GUUGUGAGUGGAAGAUUGG	CCAAUCUUCCACUCACAAC		[692-710]	[1541-1559]
366	CGAUAUAAAGUUGGGAAGG	CCUUCCCAACUUUAUAUCG		[646-664]	[1495-1513]
367	ACCUCAGCAACUGGACCAU	AUGGUCCAGUUGCUGAGGU	Rat,Ms	[357-375]	[1206-1224]
368	UUUUGCAAAAGCAACUGCA	UGCAGUUGCUUUUGCAAAA	Rat,Ms	[838-856]	[1687-1705]
369	GUGAAUAUUUUCAACUAUG	CAUAGUUGAAAAUAUUCAC		[1280-1298]	[2129-2147]
370	GCUAUUGGUCUUGUGGACA	UGUCCACAAGACCAAUAGC		[797-815]	[1646-1664]
371	AAUCCGUUGGAGUCAGCAG	CUGCUGACUCCAACGGAUU		[426-444]	[1275-1293]
372	AUGCUAUUGUGCAAUCCGU	ACGGAUUGCACAAUAGCAU		[414-432]	[1263-1281]
373	GAAAAAGUCAGACGAGAGG	CCUCUCGUCUGACUUUUUC		[377-395]	[1226-1244]
374	CAGGAACUGGUAUCCGAUC	GAUCGGAUACCAGUUCCUG		[888-906]	[1737-1755]
375	AAGGAAGAUCAUUAAGGAC	GUCCUUAAUGAUCUUCCUU	Ms	[1081-1099]	[1930-1948]
376	UGCCCACAGUUGGUGUUUU	AAAACACCAACUGUGGGCA	Rat,Ms	[822-840]	[1671-1689]
377	GGCAGGAAGGUAGAAACUG	CAGUUUCUACCUUCCUGCC		[473-491]	[1322-1340]
378	UAGUUUGCCCACAGUUGGU	ACCAACUGUGGGCAAACUA	Rat,Ms	[817-835]	[1666-1684]
379	GAUUGUGCUAUGGAACAUC	GAUGUUCCAUAGCACAAUC		[1042-1060]	[1891-1909]
380	CAAGUUACUUAUCAAGCUG	CAGCUUGAUAAGUAACUUG		[448-466]	[1297-1315]
381	UAGAAACUGACCACAUAGU	ACUAUGUGGUCAGUUUCUA	Rat,Ms	[483-501]	[1332-1350]
382	UCAAUGUUCUGGAGUGAUU	AAUCACUCCAGAACAUUGA	Rat,Ms	[755-773]	[1604-1622]
383	AGGAGGAGUCUGCGUAAUG	CAUUACGCAGACUCCUCCU		[54-72]	[54-72]
384	ACAUAGUGAAAUAAAUUCU	AGAAUUUAUUUCACUAUGU		[1319-1337]	[2168-2186]
385	GCAAAAGCAACUGCACAAG	CUUGUGCAGUUGCUUUUGC	Rat,Ms	[842-860]	[1691-1709]
386	CCUCAGAAAUUACUAUUCC	GGAAUAGUAAUUUCUGAGG		[930-948]	[1779-1797]
387	ACUACGGCAAAGGUGUCAU	AUGACACCUUUGCCGUAGU	Rat,Ms	[993-1011]	[1842-1860]
388	GUUGGUGUUUUUGCAAAAG	CUUUUGCAAAAACACCAAC	Rat,Ms	[830-848]	[1679-1697]
389	AUAUAAAGUUGGGAAGGAG	CUCCUUCCCAACUUUAUAU		[648-666]	[1497-1515]
390	CUGGACCAUGGAAAAAGUC	GACUUUUUCCAUGGUCCAG	Rat,Ms	[367-385]	[1216-1234]
391	UAUUGGUCUUGUGGACAGU	ACUGUCCACAAGACCAAUA		[799-817]	[1648-1666]
392	GCCUCAGAAAUUACUAUUC	GAAUAGUAAUUUCUGAGGC		[929-947]	[1778-1796]
393	UGGUAUCCGAUCAGAGAGU	ACUCUCUGAUCGGAUACCA		[895-913]	[1744-1762]
394	CAGUCAAUGUUCUGGAGUG	CACUCCAGAACAUUGACUG	Rat,Ms	[752-770]	[1601-1619]
395	AUCAGAGAGUGAGACAGAG	CUCUGUCUCACUCUCUGAU		[904-922]	[1753-1771]
396	UGCUGCAUGCUUCUACGAU	AUCGUAGAAGCAUGCAGCA		[631-649]	[1480-1498]
397	GUGAAUGAUCAAGUCCUUU	AAAGGACUUGAUCAUUCAC		[1261-1279]	[2110-2128]
398	GAAGCUAUUGGUCUUGUGG	CCACAAGACCAAUAGCUUC		[794-812]	[1643-1661]
399	AGGUAAAUUCUUAAUGUUC	GAACAUUAAGAAUUUACCU		[1300-1318]	[2149-2167]
400	AGCAAGGAAGAUCAUUAAG	CUUAAUGAUCUUCCUUGCU		[1078-1096]	[1927-1945]
401	AUCAAGUCCUUUGUGAAUA	UAUUCACAAAGGACUUGAU		[1268-1286]	[2117-2135]
402	GCAACUGCACAAGACAACC	GGUUGUCUUGUGCAGUUGC	Rat,Ms	[848-866]	[1697-1715]
403	GCUAUGAAGCUAUUGGUCU	AGACCAAUAGCUUCAUAGC	Rat,Ms	[789-807]	[1638-1656]
404	UGAAAGACGGCAGGAAGGU	ACCUUCCUGCCGUCUUUCA		[465-483]	[1314-1332]
405	UGCUUCUACGAUAUAAAGU	ACUUUAUAUCGUAGAAGCA		[638-656]	[1487-1505]
406	GCUGGAGAAAAUAUGACUG	CAGUCAUAUUUUCUCCAGC	Rat	[710-728]	[1559-1577]
407	AACUGGACCAUGGAAAAAG	CUUUUUCCAUGGUCCAGUU	Rat,Ms	[365-383]	[1214-1232]
408	GUAGUUUGCCCACAGUUGG	CCAACUGUGGGCAAACUAC	Rat,Ms	[816-834]	[1665-1683]

409	GUAAAUGCAGAGCUACAAG	CUUGUAGCUCUGCAUUUAC		[584-602]	[1433-1451]
410	GUCCUUUGUGAAUAUUUUC	GAAAAUAUUCACAAAGGAC		[1273-1291]	[2122-2140]
411	GGCCUGGAAAUAGACUCAG	CUGAGUCUAUUUCCAGGCC		[548-566]	[1397-1415]
412	UUGGUCUUGUGGACAGUAG	CUACUGUCCACAAGACCAA		[801-819]	[1650-1668]
413	CAUCUUCUACCUCAGGGAC	GUCCCUGAGGUAGAAGAUG	Rat,Ms	[1009-1027]	[1858-1876]
414	UCCUUUGUGAAUAUUUUCA	UGAAAAUAUUCACAAAGGA		[1274-1292]	[2123-2141]
415	GAAGAUCUCAAUGAAGUAG	CUACUUCAUUGAGAUCUUC	Ms	[1112-1130]	[1961-1979]
416	AUUACUAUUCCUCCCAGCA	UGCUGGGAGGAAUAGUAAU		[938-956]	[1787-1805]
417	AUGCUGCAUGCUUCUACGA	UCGUAGAAGCAUGCAGCAU		[630-648]	[1479-1497]
418	UCAUUAAGGACGGUGAGCA	UGCUCACCGUCCUUAAUGA	Ms	[1089-1107]	[1938-1956]
419	UUGUGCAAUCCGUUGGAGU	ACUCCAACGGAUUGCACAA		[420-438]	[1269-1287]
420	CCAUGGAAAAAGUCAGACG	CGUCUGACUUUUUCCAUGG		[372-390]	[1221-1239]
421	GGUGCUUUGAAGCAGAAGC	GCUUCUGCUUCAAAGCACC		[206-224]	[206-224]
422	GAAACUGACCACAUAGUGG	CCACUAUGUGGUCAGUUUC		[485-503]	[1334-1352]
423	GAGGUCGAAUGGGUAAAGG	CCUUUACCCAUUCGACCUC		[1203-1221]	[2052-2070]
424	ACAGAAGUGAUUCAACUCU	AGAGUUGAAUCACUUCUGU		[299-317]	[1148-1166]
425	AGCAACUGCACAAGACAAC	GUUGUCUUGUGCAGUUGCU	Rat,Ms	[847-865]	[1696-1714]
426	AAAUUACUAUUCCUCCCAG	CUGGGAGGAAUAGUAAUUU		[936-954]	[1785-1803]
427	CUUCUACGAUAUAAAGUUG	CAACUUUAUAUCGUAGAAG		[640-658]	[1489-1507]
428	AAUAUGACUGGAGCUGCUA	UAGCAGCUCCAGUCAUAUU	Rat	[719-737]	[1568-1586]
429	UGUGCAAUCCGUUGGAGUC	GACUCCAACGGAUUGCACA		[421-439]	[1270-1288]
430	AUUCUGAUUCUUCUAAAUU	AAUUUAGAAGAAUCAGAAU		[1333-1351]	[2182-2200]
431	UGCAAUCCGUUGGAGUCAG	CUGACUCCAACGGAUUGCA		[423-441]	[1272-1290]
432	AGAAACUGACCACAUAGUG	CACUAUGUGGUCAGUUUCU	Ms	[484-502]	[1333-1351]
433	AUCUUCUACCUCAGGGACA	UGUCCCUGAGGUAGAAGAU	Rat,Ms	[1010-1028]	[1859-1877]
434	UUAUCAAGCUGAAAGACGG	CCGUCUUUCAGCUUGAUAA		[456-474]	[1305-1323]
435	AGUAGUUUGCCCACAGUUG	CAACUGUGGGCAAACUACU	Rat,Ms	[815-833]	[1664-1682]
436	AGAAAUUACUAUUCCUCCC	GGGAGGAAUAGUAAUUUCU		[934-952]	[1783-1801]
437	AAACUAUUCAACAUUCAUG	CAUGAAUGUUGAAUAGUUU		[1133-1151]	[1982-2000]
438	GUCAAUGUUCUGGAGUGAU	AUCACUCCAGAACAUUGAC	Rat,Ms	[754-772]	[1603-1621]
439	AAGUGAUUCAACUCUUCCC	GGGAAGAGUUGAAUCACUU		[303-321]	[1152-1170]
440	GAAGUGAUUCAACUCUUCC	GGAAGAGUUGAAUCACUUC		[302-320]	[1151-1169]
441	CACAUAGUGAAAUAAAUUC	GAAUUUAUUUCACUAUGUG		[1318-1336]	[2167-2185]
442	AAAUAGACUCAGAUUUUGG	CCAAAAUCUGAGUCUAUUU		[555-573]	[1404-1422]
443	GUCGAAUGGGUAAAGGAGC	GCUCCUUUACCCAUUCGAC		[1206-1224]	[2055-2073]
444	AAAGGUGUCAUCUUCUACC	GGUAGAAGAUGACACCUUU	Rat,Ms	[1001-1019]	[1850-1868]
445	CUGGAGAAAAUAUGACUGG	CCAGUCAUAUUUUCUCCAG	Rat	[711-729]	[1560-1578]
446	AGAGCUACAAGCACGCUCU	AGAGCGUGCUUGUAGCUCU		[592-610]	[1441-1459]
447	GCAAGGAAGAUCAUUAAGG	CCUUAAUGAUCUUCCUUGC	Ms	[1079-1097]	[1928-1946]
448	CUAUGGAACAUCUUUAACC	GGUUAAAGAUGUUCCAUAG		[1049-1067]	[1898-1916]
449	AAAGACGGCAGGAAGGUAG	CUACCUUCCUGCCGUCUUU		[467-485]	[1316-1334]
450	GGCAAGUUACUUAUCAAGC	GCUUGAUAAGUAACUUGCC		[446-464]	[1295-1313]
451	UGAUGCCCAAUGCUAUUGU	ACAAUAGCAUUGGGCAUCA		[405-423]	[1254-1272]
452	CUUCCGGGUAAAUGCAGAG	CUCUGCAUUUACCCGGAAG	Rat	[577-595]	[1426-1444]
453	UACAAGCACGCUCUAACAU	AUGUUAGAGCGUGCUUGUA		[597-615]	[1446-1464]
454	UCAGGGACAAAGUGGUCGU	ACGACCACUUUGUCCCUGA		[1020-1038]	[1869-1887]
455	ACGCUGUUGUGAGUGGAAG	CUUCCACUCACAACAGCGU	Rat	[687-705]	[1536-1554]
456	UAUUUUCAACUAUGUAGGU	ACCUACAUAGUUGAAAAUA		[1285-1303]	[2134-2152]
457	AAAUAAAUUCUGAUUCUUC	GAAGAAUCAGAAUUUAUUU		[1327-1345]	[2176-2194]
458	GUCUUGUGGACAGUAGUUU	AAACUACUGUCCACAAGAC		[804-822]	[1653-1671]
459	CCACAGUUGGUGUUUUUGC	GCAAAAACACCAACUGUGG	Rat,Ms	[825-843]	[1674-1692]
460	AAUGUUCACAUAGUGAAAU	AUUUCACUAUGUGAACAUU		[1312-1330]	[2161-2179]
461	GGUGAGCAGCAUGAAGAUC	GAUCUUCAUGCUGCUCACC		[1100-1118]	[1949-1967]
462	UACCUCAGCAACUGGACCA	UGGUCCAGUUGCUGAGGUA	Rat,Ms	[356-374]	[1205-1223]
463	AGGUGUCAUCUUCUACCUC	GAGGUAGAAGAUGACACCU	Rat,Ms	[1003-1021]	[1852-1870]
464	AAUGCAGAGCUACAAGCAC	GUGCUUGUAGCUCUGCAUU		[587-605]	[1436-1454]

465	UACGGCAAAGGUGUCAUCU	AGAUGACACCUUUGCCGUA	Rat,Ms	[995-1013]	[1844-1862]
466	UGGACAGUAGUUUGCCCAC	GUGGGCAAACUACUGUCCA		[810-828]	[1659-1677]
467	UUUGCAAAAGCAACUGCAC	GUGCAGUUGCUUUUGCAAA	Rat,Ms	[839-857]	[1688-1706]
468	UGAGAGGAAAGGGAAGGAG	CUCCUUCCCUUUCCUCUCA		[135-153]	[135-153]
469	CCCAAUGCUAUUGUGCAAU	AUUGCACAAUAGCAUUGGG		[410-428]	[1259-1277]
470	UAUGACUGGAGCUGCUAAG	CUUAGCAGCUCCAGUCAUA	Rat	[721-739]	[1570-1588]
471	ACAUUCAUGAAGACUGAAG	CUUCAGUCUUCAUGAAUGU		[1143-1161]	[1992-2010]
472	UGUAGGUAAAUUCUUAAUG	CAUUAAGAAUUUACCUACA		[1297-1315]	[2146-2164]
473	AGGAAGGUAGAAACUGACC	GGUCAGUUUCUACCUUCCU	Rat,Ms	[476-494]	[1325-1343]
474	UGGAGCCCAAUGUUGAGUU	AACUCAACAUUGGGCUCCA		[516-534]	[1365-1383]
475	UGUGGACAGUAGUUUGCCC	GGGCAAACUACUGUCCACA		[808-826]	[1657-1675]
476	AGAGAGUGAGACAGAGUCC	GGACUCUGUCUCACUCUCU		[907-925]	[1756-1774]
477	CCAAUGCUAUUGUGCAAUC	GAUUGCACAAUAGCAUUGG		[411-429]	[1260-1278]
478	AGAUGCUGCAUGCUUCUAC	GUAGAAGCAUGCAGCAUCU		[628-646]	[1477-1495]
479	UGUUCUGGAGUGAUUUGGG	CCCAAAUCACUCCAGAACA	Rat,Ms	[759-777]	[1608-1626]
480	GUCUGCGUAAUGUGCGUGU	ACACGCACAUUACGCAGAC		[61-79]	[61-79]
481	GUGAAAUAAAUUCUGAUUC	GAAUCAGAAUUUAUUUCAC		[1324-1342]	[2173-2191]
482	UAUUCAGCAGACUUUCUCU	AGAGAAAGUCUGCUGAAUA		[1232-1250]	[2081-2099]
483	AGGAGUCUGCGUAAUGUGC	GCACAUUACGCAGACUCCU		[57-75]	[57-75]
484	CUAUUCAACAUUCAUGAAG	CUUCAUGAAUGUUGAAUAG		[1136-1154]	[1985-2003]
485	UCUACGAUAUAAAGUUGGG	CCCAACUUUAUAUCGUAGA		[642-660]	[1491-1509]
486	AAUAGCAAGGAAGAUCAUU	AAUGAUCUUCCUUGCUAUU		[1075-1093]	[1924-1942]
487	GCAGUCAGGAACUGGUAUC	GAUACCAGUUCCUGACUGC	Rat,Ms	[883-901]	[1732-1750]
488	AAGCACGCUCUAACAUCUG	CAGAUGUUAGAGCGUGCUU		[600-618]	[1449-1467]
489	AAUACCUCAGCAACUGGAC	GUCCAGUUGCUGAGGUAUU	Rat,Ms	[354-372]	[1203-1221]
490	UUCAACUAUGUAGGUAAAU	AUUUACCUACAUAGUUGAA		[1289-1307]	[2138-2156]
491	UCAACAUUCAUGAAGACUG	CAGUCUUCAUGAAUGUUGA		[1140-1158]	[1989-2007]
492	UGUCAUCUUCUACCUCAGG	CCUGAGGUAGAAGAUGACA	Rat,Ms	[1006-1024]	[1855-1873]
493	AGCACGCUCUAACAUCUGG	CCAGAUGUUAGAGCGUGCU		[601-619]	[1450-1468]
494	GGCAUCAGUCAAUGUUCUG	CAGAACAUUGACUGAUGCC	Rat,Ms	[747-765]	[1596-1614]
495	GUUUGCCCACAGUUGGUGU	ACACCAACUGUGGGCAAAC	Rat,Ms	[819-837]	[1668-1686]
496	AAAUGUUCCGGUGUGGAGG	CCUCCACACCGGAACAUUU	Rat,Ms	[177-195]	[177-195]
497	GUUCUGGAGUGAUUUGGGC	GCCCAAAUCACUCCAGAAC		[760-778]	[1609-1627]
498	CCCACAGUUGGUGUUUUUG	CAAAAACACCAACUGUGGG	Rat,Ms	[824-842]	[1673-1691]
499	AUAGCGGUCGCCGAAAUGU	ACAUUUCGGCGACCGCUAU		[164-182]	[164-182]
500	UUUUUAUUCAGCAGACUUU	AAAGUCUGCUGAAUAAAAA		[1228-1246]	[2077-2095]

Table B 4 AKR1B1 - aldo-keto reductase family 1, member B1 (aldose reductase)

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-24497579 :75-1025
1	GCUUGAUGUUGGAUCUCAA	UUGAGAUCCAACAUCAAGC		[1164-1182]
2	AGGUGGAGAUGAUCUUAAA	UUUAAGAUCAUCUCCACCU		[571-589]
3	CAAGCACAAUAAAACUACA	UGUAGUUUUAUUGUGCUUG	Chmp	[791-809]
4	UGGAGAUGAUCUUAAACAA	UUGUUUAAGAUCAUCUCCA		[574-592]
5	GGAGAUGAUCUUAAACAAA	UUUGUUUAAGAUCAUCUCC		[575-593]
6	CAAAGAGAAGCAAAAUCUA	UAGAUUUUGCUUCUCUUUG	Chmp	[1277-1295]
7	GGUGCACGUACCAUGAGAA	UUCUCAUGGUACGUGCACC	Chmp	[313-331]
8	UGACCAAAGAGAAGCAAAA	UUUUGCUUCUCUUUGGUCA	Chmp	[1273-1291]
9	GGAAGAGCUGGUGGAUGAA	UUCAUCCACCAGCUCUUCC	Chmp	[509-527]
10	CCCUGUCAGUAGAGUAGAA	UUCUACUCUACUGACAGGG	Chmp	[1186-1204]
11	GGAUGAAGGGCUGGUGAAA	UUUCACCAGCCCUUCAUCC	Chmp	[521-539]
12	AGGAGAAGUUAAUCCAGUA	UACUGGAUUAACUUCUCCU	Chmp	[652-670]
13	CGCAUUGCUGAGAACUUUA	UAAAGUUCUCAGCAAUGCG	Chmp	[879-897]
14	CCAGGAUAUGACCACCUUA	UAAGGUGGUCAUAUCCUGG	Chmp	[923-941]
15	CCAAGUCUGUGACACCAGA	UCUGGUGUCACAGACUUGG	Chmp	[859-877]

16	AGCUCUUCAUCGUCAGCAA	UUGCUGACGAUGAAGAGCU	Rb,Chmp	[289-307]
17	GCAUUGCUGAGAACUUUAA	UUAAAGUUCUCAGCAAUGC	Chmp	[880-898]
18	AGUGGGACAGCAACCUGUA	UACAGGUUGCUGUCCCACU		[1121-1139]
19	GAGUUUUGACUGCUUGGAA	UUCCAAGCAGUCAAAACUC	Chmp	[1324-1342]
20	CCACCUUACUCAGCUACAA	UUGUAGCUGAGUAAGGUGG	Chmp	[934-952]
21	GCAAAAUCUACCAGGUCAA	UUGACCUGGUAGAUUUUGC	Chmp	[1286-1304]
22	AGACACUCAGCGACCUGAA	UUCAGGUCGCUGAGUGUCU	Chmp	[358-376]
23	CAGGUGGAGAUGAUCUUAA	UUAAGAUCAUCUCCACCUG		[570-588]
24	CAAGUCUGUGACACCAGAA	UUCUGGUGUCACAGACUUG	Chmp	[860-878]
25	AUGAGAAGGGCCUGGUGAA	UUCACCAGGCCCUUCUCAU	Chmp	[325-343]
26	GGGAAAGUACAACCUGAAU	AUUCAGGUUGUACUUUCCC	Chmp	[1245-1263]
27	CCUGAAUACCCUUUUCUGA	UCAGAAAAGGGUAUUCAGG	Chmp	[1257-1275]
28	AGAGGAACUUGGUGGUGAU	AUCACCACCAAGUUCCUCU	Chmp	[838-856]
29	UGGACUACCUGGACCUCUA	UAGAGGUCCAGGUAGUCCA	Rat,Rb,Chmp	[379-397]
30	UGUGGUGCACGUACCAUGA	UCAUGGUACGUGCACCACA	Chmp	[310-328]
31	AGUAUAAGCCUGCAGUUAA	UUAACUGCAGGCUUAUACU	Chmp	[604-622]
32	AGGAAUUUUUCCCAUUGGA	UCCAAUGGGAAAAAUUCCU		[433-451]
33	UGGUGCACGUACCAUGAGA	UCUCAUGGUACGUGCACCA	Chmp	[312-330]
34	CAGAACGCAUUGCUGAGAA	UUCUCAGCAAUGCGUUCUG	Chmp	[874-892]
35	CCAACUUCAACCAUCUCCA	UGGAGAUGGUUGAAGUUGG	Chmp	[553-571]
36	UAAGGUCUUUGACUUUGAA	UUCAAAGUCAAAGACCUUA	Chmp	[896-914]
37	CUCACUCAGGAGAAGUUAA	UUAACUUCUCCUGAGUGAG	Chmp	[645-663]
38	ACUGGAAUCCUUUCAGCAA	UUGCUGAAAGGAUUCCAGU		[1342-1360]
39	CAAGAGCCCUGUCAGUAGA	UCUACUGACAGGGCUCUUG	Chmp	[1180-1198]
40	UGAGAAGGGCCUGGUGAAA	UUUCACCAGGCCCUUCUCA	Chmp	[326-344]
41	UGUCUAGCUUGAUGUUGGA	UCCAACAUCAAGCUAGACA		[1158-1176]
42	CUUUAAGCCUGGGAAGGAA	UUCCUUCCCAGGCUUAAAG	Chmp	[419-437]
43	CUGACCAAAGAGAAGCAAA	UUUGCUUCUCUUUGGUCAG	Chmp	[1272-1290]
44	CAAAAUCUACCAGGUCAAA	UUUGACCUGGUAGAUUUUG	Chmp	[1287-1305]
45	UGAGCUGUACCUCCCACAA	UUGUGGGAGGUACAGCUCA	Chmp	[979-997]
46	GGAAAGUACAACCUGAAUA	UAUUCAGGUUGUACUUUCC	Chmp	[1246-1264]
47	GUAUAAGCCUGCAGUUAAC	GUUAACUGCAGGCUUAUAC	Chmp	[605-623]
48	GGAAUUUUUCCCAUUGGAU	AUCCAAUGGGAAAAAUUCC		[434-452]
49	GAAGUAUAAGCCUGCAGUU	AACUGCAGGCUUAUACUUC	Chmp	[602-620]
50	UGGAAUCCUUUCAGCAAGA	UCUUGCUGAAAGGAUUCCA		[1344-1362]
51	CUGUGACACCAGAACGCAU	AUGCGUUCUGGUGUCACAG	Chmp	[865-883]
52	UUCCAUGAAGAGUUUUGAA	UUCAAAACUCUUCAUGGAA	Chmp	[1008-1026]
53	UCAUUUUUUUCCUUGCAAA	UUUGCAAGGAAAAAAAUGA	Chmp	[1077-1095]
54	ACCCUUUUCUGACCAAAGA	UCUUUGGUCAGAAAAGGGU	Chmp	[1264-1282]
55	UGGAGGAUCCCAGGAUCAA	UUGAUCCUGGGAUCCUCCA	Rat,Ms,Chmp	[760-778]
56	GACCAAAGAGAAGCAAAAU	AUUUUGCUUCUCUUUGGUC	Chmp	[1274-1292]
57	CCAGGUGGAGAUGAUCUUA	UAAGAUCAUCUCCACCUGG		[569-587]
58	GCUUGGAACUGGAAUCCUU	AAGGAUUCCAGUUCCAAGC		[1335-1353]
59	GCAUCUCCAACUUCAACCA	UGGUUGAAGUUGGAGAUGC	Chmp	[547-565]
60	GAAGGGCUGGUGAAAGCUA	UAGCUUUCACCAGCCCUUC	Chmp	[525-543]
61	AAGGGCUGGUGAAAGCUAU	AUAGCUUUCACCAGCCCUU	Chmp	[526-544]
62	GAGCCCUGUCAGUAGAGUA	UACUCUACUGACAGGGCUC	Chmp	[1183-1201]
63	ACCCAUAUCUCACUCAGGA	UCCUGAGUGAGAUAUGGGU	Chmp	[637-655]
64	GGUUGAGUUUUGACUGCUU	AAGCAGUCAAAACUCAACC		[1320-1338]
65	AGAACUUUAAGGUCUUUGA	UCAAAGACCUUAAAGUUCU	Rat,Chmp	[889-907]
66	CUUUUCUGACCAAAGAGAA	UUCUCUUUGGUCAGAAAAG	Chmp	[1267-1285]
67	UGGAUGAAGGGCUGGUGAA	UUCACCAGCCCUUCAUCCA	Chmp	[520-538]
68	CUUCCAUGAAGAGUUUUGA	UCAAAACUCUUCAUGGAAG	Chmp	[1007-1025]
69	CAUUGGAUGAGUCGGGCAA	UUGCCCGACUCAUCCAAUG		[445-463]
70	GUACCUCCCACAAGGAUUA	UAAUCCUUGUGGGAGGUAC	Chmp	[985-1003]
71	CAUUUUUUUCCUUGCAAAU	AUUUGCAAGGAAAAAAAUG	Chmp	[1078-1096]

72	CAGGAGAAGUUAAUCCAGU	ACUGGAUUAACUUCUCCUG	Chmp	[651-669]
73	GCGUGUCUAGCUUGAUGUU	AACAUCAAGCUAGACACGC		[1155-1173]
74	UGGAAGAGCUGGUGGAUGA	UCAUCCACCAGCUCUUCCA	Chmp	[508-526]
75	CAUAUCUCACUCAGGAGAA	UUCUCCUGAGUGAGAUAUG	Chmp	[640-658]
76	AGGGCUGGUGAAAGCUAUU	AAUAGCUUUCACCAGCCCU	Chmp	[527-545]
77	AGAGAAGCAAAAUCUACCA	UGGUAGAUUUUGCUUCUCU	Chmp	[1280-1298]
78	AAGCGUGAGGAGCUCUUCA	UGAAGAGCUCCUCACGCUU	Chmp	[279-297]
79	AAGCCUGCAGUUAACCAGA	UCUGGUUAACUGCAGGCUU	Chmp	[609-627]
80	CGGGCUAUUUAAAGGUACG	CGUACCUUUAAAUAGCCCG		[2-20]
81	CAUGGAAGAGCUGGUGGAU	AUCCACCAGCUCUUCCAUG	Chmp	[506-524]
82	CUGAGAACUUUAAGGUCUU	AAGACCUUAAAGUUCUCAG	Rat,Chmp	[886-904]
83	GCAAUGUGGUUCCCAGUGA	UCACUGGGAACCACAUUGC	Chmp	[460-478]
84	CUGCAGUUAACCAGAUUGA	UCAAUCUGGUUAACUGCAG	Chmp	[613-631]
85	AAAUCUACCAGGUCAAAAU	AUUUUGACCUGGUAGAUUU	Chmp	[1289-1307]
86	AAUCUACCAGGUCAAAAUA	UAUUUUGACCUGGUAGAUU	Chmp	[1290-1308]
87	CAAUGUGGUUCCCAGUGAC	GUCACUGGGAACCACAUUG	Chmp	[461-479]
88	CACCAGAACGCAUUGCUGA	UCAGCAAUGCGUUCUGGUG	Chmp	[871-889]
89	CUCAGGAGAAGUUAAUCCA	UGGAUUAACUUCUCCUGAG	Chmp	[649-667]
90	GAAGCAAAAUCUACCAGGU	ACCUGGUAGAUUUUGCUUC	Chmp	[1283-1301]
91	GAGGAGCUCUUCAUCGUCA	UGACGAUGAAGAGCUCCUC	Rb,Chmp	[285-303]
92	CCAUGCAGAGGAACUUGGU	ACCAAGUUCCUCUGCAUGG	Chmp	[832-850]
93	CCAGUGACACCAACAUUCU	AGAAUGUUGGUGUCACUGG	Chmp	[472-490]
94	GGUGGAGAUGAUCUUAAAC	GUUUAAGAUCAUCUCCACC		[572-590]
95	GUGACACCAACAUUCUGGA	UCCAGAAUGUUGGUGUCAC	Chmp	[475-493]
96	UUUCCUUGCAAAUGUAGUA	UACUACAUUUGCAAGGAAA	Chmp	[1084-1102]
97	CCACCCAUAUCUCACUCAG	CUGAGUGAGAUAUGGGUGG	Chmp	[635-653]
98	CUUGAAGUAUAAGCCUGCA	UGCAGGCUUAUACUUCAAG	Chmp	[599-617]
99	GCCUGCAGUUAACCAGAUU	AAUCUGGUUAACUGCAGGC	Chmp	[611-629]
100	CUCAUUUUUUUCCUUGCAA	UUGCAAGGAAAAAAAUGAG	Chmp	[1076-1094]
101	CCUUUUCUGACCAAAGAGA	UCUCUUUGGUCAGAAAAGG	Chmp	[1266-1284]
102	CAUUGCUGAGAACUUUAAG	CUUAAAGUUCUCAGCAAUG	Chmp	[881-899]
103	AGAGUAGAAGUCUCUUCCA	UGGAAGAGACUUCUACUCU	Chmp	[1196-1214]
104	GUUUCUUGCCUCAUUUUUU	AAAAAAUGAGGCAAGAAAC		[1067-1085]
105	GGGAAGGAAUUUUUCCCAU	AUGGGAAAAAUUCCUUCCC		[429-447]
106	CAACUUCAACCAUCUCCAG	CUGGAGAUGGUUGAAGUUG	Chmp	[554-572]
107	CUUGGAACUGGAAUCCUUU	AAAGGAUUCCAGUUCCAAG		[1336-1354]
108	ACGCAUUGCUGAGAACUUU	AAAGUUCUCAGCAAUGCGU	Chmp	[878-896]
109	AGGAUAUGACCACCUUACU	AGUAAGGUGGUCAUAUCCU	Chmp	[925-943]
110	GUUCCCAGUGACACCAACA	UGUUGGUGUCACUGGGAAC	Chmp	[468-486]
111	ACCUGAAGCUGGACUACCU	AGGUAGUCCAGCUUCAGGU	Chmp	[370-388]
112	AGCGUGAGGAGCUCUUCAU	AUGAAGAGCUCCUCACGCU	Chmp	[280-298]
113	CCUCAUUUUUUUCCUUGCA	UGCAAGGAAAAAAAUGAGG	Chmp	[1075-1093]
114	UGGUUCCCAGUGACACCAA	UUGGUGUCACUGGGAACCA	Chmp	[466-484]
115	CCUGGACCUCUACCUUAUU	AAUAAGGUAGAGGUCCAGG	Rat,Chmp	[386-404]
116	AGCCUGCAGUUAACCAGAU	AUCUGGUUAACUGCAGGCU	Chmp	[610-628]
117	GUGGAGAUGAUCUUAAACA	UGUUUAAGAUCAUCUCCAC		[573-591]
118	AGUACAACCUGAAUACCCU	AGGGUAUUCAGGUUGUACU	Chmp	[1250-1268]
119	UACUCAGCUACAACAGGAA	UUCCUGUUGUAGCUGAGUA	Rat,Ms,Chmp	[940-958]
120	GAAAGUACAACCUGAAUAC	GUAUUCAGGUUGUACUUUC	Chmp	[1247-1265]
121	CCAUAUCUCACUCAGGAGA	UCUCCUGAGUGAGAUAUGG	Chmp	[639-657]
122	UUUUUUCCUUGCAAAUGUA	UACAUUUGCAAGGAAAAAA	Chmp	[1081-1099]
123	UGGGACAGCAACCUGUAGA	UCUACAGGUUGCUGUCCCA		[1123-1141]
124	GGAAGGAAUUUUUCCCAUU	AAUGGGAAAAAUUCCUUCC		[430-448]
125	CUUGAUGUUGGAUCUCAAG	CUUGAGAUCCAACAUCAAG		[1165-1183]
126	CUGGAAUCCUUUCAGCAAG	CUUGCUGAAAGGAUUCCAG		[1343-1361]
127	UGACCACCUUACUCAGCUA	UAGCUGAGUAAGGUGGUCA	Chmp	[931-949]

128	CAUGAAGAGUUUUGAAGCU	AGCUUCAAAACUCUUCAUG	Chmp	[1011-1029]
129	CAAUAAAACUACAGCCCAG	CUGGGCUGUAGUUUUAUUG	Rat,Ms,Chmp	[797-815]
130	GCUACAACAGGAACUGGAG	CUCCAGUUCCUGUUGUAGC	Rat,Rb,Ms,Chmp	[946-964]
131	AUCCCAGGAUCAAGGCGAU	AUCGCCUUGAUCCUGGGAU	Chmp	[766-784]
132	CUAGCUUGAUGUUGGAUCU	AGAUCCAACAUCAAGCUAG		[1161-1179]
133	CCAAGUGACCUAUACCUGU	ACAGGUAUAGGUCACUUGG	Chmp	[1048-1066]
134	UGACUGCUUGGAACUGGAA	UUCCAGUUCCAAGCAGUCA		[1330-1348]
135	UGCUUUGCCCUUCUUUCUA	UAGAAAGAAGGGCAAAGCA	Chmp	[1218-1236]
136	AGGGUCUGUGCCUUGUUGA	UCAACAAGGCACAGACCCU	Chmp	[963-981]
137	CAGUGACACCAACAUUCUG	CAGAAUGUUGGUGUCACUG	Chmp	[473-491]
138	GAGUUUUGAAGCUGUGGUU	AACCACAGCUUCAAAACUC	Chmp	[1017-1035]
139	AAGUAUAAGCCUGCAGUUA	UAACUGCAGGCUUAUACUU	Chmp	[603-621]
140	GUGCACGUACCAUGAGAAG	CUUCUCAUGGUACGUGCAC	Chmp	[314-332]
141	AGAAGUUAAUCCAGUACUG	CAGUACUGGAUUAACUUCU	Chmp	[655-673]
142	GCCCUGUCAGUAGAGUAGA	UCUACUCUACUGACAGGGC	Chmp	[1185-1203]
143	CAGGAUAUGACCACCUUAC	GUAAGGUGGUCAUAUCCUG	Chmp	[924-942]
144	GCAGUUAACCAGAUUGAGU	ACUCAAUCUGGUUAACUGC	Chmp	[615-633]
145	GUGUUUCUUGCCUCAUUUU	AAAAUGAGGCAAGAAACAC		[1065-1083]
146	AGGGCGUGUCUAGCUUGAU	AUCAAGCUAGACACGCCCU		[1152-1170]
147	AAUUUUUCCCAUUGGAUGA	UCAUCCAAUGGGAAAAAUU		[436-454]
148	GUACAACCUGAAUACCCUU	AAGGGUAUUCAGGUUGUAC	Chmp	[1251-1269]
149	CACUAACGGUUGAGUUUUG	CAAAACUCAACCGUUAGUG		[1313-1331]
150	ACCUGGACCUCUACCUUAU	AUAAGGUAGAGGUCCAGGU	Rat,Rb,Chmp	[385-403]
151	AAUGUGGUUCCCAGUGACA	UGUCACUGGGAACCACAUU	Chmp	[462-480]
152	AGCUACAACAGGAACUGGA	UCCAGUUCCUGUUGUAGCU	Rat,Rb,Ms,Chmp	[945-963]
153	CCAAAGAGAAGCAAAAUCU	AGAUUUUGCUUCUCUUUGG	Chmp	[1276-1294]
154	CAGUAGAGUAGAAGUCUCU	AGAGACUUCUACUCUACUG	Chmp	[1192-1210]
155	GUGAGGAGCUCUUCAUCGU	ACGAUGAAGAGCUCCUCAC	Rb,Chmp	[283-301]
156	UCACUCAGGAGAAGUUAAU	AUUAACUUCUCCUGAGUGA	Chmp	[646-664]
157	AACGCAUUGCUGAGAACUU	AAGUUCUCAGCAAUGCGUU	Chmp	[877-895]
158	CCAGAACGCAUUGCUGAGA	UCUCAGCAAUGCGUUCUGG	Chmp	[873-891]
159	GUAGAAGUCUCUUCCAGUU	AACUGGAAGAGACUUCUAC	Chmp	[1199-1217]
160	CUGUCAGUAGAGUAGAAGU	ACUUCUACUCUACUGACAG	Chmp	[1188-1206]
161	AAUACCCUUUUCUGACCAA	UUGGUCAGAAAAGGGUAUU	Chmp	[1261-1279]
162	CACCCAUAUCUCACUCAGG	CCUGAGUGAGAUAUGGGUG	Chmp	[636-654]
163	GAAGAGUUUUGAAGCUGUG	CACAGCUUCAAAACUCUUC	Chmp	[1014-1032]
164	CCUUGCAAAUGUAGUAUGG	CCAUACUACAUUUGCAAGG	Chmp	[1087-1105]
165	UUGACUGCUUGGAACUGGA	UCCAGUUCCAAGCAGUCAA		[1329-1347]
166	UGUUGAGCUGUACCUCCCA	UGGGAGGUACAGCUCAACA	Chmp	[976-994]
167	AGUCCAAAGGCAUCGUGGU	ACCACGAUGCCUUUGGACU	Chmp	[676-694]
168	CUGUACCUCCCACAAGGAU	AUCCUUGUGGGAGGUACAG	Chmp	[983-1001]
169	GCUUUAAGCCUGGGAAGGA	UCCUUCCCAGGCUUAAAGC	Chmp	[418-436]
170	AGCAAAAUCUACCAGGUCA	UGACCUGGUAGAUUUUGCU	Chmp	[1285-1303]
171	UGUGCCUUGUUGAGCUGUA	UACAGCUCAACAAGGCACA	Chmp	[969-987]
172	AUACCCUUUUCUGACCAAA	UUUGGUCAGAAAAGGGUAU	Chmp	[1262-1280]
173	UGAAGCUGGACUACCUGGA	UCCAGGUAGUCCAGCUUCA	Chmp	[373-391]
174	AGGAGCUCUUCAUCGUCAG	CUGACGAUGAAGAGCUCCU	Rb,Chmp	[286-304]
175	UGAUGUUGGAUCUCAAGAG	CUCUUGAGAUCCAACAUCA	Chmp	[1167-1185]
176	CCCUUUUCUGACCAAAGAG	CUCUUUGGUCAGAAAAGGG	Chmp	[1265-1283]
177	UCUCCAACUUCAACCAUCU	AGAUGGUUGAAGUUGGAGA	Chmp	[550-568]
178	CCCAUAUCUCACUCAGGAG	CUCCUGAGUGAGAUAUGGG	Chmp	[638-656]
179	CUUUCAGCAAGACUUCUCU	AGAGAAGUCUUGCUGAAAG	Chmp	[1351-1369]
180	UGAAGAGUUUUGAAGCUGU	ACAGCUUCAAAACUCUUCA	Chmp	[1013-1031]
181	GUACCAGAAUGAGAAUGAG	CUCAUUCUCAUUCUGGUAC	Chmp	[218-236]
182	GGCGUGUCUAGCUUGAUGU	ACAUCAAGCUAGACACGCC		[1154-1172]
183	CAACCUGAAUACCCUUUUC	GAAAAGGGUAUUCAGGUUG	Chmp	[1254-1272]

184	CAGCAAGACUUCUCUUUGC	GCAAAGAGAAGUCUUGCUG	Chmp	[1355-1373]
185	UUUCUUGCCUCAUUUUUUU	AAAAAAAUGAGGCAAGAAA		[1068-1086]
186	GAACUUUAAGGUCUUUGAC	GUCAAAGACCUUAAAGUUC	Rat,Chmp	[890-908]
187	UCUCAAGAGCCCUGUCAGU	ACUGACAGGGCUCUUGAGA	Chmp	[1177-1195]
188	CAUCUCCAACUUCAACCAU	AUGGUUGAAGUUGGAGAUG	Chmp	[548-566]
189	CAGUUUGCUUUGCCCUUCU	AGAAGGGCAAAGCAAACUG	Chmp	[1213-1231]
190	UUCCCAGUGACACCAACAU	AUGUUGGUGUCACUGGGAA	Chmp	[469-487]
191	GAGAUGAUCUUAAACAAAC	GUUUGUUUAAGAUCAUCUC		[576-594]
192	CCUUCUUUCUACCCUGCUG	CAGCAGGGUAGAAAGAAGG	Chmp	[1226-1244]
193	CUACCAGGUCAAAAUAGUG	CACUAUUUUGACCUGGUAG	Chmp	[1293-1311]
194	GGAGAAGUUAAUCCAGUAC	GUACUGGAUUAACUUCUCC	Chmp	[653-671]
195	AGAUGAUCUUAAACAAACC	GGUUUGUUUAAGAUCAUCU		[577-595]
196	AGCCUGGGAAGGAAUUUUU	AAAAAUUCCUUCCCAGGCU	Chmp	[424-442]
197	GGACCUCUACCUUAUUCAC	GUGAAUAAGGUAGAGGUCC	Rat,Chmp	[389-407]
198	GAAUCCUUUCAGCAAGACU	AGUCUUGCUGAAAGGAUUC		[1346-1364]
199	AAUCCUUUCAGCAAGACUU	AAGUCUUGCUGAAAGGAUU	Chmp	[1347-1365]
200	ACUAACGGUUGAGUUUUGA	UCAAAACUCAACCGUUAGU		[1314-1332]
201	UCUACCAGGUCAAAAUAGU	ACUAUUUUGACCUGGUAGA	Chmp	[1292-1310]
202	UCCCAGUGACACCAACAUU	AAUGUUGGUGUCACUGGGA	Chmp	[470-488]
203	UGAAGUAUAAGCCUGCAGU	ACUGCAGGCUUAUACUUCA	Chmp	[601-619]
204	AACUGGAAUCCUUUCAGCA	UGCUGAAAGGAUUCCAGUU		[1341-1359]
205	GGAACUGGAAUCCUUUCAG	CUGAAAGGAUUCCAGUUCC		[1339-1357]
206	ACCUUACUCAGCUACAACA	UGUUGUAGCUGAGUAAGGU	Chmp	[936-954]
207	CCACUAACGGUUGAGUUUU	AAAACUCAACCGUUAGUGG		[1312-1330]
208	AGCUUGAUGUUGGAUCUCA	UGAGAUCCAACAUCAAGCU		[1163-1181]
209	GCAAGACUUCUCUUUGCCU	AGGCAAAGAGAAGUCUUGC	Chmp	[1357-1375]
210	CAGAGGAACUUGGUGGUGA	UCACCACCAAGUUCCUCUG	Chmp	[837-855]
211	GGACAGCAACCUGUAGAGU	ACUCUACAGGUUGCUGUCC	Chmp	[1125-1143]
212	UCAGGAGAAGUUAAUCCAG	CUGGAUUAACUUCUCCUGA	Chmp	[650-668]
213	GAAUACCCUUUUCUGACCA	UGGUCAGAAAAGGGUAUUC	Chmp	[1260-1278]
214	UGGGAAGGAAUUUUUCCCA	UGGGAAAAAAUUCCUUCCCA		[428-446]
215	UUAAGGUCUUUGACUUUGA	UCAAAGUCAAAGACCUUAA	Rat,Chmp	[895-913]
216	GACUGCUUGGAACUGGAAU	AUUCCAGUUCCAAGCAGUC		[1331-1349]
217	GAUCUCAAGAGCCCUGUCA	UGACAGGGCUCUUGAGAUC	Chmp	[1175-1193]
218	AUUGGAUGAGUCGGGCAAU	AUUGCCCGACUCAUCCAAU		[446-464]
219	GUCUUUGACUUUGAACUGA	UCAGUUCAAAGUCAAAGAC	Rb,Chmp	[900-918]
220	AAAAUCUACCAGGUCAAAA	UUUUGACCUGGUAGAUUUU	Chmp	[1288-1306]
221	CGGUUGAGUUUUGACUGCU	AGCAGUCAAAACUCAACCG		[1319-1337]
222	CUCAAGAGCCCUGUCAGUA	UACUGACAGGGCUCUUGAG	Chmp	[1178-1196]
223	CCAAGCACAAUAAAACUAC	GUAGUUUUAUUGUGCUUGG	Chmp	[790-808]
224	AUCUCCAGGUGGAGAUGAU	AUCAUCUCCACCUGGAGAU		[565-583]
225	ACAAUAAAACUACAGCCCA	UGGGCUGUAGUUUUAUUGU	Rat,Ms,Chmp	[796-814]
226	UGAGAACUUUAAGGUCUUU	AAAGACCUUAAAGUUCUCA	Rat,Chmp	[887-905]
227	AGAACGCAUUGCUGAGAAC	GUUCUCAGCAAUGCGUUCU	Chmp	[875-893]
228	UCUCACUCAGGAGAAGUUA	UAACUUCUCCUGAGUGAGA	Chmp	[644-662]
229	GCCUGGGAAGGAAUUUUUC	GAAAAAUUCCUUCCCAGGC	Chmp	[425-443]
230	GGAUAUGACCACCUUACUC	GAGUAAGGUGGUCAUAUCC	Chmp	[926-944]
231	CUUGCCUCAUUUUUUUCCU	AGGAAAAAAAUGAGGCAAG		[1071-1089]
232	GAGUAGAAGUCUCUUCCAG	CUGGAAGAGACUUCUACUC	Chmp	[1197-1215]
233	AGUAGAAGUCUCUUCCAGU	ACUGGAAGAGACUUCUACU	Chmp	[1198-1216]
234	ACCUGAAUACCCUUUUCUG	CAGAAAAGGGUAUUCAGGU	Chmp	[1256-1274]
235	UUCUGACCAAAGAGAAGCA	UGCUUCUCUUUGGUCAGAA	Chmp	[1270-1288]
236	GAUAUGACCACCUUACUCA	UGAGUAAGGUGGUCAUAUC	Chmp	[927-945]
237	UGAGUUUUGACUGCUUGGA	UCCAAGCAGUCAAAACUCA	Chmp	[1323-1341]
238	ACCAGAACGCAUUGCUGAG	CUCAGCAAUGCGUUCUGGU	Chmp	[872-890]
239	UCAACCAUCUCCAGGUGGA	UCCACCUGGAGAUGGUUGA	Chmp	[559-577]

240	CUACCUGGACCUCUACCUU	AAGGUAGAGGUCCAGGUAG	Rat,Rb,Chmp	[383-401]
241	GGCUUGAAGUAUAAGCCUG	CAGGCUUAUACUUCAAGCC	Chmp	[597-615]
242	CCCAGUGACACCAACAUUC	GAAUGUUGGUGUCACUGGG	Chmp	[471-489]
243	CCAUGAAGAGUUUUGAAGC	GCUUCAAAACUCUUCAUGG	Chmp	[1010-1028]
244	UCUGACCAAAGAGAAGCAA	UUGCUUCUCUUUGGUCAGA	Chmp	[1271-1289]
245	GGCUGGUGAAAGCUAUUGG	CCAAUAGCUUUCACCAGCC	Chmp	[529-547]
246	UGCCCUUCUUUCUACCCUG	CAGGGUAGAAAGAAGGGCA	Chmp	[1223-1241]
247	CCAACAUUCUGGACACGUG	CACGUGUCCAGAAUGUUGG	Chmp	[481-499]
248	UCCAGGUGGAGAUGAUCUU	AAGAUCAUCUCCACCUGGA		[568-586]
249	GAGAAGUUAAUCCAGUACU	AGUACUGGAUUAACUUCUC	Chmp	[654-672]
250	GAAGGAAUUUUUCCCAUUG	CAAUGGGAAAAAUUCCUUC		[431-449]
251	AAGACACUCAGCGACCUGA	UCAGGUCGCUGAGUGUCUU	Chmp	[357-375]
252	GAAUUUUUCCCAUUGGAUG	CAUCCAAUGGGAAAAAUUC		[435-453]
253	GCUGAGAACUUUAAGGUCU	AGACCUUAAAGUUCUCAGC	Rat,Chmp	[885-903]
254	AGUUUGCUUUGCCCUUCUU	AAGAAGGGCAAAGCAAACU	Chmp	[1214-1232]
255	UGAAGCGUGAGGAGCUCUU	AAGAGCUCCUCACGCUUCA	Chmp	[277-295]
256	UUGAUGUUGGAUCUCAAGA	UCUUGAGAUCCAACAUCAA	Chmp	[1166-1184]
257	AUGAGUCGGGCAAUGUGGU	ACCACAUUGCCCGACUCAU	Chmp	[451-469]
258	GAUGAUCUUAAACAAACCU	AGGUUUGUUUAAGAUCAUC		[578-596]
259	GUGUCUAGCUUGAUGUUGG	CCAACAUCAAGCUAGACAC		[1157-1175]
260	AGUAGAGUAGAAGUCUCUU	AAGAGACUUCUACUCUACU	Chmp	[1193-1211]
261	UGCAGUUAACCAGAUUGAG	CUCAAUCUGGUUAACUGCA	Chmp	[614-632]
262	CCAUUCAGGAGAAGCUCAG	CUGAGCUUCUCCUGAAUGG	Chmp	[247-265]
263	GGUCUUUGACUUUGAACUG	CAGUUCAAAGUCAAAGACC	Rb,Chmp	[899-917]
264	AGUUUUGACUGCUUGGAAC	GUUCCAAGCAGUCAAAACU	Chmp	[1325-1343]
265	AAGCACAAUAAAACUACAG	CUGUAGUUUUAUUGUGCUU	Chmp	[792-810]
266	AAAGAGAAGCAAAAUCUAC	GUAGAUUUUGCUUCUCUUU	Chmp	[1278-1296]
267	GCUUUGCCCUUCUUUCUAC	GUAGAAAGAAGGGCAAAGC	Chmp	[1219-1237]
268	ACGGGCUAUUUAAAGGUAC	GUACCUUUAAAUAGCCCGU		[1-19]
269	CCCUUCUUUCUACCCUGCU	AGCAGGGUAGAAAGAAGGG	Chmp	[1225-1243]
270	UGGACCUCUACCUUAUUCA	UGAAUAAGGUAGAGGUCCA	Rat,Chmp	[388-406]
271	GAUGUUGGAUCUCAAGAGC	GCUCUUGAGAUCCAACAUC	Chmp	[1168-1186]
272	CCAGAAUGAGAAUGAGGUG	CACCUCAUUCUCAUUCUGG	Chmp	[221-239]
273	GUGCCUUGUUGAGCUGUAC	GUACAGCUCAACAAGGCAC	Chmp	[970-988]
274	AGGUCUUUGACUUUGAACU	AGUUCAAAGUCAAAGACCU	Rb,Chmp	[898-916]
275	AUAAGCCUGCAGUUAACCA	UGGUUAACUGCAGGCUUAU	Chmp	[607-625]
276	UGUACCUCCCACAAGGAUU	AAUCCUUGUGGGAGGUACA	Chmp	[984-1002]
277	UGUGACACCAGAACGCAUU	AAUGCGUUCUGGUGUCACA	Chmp	[866-884]
278	CUGAAUACCCUUUUCUGAC	GUCAGAAAAGGGUAUUCAG	Chmp	[1258-1276]
279	UCAAGAGCCCUGUCAGUAG	CUACUGACAGGGCUCUUGA	Chmp	[1179-1197]
280	UGGAACUGGAAUCCUUUCA	UGAAAGGAUUCCAGUUCCA		[1338-1356]
281	GCACAAUAAAACUACAGCC	GGCUGUAGUUUUAUUGUGC	Chmp	[794-812]
282	AACAGGAACUGGAGGGUCU	AGACCCUCCAGUUCCUGUU	Rb,Chmp	[951-969]
283	GACACCAGAACGCAUUGCU	AGCAAUGCGUUCUGGUGUC	Chmp	[869-887]
284	UGAGUCGGGCAAUGUGGUU	AACCACAUUGCCCGACUCA	Chmp	[452-470]
285	UGUUUCUUGCCUCAUUUUU	AAAAAUGAGGCAAGAAACA		[1066-1084]
286	UUACUCAGCUACAACAGGA	UCCUGUUGUAGCUGAGUAA	Chmp	[939-957]
287	CACCUUACUCAGCUACAAC	GUUGUAGCUGAGUAAGGUG	Chmp	[935-953]
288	AGAAGACACUCAGCGACCU	AGGUCGCUGAGUGUCUUCU	Chmp	[355-373]
289	CAAGUGACCUAUACCUGUG	CACAGGUAUAGGUCACUUG	Chmp	[1049-1067]
290	GUUUGCUUUGCCCUUCUUU	AAAGAAGGGCAAAGCAAAC	Chmp	[1215-1233]
291	GAUGAAGGGCUGGUGAAAG	CUUUCACCAGCCCUUCAUC	Chmp	[522-540]
292	ACACCAGAACGCAUUGCUG	CAGCAAUGCGUUCUGGUGU	Chmp	[870-888]
293	CCUUACUCAGCUACAACAG	CUGUUGUAGCUGAGUAAGG	Chmp	[937-955]
294	GCUCUUCAUCGUCAGCAAG	CUUGCUGACGAUGAAGAGC	Rb,Chmp	[290-308]
295	UCUGUGACACCAGAACGCA	UGCGUUCUGGUGUCACAGA	Chmp	[864-882]

296	GUCAGUAGAGUAGAAGUCU	AGACUUCUACUCUACUGAC	Chmp	[1190-1208]
297	CUUUGACUUUGAACUGAGC	GCUCAGUUCAAAGUCAAAG	Rb,Chmp	[902-920]
298	CUUUAAGGUCUUUGACUUU	AAAGUCAAAGACCUUAAAG	Rat,Chmp	[893-911]
299	UGGAUGAGUCGGGCAAUGU	ACAUUGCCCGACUCAUCCA	Chmp	[448-466]
300	GCCUCAUUUUUUUCCUUGC	GCAAGGAAAAAAAUGAGGC	Chmp	[1074-1092]
301	ACUUUAAGGUCUUUGACUU	AAGUCAAAGACCUUAAAGU	Rat,Chmp	[892-910]
302	GCUUGAAGUAUAAGCCUGC	GCAGGCUUAUACUUCAAGC	Chmp	[598-616]
303	GUCUGUGCCUUGUUGAGCU	AGCUCAACAAGGCACAGAC	Chmp	[966-984]
304	GAACGCAUUGCUGAGAACU	AGUUCUCAGCAAUGCGUUC	Chmp	[876-894]
305	CACUCAGGAGAAGUUAAUC	GAUUAACUUCUCCUGAGUG	Chmp	[647-665]
306	AAGCCUGGGAAGGAAUUUU	AAAAUUCCUUCCCAGGCUU	Chmp	[423-441]
307	UACCCUUUUCUGACCAAAG	CUUUGGUCAGAAAAGGGUA	Chmp	[1263-1281]
308	ACCACCUUACUCAGCUACA	UGUAGCUGAGUAAGGUGGU	Chmp	[933-951]
309	ACAGCAACCUGUAGAGUGG	CCACUCUACAGGUUGCUGU	Chmp	[1127-1145]
310	CAGUUAACCAGAUUGAGUG	CACUCAAUCUGGUUAACUG	Chmp	[616-634]
311	UGUACCAGAAUGAGAAUGA	UCAUUCUCAUUCUGGUACA	Chmp	[217-235]
312	UUGCUUUGCCCUUCUUUCU	AGAAAGAAGGGCAAAGCAA	Chmp	[1217-1235]
313	AUCUCACUCAGGAGAAGUU	AACUUCUCCUGAGUGAGAU	Chmp	[643-661]
314	GAACUGGAAUCCUUUCAGC	GCUGAAAGGAUUCCAGUUC		[1340-1358]
315	GUCUCUUCCAGUUUGCUUU	AAAGCAAACUGGAAGAGAC	Chmp	[1205-1223]
316	UUCAGGAGAAGCUCAGGGA	UCCCUGAGCUUCUCCUGAA	Chmp	[250-268]
317	CUAACGGUUGAGUUUUGAC	GUCAAAACUCAACCGUUAG		[1315-1333]
318	UUGCCUCAUUUUUUUCCUU	AAGGAAAAAAAUGAGGCAA		[1072-1090]
319	GGAAUCCUUUCAGCAAGAC	GUCUUGCUGAAAGGAUUCC		[1345-1363]
320	AAGGAAUUUUUCCCAUUGG	CCAAUGGGAAAAAUUCCUU		[432-450]
321	UGAUCUUAAACAAACCUGG	CCAGGUUUGUUUAAGAUCA		[580-598]
322	GUGACACCAGAACGCAUUG	CAAUGCGUUCUGGUGUCAC	Chmp	[867-885]
323	UACCUGGACCUCUACCUUA	UAAGGUAGAGGUCCAGGUA	Rat,Rb,Chmp	[384-402]
324	AUAUGACCACCUUACUCAG	CUGAGUAAGGUGGUCAUAU	Chmp	[928-946]
325	CAUGCAGAGGAACUUGGUG	CACCAAGUUCCUCUGCAUG	Chmp	[833-851]
326	CCCUUCCAUGAAGAGUUUU	AAAACUCUUCAUGGAAGGG	Chmp	[1005-1023]
327	AGCCCUGUCAGUAGAGUAG	CUACUCUACUGACAGGGCU	Chmp	[1184-1202]
328	AGAGCCCUGUCAGUAGAGU	ACUCUACUGACAGGGCUCU	Chmp	[1182-1200]
329	UUGAGCUGUACCUCCCACA	UGUGGGAGGUACAGCUCAA	Chmp	[978-996]
330	UUUUCCUUGCAAAUGUAGU	ACUACAUUUGCAAGGAAAA	Chmp	[1083-1101]
331	GAGCUCUUCAUCGUCAGCA	UGCUGACGAUGAAGAGCUC	Rb,Chmp	[288-306]
332	ACACCAACAUUCUGGACAC	GUGUCCAGAAUGUUGGUGU	Chmp	[478-496]
333	AAGAGCUGGUGGAUGAAGG	CCUUCAUCCACCAGCUCUU	Chmp	[511-529]
334	AGAGUUUUGAAGCUGUGGU	ACCACAGCUUCAAAACUCU	Chmp	[1016-1034]
335	AAGUCUGUGACACCAGAAC	GUUCUGGUGUCACAGACUU	Chmp	[861-879]
336	CCUUCCAUGAAGAGUUUUG	CAAAACUCUUCAUGGAAGG	Chmp	[1006-1024]
337	GUUGGAUCUCAAGAGCCCU	AGGGCUCUUGAGAUCCAAC	Chmp	[1171-1189]
338	UGCAGAGGAACUUGGUGGU	ACCACCAAGUUCCUCUGCA	Chmp	[835-853]
339	GCCUUGUUGAGCUGUACCU	AGGUACAGCUCAACAAGGC	Chmp	[972-990]
340	CCUGCAGUUAACCAGAUUG	CAAUCUGGUUAACUGCAGG	Chmp	[612-630]
341	ACUUCAACCAUCUCCAGGU	ACCUGGAGAUGGUUGAAGU	Chmp	[556-574]
342	UGAAGGGCUGGUGAAAGCU	AGCUUUCACCAGCCCUUCA	Chmp	[524-542]
343	UCUUUGACUUUGAACUGAG	CUCAGUUCAAAGUCAAAGA	Rb,Chmp	[901-919]
344	AUCUCAAGAGCCCUGUCAG	CUGACAGGGCUCUUGAGAU	Chmp	[1176-1194]
345	UUUUUUUCCUUGCAAAUGU	ACAUUUGCAAGGAAAAAAA	Chmp	[1080-1098]
346	ACAACCUGAAUACCCUUUU	AAAAGGGUAUUCAGGUUGU	Chmp	[1253-1271]
347	UCUUCAUCGUCAGCAAGCU	AGCUUGCUGACGAUGAAGA	Rb,Chmp	[292-310]
348	AUAUCUCACUCAGGAGAAG	CUUCUCCUGAGUGAGAUAU	Chmp	[641-659]
349	GAAGAGCUGGUGGAUGAAG	CUUCAUCCACCAGCUCUUC	Chmp	[510-528]
350	UGAGGAGCUCUUCAUCGUC	GACGAUGAAGAGCUCCUCA	Rb,Chmp	[284-302]
351	CUCCAGGUGGAGAUGAUCU	AGAUCAUCUCCACCUGGAG		[567-585]

352	ACCAGAAUGAGAAUGAGGU	ACCUCAUUCUCAUUCUGGU	Chmp	[220-238]
353	CCUGGGAAGGAAUUUUUCC	GGAAAAAUUCCUUCCCAGG	Chmp	[426-444]
354	UUUAAGCCUGGGAAGGAAU	AUUCCUUCCCAGGCUUAAA	Chmp	[420-438]
355	UAACGGUUGAGUUUUGACU	AGUCAAAACUCAACCGUUA		[1316-1334]
356	UUGGAUGAGUCGGGCAAUG	CAUUGCCCGACUCAUCCAA	Chmp	[447-465]
357	CCCAAGUGACCUAUACCUG	CAGGUAUAGGUCACUUGGG	Chmp	[1047-1065]
358	GCUAUUUAAAGGUACGCGC	GCGCGUACCUUUAAAUAGC		[5-23]
359	CAACAUUCUGGACACGUGG	CCACGUGUCCAGAAUGUUG	Chmp	[482-500]
360	AAACUACAGCCCAGGUCCU	AGGACCUGGGCUGUAGUUU	Chmp	[802-820]
361	CAUUCAGGAGAAGCUCAGG	CCUGAGCUUCUCCUGAAUG	Chmp	[248-266]
362	AACCUGAAUACCCUUUUCU	AGAAAAGGGUAUUCAGGUU	Chmp	[1255-1273]
363	UCAGCAAGACUUCUCUUUG	CAAAGAGAAGUCUUGCUGA	Chmp	[1354-1372]
364	GUUUUGACUGCUUGGAACU	AGUUCCAAGCAGUCAAAAC	Chmp	[1326-1344]
365	UUUCAGCAAGACUUCUCUU	AAGAGAAGUCUUGCUGAAA	Chmp	[1352-1370]
366	AAGAGAAGCAAAAUCUACC	GGUAGAUUUUGCUUCUCUU	Chmp	[1279-1297]
367	ACAUCGACUGUGCCCAUGU	ACAUGGGCACAGUCGAUGU	Chmp	[199-217]
368	UCAGUAGAGUAGAAGUCUC	GAGACUUCUACUCUACUGA	Chmp	[1191-1209]
369	CUCCAACUUCAACCAUCUC	GAGAUGGUUGAAGUUGGAG	Chmp	[551-569]
370	UAAGCCUGCAGUUAACCAG	CUGGUUAACUGCAGGCUUA	Chmp	[608-626]
371	GACAGCAACCUGUAGAGUG	CACUCUACAGGUUGCUGUC	Chmp	[1126-1144]
372	UUCCUUGCAAAUGUAGUAU	AUACUACAUUUGCAAGGAA	Chmp	[1085-1103]
373	UUUUCUGACCAAAGAGAAG	CUUCUCUUUGGUCAGAAAA	Chmp	[1268-1286]
374	CCUUUCAGCAAGACUUCUC	GAGAAGUCUUGCUGAAAGG	Chmp	[1350-1368]
375	GAAGUCUCUUCCAGUUUGC	GCAAACUGGAAGAGACUUC	Chmp	[1202-1220]
376	GUUGAGUUUUGACUGCUUG	CAAGCAGUCAAAACUCAAC	Chmp	[1321-1339]
377	GGGCUAUUUAAAGGUACGC	GCGUACCUUUAAAUAGCCC		[3-21]
378	CUUCAACCAUCUCCAGGUG	CACCUGGAGAUGGUUGAAG	Chmp	[557-575]
379	CUCAGCUACAACAGGAACU	AGUUCCUGUUGUAGCUGAG	Rat,Ms,Chmp	[942-960]
380	UCCUUUCAGCAAGACUUCU	AGAAGUCUUGCUGAAAGGA	Chmp	[1349-1367]
381	CUAUUUAAAGGUACGCGCC	GGCGCGUACCUUUAAAUAG		[6-24]
382	AGCACAAUAAAACUACAGC	GCUGUAGUUUUAUUGUGCU	Chmp	[793-811]
383	AACUUUAAGGUCUUUGACU	AGUCAAAGACCUUAAAGUU	Rat,Chmp	[891-909]
384	GGCAUCUCCAACUUCAACC	GGUUGAAGUUGGAGAUGCC	Chmp	[546-564]
385	UCAUCGUCAGCAAGCUGUG	CACAGCUUGCUGACGAUGA	Rb,Chmp	[295-313]
386	GGCUAUUUAAAGGUACGCG	CGCGUACCUUUAAAUAGCC		[4-22]
387	GUCUAGCUUGAUGUUGGAU	AUCCAACAUCAAGCUAGAC		[1159-1177]
388	UUAAGCCUGGGAAGGAAUU	AAUUCCUUCCCAGGCUUAA	Chmp	[421-439]
389	GACACCAACAUUCUGGACA	UGUCCAGAAUGUUGGUGUC	Chmp	[477-495]
390	CUACAACAGGAACUGGAGG	CCUCCAGUUCCUGUUGUAG	Rat,Rb,Ms,Chmp	[947-965]
391	GAGAAGCAAAAUCUACCAG	CUGGUAGAUUUUGCUUCUC	Chmp	[1281-1299]
392	ACCAUCUCCAGGUGGAGAU	AUCUCCACCUGGAGAUGGU		[562-580]
393	CAUCUCCAGGUGGAGAUGA	UCAUCUCCACCUGGAGAUG		[564-582]
394	GACCUCUACCUUAUUCACU	AGUGAAUAAGGUAGAGGUC	Rat,Chmp	[390-408]
395	AGUCUCUUCCAGUUUGCUU	AAGCAAACUGGAAGAGACU	Chmp	[1204-1222]
396	GAAGUUAAUCCAGUACUGC	GCAGUACUGGAUUAACUUC	Chmp	[656-674]
397	AAGAGCCCUGUCAGUAGAG	CUCUACUGACAGGGCUCUU	Chmp	[1181-1199]
398	CAAGACUUCUCUUUGCCUC	GAGGCAAAGAGAAGUCUUG	Chmp	[1358-1376]
399	UCCAAAGGCAUCGUGGUGA	UCACCACGAUGCCUUUGGA	Chmp	[678-696]
400	AACCAUCUCCAGGUGGAGA	UCUCCACCUGGAGAUGGUU	Chmp	[561-579]
401	GGGCUGGUGAAAGCUAUUG	CAAUAGCUUUCACCAGCCC	Chmp	[528-546]
402	UAAGCCUGGGAAGGAAUUU	AAAUUCCUUCCCAGGCUUA	Chmp	[422-440]
403	AUCCUUUCAGCAAGACUUC	GAAGUCUUGCUGAAAGGAU	Chmp	[1348-1366]
404	CAGCUACAACAGGAACUGG	CCAGUUCCUGUUGUAGCUG	Rat,Ms,Chmp	[944-962]
405	ACAACAGGAACUGGAGGGU	ACCCUCCAGUUCCUGUUGU	Rat,Rb,Ms,Chmp	[949-967]
406	UGCUGAGAACUUUAAGGUC	GACCUUAAAGUUCUCAGCA	Rat,Chmp	[884-902]
407	AUGAAGGGCUGGUGAAAGC	GCUUUCACCAGCCCUUCAU	Chmp	[523-541]

408	AGAAGUCUCUUCCAGUUUG	CAAACUGGAAGAGACUUCU	Chmp	[1201-1219]
409	ACCUCUACCUUAUUCACUG	CAGUGAAUAAGGUAGAGGU	Rat,Chmp	[391-409]
410	AAGUCUCUUCCAGUUUGCU	AGCAAACUGGAAGAGACUU	Chmp	[1203-1221]
411	CGUGUCUAGCUUGAUGUUG	CAACAUCAAGCUAGACACG		[1156-1174]
412	CUUUGCCCUUCUUUCUACC	GGUAGAAAGAAGGGCAAAG	Chmp	[1220-1238]
413	AAGUUAAUCCAGUACUGCC	GGCAGUACUGGAUUAACUU	Chmp	[657-675]
414	UCCAUGAAGAGUUUUGAAG	CUUCAAAACUCUUCAUGGA	Chmp	[1009-1027]
415	AACGGUUGAGUUUUGACUG	CAGUCAAAACUCAACCGUU		[1317-1335]
416	CUUCUUUCUACCCUGCUGG	CCAGCAGGGUAGAAAGAAG	Chmp	[1227-1245]
417	ACCAAAGAGAAGCAAAAUC	GAUUUUGCUUCUCUUUGGU	Chmp	[1275-1293]
418	CCUGUCAGUAGAGUAGAAG	CUUCUACUCUACUGACAGG	Chmp	[1187-1205]
419	CUUCAUCGUCAGCAAGCUG	CAGCUUGCUGACGAUGAAG	Rb,Chmp	[293-311]
420	AAGGUCUUUGACUUUGAAC	GUUCAAAGUCAAAGACCUU	Chmp	[897-915]
421	AUGUGGUUCCCAGUGACAC	GUGUCACUGGGAACCACAU	Chmp	[463-481]
422	UCCAGUUUGCUUUGCCCUU	AAGGGCAAAGCAAACUGGA	Chmp	[1211-1229]
423	CUGGGAAGGAAUUUUUCCC	GGGAAAAAUUCCUUCCCAG	Chmp	[427-445]
424	UUUGACUUUGAACUGAGCA	UGCUCAGUUCAAAGUCAAA	Rb,Chmp	[903-921]
425	GAGGAACUUGGUGGUGAUC	GAUCACCACCAAGUUCCUC	Chmp	[839-857]
426	UUGCCCUUCUUUCUACCCU	AGGGUAGAAAGAAGGGCAA	Chmp	[1222-1240]
427	UGUUGGAUCUCAAGAGCCC	GGGCUCUUGAGAUCCAACA	Chmp	[1170-1188]
428	UGCUUGGAACUGGAAUCCU	AGGAUUCCAGUUCCAAGCA		[1334-1352]
429	UCCUUGCAAAUGUAGUAUG	CAUACUACAUUUGCAAGGA	Chmp	[1086-1104]
430	GACUUUGAACUGAGCAGCC	GGCUGCUCAGUUCAAAGUC	Chmp	[906-924]
431	AGUCUGUGACACCAGAACG	CGUUCUGGUGUCACAGACU	Chmp	[862-880]
432	CACCAACAUUCUGGACACG	CGUGUCCAGAAUGUUGGUG	Chmp	[479-497]
433	CCUUGUUGAGCUGUACCUC	GAGGUACAGCUCAACAAGG	Chmp	[973-991]
434	ACGGUUGAGUUUUGACUGC	GCAGUCAAAACUCAACCGU		[1318-1336]
435	UUGCUGAGAACUUUAAGGU	ACCUUAAAGUUCUCAGCAA	Rat,Chmp	[883-901]
436	UUGAGUUUUGACUGCUUGG	CCAAGCAGUCAAAACUCAA	Chmp	[1322-1340]
437	CCUCUACCUUAUUCACUGG	CCAGUGAAUAAGGUAGAGG	Rat,Chmp	[392-410]
438	CUUACUCAGCUACAACAGG	CCUGUUGUAGCUGAGUAAG	Chmp	[938-956]
439	UUGACUUUGAACUGAGCAG	CUGCUCAGUUCAAAGUCAA	Rb,Chmp	[904-922]
440	AAGCAAAAUCUACCAGGUC	GACCUGGUAGAUUUUGCUU	Chmp	[1284-1302]
441	AUCUACCAGGUCAAAAUAG	CUAUUUUGACCUGGUAGAU	Chmp	[1291-1309]
442	CUUCCAGUUUGCUUUGCCC	GGGCAAAGCAAACUGGAAG	Chmp	[1209-1227]
443	AUAAAACUACAGCCCAGGU	ACCUGGGCUGUAGUUUUAU	Rat,Ms,Chmp	[799-817]
444	AGCAAGACUUCUCUUUGCC	GGCAAAGAGAAGUCUUGCU	Chmp	[1356-1374]
445	UGGAUCUCAAGAGCCCUGU	ACAGGGCUCUUGAGAUCCA	Chmp	[1173-1191]
446	AAAGUACAACCUGAAUACC	GGUAUUCAGGUUGUACUUU	Chmp	[1248-1266]
447	UUCAGCAAGACUUCUCUUU	AAAGAGAAGUCUUGCUGAA	Chmp	[1353-1371]
448	UUUGCUUUGCCCUUCUUUC	GAAAGAAGGGCAAAGCAAA	Chmp	[1216-1234]
449	AGAAGCAAAAUCUACCAGG	CCUGGUAGAUUUUGCUUCU	Chmp	[1282-1300]
450	GUAGAGUAGAAGUCUCUUC	GAAGAGACUUCUACUCUAC	Chmp	[1194-1212]
451	UGCACGUACCAUGAGAAGG	CCUUCUCAUGGUACGUGCA	Chmp	[315-333]
452	AUUGCUGAGAACUUUAAGG	CCUUAAAGUUCUCAGCAAU	Rat,Chmp	[882-900]
453	ACUACCUGGACCUCUACCU	AGGUAGAGGUCCAGGUAGU	Rat,Rb,Chmp	[382-400]
454	UAGAAGUCUCUUCCAGUUU	AAACUGGAAGAGACUUCUA	Chmp	[1200-1218]
455	AAGUACAACCUGAAUACCC	GGGUAUUCAGGUUGUACUU	Chmp	[1249-1267]
456	AUCUCCAACUUCAACCAUC	GAUGGUUGAAGUUGGAGAU	Chmp	[549-567]
457	UGAAUACCCUUUUCUGACC	GGUCAGAAAAGGGUAUUCA	Chmp	[1259-1277]
458	CACAAUAAAACUACAGCCC	GGGCUGUAGUUUUAUUGUG	Chmp	[795-813]
459	ACUGCUUGGAACUGGAAUC	GAUUCCAGUUCCAAGCAGU		[1332-1350]
460	CCAGUUUGCUUUGCCCUUC	GAAGGGCAAAGCAAACUGG	Chmp	[1212-1230]
461	UUGGAACUGGAAUCCUUUC	GAAAGGAUUCCAGUUCCAA		[1337-1355]
462	UGUCAGUAGAGUAGAAGUC	GACUUCUACUCUACUGACA	Chmp	[1189-1207]
463	UUGAAGUAUAAGCCUGCAG	CUGCAGGCUUAUACUUCAA	Chmp	[600-618]

464	UCAGCUACAACAGGAACUG	CAGUUCCUGUUGUAGCUGA	Rat,Ms,Chmp	[943-961]
465	UCUCCAGGUGGAGAUGAUC	GAUCAUCUCCACCUGGAGA		[566-584]
466	UGACACCAACAUUCUGGAC	GUCCAGAAUGUUGGUGUCA	Chmp	[476-494]
467	UAUCUCACUCAGGAGAAGU	ACUUCUCCUGAGUGAGAUA	Chmp	[642-660]
468	AUGACCACCUUACUCAGCU	AGCUGAGUAAGGUGGUCAU	Chmp	[930-948]
469	GAGAACUUUAAGGUCUUUG	CAAAGACCUUAAAGUUCUC	Rat,Chmp	[888-906]
470	UUCUUUCUACCCUGCUGGG	CCCAGCAGGGUAGAAAGAA	Chmp	[1228-1246]
471	AGUUAACCAGAUUGAGUGC	GCACUCAAUCUGGUUAACU	Chmp	[617-635]
472	CUUGUUGAGCUGUACCUCC	GGAGGUACAGCUCAACAAG	Chmp	[974-992]
473	AUGGAAGAGCUGGUGGAUG	CAUCCACCAGCUCUUCCAU	Chmp	[507-525]
474	AAGAGUUUUGAAGCUGUGG	CCACAGCUUCAAAACUCUU	Chmp	[1015-1033]
475	UGCCUCAUUUUUUUCCUUG	CAAGGAAAAAAAUGAGGCA	Chmp	[1073-1091]
476	ACUCAGCUACAACAGGAAC	GUUCCUGUUGUAGCUGAGU	Rat,Ms,Chmp	[941-959]
477	UUUUUCCUUGCAAAUGUAG	CUACAUUUGCAAGGAAAAA	Chmp	[1082-1100]
478	ACCAGGUCAAAAUAGUGCC	GGCACUAUUUUGACCUGGU	Chmp	[1295-1313]
479	UACCUCCCACAAGGAUUAC	GUAAUCCUUGUGGGAGGUA	Chmp	[986-1004]
480	UACCAGAAUGAGAAUGAGG	CCUCAUUCUCAUUCUGGUA	Chmp	[219-237]
481	AGUGACACCAACAUUCUGG	CCAGAAUGUUGGUGUCACU	Chmp	[474-492]
482	UCUCUUCCAGUUUGCUUUG	CAAAGCAAACUGGAAGAGA	Chmp	[1206-1224]
483	UUUUUCCCAUUGGAUGAGU	ACUCAUCCAAUGGGAAAAA		[438-456]
484	UAGAGUAGAAGUCUCUUCC	GGAAGAGACUUCUACUCUA	Chmp	[1195-1213]
485	CUGGACCUCUACCUUAUUC	GAAUAAGGUAGAGGUCCAG	Rat,Chmp	[387-405]
486	GUUUUGAAGCUGUGGUUGC	GCAACCACAGCUUCAAAAC		[1019-1037]
487	ACUCAGGAGAAGUUAAUCC	GGAUUAACUUCUCCUGAGU	Chmp	[648-666]
488	UUGUUGAGCUGUACCUCCC	GGGAGGUACAGCUCAACAA	Chmp	[975-993]
489	UUUUGAAGCUGUGGUUGCC	GGCAACCACAGCUUCAAAA		[1020-1038]
490	UUGGAUCUCAAGAGCCCUG	CAGGGCUCUUGAGAUCCAA	Chmp	[1172-1190]
491	UAGCUUGAUGUUGGAUCUC	GAGAUCCAACAUCAAGCUA		[1162-1180]
492	UACAACCUGAAUACCCUUU	AAAGGGUAUUCAGGUUGUA	Chmp	[1252-1270]
493	UAUUUAAAGGUACGCGCCG	CGGCGCGUACCUUUAAAUA		[7-25]
494	CUCUUCAUCGUCAGCAAGC	GCUUGCUGACGAUGAAGAG	Rb,Chmp	[291-309]
495	GACCACCUUACUCAGCUAC	GUAGCUGAGUAAGGUGGUC	Chmp	[932-950]
496	UUUGAAGCUGUGGUUGCCU	AGGCAACCACAGCUUCAAA		[1021-1039]
497	AAAACUACAGCCCAGGUCC	GGACCUGGGCUGUAGUUUU	Chmp	[801-819]
498	AUCGUCAGCAAGCUGUGGU	ACCACAGCUUGCUGACGAU	Rb,Chmp	[297-315]
499	CUGUGCCUUGUUGAGCUGU	ACAGCUCAACAAGGCACAG	Chmp	[968-986]
500	CUGCUUGGAACUGGAAUCC	GGAUUCCAGUUCCAAGCAG		[1333-1351]

Table B 5 ASPP1 - protein phosphatase 1, regulatory (inhibitor) subunit 13B

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-121114286 :284-3556
1	GGAAAAAAAUUCAGCUGAA	UUCAGCUGAAUUUUUUUCC		[1239-1257]
2	CGAUGAUGCCGAUGAUAUU	AAUAUCAUCGGCAUCAUCG	Ms	[282-300]
3	CCAGGAACAAAAUUCAAAA	UUUUGAAUUUUGUUCCUGG		[1129-1147]
4	CAACGUGAAUGCUGCUGAU	AUCAGCAGCAUUCACGUUG		[3118-3136]
5	GGAGAAAAACGUACUGAAA	UUUCAGUACGUUUUUCUCC		[614-632]
6	CGUGAAUGCUGCUGAUAGU	ACUAUCAGCAGCAUUCACG		[3121-3139]
7	CGGGCAUCGAGAUUGGUAA	UUACCAAUCUCGAUGCCCG		[1602-1620]
8	CAGGAAAGCUGCAGCUAGA	UCUAGCUGCAGCUUUCCUG		[3628-3646]
9	GGCUUUUUAUAUACCAAAA	UUUUGGUAUAUAAAAAGCC		[4635-4653]
10	AAAUGUACCUGGAGAAAAA	UUUUUCUCCAGGUACAUUU		[604-622]
11	CAGGCUUUUUAUAUACCAA	UUGGUAUAUAAAAAGCCUG		[4633-4651]
12	CGGCAGAGGACAAUAACAA	UUGUUAUUGUCCUCUGCCG		[2730-2748]
13	CGGCAAUCUGUCUGCUGAA	UUCAGCAGACAGAUUGCCG		[904-922]
14	CAAUUACUAUAAAUCCAAA	UUUGGAUUUAUAGUAAUUG		[3780-3798]
15	CGAACUCAGAGAAAUGUAA	UUACAUUUCUCUGAGUUCG		[584-602]

16	CGUACAGGCUUUUUAUAUA	UAUAUAAAAAGCCUGUACG		[4629-4647]
17	CAUAGUGUGGUGAAGAAAA	UUUUCUUCACCACACUAUG		[4836-4854]
18	GUGUAAAUGUGCACAAUAA	UUAUUGUGCACAUUUACAC		[4924-4942]
19	CGUCUCUAUGGGAAAAAAA	UUUUUUUCCCAUAGAGACG		[1229-1247]
20	GGCUGAGAGUCCGGUUUAA	UUAAACCGGACUCUCAGCC		[2925-2943]
21	CAGGAAGUACAGACUGCAA	UUGCAGUCUGUACUUCCUG		[959-977]
22	CUGUCGAGAUGUUGUAGAA	UUCUACAACAUCUCGACAG		[364-382]
23	CAGCGUUUACAUUUUCUAA	UUAGAAAAUGUAAACGCUG	Ms	[743-761]
24	GCAGCAGAAGGAACUCUUA	UAAGAGUUCCUUCUGCUGC		[1153-1171]
25	UGUGGUGAAGAAAAGUGAA	UUCACUUUUCUUCACCACA		[4841-4859]
26	CCAACUUAACCAGGAACAA	UUGUUCCUGGUUAAGUUGG		[1120-1138]
27	GGGCAUCGAGAUUGGUAAA	UUUACCAAUCUCGAUGCCC		[1603-1621]
28	CCAUGUUCCAGGAAAAGAA	UUCUUUUCCUGGAACAUGG	Rat	[939-957]
29	AGGAGAACAAGCUGAAGAA	UUCUUCAGCUUGUUCUCCU	Rat	[840-858]
30	GUCUAUUUCUGAAAAUGAA	UUCAUUUUCAGAAAUAGAC		[787-805]
31	GCAGCAGUCUAUUUCUGAA	UUCAGAAAUAGACUGCUGC		[781-799]
32	CAAUCUGUCUGCUGAAAUA	UAUUUCAGCAGACAGAUUG		[907-925]
33	CAACCAUAAGCGACAUUGA	UCAAUGUCGCUUAUGGUUG		[3231-3249]
34	CAGCAGAAGGAACUCUUAA	UUAAGAGUUCCUUCUGCUG		[1154-1172]
35	CACUGAGGUGUGAAUUGUA	UACAAUUCACACCUCAGUG		[4610-4628]
36	GGGAGAGCCUCAGCAUAUA	UAUAUGCUGAGGCUCUCCC		[4236-4254]
37	CACGGAGGGAAGAAGUGAA	UUCACUUCUUCCCUCCGUG		[495-513]
38	AGAAGGAACUCUUAAAUAA	UUAUUUAAGAGUUCCUUCU		[1158-1176]
39	AGCUGGGUGUGAUGAACAA	UUGUUCAUCACACCCAGCU		[3327-3345]
40	GCUAGAAAAUGGUCUUAAU	AUUAAGACCAUUUUCUAGC		[3641-3659]
41	CGAUGAUAUUAACUGUUUU	AAAACAGUUAAUAUCAUCG		[291-309]
42	AGGGCUAUGUGCCCAAAAA	UUUUUGGGCACAUAGCCCU	Rat	[3486-3504]
43	AGCAGAAGGAACUCUUAAA	UUUAAGAGUUCCUUCUGCU		[1155-1173]
44	CCGGCAGAGGACAAUAACA	UGUUAUUGUCCUCUGCCGG		[2729-2747]
45	GUACGAACAUCUUCAGAAA	UUUCUGAAGAUGUUCGUAC		[469-487]
46	GGCUGUAUCCACGGAUCAA	UUGAUCCGUGGAUACAGCC		[3513-3531]
47	CUCAGAGAAAUGUAAUAAA	UUUAUUACAUUUCUCUGAG		[588-606]
48	CAAGGAACAGCGUUUACAU	AUGUAAACGCUGUUCCUUG	Rat,Ms	[736-754]
49	GCAACAGCAGCAGAUUGAA	UUCAAUCUGCUGCUGUUGC		[694-712]
50	CCCAGGAGAACAAGCUGAA	UUCAGCUUGUUCUCCUGGG	Rat	[837-855]
51	GAAUGCUGCUGAUAGUGAU	AUCACUAUCAGCAGCAUUC		[3124-3142]
52	CAGCAAUUGGAAGAUUUAA	UUAAAUCUUCCAAUUGCUG		[1001-1019]
53	GCAAAAUCAUGAACGGCAA	UUGCCGUUCAUGAUUUUGC		[891-909]
54	CUUAAAUAAGUCAGUUAAA	UUUAACUGACUUAUUUAAG	Ms	[2083-2101]
55	CUGUCUGCUGAAAUAGAAA	UUUCUAUUUCAGCAGACAG		[911-929]
56	GGAGAACAAGCUGAAGAAA	UUUCUUCAGCUUGUUCUCC		[841-859]
57	CACCGAAUCGGACACUCAU	AUGAGUGUCCGAUUCGGUG		[3979-3997]
58	CCAUGAUGGACAAGCGAAU	AUUCGCUUGUCCAUCAUGG		[1194-1212]
59	GGACAAGCGAAUCAGUGAA	UUCACUGAUUCGCUUGUCC		[1201-1219]
60	GAUCCAAAUCCGCUAAUGA	UCAUUAGCGGAUUUGGAUC		[1422-1440]
61	GCGGCGGUGGAGUUAAAAA	UUUUUAACUCCACCGCCGC		[1073-1091]
62	CAGCGUCCACAAUGUGAAU	AUUCACAUUGUGGACGCUG		[3678-3696]
63	CCAUUAAGAAGUCCCAUAA	UUAUGGGACUUCUUAAUGG		[3833-3851]
64	GUACAGACUGCAAUUUUAA	UUAAAAUUGCAGUCUGUAC		[965-983]
65	CAACUUAACCAGGAACAAA	UUUGUUCCUGGUUAAGUUG		[1121-1139]
66	CCAACUUGAAGAAGCCCAA	UUGGGCUUCUUCAAGUUGG		[2886-2904]
67	AGAACAAGCUGAAGAAAAU	AUUUUCUUCAGCUUGUUCU		[843-861]
68	CAAGUCGACUACAGCAAAA	UUUUGCUGUAGUCGACUUG		[878-896]
69	AACCAGGAACAAAAUUCAA	UUGAAUUUUGUUCCUGGUU		[1127-1145]
70	GGGAAAUGAACGUCCCAUA	UAUGGGACGUUCAUUUCCC		[433-451]
71	AACCAUAAGCGACAUUGAA	UUCAAUGUCGCUUAUGGUU		[3232-3250]

72	GGCGGUGGAGUUAAAAAGA	UCUUUUUAACUCCACCGCC		[1075-1093]
73	GCCUGAACUUCCUUUUGGA	UCCAAAAGGAAGUUCAGGC		[3551-3569]
74	GAAAAUUCGUGCAAUGAGA	UCUCAUUGCACGAAUUUUC		[856-874]
75	CGCGAUGAUGCCGAUGAUA	UAUCAUCGGCAUCAUCGCG	Ms	[280-298]
76	GAGCAACAAUGAACAGAUU	AAUCUGUUCAUUGUUGCUC	Rat,Ms	[313-331]
77	AACUGAGAACAGUGAACAA	UUGUUCACUGUUCUCAGUU		[541-559]
78	AGUACAGACUGCAAUUUUA	UAAAAUUGCAGUCUGUACU		[964-982]
79	GAGAAAAACGUACUGAAAA	UUUUCAGUACGUUUUUCUC		[615-633]
80	CAGAGGACAAUAACAACAA	UUGUUGUUAUUGUCCUCUG		[2733-2751]
81	UGUAAAUGUGCACAAUAAA	UUUAUUGUGCACAUUUACA		[4925-4943]
82	CCACAAUGUGAAUCCUACA	UGUAGGAUUCACAUUGUGG		[3684-3702]
83	GGAAGAUCCAAAUCCGCUA	UAGCGGAUUUGGAUCUUCC		[1418-1436]
84	ACUACAGAUUCGUAACCAA	UUGGUUACGAAUCUGUAGU		[1105-1123]
85	GAAAGCUGCAGCUAGAAAA	UUUUCUAGCUGCAGCUUUC		[3631-3649]
86	GCCGAUGUGGACAAUGGAA	UUCCAUUGUCCACAUCGGC		[2549-2567]
87	AACUUAACCAGGAACAAAA	UUUUGUUCCUGGUUAAGUU		[1122-1140]
88	CCAAUUACUAUAAAUCCAA	UUGGAUUUAUAGUAAUUGG		[3779-3797]
89	CAACAGCAGCAGAUUGAAA	UUUCAAUCUGCUGCUGUUG		[695-713]
90	GGAAAAGAAGCAGGAAGUA	UACUUCCUGCUUCUUUUCC		[949-967]
91	GAGUUGAAGCCCAGGAGAA	UUCUCCUGGGCUUCAACUC		[828-846]
92	GCUGUAUCCACGGAUCAAA	UUUGAUCCGUGGAUACAGC		[3514-3532]
93	GGGACAUACCCAAGUCCUA	UAGGACUUGGGUAUGUCCC		[1670-1688]
94	AGGCUUUUUAUAUACCAAA	UUUGGUAUAUAAAAAGCCU		[4634-4652]
95	AGCGGACCAACUUGAAGAA	UUCUUCAAGUUGGUCCGCU		[2880-2898]
96	CGACAUUGAAACUGCUGCA	UGCAGCAGUUUCAAUGUCG		[3241-3259]
97	UGGAGAAAAACGUACUGAA	UUCAGUACGUUUUUCUCCA		[613-631]
98	CUCUCAGUAUUGCCUCAAA	UUUGAGGCAAUACUGAGAG		[1389-1407]
99	CAAGAGCAACGAACUCAGA	UCUGAGUUCGUUGCUCUUG		[575-593]
100	CAGAAAGUACUGAGAAAGA	UCUUUCUCAGUACUUUCUG		[2208-2226]
101	CCAGGAAAAGAAGCAGGAA	UUCCUGCUUCUUUUCCUGG	Rat	[946-964]
102	UGGGAAUCCACGUGUUGAA	UUCAACACGUGGAUUCCCA	Ms	[640-658]
103	AAGUGAACGCCCUUGUAGA	UCUACAAGGGCGUUCACUU		[4853-4871]
104	AAAUGAAAAGCUUCAGAAA	UUUCUGAAGCUUUUCAUUU	Ms	[799-817]
105	GCUUAGUCAGCAAUUGGAA	UUCCAAUUGCUGACUAAGC		[994-1012]
106	GAGCAACGAACUCAGAGAA	UUCUCUGAGUUCGUUGCUC		[578-596]
107	UGAACAGAUUUUAACAGAA	UUCUGUUAAAAUCUGUUCA	Rat,Ms	[322-340]
108	CAACAAUGAACAGAUUUUA	UAAAAUCUGUUCAUUGUUG	Rat,Ms	[316-334]
109	GGAAAGCUGCAGCUAGAAA	UUUCUAGCUGCAGCUUUCC		[3630-3648]
110	CAAUGAACAGAUUUUAACA	UGUUAAAAUCUGUUCAUUG	Rat,Ms	[319-337]
111	GAGAAAUGUAAUAAAUGUA	UACAUUUAUUACAUUUCUC		[592-610]
112	CCUUAAAUAAGUCAGUUAA	UUAACUGACUUAUUUAAGG	Ms	[2082-2100]
113	GCUGAAAUAGAAAGGUUCA	UGAACCUUUCUAUUUCAGC		[917-935]
114	CAGAAGGAACUCUUAAAUA	UAUUUAAGAGUUCCUUCUG		[1157-1175]
115	GUGUGGUGAAGAAAAGUGA	UCACUUUUCUUCACCACAC		[4840-4858]
116	CAGCGUUCACCUCUGCAAA	UUUGCAGAGGUGAACGCUG		[3178-3196]
117	CUGUUUUCUUGAGCAACAA	UUGUUGCUCAAGAAAACAG		[303-321]
118	GAGGUACUUUCGCCUCCAA	UUGGAGGCGAAAGUACCUC		[3747-3765]
119	AAAGCUUCAGAAAUUGAAA	UUUCAAUUUCUGAAGCUUU		[805-823]
120	AACAAUGAACAGAUUUUAA	UUAAAAUCUGUUCAUUGUU	Rat,Ms	[317-335]
121	CGAACAAGCGGACCAACUU	AAGUUGGUCCGCUUGUUCG		[2874-2892]
122	CAGACCCAAGAGCAACGAA	UUCGUUGCUCUUGGGUCUG		[569-587]
123	GACUGUACCAAGAACUACA	UGUAGUUCUUGGUACAGUC		[1092-1110]
124	AGAUUUAAAGAAAGGAAAA	UUUUCCUUUCUUUAAAUCU	Ms	[1012-1030]
125	GAGAACAAGCUGAAGAAAA	UUUUCUUCAGCUUGUUCUC		[842-860]
126	UAACCAACUUAACCAGGAA	UUCCUGGUUAAGUUGGUUA		[1117-1135]
127	GAAGAUUUAAAGAAAGGAA	UUCCUUUCUUUAAAUCUUC	Rat,Ms	[1010-1028]

128	ACGUCUCUAUGGGAAAAAA	UUUUUUCCCAUAGAGACGU		[1228-1246]
129	ACGGAGGGAAGAAGUGAAA	UUUCACUUCUUCCCUCCGU		[496-514]
130	CCUGGAAAGGAGGAAGGAA	UUCCUUCCUCCUUUCCAGG		[1717-1735]
131	UCUCCAGUUUGCCCAUUAA	UUAAUGGGCAAACUGGAGA		[3722-3740]
132	UAAAGAAAGGAAAACUGAA	UUCAGUUUUCCUUUCUUUA	Ms	[1017-1035]
133	GGGAAGAAGUGAAAUUUUU	AAAAAUUUCACUUCUUCCC		[501-519]
134	CAAGAACUACAGAUUCGUA	UACGAAUCUGUAGUUCUUG		[1100-1118]
135	GUACGUACAGGCUUUUUAU	AUAAAAAGCCUGUACGUAC		[4626-4644]
136	AGCAAUUGGAAGAUUUAAA	UUUAAAUCUUCCAAUUGCU		[1002-1020]
137	GCAGAAGGAACUCUUAAAU	AUUUAAGAGUUCCUUCUGC		[1156-1174]
138	CCUAAAGGCUGAUUGUGCA	UGCACAAUCAGCCUUUAGG		[4152-4170]
139	GCAGCAGAUUGAAAAUCAG	CUGAUUUUCAAUCUGCUGC		[700-718]
140	CGGUGGAGUUAAAAAGACU	AGUCUUUUUAACUCCACCG		[1077-1095]
141	CAAUGUGAAUCCUACAGUU	AACUGUAGGAUUCACAUUG		[3687-3705]
142	UGAUCAGCUUAGUCAGCAA	UUGCUGACUAAGCUGAUCA	Ms	[988-1006]
143	GGACAAUGGAAACACCAAU	AUUGGUGUUUCCAUUGUCC	Rat	[2557-2575]
144	AGCCGGCAGAGGACAAUAA	UUAUUGUCCUCUGCCGGCU		[2727-2745]
145	AUUGGAAGAUUUAAAGAAA	UUUCUUUAAAUCUUCCAAU		[1006-1024]
146	GCUGGGUGUGAUGAACAAA	UUUGUUCAUCACACCCAGC		[3328-3346]
147	CCUAUAACACCGGAAACAA	UUGUUUCCGGUGUUAUAGG		[344-362]
148	GAAAGAGCCUGAGCAGGAU	AUCCUGCUCAGGCUCUUUC		[2221-2239]
149	UCUGUCUGCUGAAAUAGAA	UUCUAUUUCAGCAGACAGA		[910-928]
150	AGAAAAACGUACUGAAAAU	AUUUUCAGUACGUUUUUCU		[616-634]
151	CACCAAAGGAGCCUCUGUA	UACAGAGGCUCCUUUGGUG		[4039-4057]
152	ACAAGCGGACCAACUUGAA	UUCAAGUUGGUCCGCUUGU		[2877-2895]
153	CAGUGAAGACAGAAGCUCU	AGAGCUUCUGUCUUCACUG		[3867-3885]
154	CUCUAUUUUUCAUGUAUGA	UCAUACAUGAAAAAUAGAG		[4735-4753]
155	GGACAAGUCGACUACAGCA	UGCUGUAGUCGACUUGUCC		[875-893]
156	GAUCAUCUAUGAGGUGGAA	UUCCACCUCAUAGAUGAUC	Rat	[3001-3019]
157	GCUCAUGGAAGAUCCAAAU	AUUUGGAUCUUCCAUGAGC		[1412-1430]
158	UGUAGAAUUUUGCAAGGAA	UUCCUUGCAAAAUUCUACA		[376-394]
159	ACAGCGUCCACAAUGUGAA	UUCACAUUGUGGACGCUGU		[3677-3695]
160	CUCUCAGAGCUCCAAGAUA	UAUCUUGGAGCUCUGAGAG		[665-683]
161	CGUGAACGUCUCUAUGGGA	UCCCAUAGAGACGUUCACG		[1223-1241]
162	AUGGGUUCCAGUCUUACAA	UUGUAAGACUGGAACCCAU		[1035-1053]
163	UCGACAAGCUCCCUGGAAA	UUUCCAGGGAGCUUGUCGA		[1706-1724]
164	CAGACUCACUGAUGCAGCA	UGCUGCAUCAGUGAGUCUG		[4785-4803]
165	CCCAGACAGUGAAUUCAAG	CUUGAAUUCACUGUCUGGG		[1995-2013]
166	CAGUGCUCCCAGUUUCUAU	AUAGAAACUGGGAGCACUG		[3293-3311]
167	CCCAACUGAGAACAGUGAA	UUCACUGUUCUCAGUUGGG		[538-556]
168	GAUGGACAAGCGAAUCAGU	ACUGAUUCGCUUGUCCAUC		[1198-1216]
169	AACAGAAGUUCCUAUAACA	UGUUAUAGGAACUUCUGUU	Rat,Ms	[334-352]
170	UGCAGAGGAUCAUCUAUGA	UCAUAGAUGAUCCUCUGCA	Rat,Ms	[2994-3012]
171	CAGCAGUCUAUUUCUGAAA	UUUCAGAAAUAGACUGCUG		[782-800]
172	AAAAGUGAACGCCCUUGUA	UACAAGGGCGUUCACUUUU		[4851-4869]
173	GGUGUGAAUUGUACGUACA	UGUACGUACAAUUCACACC		[4616-4634]
174	UACAUAGUGUGGUGAAGAA	UUCUUCACCACACUAUGUA		[4834-4852]
175	GAACGUCUCUAUGGGAAAA	UUUUCCCAUAGAGACGUUC		[1226-1244]
176	CAUUUUUGCCUCAACCAUA	UAUGGUUGAGGCAAAAAUG		[3220-3238]
177	UGCUCAUGGAAGAUCCAAA	UUUGGAUCUUCCAUGAGCA		[1411-1429]
178	CCGAUGUGGACAAUGGAAA	UUUCCAUUGUCCACAUCGG		[2550-2568]
179	GCAGGAAGUACAGACUGCA	UGCAGUCUGUACUUCCUGC		[958-976]
180	AGCUAUGGGACAUACCCAA	UUGGGUAUGUCCCAUAGCU		[1664-1682]
181	AGGAAAGCUGCAGCUAGAA	UUCUAGCUGCAGCUUUCCU		[3629-3647]
182	GGAACAAAAUUCAAAACUU	AAGUUUUGAAUUUUGUUCC		[1132-1150]
183	UCGUGAAGUUCCUGCUGGA	UCCAGCAGGAACUUCACGA		[3090-3108]

184	GGACACUCAUCCUUUCUCA	UGAGAAAGGAUGAGUGUCC		[3988-4006]
185	CGAACACUCGCCUGAACUU	AAGUUCAGGCGAGUGUUCG		[3542-3560]
186	CAGACAGCGUCCACAAUGU	ACAUUGUGGACGCUGUCUG		[3674-3692]
187	GUCUCUAUGGGAAAAAAAU	AUUUUUUUCCCAUAGAGAC		[1230-1248]
188	GGAAGUACAGACUGCAAUU	AAUUGCAGUCUGUACUUCC		[961-979]
189	AAAAGAAGCAGGAAGUACA	UGUACUUCCUGCUUCUUUU		[951-969]
190	GUACCUGGAGAAAAACGUA	UACGUUUUUCUCCAGGUAC		[608-626]
191	AAUAAAUACCCACUUUCAA	UUGAAAGUGGGUAUUUAUU		[3797-3815]
192	AGUUAAAAAGACUGUACCA	UGGUACAGUCUUUUUAACU		[1083-1101]
193	ACCAUAAGCGACAUUGAAA	UUUCAAUGUCGCUUAUGGU		[3233-3251]
194	CUGUUCCAGUUCACCUAAA	UUUAGGUGAACUGGAACAG		[4139-4157]
195	GUAUGGUAAGCCCGUUUUA	UAAAACGGGCUUACCAUAC		[2107-2125]
196	ACUUAACCAGGAACAAAAU	AUUUUGUUCCUGGUUAAGU		[1123-1141]
197	GGAACAGCGUUUACAUUUU	AAAAUGUAAACGCUGUUCC	Ms	[739-757]
198	AAGACUGUACCAAGAACUA	UAGUUCUUGGUACAGUCUU		[1090-1108]
199	GAGGGCUAUGUGCCCAAAA	UUUUGGGCACAUAGCCCUC	Rat	[3485-3503]
200	AUUUUUGCCUCAACCAUAA	UUAUGGUUGAGGCAAAAAU		[3221-3239]
201	CCCUAAGACCAAGUGACAA	UUGUCACUUGGUCUUAGGG		[4215-4233]
202	GGAUCAUCUAUGAGGUGGA	UCCACCUCAUAGAUGAUCC	Rat,Ms	[3000-3018]
203	GCUGCUCAUGGAAGAUCCA	UGGAUCUUCCAUGAGCAGC		[1409-1427]
204	GGCCCUUAGGCUCUAUUUU	AAAAUAGAGCCUAAGGGCC		[4725-4743]
205	UAACCAGGAACAAAAUUCA	UGAAUUUUGUUCCUGGUUA		[1126-1144]
206	UGGACAAUGGAAACACCAA	UUGGUGUUUCCAUUGUCCA	Rat	[2556-2574]
207	GAAGGAACUCUUAAAUAAG	CUUAUUUAAGAGUUCCUUC		[1159-1177]
208	UGCUGCUGAUAGUGAUGGA	UCCAUCACUAUCAGCAGCA		[3127-3145]
209	AGAUUCGUAACCAACUUAA	UUAAGUUGGUUACGAAUCU		[1110-1128]
210	GGGUGUGAUGAACAAAGGU	ACCUUUGUUCAUCACACCC		[3331-3349]
211	AUCCAAAUCCGCUAAUGAU	AUCAUUAGCGGAUUUGGAU		[1423-1441]
212	GGAGGGAAGAAGUGAAAUU	AAUUUCACUUCUUCCCUCC		[498-516]
213	GAAGAUCCAAAUCCGCUAA	UUAGCGGAUUUGGAUCUUC		[1419-1437]
214	ACUACAGCAAAAUCAUGAA	UUCAUGAUUUUGCUGUAGU	Rat	[885-903]
215	CGGCGGUGGAGUUAAAAAG	CUUUUUAACUCCACCGCCG		[1074-1092]
216	CCAUUAACUGGGAGAGGUA	UACCUCUCCCAGUUAAUGG		[3734-3752]
217	AUUGAAAGAACGAGUUGAA	UUCAACUCGUUCUUUCAAU		[817-835]
218	GACAGAAGCUCUUACUGAC	GUCAGUAAGAGCUUCUGUC		[3874-3892]
219	GGCAACAGCAGCAGAUUGA	UCAAUCUGCUGCUGUUGCC		[693-711]
220	CAAAACUUCAGCAGCAGAA	UUCUGCUGCUGAAGUUUUG		[1143-1161]
221	UCAGCAAUUGGAAGAUUUA	UAAAUCUUCCAAUUGCUGA		[1000-1018]
222	CGAUGUGGACAAUGGAAAC	GUUUCCAUUGUCCACAUCG		[2551-2569]
223	CAGGCUCCUCACAACAGAU	AUCUGUUGUGAGGAGCCUG		[1818-1836]
224	ACAUUAAAACAGAAUUCUA	UAGAAUUCUGUUUUAAUGU		[1454-1472]
225	ACCCGAACUAUGUUGGAAA	UUUCCAACAUAGUUCGGGU		[4682-4700]
226	CGGAGGGAAGAAGUGAAAU	AUUUCACUUCUUCCCUCCG		[497-515]
227	UCAGCUGAACCGUGUGAAU	AUUCACACGGUUCAGCUGA		[1249-1267]
228	ACCAGGAACAAAAUUCAAA	UUUGAAUUUUGUUCCUGGU		[1128-1146]
229	CCAUUCAAAGCUACCCGAA	UUCGGGUAGCUUUGAAUGG		[4670-4688]
230	GCCUCAACCAUAAGCGACA	UGUCGCUUAUGGUUGAGGC		[3227-3245]
231	UAGCAGACAGCGUCCACAA	UUGUGGACGCUGUCUGCUA		[3671-3689]
232	GUUUUACCUUCGGGUUCAA	UUGAACCCGAAGGUAAAAC		[2120-2138]
233	CAGUGAACUGCGUGAACGU	ACGUUCACGCAGUUCACUG		[1213-1231]
234	ACAAGUCGACUACAGCAAA	UUUGCUGUAGUCGACUUGU		[877-895]
235	GACCCAAGAGCAACGAACU	AGUUCGUUGCUCUUGGGUC		[571-589]
236	GCGAUGAUGCCGAUGAUAU	AUAUCAUCGGCAUCAUCGC	Ms	[281-299]
237	UACCAAAAGUAUUUUUUGA	UCAAAAAAUACUUUUGGUA		[4646-4664]
238	AGACAGAAGCUCUUACUGA	UCAGUAAGAGCUUCUGUCU		[3873-3891]
239	GGUGCAGAGGAUCAUCUAU	AUAGAUGAUCCUCUGCACC		[2992-3010]

240	AGGAGAUGGAGGAAGGCUA	UAGCCUUCCUCCAUCUCCU		[3270-3288]
241	CAAUGAGAGGACAAGUCGA	UCGACUUGUCCUCUCAUUG		[867-885]
242	AGAGAAAUGUAAUAAAUGU	ACAUUUAUUACAUUUCUCU		[591-609]
243	CGAGAUGUUGUAGAAUUUU	AAAAUUCUACAACAUCUCG		[368-386]
244	AACUCAGAGAAAUGUAAUA	UAUUACAUUUCUCUGAGUU		[586-604]
245	AGCGUUUACAUUUUCUAAA	UUUAGAAAAUGUAAACGCU	Ms	[744-762]
246	UCAGAGAAAUGUAAUAAAU	AUUUAUUACAUUUCUCUGA		[589-607]
247	UGGUGCAGAGGAUCAUCUA	UAGAUGAUCCUCUGCACCA		[2991-3009]
248	AGAGCAACGAACUCAGAGA	UCUCUGAGUUCGUUGCUCU		[577-595]
249	AGGAGCCUCUGUAUGGAAA	UUUCCAUACAGAGGCUCCU		[4045-4063]
250	CCGUCAGCAGCAGUCUAUU	AAUAGACUGCUGCUGACGG		[775-793]
251	CAAGUUCCAUAUACUCCAU	AUGGAGUAUAUGGAACUUG		[2010-2028]
252	ACUAGACCAUUCAAAGCUA	UAGCUUUGAAUGGUCUAGU		[4664-4682]
253	GAUGUUGUAGAAUUUUGCA	UGCAAAAUUCUACAACAUC		[371-389]
254	CACUGUAGCCCAUCACCUU	AAGGUGAUGGGCUACAGUG		[4802-4820]
255	GAUGAUGCCGAUGAUAUUA	UAAUAUCAUCGGCAUCAUC	Ms	[283-301]
256	GCAACGAACUCAGAGAAAU	AUUUCUCUGAGUUCGUUGC		[580-598]
257	UGCGCUGCCUCUUGUAACA	UGUUACAAGAGGCAGCGCA		[3161-3179]
258	CCACACCACCUAAGAAUUA	UAAUUCUUAGGUGGUGUGG		[2043-2061]
259	GGCUCUAUUUUUCAUGUAU	AUACAUGAAAAAUAGAGCC		[4733-4751]
260	UGAGCAACAAUGAACAGAU	AUCUGUUCAUUGUUGCUCA	Rat,Ms	[312-330]
261	AAUGGGUUCCAGUCUUACA	UGUAAGACUGGAACCCAUU		[1034-1052]
262	GCUCUUCCGUGAAACCAGU	ACUGGUUUCACGGAAGAGC		[1473-1491]
263	AACUCUUAAAUAAGCGCAA	UUGCGCUUAUUUAAGAGUU		[1164-1182]
264	GCAGUCUAUUUCUGAAAAU	AUUUUCAGAAAUAGACUGC		[784-802]
265	UGUGCUGUUUUCCAGGAAA	UUUCCUGGAAAACAGCACA		[3616-3634]
266	AAAAGCUUCAGAAAUUGAA	UUCAAUUUCUGAAGCUUUU		[804-822]
267	CAAUUUUAAGGGUUGAUCA	UGAUCAACCCUUAAAAUUG		[975-993]
268	GCUGCAGCUAGAAAAUGGU	ACCAUUUUCUAGCUGCAGC		[3635-3653]
269	CGCUAAUGAUGGAAACUGG	CCAGUUUCCAUCAUUAGCG		[1432-1450]
270	AGUGAAGACAGAAGCUCUU	AAGAGCUUCUGUCUUCACU		[3868-3886]
271	AGUGCUCCCAGUUUCUAUA	UAUAGAAACUGGGAGCACU		[3294-3312]
272	UUCAGAAAGUACUGAGAAA	UUUCUCAGUACUUUCUGAA		[2206-2224]
273	GCUGGAUUUUGGUGUCAAC	GUUGACACCAAAAUCCAGC		[3103-3121]
274	UUUUGACUAGACCAUUCAA	UUGAAUGGUCUAGUCAAAA		[4659-4677]
275	AGCAGUCUAUUUCUGAAAA	UUUUCAGAAAUAGACUGCU		[783-801]
276	UCGAGAUGUUGUAGAAUUU	AAAUUCUACAACAUCUCGA		[367-385]
277	UCGUGCAAUGAGAGGACAA	UUGUCCUCUCAUUGCACGA		[862-880]
278	CCUUAGGCUCUAUUUUUCA	UGAAAAAAUAGAGCCUAAGG		[4728-4746]
279	CCUGUUCCAGUUCACCUAA	UUAGGUGAACUGGAACAGG		[4138-4156]
280	GAGGAAGGCUACAUCCAGU	ACUGGAUGUAGCCUUCCUC		[3278-3296]
281	ACAGCAGCAGAUUGAAAAU	AUUUUCAAUCUGCUGCUGU		[697-715]
282	CUACCCGAACUAUGUUGGA	UCCAACAUAGUUCGGGUAG		[4680-4698]
283	CCUUCAGAAAGUACUGAGA	UCUCAGUACUUUCUGAAGG		[2204-2222]
284	CAGUGAAUUCAAGUUCCAU	AUGGAACUUGAAUUCACUG		[2001-2019]
285	UCGACUACAGCAAAAUCAU	AUGAUUUUGCUGUAGUCGA		[882-900]
286	AGCAACGAACUCAGAGAAA	UUUCUCUGAGUUCGUUGCU		[579-597]
287	GGCAAUCUGUCUGCUGAAA	UUUCAGCAGACAGAUUGCC		[905-923]
288	CCAUUUUUGCCUCAACCAU	AUGGUUGAGGCAAAAAUGG		[3219-3237]
289	AAGAUUUAAAGAAAGGAAA	UUUCCUUUCUUUAAAUCUU	Rat,Ms	[1011-1029]
290	GAAGAAAAGUGAACGCCCU	AGGGCGUUCACUUUUCUUC		[4847-4865]
291	CUGAAAAAGCGCAGCUCCA	UGGAGCUGCGCUUUUUCAG		[2396-2414]
292	GAACUCAGAGAAAUGUAAU	AUUACAUUUCUCUGAGUUC		[585-603]
293	UGAAGAAGCCCAACUCGGA	UCCGAGUUGGGCUUCUUCA		[2892-2910]
294	UGAGAACAGUGAACAAGGU	ACCUUGUUCACUGUUCUCA		[544-562]
295	GCCCUUAGGCUCUAUUUUU	AAAAAUAGAGCCUAAGGGC		[4726-4744]

296	UGAUCAUAUGAUGUACGAA	UUCGUACAUCAUAUGAUCA		[457-475]
297	UGGACAAGCGAAUCAGUGA	UCACUGAUUCGCUUGUCCA		[1200-1218]
298	AACAGCAGCAGAUUGAAAA	UUUUCAAUCUGCUGCUGUU		[696-714]
299	GGGAAAAAAAAUUCAGCUGA	UCAGCUGAAUUUUUUUCCC		[1238-1256]
300	GGCAGAGGACAAUAACAAC	GUUGUUAUUGUCCUCUGCC		[2731-2749]
301	GAAUCAGUGAACUGCGUGA	UCACGCAGUUCACUGAUUC		[1209-1227]
302	CUCAAAUGCUGCUCAUGGA	UCCAUGAGCAGCAUUUGAG		[1402-1420]
303	ACAGUGAAUUCAAGUUCCA	UGGAACUUGAAUUCACUGU		[2000-2018]
304	AAAGCUGCAGCUAGAAAAU	AUUUUCUAGCUGCAGCUUU		[3632-3650]
305	CAAUUGGAAGAUUUAAAGA	UCUUUAAAUCUUCCAAUUG		[1004-1022]
306	CGUCCACAAUGUGAAUCCU	AGGAUUCACAUUGUGGACG		[3681-3699]
307	CUCCAUGUACCUCCAGCAA	UUGCUGGAGGUACAUGGAG	Rat,Ms	[2023-2041]
308	CAGGAGAACAAGCUGAAGA	UCUUCAGCUUGUUCUCCUG	Rat	[839-857]
309	UGGGUUCCAGUCUUACAAU	AUUGUAAGACUGGAACCCA		[1036-1054]
310	CAGUUCACCUAAAGGCUGA	UCAGCCUUUAGGUGAACUG		[4145-4163]
311	AAGCGACAUUGAAACUGCU	AGCAGUUUCAAUGUCGCUU		[3238-3256]
312	CCAGACAGUGAAUUCAAGU	ACUUGAAUUCACUGUCUGG		[1996-2014]
313	CUAUUUCUGAAAAUGAAAA	UUUUCAUUUUCAGAAAUAG		[789-807]
314	GAAGAAAAUUCGUGCAAUG	CAUUGCACGAAUUUUCUUC		[853-871]
315	GUUCCAUAUACUCCAUGUA	UACAUGGAGUAUAUGGAAC		[2013-2031]
316	GCUUCAGAAAUUGAAAGAA	UUCUUUCAAUUUCUGAAGC		[808-826]
317	ACAGGCUUUUUAUAUACCA	UGGUAUAUAAAAAGCCUGU		[4632-4650]
318	ACAUAGUGUGGUGAAGAAA	UUUCUUCACCACACUAUGU		[4835-4853]
319	AGCAGACAGCGUCCACAAU	AUUGUGGACGCUGUCUGCU		[3672-3690]
320	UAAAAAGACUGUACCAAGA	UCUUGGUACAGUCUUUUUA		[1086-1104]
321	ACUUCAGCAGCAGAAGGAA	UUCCUUCUGCUGCUGAAGU		[1147-1165]
322	AGCGGCGGUGGAGUUAAAA	UUUUAACUCCACCGCCGCU		[1072-1090]
323	GCCUUAAAUAAGUCAGUUA	UAACUGACUUAUUUAAGGC		[2081-2099]
324	CAAGCUGAAGAAAAUUCGU	ACGAAUUUUCUUCAGCUUG		[847-865]
325	AAGGAGCCUCUGUAUGGAA	UUCCAUACAGAGGCUCCUU		[4044-4062]
326	UUUCUUGAGCAACAAUGAA	UUCAUUGUUGCUCAAGAAA		[307-325]
327	GGAAGAUUUAAAGAAAGGA	UCCUUUCUUUAAAUCUUCC		[1009-1027]
328	GGAGCACUGACUGUACAUA	UAUGUACAGUCAGUGCUCC		[4821-4839]
329	CGGAAACAACCUGUCGAGA	UCUCGACAGGUUGUUUCCG		[354-372]
330	AAAAAGACUGUACCAAGAA	UUCUUGGUACAGUCUUUUU		[1087-1105]
331	UGUAAUAAAUGUACCUGGA	UCCAGGUACAUUUAUUACA		[598-616]
332	CUGUACAUAGUGUGGUGAA	UUCACCACACUAUGUACAG		[4831-4849]
333	AAAAGCUGGGUGUGAUGAA	UUCAUCACACCCAGCUUUU		[3324-3342]
334	CAGAUUCGUAACCAACUUA	UAAGUUGGUUACGAAUCUG		[1109-1127]
335	GACAGCGUCCACAAUGUGA	UCACAUUGUGGACGCUGUC		[3676-3694]
336	CCAGUGCUCCCAGUUUCUA	UAGAAACUGGGAGCACUGG		[3292-3310]
337	CAUCGAGAUUGGUAAAGUG	CACUUUACCAAUCUCGAUG		[1606-1624]
338	CAUUUAGCUGAAGUGUGGA	UCCACACUUCAGCUAAAUG		[413-431]
339	GUGAAGACAGAAGCUCUUA	UAAGAGCUUCUGUCUUCAC		[3869-3887]
340	GUUAAAGCAGUGUAUGGUA	UACCAUACACUGCUUUAAC	Rat	[2096-2114]
341	CCACUUAAGAGAUUAUUGU	ACAAUAAUCUCUUAAGUGG		[3600-3618]
342	ACGAACUCAGAGAAAUGUA	UACAUUUCUCUGAGUUCGU		[583-601]
343	AGAGGACAAUAACAACAAC	GUUGUUGUUAUUGUCCUCU		[2734-2752]
344	GCGCCUUAAAUAAGUCAGU	ACUGACUUAUUUAAGGCGC		[2079-2097]
345	AGCUUAGUCAGCAAUUGGA	UCCAAUUGCUGACUAAGCU		[993-1011]
346	GAAGACAGAAGCUCUUACU	AGUAAGAGCUUCUGUCUUC		[3871-3889]
347	GCAGAGGACAAUAACAACA	UGUUGUUAUUGUCCUCUGC		[2732-2750]
348	UCUAUUUCUGAAAAUGAAA	UUUCAUUUUCAGAAAUAGA		[788-806]
349	CAACGAACUCAGAGAAAUG	CAUUUCUCUGAGUUCGUUG		[581-599]
350	UGCCGAUGAUAUUAACUGU	ACAGUUAAUAUCAUCGGCA		[288-306]
351	CAUGGAAGAUCCAAAUCCG	CGGAUUUGGAUCUUCCAUG		[1415-1433]

352	UGAUGCCGAUGAUAUUAAC	GUUAAUAUCAUCGGCAUCA	Ms	[285-303]
353	CCCUGCAAGCUCAAAUUCA	UGAAUUUGAGCUUGCAGGG		[4306-4324]
354	CCAAGUGACAACUGGGAGA	UCUCCCAGUUGUCACUUGG		[4223-4241]
355	GUCAGUUAAAGCAGUGUAU	AUACACUGCUUUAACUGAC	Rat	[2092-2110]
356	CUACCAGAGUGAUGCAGAC	GUCUGCAUCACUCUGGUAG		[2335-2353]
357	AAAGCUACCCGAACUAUGU	ACAUAGUUCGGGUAGCUUU		[4676-4694]
358	CAAAUCCGCUAAUGAUGGA	UCCAUCAUUAGCGGAUUUG		[1426-1444]
359	UCUCAGAGCUCCAAGAUAU	AUAUCUUGGAGCUCUGAGA		[666-684]
360	UGAACGUCUCUAUGGGAAA	UUUCCCAUAGAGACGUUCA		[1225-1243]
361	AUAAAUACCCACUUUCAAA	UUUGAAAGUGGGUAUUUAU		[3798-3816]
362	CCAAGAGCAACGAACUCAG	CUGAGUUCGUUGCUCUUGG		[574-592]
363	CGCUUCACUGAGGUGUGAA	UUCACACCUCAGUGAAGCG		[4605-4623]
364	CCAAGGAACAGCGUUUACA	UGUAAACGCUGUUCCUUGG	Rat,Ms	[735-753]
365	CCUGCAAGCUCAAAUUCAG	CUGAAUUUGAGCUUGCAGG		[4307-4325]
366	UUUUCUUGAGCAACAAUGA	UCAUUGUUGCUCAAGAAAA		[306-324]
367	CCUUUGAUCAUAUGAUGUA	UACAUCAUAUGAUCAAAGG		[453-471]
368	UGCUGUACCAGCGCUUCAA	UUGAAGCGCUGGUACAGCA		[2457-2475]
369	GGACAAUAACAACAACGUG	CACGUUGUUGUUAUUGUCC	Rat	[2737-2755]
370	GAAAAUGAAAAGCUUCAGA	UCUGAAGCUUUUCAUUUUC	Ms	[797-815]
371	CAACAGAUUCAGCAGAGGA	UCCUCUGCUGAAUCUGUUG		[1829-1847]
372	GACAAGUCGACUACAGCAA	UUGCUGUAGUCGACUUGUC		[876-894]
373	CACAGCGCCUUAAAUAAGU	ACUUAUUUAAGGCGCUGUG		[2075-2093]
374	GACCAAGUGACAACUGGGA	UCCCAGUUGUCACUUGGUC		[4221-4239]
375	GCUGAAGAAAAUUCGUGCA	UGCACGAAUUUUCUUCAGC		[850-868]
376	GUUCCUAUAACACCGGAAA	UUUCCGGUGUUAUAGGAAC		[341-359]
377	GGGCUAUGUGCCCAAAAAC	GUUUUUGGGCACAUAGCCC	Rat	[3487-3505]
378	AGGGAAGAAGUGAAAUUUU	AAAAUUUCACUUCUUCCCU		[500-518]
379	ACAGCGUUUACAUUUUCUA	UAGAAAAUGUAAACGCUGU	Ms	[742-760]
380	GGGUUGAUCAGCUUAGUCA	UGACUAAGCUGAUCAACCC		[984-1002]
381	AAAGGAGCCUCUGUAUGGA	UCCAUACAGAGGCUCCUUU		[4043-4061]
382	AAAUAAAUACCCACUUUCA	UGAAAGUGGGUAUUUAUUU		[3796-3814]
383	GGUUGAUCAGCUUAGUCAG	CUGACUAAGCUGAUCAACC		[985-1003]
384	CCAUACCCUUUGAUCAUAU	AUAUGAUCAAAGGGUAUGG		[447-465]
385	AGAGGAUCAUCUAUGAGGU	ACCUCAUAGAUGAUCCUCU	Rat,Ms	[2997-3015]
386	GAUUCGUAACCAACUUAAC	GUUAAGUUGGUUACGAAUC		[1111-1129]
387	AGUCUAUUUCUGAAAAUGA	UCAUUUUCAGAAAUAGACU		[786-804]
388	GUACCAAGAACUACAGAUU	AAUCUGUAGUUCUUGGUAC		[1096-1114]
389	CAAAAGUAUUUUUUGACUA	UAGUCAAAAAAUACUUUUG		[4649-4667]
390	CGUCAGCAGCAGUCUAUUU	AAAUAGACUGCUGCUGACG		[776-794]
391	CUCUGGAAGGAGAGUUCGA	UCGAACUCUCCUUCCAGAG		[2970-2988]
392	AAUUGGAAGAUUUAAAGAA	UUCUUUAAAUCUUCCAAUU		[1005-1023]
393	GUUAAAAAGACUGUACCAA	UUGGUACAGUCUUUUUAAC		[1084-1102]
394	CUGCUGAAAUAGAAAGGUU	AACCUUUCUAUUUCAGCAG		[915-933]
395	AACCUGUCGAGAUGUUGUA	UACAACAUCUCGACAGGUU		[361-379]
396	GUAUUUUUUGACUAGACCA	UGGUCUAGUCAAAAAAUAC		[4654-4672]
397	CUUCAGAAAGUACUGAGAA	UUCUCAGUACUUUCUGAAG		[2205-2223]
398	AAAUGCUGCUCAUGGAAGA	UCUUCCAUGAGCAGCAUUU		[1405-1423]
399	GCUUCACUGAGGUGUGAAU	AUUCACACCUCAGUGAAGC		[4606-4624]
400	AUUUUGGUGUCAACGUGAA	UUCACGUUGACACCAAAAU		[3108-3126]
401	UGGAGUUAAAAAGACUGUA	UACAGUCUUUUUAACUCCA		[1080-1098]
402	GCUACCAGAGUGAUGCAGA	UCUGCAUCACUCUGGUAGC		[2334-2352]
403	GAAAAGCUUCAGAAAUUGA	UCAAUUUCUGAAGCUUUUC		[803-821]
404	GUAACCAACUUAACCAGGA	UCCUGGUUAAGUUGGUUAC		[1116-1134]
405	CUGAGAAAGAGCCUGAGCA	UGCUCAGGCUCUUUCUCAG		[2217-2235]
406	CUGUACCAAGAACUACAGA	UCUGUAGUUCUUGGUACAG		[1094-1112]
407	AGAAAAUGGUCUUAAUGGU	ACCAUUAAGACCAUUUUCU		[3644-3662]

408	CUCUUAAAUAAGCGCAACA	UGUUGCGCUUAUUUAAGAG		[1166-1184]
409	UCCAGAAGCUGCUGUACCA	UGGUACAGCAGCUUCUGGA		[2448-2466]
410	UGAAUGGGUUCCAGUCUUA	UAAGACUGGAACCCAUUCA		[1032-1050]
411	CUUUUUAUAUACCAAAAGU	ACUUUUGGUAUAUAAAAAG		[4637-4655]
412	CCAGGAGAACAAGCUGAAG	CUUCAGCUUGUUCUCCUGG	Rat	[838-856]
413	UGGAGGAAGGCUACAUCCA	UGGAUGUAGCCUUCCUCCA		[3276-3294]
414	AAGCCUGAACUCCCACUGA	UCAGUGGGAGUUCAGGCUU		[1913-1931]
415	GAACAAGCUGAAGAAAAUU	AAUUUUCUUCAGCUUGUUC		[844-862]
416	GUACUUUCGCCUCCAAGGA	UCCUUGGAGGCGAAAGUAC		[3750-3768]
417	AAGGGUUGAUCAGCUUAGU	ACUAAGCUGAUCAACCCUU		[982-1000]
418	CCAAUGGAAACCUGGAAGA	UCUUCCAGGUUUCCAUUGG		[2577-2595]
419	AAAUAAGUCAGUUAAAGCA	UGCUUUAACUGACUUAUUU	Ms	[2086-2104]
420	AGCAGCAGAUUGAAAAUCA	UGAUUUUCAAUCUGCUGCU		[699-717]
421	GAAGCAGGAAGUACAGACU	AGUCUGUACUUCCUGCUUC		[955-973]
422	CUGAAAAUGAAAAGCUUCA	UGAAGCUUUUCAUUUUCAG	Ms	[795-813]
423	GGACCAACUUGAAGAAGCC	GGCUUCUUCAAGUUGGUCC		[2883-2901]
424	AAGAACUACAGAUUCGUAA	UUACGAAUCUGUAGUUCUU		[1101-1119]
425	CUGCAAUUUUAAGGGUUGA	UCAACCCUUAAAAUUGCAG		[972-990]
426	CCGAUGAUAUUAACUGUUU	AAACAGUUAAUAUCAUCGG		[290-308]
427	AAUGGAGUCAGGUGCUGGA	UCCAGCACCUGACUCCAUU		[4333-4351]
428	AAUAAAUGUACCUGGAGAA	UUCUCCAGGUACAUUUAUU		[601-619]
429	CGCCUUAAAUAAGUCAGUU	AACUGACUUAUUUAAGGCG		[2080-2098]
430	CUGUAUGGAAACAUGUCCA	UGGACAUGUUUCCAUACAG		[4053-4071]
431	UCAGCAGAGGAUUUCCGUA	UACGGAAAUCCUCUGCUGA		[1837-1855]
432	AAAAUGAAAAGCUUCAGAA	UUCUGAAGCUUUUCAUUUU	Ms	[798-816]
433	GCACAAUAAACCCGUCUCA	UGAGACGGGUUUAUUGUGC		[4934-4952]
434	GAGAGUUCGAUCUGGUGCA	UGCACCAGAUCGAACUCUC		[2979-2997]
435	CCUCAACCAUAAGCGACAU	AUGUCGCUUAUGGUUGAGG		[3228-3246]
436	AGGUGGAAGAUCCCAGCAA	UUGCUGGGAUCUUCCACCU		[3012-3030]
437	AGAAAGAGCCUGAGCAGGA	UCCUGCUCAGGCUCUUUCU		[2220-2238]
438	AAGCGGACCAACUUGAAGA	UCUUCAAGUUGGUCCGCUU		[2879-2897]
439	GUGUGAUGAACAAAGGUGU	ACACCUUUGUUCAUCACAC		[3333-3351]
440	UAACUGUUUUCUUGAGCAA	UUGCUCAAGAAAACAGUUA		[300-318]
441	AGCACUGACUGUACAUAGU	ACUAUGUACAGUCAGUGCU		[4823-4841]
442	UGUACGUACAGGCUUUUUA	UAAAAAGCCUGUACGUACA		[4625-4643]
443	GUGUGAGGAGAUGGAGGAA	UUCCUCCAUCUCCUCACAC		[3265-3283]
444	UCUUGAGCAACAAUGAACA	UGUUCAUUGUUGCUCAAGA	Rat,Ms	[309-327]
445	GAUUUUGGUGUCAACGUGA	UCACGUUGACACCAAAAUC		[3107-3125]
446	CAGACAGUGAAUUCAAGUU	AACUUGAAUUCACUGUCUG		[1997-2015]
447	AAAGAAGCAGGAAGUACAG	CUGUACUUCCUGCUUCUUU		[952-970]
448	UUGCCUCAACCAUAAGCGA	UCGCUUAUGGUUGAGGCAA		[3225-3243]
449	CGUUUUACCUUCGGGUUCA	UGAACCCGAAGGUAAAACG		[2119-2137]
450	UGAAGAAAAUUCGUGCAAU	AUUGCACGAAUUUUCUUCA		[852-870]
451	CGCUUCCUGUUCCAGUUCA	UGAACUGGAACAGGAAGCG		[4133-4151]
452	ACUGUUUUCUUGAGCAACA	UGUUGCUCAAGAAAACAGU		[302-320]
453	GCAACAAUGAACAGAUUUU	AAAAUCUGUUCAUUGUUGC	Rat,Ms	[315-333]
454	AGGCCCUUAGGCUCUAUUU	AAAUAGAGCCUAAGGGCCU		[4724-4742]
455	GCGAAUCAGUGAACUGCGU	ACGCAGUUCACUGAUUCGC		[1207-1225]
456	CAUUGAAACUGCUGCAGAC	GUCUGCAGCAGUUUCAAUG		[3244-3262]
457	AGGCUCUAUUUUUCAUGUA	UACAUGAAAAAUAGAGCCU		[4732-4750]
458	CCACCAUCACAUCGUGAAG	CUUCACGAUGUGAUGGUGG		[3079-3097]
459	UUGCAAGGAACCUGGAGAA	UUCUCCAGGUUCCUUGCAA		[385-403]
460	CUGUUUGGUGCCUGAAGGA	UCCUUCAGGCACCAAACAG		[4432-4450]
461	CGUGCAAUGAGAGGACAAG	CUUGUCCUCUCAUUGCACG		[863-881]
462	CUGUACCAGCGCUUCAACA	UGUUGAAGCGCUGGUACAG		[2459-2477]
463	CAGAGAAAUGUAAUAAAUG	CAUUUAUUACAUUUCUCUG		[590-608]

464	CAAUGAUAAUGAGUUACCU	AGGUAACUCAUUAUCAUUG	Ms	[2656-2674]
465	GCUCCUCACAACAGAUUCA	UGAAUCUGUUGUGAGGAGC		[1821-1839]
466	UUUACAUUUUCUAAAGCAA	UUGCUUUAGAAAAUGUAAA	Ms	[748-766]
467	CUAGGCAACAGCAGCAGAU	AUCUGCUGCUGUUGCCUAG		[690-708]
468	CGACUACAGCAAAAUCAUG	CAUGAUUUUGCUGUAGUCG		[883-901]
469	AAGGAAAACUGAAUGGGUU	AACCCAUUCAGUUUUCCUU	Ms	[1023-1041]
470	GCUGAUAGUGAUGGAUGGA	UCCAUCCAUCACUAUCAGC		[3131-3149]
471	CUUAAUGGUGCUCACUUUA	UAAAGUGAGCACCAUUAAG		[3654-3672]
472	AUAGUGUGGUGAAGAAAAG	CUUUUCUUCACCACACUAU		[4837-4855]
473	CAACCUGUCGAGAUGUUGU	ACAACAUCUCGACAGGUUG		[360-378]
474	GUGGACAAUGGAAACACCA	UGGUGUUUCCAUUGUCCAC	Rat	[2555-2573]
475	AAUGGUGCUCACUUUAGCA	UGCUAAAGUGAGCACCAUU		[3657-3675]
476	AAGCUAUGGGACAUACCCA	UGGGUAUGUCCCAUAGCUU		[1663-1681]
477	AUCUGUCUGCUGAAAUAGA	UCUAUUUCAGCAGACAGAU		[909-927]
478	UAAAUAAGCGCAACAUGGA	UCCAUGUUGCGCUUAUUUA		[1170-1188]
479	AAAGAAAGGAAAACUGAAU	AUUCAGUUUUCCUUUCUUU	Ms	[1018-1036]
480	CACCACCUAAGAAUUACCA	UGGUAAUUCUUAGGUGGUG		[2046-2064]
481	CAGGAAAAGCUGGGUGUGA	UCACACCCAGCUUUUCCUG		[3320-3338]
482	CAAAGCUACCCGAACUAUG	CAUAGUUCGGGUAGCUUUG		[4675-4693]
483	UCACCGAAUCGGACACUCA	UGAGUGUCCGAUUCGGUGA		[3978-3996]
484	CGUGAAGUUCCUGCUGGAU	AUCCAGCAGGAACUUCACG		[3091-3109]
485	CAGCGCCUUAAAUAAGUCA	UGACUUAUUUAAGGCGCUG		[2077-2095]
486	CCAUAUACUCCAUGUACCU	AGGUACAUGGAGUAUAUGG		[2016-2034]
487	AGGACGAAAGCGAGACUGA	UCAGUCUCGCUUUCGUCCU		[3438-3456]
488	AUGAUGCCGAUGAUAUUAA	UUAAUAUCAUCGGCAUCAU	Ms	[284-302]
489	AGUGAAUUCAAGUUCCAUA	UAUGGAACUUGAAUUCACU		[2002-2020]
490	AAGGAACAGCGUUUACAUU	AAUGUAAACGCUGUUCCUU	Rat,Ms	[737-755]
491	AGAGGACAAGUCGACUACA	UGUAGUCGACUUGUCCUCU		[872-890]
492	UGCUGGAUUUUGGUGUCAA	UUGACACCAAAAUCCAGCA		[3102-3120]
493	GUCCCAUACCCUUUGAUCA	UGAUCAAAGGGUAUGGGAC		[444-462]
494	CCCAUACCCUUUGAUCAUA	UAUGAUCAAAGGGUAUGGG		[446-464]
495	GCAUCGAGAUUGGUAAAGU	ACUUUACCAAUCUCGAUGC		[1605-1623]
496	UGAAGUUCCUGCUGGAUUU	AAAUCCAGCAGGAACUUCA		[3093-3111]
497	CAGUAUUGCCUCAAAUGCU	AGCAUUUGAGGCAAUACUG		[1393-1411]
498	UGAUAUUAACUGUUUUCUU	AAGAAAACAGUUAAUAUCA		[294-312]
499	AGAGUGAUGCAGACCUGGA	UCCAGGUCUGCAUCACUCU	Ms	[2340-2358]
500	AAAGUAUUUUUUGACUAGA	UCUAGUCAAAAAAUACUUU		[4651-4669]

Table B 6 BNIP3 - BCL2/adenovirus E1B 19kDa interacting protein 3

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-7669480 :127-711
1	UGAGGAAGAUGAUAUUGAA	UUCAAUAUCAUCUUCCUCA		[411-429]
2	CAACCUUAAUUCAGCUGAA	UUCAGCUGAAUUAAGGUUG		[1046-1064]
3	GCUAAUUGUUCAUAAUCAA	UUGAUUAUGAACAAUUAGC		[1231-1249]
4	AAAGCAUCUUGAAGAAAAA	UUUUUCUUCAAGAUGCUUU	GP,Chn	[446-464]
5	AAAAGAAUAGACACUAAAA	UUUUAGUGUCUAUUCUUUU		[857-875]
6	ACACGAGCGUCAUGAAGAA	UUCUUCAUGACGCUCGUGU		[566-584]
7	GGAACACGAGCGUCAUGAA	UUCAUGACGCUCGUGUUCC		[563-581]
8	CAGGUUGUCUACUAAAGAA	UUCUUUAGUAGACAACCUG		[1195-1213]
9	CGUUCCUAAUUUAGUAAAA	UUUUACUAAAUUAGGAACG		[837-855]
10	CCAAGGAGUUCCUCUUUAA	UUAAAGAGGAACUCCUUGG		[512-530]
11	GGAAGAUGAUAUUGAAAGA	UCUUUCAAUAUCAUCUUCC		[414-432]
12	GGGUUUGUCCAAAAUAAAU	AUUUAUUUUGGACAAACCC		[1120-1138]
13	GGGCAUAUUCUCUGCAGAA	UUCUGCAGAGAAUAUGCCC		[588-606]
14	CUGCAUUGGUGAAUUUAAU	AUUAAAUUCACCAAUGCAG		[1413-1431]
15	GCUUUUGCAUUAUAAGGAA	UUCCUUAUAAUGCAAAAGC		[1308-1326]

16	AAAUCAUGUUGAUCUAUAA	UUAUAGAUCAACAUGAUUU		[873-891]
17	GAAUGAAUAACAUUGAUAA	UUAUCAAUGUUAUUCAUUC		[1083-1101]
18	CCUCGGUUUCUAUUUAUAA	UUAUAAAUAGAAACCGAGG		[227-245]
19	GUGAAAAUUUGGUAGUAAA	UUUACUACCAAAUUUUCAC		[939-957]
20	GAUGCAGGUUGUCUACUAA	UUAGUAGACAACCUGCAUC		[1191-1209]
21	CAGCUUUAUUCUAAGCAAA	UUUGCUUAGAAUAAAGCUG		[1470-1488]
22	CAAGGAGUUCCUCUUUAAA	UUUAAAGAGGAACUCCUUG		[513-531]
23	CUGCGUUCCUAAUUUAGUA	UACUAAAUUAGGAACGCAG		[834-852]
24	UGUUCAUAAUCAACAGAAA	UUUCUGUUGAUUAUGAACA		[1237-1255]
25	GAGGAAGAUGAUAUUGAAA	UUUCAAUAUCAUCUUCCUC		[412-430]
26	UGGAGACAUGGAAAAAAUA	UAUUUUUUCCAUGUCUCCA		[246-264]
27	GAAAGCAUCUUGAAGAAAA	UUUUCUUCAAGAUGCUUUC	GP,Chn	[445-463]
28	AAAUUAUCUGCAACCUUAA	UUAAGGUUGCAGAUAAUUU		[1036-1054]
29	GGAUGCAGGUUGUCUACUA	UAGUAGACAACCUGCAUCC		[1190-1208]
30	AAGUUGAAAGCAUCUUGAA	UUCAAGAUGCUUUCAACUU	GP,Chn	[440-458]
31	AUAAAAGAAUAGACACUAA	UUAGUGUCUAUUCUUUUAU		[855-873]
32	GCAGGUUGUCUACUAAAGA	UCUUUAGUAGACAACCUGC		[1194-1212]
33	GCCUCGGUUUCUAUUUAUA	UAUAAAUAGAAACCGAGGC		[226-244]
34	GCAUUAUAAGGAAUUAAGU	ACUUAAUUCCUUAUAAUGC		[1314-1332]
35	ACACCUAUGGGAUCAAUAA	UUAUUGAUCCCAUAGGUGU		[894-912]
36	CUAUGCUAAUUGUUCAUAA	UUAUGAACAAUUAGCAUAG		[1227-1245]
37	GAAUAGACACUAAAAUCAU	AUGAUUUUAGUGUCUAUUC		[861-879]
38	CAACAGAAACCAAGAUAGA	UCUAUCUUGGUUUCUGUUG		[1247-1265]
39	GAUUAAUGUCUACUGUGAA	UUCACAGUAGACAUUAAUC		[925-943]
40	AAAGAAUAGACACUAAAAU	AUUUUAGUGUCUAUUCUUU		[858-876]
41	CCUUAUAUAUCACACUAUU	AAUAGUGUGAUAUAUAAGG		[1146-1164]
42	CAGGGCUUCUGAAACAGAU	AUCUGUUUCAGAAGCCCUG		[357-375]
43	CCAUAGCAUUGGAGAGAAA	UUUCUCUCCAAUGCUAUGG		[378-396]
44	GGUUUGUCCAAAAUAAAUA	UAUUUAUUUUGGACAAACC		[1121-1139]
45	GAAGUUGAAAGCAUCUUGA	UCAAGAUGCUUUCAACUUC	GP,Chn	[439-457]
46	AAGAAGGAAAGAAGUUGAA	UUCAACUUCUUUCCUUCUU		[429-447]
47	UAAAAGAAUAGACACUAAA	UUUAGUGUCUAUUCUUUUA		[856-874]
48	UCUGCAUUGGUGAAUUUAA	UUAAAUUCACCAAUGCAGA		[1412-1430]
49	CACUAUUGUAGAAAGUAUU	AAUACUUUCUACAAUAGUG		[1158-1176]
50	GAAGUACUUUAUAUUUCAA	UUGAAAUAUAAAGUACUUC		[1062-1080]
51	CAACAUAGCUCACUGAAGA	UCUUCAGUGAGCUAUGUUG		[762-780]
52	CUAAAAUCAUGUUGAUCUA	UAGAUCAACAUGAUUUUAG		[870-888]
53	GGAAUUAAGUCUCCGAUUA	UAAUCGGAGACUUAAUUCC		[1323-1341]
54	ACACUAUUGUAGAAAGUAU	AUACUUUCUACAAUAGUGU		[1157-1175]
55	GGAAAGAAGUUGAAAGCAU	AUGCUUUCAACUUCUUUCC	GP,Chn	[434-452]
56	CUCGGUUUCUAUUUAUAAU	AUUAUAAAUAGAAACCGAG		[228-246]
57	CAUAAUCAACAGAAACCAA	UUGGUUUCUGUUGAUUAUG		[1241-1259]
58	CAGCUGAAGUACUUUAUAU	AUAUAAAGUACUUCAGCUG		[1057-1075]
59	CAGCCUCGGUUUCUAUUUA	UAAAUAGAAACCGAGGCUG		[224-242]
60	AGGUGAUCACCCUGGAUGA	UCAUCCAGGGUGAUCACCU		[1344-1362]
61	CAGAAUUUCUGAAAGUUUU	AAAACUUUCAGAAAUUCUG		[602-620]
62	AAACCAAGAUAGAGCUACA	UGUAGCUCUAUCUUGGUUU		[1253-1271]
63	GAAUUAAGUCUCCGAUUAU	AUAAUCGGAGACUUAAUUC		[1324-1342]
64	GGCCUUAUAUAUCACACUA	UAGUGUGAUAUAUAAGGCC		[1144-1162]
65	ACACUAAAAUCAUGUUGAU	AUCAACAUGAUUUUAGUGU		[867-885]
66	CCUUAAUUCAGCUGAAGUA	UACUUCAGCUGAAUUAAGG		[1049-1067]
67	GUACAGUUCGUACACUAAA	UUUAGUGUACGAACUGUAC		[1281-1299]
68	CAAGUCGGCCGGAAAAUAU	AUAUUUUCCGGCCGACUUG		[488-506]
69	AAUAAAAUCGCUACUUUAA	UUAAAGUAGCGAUUUUAUU		[1100-1118]
70	AACUCUUCUUGCUUUUGCA	UGCAAAAGCAAGAAGAGUU		[1298-1316]
71	CAACAGGGCUUCUGAAACA	UGUUUCAGAAGCCCUGUUG		[354-372]

72	UGAUCAGUUUUCUGCUGAA	UUCAGCAGAAAACUGAUCA		[1360-1378]
73	UUGAAAGCAUCUUGAAGAA	UUCUUCAAGAUGCUUUCAA	GP,Chn	[443-461]
74	AGGUUGUCUACUAAAGAAA	UUUCUUUAGUAGACAACCU		[1196-1214]
75	AAAGAAGGAAAGAAGUUGA	UCAACUUCUUUCCUUCUUU		[428-446]
76	GGGUAGAACUGCACUUCAG	CUGAAGUGCAGUUCUACCC	Rat,Ms	[179-197]
77	AGAAGGAAAGAAGUUGAAA	UUUCAACUUCUUUCCUUCU	Chn	[430-448]
78	GAUGAUAUUGAAAGAAGGA	UCCUUCUUUCAAUAUCAUC		[418-436]
79	AGCACCUUUUGAUGAAGAA	UUCUUCAUCAAAAGGUGCU		[700-718]
80	UAAUAAAAUCGCUACUUUA	UAAAGUAGCGAUUUUAUUA		[1099-1117]
81	AUAGCAUUGGAGAGAAAAA	UUUUUCUCUCCAAUGCUAU		[380-398]
82	GAAGGCACCUACUCAGUAU	AUACUGAGUAGGUGCCUUC		[1376-1394]
83	AGGGCUUCUGAAACAGAUA	UAUCUGUUUCAGAAGCCCU		[358-376]
84	CCAAGAGCUCUCACUGUGA	UCACAGUGAGAGCUCUUGG	Rat	[302-320]
85	GUAAAUGCUGCGUUCCUAA	UUAGGAACGCAGCAUUUAC		[827-845]
86	UCAUGUUGAUCUAUAAUUA	UAAUUAUAGAUCAACAUGA		[876-894]
87	UGAUAUUGAAAGAAGGAAA	UUUCCUUCUUUCAAUAUCA		[420-438]
88	UCUUGCUUUUGCAUUAUAA	UUAUAAUGCAAAAGCAAGA		[1304-1322]
89	GUGUUUAUUUGUUCUGUAA	UUACAGAACAAAUAAACAC		[812-830]
90	UCAGCUUUAUUCUAAGCAA	UUGCUUAGAAUAAAGCUGA		[1469-1487]
91	AGGAGUUCCUCUUUAAACA	UGUUUAAAGAGGAACUCCU	GP	[515-533]
92	AAGUCGGCCGGAAAAUAUU	AAUAUUUUCCGGCCGACUU		[489-507]
93	GUUGAAAGCAUCUUGAAGA	UCUUCAAGAUGCUUUCAAC	GP,Chn	[442-460]
94	GUUCGUUAGUGGAUUACUU	AAGUAAUCCACUAACGAAC		[734-752]
95	CAGCUCACAGUCUGAGGAA	UUCCUCAGACUGUGAGCUG		[399-417]
96	UGGAAAAAAUACUGCUGGA	UCCAGCAGUAUUUUUUCCA	Rat	[254-272]
97	AUAUCACACUAUUGUAGAA	UUCUACAAUAGUGUGAUAU		[1152-1170]
98	CAUCUUGAAGAAAAACUCA	UGAGUUUUUCUUCAAGAUG	Chn	[450-468]
99	AGCAUGUCAGACUGAUUAA	UUAAUCAGUCUGACAUGCU		[912-930]
100	AUGGAGACAUGGAAAAAAU	AUUUUUUCCAUGUCUCCAU		[245-263]
101	CACUGAAGAGCUGUUAGAU	AUCUAACAGCUCUUCAGUG		[772-790]
102	UACCAACAGGGCUUCUGAA	UUCAGAAGCCCUGUUGGUA		[351-369]
103	GAUCUAUAAUUACACCUAU	AUAGGUGUAAUUAUAGAUC		[883-901]
104	GUUGUCUACUAAAGAAAGA	UCUUUCUUUAGUAGACAAC		[1198-1216]
105	UCAAAAGAAUGAAUAACAU	AUGUUAUUCAUUCUUUUGA		[1077-1095]
106	CGAGCGUCAUGAAGAAAGG	CCUUUCUUCAUGACGCUCG		[569-587]
107	UGCUGAAGGCACCUACUCA	UGAGUAGGUGCCUUCAGCA		[1372-1390]
108	GCACCUACUCAGUAUCUUU	AAAGAUACUGAGUAGGUGC		[1380-1398]
109	AAAAUUAUCUGCAACCUUA	UAAGGUUGCAGAUAAUUUU		[1035-1053]
110	CAGUCUGAGGAAGAUGAUA	UAUCAUCUUCCUCAGACUG		[406-424]
111	UCAGCUGAAGUACUUUAUA	UAUAAAGUACUUCAGCUGA		[1056-1074]
112	UGGAUAUGGGAUUGGUCAA	UUGACCAAUCCCAUAUCCA	Rat,Ms, GP,Chn	[472-490]
113	ACUAUUGUAGAAAGUAUUA	UAAUACUUUCUACAAUAGU		[1159-1177]
114	UGCUAAUUGUUCAUAAUCA	UGAUUAUGAACAAUUAGCA		[1230-1248]
115	GCCUUAUAUAUCACACUAU	AUAGUGUGAUAUAUAAGGC		[1145-1163]
116	CAUUGAUAAUAAAAUCGCU	AGCGAUUUUAUUAUCAAUG		[1093-1111]
117	GUUUGUCCAAAAUAAAUAU	AUAUUUAUUUUGGACAAAC		[1122-1140]
118	GAACUGCACUUCAGCAAUA	UAUUGCUGAAGUGCAGUUC		[184-202]
119	GUUCGUACACUAAACUCUU	AAGAGUUUAGUGUACGAAC		[1286-1304]
120	AAGAAUGAAUAACAUUGAU	AUCAAUGUUAUUCAUUCUU		[1081-1099]
121	GUUAGUGGAUUACUUCUGA	UCAGAAGUAAUCCACUAAC		[738-756]
122	GAUCAAUAAGCAUGUCAGA	UCUGACAUGCUUAUUGAUC		[904-922]
123	CCAAGAUAGAGCUACAAAC	GUUUGUAGCUCUAUCUUGG		[1256-1274]
124	CUACUAAAGAAAGAUUAUA	UAUAAUCUUUCUUUAGUAG		[1203-1221]
125	UGAUCACCCUGGAUGAUCA	UGAUCAUCCAGGGUGAUCA		[1347-1365]
126	AAUGGAGACAUGGAAAAAA	UUUUUUCCAUGUCUCCAUU		[244-262]

127	UGGGUAGAACUGCACUUCA	UGAAGUGCAGUUCUACCCA	Rat,Ms	[178-196]
128	AGAAUAGACACUAAAAUCA	UGAUUUUAGUGUCUAUUCU		[860-878]
129	CAAGAUAGAGCUACAAACU	AGUUUGUAGCUCUAUCUUG		[1257-1275]
130	AGAUAGAGCUACAAACUCA	UGAGUUUGUAGCUCUAUCU		[1259-1277]
131	UGAAGUACUUUAUAUUUCA	UGAAAUAUAAAGUACUUCA		[1061-1079]
132	GGUUUCUAUUUAUAAUGGA	UCCAUUAUAAAUAGAAACC		[231-249]
133	UAUGCUAAUUGUUCAUAAU	AUUAUGAACAAUUAGCAUA		[1228-1246]
134	UGUCCAAAAUAAAUAUUGU	ACAAUAUUUAUUUUGGACA		[1125-1143]
135	AAUGGAUGCAGGUUGUCUA	UAGACAACCUGCAUCCAUU		[1187-1205]
136	UGUACAGUUCGUACACUAA	UUAGUGUACGAACUGUACA		[1280-1298]
137	CACCCUGGAUGAUCAGUUU	AAACUGAUCAUCCAGGGUG		[1351-1369]
138	ACCAAGAUAGAGCUACAAA	UUUGUAGCUCUAUCUUGGU		[1255-1273]
139	AUUGGAAGGCGUCUGACAA	UUGUCAGACGCCUUCCAAU	Rat,Ms	[673-691]
140	UGAGGAACACGAGCGUCAU	AUGACGCUCGUGUUCCUCA		[560-578]
141	GCUUUUAAAAUCAGCUUUA	UAAAGCUGAUUUUAAAAGC		[1459-1477]
142	GAGAGAAAAACAGCUCACA	UGUGAGCUGUUUUUCUCUC		[389-407]
143	CUGUACAGUUCGUACACUA	UAGUGUACGAACUGUACAG		[1279-1297]
144	CCCAAGGAGUUCCUCUUUA	UAAAGAGGAACUCCUUGGG		[511-529]
145	GAGACAUGGAAAAAAUACU	AGUAUUUUUUCCAUGUCUC		[248-266]
146	AACCAAGAUAGAGCUACAA	UUGUAGCUCUAUCUUGGUU		[1254-1272]
147	GAAGAUGAUAUUGAAAGAA	UUCUUUCAAUAUCAUCUUC		[415-433]
148	GCAUAUUCUCUGCAGAAUU	AAUUCUGCAGAGAAUAUGC		[590-608]
149	ACCAGCACCUUUUGAUGAA	UUCAUCAAAAGGUGCUGGU		[697-715]
150	AAAGAAUGAAUAACAUUGA	UCAAUGUUAUUCAUUCUUU		[1080-1098]
151	GAAAAACUCAGAUUGGAUA	UAUCCAAUCUGAGUUUUUC	Rat,Ms,Chn	[459-477]
152	AUGCAGGUUGUCUACUAAA	UUUAGUAGACAACCUGCAU		[1192-1210]
153	CUGUGAAAAUUUGGUAGUA	UACUACCAAAUUUUCACAG		[937-955]
154	CACGAGCGUCAUGAAGAAA	UUUCUUCAUGACGCUCGUG		[567-585]
155	GGUUGUCUACUAAAGAAAG	CUUUCUUUAGUAGACAACC		[1197-1215]
156	GGCAUAUUCUCUGCAGAAU	AUUCUGCAGAGAAUAUGCC		[589-607]
157	UCUUCUUGCUUUUGCAUUA	UAAUGCAAAAGCAAGAAGA		[1301-1319]
158	CAUGAGUCUGGACGGAGUA	UACUCCGUCCAGACUCAUG		[280-298]
159	CUUCUGAGCUUGCAACAUA	UAUGUUGCAAGCUCAGAAG		[750-768]
160	CAUAUUCUCUGCAGAAUUU	AAAUUCUGCAGAGAAUAUG		[591-609]
161	UUAUAAUGGAGACAUGGAA	UUCCAUGUCUCCAUUAUAA		[240-258]
162	CUUUUAAAAUCAGCUUUAU	AUAAAGCUGAUUUUAAAAG		[1460-1478]
163	GUAGUAAAUUUUCAUUUGA	UCAAAUGAAAAUUUACUAC		[950-968]
164	GAGAAAAACAGCUCACAGU	ACUGUGAGCUGUUUUUCUC		[391-409]
165	CCUAUGGGAUCAAUAAGCA	UGCUUAUUGAUCCCAUAGG		[897-915]
166	CCCAUAGCAUUGGAGAGAA	UUCUCUCCAAUGCUAUGGG		[377-395]
167	UUGCAUUAUAAGGAAUUAA	UUAAUUCCUUAUAAUGCAA		[1312-1330]
168	GCGUUCCUAAUUUAGUAAA	UUUACUAAAUUAGGAACGC		[836-854]
169	UAUAUAUCACACUAUUGUA	UACAAUAGUGUGAUAUAUA		[1149-1167]
170	GCAGAAUUUCUGAAAGUUU	AAACUUUCAGAAAUUCUGC		[601-619]
171	GUCUACUAAAGAAAGAUUA	UAAUCUUUCUUUAGUAGAC		[1201-1219]
172	AAAACAGCUCACAGUCUGA	UCAGACUGUGAGCUGUUUU		[395-413]
173	CACAGUCUGAGGAAGAUGA	UCAUCUUCCUCAGACUGUG		[404-422]
174	CUACAAACUCAGCUGUACA	UGUACAGCUGAGUUUGUAG		[1267-1285]
175	GUCUGAGGAAGAUGAUAUU	AAUAUCAUCUUCCUCAGAC		[408-426]
176	UAAUCAACAGAAACCAAGA	UCUUGGUUUCUGUUGAUUA		[1243-1261]
177	AAGAAAAACUCAGAUUGGA	UCCAAUCUGAGUUUUUCUU	Rat,Ms,Chn	[457-475]
178	UGAUUAAUGUCUACUGUGA	UCACAGUAGACAUUAAUCA		[924-942]
179	UAACUAUGCUAAUUGUUCA	UGAACAAUUAGCAUAGUUA		[1224-1242]
180	CCUGGAUGAUCAGUUUUCU	AGAAAACUGAUCAUCCAGG		[1354-1372]
181	CACACUAUUGUAGAAAGUA	UACUUUCUACAAUAGUGUG		[1156-1174]
182	CUCUGCAGAAUUUCUGAAA	UUUCAGAAAUUCUGCAGAG		[597-615]

183	GGAUGAUCAGUUUUCUGCU	AGCAGAAAACUGAUCAUCC		[1357-1375]
184	ACUGCACUUCAGCAAUAAU	AUUAUUGCUGAAGUGCAGU		[186-204]
185	GUUCCAGCCUCGGUUUCUA	UAGAAACCGAGGCUGGAAC		[220-238]
186	GACACUAAAAUCAUGUUGA	UCAACAUGAUUUUAGUGUC		[866-884]
187	AGCUGAAGUACUUUAUAUU	AAUAUAAAGUACUUCAGCU		[1058-1076]
188	GUUUAUUUGUUCUGUAAAU	AUUUACAGAACAAAUAAAC		[814-832]
189	UGUGAAAAUUUGGUAGUAA	UUACUACCAAAUUUUCACA		[938-956]
190	AACUGCACUUCAGCAAUAA	UUAUUGCUGAAGUGCAGUU		[185-203]
191	CAUAGCAUUGGAGAGAAAA	UUUUCUCUCCAAUGCUAUG		[379-397]
192	CUCACAGUCUGAGGAAGAU	AUCUUCCUCAGACUGUGAG		[402-420]
193	UCUACUAAAGAAAGAUUAU	AUAAUCUUUCUUUAGUAGA		[1202-1220]
194	GCUCACAGUCUGAGGAAGA	UCUUCCUCAGACUGUGAGC		[401-419]
195	CCUGGGUAGAACUGCACUU	AAGUGCAGUUCUACCCAGG	Rat,Ms	[176-194]
196	GUUCCUAAUUUAGUAAAAU	AUUUUACUAAAUUAGGAAC		[838-856]
197	AGCCUCGGUUUCUAUUUAU	AUAAAUAGAAACCGAGGCU		[225-243]
198	UGAAAAUUUGGUAGUAAAU	AUUUACUACCAAAUUUUCA		[940-958]
199	AGCAUUGGAGAGAAAAACA	UGUUUUUCUCUCCAAUGCU		[382-400]
200	GAAAGAAGUUGAAAGCAUC	GAUGCUUUCAACUUCUUUC	GP,Chn	[435-453]
201	AGUCUGACUUGGUUCGUUA	UAACGAACCAAGUCAGACU		[723-741]
202	AUACCAACAGGGCUUCUGA	UCAGAAGCCCUGUUGGUAU		[350-368]
203	CAGUAUCUUUUCCUCUUUA	UAAAGAGGAAAAGAUACUG		[1389-1407]
204	GAAGGAAAGAAGUUGAAAG	CUUUCAACUUCUUUCCUUC	Chn	[431-449]
205	AGAUGAUAUUGAAAGAAGG	CCUUCUUUCAAUAUCAUCU		[417-435]
206	UCUUGAAGAAAAACUCAGA	UCUGAGUUUUUCUUCAAGA	Chn	[452-470]
207	UAAUGGAGACAUGGAAAAA	UUUUUCCAUGUCUCCAUUA		[243-261]
208	CGUACACUAAACUCUUCUU	AAGAAGAGUUUAGUGUACG		[1289-1307]
209	CUGAAAGUUUUCCUUCCAU	AUGGAAGGAAAACUUUCAG		[610-628]
210	ACUUCAGCAAUAAUGGGAA	UUCCCAUUAUUGCUGAAGU	Chn	[191-209]
211	GAAACAGAUACCCAUAGCA	UGCUAUGGGUAUCUGUUUC		[367-385]
212	UCAAGUCGGCCGGAAAAUA	UAUUUUCCGGCCGACUUGA		[487-505]
213	GCUGCGUUCCUAAUUUAGU	ACUAAAUUAGGAACGCAGC		[833-851]
214	GCAUGUCAGACUGAUUAAU	AUUAAUCAGUCUGACAUGC		[913-931]
215	UCCUCUUUAAACACCCGAA	UUCGGGUGUUUAAAGAGGA	GP	[521-539]
216	CUGCAACCUUAAUUCAGCU	AGCUGAAUUAAGGUUGCAG		[1043-1061]
217	CAAAAGAAUGAAUAACAUU	AAUGUUAUUCAUUCUUUUG		[1078-1096]
218	CAGCUGUACAGUUCGUACA	UGUACGAACUGUACAGCUG		[1276-1294]
219	CUCAGCAUGAGGAACACGA	UCGUGUUCCUCAUGCUGAG		[553-571]
220	UCAGCAUGAGGAACACGAG	CUCGUGUUCCUCAUGCUGA		[554-572]
221	CAGCACCUUUUGAUGAAGA	UCUUCAUCAAAAGGUGCUG		[699-717]
222	GGUGAUCACCCUGGAUGAU	AUCAUCCAGGGUGAUCACC		[1345-1363]
223	CAGACUGAUUAAUGUCUAC	GUAGACAUUAAUCAGUCUG		[919-937]
224	AGAAAAACUCAGAUUGGAU	AUCCAAUCUGAGUUUUUCU	Rat,Ms,Chn	[458-476]
225	CUGAGGAAGAUGAUAUUGA	UCAAUAUCAUCUUCCUCAG		[410-428]
226	AAUUAUCUGCAACCUUAAU	AUUAAGGUUGCAGAUAAUU		[1037-1055]
227	CUGCAGAAUUUCUGAAAGU	ACUUUCAGAAAUUCUGCAG		[599-617]
228	GAUUAUAUAUAACUAUGCU	AGCAUAGUUAUAUAUAAUC		[1215-1233]
229	CAUCUCUGCUGCUCUCUCA	UGAGAGAGCAGCAGAGAUG		[626-644]
230	GGCACCUACUCAGUAUCUU	AAGAUACUGAGUAGGUGCC		[1379-1397]
231	UCGCAGACACCACAAGAUA	UAUCUUGUGGUGUCUGCGA		[334-352]
232	UGAAGGCACCUACUCAGUA	UACUGAGUAGGUGCCUUCA		[1375-1393]
233	GAAAGUUUUCCUUCCAUCU	AGAUGGAAGGAAAACUUUC		[612-630]
234	UAUAAUGGAGACAUGGAAA	UUUCCAUGUCUCCAUUAUA		[241-259]
235	UUUGCAUUAUAAGGAAUUA	UAAUUCCUUAUAAUGCAAA		[1311-1329]
236	AACACGAGCGUCAUGAAGA	UCUUCAUGACGCUCGUGUU		[565-583]
237	CUAUGGGAUCAAUAAGCAU	AUGCUUAUUGAUCCCAUAG		[898-916]
238	AUUAAUGUCUACUGUGAAA	UUUCACAGUAGACAUUAAU		[926-944]

239	GAUUACUUCUGAGCUUGCA	UGCAAGCUCAGAAGUAAUC		[745-763]
240	CUUGAAGAAAAACUCAGAU	AUCUGAGUUUUUCUUCAAG	Chn	[453-471]
241	CAGACACCACAAGAUACCA	UGGUAUCUUGUGGUGUCUG	Rat,Ms	[337-355]
242	GAUAGAGCUACAAACUCAG	CUGAGUUUGUAGCUCUAUC		[1260-1278]
243	ACAGUCUGAGGAAGAUGAU	AUCAUCUUCCUCAGACUGU		[405-423]
244	GUGGAUUACUUCUGAGCUU	AAGCUCAGAAGUAAUCCAC		[742-760]
245	AUGCUGCGUUCCUAAUUUA	UAAAUUAGGAACGCAGCAU		[831-849]
246	GUAAAAUAAAAGAAUAGAC	GUCUAUUCUUUUAUUUUAC		[850-868]
247	UCAGACUGAUUAAUGUCUA	UAGACAUUAAUCAGUCUGA		[918-936]
248	GACUUGGUUCGUUAGUGGA	UCCACUAACGAACCAAGUC		[728-746]
249	CUAUUGUAGAAAGUAUUAU	AUAAUACUUUCUACAAUAG		[1160-1178]
250	GCUGAAGUACUUUAUAUUU	AAAUAUAAAGUACUUCAGC		[1059-1077]
251	AAAAUCAGCUUUAUUCUAA	UUAGAAUAAAGCUGAUUUU		[1465-1483]
252	UGUAAAUGCUGCGUUCCUA	UAGGAACGCAGCAUUUACA		[826-844]
253	ACCAACAGGGCUUCUGAAA	UUUCAGAAGCCCUGUUGGU		[352-370]
254	UAUUGAAAGAAGGAAAGAA	UUCUUUCCUUCUUUCAAUA		[423-441]
255	UCUGCUGAAGGCACCUACU	AGUAGGUGCCUUCAGCAGA		[1370-1388]
256	AGGAAAGAAGUUGAAAGCA	UGCUUUCAACUUCUUUCCU	Chn	[433-451]
257	AGCUACAAACUCAGCUGUA	UACAGCUGAGUUUGUAGCU		[1265-1283]
258	CUACUGUGAAAAUUUGGUA	UACCAAAUUUUCACAGUAG		[934-952]
259	GUAGAACUGCACUUCAGCA	UGCUGAAGUGCAGUUCUAC	Rat,Ms	[181-199]
260	AGCUUUAUUCUAAGCAAAU	AUUUGCUUAGAAUAAAGCU		[1471-1489]
261	UGAAAGAAGGAAAGAAGUU	AACUUCUUUCCUUCUUUCA		[426-444]
262	AAGGAAUUAAGUCUCCGAU	AUCGGAGACUUAAUUCCUU		[1321-1339]
263	GGAGACAUGGAAAAAAUAC	GUAUUUUUUCCAUGUCUCC		[247-265]
264	ACACCACAAGAUACCAACA	UGUUGGUAUCUUGUGGUGU	Rat,Ms	[340-358]
265	CAAACUCAGCUGUACAGUU	AACUGUACAGCUGAGUUUG		[1270-1288]
266	AGAAUGAAUAACAUUGAUA	UAUCAAUGUUAUUCAUUCU		[1082-1100]
267	UUGAAAGAAGGAAAGAAGU	ACUUCUUUCCUUCUUUCAA		[425-443]
268	ACUGGAGUCUGACUUGGUU	AACCAAGUCAGACUCCAGU		[718-736]
269	UAAGGAAUUAAGUCUCCGA	UCGGAGACUUAAUUCCUUA		[1320-1338]
270	CACCUAUGGGAUCAAUAAG	CUUAUUGAUCCCAUAGGUG		[895-913]
271	UGGAGAGAAAAACAGCUCA	UGAGCUGUUUUUCUCUCCA		[387-405]
272	AAAUACUGCUGGACGCACA	UGUGCGUCCAGCAGUAUUU		[260-278]
273	AGGAAUUAAGUCUCCGAUU	AAUCGGAGACUUAAUUCCU		[1322-1340]
274	UGCGUUCCUAAUUUAGUAA	UUACUAAAUUAGGAACGCA		[835-853]
275	AAGCAUGUCAGACUGAUUA	UAAUCAGUCUGACAUGCUU		[911-929]
276	GAGCUUGCAACAUAGCUCA	UGAGCUAUGUUGCAAGCUC		[755-773]
277	AAUAAAAGAAUAGACACUA	UAGUGUCUAUUCUUUUAUU		[854-872]
278	CCUCUUUAUCACUCUGCAU	AUGCAGAGUGAUAAAGAGG		[1400-1418]
279	UUAAUAUACUAGUCAUGAU	AUCAUGACUAGUAUAUUAA		[1001-1019]
280	UCACUGAAGAGCUGUUAGA	UCUAACAGCUCUUCAGUGA		[771-789]
281	ACAGGGCUUCUGAAACAGA	UCUGUUUCAGAAGCCCUGU		[356-374]
282	GAUCUAUAUUGGAAGGCGU	ACGCCUUCCAAUAUAGAUC		[666-684]
283	CUUCUUGCUUUUGCAUUAU	AUAAUGCAAAAGCAAGAAG		[1302-1320]
284	AGUUGAAAGCAUCUUGAAG	CUUCAAGAUGCUUUCAACU	GP,Chn	[441-459]
285	AUUUGGUAGUAAAUUUUCA	UGAAAAUUUACUACCAAAU		[945-963]
286	AUGAAGAACUGGAGUCUGA	UCAGACUCCAGUUCUUCAU		[711-729]
287	ACUCAGAUUGGAUAUGGGA	UCCCAUAUCCAAUCUGAGU	Rat,Ms,Chn	[464-482]
288	UGUUUAUUUGUUCUGUAAA	UUUACAGAACAAAUAAACA		[813-831]
289	AUUACUUCUGAGCUUGCAA	UUGCAAGCUCAGAAGUAAU		[746-764]
290	UGCAACAUAGCUCACUGAA	UUCAGUGAGCUAUGUUGCA		[760-778]
291	AUUAGGUGAUCACCCUGGA	UCCAGGGUGAUCACCUAAU		[1341-1359]
292	GCAACAUAGCUCACUGAAG	CUUCAGUGAGCUAUGUUGC		[761-779]
293	CUCGCAGACACCACAAGAU	AUCUUGUGGUGUCUGCGAG		[333-351]
294	UGCAUUAUAAGGAAUUAAG	CUUAAUUCCUUAUAAUGCA		[1313-1331]

295	UGCUUUUGCAUUAUAAGGA	UCCUUAUAAUGCAAAAGCA		[1307-1325]
296	UCUGAAAGUUUUCCUUCCA	UGGAAGGAAAACUUUCAGA		[609-627]
297	GAACACGAGCGUCAUGAAG	CUUCAUGACGCUCGUGUUC		[564-582]
298	CUUGCUUUUGCAUUAUAAG	CUUAUAAUGCAAAAGCAAG		[1305-1323]
299	CGCAGACACCACAAGAUAC	GUAUCUUGUGGUGUCUGCG		[335-353]
300	AAUUAAGUCUCCGAUUAUU	AAUAAUCGGAGACUUAAUU		[1325-1343]
301	AUGUCAGACUGAUUAAUGU	ACAUUAAUCAGUCUGACAU		[915-933]
302	AAAUCAGCUUUAUUCUAAG	CUUAGAAUAAAGCUGAUUU		[1466-1484]
303	UUGGUUCGUUAGUGGAUUA	UAAUCCACUAACGAACCAA		[731-749]
304	AAGAGCUCUCACUGUGACA	UGUCACAGUGAGAGCUCUU	Rat	[304-322]
305	AUAAUGGAGACAUGGAAAA	UUUUCCAUGUCUCCAUUAU		[242-260]
306	UUCUCUGCAGAAUUUCUGA	UCAGAAAUUCUGCAGAGAA		[595-613]
307	GAUUGGAUAUGGGAUUGGU	ACCAAUCCCAUAUCCAAUC	Rat,Ms, GP,Chn	[469-487]
308	AUAUAACUAUGCUAAUUGU	ACAAUUAGCAUAGUUAUAU		[1221-1239]
309	AUUAAGUCUCCGAUUAUUA	UAAUAAUCGGAGACUUAAU		[1326-1344]
310	CUCAGAUUGGAUAUGGGAU	AUCCCAUAUCCAAUCUGAG	Rat,Ms,Chn	[465-483]
311	CUCUGCAUUGGUGAAUUUA	UAAAUUCACCAAUGCAGAG		[1411-1429]
312	AGAGAAAAACAGCUCACAG	CUGUGAGCUGUUUUUCUCU		[390-408]
313	CUUUUGCAUUAUAAGGAAU	AUUCCUUAUAAUGCAAAAG		[1309-1327]
314	CUCCACCAGCACCUUUUGA	UCAAAAGGUGCUGGUGGAG		[693-711]
315	CUGAAGGCACCUACUCAGU	ACUGAGUAGGUGCCUUCAG		[1374-1392]
316	UAUUGGAAGGCGUCUGACA	UGUCAGACGCCUUCCAAUA		[672-690]
317	CACCAGCACCUUUUGAUGA	UCAUCAAAAGGUGCUGGUG		[696-714]
318	GAAAAACAGCUCACAGUCU	AGACUGUGAGCUGUUUUUC		[393-411]
319	UAAUGUCUACUGUGAAAAU	AUUUUCACAGUAGACAUUA		[928-946]
320	UAAAAUCAGCUUUAUUCUA	UAGAAUAAAGCUGAUUUUA		[1464-1482]
321	CACCUACUCAGUAUCUUUU	AAAAGAUACUGAGUAGGUG		[1381-1399]
322	UGAAAGCAUCUUGAAGAAA	UUUCUUCAAGAUGCUUUCA	GP,Chn	[444-462]
323	GAAGAAAAACUCAGAUUGG	CCAAUCUGAGUUUUUCUUC	Rat,Ms,Chn	[456-474]
324	ACACUAAACUCUUCUUGCU	AGCAAGAAGAGUUUAGUGU		[1292-1310]
325	UACACCUAUGGGAUCAAUA	UAUUGAUCCCAUAGGUGUA		[893-911]
326	GGUUCGUUAGUGGAUUACU	AGUAAUCCACUAACGAACC		[733-751]
327	CUAAACUCUUCUUGCUUUU	AAAAGCAAGAAGAGUUUAG		[1295-1313]
328	AUGUUGAUCUAUAAUUACA	UGUAAUUAUAGAUCAACAU		[878-896]
329	AGACACCACAAGAUACCAA	UUGGUAUCUUGUGGUGUCU	Rat,Ms	[338-356]
330	UCUGAAACAGAUACCCAUA	UAUGGGUAUCUGUUUCAGA		[364-382]
331	GAAGAACUGGAGUCUGACU	AGUCAGACUCCAGUUCUUC		[713-731]
332	AACAGAUACCCAUAGCAUU	AAUGCUAUGGGUAUCUGUU		[369-387]
333	CCACCAGCACCUUUUGAUG	CAUCAAAAGGUGCUGGUGG		[695-713]
334	GGAUCAAUAAGCAUGUCAG	CUGACAUGCUUAUUGAUCC		[903-921]
335	GGUAGUAAAUUUUCAUUUG	CAAAUGAAAAUUUACUACC		[949-967]
336	AAAAUCAUGUUGAUCUAUA	UAUAGAUCAACAUGAUUUU		[872-890]
337	CACUAAACUCUUCUUGCUU	AAGCAAGAAGAGUUUAGUG		[1293-1311]
338	AAUAGACACUAAAAUCAUG	CAUGAUUUUAGUGUCUAUU		[862-880]
339	AGAACUGCACUUCAGCAAU	AUUGCUGAAGUGCAGUUCU	Rat,Ms	[183-201]
340	UCCUCUUUAUCACUCUGCA	UGCAGAGUGAUAAAGAGGA		[1399-1417]
341	CAUGUUGAUCUAUAAUUAC	GUAAUUAUAGAUCAACAUG		[877-895]
342	AGAUACCCAUAGCAUUGGA	UCCAAUGCUAUGGGUAUCU		[372-390]
343	GUCAAGUCGGCCGGAAAAU	AUUUUCCGGCCGACUUGAC		[486-504]
344	UAUAAUUACACCUAUGGGA	UCCCAUAGGUGUAAUUAUA		[887-905]
345	GAGUCUGACUUGGUUCGUU	AACGAACCAAGUCAGACUC		[722-740]
346	AAUCAUGUUGAUCUAUAAU	AUUAUAGAUCAACAUGAUU		[874-892]
347	CAAGAUACCAACAGGGCUU	AAGCCCUGUUGGUAUCUUG		[346-364]
348	UGAUCUAUAAUUACACCUA	UAGGUGUAAUUAUAGAUCA		[882-900]
349	CUUUUGAUGAAGAACUGGA	UCCAGUUCUUCAUCAAAAG		[705-723]

350	GCAUCUUGAAGAAAAACUC	GAGUUUUUCUUCAAGAUGC	GP,Chn	[449-467]
351	UAUCUGCAACCUUAAUUCA	UGAAUUAAGGUUGCAGAUA		[1040-1058]
352	AAUUGUUCAUAAUCAACAG	CUGUUGAUUAUGAACAAUU		[1234-1252]
353	CAGUUUUCUGCUGAAGGCA	UGCCUUCAGCAGAAAACUG		[1364-1382]
354	AAAUAAAAGAAUAGACACU	AGUGUCUAUUCUUUUAUUU		[853-871]
355	UCUCUGCAGAAUUUCUGAA	UUCAGAAAUUCUGCAGAGA		[596-614]
356	GCAUUGGAGAGAAAAACAG	CUGUUUUUCUCUCCAAUGC		[383-401]
357	CCAGCCUCGGUUUCUAUUU	AAAUAGAAACCGAGGCUGG		[223-241]
358	AACUAUGCUAAUUGUUCAU	AUGAACAAUUAGCAUAGUU		[1225-1243]
359	CUUGGUUCGUUAGUGGAUU	AAUCCACUAACGAACCAAG		[730-748]
360	CGGUUUCUAUUUAUAAUGG	CCAUUAUAAAUAGAAACCG		[230-248]
361	GGAGAGAAAAACAGCUCAC	GUGAGCUGUUUUUCUCUCC		[388-406]
362	UAAGCAUGUCAGACUGAUU	AAUCAGUCUGACAUGCUUA		[910-928]
363	CAUUAUAAGGAAUUAAGUC	GACUUAAUUCCUUAUAAUG		[1315-1333]
364	UCACACUAUUGUAGAAAGU	ACUUUCUACAAUAGUGUGA		[1155-1173]
365	CAGAAACCAAGAUAGAGCU	AGCUCUAUCUUGGUUUCUG		[1250-1268]
366	AUGAUAUUGAAAGAAGGAA	UUCCUUCUUUCAAUAUCAU		[419-437]
367	CACUCUGCAUUGGUGAAUU	AAUUCACCAAUGCAGAGUG		[1409-1427]
368	ACUGAUUAAUGUCUACUGU	ACAGUAGACAUUAAUCAGU		[922-940]
369	UCAUAAUCAACAGAAACCA	UGGUUUCUGUUGAUUAUGA		[1240-1258]
370	AUUGAAAGAAGGAAAGAAG	CUUCUUUCCUUCUUUCAAU		[424-442]
371	UUCAAAAGAAUGAAUAACA	UGUUAUUCAUUCUUUUGAA		[1076-1094]
372	AAAGAAGUUGAAAGCAUCU	AGAUGCUUUCAACUUCUUU	GP,Chn	[436-454]
373	UGCAGGUUGUCUACUAAAG	CUUUAGUAGACAACCUGCA		[1193-1211]
374	AAGAAUAGACACUAAAAUC	GAUUUUAGUGUCUAUUCUU		[859-877]
375	AAACAGAUACCCAUAGCAU	AUGCUAUGGGUAUCUGUUU		[368-386]
376	CCUCUUUAAACACCCGAAG	CUUCGGGUGUUUAAAGAGG	GP	[522-540]
377	UAGACACUAAAAUCAUGUU	AACAUGAUUUUAGUGUCUA		[864-882]
378	GUCUCCGAUUAUUAGGUGA	UCACCUAAUAAUCGGAGAC		[1331-1349]
379	AAGUUUUCCUUCCAUCUCU	AGAGAUGGAAGGAAAACUU		[614-632]
380	UUAGGUGAUCACCCUGGAU	AUCCAGGGUGAUCACCUAA		[1342-1360]
381	GCAACCUUAAUUCAGCUGA	UCAGCUGAAUUAAGGUUGC		[1045-1063]
382	GGGAUCAAUAAGCAUGUCA	UGACAUGCUUAUUGAUCCC		[902-920]
383	CAUUGGUGAAUUUAAUCCU	AGGAUUAAAUUCACCAAUG		[1416-1434]
384	AAUGCUGCGUUCCUAAUUU	AAAUUAGGAACGCAGCAUU		[830-848]
385	ACUCUUCUUGCUUUUGCAU	AUGCAAAAGCAAGAAGAGU		[1299-1317]
386	AAAAAUUAUCUGCAACCUU	AAGGUUGCAGAUAAUUUUU		[1034-1052]
387	AAAAUAAAAGAAUAGACAC	GUGUCUAUUCUUUUAUUUU		[852-870]
388	CAAGAGCUCUCACUGUGAC	GUCACAGUGAGAGCUCUUG	Rat	[303-321]
389	CUUCUGAAACAGAUACCCA	UGGGUAUCUGUUUCAGAAG		[362-380]
390	ACAGCUCACAGUCUGAGGA	UCCUCAGACUGUGAGCUGU		[398-416]
391	GAAAAUUUGGUAGUAAAUU	AAUUUACUACCAAAUUUUC		[941-959]
392	UGCAGAAUUUCUGAAAGUU	AACUUUCAGAAAUUCUGCA		[600-618]
393	GGUAGAACUGCACUUCAGC	GCUGAAGUGCAGUUCUACC	Rat,Ms	[180-198]
394	AGUUCGUACACUAAACUCU	AGAGUUUAGUGUACGAACU		[1285-1303]
395	CUCCAAGAGCUCUCACUGU	ACAGUGAGAGCUCUUGGAG	Rat	[300-318]
396	GUGCUUUUAAAAUCAGCUU	AAGCUGAUUUUAAAAGCAC		[1457-1475]
397	CUGUAAAUGCUGCGUUCCU	AGGAACGCAGCAUUUACAG		[825-843]
398	CCAGCACCUUUUGAUGAAG	CUUCAUCAAAAGGUGCUGG		[698-716]
399	CACUUCAGCAAUAAUGGGA	UCCCAUUAUUGCUGAAGUG	Chn	[190-208]
400	AAUCAACAGAAACCAAGAU	AUCUUGGUUUCUGUUGAUU		[1244-1262]
401	UAGAACUGCACUUCAGCAA	UUGCUGAAGUGCAGUUCUA	Rat,Ms	[182-200]
402	CCGAUUAUUAGGUGAUCAC	GUGAUCACCUAAUAAUCGG		[1335-1353]
403	UUUGGUAGUAAAUUUUCAU	AUGAAAAUUUACUACCAAA		[946-964]
404	CUCAGUAUCUUUUCCUCUU	AAGAGGAAAAGAUACUGAG		[1387-1405]
405	UUCUGAAACAGAUACCCAU	AUGGGUAUCUGUUUCAGAA		[363-381]

406	UUGGAUAUGGGAUUGGUCA	UGACCAAUCCCAUAUCCAA	Rat,Ms, GP,Chn	[471-489]
407	GCUCACUGAAGAGCUGUUA	UAACAGCUCUUCAGUGAGC		[769-787]
408	UCGUUAGUGGAUUACUUCU	AGAAGUAAUCCACUAACGA		[736-754]
409	ACUUGGUUCGUUAGUGGAU	AUCCACUAACGAACCAAGU		[729-747]
410	GAUAUUGAAAGAAGGAAAG	CUUUCCUUCUUUCAAUAUC		[421-439]
411	CCAACAGGGCUUCUGAAAC	GUUUCAGAAGCCCUGUUGG		[353-371]
412	UAAUUCAGCUGAAGUACUU	AAGUACUUCAGCUGAAUUA		[1052-1070]
413	UUCUUGCUUUUGCAUUAUA	UAUAAUGCAAAAGCAAGAA		[1303-1321]
414	GAUCACCCUGGAUGAUCAG	CUGAUCAUCCAGGGUGAUC		[1348-1366]
415	ACCUUAAUUCAGCUGAAGU	ACUUCAGCUGAAUUAAGGU		[1048-1066]
416	AGUAUCUUUUCCUCUUUAU	AUAAAGAGGAAAAGAUACU		[1390-1408]
417	UACAGUUCGUACACUAAAC	GUUUAGUGUACGAACUGUA		[1282-1300]
418	CAGCAAUAAUGGGAACGGG	CCCGUUCCCAUUAUUGCUG		[195-213]
419	GCUACAAACUCAGCUGUAC	GUACAGCUGAGUUUGUAGC		[1266-1284]
420	UGUCUACUAAAGAAAGAUU	AAUCUUUCUUUAGUAGACA		[1200-1218]
421	GGAGUUCCUCUUUAAACAC	GUGUUUAAAGAGGAACUCC	GP	[516-534]
422	GAGCUACAAACUCAGCUGU	ACAGCUGAGUUUGUAGCUC		[1264-1282]
423	AUGAGGAACACGAGCGUCA	UGACGCUCGUGUUCCUCAU		[559-577]
424	CACCUUUUGAUGAAGAACU	AGUUCUUCAUCAAAAGGUG		[702-720]
425	UGAAGAGCUGUUAGAUCCU	AGGAUCUAACAGCUCUUCA		[775-793]
426	CCACAAGAUACCAACAGGG	CCCUGUUGGUAUCUUGUGG		[343-361]
427	CGUUAGUGGAUUACUUCUG	CAGAAGUAAUCCACUAACG		[737-755]
428	ACUCUGCAUUGGUGAAUUU	AAAUUCACCAAUGCAGAGU		[1410-1428]
429	UCCGAUUAUUAGGUGAUCA	UGAUCACCUAAUAAUCGGA		[1334-1352]
430	GUCCAAAAUAAAUAUUGUG	CACAAUAUUUAUUUUGGAC		[1126-1144]
431	AGAAACCAAGAUAGAGCUA	UAGCUCUAUCUUGGUUUCU		[1251-1269]
432	GAAAGAAGGAAAGAAGUUG	CAACUUCUUUCCUUCUUUC		[427-445]
433	AGUCUGAGGAAGAUGAUAU	AUAUCAUCUUCCUCAGACU		[407-425]
434	UGAAUUUAAUCCUCUCCUU	AAGGAGAGGAUUAAAUUCA		[1422-1440]
435	CUUAUAUAUCACACUAUUG	CAAUAGUGUGAUAUAUAAG		[1147-1165]
436	CUCUGCUGCUCUCUCAUUU	AAAUGAGAGAGCAGCAGAG		[629-647]
437	CUAUAAUUACACCUAUGGG	CCCAUAGGUGUAAUUAUAG		[886-904]
438	CUCAGCUGUACAGUUCGUA	UACGAACUGUACAGCUGAG		[1274-1292]
439	AAUUUAAAUGGAUGCAGGU	ACCUGCAUCCAUUUAAAUU		[1181-1199]
440	CAAUAAGCAUGUCAGACUG	CAGUCUGACAUGCUUAUUG		[907-925]
441	AAAAACUCAGAUUGGAUAU	AUAUCCAAUCUGAGUUUUU	Rat,Ms,Chn	[460-478]
442	ACCCUCAGCAUGAGGAACA	UGUUCCUCAUGCUGAGGGU		[550-568]
443	CUGGAUGAUCAGUUUUCUG	CAGAAAACUGAUCAUCCAG		[1355-1373]
444	CAGUUCGUACACUAAACUC	GAGUUUAGUGUACGAACUG		[1284-1302]
445	AGGCACCUACUCAGUAUCU	AGAUACUGAGUAGGUGCCU		[1378-1396]
446	AGAAGUUGAAAGCAUCUUG	CAAGAUGCUUUCAACUUCU	GP,Chn	[438-456]
447	AUAAAAUCGCUACUUUAAG	CUUAAAGUAGCGAUUUUAU		[1101-1119]
448	UACUUCUGAGCUUGCAACA	UGUUGCAAGCUCAGAAGUA		[748-766]
449	AUCACUCUGCAUUGGUGAA	UUCACCAAUGCAGAGUGAU		[1407-1425]
450	UAUAUUGGAAGGCGUCUGA	UCAGACGCCUUCCAAUAUA		[670-688]
451	UUUAUAAUGGAGACAUGGA	UCCAUGUCUCCAUUAUAAA		[239-257]
452	ACAAGAUACCAACAGGGCU	AGCCCUGUUGGUAUCUUGU		[345-363]
453	GACUGAUUAAUGUCUACUG	CAGUAGACAUUAAUCAGUC		[921-939]
454	UUGCAACAUAGCUCACUGA	UCAGUGAGCUAUGUUGCAA		[759-777]
455	AGGAACACGAGCGUCAUGA	UCAUGACGCUCGUGUUCCU		[562-580]
456	UAAUUGUUCAUAAUCAACA	UGUUGAUUAUGAACAAUUA		[1233-1251]
457	AGUGGAUUACUUCUGAGCU	AGCUCAGAAGUAAUCCACU		[741-759]
458	UUGUCUACUAAAGAAAGAU	AUCUUUCUUUAGUAGACAA		[1199-1217]
459	ACCUUUUGAUGAAGAACUG	CAGUUCUUCAUCAAAAGGU		[703-721]
460	UAUAUCACACUAUUGUAGA	UCUACAAUAGUGUGAUAUA		[1151-1169]

461	CAUUGGAGAGAAAAACAGC	GCUGUUUUUCUCUCCAAUG		[384-402]
462	GUAGCUCCAAGAGCUCUCA	UGAGAGCUCUUGGAGCUAC		[296-314]
463	UUCUGAGCUUGCAACAUAG	CUAUGUUGCAAGCUCAGAA		[751-769]
464	UUAAAUGGAUGCAGGUUGU	ACAACCUGCAUCCAUUUAA		[1184-1202]
465	GCACUUCAGCAAUAAUGGG	CCCAUUAUUGCUGAAGUGC		[189-207]
466	UGUCUACUGUGAAAAUUUG	CAAAUUUUCACAGUAGACA		[931-949]
467	UGCUGCGUUCCUAAUUUAG	CUAAAUUAGGAACGCAGCA		[832-850]
468	AACCUUAAUUCAGCUGAAG	CUUCAGCUGAAUUAAGGUU		[1047-1065]
469	UAAAUGCUGCGUUCCUAAU	AUUAGGAACGCAGCAUUUA		[828-846]
470	UCCACCAGCACCUUUUGAU	AUCAAAAGGUGCUGGUGGA		[694-712]
471	CUUUAUUCUAAGCAAAUCU	AGAUUUGCUUAGAAUAAAG		[1473-1491]
472	GGGCUUCUGAAACAGAUAC	GUAUCUGUUUCAGAAGCCC		[359-377]
473	GAAUUUAAUCCUCUCCUUU	AAAGGAGAGGAUUAAAUUC		[1423-1441]
474	AAGGAAAGAAGUUGAAAGC	GCUUUCAACUUCUUUCCUU	Chn	[432-450]
475	AUAAUAAAAUCGCUACUUU	AAAGUAGCGAUUUUAUUAU		[1098-1116]
476	GGAUAUGGGAUUGGUCAAG	CUUGACCAAUCCCAUAUCC	Rat,Ms, GP,Chn	[473-491]
477	UCCUGGGUAGAACUGCACU	AGUGCAGUUCUACCCAGGA	Rat,Ms	[175-193]
478	AUGUCUACUGUGAAAAUUU	AAAUUUUCACAGUAGACAU		[930-948]
479	UUCAGCUGAAGUACUUUAU	AUAAAGUACUUCAGCUGAA		[1055-1073]
480	UCAGAUUGGAUAUGGGAUU	AAUCCCAUAUCCAAUCUGA	Rat,Ms,Chn	[466-484]
481	UUAAGUCUCCGAUUAUUAG	CUAAUAAUCGGAGACUUAA		[1327-1345]
482	UGAUAAUAAAAUCGCUACU	AGUAGCGAUUUUAUUAUCA		[1096-1114]
483	GCUGUACAGUUCGUACACU	AGUGUACGAACUGUACAGC		[1278-1296]
484	GAUAUGGGAUUGGUCAAGU	ACUUGACCAAUCCCAUAUC	Rat,Ms, GP,Chn	[474-492]
485	GUCUGACUUGGUUCGUUAG	CUAACGAACCAAGUCAGAC		[724-742]
486	UUGUUCAUAAUCAACAGAA	UUCUGUUGAUUAUGAACAA		[1236-1254]
487	AGUCGGCCGGAAAAUAUUC	GAAUAUUUUCCGGCCGACU		[490-508]
488	AUUACACCUAUGGGAUCAA	UUGAUCCCAUAGGUGUAAU		[891-909]
489	AACUGGAGUCUGACUUGGU	ACCAAGUCAGACUCCAGUU		[717-735]
490	GUUCAUAAUCAACAGAAAC	GUUUCUGUUGAUUAUGAAC		[1238-1256]
491	AAGAUGAUAUUGAAAGAAG	CUUCUUUCAAUAUCAUCUU		[416-434]
492	UUAUAUAUCACACUAUUGU	ACAAUAGUGUGAUAUAUAA		[1148-1166]
493	CUGCACUUCAGCAAUAAUG	CAUUAUUGCUGAAGUGCAG		[187-205]
494	AUAUUGAAAGAAGGAAAGA	UCUUUCCUUCUUUCAAUAU		[422-440]
495	AGAAUUUCUGAAAGUUUUC	GAAAACUUUCAGAAAUUCU		[603-621]
496	AAAUGCUGCGUUCCUAAUU	AAUUAGGAACGCAGCAUUU		[829-847]
497	AUUCAGCUGAAGUACUUUA	UAAAGUACUUCAGCUGAAU		[1054-1072]
498	AUUGAUAAUAAAAUCGCUA	UAGCGAUUUUAUUAUCAAU		[1094-1112]
499	UAUUCUCUGCAGAAUUUCU	AGAAAUUCUGCAGAGAAUA		[593-611]
500	AACAGAAACCAAGAUAGAG	CUCUAUCUUGGUUUCUGUU		[1248-1266]
501	GUUCAACUUUUGUGUGCUU	AAGCACACAAAAGUUGAAC		
502	UCCUUUGUGUUCAACUUUU	AAAAGUUGAACACAAAGGA		

Table B 7 CAPNS1 - calpain, small subunit 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-51599152 :158-964
1	CGACGCUACUCAGAUGAAA	UUUCAUCUGAGUAGCGUCG	Mnk,Chmp	[800-818]
2	GUGGGAACAUGGAUUUUGA	UCAAAAUCCAUGUUCCCAC	Mnk,Chmp	[819-837]
3	UCAUGAACAUUCUCAAUAA	UUAUUGAGAAUGUUCAUGA	Mnk,Chmp	[516-534]
4	CCAUGUUCCGUGCCUUCAA	UUGAAGGCACGGAACAUGG	Rb,Mnk,Dog,GP,Chmp	[870-888]
5	CUUCAAAUCUCUUGACAAA	UUUGUCAAGAGAUUUGAAG	Rb,Mnk,GP,Chmp	[883-901]
6	GACCAUUUGCAGUAGUGAA	UUCACUACUGCAAAUGGUC	Chmp	[718-736]
7	CAUGUUCCGUGCCUUCAAA	UUUGAAGGCACGGAACAUG	Rb,Mnk,Dog,GP,Chmp	[871-889]
8	UGGUUAACUCGUUCUUGAA	UUCAAGAACGAGUUAACCA	Mnk,Dog,Chmp	[165-183]

9	CCACAGAACUCAUGAACAU	AUGUUCAUGAGUUCUGUGG	Rb,Mnk,Dog,Chmp	[507-525]
10	GAUGGAUAGCGACACCACA	UGUGGUGUCGCUAUCCAUC	Mnk,GP,Chmp	[607-625]
11	CAGGGUUCCACCUGAAUGA	UCAUUCAGGUGGAACCCUG	Rb,Mnk,Dog,Chmp	[759-777]
12	GGAACAUGGAUUUUGACAA	UUGUCAAAAUCCAUGUUCC	Mnk,Dog,Chmp	[822-840]
13	AGGCCCAGGAGGAAAUAAA	UUUAUUUCCUCCUGGGCCU	Mnk,Dog,Chmp	[1437-1455]
14	CCUUCAAAUCUCUUGACAA	UUGUCAAGAGAUUUGAAGG	Rb,Mnk,Dog,GP,Chmp	[882-900]
15	CUGGACAAAUCCAGGUGAA	UUCACCUGGAUUUGUCCAG	Mnk,Chmp	[909-927]
16	AACUCAUGAACAUUCUCAA	UUGAGAAUGUUCAUGAGUU	Rb,Mnk,Dog,Chmp	[513-531]
17	GAUCCUGUCUGCAGUCACA	UGUGACUGCAGACAGGAUC	Chmp	[1038-1056]
18	CGAUCAGGGACCAUUUGCA	UGCAAAUGGUCCCUGAUCG	Mnk,Chmp	[710-728]
19	CCUGAAUGAGCAUCUCUAU	AUAGAGAUGCUCAUUCAGG	Mnk,Chmp	[769-787]
20	CCGACGCUACUCAGAUGAA	UUCAUCUGAGUAGCGUCGG	Mnk,Chmp	[799-817]
21	CCCUGAUCUGAAGACUGAU	AUCAGUCUUCAGAUCAGGG	Mnk,Chmp	[550-568]
22	ACUUGUGGAACAACAUCAA	UUGAUGUUGUUCCACAAGU	Mnk,Chmp	[654-672]
23	GGCUGCAGCUGACUAUGUA	UACAUAGUCAGCUGCAGCC	Mnk,Ms,Chmp	[939-957]
24	CUGGUUAACUCGUUCUUGA	UCAAGAACGAGUUAACCAG	Mnk,Dog,Chmp	[164-182]
25	CAAAUCUCUUGACAAAGAU	AUCUUUGUCAAGAGAUUUG	Rb,Mnk,GP,Chmp	[886-904]
26	CACGACACCCUGAUCUGAA	UUCAGAUCAGGGUGUCGUG	Mnk,Chmp	[543-561]
27	CUGACUAUGUAUUCCUGAA	UUCAGGAAUACAUAGUCAG	Mnk,Ms,Chmp	[947-965]
28	GCUCUAGGACACUCUAACA	UGUUAGAGUGUCCUAGAGC	Chmp	[1160-1178]
29	CCAUAUACAAACAGUUCGA	UCGAACUGUUUGUAUAUGG	Chmp	[684-702]
30	GGACCAUUUGCAGUAGUGA	UCACUACUGCAAAUGGUCC	Chmp	[717-735]
31	UGGGCUUUGAGGAAUUCAA	UUGAAUUCCUCAAAGCCCA	Mnk,Chmp	[633-651]
32	GGCCCAGGAGGAAAUAAAC	GUUUAUUUCCUCCUGGGCC	Mnk,Chmp	[1438-1456]
33	GGUUCCACCUGAAUGAGCA	UGCUCAUUCAGGUGGAACC	Mnk,Chmp	[762-780]
34	GAGCAUCUCUAUAACAUGA	UCAUGUUAUAGAGAUGCUC	Mnk,Chmp	[776-794]
35	GACAAAUCCAGGUGAACAU	AUGUUCACCUGGAUUUGUC	Mnk,GP,Chmp	[912-930]
36	CCCUCACUGCCUUGCUAUA	UAUAGCAAGGCAGUGAGGG		[985-1003]
37	CUUGUGGAACAACAUCAAA	UUUGAUGUUGUUCCACAAG	Mnk,Chmp	[655-673]
38	CACAUUACUCCAACAUUGA	UCAAUGUUGGAGUAAUGUG	Mnk	[411-429]
39	CCCAGCUUCUCAACAUCCA	UGGAUGUUGAGAAGCUGGG	Mnk,Chmp	[1108-1126]
40	GACCGAUCAGGGACCAUUU	AAAUGGUCCCUGAUCGGUC	Mnk,Chmp	[707-725]
41	UCAAGUACUUGUGGAACAA	UUGUUCCACAAGUACUUGA	Mnk,Chmp	[648-666]
42	CCCAGUGCCUUUGUCUAUA	UAUAGACAAAGGCACUGGG	Mnk,Chmp	[1400-1418]
43	GGACAAAUCCAGGUGAACA	UGUUCACCUGGAUUUGUCC	Mnk,GP,Chmp	[911-929]
44	GUUCGACACUGACCGAUCA	UGAUCGGUCAGUGUCGAAC	Chmp	[697-715]
45	CCAGUGCCUUUGUCUAUAU	AUAUAGACAAAGGCACUGG	Mnk,Chmp	[1401-1419]
46	GAAUGAGCAUCUCUAUAAC	GUUAUAGAGAUGCUCAUUC	Mnk,Chmp	[772-790]
47	AGUACUUGUGGAACAACAU	AUGUUGUUCCACAAGUACU	Mnk,Chmp	[651-669]
48	CAAUAAGGUUGUGACACGA	UCGUGUCACAACCUUAUUG	Mnk,Chmp	[529-547]
49	CAAGCUGGGCUUUGAGGAA	UUCCUCAAAGCCCAGCUUG	Chmp	[628-646]
50	GGGCUUUGAGGAAUUCAAG	CUUGAAUUCCUCAAAGCCC	Mnk,Chmp	[634-652]
51	CUCAGUUCUGGGAGGAUGA	UCAUCCUCCCAGAACUGAG	Chmp	[1299-1317]
52	GCCCAGGAGGAAAUAAACA	UGUUUAUUUCCUCCUGGGC	Mnk,Chmp	[1439-1457]
53	CAGGCCCAGGAGGAAAUAA	UUAUUUCCUCCUGGGCCUG	Mnk,Dog,Chmp	[1436-1454]
54	CAGAACUCAUGAACAUUCU	AGAAUGUUCAUGAGUUCUG	Rb,Mnk,Dog,Chmp	[510-528]
55	AAGUACUUGUGGAACAACA	UGUUGUUCCACAAGUACUU	Mnk,Chmp	[650-668]
56	ACAUGAUCAUCCGACGCUA	UAGCGUCGGAUGAUCAUGU	Rb,Mnk,Dog,Chmp	[789-807]
57	ACCCUGAUCUGAAGACUGA	UCAGUCUUCAGAUCAGGGU	Mnk,Chmp	[549-567]
58	CUGAAUGAGCAUCUCUAUA	UAUAGAGAUGCUCAUUCAG	Mnk,Chmp	[770-788]
59	GAACAUUCUCAAUAAGGUU	AACCUUAUUGAGAAUGUUC	Mnk,Chmp	[520-538]
60	AAAUCCAGGUGAACAUCCA	UGGAUGUUCACCUGGAUUU	Rb,Mnk,GP,Chmp	[915-933]
61	ACCUGAAUGAGCAUCUCUA	UAGAGAUGCUCAUUCAGGU	Mnk,Ms,Chmp	[768-786]
62	GUGCCUUUGUCUAUAUUCU	AGAAUAUAGACAAAGGCAC	Mnk,Chmp	[1404-1422]
63	CCUGGGAAAUGUGCUUGGA	UCCAAGCACAUUUCCCAGG	Chmp	[229-247]
64	AAUUCAAGUACUUGUGGAA	UUCCACAAGUACUUGAAUU	Mnk,Chmp	[645-663]

65	UGAACAUUCUCAAUAAGGU	ACCUUAUUGAGAAUGUUCA	Mnk,Chmp	[519-537]
66	CUGUCUGCAGUCACAUCUU	AAGAUGUGACUGCAGACAG	Mnk,Chmp	[1042-1060]
67	UCUGAAGACUGAUGGUUUU	AAAACCAUCAGUCUUCAGA	Mnk,Chmp	[556-574]
68	CAUGAACAUUCUCAAUAAG	CUUAUUGAGAAUGUUCAUG	Mnk,Chmp	[517-535]
69	GGAACAACAUCAAAAGGUG	CACCUUUUGAUGUUGUUCC	Mnk,Chmp	[660-678]
70	CCCAGGAGGAAAUAAACAU	AUGUUUAUUUCCUCCUGGG	Mnk,Chmp	[1440-1458]
71	CAAGCCUAGCACUUGUGAU	AUCACAAGUGCUAGGCUUG	Chmp	[1256-1274]
72	UUGUGGAACAACAUCAAAA	UUUUGAUGUUGUUCCACAA	Mnk,Chmp	[656-674]
73	GCUAUAGGAGUCACCUGGA	UCCAGGUGACUCCUAUAGC	Mnk,Chmp	[998-1016]
74	CCAUGUUCCUGGUUAACUC	GAGUUAACCAGGAACAUGG	Rb,Dog,Chmp	[156-174]
75	GGGAACAUGGAUUUUGACA	UGUCAAAAUCCAUGUUCCC	Mnk,Dog,Chmp	[821-839]
76	CUCUAGGACACUCUAACAA	UUGUUAGAGUGUCCUAGAG	Chmp	[1161-1179]
77	GCUGCAGCUGACUAUGUAU	AUACAUAGUCAGCUGCAGC	Mnk,Ms,Chmp	[940-958]
78	AUGAAAGUGGGAACAUGGA	UCCAUGUUCCCACUUUCAU	Mnk,Chmp	[813-831]
79	UCAAAUCUCUUGACAAAGA	UCUUUGUCAAGAGAUUUGA	Rb,Mnk,GP,Chmp	[885-903]
80	AGCUUUUGUUCUCUCAGUA	UACUGAGAGAACAAAAGCU	Chmp	[1082-1100]
81	CAGUGCCUUUGUCUAUAUU	AAUAUAGACAAAGGCACUG	Mnk,Chmp	[1402-1420]
82	CGACACCCUGAUCUGAAGA	UCUUCAGAUCAGGGUGUCG	Rb,Mnk,Chmp	[545-563]
83	GAAUUCAAGUACUUGUGGA	UCCACAAGUACUUGAAUUC	Mnk,Chmp	[644-662]
84	GAACAUGGAUUUUGACAAC	GUUGUCAAAAUCCAUGUUC	Mnk,Dog,Chmp	[823-841]
85	ACAGUUCGACACUGACCGA	UCGGUCAGUGUCGAACUGU	Chmp	[694-712]
86	CAUCCGACGCUACUCAGAU	AUCUGAGUAGCGUCGGAUG	Mnk,Chmp	[796-814]
87	AGCAGGGUUCCACCUGAAU	AUUCAGGUGGAACCCUGCU	Rb,Dog,Chmp	[757-775]
88	UGAAUGAGCAUCUCUAUAA	UUAUAGAGAUGCUCAUUCA	Mnk,Chmp	[771-789]
89	CAACAUCCAGGGCCCAAUU	AAUUGGGCCCUGGAUGUUG		[1118-1136]
90	CAAACAGUUCGACACUGAC	GUCAGUGUCGAACUGUUUG	Chmp	[691-709]
91	ACUCAUGAACAUUCUCAAU	AUUGAGAAUGUUCAUGAGU	Mnk,Chmp	[514-532]
92	UCACUGCCUUGCUAUAGGA	UCCUAUAGCAAGGCAGUGA		[988-1006]
93	AUAGCGACACCACAGGCAA	UUGCCUGUGGUGUCGCUAU	Ms, GP,Chmp	[612-630]
94	GUUCCACCUGAAUGAGCAU	AUGCUCAUUCAGGUGGAAC	Mnk,Chmp	[763-781]
95	UCUCAAUAAGGUUGUGACA	UGUCACAACCUUAUUGAGA	Mnk,Chmp	[526-544]
96	CCAAGCCUAGCACUUGUGA	UCACAAGUGCUAGGCUUGG	Chmp	[1255-1273]
97	CCAGCUUCUCAACAUCCAG	CUGGAUGUUGAGAAGCUGG	Mnk,Chmp	[1109-1127]
98	UGGAUUUUGACAACUUCAU	AUGAAGUUGUCAAAAUCCA	Rb,Mnk,Dog,Chmp	[828-846]
99	CUAUAACAUGAUCAUCCGA	UCGGAUGAUCAUGUUAUAG	Mnk,Chmp	[784-802]
100	AGGUGAACAUCCAGGAGUG	CACUCCUGGAUGUUCACCU	Rb,Mnk,Dog,Chmp	[921-939]
101	UUGUUACCCAGCUUCUCAA	UUGAGAAGCUGGGUAACAA	Mnk,Chmp	[1102-1120]
102	GGCUUUGAGGAAUUCAAGU	ACUUGAAUUCCUCAAAGCC	Mnk,Chmp	[635-653]
103	UGAUCUGAAGACUGAUGGU	ACCAUCAGUCUUCAGAUCA	Mnk,Chmp	[553-571]
104	UGUGGAACAACAUCAAAAG	CUUUUGAUGUUGUUCCACA	Mnk,Chmp	[657-675]
105	ACAAACAGUUCGACACUGA	UCAGUGUCGAACUGUUUGU	Chmp	[690-708]
106	GCCUUCAAAUCUCUUGACA	UGUCAAGAGAUUUGAAGGC	Rb,Mnk,Dog,GP,Chmp	[881-899]
107	AUGGAUUUUGACAACUUCA	UGAAGUUGUCAAAAUCCAU	Rb,Mnk,Dog,Chmp	[827-845]
108	CUUGUUACCCAGCUUCUCA	UGAGAAGCUGGGUAACAAG	Mnk,Chmp	[1101-1119]
109	GAGGAAUUCAAGUACUUGU	ACAAGUACUUGAAUUCCUC	Mnk,Chmp	[641-659]
110	UGAAAGUGGGAACAUGGAU	AUCCAUGUUCCCACUUUCA	Mnk,Chmp	[814-832]
111	GAUCAUCCGACGCUACUCA	UGAGUAGCGUCGGAUGAUC	Mnk,Chmp	[793-811]
112	CAUGGAUUUUGACAACUUC	GAAGUUGUCAAAAUCCAUG	Rb,Mnk,Dog,Chmp	[826-844]
113	GUGCCUUCAAAUCUCUUGA	UCAAGAGAUUUGAAGGCAC	Rb,Mnk,Dog,GP,Chmp	[879-897]
114	GGCUCUAGGACACUCUAAC	GUUAGAGUGUCCUAGAGCC	Chmp	[1159-1177]
115	AAUGAGCAUCUCUAUAACA	UGUUAUAGAGAUGCUCAUU	Mnk,Chmp	[773-791]
116	CACAGAACUCAUGAACAUU	AAUGUUCAUGAGUUCUGUG	Rb,Mnk,Dog,Chmp	[508-526]
117	GAUUUUGACAACUUCAUCA	UGAUGAAGUUGUCAAAAUC	Rb,Mnk,Dog,Chmp	[830-848]
118	GAAAGUGGGAACAUGGAUU	AAUCCAUGUUCCCACUUUC	Mnk,Chmp	[815-833]
119	UUGCAGUAGUGAACUCCCA	UGGGAGUUCACUACUGCAA	Chmp	[724-742]
120	UGGGAACAUGGAUUUUGAC	GUCAAAAUCCAUGUUCCCA	Mnk,Chmp	[820-838]

121	CCGUGCCUUCAAAUCUCUU	AAGAGAUUUGAAGGCACGG	Rb,Mnk,Dog,GP,Chmp	[877-895]
122	CUCAGUACUUGUUACCCAG	CUGGGUAACAAGUACUGAG	Chmp	[1094-1112]
123	ACGACACCCUGAUCUGAAG	CUUCAGAUCAGGGUGUCGU	Mnk,Chmp	[544-562]
124	UCCAGGUGAACAUCCAGGA	UCCUGGAUGUUCACCUGGA	Rb,Mnk,Chmp	[918-936]
125	ACACGACACCCUGAUCUGA	UCAGAUCAGGGUGUCGUGU	Mnk,Chmp	[542-560]
126	AUCUCUAUAACAUGAUCAU	AUGAUCAUGUUAUAGAGAU	Mnk,GP,Chmp	[780-798]
127	GCUGACUAUGUAUUCCUGA	UCAGGAAUACAUAGUCAGC	Rat,Mnk,Ms,Chmp	[946-964]
128	AUAAGGUUGUGACACGACA	UGUCGUGUCACAACCUUAU	Mnk,Chmp	[531-549]
129	UACUCAGAUGAAAGUGGGA	UCCCACUUUCAUCUGAGUA	Mnk,Chmp	[806-824]
130	GCUUUGAGGAAUUCAAGUA	UACUUGAAUUCCUCAAAGC	Mnk,Chmp	[636-654]
131	GAACUCAUGAACAUUCUCA	UGAGAAUGUUCAUGAGUUC	Rb,Mnk,Dog,Chmp	[512-530]
132	CCAGGAGGAAAUAAACAUG	CAUGUUUAUUUCCUCCUGG	Mnk,Chmp	[1441-1459]
133	GACGCUACUCAGAUGAAAG	CUUUCAUCUGAGUAGCGUC	Mnk,Chmp	[801-819]
134	CAUCUCUAUAACAUGAUCA	UGAUCAUGUUAUAGAGAUG	Mnk,GP,Chmp	[779-797]
135	GGAGAUGACAUGGAGGUCA	UGACCUCCAUGUCAUCUCC	Mnk,GP	[485-503]
136	CUCAUGAACAUUCUCAAUA	UAUUGAGAAUGUUCAUGAG	Mnk,Chmp	[515-533]
137	GCACUUGUGAUGCCUCCAU	AUGGAGGCAUCACAAGUGC		[1264-1282]
138	GAGAUGACAUGGAGGUCAG	CUGACCUCCAUGUCAUCUC	Mnk,GP	[486-504]
139	ACAUGGAUUUUGACAACUU	AAGUUGUCAAAAUCCAUGU	Rb,Mnk,Dog,Chmp	[825-843]
140	CUCUAACAAGCUCUGUCCA	UGGACAGAGCUUGUUAGAG	Mnk,Chmp	[1171-1189]
141	GAUGAAAGUGGGAACAUGG	CCAUGUUCCCACUUUCAUC	Mnk,Chmp	[812-830]
142	UGCUGACCCACAAGCUUUU	AAAAGCUUGUGGGUCAGCA	Chmp	[1070-1088]
143	GCAGUUCCGGAGACUCUUU	AAAGAGUCUCCGGAACUGC	Mnk	[454-472]
144	CCAUUUGCAGUAGUGAACU	AGUUCACUACUGCAAAUGG	Chmp	[720-738]
145	UGUCUGCAGUCACAUCUUU	AAAGAUGUGACUGCAGACA	Mnk,Chmp	[1043-1061]
146	UGACCCACAAGCUUUUGUU	AACAAAAGCUUGUGGGUCA	Chmp	[1073-1091]
147	UCUCAGUACUUGUUACCCA	UGGGUAACAAGUACUGAGA	Chmp	[1093-1111]
148	GGAUUUUGACAACUUCAUC	GAUGAAGUUGUCAAAAUCC	Rb,Mnk,Dog,Chmp	[829-847]
149	UUGUGACACGACACCCUGA	UCAGGGUGUCGUGUCACAA	Mnk,Chmp	[537-555]
150	GACUAUGUAUUCCUGAACU	AGUUCAGGAAUACAUAGUC	Mnk,Chmp	[949-967]
151	UGAGCAUCUCUAUAACAUG	CAUGUUAUAGAGAUGCUCA	Mnk,Chmp	[775-793]
152	UAUGUAUUCCUGAACUGGA	UCCAGUUCAGGAAUACAUA	Mnk,Chmp	[952-970]
153	AUGAGCAUCUCUAUAACAU	AUGUUAUAGAGAUGCUCAU	Mnk,Chmp	[774-792]
154	GCAUCUCUAUAACAUGAUC	GAUCAUGUUAUAGAGAUGC	Mnk,Chmp	[778-796]
155	AGUACUUGUUACCCAGCUU	AAGCUGGGUAACAAGUACU	Chmp	[1097-1115]
156	UCAUCCGACGCUACUCAGA	UCUGAGUAGCGUCGGAUGA	Mnk,Chmp	[795-813]
157	GGGACCAUUUGCAGUAGUG	CACUACUGCAAAUGGUCCC	Chmp	[716-734]
158	CAGGUGAACAUCCAGGAGU	ACUCCUGGAUGUUCACCUG	Rb,Mnk,Dog,Chmp	[920-938]
159	UUCAAGUACUUGUGGAACA	UGUUCCACAAGUACUUGAA	Mnk,Chmp	[647-665]
160	CUGGGAAAUGUGCUUGGAG	CUCCAAGCACAUUUCCCAG	Chmp	[230-248]
161	AUAUACAAACAGUUCGACA	UGUCGAACUGUUUGUAUAU	Chmp	[686-704]
162	GAUCAGGGACCAUUUGCAG	CUGCAAAUGGUCCCUGAUC	Mnk,Chmp	[711-729]
163	GUUCUCUCAGUACUUGUUA	UAACAAGUACUGAGAGAAC	Chmp	[1089-1107]
164	UCUGCAGUCACAUCUUUGU	ACAAAGAUGUGACUGCAGA	Mnk,Chmp	[1045-1063]
165	AAGCUUUUGUUCUCUCAGU	ACUGAGAGAACAAAAGCUU	Chmp	[1081-1099]
166	CAGUACUUGUUACCCAGCU	AGCUGGGUAACAAGUACUG	Chmp	[1096-1114]
167	GGUUAACUCGUUCUUGAAG	CUUCAAGAACGAGUUAACC	Mnk,Chmp	[166-184]
168	UUACCCAGCUUCUCAACAU	AUGUUGAGAAGCUGGGUAA	Mnk,Chmp	[1105-1123]
169	GGACACUCUAACAAGCUCU	AGAGCUUGUUAGAGUGUCC	Chmp	[1166-1184]
170	ACAAGCUUUUGUUCUCUCA	UGAGAGAACAAAAGCUUGU	Chmp	[1079-1097]
171	CUAGGACACUCUAACAAGC	GCUUGUUAGAGUGUCCUAG	Chmp	[1163-1181]
172	CCACCUGAAUGAGCAUCUC	GAGAUGCUCAUUCAGGUGG	Mnk,Ms,Chmp	[766-784]
173	UUGAGGAAUUCAAGUACUU	AAGUACUUGAAUUCCUCAA	Mnk,Chmp	[639-657]
174	AGAUGAAAGUGGGAACAUG	CAUGUUCCCACUUUCAUCU	Mnk,Chmp	[811-829]
175	CAGAUGAAAGUGGGAACAU	AUGUUCCCACUUUCAUCUG	Mnk,Chmp	[810-828]
176	CUAUAGGAGUCACCUGGAG	CUCCAGGUGACUCCUAUAG	Mnk,Chmp	[999-1017]

177	ACGCUACUCAGAUGAAAGU	ACUUUCAUCUGAGUAGCGU	Mnk,Chmp	[802-820]
178	CCCACAAGCUUUUGUUCUC	GAGAACAAAAGCUUGUGGG	Chmp	[1076-1094]
179	AAUCCAGGUGAACAUCCAG	CUGGAUGUUCACCUGGAUU	Rb,Mnk,Chmp	[916-934]
180	CCACAAGCUUUUGUUCUCU	AGAGAACAAAAGCUUGUGG	Chmp	[1077-1095]
181	CUCUCAGUUCUGGGAGGAU	AUCCUCCCAGAACUGAGAG	Chmp	[1297-1315]
182	AGCUGGGCUUUGAGGAAUU	AAUUCCUCAAAGCCCAGCU	Mnk,Chmp	[630-648]
183	CUUUUGUUCUCUCAGUACU	AGUACUGAGAGAACAAAAG	Chmp	[1084-1102]
184	ACUGGACAAAUCCAGGUGA	UCACCUGGAUUUGUCCAGU	Mnk,Chmp	[908-926]
185	AGCAUCUCUAUAACAUGAU	AUCAUGUUAUAGAGAUGCU	Mnk,Chmp	[777-795]
186	AACUCCCAGGUGCCUUUGA	UCAAAGGCACCUGGGAGUU		[735-753]
187	UCAGGGACCAUUUGCAGUA	UACUGCAAAUGGUCCCUGA	Mnk,Chmp	[713-731]
188	AUGUAUUCCUGAACUGGAG	CUCCAGUUCAGGAAUACAU	Mnk,Chmp	[953-971]
189	CAUGAUCAUCCGACGCUAC	GUAGCGUCGGAUGAUCAUG	Mnk,Dog,Chmp	[790-808]
190	CAGGGACCAUUUGCAGUAG	CUACUGCAAAUGGUCCCUG	Mnk,Chmp	[714-732]
191	UGUGACACGACACCCUGAU	AUCAGGGUGUCGUGUCACA	Mnk,Chmp	[538-556]
192	CCUGUCUGCAGUCACAUCU	AGAUGUGACUGCAGACAGG	Mnk,Chmp	[1041-1059]
193	CACCCUGAUCUGAAGACUG	CAGUCUUCAGAUCAGGGUG	Mnk,Chmp	[548-566]
194	AGGGACCAUUUGCAGUAGU	ACUACUGCAAAUGGUCCCU	Chmp	[715-733]
195	GGAGGAAAUAAACAUGCCC	GGGCAUGUUUAUUUCCUCC	Chmp	[1444-1462]
196	UGAACUCCCAGGUGCCUUU	AAAGGCACCUGGGAGUUCA		[733-751]
197	UGCCUUUGUCUAUAUUCUG	CAGAAUAUAGACAAAGGCA	Mnk,Chmp	[1405-1423]
198	UGUCUAUAUUCUGCUCCCA	UGGGAGCAGAAUAUAGACA	Mnk,Chmp	[1411-1429]
199	UGUUCCUGGUUAACUCGUU	AACGAGUUAACCAGGAACA	Rb,Mnk,Dog,Chmp	[159-177]
200	CUGGGCUUUGAGGAAUUCA	UGAAUUCCUCAAAGCCCAG	Mnk,Chmp	[632-650]
201	UGAUGGAUAGCGACACCAC	GUGGUGUCGCUAUCCAUCA	Mnk,GP,Chmp	[606-624]
202	CACCUGAAUGAGCAUCUCU	AGAGAUGCUCAUUCAGGUG	Mnk,Ms,Chmp	[767-785]
203	CACUUGUGAUGCCUCCAUG	CAUGGAGGCAUCACAAGUG		[1265-1283]
204	CAGUAGUGAACUCCCAGGU	ACCUGGGAGUUCACUACUG		[727-745]
205	AUCCUAGGCGGAGUCAUCA	UGAUGACUCCGCCUAGGAU	Mnk,Chmp	[338-356]
206	AAAGUGGGAACAUGGAUUU	AAAUCCAUGUUCCCACUUU	Mnk,Chmp	[816-834]
207	ACAUUACUCCAACAUUGAG	CUCAAUGUUGGAGUAAUGU	Mnk	[412-430]
208	AUCUGAAGACUGAUGGUUU	AAACCAUCAGUCUUCAGAU	Mnk,Chmp	[555-573]
209	GUGGAACAACAUCAAAAGG	CCUUUUGAUGUUGUUCCAC	Mnk,Chmp	[658-676]
210	CAAGCUUUUGUUCUCUCAG	CUGAGAGAACAAAAGCUUG	Chmp	[1080-1098]
211	CAGUUCGACACUGACCGAU	AUCGGUCAGUGUCGAACUG	Chmp	[695-713]
212	CUGCUGACCCACAAGCUUU	AAAGCUUGUGGGUCAGCAG	Chmp	[1069-1087]
213	AAGUGGGAACAUGGAUUUU	AAAAUCCAUGUUCCCACUU	Mnk,Chmp	[817-835]
214	CUGGAGAUGACAUGGAGGU	ACCUCCAUGUCAUCUCCAG	Mnk,GP	[483-501]
215	UACUUGUGGAACAACAUCA	UGAUGUUGUUCCACAAGUA	Mnk,Chmp	[653-671]
216	GCUUUUGUUCUCUCAGUAC	GUACUGAGAGAACAAAAGC	Chmp	[1083-1101]
217	CUGCCUUGCUAUAGGAGUC	GACUCCUAUAGCAAGGCAG		[991-1009]
218	UCAACAUCCAGGGCCCAAU	AUUGGGCCCUGGAUGUUGA	Mnk,Chmp	[1117-1135]
219	CAGUUCUGGGAGGAUGACU	AGUCAUCCUCCCAGAACUG	Chmp	[1301-1319]
220	UGGGAAAUGUGCUUGGAGG	CCUCCAAGCACAUUUCCCA	Chmp	[231-249]
221	UGGACAAAUCCAGGUGAAC	GUUCACCUGGAUUUGUCCA	Mnk,Chmp	[910-928]
222	GCACUGGACAAAUCCAGGU	ACCUGGAUUUGUCCAGUGC	Mnk,Chmp	[906-924]
223	AGGAGGAAAUAAACAUGCC	GGCAUGUUUAUUUCCUCCU	Chmp	[1443-1461]
224	AGCACUUGUGAUGCCUCCA	UGGAGGCAUCACAAGUGCU		[1263-1281]
225	ACUCAGAUGAAAGUGGGAA	UUCCCACUUUCAUCUGAGU	Mnk,Chmp	[807-825]
226	CCUGAUCUGAAGACUGAUG	CAUCAGUCUUCAGAUCAGG	Mnk,Chmp	[551-569]
227	UUUUGUUCUCUCAGUACUU	AAGUACUGAGAGAACAAAA	Chmp	[1085-1103]
228	CCUUUGUCUAUAUUCUGCU	AGCAGAAUAUAGACAAAGG	Mnk,Chmp	[1407-1425]
229	CAGCUGACUAUGUAUUCCU	AGGAAUACAUAGUCAGCUG	Rat,Mnk,Ms,Chmp	[944-962]
230	GAACAACAUCAAAAGGUGG	CCACCUUUUGAUGUUGUUC	Mnk,Chmp	[661-679]
231	UGUUCUCUCAGUACUUGUU	AACAAGUACUGAGAGAACA	Chmp	[1088-1106]
232	CUCACUGCCUUGCUAUAGG	CCUAUAGCAAGGCAGUGAG		[987-1005]

233	UCUAUAACAUGAUCAUCCG	CGGAUGAUCAUGUUAUAGA	Mnk,GP,Chmp	[783-801]
234	GUUACCCAGCUUCUCAACA	UGUUGAGAAGCUGGGUAAC	Mnk,Chmp	[1104-1122]
235	UCAGAUGAAAGUGGGAACA	UGUUCCCACUUUCAUCUGA	Mnk,Chmp	[809-827]
236	CUGCAGUCACAUCUUUGUG	CACAAAGAUGUGACUGCAG	Mnk,Chmp	[1046-1064]
237	CAAGUACUUGUGGAACAAC	GUUGUUCCACAAGUACUUG	Mnk,Chmp	[649-667]
238	CUCAGAUGAAAGUGGGAAC	GUUCCCACUUUCAUCUGAG	Mnk,Chmp	[808-826]
239	UCUAGGACACUCUAACAAG	CUUGUUAGAGUGUCCUAGA	Chmp	[1162-1180]
240	CAUUCUCAAUAAGGUUGUG	CACAACCUUAUUGAGAAUG	Mnk,Chmp	[523-541]
241	AUACAAACAGUUCGACACU	AGUGUCGAACUGUUUGUAU	Chmp	[688-706]
242	UGACCGAUCAGGGACCAUU	AAUGGUCCCUGAUCGGUCA	Rat,Mnk,Chmp	[706-724]
243	AGGGUUCCACCUGAAUGAG	CUCAUUCAGGUGGAACCCU	Mnk,Chmp	[760-778]
244	CACUGCCUUGCUAUAGGAG	CUCCUAUAGCAAGGCAGUG		[989-1007]
245	GUGAUGGAUAGCGACACCA	UGGUGUCGCUAUCCAUCAC	Mnk,GP,Chmp	[605-623]
246	CUUGCUAUAGGAGUCACCU	AGGUGACUCCUAUAGCAAG	Chmp	[995-1013]
247	AAAUGUGCUUGGAGGCCUG	CAGGCCUCCAAGCACAUUU	Chmp	[235-253]
248	UCCGUGCCUUCAAAUCUCU	AGAGAUUUGAAGGCACGGA	Rb,Mnk,Dog,GP,Chmp	[876-894]
249	AGCUGACUAUGUAUUCCUG	CAGGAAUACAUAGUCAGCU	Rat,Mnk,Ms,Chmp	[945-963]
250	CAUUUGCAGUAGUGAACUC	GAGUUCACUACUGCAAAUG	Chmp	[721-739]
251	GACACUCUAACAAGCUCUG	CAGAGCUUGUUAGAGUGUC	Chmp	[1167-1185]
252	AAGCCUAGCACUUGUGAUG	CAUCACAAGUGCUAGGCUU	Chmp	[1257-1275]
253	CGUGCCUUCAAAUCUCUUG	CAAGAGAUUUGAAGGCACG	Rb,Mnk,Dog,GP,Chmp	[878-896]
254	AUGGAUAGCGACACCACAG	CUGUGGUGUCGCUAUCCAU	Mnk,Ms, GP,Chmp	[608-626]
255	GUCUGCAGUCACAUCUUUG	CAAAGAUGUGACUGCAGAC	Mnk,Chmp	[1044-1062]
256	GUACUUGUGGAACAACAUC	GAUGUUGUUCCACAAGUAC	Mnk,Chmp	[652-670]
257	UGGAACAACAUCAAAAGGU	ACCUUUUGAUGUUGUUCCA	Mnk,Chmp	[659-677]
258	CAGGAGGAAAUAAACAUGC	GCAUGUUUAUUUCCUCCUG	Chmp	[1442-1460]
259	GUUCCGUGCCUUCAAAUCU	AGAUUUGAAGGCACGGAAC	Rb,Mnk,Dog,GP,Chmp	[874-892]
260	GCAGUCACAUCUUUGUGGG	CCCACAAAGAUGUGACUGC	Mnk,Chmp	[1048-1066]
261	ACACCCUGAUCUGAAGACU	AGUCUUCAGAUCAGGGUGU	Mnk,Chmp	[547-565]
262	GAUCUGAAGACUGAUGGUU	AACCAUCAGUCUUCAGAUC	Mnk,Chmp	[554-572]
263	AGAACUCAUGAACAUUCUC	GAGAAUGUUCAUGAGUUCU	Rb,Mnk,Dog,Chmp	[511-529]
264	AAAUCUCUUGACAAAGAUG	CAUCUUUGUCAAGAGAUUU	Rb,Mnk,GP,Chmp	[887-905]
265	GACCCACAAGCUUUUGUUC	GAACAAAAGCUUGUGGGUC	Chmp	[1074-1092]
266	CCUAGCACUUGUGAUGCCU	AGGCAUCACAAGUGCUAGG		[1260-1278]
267	AUAACAUGAUCAUCCGACG	CGUCGGAUGAUCAUGUUAU	Mnk,Chmp	[786-804]
268	CCUGGUUAACUCGUUCUUG	CAAGAACGAGUUAACCAGG	Mnk,Dog,Chmp	[163-181]
269	UACCCAGCUUCUCAACAUC	GAUGUUGAGAAGCUGGGUA	Mnk,Chmp	[1106-1124]
270	ACCAUUUGCAGUAGUGAAC	GUUCACUACUGCAAAUGGU	Chmp	[719-737]
271	AUGUUCCGUGCCUUCAAAU	AUUUGAAGGCACGGAACAU	Rb,Mnk,Dog,GP,Chmp	[872-890]
272	UAAGGUUGUGACACGACAC	GUGUCGUGUCACAACCUUA	Mnk,Chmp	[532-550]
273	GGAAUUCAAGUACUUGUGG	CCACAAGUACUUGAAUUCC	Mnk,Chmp	[643-661]
274	ACACCCUUCACGGUUGCUA	UAGCAACCGUGAAGGGUGU		[1341-1359]
275	UGCAGUAGUGAACUCCCAG	CUGGGAGUUCACUACUGCA	Chmp	[725-743]
276	CACUCUAACAAGCUCUGUC	GACAGAGCUUGUUAGAGUG	Mnk,Chmp	[1169-1187]
277	ACUGCCUUGCUAUAGGAGU	ACUCCUAUAGCAAGGCAGU		[990-1008]
278	CUACUCAGAUGAAAGUGGG	CCCACUUUCAUCUGAGUAG	Mnk,Chmp	[805-823]
279	UACUUGUUACCCAGCUUCU	AGAAGCUGGGUAACAAGUA	Chmp	[1099-1117]
280	UUUGAGGAAUUCAAGUACU	AGUACUUGAAUUCCUCAAA	Mnk,Chmp	[638-656]
281	AUCCUGUCUGCAGUCACAU	AUGUGACUGCAGACAGGAU	Mnk,Chmp	[1039-1057]
282	ACCGAUCAGGGACCAUUUG	CAAAUGGUCCCUGAUCGGU	Mnk,Chmp	[708-726]
283	CUGACCCACAAGCUUUUGU	ACAAAAGCUUGUGGGUCAG	Chmp	[1072-1090]
284	CUGCAGCUGACUAUGUAUU	AAUACAUAGUCAGCUGCAG	Mnk,Ms,Chmp	[941-959]
285	ACAACUUCAUCAGCUGCUU	AAGCAGCUGAUGAAGUUGU	Rb,Mnk,GP,Chmp	[837-855]
286	CAUGUUCCUGGUUAACUCG	CGAGUUAACCAGGAACAUG	Rb,Mnk,Dog,Chmp	[157-175]
287	UCCGACGCUACUCAGAUGA	UCAUCUGAGUAGCGUCGGA	Mnk,Chmp	[798-816]
288	AGGAAUUCAAGUACUUGUG	CACAAGUACUUGAAUUCCU	Mnk,Chmp	[642-660]

289	AGGACACUCUAACAAGCUC	GAGCUUGUUAGAGUGUCCU	Chmp	[1165-1183]
290	UCCUGGUUAACUCGUUCUU	AAGAACGAGUUAACCAGGA	Mnk,Dog,Chmp	[162-180]
291	CAUAUACAAACAGUUCGAC	GUCGAACUGUUUGUAUAUG	Chmp	[685-703]
292	GCCUUUGUCUAUAUUCUGC	GCAGAAUAUAGACAAAGGC	Mnk,Chmp	[1406-1424]
293	UGCCUUGCUAUAGGAGUCA	UGACUCCUAUAGCAAGGCA		[992-1010]
294	AUGAUCAUCCGACGCUACU	AGUAGCGUCGGAUGAUCAU	Mnk,Dog,Chmp	[791-809]
295	CUUUGAGGAAUUCAAGUAC	GUACUUGAAUUCCUCAAAG	Mnk,Chmp	[637-655]
296	AUCCGACGCUACUCAGAUG	CAUCUGAGUAGCGUCGGAU	Mnk,Chmp	[797-815]
297	AGUGCCUUUGUCUAUAUUC	GAAUAUAGACAAAGGCACU	Mnk,Chmp	[1403-1421]
298	AAUGUGCUUGGAGGCCUGA	UCAGGCCUCCAAGCACAUU	Mnk,Chmp	[236-254]
299	AUGUGCUUGGAGGCCUGAU	AUCAGGCCUCCAAGCACAU	Mnk,Chmp	[237-255]
300	GUCUAUAUUCUGCUCCCAG	CUGGGAGCAGAAUAUAGAC	Mnk,Chmp	[1412-1430]
301	UAGGACACUCUAACAAGCU	AGCUUGUUAGAGUGUCCUA	Chmp	[1164-1182]
302	UCCUGUCUGCAGUCACAUC	GAUGUGACUGCAGACAGGA	Mnk,Chmp	[1040-1058]
303	CCUCACUGCCUUGCUAUAG	CUAUAGCAAGGCAGUGAGG		[986-1004]
304	UCAAUAAGGUUGUGACACG	CGUGUCACAACCUUAUUGA	Mnk,Chmp	[528-546]
305	UGACACGACACCCUGAUCU	AGAUCAGGGUGUCGUGUCA	Mnk,Chmp	[540-558]
306	ACAGAACUCAUGAACAUUC	GAAUGUUCAUGAGUUCUGU	Rb,Mnk,Dog,Chmp	[509-527]
307	UUGUUCUCUCAGUACUUGU	ACAAGUACUGAGAGAACAA	Chmp	[1087-1105]
308	GUUCCUGGUUAACUCGUUC	GAACGAGUUAACCAGGAAC	Rb,Mnk,Dog,Chmp	[160-178]
309	CCUUGCUAUAGGAGUCACC	GGUGACUCCUAUAGCAAGG	Chmp	[994-1012]
310	ACUUGUUACCCAGCUUCUC	GAGAAGCUGGGUAACAAGU	Mnk,Chmp	[1100-1118]
311	UUCCGUGCCUUCAAAUCUC	GAGAUUUGAAGGCACGGAA	Rb,Mnk,Dog,GP,Chmp	[875-893]
312	ACAUCCAGGGCCCAAUUUG	CAAAUUGGGCCCUGGAUGU		[1120-1138]
313	CGCUACUCAGAUGAAAGUG	CACUUUCAUCUGAGUAGCG	Mnk,Chmp	[803-821]
314	UCUCUCAGUUCUGGGAGGA	UCCUCCCAGAACUGAGAGA	Chmp	[1296-1314]
315	AGAUGACAUGGAGGUCAGC	GCUGACCUCCAUGUCAUCU	Mnk	[487-505]
316	UCAUCAGCUGCUUGGUCAG	CUGACCAAGCAGCUGAUGA	Rat,Rb,Mnk,Ms, GP,Chmp	[843-861]
317	GCCUUGCUAUAGGAGUCAC	GUGACUCCUAUAGCAAGGC	Chmp	[993-1011]
318	AAGCUGGGCUUUGAGGAAU	AUUCCUCAAAGCCCAGCUU	Mnk,Chmp	[629-647]
319	AGUUCUGGGAGGAUGACUC	GAGUCAUCCUCCCAGAACU	Chmp	[1302-1320]
320	ACACUCUAACAAGCUCUGU	ACAGAGCUUGUUAGAGUGU	Mnk,Chmp	[1168-1186]
321	CUAACAAGCUCUGUCCACG	CGUGGACAGAGCUUGUUAG		[1173-1191]
322	AGUAGUGAACUCCCAGGUG	CACCUGGGAGUUCACUACU		[728-746]
323	ACAUUCUCAAUAAGGUUGU	ACAACCUUAUUGAGAAUGU	Mnk,Chmp	[522-540]
324	CAGCUUCUCAACAUCCAGG	CCUGGAUGUUGAGAAGCUG	Mnk,Chmp	[1110-1128]
325	UGAUCAUCCGACGCUACUC	GAGUAGCGUCGGAUGAUCA	Mnk,Dog,Chmp	[792-810]
326	UGACUAUGUAUUCCUGAAC	GUUCAGGAAUACAUAGUCA	Mnk,Chmp	[948-966]
327	AAUUUGCCCUGCCUGGAGU	ACUCCAGGCAGGGCAAAUU		[1133-1151]
328	UAUACAAACAGUUCGACAC	GUGUCGAACUGUUUGUAUA	Chmp	[687-705]
329	AGUUCGACACUGACCGAUC	GAUCGGUCAGUGUCGAACU	Chmp	[696-714]
330	UGAGGAAUUCAAGUACUUG	CAAGUACUUGAAUUCCUCA	Mnk,Chmp	[640-658]
331	UGCCUUCAAAUCUCUUGAC	GUCAAGAGAUUUGAAGGCA	Rb,Mnk,Dog,GP,Chmp	[880-898]
332	AACAGUUCGACACUGACCG	CGGUCAGUGUCGAACUGUU	Chmp	[693-711]
333	GCAGCUGACUAUGUAUUCC	GGAAUACAUAGUCAGCUGC	Rat,Mnk,Ms,Chmp	[943-961]
334	CUGAAGACUGAUGGUUUUG	CAAAACCAUCAGUCUUCAG	Mnk,Chmp	[557-575]
335	AAACAGUUCGACACUGACC	GGUCAGUGUCGAACUGUUU	Chmp	[692-710]
336	CUCUAUAACAUGAUCAUCC	GGAUGAUCAUGUUAUAGAG	Mnk,GP,Chmp	[782-800]
337	ACCCACAAGCUUUUGUUCU	AGAACAAAAGCUUGUGGGU	Chmp	[1075-1093]
338	UCAGUUCUGGGAGGAUGAC	GUCAUCCUCCCAGAACUGA	Chmp	[1300-1318]
339	GCUGACCCACAAGCUUUUG	CAAAAGCUUGUGGGUCAGC	Chmp	[1071-1089]
340	ACUAUGUAUUCCUGAACUG	CAGUUCAGGAAUACAUAGU	Mnk,Chmp	[950-968]
341	UUCAAAUCUCUUGACAAAG	CUUUGUCAAGAGAUUUGAA	Rb,Mnk,GP,Chmp	[884-902]
342	UGUUACCCAGCUUCUCAAC	GUUGAGAAGCUGGGUAACA	Mnk,Chmp	[1103-1121]
343	AACAUCCAGGGCCCAAUUU	AAAUUGGGCCCUGGAUGUU		[1119-1137]

344	CUAUGUAUUCCUGAACUGG	CCAGUUCAGGAAUACAUAG	Mnk,Chmp	[951-969]
345	UUCUCAAUAAGGUUGUGAC	GUCACAACCUUAUUGAGAA	Mnk,Chmp	[525-543]
346	AGUGGGAACAUGGAUUUUG	CAAAAUCCAUGUUCCCACU	Mnk,Chmp	[818-836]
347	CUUUGUCUAUAUUCUGCUC	GAGCAGAAUAUAGACAAAG	Mnk,Chmp	[1408-1426]
348	ACUUCAUCAGCUGCUUGGU	ACCAAGCAGCUGAUGAAGU	Rat,Rb,Mnk,Ms, GP,Chmp	[840-858]
349	CAUUACUCCAACAUUGAGG	CCUCAAUGUUGGAGUAAUG	Mnk	[413-431]
350	CUGAUCUGAAGACUGAUGG	CCAUCAGUCUUCAGAUCAG	Mnk,Chmp	[552-570]
351	ACUUGUGAUGCCUCCAUGC	GCAUGGAGGCAUCACAAGU		[1266-1284]
352	GACACCCUGAUCUGAAGAC	GUCUUCAGAUCAGGGUGUC	Rb,Mnk,Chmp	[546-564]
353	UUCUCUCAGUACUUGUUAC	GUAACAAGUACUGAGAGAA	Chmp	[1090-1108]
354	GAAAUGUGCUUGGAGGCCU	AGGCCUCCAAGCACAUUUC	Chmp	[234-252]
355	UUGCUAUAGGAGUCACCUG	CAGGUGACUCCUAUAGCAA	Chmp	[996-1014]
356	UAACAAGCUCUGUCCACGG	CCGUGGACAGAGCUUGUUA		[1174-1192]
357	CACUGGACAAAUCCAGGUG	CACCUGGAUUUGUCCAGUG	Mnk,Chmp	[907-925]
358	AACAUGGAUUUUGACAACU	AGUUGUCAAAAUCCAUGUU	Rb,Mnk,Dog,Chmp	[824-842]
359	GCUGGGCUUUGAGGAAUUC	GAAUUCCUCAAAGCCCAGC	Mnk,Chmp	[631-649]
360	CUAGCACUUGUGAUGCCUC	GAGGCAUCACAAGUGCUAG		[1261-1279]
361	CAGUUCCGGAGACUCUUUG	CAAAGAGUCUCCGGAACUG	Mnk	[455-473]
362	AUCAGGGACCAUUUGCAGU	ACUGCAAAUGGUCCCUGAU	Mnk,Chmp	[712-730]
363	ACAAAUCCAGGUGAACAUC	GAUGUUCACCUGGAUUUGU	Mnk,GP,Chmp	[913-931]
364	AUCAUCCGACGCUACUCAG	CUGAGUAGCGUCGGAUGAU	Mnk,Chmp	[794-812]
365	UUCAUCAGCUGCUUGGUCA	UGACCAAGCAGCUGAUGAA	Rat,Rb,Mnk,Ms, GP,Chmp	[842-860]
366	GACAACUUCAUCAGCUGCU	AGCAGCUGAUGAAGUUGUC	Rb,Mnk,GP,Chmp	[836-854]
367	UGCUAUAGGAGUCACCUGG	CCAGGUGACUCCUAUAGCA	Chmp	[997-1015]
368	UCUCUAUAACAUGAUCAUC	GAUGAUCAUGUUAUAGAGA	Mnk,GP,Chmp	[781-799]
369	AUGAACAUUCUCAAUAAGG	CCUUAUUGAGAAUGUUCAU	Mnk,Chmp	[518-536]
370	AUUUGCCCUGCCUGGAGUU	AACUCCAGGCAGGGCAAAU		[1134-1152]
371	CACAAGCUUUUGUUCUCUC	GAGAGAACAAAAGCUUGUG	Chmp	[1078-1096]
372	UGGAGAUGACAUGGAGGUC	GACCUCCAUGUCAUCUCCA	Mnk,GP	[484-502]
373	CAACUUCAUCAGCUGCUUG	CAAGCAGCUGAUGAAGUUG	Rb,Mnk,GP,Chmp	[838-856]
374	UUCUGGGAGGAUGACUCCA	UGGAGUCAUCCUCCCAGAA	Mnk,Chmp	[1304-1322]
375	UCCACCUGAAUGAGCAUCU	AGAUGCUCAUUCAGGUGGA	Mnk,Ms,Chmp	[765-783]
376	UGCAGCUGACUAUGUAUUC	GAAUACAUAGUCAGCUGCA	Rat,Mnk,Ms,Chmp	[942-960]
377	UUCGACACUGACCGAUCAG	CUGAUCGGUCAGUGUCGAA	Chmp	[698-716]
378	CUCAAUAAGGUUGUGACAC	GUGUCACAACCUUAUUGAG	Mnk,Chmp	[527-545]
379	ACUCUAACAAGCUCUGUCC	GGACAGAGCUUGUUAGAGU	Mnk,Chmp	[1170-1188]
380	UCUAACAAGCUCUGUCCAC	GUGGACAGAGCUUGUUAGA		[1172-1190]
381	AAGGUUGUGACACGACACC	GGUGUCGUGUCACAACCUU	Mnk,Chmp	[533-551]
382	UGAAGACUGAUGGUUUUGG	CCAAAACCAUCAGUCUUCA	Mnk,Chmp	[558-576]
383	CAAAUCCAGGUGAACAUCC	GGAUGUUCACCUGGAUUUG	Rb,Mnk,GP,Chmp	[914-932]
384	AAUAAGGUUGUGACACGAC	GUCGUGUCACAACCUUAUU	Mnk,Chmp	[530-548]
385	GUACUUGUUACCCAGCUUC	GAAGCUGGGUAACAAGUAC	Chmp	[1098-1116]
386	GCUACUCAGAUGAAAGUGG	CCACUUUCAUCUGAGUAGC	Mnk,Chmp	[804-822]
387	UCUCAGUUCUGGGAGGAUG	CAUCCUCCCAGAACUGAGA	Chmp	[1298-1316]
388	UGCAGUCACAUCUUUGUGG	CCACAAAGAUGUGACUGCA	Mnk,Chmp	[1047-1065]
389	UCUAUAUUCUGCUCCCAGC	GCUGGGAGCAGAAUAUAGA	Chmp	[1413-1431]
390	UAGCACUUGUGAUGCCUCC	GGAGGCAUCACAAGUGCUA		[1262-1280]
391	UGUUCCGUGCCUUCAAAUC	GAUUUGAAGGCACGGAACA	Rb,Mnk,Dog,GP,Chmp	[873-891]
392	UACAAACAGUUCGACACUG	CAGUGUCGAACUGUUUGUA	Chmp	[689-707]
393	AUUCUCAAUAAGGUUGUGA	UCACAACCUUAUUGAGAAU	Mnk,Chmp	[524-542]
394	AACAUGAUCAUCCGACGCU	AGCGUCGGAUGAUCAUGUU	Rb,Mnk,Dog,Chmp	[788-806]
395	UUGACAACUUCAUCAGCUG	CAGCUGAUGAAGUUGUCAA	Rb,Mnk,Dog,Chmp	[834-852]
396	CUAUAUUCUGCUCCCAGCC	GGCUGGGAGCAGAAUAUAG	Chmp	[1414-1432]
397	AAUCUCUUGACAAAGAUGG	CCAUCUUUGUCAAGAGAUU	Rb,Mnk,GP,Chmp	[888-906]

398	ACCCAGCUUCUCAACAUCC	GGAUGUUGAGAAGCUGGGU	Mnk,Chmp	[1107-1125]
399	UUGUCUAUAUUCUGCUCCC	GGGAGCAGAAUAUAGACAA	Mnk,Chmp	[1410-1428]
400	UUUGCAGUAGUGAACUCCC	GGGAGUUCACUACUGCAAA	Chmp	[723-741]
401	AUGUUCCUGGUUAACUCGU	ACGAGUUAACCAGGAACAU	Rb,Mnk,Dog,Chmp	[158-176]
402	AGUUCCGGAGACUCUUUGC	GCAAAGAGUCUCCGGAACU	Mnk	[456-474]
403	AGCUUCUCAACAUCCAGGG	CCCUGGAUGUUGAGAAGCU	Mnk,Chmp	[1111-1129]
404	AUCCAGGUGAACAUCCAGG	CCUGGAUGUUCACCUGGAU	Rb,Mnk,Chmp	[917-935]
405	UUUGACAACUUCAUCAGCU	AGCUGAUGAAGUUGUCAAA	Rb,Mnk,Dog,Chmp	[833-851]
406	AGCCUAGCACUUGUGAUGC	GCAUCACAAGUGCUAGGCU	Chmp	[1258-1276]
407	AUUUUGACAACUUCAUCAG	CUGAUGAAGUUGUCAAAAU	Rb,Mnk,Dog,Chmp	[831-849]
408	AUUCAAGUACUUGUGGAAC	GUUCCACAAGUACUUGAAU	Mnk,Chmp	[646-664]
409	UUCCUGGUUAACUCGUUCU	AGAACGAGUUAACCAGGAA	Mnk,Dog,Chmp	[161-179]
410	UCAGUACUUGUUACCCAGC	GCUGGGUAACAAGUACUGA	Chmp	[1095-1113]
411	UAACAUGAUCAUCCGACGC	GCGUCGGAUGAUCAUGUUA	Mnk,Chmp	[787-805]
412	CUCUCAGUACUUGUUACCC	GGGUAACAAGUACUGAGAG	Chmp	[1092-1110]
413	AUAUUCUGCUCCCAGCCUG	CAGGCUGGGAGCAGAAUAU	Chmp	[1416-1434]
414	UAUAACAUGAUCAUCCGAC	GUCGGAUGAUCAUGUUAUA	Mnk,Chmp	[785-803]
415	UUUGUUCUCUCAGUACUUG	CAAGUACUGAGAGAACAAA	Chmp	[1086-1104]
416	CUUCAUCAGCUGCUUGGUC	GACCAAGCAGCUGAUGAAG	Rat,Rb,Mnk,Ms, GP,Chmp	[841-859]
417	UGUAUUCCUGAACUGGAGC	GCUCCAGUUCAGGAAUACA	Mnk,Chmp	[954-972]
418	UAUAGGAGUCACCUGGAGC	GCUCCAGGUGACUCCUAUA	Mnk,Chmp	[1000-1018]
419	UAUAUUCUGCUCCCAGCCU	AGGCUGGGAGCAGAAUAUA	Chmp	[1415-1433]
420	AUUACUCCAACAUUGAGGC	GCCUCAAUGUUGGAGUAAU	Mnk	[414-432]
421	AACAUUCUCAAUAAGGUUG	CAACCUUAUUGAGAAUGUU	Mnk,Chmp	[521-539]
422	UGACAACUUCAUCAGCUGC	GCAGCUGAUGAAGUUGUCA	Rb,Mnk,Dog,Chmp	[835-853]
423	UUUUGACAACUUCAUCAGC	GCUGAUGAAGUUGUCAAAA	Rb,Mnk,Dog,Chmp	[832-850]
424	UCUCUCAGUACUUGUUACC	GGUAACAAGUACUGAGAGA	Chmp	[1091-1109]
425	AACUUCAUCAGCUGCUUGG	CCAAGCAGCUGAUGAAGUU	Rat,Rb,Mnk,Ms, GP,Chmp	[839-857]
426	GUAUUCCUGAACUGGAGCC	GGCUCCAGUUCAGGAAUAC	Mnk,Chmp	[955-973]
427	UUACUCCAACAUUGAGGCC	GGCCUCAAUGUUGGAGUAA	Mnk	[415-433]
428	AUUUGCAGUAGUGAACUCC	GGAGUUCACUACUGCAAAU	Chmp	[722-740]
429	UAUUCCUGAACUGGAGCCC	GGGCUCCAGUUCAGGAAUA	Mnk,Chmp	[956-974]
430	UUCCACCUGAAUGAGCAUC	GAUGCUCAUUCAGGUGGAA	Mnk,Ms,Chmp	[764-782]
431	UUUGUCUAUAUUCUGCUCC	GGAGCAGAAUAUAGACAAA	Mnk,Chmp	[1409-1427]

Table B 8 CASP1 - caspase 1, apoptosis-related cysteine peptidase

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-73622112 :18-1169
1	GCGUAGAUGUGAAAAAAAA	UUUUUUUUCACAUCUACGC		[550-568]
2	CAGCGUAGAUGUGAAAAAA	UUUUUUCACAUCUACGCUG		[548-566]
3	GGGUGAAGGUACAAUAAAU	AUUUAUUGUACCUUCACCC		[68-86]
4	GGAUGAUGCUAUUAAGAAA	UUUCUUAAUAGCAUCAUCC		[896-914]
5	UGACAAUGCUGCUACAAAA	UUUUGUAGCAGCAUUGUCA		[520-538]
6	CAAAGGAUAUGGAAACAAA	UUUGUUUCCAUAUCCUUUG		[378-396]
7	AGACAAGGGUGCUGAACAA	UUGUUCAGCACCCUUGUCU		[109-127]
8	AGAGAUGGAGAAAGUAAAA	UUUUACUUUCUCCAUCUCU		[131-149]
9	AAAGGAUAUGGAAACAAAA	UUUUGUUUCCAUAUCCUUU		[379-397]
10	CAAUCUUUAACAUGUUGAA	UUCAACAUGUUAAAGAUUG		[733-751]
11	CGUAGAUGUGAAAAAAAAU	AUUUUUUUUCACAUCUACG		[551-569]
12	GGAGAAAGUAAAACGUGAA	UUCACGUUUUACUUUCUCC		[137-155]
13	CAGAUAUACUACAACUCAA	UUGAGUUGUAGUAUAUCUG		[712-730]
14	GGUACAGCGUAGAUGUGAA	UUCACAUCUACGCUGUACC		[544-562]
15	AAGAGAUGGAGAAAGUAAA	UUUACUUUCUCCAUCUCUU		[130-148]
16	CGAAGGUGAUCAUCAUCCA	UGGAUGAUGAUCACCUUCG		[784-802]

17	CCGCAAGGUUCGAUUUUCA	UGAAAAUCGAACCUUGCGG		[1064-1082]
18	AGGCAUUUGUGGGAAGAAA	UUUCUUCCCACAAAUGCCU		[677-695]
19	AAUUAUGUCUGCUGAAUAA	UUAUUCAGCAGACAUAAUU		[1235-1253]
20	AGCGUAGAUGUGAAAAAAA	UUUUUUUCACAUCUACGCU		[549-567]
21	AUGUCUGCUGAAUAAUAAA	UUUAUUAUUCAGCAGACAU		[1239-1257]
22	GAAGAAACACUCUGAGCAA	UUGCUCAGAGUGUUUCUUC		[689-707]
23	CAAGGGUGCUGAACAAGGA	UCCUUGUUCAGCACCCUUG		[112-130]
24	CUCCCUAGAAGAAGCUCAA	UUGAGCUUCUUCUAGGGAG		[362-380]
25	GAGAAAGUAAAACGUGAAA	UUUCACGUUUUACUUUCUC		[138-156]
26	GCUCAGAAGGGAAUGUCAA	UUGACAUUCCCUUCUGAGC		[337-355]
27	GCAUGACAAUGCUGCUACA	UGUAGCAGCAUUGUCAUGC		[517-535]
28	GGCAGAGAUUUAUCCAAUA	UAUUGGAUAAAUCUCUGCC		[401-419]
29	GAAGAGAUGGAGAAAGUAA	UUACUUUCUCCAUCUCUUC		[129-147]
30	GAAAGUAAAACGUGAAAAU	AUUUUCACGUUUUACUUUC		[140-158]
31	GCACGUUCCUGGUGUUCAU	AUGAACACCAGGAACGUGC		[640-658]
32	UCCUGAAGGAGAAGAGAAA	UUUCUCUUCUCCUUCAGGA		[31-49]
33	GGCUCAGAAGGGAAUGUCA	UGACAUUCCCUUCUGAGCC		[336-354]
34	GGAAGAGAUGGAGAAAGUA	UACUUUCUCCAUCUCUUCC		[128-146]
35	AGAAGAAGCUCAAAGGAUA	UAUCCUUUGAGCUUCUUCU		[368-386]
36	ACAAGGUCCUGAAGGAGAA	UUCUCCUUCAGGACCUUGU		[25-43]
37	CGUGAAAAUGCUACAGUUA	UAACUGUAGCAUUUUCACG		[150-168]
38	AACUCAAUGCAAUCUUUAA	UUAAAGAUUGCAUUGAGUU		[724-742]
39	AGGAGUUUCUGGAAACCUA	UAGGUUUCCAGAAACUCCU		[851-869]
40	GACAGUAUUCCUAGAAGAA	UUCUUCUAGGAAUACUGUC		[474-492]
41	GGAGUUUCUGGAAACCUAU	AUAGGUUUCCAGAAACUCC		[852-870]
42	CCUCUUCCCAGGACAUUAA	UUAAUGUCCUGGGAAGAGG	Rat	[1151-1169]
43	CAAGCUUUGCUCCCUAGAA	UUCUAGGGAGCAAAGCUUG		[353-371]
44	GAUGAAUUAUUACAGACAA	UUGUCUGUAAUAAUUCAUC		[96-114]
45	GGACAUUAAAAUAAGGAAA	UUUCCUUAUUUUAAUGUCC		[1161-1179]
46	CAAGGAAGAGAUGGAGAAA	UUUCUCCAUCUCUUCCUUG		[125-143]
47	CAUGGGUGAAGGUACAAUA	UAUUGUACCUUCACCCAUG		[65-83]
48	CAUUGAACAUAUGCAAGAA	UUCUUGCAUAUGUUCAAUG		[1013-1031]
49	UGGAAUUAUGUCUGCUGAA	UUCAGCAGACAUAAUUCCA		[1232-1250]
50	GGGUGCUGAACAAGGAAGA	UCUUCCUUGUUCAGCACCC		[115-133]
51	GCUGAAUAAUAAACUUUUU	AAAAAGUUUAUUAUUCAGC		[1245-1263]
52	GCAUUUGUGGGAAGAAACA	UGUUUCUUCCCACAAAUGC		[679-697]
53	UGAGCAAGUCCCAGAUAUA	UAUAUCUGGGACUUGCUCA		[701-719]
54	AGAGCUGGAGGCAUUUGCA	UGCAAAUGCCUCCAGCUCU		[593-611]
55	GGUCCUGAAGGAGAAGAGA	UCUCUUCUCCUUCAGGACC		[29-47]
56	UAUGUCUGCUGAAUAAUAA	UUAUUAUUCAGCAGACAUA		[1238-1256]
57	GGCUCUGUUUUUAUUGGAA	UUCCAAUAAAAACAGAGCC		[990-1008]
58	GAAUUAUGUCUGCUGAAUA	UAUUCAGCAGACAUAAUUC		[1234-1252]
59	CAUUAUCUGCAAUGAAGAA	UUCUUCAUUGCAGAUAAUG		[452-470]
60	CGCAAGGUUCGAUUUUCAU	AUGAAAAUCGAACCUUGCG		[1065-1083]
61	UGGGUGAAGGUACAAUAAA	UUUAUUGUACCUUCACCCA		[67-85]
62	CUGGAUGAAUUAUUACAGA	UCUGUAAUAAUUCAUCCAG		[93-111]
63	GCUCUUCCACACCAGAUAA	UUAUCUGGUGUGGAAGAGC		[946-964]
64	AAGGGUGCUGAACAAGGAA	UUCCUUGUUCAGCACCCUU		[113-131]
65	GCAGAGAUUUAUCCAAUAA	UUAUUGGAUAAAUCUCUGC		[402-420]
66	UGGAGAAAGUAAAACGUGA	UCACGUUUUACUUUCUCCA		[136-154]
67	GAAAGAGUGACUUUGACAA	UUGUCAAAGUCACUCUUUC		[1122-1140]
68	AUGGGUGAAGGUACAAUAA	UUAUUGUACCUUCACCCAU		[66-84]
69	GAAGACUCAUUGAACAUAU	AUAUGUUCAAUGAGUCUUC		[1006-1024]
70	AACCGAAGGUGAUCAUCAU	AUGAUGAUCACCUUCGGUU		[781-799]
71	ACAGCGUAGAUGUGAAAAA	UUUUUCACAUCUACGCUGU		[547-565]
72	GCAAGUCCCAGAUAUACUA	UAGUAUAUCUGGGACUUGC		[704-722]

73	AGAAGAGAAAGCUGUUUAU	AUAAACAGCUUUCUCUUCU		[40-58]
74	AGGACAUUAAAAUAAGGAA	UUCCUUAUUUUAAUGUCCU		[1160-1178]
75	CUCUUCCCAGGACAUUAAA	UUUAAUGUCCUGGGAAGAG	Rat	[1152-1170]
76	AGCUGAGGUUGACAUCACA	UGUGAUGUCAACCUCAGCU		[497-515]
77	GAAGCUCAAAGGAUAUGGA	UCCAUAUCCUUUGAGCUUC		[372-390]
78	GGAAACCUAUCUUUACCAA	UUGGUAAAGAUAGGUUUCC		[861-879]
79	CCAAUAAUGGACAAGUCAA	UUGACUUGUCCAUUAUUGG		[414-432]
80	GUCUCAUGGUAUUCGGGAA	UUCCCGAAUACCAUGAGAC		[659-677]
81	GUACAGCGUAGAUGUGAAA	UUUCACAUCUACGCUGUAC		[545-563]
82	CUUACUGGAUGAAUUAUUA	UAAUAAUUCAUCCAGUAAG		[89-107]
83	UUAACAUGUUGAAUACCAA	UUGGUAUUCAACAUGUUAA		[739-757]
84	UACAGACAAGGGUGCUGAA	UUCAGCACCCUUGUCUGUA		[106-124]
85	CAGAGAUUUAUCCAAUAAU	AUUAUUGGAUAAAUCUCUG	Rat,Ms	[403-421]
86	ACGUGAAAAUGCUACAGUU	AACUGUAGCAUUUUCACGU		[149-167]
87	AGCUCAAAGGAUAUGGAAA	UUUCCAUAUCCUUUGAGCU		[374-392]
88	GAAGAAGCUCAAAGGAUAU	AUAUCCUUUGAGCUUCUUC		[369-387]
89	GUUUAAAGAUUCAGUAGGA	UCCUACUGAAUCUUUAAAC		[836-854]
90	CGGCAGAGAUUUAUCCAAU	AUUGGAUAAAUCUCUGCCG		[400-418]
91	ACUCAUUGAACAUAUGCAA	UUGCAUAUGUUCAAUGAGU		[1010-1028]
92	CACAUACAUUUGUGAAGAA	UUCUUCACAAAUGUAUGUG		[236-254]
93	GGUGUGGUUUAAAGAUUCA	UGAAUCUUUAAACCACACC		[830-848]
94	CCAGAUAAUGUUUCUUGGA	UCCAAGAAACAUUAUCUGG		[957-975]
95	AGGACAAACCGAAGGUGAU	AUCACCUUCGGUUUGUCCU		[775-793]
96	GUGGGAAGAAACACUCUGA	UCAGAGUGUUUCUUCCCAC		[685-703]
97	UGACAGUAUUCCUAGAAGA	UCUUCUAGGAAUACUGUCA		[473-491]
98	GUCCUGAAGGAGAAGAGAA	UUCUCUUCUCCUUCAGGAC		[30-48]
99	CAACUCAAUGCAAUCUUUA	UAAAGAUUGCAUUGAGUUG		[723-741]
100	GCUUUGCUCCCUAGAAGAA	UUCUUCUAGGGAGCAAAGC		[356-374]
101	AAGCUCAAAGGAUAUGGAA	UUCCAUAUCCUUUGAGCUU		[373-391]
102	CUGGUGUGGUGUGGUUUAA	UUAAACCACACCACACCAG		[823-841]
103	CAGUAUUCCUAGAAGAACU	AGUUCUUCUAGGAAUACUG		[476-494]
104	AGGAGAAGAGAAAGCUGUU	AACAGCUUUCUCUUCUCCU		[37-55]
105	CUUCGGACAUGACUACAGA	UCUGUAGUCAUGUCCGAAG		[577-595]
106	ACAUGUUGAAUACCAAGAA	UUCUUGGUAUUCAACAUGU		[742-760]
107	AAGGCAUUUGUGGGAAGAA	UUCUUCCCACAAAUGCCUU		[676-694]
108	GUGUGGUGUGGUUUAAAGA	UCUUUAAACCACACCACAC		[826-844]
109	GUGGUUUAAAGAUUCAGUA	UACUGAAUCUUUAAACCAC		[833-851]
110	CUCUGUUUUUAUUGGAAGA	UCUUCCAAUAAAAACAGAG		[992-1010]
111	UGGUGUGGUGUGGUUUAAA	UUUAAACCACACCACACCA		[824-842]
112	CUAGAAGAAGCUCAAAGGA	UCCUUUGAGCUUCUUCUAG		[366-384]
113	CCUGUGAUGUGGAGGAAAU	AUUUCCUCCACAUCACAGG		[1042-1060]
114	UGAAGAAUUUGACAGUAUU	AAUACUGUCAAAUUCUUCA		[464-482]
115	AGAGUGACUUUGACAAGAU	AUCUUGUCAAAGUCACUCU		[1125-1143]
116	CAGUAGGAGUUUCUGGAAA	UUUCCAGAAACUCCUACUG		[847-865]
117	CAGACAAGGGUGCUGAACA	UGUUCAGCACCCUUGUCUG		[108-126]
118	GAGGAUGAUGCUAUUAAGA	UCUUAAUAGCAUCAUCCUC		[894-912]
119	CAAUGGGCUCUGUUUUUAU	AUAAAAACAGAGCCCAUUG		[985-1003]
120	UCUCAUUAUCUGCAAUGAA	UUCAUUGCAGAUAAUGAGA		[449-467]
121	CAGAGCACAAGACCUCUGA	UCAGAGGUCUUGUGCUCUG		[619-637]
122	GGAAUUAUGUCUGCUGAAU	AUUCAGCAGACAUAAUUCC		[1233-1251]
123	GGGCUCUGUUUUUAUUGGA	UCCAAUAAAAACAGAGCCC		[989-1007]
124	AUGCUACAGUUAUGGAUAA	UUAUCCAUAACUGUAGCAU		[157-175]
125	CCUGGUGUGGUGUGGUUUA	UAAACCACACCACACCAGG		[822-840]
126	UUAAAAUAAGGAAACUGUA	UACAGUUUCCUUAUUUUAA		[1166-1184]
127	UGAACAUAUGCAAGAAUAU	AUAUUCUUGCAUAUGUUCA		[1016-1034]
128	GUAAAACGUGAAAAUGCUA	UAGCAUUUUCACGUUUUAC		[144-162]

129	UGAGGAUGAUGCUAUUAAG	CUUAAUAGCAUCAUCCUCA		[893-911]
130	ACAAGGAAGAGAUGGAGAA	UUCUCCAUCUCUUCCUUGU		[124-142]
131	GACUCAUUGAACAUAUGCA	UGCAUAUGUUCAAUGAGUC		[1009-1027]
132	GGAAGAAACACUCUGAGCA	UGCUCAGAGUGUUUCUUCC		[688-706]
133	UUGGAAGACUCAUUGAACA	UGUUCAAUGAGUCUUCCAA		[1003-1021]
134	GAAUGUCUGUGGGCAGGAA	UUCCUGCCCACAGACAUUC		[1186-1204]
135	GGAUGAAUUAUUACAGACA	UGUCUGUAAUAAUUCAUCC		[95-113]
136	AGUCCCAGAUAUACUACAA	UUGUAGUAUAUCUGGGACU		[707-725]
137	UUAUGUCUGCUGAAUAAUA	UAUUAUUCAGCAGACAUAA		[1237-1255]
138	GAGCACAAGACCUCUGACA	UGUCAGAGGUCUUGUGCUC		[621-639]
139	AGUAAAACGUGAAAAUGCU	AGCAUUUUCACGUUUUACU		[143-161]
140	CCAGAUAUACUACAACUCA	UGAGUUGUAGUAUAUCUGG		[711-729]
141	AGCUUUGCUCCCUAGAAGA	UCUUCUAGGGAGCAAAGCU		[355-373]
142	CUGUGAUGUGGAGGAAAUU	AAUUUCCUCCACAUCACAG		[1043-1061]
143	CCCAGGACAUUAAAAUAAG	CUUAUUUUAAUGUCCUGGG		[1157-1175]
144	AGAUAAUGUUUCUUGGAGA	UCUCCAAGAAACAUUAUCU		[959-977]
145	UGGAGGAAAUUUUCCGCAA	UUGCGGAAAAUUUCCUCCA		[1051-1069]
146	AAAGGUUUUUGGAAUUAUG	CAUAAUUCCAAAAACCUUU		[1223-1241]
147	CUCAAUGCAAUCUUUAACA	UGUUAAAGAUUGCAUUGAG		[726-744]
148	AGAACUGCCCAAGUUUGAA	UUCAAACUUGGGCAGUUCU		[757-775]
149	AGAUAUACUACAACUCAAU	AUUGAGUUGUAGUAUAUCU		[713-731]
150	AACCUAUCUUUACCAACUA	UAGUUGGUAAAGAUAGGUU		[864-882]
151	GUUCAUGUCUCAUGGUAUU	AAUACCAUGAGACAUGAAC		[653-671]
152	GAGUGACUUUGACAAGAUG	CAUCUUGUCAAAGUCACUC		[1126-1144]
153	AAAUAAGGAAACUGUAUGA	UCAUACAGUUUCCUUAUUU		[1169-1187]
154	UUAAGAAAGCCCACAUAGA	UCUAUGUGGGCUUUCUUAA		[907-925]
155	UAUUGGAAGACUCAUUGAA	UUCAAUGAGUCUUCCAAUA		[1001-1019]
156	GUGAAAAUGCUACAGUUAU	AUAACUGUAGCAUUUUCAC		[151-169]
157	GACAAUGCUGCUACAAAAU	AUUUUGUAGCAGCAUUGUC		[521-539]
158	ACAUGACUACAGAGCUGGA	UCCAGCUCUGUAGUCAUGU		[583-601]
159	AAAUUUGCAUCACAUACAU	AUGUAUGUGAUGCAAAUUU		[226-244]
160	CUACAGAGCUGGAGGCAUU	AAUGCCUCCAGCUCUGUAG		[589-607]
161	CAAGAUGUUUCUACCUCUU	AAGAGGUAGAAACAUCUUG		[1138-1156]
162	UGAAGAGAUCCUUCUGUAA	UUACAGAAGGAUCUCUUCA		[1206-1224]
163	AAGAGUGACUUUGACAAGA	UCUUGUCAAAGUCACUCUU		[1124-1142]
164	CAACUACAGAAGAGUUUGA	UCAAACUCUUCUGUAGUUG		[877-895]
165	GGGCAGGAAGUGAAGAGAU	AUCUCUUCACUUCCUGCCC		[1196-1214]
166	UGGUAUUCGGGAAGGCAUU	AAUGCCUUCCCGAAUACCA		[665-683]
167	GAGAAGAGAAAGCUGUUUA	UAAACAGCUUUCUCUUCUC		[39-57]
168	GUUUGAGGAUGAUGCUAUU	AAUAGCAUCAUCCUCAAAC		[890-908]
169	UCCCUAGAAGAAGCUCAAA	UUUGAGCUUCUUCUAGGGA		[363-381]
170	AGAAAGUAAAACGUGAAAA	UUUUCACGUUUUACUUUCU		[139-157]
171	AUGCAAUCUUUAACAUGUU	AACAUGUUAAAGAUUGCAU		[730-748]
172	GAAGAGAUCCUUCUGUAAA	UUUACAGAAGGAUCUCUUC		[1207-1225]
173	ACUGAAAGAGUGACUUUGA	UCAAAGUCACUCUUUCAGU		[1119-1137]
174	AAAAGUCGGCAGAGAUUUA	UAAAUCUCUGCCGACUUUU		[394-412]
175	UGCUGAACAAGGAAGAGAU	AUCUCUUCCUUGUUCAGCA		[118-136]
176	GUUUCUUGGAGACAUCCCA	UGGGAUGUCUCCAAGAAAC		[966-984]
177	GAUAAGACCCGAGCUUUGA	UCAAAGCUCGGGUCUUAUC		[171-189]
178	CUGUAAAGGUUUUUGGAAU	AUUCCAAAAACCUUUACAG		[1219-1237]
179	CAUGGUAUUCGGGAAGGCA	UGCCUUCCCGAAUACCAUG		[663-681]
180	CACACGUCUUGCUCUCAUU	AAUGAGAGCAAGACGUGUG		[437-455]
181	UGCUCUUCCACACCAGAUA	UAUCUGGUGUGGAAGAGCA		[945-963]
182	AUGACAAUGCUGCUACAAA	UUUGUAGCAGCAUUGUCAU		[519-537]
183	UCUUGGAGACAUCCCACAA	UUGUGGGAUGUCUCCAAGA		[969-987]
184	GUUUUUAUUGGAAGACUCA	UGAGUCUUCCAAUAAAAAC		[996-1014]

185	GGGAAGGCAUUUGUGGGAA	UUCCCACAAAUGCCUUCCC		[673-691]
186	GAACUGGAGCUGAGGUUGA	UCAACCUCAGCUCCAGUUC		[490-508]
187	CCAGGACAUUAAAAUAAGG	CCUUAUUUUAAUGUCCUGG		[1158-1176]
188	CAGGCAUGACAAUGCUGCU	AGCAGCAUUGUCAUGCCUG		[514-532]
189	CGGACAUGACUACAGAGCU	AGCUCUGUAGUCAUGUCCG		[580-598]
190	GGCAUUUGUGGGAAGAAAC	GUUUCUUCCCACAAAUGCC		[678-696]
191	GAAGGCAUUUGUGGGAAGA	UCUUCCCACAAAUGCCUUC		[675-693]
192	AGGAAGAGAUGGAGAAAGU	ACUUUCUCCAUCUCUUCCU		[127-145]
193	UUCCCAGGACAUUAAAAUA	UAUUUUAAUGUCCUGGGAA		[1155-1173]
194	CAAGAAUAUGCCUGUUCCU	AGGAACAGGCAUAUUCUUG		[1026-1044]
195	GAAUUUGACAGUAUUCCUA	UAGGAAUACUGUCAAAUUC		[468-486]
196	GGAAGACUCAUUGAACAUA	UAUGUUCAAUGAGUCUUCC		[1005-1023]
197	CAUACAUUUGUGAAGAAGA	UCUUCUUCACAAAUGUAUG		[238-256]
198	UCAUUAUCUGCAAUGAAGA	UCUUCAUUGCAGAUAAUGA		[451-469]
199	AGAAAGCCCACAUAGAGAA	UUCUCUAUGUGGGCUUUCU		[910-928]
200	CAAAUUUGCAUCACAUACA	UGUAUGUGAUGCAAAUUUG		[225-243]
201	CUUGGAGACAUCCCACAAU	AUUGUGGGAUGUCUCCAAG		[970-988]
202	CAUCACAUACAUUUGUGAA	UUCACAAAUGUAUGUGAUG		[233-251]
203	CCCACAAUGGGCUCUGUUU	AAACAGAGCCCAUUGUGGG		[981-999]
204	AAGAAAGCCCACAUAGAGA	UCUCUAUGUGGGCUUUCUU		[909-927]
205	GACAUCACAGGCAUGACAA	UUGUCAUGCCUGUGAUGUC		[507-525]
206	GGAGGAAAUUUUCCGCAAG	CUUGCGGAAAAUUUCCUCC		[1052-1070]
207	GAGCUUUGAUUGACUCCGU	ACGGAGUCAAUCAAAGCUC		[181-199]
208	AGACCCGAGCUUUGAUUGA	UCAAUCAAAGCUCGGGUCU		[175-193]
209	CUGAGCAAGUCCCAGAUAU	AUAUCUGGGACUUGCUCAG		[700-718]
210	UCUUCCCAGGACAUUAAAA	UUUUAAUGUCCUGGGAAGA		[1153-1171]
211	AGGAUGAUGCUAUUAAGAA	UUCUUAAUAGCAUCAUCCU		[895-913]
212	AUACUACAACUCAAUGCAA	UUGCAUUGAGUUGUAGUAU		[717-735]
213	GAAGGAGAAGAGAAAGCUG	CAGCUUUCUCUUCUCCUUC		[35-53]
214	GGAUAAGACCCGAGCUUUG	CAAAGCUCGGGUCUUAUCC		[170-188]
215	CAAGGUUCGAUUUUCAUUU	AAAUGAAAAUCGAACCUUG		[1067-1085]
216	UCGGCAGAGAUUUAUCCAA	UUGGAUAAAUCUCUGCCGA		[399-417]
217	UUCCAUGGGUGAAGGUACA	UGUACCUUCACCCAUGGAA		[62-80]
218	GAUGGAGAAAGUAAAACGU	ACGUUUUACUUUCUCCAUC		[134-152]
219	AAGGUUUUUGGAAUUAUGU	ACAUAAUUCCAAAAACCUU		[1224-1242]
220	GGUGUGGUGUGGUUUAAAG	CUUUAAACCACACCACACC		[825-843]
221	GAUGUGAAAAAAAAUCUCA	UGAGAUUUUUUUUCACAUC		[555-573]
222	ACCCGAGCUUUGAUUGACU	AGUCAAUCAAAGCUCGGGU		[177-195]
223	UUGGAAUUAUGUCUGCUGA	UCAGCAGACAUAAUUCCAA		[1231-1249]
224	UGAACAAGGAAGAGAUGGA	UCCAUCUCUUCCUUGUUCA		[121-139]
225	GCAUCACAUACAUUUGUGA	UCACAAAUGUAUGUGAUGC		[232-250]
226	CAAUAAUGGACAAGUCAAG	CUUGACUUGUCCAUUAUUG		[415-433]
227	AAAACGUGAAAAUGCUACA	UGUAGCAUUUUCACGUUUU		[146-164]
228	CAGGACAUUAAAAUAAGGA	UCCUUAUUUUAAUGUCCUG		[1159-1177]
229	CACAAGACCUCUGACAGCA	UGCUGUCAGAGGUCUUGUG		[624-642]
230	GUGAAGAGAUCCUUCUGUA	UACAGAAGGAUCUCUUCAC		[1205-1223]
231	UCUGCAAUGAAGAAUUUGA	UCAAAUUCUUCAUUGCAGA		[457-475]
232	GGGUACAGCGUAGAUGUGA	UCACAUCUACGCUGUACCC		[543-561]
233	GGAAAUUUUCCGCAAGGUU	AACCUUGCGGAAAAUUUCC		[1055-1073]
234	CCUGUUCCUGUGAUGUGGA	UCCACAUCACAGGAACAGG		[1036-1054]
235	ACAUCACAGGCAUGACAAU	AUUGUCAUGCCUGUGAUGU		[508-526]
236	GACAAGGUCCUGAAGGAGA	UCUCCUUCAGGACCUUGUC		[24-42]
237	CUGAAAGAGUGACUUUGAC	GUCAAAGUCACUCUUUCAG		[1120-1138]
238	UUGACUCCGUUAUUCCGAA	UUCGGAAUAACGGAGUCAA		[190-208]
239	AGCUGGAGGCAUUUGCACA	UGUGCAAAUGCCUCCAGCU		[595-613]
240	UGUGGUGUGGUUUAAAGAU	AUCUUUAAACCACACCACA		[827-845]

241	CUUCCCAGGACAUUAAAAU	AUUUUAAUGUCCUGGGAAG		[1154-1172]
242	AGAUUUAUCCAAUAAUGGA	UCCAUUAUUGGAUAAAUCU		[406-424]
243	AUUUGACAGUAUUCCUAGA	UCUAGGAAUACUGUCAAAU		[470-488]
244	GCUACAGUUAUGGAUAAGA	UCUUAUCCAUAACUGUAGC		[159-177]
245	GGAGCUGAGGUUGACAUCA	UGAUGUCAACCUCAGCUCC		[495-513]
246	UGCUGAAUAAUAAACUUUU	AAAAGUUUAUUAUUCAGCA		[1244-1262]
247	CUCAGAAGGGAAUGUCAAG	CUUGACAUUCCCUUCUGAG		[338-356]
248	CAGAUGCCCACCACUGAAA	UUUCAGUGGUGGGCAUCUG		[1107-1125]
249	CAGAAGAGUUUGAGGAUGA	UCAUCCUCAAACUCUUCUG		[883-901]
250	CUUUGACAAGAUGUUUCUA	UAGAAACAUCUUGUCAAAG		[1132-1150]
251	CGUCUUGCUCUCAUUAUCU	AGAUAAUGAGAGCAAGACG		[441-459]
252	CUUUGAUUGACUCCGUUAU	AUAACGGAGUCAAUCAAAG		[184-202]
253	UGACUCCGUUAUUCCGAAA	UUUCGGAAUAACGGAGUCA		[191-209]
254	GUGACUUUGACAAGAUGUU	AACAUCUUGUCAAAGUCAC		[1128-1146]
255	ACAACUCAAUGCAAUCUUU	AAAGAUUGCAUUGAGUUGU		[722-740]
256	CUCUCAUUAUCUGCAAUGA	UCAUUGCAGAUAAUGAGAG		[448-466]
257	GCACACGUCUUGCUCUCAU	AUGAGAGCAAGACGUGUGC		[436-454]
258	GCAAGGUUCGAUUUUCAUU	AAUGAAAAUCGAACCUUGC		[1066-1084]
259	AGAAGAGUUUGAGGAUGAU	AUCAUCCUCAAACUCUUCU		[884-902]
260	UCUGCUGAAUAAUAAACUU	AAGUUUAUUAUUCAGCAGA		[1242-1260]
261	CGCUUUCUGCUCUUCCACA	UGUGGAAGAGCAGAAAGCG		[938-956]
262	UAAAGGUUUUUGGAAUUAU	AUAAUUCCAAAAACCUUUA		[1222-1240]
263	AGGUUCGAUUUUCAUUUGA	UCAAAUGAAAAUCGAACCU	Ms	[1069-1087]
264	CAUGACAAUGCUGCUACAA	UUGUAGCAGCAUUGUCAUG		[518-536]
265	UCCCAGGACAUUAAAAUAA	UUAUUUUAAUGUCCUGGGA		[1156-1174]
266	CAGAUGGUAGAGCGCAGAU	AUCUGCGCUCUACCAUCUG		[1093-1111]
267	CAAUGCUGCUACAAAAUCU	AGAUUUUGUAGCAGCAUUG		[523-541]
268	UUGCUCUCAUUAUCUGCAA	UUGCAGAUAAUGAGAGCAA		[445-463]
269	CUCUGAGCAAGUCCCAGAU	AUCUGGGACUUGCUCAGAG		[698-716]
270	GGUUCGAUUUUCAUUUGAG	CUCAAAUGAAAAUCGAACC		[1070-1088]
271	CCUAUCUUUACCAACUACA	UGUAGUUGGUAAAGAUAGG		[866-884]
272	UGUUCAUGUCUCAUGGUAU	AUACCAUGAGACAUGAACA		[652-670]
273	UGCAAUGAAGAAUUUGACA	UGUCAAAUUCUUCAUUGCA		[459-477]
274	CACACCAGAUAAUGUUUCU	AGAAACAUUAUCUGGUGUG		[953-971]
275	GUGUUCAUGUCUCAUGGUA	UACCAUGAGACAUGAACAC		[651-669]
276	CCUGAAGGAGAAGAGAAAG	CUUUCUCUUCUCCUUCAGG		[32-50]
277	AAACAAAAGUCGGCAGAGA	UCUCUGCCGACUUUUGUUU		[390-408]
278	UCUGUAAAGGUUUUUGGAA	UUCCAAAAACCUUUACAGA		[1218-1236]
279	CUGCAAUGAAGAAUUUGAC	GUCAAAUUCUUCAUUGCAG		[458-476]
280	GGAAACAAAAGUCGGCAGA	UCUGCCGACUUUUGUUUCC		[388-406]
281	UCAGUAGGAGUUUCUGGAA	UUCCAGAAACUCCUACUGA		[846-864]
282	GGAGAAGAGAAAGCUGUUU	AAACAGCUUUCUCUUCUCC		[38-56]
283	CUACAGUUAUGGAUAAGAC	GUCUUAUCCAUAACUGUAG		[160-178]
284	UCCUGGUGUUCAUGUCUCA	UGAGACAUGAACACCAGGA		[646-664]
285	CUCAAAGGAUAUGGAAACA	UGUUUCCAUAUCCUUUGAG		[376-394]
286	AGCUGUUUAUCCGUUCCAU	AUGGAACGGAUAAACAGCU		[49-67]
287	CUAUCUUUACCAACUACAG	CUGUAGUUGGUAAAGAUAG		[867-885]
288	AGUUAUGGAUAAGACCCGA	UCGGGUCUUAUCCAUAACU		[164-182]
289	AAGCCCACAUAGAGAAGGA	UCCUUCUCUAUGUGGGCUU		[913-931]
290	CACGUCUUGCUCUCAUUAU	AUAAUGAGAGCAAGACGUG		[439-457]
291	CCACAUAGAGAAGGAUUUU	AAAAUCCUUCUCUAUGUGG		[917-935]
292	UAUUAAGAAAGCCCACAUA	UAUGUGGGCUUUCUUAAUA		[905-923]
293	CAAUGAAGAAUUUGACAGU	ACUGUCAAAUUCUUCAUUG		[461-479]
294	GCUUUGAUUGACUCCGUUA	UAACGGAGUCAAUCAAAGC		[183-201]
295	UAAAAUAAGGAAACUGUAU	AUACAGUUUCCUUAUUUUA		[1167-1185]
296	UGAAAGAGUGACUUUGACA	UGUCAAAGUCACUCUUUCA		[1121-1139]

297	UGUCAAGCUUUGCUCCCUA	UAGGGAGCAAAGCUUGACA		[350-368]
298	GAUGCCCACCACUGAAAGA	UCUUUCAGUGGUGGGCAUC		[1109-1127]
299	CCACAAUGGGCUCUGUUUU	AAAACAGAGCCCAUUGUGG		[982-1000]
300	CGUUCCAUGGGUGAAGGUA	UACCUUCACCCAUGGAACG		[60-78]
301	UCAAUGCAAUCUUUAACAU	AUGUUAAAGAUUGCAUUGA		[727-745]
302	ACACGUCUUGCUCUCAUUA	UAAUGAGAGCAAGACGUGU		[438-456]
303	AGGAUAUGGAAACAAAAGU	ACUUUUGUUUCCAUAUCCU		[381-399]
304	GGUGAAGGUACAAUAAAUG	CAUUUAUUGUACCUUCACC		[69-87]
305	AUAAGACCCGAGCUUUGAU	AUCAAAGCUCGGGUCUUAU		[172-190]
306	CAUUUGUGAAGAAGACAGU	ACUGUCUUCUUCACAAAUG		[242-260]
307	AAGAACUGCCCAAGUUUGA	UCAAACUUGGGCAGUUCUU		[756-774]
308	AUAAGGAAACUGUAUGAAU	AUUCAUACAGUUUCCUUAU		[1171-1189]
309	GCAAUCUUUAACAUGUUGA	UCAACAUGUUAAAGAUUGC		[732-750]
310	AGCUUUGAUUGACUCCGUU	AACGGAGUCAAUCAAAGCU		[182-200]
311	AAGAGAUCCUUCUGUAAAG	CUUUACAGAAGGAUCUCUU		[1208-1226]
312	AUGGUAUUCGGGAAGGCAU	AUGCCUUCCCGAAUACCAU		[664-682]
313	GAAAAAAAAUCUCACUGCU	AGCAGUGAGAUUUUUUUUC		[560-578]
314	CUCUUCCACACCAGAUAAU	AUUAUCUGGUGUGGAAGAG		[947-965]
315	ACCUCUUCCCAGGACAUUA	UAAUGUCCUGGGAAGAGGU	Rat	[1150-1168]
316	AAUGCUACAGUUAUGGAUA	UAUCCAUAACUGUAGCAUU		[156-174]
317	CCCACAUAGAGAAGGAUUU	AAAUCCUUCUCUAUGUGGG		[916-934]
318	CCAUGGGUGAAGGUACAAU	AUUGUACCUUCACCCAUGG		[64-82]
319	GGUGUUCAUGUCUCAUGGU	ACCAUGAGACAUGAACACC		[650-668]
320	AAGGACAAACCGAAGGUGA	UCACCUUCGGUUUGUCCUU		[774-792]
321	GUGGUGUGGUUUAAAGAUU	AAUCUUUAAACCACACCAC		[828-846]
322	CCAAGAACUGCCCAAGUUU	AAACUUGGGCAGUUCUUGG		[754-772]
323	UGGGAAGAAACACUCUGAG	CUCAGAGUGUUUCUUCCCA		[686-704]
324	CCUAGAAGAAGCUCAAAGG	CCUUUGAGCUUCUUCUAGG		[365-383]
325	AAGGAAACUGUAUGAAUGU	ACAUUCAUACAGUUUCCUU		[1173-1191]
326	GAAGGGAAUGUCAAGCUUU	AAAGCUUGACAUUCCCUUC		[342-360]
327	AAUGCAAUCUUUAACAUGU	ACAUGUUAAAGAUUGCAUU		[729-747]
328	UUGAACAUAUGCAAGAAUA	UAUUCUUGCAUAUGUUCAA		[1015-1033]
329	UUCUGGAAACCUAUCUUUA	UAAAGAUAGGUUUCCAGAA		[857-875]
330	CUAGAAGAACUGGAGCUGA	UCAGCUCCAGUUCUUCUAG		[484-502]
331	CUCACUGCUUCGGACAUGA	UCAUGUCCGAAGCAGUGAG		[570-588]
332	UUCUGUAAAGGUUUUUGGA	UCCAAAAACCUUUACAGAA		[1217-1235]
333	CCACUGAAAGAGUGACUUU	AAAGUCACUCUUUCAGUGG		[1117-1135]
334	GUGAUGUGGAGGAAAUUUU	AAAAUUUCCUCCACAUCAC		[1045-1063]
335	ACUGCUUCGGACAUGACUA	UAGUCAUGUCCGAAGCAGU		[573-591]
336	GCUCCCUAGAAGAAGCUCA	UGAGCUUCUUCUAGGGAGC		[361-379]
337	AGAGAUUUAUCCAAUAAUG	CAUUAUUGGAUAAAUCUCU	Rat,Ms	[404-422]
338	AACAAAAGUCGGCAGAGAU	AUCUCUGCCGACUUUUGUU		[391-409]
339	UGGAAGACUCAUUGAACAU	AUGUUCAAUGAGUCUUCCA		[1004-1022]
340	GGAAGGCAUUUGUGGGAAG	CUUCCCACAAAUGCCUUCC		[674-692]
341	GGACAUGACUACAGAGCUG	CAGCUCUGUAGUCAUGUCC		[581-599]
342	UGAAAAUGCUACAGUUAUG	CAUAACUGUAGCAUUUUCA		[152-170]
343	CUUCCACACCAGAUAAUGU	ACAUUAUCUGGUGUGGAAG		[949-967]
344	UCCUGUGAUGUGGAGGAAA	UUUCCUCCACAUCACAGGA		[1041-1059]
345	AGAAGGGAAUGUCAAGCUU	AAGCUUGACAUUCCCUUCU		[341-359]
346	ACAUAGAGAAGGAUUUUAU	AUAAAAUCCUUCUCUAUGU		[919-937]
347	CACAUAGAGAAGGAUUUUA	UAAAAUCCUUCUCUAUGUG		[918-936]
348	CUACCUCUUCCCAGGACAU	AUGUCCUGGGAAGAGGUAG	Rat	[1148-1166]
349	AUCUUUACCAACUACAGAA	UUCUGUAGUUGGUAAAGAU		[869-887]
350	GGUGCUGAACAAGGAAGAG	CUCUUCCUUGUUCAGCACC		[116-134]
351	CUCAUUAUCUGCAAUGAAG	CUUCAUUGCAGAUAAUGAG		[450-468]
352	ACAAGAUGUUUCUACCUCU	AGAGGUAGAAACAUCUUGU		[1137-1155]

353	CUGCUCUUCCACACCAGAU	AUCUGGUGUGGAAGAGCAG		[944-962]
354	AAGGAUAUGGAAACAAAAG	CUUUUGUUUCCAUAUCCUU		[380-398]
355	CUUUACCAACUACAGAAGA	UCUUCUGUAGUUGGUAAAG		[871-889]
356	GAAGAACUGGAGCUGAGGU	ACCUCAGCUCCAGUUCUUC		[487-505]
357	UCUGCUCUUCCACACCAGA	UCUGGUGUGGAAGAGCAGA		[943-961]
358	AGAGUUUGAGGAUGAUGCU	AGCAUCAUCCUCAAACUCU		[887-905]
359	CACAAUGGGCUCUGUUUUU	AAAAACAGAGCCCAUUGUG		[983-1001]
360	GGUUUUUGGAAUUAUGUCU	AGACAUAAUUCCAAAAACC		[1226-1244]
361	CCUGGUGUUCAUGUCUCAU	AUGAGACAUGAACACCAGG		[647-665]
362	AGGUUGACAUCACAGGCAU	AUGCCUGUGAUGUCAACCU		[502-520]
363	UACUACAACUCAAUGCAAU	AUUGCAUUGAGUUGUAGUA		[718-736]
364	UGACAUCACAGGCAUGACA	UGUCAUGCCUGUGAUGUCA		[506-524]
365	AAUAAGGAAACUGUAUGAA	UUCAUACAGUUUCCUUAUU		[1170-1188]
366	CUCAGGCUCAGAAGGGAAU	AUUCCCUUCUGAGCCUGAG		[332-350]
367	CAAGGUCCUGAAGGAGAAG	CUUCUCCUUCAGGACCUUG		[26-44]
368	UGCUCUCAUUAUCUGCAAU	AUUGCAGAUAAUGAGAGCA		[446-464]
369	AAGCUUUGCUCCCUAGAAG	CUUCUAGGGAGCAAAGCUU		[354-372]
370	CUAUUAAGAAAGCCCACAU	AUGUGGGCUUUCUUAAUAG		[904-922]
371	AAUGAAGAAUUUGACAGUA	UACUGUCAAAUUCUUCAUU		[462-480]
372	GAGCAAGUCCCAGAUAUAC	GUAUAUCUGGGACUUGCUC		[702-720]
373	AGAAUUUGACAGUAUUCCU	AGGAAUACUGUCAAAUUCU		[467-485]
374	GGCUUACUGGAUGAAUUAU	AUAAUUCAUCCAGUAAGCC		[87-105]
375	AGAGCACAAGACCUCUGAC	GUCAGAGGUCUUGUGCUCU		[620-638]
376	AAGACUCAUUGAACAUAUG	CAUAUGUUCAAUGAGUCUU		[1007-1025]
377	AGGUCCUGAAGGAGAAGAG	CUCUUCUCCUUCAGGACCU		[28-46]
378	UGAUGUGGAGGAAAUUUUC	GAAAAUUUCCUCCACAUCA		[1046-1064]
379	AUCGCUUUCUGCUCUUCCA	UGGAAGAGCAGAAAGCGAU		[936-954]
380	UUAUUGGAAGACUCAUUGA	UCAAUGAGUCUUCCAAUAA		[1000-1018]
381	AAAUGCUACAGUUAUGGAU	AUCCAUAACUGUAGCAUUU		[155-173]
382	AAAGAGUGACUUUGACAAG	CUUGUCAAAGUCACUCUUU		[1123-1141]
383	GAGGUUGACAUCACAGGCA	UGCCUGUGAUGUCAACCUC		[501-519]
384	GUCGGCAGAGAUUUAUCCA	UGGAUAAAUCUCUGCCGAC		[398-416]
385	GCUGAACAAGGAAGAGAUG	CAUCUCUUCCUUGUUCAGC		[119-137]
386	GGUAUUCGGGAAGGCAUUU	AAAUGCCUUCCCGAAUACC		[666-684]
387	GCUCAAAGGAUAUGGAAAC	GUUUCCAUAUCCUUUGAGC		[375-393]
388	ACAAAAGUCGGCAGAGAUU	AAUCUCUGCCGACUUUUGU		[392-410]
389	AAGGGAAUGUCAAGCUUUG	CAAAGCUUGACAUUCCCUU		[343-361]
390	GUAAAGGUUUUUGGAAUUA	UAAUUCCAAAAACCUUUAC		[1221-1239]
391	GAAACUGUAUGAAUGUCUG	CAGACAUUCAUACAGUUUC		[1176-1194]
392	CAUGUUGAAUACCAAGAAC	GUUCUUGGUAUUCAACAUG		[743-761]
393	AAGGAGAAGAGAAAGCUGU	ACAGCUUUCUCUUCUCCUU		[36-54]
394	AUCUUUAACAUGUUGAAUA	UAUUCAACAUGUUAAAGAU		[735-753]
395	UAUCUUUACCAACUACAGA	UCUGUAGUUGGUAAAGAUA		[868-886]
396	AAUGGGCUCUGUUUUUAUU	AAUAAAAACAGAGCCCAUU		[986-1004]
397	UAAGAAAGCCCACAUAGAG	CUCUAUGUGGGCUUUCUUA		[908-926]
398	CUGGAGCUGAGGUUGACAU	AUGUCAACCUCAGCUCCAG		[493-511]
399	UGGGCAGGAAGUGAAGAGA	UCUCUUCACUUCCUGCCCA		[1195-1213]
400	UGUAAAGGUUUUUGGAAUU	AAUUCCAAAAACCUUUACA		[1220-1238]
401	GACCCGAGCUUUGAUUGAC	GUCAAUCAAAGCUCGGGUC		[176-194]
402	ACUGGAGCUGAGGUUGACA	UGUCAACCUCAGCUCCAGU		[492-510]
403	UGGAAACCUAUCUUUACCA	UGGUAAAGAUAGGUUUCCA		[860-878]
404	UGUGGUUUAAAGAUUCAGU	ACUGAAUCUUUAAACCACA		[832-850]
405	GGAUAUGGAAACAAAAGUC	GACUUUUGUUUCCAUAUCC		[382-400]
406	CAUAGAGAAGGAUUUUAUC	GAUAAAAUCCUUCUCUAUG		[920-938]
407	UAUUCCUAGAAGAACUGGA	UCCAGUUCUUCUAGGAAUA		[479-497]
408	CACAUCCUCAGGCUCAGAA	UUCUGAGCCUGAGGAUGUG		[326-344]

409	ACACUCUGAGCAAGUCCCA	UGGGACUUGCUCAGAGUGU		[695-713]
410	ACUCAAUGCAAUCUUUAAC	GUUAAAGAUUGCAUUGAGU		[725-743]
411	AAAAUGCUACAGUUAUGGA	UCCAUAACUGUAGCAUUUU		[154-172]
412	GAACAAGGAAGAGAUGGAG	CUCCAUCUCUUCCUUGUUC		[122-140]
413	CCCUAGAAGAAGCUCAAAG	CUUUGAGCUUCUUCUAGGG		[364-382]
414	UAAGGAAACUGUAUGAAUG	CAUUCAUACAGUUUCCUUA		[1172-1190]
415	GAGUUUGAGGAUGAUGCUA	UAGCAUCAUCCUCAAACUC		[888-906]
416	UCUGUGGGCAGGAAGUGAA	UUCACUUCCUGCCCACAGA		[1191-1209]
417	UCAUUGAACAUAUGCAAGA	UCUUGCAUAUGUUCAAUGA		[1012-1030]
418	UAUCUGCAAUGAAGAAUUU	AAAUUCUUCAUUGCAGAUA		[455-473]
419	GUUUCUGGAAACCUAUCUU	AAGAUAGGUUUCCAGAAAC		[855-873]
420	CAGAAGGGAAUGUCAAGCU	AGCUUGACAUUCCCUUCUG		[340-358]
421	AUGCUAUUAAGAAAGCCCA	UGGGCUUUCUUAAUAGCAU		[901-919]
422	CACUGCUUCGGACAUGACU	AGUCAUGUCCGAAGCAGUG		[572-590]
423	UUUGAUUGACUCCGUUAUU	AAUAACGGAGUCAAUCAAA		[185-203]
424	CUUGCUCUCAUUAUCUGCA	UGCAGAUAAUGAGAGCAAG		[444-462]
425	GCUUACUGGAUGAAUUAUU	AAUAAUUCAUCCAGUAAGC		[88-106]
426	CAAUGCAAUCUUUAACAUG	CAUGUUAAAGAUUGCAUUG		[728-746]
427	GAAGGUGAUCAUCAUCCAG	CUGGAUGAUGAUCACCUUC		[785-803]
428	UAGAAGAAGCUCAAAGGAU	AUCCUUUGAGCUUCUUCUA		[367-385]
429	UCCAUGGGUGAAGGUACAA	UUGUACCUUCACCCAUGGA		[63-81]
430	GAAGAAUUUGACAGUAUUC	GAAUACUGUCAAAUUCUUC		[465-483]
431	GUUCCUGUGAUGUGGAGGA	UCCUCCACAUCACAGGAAC		[1039-1057]
432	GAGGAAAUUUUCCGCAAGG	CCUUGCGGAAAAUUUCCUC		[1053-1071]
433	CCCACCACUGAAAGAGUGA	UCACUCUUUCAGUGGUGGG		[1113-1131]
434	AACAAGGAAGAGAUGGAGA	UCUCCAUCUCUUCCUUGUU		[123-141]
435	UACUGGAUGAAUUAUUACA	UGUAAUAAUUCAUCCAGUA		[91-109]
436	GGCAGGAAGUGAAGAGAUC	GAUCUCUUCACUUCCUGCC		[1197-1215]
437	AGCAAGUCCCAGAUAUACU	AGUAUAUCUGGGACUUGCU		[703-721]
438	UGACUUUGACAAGAUGUUU	AAACAUCUUGUCAAAGUCA		[1129-1147]
439	CAUGUCUCAUGGUAUUCGG	CCGAAUACCAUGAGACAUG		[656-674]
440	UCUUUAACAUGUUGAAUAC	GUAUUCAACAUGUUAAAGA		[736-754]
441	UAGAAGAACUGGAGCUGAG	CUCAGCUCCAGUUCUUCUA		[485-503]
442	UCUGGAAACCUAUCUUUAC	GUAAAGAUAGGUUUCCAGA		[858-876]
443	AAACCUAUCUUUACCAACU	AGUUGGUAAAGAUAGGUUU		[863-881]
444	AAUCUUUAACAUGUUGAAU	AUUCAACAUGUUAAAGAUU		[734-752]
445	GAGAAAGCUGUUUAUCCGU	ACGGAUAAACAGCUUUCUC		[44-62]
446	UUGAGGAUGAUGCUAUUAA	UUAAUAGCAUCAUCCUCAA		[892-910]
447	CUACAGAAGAGUUUGAGGA	UCCUCAAACUCUUCUGUAG		[880-898]
448	AAACCGAAGGUGAUCAUCA	UGAUGAUCACCUUCGGUUU		[780-798]
449	ACAGCACGUUCCUGGUGUU	AACACCAGGAACGUGCUGU		[637-655]
450	CAGAUAAUGUUUCUUGGAG	CUCCAAGAAACAUUAUCUG		[958-976]
451	GAAUAUGCCUGUUCCUGUG	CACAGGAACAGGCAUAUUC		[1029-1047]
452	GGGAAUGUCAAGCUUUGCU	AGCAAAGCUUGACAUUCCC		[345-363]
453	AGGUGAUCAUCAUCCAGGC	GCCUGGAUGAUGAUCACCU		[787-805]
454	ACGUCUUGCUCUCAUUAUC	GAUAAUGAGAGCAAGACGU		[440-458]
455	AGGAAAUUUUCCGCAAGGU	ACCUUGCGGAAAAUUUCCU		[1054-1072]
456	GAUCCUUCUGUAAAGGUUU	AAACCUUUACAGAAGGAUC		[1212-1230]
457	UCACAGGCAUGACAAUGCU	AGCAUUGUCAUGCCUGUGA		[511-529]
458	UCAAAGGAUAUGGAAACAA	UUGUUUCCAUAUCCUUUGA		[377-395]
459	CAGGCUCAGAAGGGAAUGU	ACAUUCCCUUCUGAGCCUG		[334-352]
460	UCUGAGCAAGUCCCAGAUA	UAUCUGGGACUUGCUCAGA		[699-717]
461	ACAUUAAAAUAAGGAAACU	AGUUUCCUUAUUUUAAUGU		[1163-1181]
462	GUCUGCUGAAUAAUAAACU	AGUUUAUUAUUCAGCAGAC		[1241-1259]
463	UGGUGUUCAUGUCUCAUGG	CCAUGAGACAUGAACACCA		[649-667]
464	UUCCUGUGAUGUGGAGGAA	UUCCUCCACAUCACAGGAA		[1040-1058]

465	GUGCUGAACAAGGAAGAGA	UCUCUUCCUUGUUCAGCAC		[117-135]
466	UGAAGGAGAAGAGAAAGCU	AGCUUUCUCUUCUCCUUCA		[34-52]
467	UACAGAGCUGGAGGCAUUU	AAAUGCCUCCAGCUCUGUA		[590-608]
468	GGGAAGAAACACUCUGAGC	GCUCAGAGUGUUUCUUCCC		[687-705]
469	AAGUCCCAGAUAUACUACA	UGUAGUAUAUCUGGGACUU		[706-724]
470	UGCAGGACAACCCAGCUAU	AUAGCUGGGUUGUCCUGCA		[304-322]
471	UGACAAGAUGUUUCUACCU	AGGUAGAAACAUCUUGUCA		[1135-1153]
472	UACAGCGUAGAUGUGAAAA	UUUUCACAUCUACGCUGUA		[546-564]
473	GUUCGAUUUUCAUUUGAGC	GCUCAAAUGAAAAUCGAAC		[1071-1089]
474	AUGAAUUAUUACAGACAAG	CUUGUCUGUAAUAAUUCAU		[97-115]
475	CUGCUGAAUAAUAAACUUU	AAAGUUUAUUAUUCAGCAG		[1243-1261]
476	GCUAUUAAGAAAGCCCACA	UGUGGGCUUUCUUAAUAGC		[903-921]
477	AGAGAAAGCUGUUUAUCCG	CGGAUAAACAGCUUUCUCU		[43-61]
478	AUGAAGAAUUUGACAGUAU	AUACUGUCAAAUUCUUCAU		[463-481]
479	AGCACAAGACCUCUGACAG	CUGUCAGAGGUCUUGUGCU		[622-640]
480	AGAAACACUCUGAGCAAGU	ACUUGCUCAGAGUGUUUCU		[691-709]
481	GAGUUUCUGGAAACCUAUC	GAUAGGUUUCCAGAAACUC		[853-871]
482	GUAUGAAUGUCUGUGGGCA	UGCCCACAGACAUUCAUAC		[1182-1200]
483	AGCUAUGCCCACAUCCUCA	UGAGGAUGUGGGCAUAGCU		[317-335]
484	AGAUGUGAAAAAAAAUCUC	GAGAUUUUUUUUCACAUCU		[554-572]
485	UCAAGCUUUGCUCCCUAGA	UCUAGGGAGCAAAGCUUGA		[352-370]
486	AUGGACAAGUCAAGCCGCA	UGCGGCUUGACUUGUCCAU		[420-438]
487	GCUCUGUUUUUAUUGGAAG	CUUCCAAUAAAAACAGAGC		[991-1009]
488	GUGGAGGAAAUUUUCCGCA	UGCGGAAAAUUUCCUCCAC		[1050-1068]
489	GAGCUGAGGUUGACAUCAC	GUGAUGUCAACCUCAGCUC		[496-514]
490	AGCCCACAUAGAGAAGGAU	AUCCUUCUCUAUGUGGGCU		[914-932]
491	CAAAAGUCGGCAGAGAUUU	AAAUCUCUGCCGACUUUUG		[393-411]
492	ACCAGAUAAUGUUUCUUGG	CCAAGAAACAUUAUCUGGU		[956-974]
493	GAACAUAUGCAAGAAUAUG	CAUAUUCUUGCAUAUGUUC		[1017-1035]
494	CCCGAGCUUUGAUUGACUC	GAGUCAAUCAAAGCUCGGG		[178-196]
495	UAUACUACAACUCAAUGCA	UGCAUUGAGUUGUAGUAUA		[716-734]
496	CGUUCCUGGUGUUCAUGUC	GACAUGAACACCAGGAACG		[643-661]
497	AGGUUUUUGGAAUUAUGUC	GACAUAAUUCCAAAAACCU		[1225-1243]
498	UCCAAUAAUGGACAAGUCA	UGACUUGUCCAUUAUUGGA		[413-431]
499	GCCCACAUAGAGAAGGAUU	AAUCCUUCUCUAUGUGGGC		[915-933]
500	CCAAAUUUGCAUCACAUAC	GUAUGUGAUGCAAAUUUGG		[224-242]

Table B 9 CASP12 - caspase 12

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-109637802 :-
1	UGGUGAAGUUGCUGAUCAA	UUGAUCAGCAACUUCACCA		[297-315]
2	CAGUGGUUAUAAAAGAGAA	UUCUCUUUUAUAACCACUG		[657-675]
3	GAUACUCAGUGGUUAUAAA	UUUAUAACCACUGAGUAUC		[651-669]
4	GAUGGAAAAUAAUGUAUUA	UAAUACAUUAUUUUCCAUC		[346-364]
5	CAACAUCCGCAACAAAGAA	UUCUUUGUUGCGGAUGUUG		[559-577]
6	CGAUGACACCAUCUUUGAA	UUCAAAGAUGGUGUCAUCG		[832-850]
7	GAGUCAUCAUCUAGAGGAA	UUCCUCUAGAUGAUGACUC		[1153-1171]
8	GAAUUAAAACUCAUAAGAA	UUCUUAUGAGUUUUAAUUC		[1276-1294]
9	GGACUUCAUUGCUUUCAAA	UUUGAAAGCAAUGAAGUCC		[1042-1060]
10	CAACUAUCUUCAUAAUCGA	UCGAUUAUGAAGAUAGUUG		[580-598]
11	GGAGAGCAAGCCUGUUGAA	UUCAACAGGCUUGCUCUCC		[189-207]
12	GCACAUUCCUGGUGUUUAU	AUAAACACCAGGAAUGUGC	Ms	[747-765]
13	CCAGAGUCUGAAAGACAAA	UUUGUCUUUCAGACUCUGG		[871-889]
14	CCUGUGGAAUUCCAAAAAA	UUUUUUGGAAUUCCACAGG		[484-502]
15	CCAAGGUCAUCAUCAUGCA	UGCAUGAUGAUGACCUUGG		[891-909]
16	CCAUCUUUGAAAUUUUCAA	UUGAAAAUUUCAAAGAUGG		[840-858]

17	CAAGGUCAUCAUCAUGCAA	UUGCAUGAUGAUGACCUUG		[892-910]
18	CAGGCAAAAUAUUUAGGGA	UCCCUAAAUAUUUUGCCUG		[462-480]
19	CCUCAACAUCCGCAACAAA	UUUGUUGCGGAUGUUGAGG		[556-574]
20	CCAUUCAGGGUAAUAUCAA	UUGAUAUUACCCUGAAUGG		[152-170]
21	AGCUCAAACUGCAGGCAAA	UUUGCCUGCAGUUUGAGCU		[451-469]
22	AGAUCAGAGUCUAAUUUUA	UAAAAUUAGACUCUGAUCU		[93-111]
23	CUGUAAUGAUGCUGUUACA	UGUAACAGCAUCAUUACAG		[1006-1024]
24	GCCUCAACAUCCGCAACAA	UUGUUGCGGAUGUUGAGGC		[555-573]
25	CUCUUUCCUGGGAAUUAAA	UUUAAUUCCCAGGAAAGAG		[1265-1283]
26	AUGAUUUGAUGGAAAAUAA	UUAUUUUCCAUCAAAUCAU		[339-357]
27	ACACGAGAUCAGAGUCUAA	UUAGACUCUGAUCUCGUGU		[88-106]
28	CAAACUGCAGGCAAAAUAU	AUAUUUUGCCUGCAGUUUG		[455-473]
29	UCCGCAACAAAGAAUUCAA	UUGAAUUCUUUGUUGCGGA		[564-582]
30	GAUGUGAGAUCUACUUGAA	UUCAAGUAGAUCUCACAUC		[625-643]
31	CUUGGAGACAUGAAACAAA	UUUGUUUCAUGUCUCCAAG		[1083-1101]
32	AGAUGAGAUACACCUUAUA	UAUAAGGUGUAUCUCAUCU		[370-388]
33	GGAAAUGGAAACAGCACUA	UAGUGCUGUUUCCAUUUCC		[688-706]
34	UGUGGAAUUCCAAAAAACA	UGUUUUUUGGAAUUCCACA		[486-504]
35	CCUGGUUGAUGAUAUCACU	AGUGAUAUCAUCAACCAGG		[427-445]
36	GCUCAAACUGCAGGCAAAA	UUUUGCCUGCAGUUUGAGC		[452-470]
37	CUGAAAACCUGGUUGAUGA	UCAUCAACCAGGUUUUCAG		[420-438]
38	GGAUGUGAGAUCUACUUGA	UCAAGUAGAUCUCACAUCC		[624-642]
39	CUAUCUUCAUAAUCGAAAU	AUUUCGAUUAUGAAGAUAG		[583-601]
40	GACUAUCCAUGACACGAUA	UAUCGUGUCAUGGAUAGUC		[1239-1257]
41	UGGGAAUUAAAACUCAUAA	UUAUGAGUUUUAAUUCCCA		[1273-1291]
42	CCUGGGAAUUAAAACUCAU	AUGAGUUUUAAUUCCCAGG		[1271-1289]
43	GUCUGAAAGACAAACCCAA	UUGGGUUUGUCUUUCAGAC		[876-894]
44	GCAACAAAGAAUUCAACUA	UAGUUGAAUUCUUUGUUGC		[567-585]
45	CCAUGACACGAUAUUUCUA	UAGAAAUAUCGUGUCAUGG		[1245-1263]
46	CACAGCUCAGGAAAUGGAA	UUCCAUUUCCUGAGCUGUG		[679-697]
47	GUCGGCUCUUGCAAGGUAA	UUACCUUGCAAGAGCCGAC		[984-1002]
48	CACCACUGACAGUGGAAAA	UUUUCCACUGUCAGUGGUG		[946-964]
49	CUGGGAAUUAAAACUCAUA	UAUGAGUUUUAAUUCCCAG		[1272-1290]
50	UGUGGUGAGCAAUGCUGAA	UUCAGCAUUGCUCACCACA		[406-424]
51	CACUUUGUUAUGUCAAAAA	UUUUUGACAUAACAAAGUG		[23-41]
52	AGGACUUCAUUGCUUUCAA	UUGAAAGCAAUGAAGUCCU		[1041-1059]
53	GACCAAGCACUGGGAUCAA	UUGAUCCCAGUGCUUGGUC		[796-814]
54	GGAAUUAAAACUCAUAAGA	UCUUAUGAGUUUUAAUUCC		[1275-1293]
55	UGAUUUGAUGGAAAAUAAU	AUUAUUUUCCAUCAAAUCA		[340-358]
56	CUUUGUUAUGUCAAAAAGA	UCUUUUUGACAUAACAAAG		[25-43]
57	GUUUCUUGGAGACAUGAAA	UUUCAUGUCUCCAAGAAAC		[1079-1097]
58	GAGCAAGCCUGUUGAAAUU	AAUUUCAACAGGCUUGCUC		[192-210]
59	ACACCUGUGGAAUUCCAAA	UUUGGAAUUCCACAGGUGU		[481-499]
60	AACCCAAGGUCAUCAUCAU	AUGAUGAUGACCUUGGGUU		[888-906]
61	ACAGCUGAGUUCAGAUAUA	UAUAUCUGAACUCAGCUGU		[502-520]
62	AGCCGGUGCAGAUACUCAU	AUGAGUAUCUGCACCGGCU		[964-982]
63	UGAUGAUAUCACUGAGACA	UGUCUCAGUGAUAUCAUCA		[433-451]
64	CAACAAAGAAUUCAACUAU	AUAGUUGAAUUCUUUGUUG		[568-586]
65	CCAAAGGAAAGCAGUUAUA	UAUAACUGCUUUCCUUUGG		[70-88]
66	GCUCUGUCUUCAUUUCCCA	UGGGAAAUGAAGACAGAGC		[1104-1122]
67	GAUACACCUUAUAGGAAAA	UUUUCCUAUAAGGUGUAUC		[376-394]
68	UAAUCGAAAUGGUUCUGAA	UUCAGAACCAUUUCGAUUA		[592-610]
69	UCAGGAAAUGGAAACAGCA	UGCUGUUUCCAUUUCCUGA		[685-703]
70	CAGAUGAGAUACACCUUAU	AUAAGGUGUAUCUCAUCUG		[369-387]
71	GGAUACUCAGUGGUUAUAA	UUAUAACCACUGAGUAUCC		[650-668]
72	GUUCAACAUUCAUUUGAGA	UCUCAAAUGAAUGUUGAAC		[1184-1202]

73	CACCUGUGGAAUUCCAAAA	UUUUGGAAUUCCACAGGUG		[482-500]
74	UCAAAAGGUUCAACAUUCA	UGAAUGUUGAACCUUUUGA		[1177-1195]
75	UCAACAUCCGCAACAAAGA	UCUUUGUUGCGGAUGUUGA		[558-576]
76	UUUGUUAUGUCAAAAAGAA	UUCUUUUUGACAUAACAAA		[26-44]
77	CCGCAACAAAGAAUUCAAC	GUUGAAUUCUUUGUUGCGG		[565-583]
78	CGGUGCAGAUACUCAUGGU	ACCAUGAGUAUCUGCACCG		[967-985]
79	UAGAGGAAAUUUUUCAAAA	UUUUGAAAAAUUUCCUCUA		[1164-1182]
80	CAAAUUAUCUACUACUUCA	UGAAGUAGUAGAUAAUUUG		[1121-1139]
81	ACUCAGUGGUUAUAAAAGA	UCUUUUAUAACCACUGAGU		[654-672]
82	CAUUCAGGGUAAUAUCAAC	GUUGAUAUUACCCUGAAUG		[153-171]
83	GGAAAUUUUUCAAAAGGUU	AACCUUUUGAAAAAUUUCC		[1168-1186]
84	AAAGAAAAAGAGAAUUUGA	UCAAAUUCUCUUUUUCUUU		[119-137]
85	GGUUCAACAUUCAUUUGAG	CUCAAAUGAAUGUUGAACC		[1183-1201]
86	UCUCUUUCCUGGGAAUUAA	UUAAUUCCCAGGAAAGAGA		[1264-1282]
87	AGGUAACAUCUGUAAUGAU	AUCAUUACAGAUGUUACCU		[997-1015]
88	GGAAAAGCCGGUGCAGAUA	UAUCUGCACCGGCUUUUCC		[959-977]
89	UGGUGAGCAAUGCUGAAAA	UUUUCAGCAUUGCUCACCA		[408-426]
90	AAUCUUCCACACCACAUAA	UUAUGUGGUGUGGAAGAUU		[1059-1077]
91	GAACACCUGUGGAAUUCCA	UGGAAUUCCACAGGUGUUC		[479-497]
92	UGAUCAAGACCUUUCUAGA	UCUAGAAAGGUCUUGAUCA		[309-327]
93	GGUUGAUGAUAUCACUGAG	CUCAGUGAUAUCAUCAACC		[430-448]
94	UAAAGUUUGUGGUGAGCAA	UUGCUCACCACAAACUUUA		[399-417]
95	GCCCACCAUUGAAAGACUA	UAGUCUUUCAAUGGUGGGC		[1225-1243]
96	AAAGGAAAGCAGUUAUACA	UGUAUAACUGCUUUCCUUU		[72-90]
97	AGGCAAAAUAUUUAGGGAA	UUCCCUAAAUAUUUUGCCU		[463-481]
98	CUGUCUUCAUUUCCCAAAU	AUUUGGGAAAUGAAGACAG		[1107-1125]
99	CAGAUGUUCUUCACGAUGA	UCAUCGUGAAGAACAUCUG		[819-837]
100	CAAAGAAUUCAACUAUCUU	AAGAUAGUUGAAUUCUUUG		[571-589]
101	GAUCAGAGUCUAAUUUUAU	AUAAAAUUAGACUCUGAUC		[94-112]
102	CAGCUGCCCACCAUUGAAA	UUUCAAUGGUGGGCAGCUG		[1220-1238]
103	CUUAUAGGAAAAUGUCUAA	UUAGACAUUUUCCUAUAAG		[383-401]
104	GGAGAAAGAGAGGCGAACA	UGUUCGCCUCUCUUUCUCC		[530-548]
105	UCCUAUUUUCCAAAGGAAA	UUUCCUUUGGAAAAUAGGA		[61-79]
106	CGGCUCUUGCAAGGUAACA	UGUUACCUUGCAAGAGCCG		[986-1004]
107	UACAAAGGCUCAUGUGGAA	UUCCACAUGAGCCUUUGUA		[1021-1039]
108	GAGAAAGAGAGGCGAACAU	AUGUUCGCCUCUCUUUCUC		[531-549]
109	CCAGUGAUGGAGAAAGAGA	UCUCUUUCUCCAUCACUGG		[522-540]
110	CCAAGCACUGGGAUCAAGA	UCUUGAUCCCAGUGCUUGG		[798-816]
111	AAAUUUUCAACAACCGUAA	UUACGGUUGUUGAAAAUUU		[849-867]
112	CUAGAGGAAAUUUUUCAAA	UUUGAAAAAUUUCCUCUAG		[1163-1181]
113	CAAAAGGUUCAACAUUCAU	AUGAAUGUUGAACCUUUUG		[1178-1196]
114	GCAAAAUAUUUAGGGAACA	UGUUCCCUAAAUAUUUUGC		[465-483]
115	AAAUCUUCCACACCACAUA	UAUGUGGUGUGGAAGAUUU		[1058-1076]
116	UCCACUGAGAGGAGAGCAA	UUGCUCUCCUCUCAGUGGA		[179-197]
117	CAAAGGCUCAUGUGGAAAA	UUUUCCACAUGAGCCUUUG		[1023-1041]
118	ACUGCAGGCAAAAUAUUUA	UAAAUAUUUUGCCUGCAGU		[458-476]
119	AGAUACACCUUAUAGGAAA	UUUCCUAUAAGGUGUAUCU		[375-393]
120	CAAGCCUGUUGAAAUUGUU	AACAAUUUCAACAGGCUUG		[195-213]
121	AUCCAGUGAUGGAGAAAGA	UCUUUCUCCAUCACUGGAU		[520-538]
122	AGGCUCAUGUGGAAAAGGA	UCCUUUUCCACAUGAGCCU		[1026-1044]
123	UCUAGAGGAAAUUUUUCAA	UUGAAAAAUUUCCUCUAGA		[1162-1180]
124	CCCAAAUUAUCUACUACUU	AAGUAGUAGAUAAUUUGGG		[1119-1137]
125	AAUUGUUUUUGCUUUCACA	UGUGAAAGCAAAAACAAUU		[207-225]
126	CAACAAGCUGGUCCACUGA	UCAGUGGACCAGCUUGUUG		[168-186]
127	ACCUGUGGAAUUCCAAAAA	UUUUUGGAAUUCCACAGGU		[483-501]
128	UGUGAGAUCUACUUGAAAA	UUUUCAAGUAGAUCUCACA		[627-645]

129	UCUUCAUUUCCCAAAUUAU	AUAAUUUGGGAAAUGAAGA		[1110-1128]
130	CCACAUAAUGUUUCUUGGA	UCCAAGAAACAUUAUGUGG		[1070-1088]
131	AUGUGAGAUCUACUUGAAA	UUUCAAGUAGAUCUCACAU		[626-644]
132	UUCUGGUCCACAUGGUGAA	UUCACCAUGUGGACCAGAA		[285-303]
133	AGUGGUUAUAAAAGAGAAU	AUUCUCUUUUAUAACCACU		[658-676]
134	CCAUUGAAAGACUAUCCAU	AUGGAUAGUCUUUCAAUGG		[1230-1248]
135	CUCUGUCUUCAUUUCCCAA	UUGGGAAAUGAAGACAGAG		[1105-1123]
136	GAGAUACACCUUAUAGGAA	UUCCUAUAAGGUGUAUCUC		[374-392]
137	GCAAGGUAACAUCUGUAAU	AUUACAGAUGUUACCUUGC		[994-1012]
138	AAUUCAACUAUCUUCAUAA	UUAUGAAGAUAGUUGAAUU		[576-594]
139	GUUAUGUCAAAAAGAAGAA	UUCUUCUUUUUGACAUAAC		[29-47]
140	GGGAAUUAAAACUCAUAAG	CUUAUGAGUUUUAAUUCCC		[1274-1292]
141	UGGAAAAGCCGGUGCAGAU	AUCUGCACCGGCUUUUCCA		[958-976]
142	UGUCACAUAGCAUCCUGAA	UUCAGGAUGCUAUGUGACA		[765-783]
143	CAGCUGAGUUCAGAUAUAU	AUAUAUCUGAACUCAGCUG		[503-521]
144	GAAAUGGAAACAGCACUAA	UUAGUGCUGUUUCCAUUUC		[689-707]
145	GAAUCUCACAGCUCAGGAA	UUCCUGAGCUGUGAGAUUC		[673-691]
146	CCUUAUAGGAAAAUGUCUA	UAGACAUUUUCCUAUAAGG		[382-400]
147	UGGUCCACAUGGUGAAGUU	AACUUCACCAUGUGGACCA		[288-306]
148	GAAUUCAACUAUCUUCAUA	UAUGAAGAUAGUUGAAUUC		[575-593]
149	GCUGAUCAAGACCUUUCUA	UAGAAAGGUCUUGAUCAGC		[307-325]
150	AGAGCAAGCCUGUUGAAAU	AUUUCAACAGGCUUGCUCU		[191-209]
151	CGCAACAAAGAAUUCAACU	AGUUGAAUUCUUUGUUGCG		[566-584]
152	ACACCAUCUUUGAAAUUUU	AAAAUUUCAAAGAUGGUGU		[837-855]
153	UUCCUAUUUUCCAAAGGAA	UUCCUUUGGAAAAUAGGAA		[60-78]
154	CUUGGAGUCAUCAUCUAGA	UCUAGAUGAUGACUCCAAG		[1149-1167]
155	AAUUUUCCAUUCAGGGUAA	UUACCCUGAAUGGAAAAUU		[146-164]
156	CAGUGAUGGAGAAAGAGAG	CUCUCUUUCUCCAUCACUG		[523-541]
157	ACAGCUCAGGAAAUGGAAA	UUUCCAUUUCCUGAGCUGU		[680-698]
158	ACGGUGUUCUGGUCCACAU	AUGUGGACCAGAACACCGU		[279-297]
159	UGUGGAAAAGGACUUCAUU	AAUGAAGUCCUUUUCCACA		[1033-1051]
160	UGAGAUACACCUUAUAGGA	UCCUAUAAGGUGUAUCUCA		[373-391]
161	AGGCAAUGGUGCUGGGAUU	AAUCCCAGCACCAUUGCCU		[919-937]
162	CAGCUCAAACUGCAGGCAA	UUGCCUGCAGUUUGAGCUG		[450-468]
163	UCUGCUUCCUAUUUUCCAA	UUGGAAAAUAGGAAGCAGA		[55-73]
164	AGAUCUACUUGAAAACCUU	AAGGUUUUCAAGUAGAUCU		[631-649]
165	UUCACUUUGUUAUGUCAAA	UUUGACAUAACAAAGUGAA		[21-39]
166	GGGAUUGUUUGGUUCACCA	UGGUGAACCAAACAAUCCC		[932-950]
167	UGAAAACCUGGUUGAUGAU	AUCAUCAACCAGGUUUUCA		[421-439]
168	CUGAUGAGAAACCAUCCAA	UUGGAUGGUUUCUCAUCAG		[261-279]
169	UCAUCUAGAGGAAAUUUUU	AAAAAUUUCCUCUAGAUGA		[1159-1177]
170	GAAUCUGUGGGACCAAGCA	UGCUUGGUCCCACAGAUUC		[786-804]
171	AACACCUGUGGAAUUCCAA	UUGGAAUUCCACAGGUGUU		[480-498]
172	AAGACAAACCCAAGGUCAU	AUGACCUUGGGUUUGUCUU		[882-900]
173	GUGGAAUUCCAAAAAACAG	CUGUUUUUUGGAAUUCCAC		[487-505]
174	GGCUCUUGCAAGGUAACAU	AUGUUACCUUGCAAGAGCC		[987-1005]
175	AACUAUCUUCAUAAUCGAA	UUCGAUUAUGAAGAUAGUU		[581-599]
176	UUGAUGAUUUGAUGGAAAA	UUUUCCAUCAAAUCAUCAA		[336-354]
177	UGAAAACCUUGGAUACUCA	UGAGUAUCCAAGGUUUUCA		[640-658]
178	AUACUCAGUGGUUAUAAAA	UUUUAUAACCACUGAGUAU		[652-670]
179	CAUCUGUAAUGAUGCUGUU	AACAGCAUCAUUACAGAUG		[1003-1021]
180	UGGAAACAGCACUAAGGCA	UGCCUUAGUGCUGUUUCCA		[693-711]
181	AGAUAUAUCCAGUGAUGGA	UCCAUCACUGGAUAUAUCU	Rat,Ms	[514-532]
182	GAUGAUUUGAUGGAAAAUA	UAUUUUCCAUCAAAUCAUC		[338-356]
183	AGAAUUUGAGGACUGGGAA	UUCCCAGUCCUCAAAUUCU		[129-147]
184	GAGGACUGGGAAUUUUCCA	UGGAAAAUUCCCAGUCCUC		[136-154]

185	GCUGAUGAGAAACCAUCCA	UGGAUGGUUUCUCAUCAGC		[260-278]
186	CUUGGAUACUCAGUGGUUA	UAACCACUGAGUAUCCAAG		[647-665]
187	GGCUCAUGUGGAAAAGGAC	GUCCUUUUCCACAUGAGCC		[1027-1045]
188	AGGAGAGCAAGCCUGUUGA	UCAACAGGCUUGCUCUCCU		[188-206]
189	CAAUGGUGCUGGGAUUGUU	AACAAUCCCAGCACCAUUG		[922-940]
190	ACAAGCUGGUCCACUGAGA	UCUCAGUGGACCAGCUUGU		[170-188]
191	UUGGAGACAUGAAACAAAU	AUUUGUUUCAUGUCUCCAA		[1084-1102]
192	CUGUGGAAUUCCAAAAAAC	GUUUUUUGGAAUUCCACAG		[485-503]
193	GAGAGCAAGCCUGUUGAAA	UUUCAACAGGCUUGCUCUC		[190-208]
194	ACGAGAUCAGAGUCUAAUU	AAUUAGACUCUGAUCUCGU		[90-108]
195	CUGGGAAUUUUCCAUUCAG	CUGAAUGGAAAAUUCCCAG		[141-159]
196	GUAAUGAUGCUGUUACAAA	UUUGUAACAGCAUCAUUAC		[1008-1026]
197	GUGUUUAUGUCACAUAGCA	UGCUAUGUGACAUAAACAC		[758-776]
198	GGAAAGCAGUUAUACACGA	UCGUGUAUAACUGCUUUCC		[75-93]
199	GUCUUCAUUUCCCAAAUUA	UAAUUUGGGAAAUGAAGAC		[1109-1127]
200	CAAAUAUACUGACCCAGCU	AGCUGGGUCAGUAUAUUUG		[1206-1224]
201	UCCACAUGGUGAAGUUGCU	AGCAACUUCACCAUGUGGA		[291-309]
202	GAAAUUUUCAACAACCGUA	UACGGUUGUUGAAAAUUUC		[848-866]
203	GAGCAAUGCUGAAAACCUG	CAGGUUUUCAGCAUUGCUC		[412-430]
204	AGAGGAAAUUUUUCAAAAG	CUUUUGAAAAAUUUCCUCU		[1165-1183]
205	GAUGACACCAUCUUUGAAA	UUUCAAAGAUGGUGUCAUC		[833-851]
206	UCACUUUGUUAUGUCAAAA	UUUUGACAUAACAAAGUGA		[22-40]
207	AUUCAACUAUCUUCAUAAU	AUUAUGAAGAUAGUUGAAU		[577-595]
208	CUUCCUAUUUUCCAAAGGA	UCCUUUGGAAAAUAGGAAG		[59-77]
209	CACGAUAUUUCUAUCUCUU	AAGAGAUAGAAAUAUCGUG		[1251-1269]
210	GGAAUUUUCCAUUCAGGGU	ACCCUGAAUGGAAAAUUCC		[144-162]
211	UGCAAGGUAACAUCUGUAA	UUACAGAUGUUACCUUGCA		[993-1011]
212	UCUUUGAAAUUUUCAACAA	UUGUUGAAAAUUUCAAAGA		[843-861]
213	AGAUGUUCUUCACGAUGAC	GUCAUCGUGAAGAACAUCU		[820-838]
214	CAUCCUGAAUGGAAUCUGU	ACAGAUUCCAUUCAGGAUG		[775-793]
215	AGUUAUACACGAGAUCAGA	UCUGAUCUCGUGUAUAACU		[82-100]
216	CUGAGUUCAGAUAUAUCCA	UGGAUAUAUCUGAACUCAG		[506-524]
217	CGAGAUCAGAGUCUAAUUU	AAAUUAGACUCUGAUCUCG		[91-109]
218	UGAGACAGCUCAAACUGCA	UGCAGUUUGAGCUGUCUCA		[445-463]
219	AGAAUUCAACUAUCUUCAU	AUGAAGAUAGUUGAAUUCU		[574-592]
220	UGUCAAAAAGAAGAAAACA	UGUUUUCUUCUUUUUGACA		[33-51]
221	AGGGUAAUAUCAACAAGCU	AGCUUGUUGAUAUUACCCU		[158-176]
222	ACGAUGACACCAUCUUUGA	UCAAAGAUGGUGUCAUCGU		[831-849]
223	CAUAGCAUCCUGAAUGGAA	UUCCAUUCAGGAUGCUAUG		[770-788]
224	ACAUAAUGUUUCUUGGAGA	UCUCCAAGAAACAUUAUGU		[1072-1090]
225	UCCUGGUGUUUAUGUCACA	UGUGACAUAAACACCAGGA		[753-771]
226	AAGGUAACAUCUGUAAUGA	UCAUUACAGAUGUUACCUU		[996-1014]
227	GCUGCCCACCAUUGAAAGA	UCUUUCAAUGGUGGGCAGC		[1222-1240]
228	GAUCAAGACCUUUCUAGAU	AUCUAGAAAGGUCUUGAUC		[310-328]
229	AUGGAGAAAGAGAGGCGAA	UUCGCCUCUCUUUCUCCAU		[528-546]
230	AAUUAAAACUCAUAAGAAG	CUUCUUAUGAGUUUUAAUU		[1277-1295]
231	GAGAAUUUGAGGACUGGGA	UCCCAGUCCUCAAAUUCUC		[128-146]
232	AAAGGUUCAACAUUCAUUU	AAAUGAAUGUUGAACCUUU		[1180-1198]
233	UCUUUCCUGGGAAUUAAAA	UUUUAAUUCCCAGGAAAGA		[1266-1284]
234	UGUUAUGUCAAAAAGAAGA	UCUUCUUUUUGACAUAACA		[28-46]
235	GAAAAUGUCUAAAGUUUGU	ACAAACUUUAGACAUUUUC		[390-408]
236	AGGAAAUUUUUCAAAAGGU	ACCUUUUGAAAAAUUUCCU		[1167-1185]
237	CAUUCUGUUCACUUUGUUA	UAACAAAGUGAACAGAAUG		[14-32]
238	CUAUCUCUUUCCUGGGAAU	AUUCCCAGGAAAGAGAUAG		[1261-1279]
239	AUUAAAAUACAGAUGAGAUA	UAUCUCAUCUGUAUUUAAU		[361-379]
240	CAGGAAAUGGAAACAGCAC	GUGCUGUUUCCAUUUCCUG		[686-704]

241	UUUGAUGAUUUGAUGGAAA	UUUCCAUCAAAUCAUCAAA		[335-353]
242	GGUGAGCAAUGCUGAAAAC	GUUUUCAGCAUUGCUCACC		[409-427]
243	CAAAUCUUCCACACCACAU	AUGUGGUGUGGAAGAUUUG		[1057-1075]
244	UUUUCAAAAGGUUCAACAU	AUGUUGAACCUUUUGAAAA		[1174-1192]
245	UGCUGAAAACCUGGUUGAU	AUCAACCAGGUUUUCAGCA		[418-436]
246	AAGCCGGUGCAGAUACUCA	UGAGUAUCUGCACCGGCUU		[963-981]
247	UCCUGGGAAUUAAAACUCA	UGAGUUUUAAUUCCCAGGA		[1270-1288]
248	AUGUGGAAAAGGACUUCAU	AUGAAGUCCUUUUCCACAU		[1032-1050]
249	GUGAAGUUGCUGAUCAAGA	UCUUGAUCAGCAACUUCAC		[299-317]
250	CUUGCAAGGUAACAUCUGU	ACAGAUGUUACCUUGCAAG		[991-1009]
251	GAAUUUUCCAUUCAGGGUA	UACCCUGAAUGGAAAAUUC		[145-163]
252	ACACGAUAUUUCUAUCUCU	AGAGAUAGAAAUAUCGUGU		[1250-1268]
253	UGUUUCUUGGAGACAUGAA	UUCAUGUCUCCAAGAAACA		[1078-1096]
254	AUAGGAAAAUGUCUAAAGU	ACUUUAGACAUUUUCCUAU		[386-404]
255	UGUUCACUUUGUUAUGUCA	UGACAUAACAAAGUGAACA		[19-37]
256	UGAUGAUUUGAUGGAAAAU	AUUUUCCAUCAAAUCAUCA		[337-355]
257	AAGAGAAUCUCACAGCUCA	UGAGCUGUGAGAUUCUCUU		[669-687]
258	GUGUUCUGGUCCACAUGGU	ACCAUGUGGACCAGAACAC		[282-300]
259	CACUGAGACAGCUCAAACU	AGUUUGAGCUGUCUCAGUG		[442-460]
260	CACGAGAUCAGAGUCUAAU	AUUAGACUCUGAUCUCGUG		[89-107]
261	CCUGGUGUUUAUGUCACAU	AUGUGACAUAAACACCAGG		[754-772]
262	CAUCCAACGGUGUUCUGGU	ACCAGAACACCGUUGGAUG		[273-291]
263	CAAAAAACAGCUGAGUUCA	UGAACUCAGCUGUUUUUUG		[496-514]
264	GGAAAAGGACUUCAUUGCU	AGCAAUGAAGUCCUUUUCC		[1036-1054]
265	AGGAAAAUGUCUAAAGUUU	AAACUUUAGACAUUUUCCU		[388-406]
266	UAAAACUCAUAAGAAGCAA	UUGCUUCUUAUGAGUUUUA		[1280-1298]
267	GCUGGGAUUGUUUGGUUCA	UGAACCAAACAAUCCCAGC		[929-947]
268	CUGCUUCCUAUUUUCCAAA	UUUGGAAAAUAGGAAGCAG		[56-74]
269	GUUGAUGAUAUCACUGAGA	UCUCAGUGAUAUCAUCAAC		[431-449]
270	UAUCACUGAGACAGCUCAA	UUGAGCUGUCUCAGUGAUA		[439-457]
271	AUUGAAAGACUAUCCAUGA	UCAUGGAUAGUCUUUCAAU		[1232-1250]
272	ACAUGGUGAAGUUGCUGAU	AUCAGCAACUUCACCAUGU		[294-312]
273	UCAAACUGCAGGCAAAAUA	UAUUUUGCCUGCAGUUUGA		[454-472]
274	GGCAAAGAAAAAGAGAAUU	AAUUCUCUUUUUCUUUGCC		[116-134]
275	ACAGAUGAGAUACACCUUA	UAAGGUGUAUCUCAUCUGU		[368-386]
276	GCAUUUUUGAUGAUUUGAU	AUCAAAUCAUCAAAAAUGC		[330-348]
277	UCAUGGUCGGCUCUUGCAA	UUGCAAGAGCCGACCAUGA		[979-997]
278	UUUGAUGGAAAAUAAUGUA	UACAUUAUUUUCCAUCAAA		[343-361]
279	CCCACCAUUGAAAGACUAU	AUAGUCUUUCAAUGGUGGG		[1226-1244]
280	AGUCAUCAUCUAGAGGAAA	UUUCCUCUAGAUGAUGACU		[1154-1172]
281	UUAGGGAACACCUGUGGAA	UUCCACAGGUGUUCCCUAA		[474-492]
282	AAUUUUUCAAAAGGUUCAA	UUGAACCUUUUGAAAAAUU		[1171-1189]
283	AAGAAUUCAACUAUCUUCA	UGAAGAUAGUUGAAUUCUU		[573-591]
284	CUACUACUUCAGAGAGUAU	AUACUCUCUGAAGUAGUAG		[1129-1147]
285	AAACUGCAGGCAAAAUAUU	AAUAUUUUGCCUGCAGUUU		[456-474]
286	GCCUGUUGAAAUUGUUUUU	AAAAACAAUUUCAACAGGC		[198-216]
287	AUAGCAUCCUGAAUGGAAU	AUUCCAUUCAGGAUGCUAU		[771-789]
288	UUUUGAUGAUUUGAUGGAA	UUCCAUCAAAUCAUCAAAA		[334-352]
289	ACUGGGAAUUUUCCAUUCA	UGAAUGGAAAAUUCCCAGU		[140-158]
290	GUAUUAAAUACAGAUGAGA	UCUCAUCUGUAUUUAAUAC		[359-377]
291	GUCACAUAGCAUCCUGAAU	AUUCAGGAUGCUAUGUGAC		[766-784]
292	GAAACAGCACUAAGGCAGU	ACUGCCUUAGUGCUGUUUC		[695-713]
293	GAUGGAGAAAGAGAGGCGA	UCGCCUCUCUUUCUCCAUC		[527-545]
294	UUAUGUCAAAAAGAAGAAA	UUUCUUCUUUUUGACAUAA		[30-48]
295	AAAUGGAAACAGCACUAAG	CUUAGUGCUGUUUCCAUUU		[690-708]
296	GGCAUUUUUGAUGAUUUGA	UCAAAUCAUCAAAAAUGCC		[329-347]

297	UGGUGUUUAUGUCACAUAG	CUAUGUGACAUAAACACCA		[756-774]
298	GGCUGAUGAGAAACCAUCC	GGAUGGUUUCUCAUCAGCC		[259-277]
299	GCAAAGAAAAAGAGAAUUU	AAAUUCUCUUUUUCUUUGC		[117-135]
300	UCAUUUCCCAAAUUAUCUA	UAGAUAAUUUGGGAAAUGA		[1113-1131]
301	CAGAGAGUAUUCUUGGAGU	ACUCCAAGAAUACUCUCUG		[1138-1156]
302	AGACUAUCCAUGACACGAU	AUCGUGUCAUGGAUAGUCU		[1238-1256]
303	CUGGUGUUUAUGUCACAUA	UAUGUGACAUAAACACCAG		[755-773]
304	UAUGUCAAAAAGAAGAAAA	UUUUCUUCUUUUUGACAUA		[31-49]
305	GAAUUUGAGGACUGGGAAU	AUUCCCAGUCCUCAAAUUC		[130-148]
306	UGUUGAAAUUGUUUUUGCU	AGCAAAAACAAUUUCAACA		[201-219]
307	UCACGAUGACACCAUCUUU	AAAGAUGGUGUCAUCGUGA		[829-847]
308	AGUUGCUGAUCAAGACCUU	AAGGUCUUGAUCAGCAACU		[303-321]
309	UGAAGUUGCUGAUCAAGAC	GUCUUGAUCAGCAACUUCA		[300-318]
310	UCCAUUCAGGGUAAUAUCA	UGAUAUUACCCUGAAUGGA		[151-169]
311	CUUCAUAAUCGAAAUGGUU	AACCAUUUCGAUUAUGAAG		[587-605]
312	AGGUCAUCAUCAUGCAAGC	GCUUGCAUGAUGAUGACCU		[894-912]
313	GGGUAAUAUCAACAAGCUG	CAGCUUGUUGAUAUUACCC		[159-177]
314	GGCAAAAUAUUUAGGGAAC	GUUCCCUAAAUAUUUUGCC		[464-482]
315	UAAUGAUGCUGUUACAAAG	CUUUGUAACAGCAUCAUUA		[1009-1027]
316	CAAAAAGAAGAAAACACCU	AGGUGUUUUCUUCUUUUUG		[36-54]
317	AAAAGCCGGUGCAGAUACU	AGUAUCUGCACCGGCUUUU		[961-979]
318	CAAGCACUGGGAUCAAGAG	CUCUUGAUCCCAGUGCUUG		[799-817]
319	CAGACAGCACAUUCCUGGU	ACCAGGAAUGUGCUGUCUG	Ms	[741-759]
320	CUGCAGGCAAAAUAUUUAG	CUAAAUAUUUUGCCUGCAG		[459-477]
321	CAGUCCUCAGACAGCACAU	AUGUGCUGUCUGAGGACUG	Ms	[734-752]
322	GUUCACUUUGUUAUGUCAA	UUGACAUAACAAAGUGAAC		[20-38]
323	GGAAUUCCAAAAAACAGCU	AGCUGUUUUUUGGAAUUCC		[489-507]
324	GGAAAAUGUCUAAAGUUUG	CAAACUUUAGACAUUUUCC		[389-407]
325	AAUUAUCUACUACUUCAGA	UCUGAAGUAGUAGAUAAUU		[1123-1141]
326	UCUUCAUAAUCGAAAUGGU	ACCAUUUCGAUUAUGAAGA		[586-604]
327	UUCAGGGUAAUAUCAACAA	UUGUUGAUAUUACCCUGAA		[155-173]
328	UUCUUGGAGUCAUCAUCUA	UAGAUGAUGACUCCAAGAA		[1147-1165]
329	GAUGAGAUACACCUUAUAG	CUAUAAGGUGUAUCUCAUC		[371-389]
330	CUCAGUGGUUAUAAAAGAG	CUCUUUUAUAACCACUGAG		[655-673]
331	CAAGGUAACAUCUGUAAUG	CAUUACAGAUGUUACCUUG		[995-1013]
332	ACAAAGAAUUCAACUAUCU	AGAUAGUUGAAUUCUUUGU		[570-588]
333	CUUCCACACCACAUAAUGU	ACAUUAUGUGGUGUGGAAG		[1062-1080]
334	GUUCACCACUGACAGUGGA	UCCACUGUCAGUGGUGAAC		[943-961]
335	UCUUGGAGACAUGAAACAA	UUGUUUCAUGUCUCCAAGA		[1082-1100]
336	CACACCACAUAAUGUUUCU	AGAAACAUUAUGUGGUGUG		[1066-1084]
337	GUUAUAAAAGAGAAUCUCA	UGAGAUUCUCUUUUAUAAC		[662-680]
338	AGGGAACACCUGUGGAAUU	AAUUCCACAGGUGUUCCCU		[476-494]
339	UUGCAAGGUAACAUCUGUA	UACAGAUGUUACCUUGCAA		[992-1010]
340	GUUCUGGUCCACAUGGUGA	UCACCAUGUGGACCAGAAC		[284-302]
341	AGAGGAGAGCAAGCCUGUU	AACAGGCUUGCUCUCCUCU		[186-204]
342	CCUCAGACAGCACAUUCCU	AGGAAUGUGCUGUCUGAGG	Ms	[738-756]
343	UUUCCCAAAUUAUCUACUA	UAGUAGAUAAUUUGGGAAA		[1116-1134]
344	UCAAAUCUUCCACACCACA	UGUGGUGUGGAAGAUUUGA		[1056-1074]
345	AACUGCAGGCAAAAUAUUU	AAAUAUUUUGCCUGCAGUU		[457-475]
346	AAAACAGCUGAGUUCAGAU	AUCUGAACUCAGCUGUUUU		[499-517]
347	CAGUUAUACACGAGAUCAG	CUGAUCUCGUGUAUAACUG		[81-99]
348	GAAAUGGUUCUGAACUUGA	UCAAGUUCAGAACCAUUUC		[597-615]
349	UUCAGAGAGUAUUCUUGGA	UCCAAGAAUACUCUCUGAA		[1136-1154]
350	CACCAUCUUUGAAAUUUUC	GAAAAUUUCAAAGAUGGUG		[838-856]
351	CAUGACACGAUAUUUCUAU	AUAGAAAUAUCGUGUCAUG		[1246-1264]
352	AUGUAUUAAAUACAGAUGA	UCAUCUGUAUUUAAUACAU		[357-375]

353	GGAGUCAUCAUCUAGAGGA	UCCUCUAGAUGAUGACUCC		[1152-1170]
354	UAGGAAAAUGUCUAAAGUU	AACUUUAGACAUUUUCCUA		[387-405]
355	AAAACCUGGUUGAUGAUAU	AUAUCAUCAACCAGGUUUU		[423-441]
356	GAGUAUUCUUGGAGUCAUC	GAUGACUCCAAGAAUACUC		[1142-1160]
357	UGAUGGAAAAUAAUGUAUU	AAUACAUUAUUUUCCAUCA		[345-363]
358	AAGCAGUUAUACACGAGAU	AUCUCGUGUAUAACUGCUU		[78-96]
359	AUGACACCAUCUUUGAAAU	AUUUCAAAGAUGGUGUCAU		[834-852]
360	ACCAUUGAAAGACUAUCCA	UGGAUAGUCUUUCAAUGGU		[1229-1247]
361	AAACCUGGUUGAUGAUAUC	GAUAUCAUCAACCAGGUUU		[424-442]
362	AAUGGAAACAGCACUAAGG	CCUUAGUGCUGUUUCCAUU		[691-709]
363	ACAGCACAUUCCUGGUGUU	AACACCAGGAAUGUGCUGU	Ms	[744-762]
364	AGUCUGAAAGACAAACCCA	UGGGUUUGUCUUUCAGACU		[875-893]
365	GCUCAUGUGGAAAAGGACU	AGUCCUUUUCCACAUGAGC		[1028-1046]
366	GUAAUAUCAACAAGCUGGU	ACCAGCUUGUUGAUAUUAC		[161-179]
367	UCUACUUGAAAACCUUGGA	UCCAAGGUUUUCAAGUAGA		[634-652]
368	CUUCAUUUCCCAAAUUAUC	GAUAAUUUGGGAAAUGAAG		[1111-1129]
369	AAUGGUGCUGGGAUUGUUU	AAACAAUCCCAGCACCAUU		[923-941]
370	GCAAGCCUGUUGAAAUUGU	ACAAUUUCAACAGGCUUGC		[194-212]
371	CUUUGAAAUUUUCAACAAC	GUUGUUGAAAAUUUCAAAG		[844-862]
372	ACUCAUAAGAAGCAACUCA	UGAGUUGCUUCUUAUGAGU		[1284-1302]
373	GAAAGACUAUCCAUGACAC	GUGUCAUGGAUAGUCUUUC		[1235-1253]
374	GAGAUCAGAGUCUAAUUUU	AAAAUUAGACUCUGAUCUC		[92-110]
375	GAUGUUCUUCACGAUGACA	UGUCAUCGUGAAGAACAUC		[821-839]
376	GAGGAAAUUUUUCAAAAGG	CCUUUUGAAAAAUUUCCUC		[1166-1184]
377	AGGAAAUGGAAACAGCACU	AGUGCUGUUUCCAUUUCCU		[687-705]
378	GAAAAGGACUUCAUUGCUU	AAGCAAUGAAGUCCUUUUC		[1037-1055]
379	GGGAAUUUUCCAUUCAGGG	CCCUGAAUGGAAAAUUCCC		[143-161]
380	UGAUGAGAAACCAUCCAAC	GUUGGAUGGUUUCUCAUCA		[262-280]
381	UGCCCACCAUUGAAAGACU	AGUCUUUCAAUGGUGGGCA		[1224-1242]
382	ACACCUUAUAGGAAAAUGU	ACAUUUUCCUAUAAGGUGU		[379-397]
383	UAUUAAAUACAGAUGAGAU	AUCUCAUCUGUAUUUAAUA		[360-378]
384	CAUUUUUGAUGAUUUGAUG	CAUCAAAUCAUCAAAAAUG		[331-349]
385	AAGAGAGGCGAACAUGCCU	AGGCAUGUUCGCCUCUCUU		[535-553]
386	UGUAAUGAUGCUGUUACAA	UUGUAACAGCAUCAUUACA		[1007-1025]
387	CUACUUGAAAACCUUGGAU	AUCCAAGGUUUUCAAGUAG		[635-653]
388	UGUUUAUGUCACAUAGCAU	AUGCUAUGUGACAUAAACA		[759-777]
389	CGAUAUUUCUAUCUCUUUC	GAAAGAGAUAGAAAUAUCG		[1253-1271]
390	UAUAUCCAGUGAUGGAGAA	UUCUCCAUCACUGGAUAUA	Rat,Ms	[517-535]
391	UGUAUUAAAUACAGAUGAG	CUCAUCUGUAUUUAAUACA		[358-376]
392	ACAUCCGCAACAAAGAAUU	AAUUCUUUGUUGCGGAUGU		[561-579]
393	GUUUGGUUCACCACUGACA	UGUCAGUGGUGAACCAAAC		[938-956]
394	GAGACAGCUCAAACUGCAG	CUGCAGUUUGAGCUGUCUC		[446-464]
395	AGCUCAGGAAAUGGAAACA	UGUUUCCAUUUCCUGAGCU		[682-700]
396	AGGUUCAACAUUCAUUUGA	UCAAAUGAAUGUUGAACCU		[1182-1200]
397	GAAAAAGAGAAUUUGAGGA	UCCUCAAAUUCUCUUUUUC		[122-140]
398	GUGGUGAGCAAUGCUGAAA	UUUCAGCAUUGCUCACCAC		[407-425]
399	CAAUGCUGAAAACCUGGUU	AACCAGGUUUUCAGCAUUG		[415-433]
400	AAAUUUUUCAAAAGGUUCA	UGAACCUUUUGAAAAAUUU		[1170-1188]
401	ACUAUCUUCAUAAUCGAAA	UUUCGAUUAUGAAGAUAGU		[582-600]
402	CCUUGGAUACUCAGUGGUU	AACCACUGAGUAUCCAAGG		[646-664]
403	UAUAAAAGAGAAUCUCACA	UGUGAGAUUCUCUUUUAUA		[664-682]
404	UUGGAUACUCAGUGGUUAU	AUAACCACUGAGUAUCCAA		[648-666]
405	GCAGUUAUACACGAGAUCA	UGAUCUCGUGUAUAACUGC		[80-98]
406	GAAAGAGAGGCGAACAUGC	GCAUGUUCGCCUCUCUUUC		[533-551]
407	UGGGAAUUUUCCAUUCAGG	CCUGAAUGGAAAAUUCCCA		[142-160]
408	AUGUCACAUAGCAUCCUGA	UCAGGAUGCUAUGUGACAU		[764-782]

409	GGCUCUGUCUUCAUUUCCC	GGGAAAUGAAGACAGAGCC		[1103-1121]
410	GCACUAAGGCAGUUUGCUG	CAGCAAACUGCCUUAGUGC		[701-719]
411	AGGACUGGGAAUUUUCCAU	AUGGAAAAUUCCCAGUCCU		[137-155]
412	CAUGUGGAAAAGGACUUCA	UGAAGUCCUUUUCCACAUG		[1031-1049]
413	UCACCACUGACAGUGGAAA	UUUCCACUGUCAGUGGUGA		[945-963]
414	UCUACUACUUCAGAGAGUA	UACUCUCUGAAGUAGUAGA		[1128-1146]
415	UGUCUUCAUUUCCCAAAUU	AAUUUGGGAAAUGAAGACA		[1108-1126]
416	GUCAUCAUCUAGAGGAAAU	AUUUCCUCUAGAUGAUGAC		[1155-1173]
417	UAACAUCUGUAAUGAUGCU	AGCAUCAUUACAGAUGUUA		[1000-1018]
418	AAAGACAAACCCAAGGUCA	UGACCUUGGGUUUGUCUUU		[881-899]
419	AGCACAUUCCUGGUGUUUA	UAAACACCAGGAAUGUGCU	Ms	[746-764]
420	CAGAGUCUAAUUUUAUCUU	AAGAUAAAAUUAGACUCUG		[97-115]
421	GAAAUUGUUUUUGCUUUCA	UGAAAGCAAAAACAAUUUC		[205-223]
422	UGCUGAUCAAGACCUUUCU	AGAAAGGUCUUGAUCAGCA		[306-324]
423	UACACGAGAUCAGAGUCUA	UAGACUCUGAUCUCGUGUA		[87-105]
424	GAAAACCUGGUUGAUGAUA	UAUCAUCAACCAGGUUUUC		[422-440]
425	UGAGCAAUGCUGAAAACCU	AGGUUUUCAGCAUUGCUCA		[411-429]
426	CUCAAACUGCAGGCAAAAU	AUUUUGCCUGCAGUUUGAG		[453-471]
427	UCAGGGUAAUAUCAACAAG	CUUGUUGAUAUUACCCUGA		[156-174]
428	UUUCAAAUCUUCCACACCA	UGGUGUGGAAGAUUUGAAA		[1054-1072]
429	UGGAUACUCAGUGGUUAUA	UAUAACCACUGAGUAUCCA		[649-667]
430	UAAAUACAGAUGAGAUACA	UGUAUCUCAUCUGUAUUUA		[363-381]
431	AGAGUAUUCUUGGAGUCAU	AUGACUCCAAGAAUACUCU		[1141-1159]
432	UGGUUAUAAAAGAGAAUCU	AGAUUCUCUUUUAUAACCA		[660-678]
433	CAAAAUAUUUAGGGAACAC	GUGUUCCCUAAAUAUUUUG		[466-484]
434	AUGGAAUCUGUGGGACCAA	UUGGUCCCACAGAUUCCAU		[783-801]
435	CUCAGGAAAUGGAAACAGC	GCUGUUUCCAUUUCCUGAG		[684-702]
436	AUAAGAAGCAACUCAGGUA	UACCUGAGUUGCUUCUUAU		[1288-1306]
437	GUAUUCUUGGAGUCAUCAU	AUGAUGACUCCAAGAAUAC		[1144-1162]
438	GGACUGGGAAUUUUCCAUU	AAUGGAAAAUUCCCAGUCC		[138-156]
439	GGUGAAGUUGCUGAUCAAG	CUUGAUCAGCAACUUCACC		[298-316]
440	UGGUUGAUGAUAUCACUGA	UCAGUGAUAUCAUCAACCA		[429-447]
441	AACGGUGUUCUGGUCCACA	UGUGGACCAGAACACCGUU		[278-296]
442	CCUAUUUUCCAAAGGAAAG	CUUUCCUUUGGAAAAUAGG		[62-80]
443	CAUCUAGAGGAAAUUUUUC	GAAAAAUUUCCUCUAGAUG		[1160-1178]
444	CAUCAUCUAGAGGAAAUUU	AAAUUUCCUCUAGAUGAUG		[1157-1175]
445	UUGUUUGGUUCACCACUGA	UCAGUGGUGAACCAAACAA		[936-954]
446	AAACCCAAGGUCAUCAUCA	UGAUGAUGACCUUGGGUUU		[887-905]
447	UUGUGGUGAGCAAUGCUGA	UCAGCAUUGCUCACCACAA		[405-423]
448	CACAUGGUGAAGUUGCUGA	UCAGCAACUUCACCAUGUG		[293-311]
449	AUCUAGAGGAAAUUUUUCA	UGAAAAAUUUCCUCUAGAU		[1161-1179]
450	GUGCUGGGAUUGUUUGGUU	AACCAAACAAUCCCAGCAC		[927-945]
451	GAGAUCUACUUGAAAACCU	AGGUUUUCAAGUAGAUCUC		[630-648]
452	GUACAUGAUUUCAUUCUGU	ACAGAAUGAAAUCAUGUAC		[3-21]
453	UCGAAAUGGUUCUGAACUU	AAGUUCAGAACCAUUUCGA		[595-613]
454	CACUGACAGUGGAAAAGCC	GGCUUUUCCACUGUCAGUG		[949-967]
455	GGUAACAUCUGUAAUGAUG	CAUCAUUACAGAUGUUACC		[998-1016]
456	GUUCAGAUAUAUCCAGUGA	UCACUGGAUAUAUCUGAAC		[510-528]
457	CUCAUAAGAAGCAACUCAG	CUGAGUUGCUUCUUAUGAG		[1285-1303]
458	AAAAACAGCUGAGUUCAGA	UCUGAACUCAGCUGUUUUU		[498-516]
459	AUGUCAAAAAGAAGAAAAC	GUUUUCUUCUUUUUGACAU		[32-50]
460	UCAGUGGUUAUAAAAGAGA	UCUCUUUUAUAACCACUGA		[656-674]
461	CAAAGAAAAAGAGAAUUUG	CAAAUUCUCUUUUUCUUUG		[118-136]
462	AAAAGGUUCAACAUUCAUU	AAUGAAUGUUGAACCUUUU		[1179-1197]
463	AAAGCAGUUAUACACGAGA	UCUCGUGUAUAACUGCUUU		[77-95]
464	UUACAAAGGCUCAUGUGGA	UCCACAUGAGCCUUUGUAA		[1020-1038]

465	AUUGCUUUCAAAUCUUCCA	UGGAAGAUUUGAAAGCAAU		[1049-1067]
466	AUAUCAACAAGCUGGUCCA	UGGACCAGCUUGUUGAUAU		[164-182]
467	UUUCCAUUCAGGGUAAUAU	AUAUUACCCUGAAUGGAAA		[149-167]
468	CUGAAUGGAAUCUGUGGGA	UCCCACAGAUUCCAUUCAG		[779-797]
469	CUAUCCAUGACACGAUAUU	AAUAUCGUGUCAUGGAUAG		[1241-1259]
470	UCACAGCUCAGGAAAUGGA	UCCAUUUCCUGAGCUGUGA		[678-696]
471	AAGAAAAAGAGAAUUUGAG	CUCAAAUUCUCUUUUUCUU		[120-138]
472	AACAAAGAAUUCAACUAUC	GAUAGUUGAAUUCUUUGUU		[569-587]
473	AAACAGCUGAGUUCAGAUA	UAUCUGAACUCAGCUGUUU		[500-518]
474	CCUUCUGCUUCCUAUUUUC	GAAAAUAGGAAGCAGAAGG		[52-70]
475	ACGAUAUUUCUAUCUCUUU	AAAGAGAUAGAAAUAUCGU		[1252-1270]
476	CAGCACUAAGGCAGUUUGC	GCAAACUGCCUUAGUGCUG		[699-717]
477	UAGGGAACACCUGUGGAAU	AUUCCACAGGUGUUCCCUA		[475-493]
478	AGAGAAUCUCACAGCUCAG	CUGAGCUGUGAGAUUCUCU		[670-688]
479	UUAUCUACUACUUCAGAGA	UCUCUGAAGUAGUAGAUAA		[1125-1143]
480	AAAUAUUUAGGGAACACCU	AGGUGUUCCCUAAAUAUUU		[468-486]
481	ACUUUGUUAUGUCAAAAAG	CUUUUUGACAUAACAAAGU		[24-42]
482	AAAUGGUUCUGAACUUGAC	GUCAAGUUCAGAACCAUUU		[598-616]
483	GAAACCAUCCAACGGUGUU	AACACCGUUGGAUGGUUUC		[268-286]
484	CAUUGAAAGACUAUCCAUG	CAUGGAUAGUCUUUCAAUG		[1231-1249]
485	UGAAAGACUAUCCAUGACA	UGUCAUGGAUAGUCUUUCA		[1234-1252]
486	AGCACUAAGGCAGUUUGCU	AGCAAACUGCCUUAGUGCU		[700-718]
487	UGAAAUUUUCAACAACCGU	ACGGUUGUUGAAAAUUUCA		[847-865]
488	GAGAAACCAUCCAACGGUG	CACCGUUGGAUGGUUUCUC		[266-284]
489	GAUUUGAUGGAAAAUAAUG	CAUUAUUUUCCAUCAAAUC		[341-359]
490	AUGCUGAAAACCUGGUUGA	UCAACCAGGUUUUCAGCAU		[417-435]
491	AUCACUGAGACAGCUCAAA	UUUGAGCUGUCUCAGUGAU		[440-458]
492	UCAUCAUCUAGAGGAAAUU	AAUUUCCUCUAGAUGAUGA		[1156-1174]
493	UUAUAGGAAAAUGUCUAAA	UUUAGACAUUUUCCUAUAA		[384-402]
494	AAAAGGACUUCAUUGCUUU	AAAGCAAUGAAGUCCUUUU		[1038-1056]
495	CAUGAUUUCAUUCUGUUCA	UGAACAGAAUGAAAUCAUG		[6-24]
496	ACCAUCUUUGAAAUUUUCA	UGAAAAUUUCAAAGAUGGU		[839-857]
497	AUCUCACAGCUCAGGAAAU	AUUUCCUGAGCUGUGAGAU		[675-693]
498	AUUUGAUGGAAAAUAAUGU	ACAUUAUUUUCCAUCAAAU		[342-360]
499	CUUCAUUGCUUUCAAAUCU	AGAUUUGAAAGCAAUGAAG		[1045-1063]
500	UCUGUCUUCAUUUCCCAAA	UUUGGGAAAUGAAGACAGA		[1106-1124]

Table B 10 CASP2 - caspase 2, apoptosis-related cysteine peptidase

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-39995058 :148-1506
1	GAGUGAUGCCGGUAAAGAA	UUCUUUACCGGCAUCACUC	Cyn,Mnk	[1182-1200]
2	GGAAGGUGUCCAAAUUUAA	UUAAAUUUGGACACCUUCC	Mnk	[1965-1983]
3	GGGUCGACAUAGUAUGGAA	UUCCAUACUAUGUCGACCC	Mnk	[4025-4043]
4	GGAGAGUGAUGCCGGUAAA	UUUACCGGCAUCACUCUCC	Cyn,Mnk	[1179-1197]
5	CAUCGAGGCUCUUGCUCAA	UUGAGCAAGAGCCUCGAUG	Mnk	[1305-1323]
6	GGAUCAUGUAAAUGCUCAA	UUGAGCAUUUACAUGAUCC	Mnk	[2505-2523]
7	AGGUGAACGCACUUAUCAA	UUGAUAAGUGCGUUCACCU	Mnk	[1373-1391]
8	CCAGGAUUUGGUUGUUUAA	UUAAACAACCAAAUCCUGG		[3229-3247]
9	CAAUCAACCUGCACUUCAU	AUGAAGUGCAGGUUGAUUG	Mnk	[2368-2386]
10	CACAGGAAAUGCAAGAGAA	UUCUCUUGCAUUUCCUGUG	Cyn,Rat,Ms,GP,Chn,Mnk	[890-908]
11	GCCCAAGCCUACAGAACAA	UUGUUCUGUAGGCUUGGGC	Cyn,Mnk	[1061-1079]
12	UGACCAGACUGCACAGGAA	UUCCUGUGCAGUCUGGUCA	Cyn,Rat,GP,Dog,Mnk	[879-897]
13	CAAGGAUCGGGAAGGUUAU	AUAACCUUCCCGAUCCUUG	Mnk	[1389-1407]
14	CAACUUCCCUGUUCUUUAA	UUAAAGAACAGGGAAGUUG	Mnk	[2663-2681]

15	GGAUUUGGUUGUUUAAAUA	UAUUUAAACAACCAAAUCC		[3232-3250]
16	CCACCAAAUCUGUCUAGAA	UUCUAGACAGAUUUGGUGG	Mnk	[2474-2492]
17	CCUACAGAACAAACCAAAA	UUUUGGUUUGUUCUGUAGG	Mnk	[1068-1086]
18	CAGGAAACUCUAAAAAAGA	UCUUUUUUAGAGUUUCCUG	Cyn,Mnk	[256-274]
19	CAUCAUCAGGAAACUCUAA	UUAGAGUUUCCUGAUGAUG	Mnk	[250-268]
20	ACAGGAAAUGCAAGAGAAA	UUUCUCUUGCAUUUCCUGU	Cyn,Rat,Ms, GP,Chn,Mnk	[891-909]
21	AGGAAACUCUAAAAAAGAA	UUCUUUUUUAGAGUUUCCU	Cyn,Mnk	[257-275]
22	GAAGGUGUCCAAAUUUAAU	AUUAAAUUUGGACACCUUC		[1966-1984]
23	GCAUCCUCAUCAUCAGGAA	UUCCUGAUGAUGAGGAUGC	Mnk	[243-261]
24	GAGUUUGGAAGGUGUCCAA	UUGGACACCUUCCAAACUC	Mnk	[1959-1977]
25	UGCCCAUGGAAGUCUCAAA	UUUGAGACUUCCAUGGGCA	Mnk	[2179-2197]
26	GGACAUCAUCACCUUGGAA	UUCCAAGGUGAUGAUGUCC	Cyn,Dog,Mnk	[336-354]
27	CCUGACAAGUGAAGUUGUA	UACAACUUCACUUGUCAGG	Mnk	[1766-1784]
28	UGGUGUCCUUCUUCCUCAA	UUGAGGAAGAAGGACACCA		[3491-3509]
29	CGUCCAUCUCUCUCCCUUA	UAAGGGAGAGAGAUGGACG	Mnk	[2332-2350]
30	CUAUGGUGUGGAUGGGAAA	UUUCCCAUCCACACCAUAG	Mnk	[996-1014]
31	CAAUAUACACGGAUUAUUA	UAAUAAUCCGUGUAUAUUG	Mnk	[3812-3830]
32	CGUUGAGCUGUGACUACGA	UCGUAGUCACAGCUCAACG	Rb,Dog,Mnk	[539-557]
33	UCAUGUAAAUGCUCAAAGA	UCUUUGAGCAUUUACAUGA		[2508-2526]
34	AGUGAUGCCGGUAAAGAAA	UUUCUUUACCGGCAUCACU	Cyn,Mnk	[1183-1201]
35	ACUCCUGAAUUUUAUCAAA	UUUGAUAAAAUUCAGGAGU	Mnk	[685-703]
36	GCACUUCACUGGAGAGAAA	UUUCUCUCCAGUGAAGUGC	Cyn,Rat,Ms,Dog,Mnk	[771-789]
37	CUACAAUCCUACCUUUUGA	UCAAAAGGUAGGAUUGUAG	Mnk	[3776-3794]
38	GACCAGACUGCACAGGAAA	UUUCCUGUGCAGUCUGGUC	Cyn,Rat,GP,Chn,Dog,Mnk	[880-898]
39	AAGCAAACAUGACUAGAGA	UCUCUAGUCAUGUUUGCUU		[2011-2029]
40	CCCUCAUUUAAAAUGUAAA	UUUACAUUUUAAAUGAGGG	Mnk	[3297-3315]
41	CUAUGACGUCCAUGUUCUA	UAGAACAUGGACGUCAUAG	Mnk	[858-876]
42	AGGACAUCAUCACCUUGGA	UCCAAGGUGAUGAUGUCCU	Cyn,Dog,Mnk	[335-353]
43	UCAUCAUCAGGAAACUCUA	UAGAGUUUCCUGAUGAUGA	Mnk	[249-267]
44	GCAGAAUUUUGCACAGUUA	UAACUGUGCAAAAUUCUGC	Mnk	[912-930]
45	GACUGCACAGGAAAUGCAA	UUGCAUUUCCUGUGCAGUC	Cyn,Rat,GP,Chn,Mnk	[885-903]
46	CCAUCUCUCUCCCUUACUA	UAGUAAGGGAGAGAGAUGG	Mnk	[2335-2353]
47	CUGCCUUUGGGUCGACAUA	UAUGUCGACCCAAAGGCAG	Mnk	[4017-4035]
48	UGACAAGUGAAGUUGUAAA	UUUACAACUUCACUUGUCA	Mnk	[1768-1786]
49	CUGUCUGCCUUCAGGUGAA	UUCACCUGAAGGCAGACAG	Cyn,Mnk	[659-677]
50	GGAUGUGGACCACAGUACU	AGUACUGUGGUCCACAUCC	Cyn,Rb,Mnk	[813-831]
51	UAGUCAAGGUGCUCAAUAA	UUAUUGAGCACCUUGACUA	Mnk	[3959-3977]
52	CCUUUGGGUCGACAUAGUA	UACUAUGUCGACCCAAAGG	Mnk	[4020-4038]
53	GCAAGGAGAUGUCUGAAUA	UAUUCAGACAUCUCCUUGC	Mnk	[1433-1451]
54	CCAUGGAAGUCUCAAAGAU	AUCUUUGAGACUUCCAUGG	Mnk	[2182-2200]
55	GAAGAAGCAAACAUGACUA	UAGUCAUGUUUGCUUCUUC		[2007-2025]
56	CCAGCUCCUUUUCUGUGAA	UUCACAGAAAAGGAGCUGG	Mnk	[1679-1697]
57	GAAGAGCCUGACAAGUGAA	UUCACUUGUCAGGCUCUUC	Mnk	[1760-1778]
58	UCCUCAACUUGCUGCCUAA	UUAGGCAGCAAGUUGAGGA	Cyn,Mnk	[407-425]
59	CAUAGUGGGCCUUCAUUAA	UUAAUGAAGGCCCACUAUG		[3714-3732]
60	CAUCAGGAAACUCUAAAAA	UUUUUAGAGUUUCCUGAUG	Cyn,GP,Mnk	[253-271]
61	CCGUGGAGAUGAGACUGAU	AUCAGUCUCAUCUCCACGG	Cyn,GP,Chn,Mnk	[1107-1125]
62	UCAUCAGGAAACUCUAAAA	UUUUAGAGUUUCCUGAUGA	Mnk	[252-270]
63	AGUCAAGGUGCUCAAUAAA	UUUAUUGAGCACCUUGACU	Mnk	[3960-3978]
64	GGUGCAAGGAGAUGUCUGA	UCAGACAUCUCCUUGCACC	Mnk	[1430-1448]
65	UGAAGAGCCUGACAAGUGA	UCACUUGUCAGGCUCUUCA	Mnk	[1759-1777]
66	GCCUACAGAACAAACCAAA	UUUGGUUUGUUCUGUAGGC	Mnk	[1067-1085]
67	AAUCCUACCUUUUGAUAAA	UUUAUCAAAAGGUAGGAUU	Mnk	[3780-3798]
68	GCCUUUGGGUCGACAUAGU	ACUAUGUCGACCCAAAGGC	Mnk	[4019-4037]
69	CAGGAAUGUUUCAGCUGCA	UGCAGCUGAAACAUUCCUG	Mnk	[1738-1756]
70	GAAGCCCUUUGCCUGUAGA	UCUACAGGCAAAGGGCUUC	Mnk	[1695-1713]

71	GGGAGAGGGCAUAUAAAUU	AAUUUAUAUGCCCUCUCCC		[1802-1820]
72	CCAUCAUCUCUGCCUUUGA	UCAAAGGCAGAGAUGAUGG	Mnk	[1645-1663]
73	UGGAAGGUGUCCAAAUUUA	UAAAUUUGGACACCUUCCA	Mnk	[1964-1982]
74	CUCCCUAGACAAUAAAGAU	AUCUUUAUUGUCUAGGGAG	Cyn,Mnk	[636-654]
75	AAACGAGGUUCCUGGUACA	UGUACCAGGAACCUCGUUU	Cyn,Mnk	[1288-1306]
76	CAUCCUCAUCAUCAGGAAA	UUUCCUGAUGAUGAGGAUG	Mnk	[244-262]
77	CCAACUUCCCUGUUCUUUA	UAAAGAACAGGGAAGUUGG	Mnk	[2662-2680]
78	CUCUAGUCACCCUCUUCAA	UUGAAGAGGGUGACUAGAG	Cyn,Rat,Ms,Mnk	[830-848]
79	CAAGGUGCUCAAUAAAUAU	AUAUUUAUUGAGCACCUUG	Mnk	[3963-3981]
80	CUUGCUGCAGUGUCCAGAA	UUCUGGACACUGCAGCAAG	Mnk	[2035-2053]
81	CGACAGAUACUGUGGAACA	UGUUCCACAGUAUCUGUCG	Cyn,Mnk	[617-635]
82	GAACCCUUCUGCUUUCUAU	AUAGAAAGCAGAAGGGUUC	Mnk	[3275-3293]
83	GACCAUCUCCUAUCUUUUA	UAAAAGAUAGGAGAUGGUC	Mnk	[1902-1920]
84	UGUGGACCACAGUACUCUA	UAGAGUACUGUGGUCCACA	Cyn,Rb,Mnk	[816-834]
85	AACACUCCCUAGACAAUAA	UUAUUGUCUAGGGAGUGUU	Cyn,Mnk	[632-650]
86	GAAACUGCUCCAGCUCCAA	UUGGAGCUGGAGCAGUUUC		[1011-1029]
87	AGUGAUUGCUUUUAUUACA	UGUAAUAAAAGCAAUCACU	Mnk	[1864-1882]
88	CCUCCAGUCUGUUCUCACA	UGUGAGAACAGACUGGAGG		[3039-3057]
89	UGUUCCUUUUGACAAUAUA	UAUAUUGUCAAAAGGAACA	Mnk	[3800-3818]
90	AAGCACUGAGGGAGACCAA	UUGGUCUCCCUCAGUGCUU	Cyn,Mnk	[458-476]
91	CAGCUGUUGUUGAGCGAAU	AUUCGCUCAACAACAGCUG		[295-313]
92	CAAAUUUAAUGUAGACAUU	AAUGUCUACAUUAAAUUUG		[1975-1993]
93	UGUCCAAAUUUAAUGUAGA	UCUACAUUAAAUUUGGACA		[1971-1989]
94	GCUUCAGCAUGUACUCCCA	UGGGAGUACAUGCUGAAGC	Cyn,Mnk	[519-537]
95	CAAAAAUGUUCUUCAUCCA	UGGAUGAAGAACAUUUUUG	Rat,Ms,Mnk	[1082-1100]
96	GAAGUAUUUGAGAGAGAGA	UCUCUCUCUCAAAUACUUC	Mnk	[4041-4059]
97	GAAGCCUUGCACUCCUGAA	UUCAGGAGUGCAAGGCUUC	Cyn,Mnk	[675-693]
98	AAUGGUGAUUUCUUGCUAA	UUAGCAAGAAAUCACCAUU	Mnk	[3370-3388]
99	GCAUUUUUAGCUCCUUGAA	UUCAAGGAGCUAAAAAUGC	Mnk	[3872-3890]
100	GGCUCUGAAGAAGCAAACA	UGUUUGCUUCUUCAGAGCC		[2001-2019]
101	UCCUGAAUUUUAUCAAACA	UGUUUGAUAAAAUUCAGGA	Mnk	[687-705]
102	CCGACAUGCUGGUUAAGGU	ACCUUAACCAGCAUGUCGG	Cyn,Rb,Mnk	[1358-1376]
103	UGGAGAGAAAGAACUGGAA	UUCCAGUUCUUUCUCUCCA	Cyn,Mnk	[780-798]
104	CUAGGCCUGUAGUAGUCAA	UUGACUACUACAGGCCUAG	Mnk	[3947-3965]
105	GAGAUAACUUCCUUCACAU	AUGUGAAGGAAGUUAUCUC	Mnk	[3905-3923]
106	CUCCCUUCUUUACCUUCAU	AUGAAGGUAAAGAAGGGAG		[2436-2454]
107	CUACAGAACAAACCAAAAA	UUUUUGGUUUGUUCUGUAG	Rat,Mnk	[1069-1087]
108	CAGGAUUUGGUUGUUUAAA	UUUAAACAACCAAAUCCUG		[3230-3248]
109	CUCUGAGCUUUGUUACUGA	UCAGUAACAAAGCUCAGAG	Dog,Mnk	[2217-2235]
110	UAUCCCUGCUUAUCUGAAA	UUUCAGAUAAGCAGGGAUA	Mnk	[2639-2657]
111	GGGCCUUCAUUAAAUGUUU	AAACAUUUAAUGAAGGCCC		[3720-3738]
112	GCUUUACAGGAUCAUGUAA	UUACAUGAUCCUGUAAAGC		[2497-2515]
113	CUAGAGUGAGAGUUUGGAA	UUCCAAACUCUCACUCUAG	Mnk	[1950-1968]
114	GGCUGUAAAUGAGGGCAGA	UCUGCCCUCAUUUACAGCC	Mnk	[3651-3669]
115	CGACUUGAGUCUCCCUUUU	AAAAGGGAGACUCAAGUCG	Mnk	[555-573]
116	CCUUGAACCUCAUUAAAUG	CAUUUAAUGAGGUUCAAGG	Mnk	[3355-3373]
117	AACCAAAAAUGUUCUUCAU	AUGAAGAACAUUUUUGGUU	Rat,Mnk	[1079-1097]
118	CCAGUCUGUUCUCACAUAA	UUAUGUGAGAACAGACUGG		[3042-3060]
119	CUGACAAGUGAAGUUGUAA	UUACAACUUCACUUGUCAG	Mnk	[1767-1785]
120	CAUGCAUCCUCAUCAUCAG	CUGAUGAUGAGGAUGCAUG	Mnk	[240-258]
121	GAGGAUAUGUUGCUCACCA	UGGUGAGCAACAUAUCCUC	Cyn,Mnk	[490-508]
122	GGUUGACCAACAAGAUGGA	UCCAUCUUGUUGGUCAACC	Mnk	[1131-1149]
123	CCUGCACUUCAUAUCUAGA	UCUAGAUAUGAAGUGCAGG	Mnk	[2375-2393]
124	CACUCCUGAAUUUUAUCAA	UUGAUAAAAUUCAGGAGUG	Mnk	[684-702]
125	GAAACUGCAGAAUUUUGCA	UGCAAAAUUCUGCAGUUUC	Mnk	[906-924]
126	GGCUCUUGCUCAAGUGUUU	AAACACUUGAGCAAGAGCC	Mnk	[1311-1329]

127	UCUGAAGAAGCAAACAUGA	UCAUGUUUGCUUCUUCAGA		[2004-2022]
128	GCUCCUUGAAGACAUAUCA	UGAUAUGUCUUCAAGGAGC	Mnk	[3881-3899]
129	GUAUUAAACUCUCCUUUGA	UCAAAGGAGAGUUUAAUAC	Mnk	[2562-2580]
130	GAGCGAAUUGUUAGAACAU	AUGUUCUAACAAUUCGCUC		[306-324]
131	CCAAAUAAAUGCUCAUAUU	AAUAUGAGCAUUUAUUUGG	Mnk	[4104-4122]
132	GUGAUGCCGGUAAAGAAAA	UUUUCUUUACCGGCAUCAC	Cyn,Mnk	[1184-1202]
133	CUUCAUAUCUAGAUUUCUA	UAGAAAUCUAGAUAUGAAG	Mnk	[2381-2399]
134	CCUUGCAUUUGUACCUUAU	AUAAGGUACAAAUGCAAGG	Mnk	[2153-2171]
135	AAACCUUUAUCCCUGCUUA	UAAGCAGGGAUAAAGGUUU	Mnk	[2632-2650]
136	GUAAAUGCUCAAAGAUGUA	UACAUCUUUGAGCAUUUAC		[2512-2530]
137	ACAUGCUGGUUAAGGUGAA	UUCACCUUAACCAGCAUGU	Cyn,Rb,Mnk	[1361-1379]
138	CCGCCCUUUUUGUCCUAGA	UCUAGGACAAAAAGGGCGG		[1936-1954]
139	CUUUUUCCUUCCUGAGAAA	UUUCUCAGGAAGGAAAAAG	Mnk	[2313-2331]
140	UCAUUAAAUGUUUGUUGAA	UUCAACAAACAUUUAAUGA		[3726-3744]
141	GACAUAGUAUGGAAGUAUU	AAUACUUCCAUACUAUGUC	Mnk	[4030-4048]
142	GGGCUAUGACGUCCAUGUU	AACAUGGACGUCAUAGCCC	Cyn,Mnk	[855-873]
143	GAUAAAAUGUUCCUUUUGA	UCAAAAGGAACAUUUUAUC	Mnk	[3793-3811]
144	CCAGUGGAAGGACACUCUU	AAGAGUGUCCUUCCACUGG	Mnk	[2090-2108]
145	GUGUGAUAGAGCCUUUGAU	AUCAAAGGCUCUAUCACAC	Mnk	[1557-1575]
146	AUCAGGAAACUCUAAAAAA	UUUUUUAGAGUUUCCUGAU	Cyn,Mnk	[254-272]
147	AGCUGUGACUACGACUUGA	UCAAGUCGUAGUCACAGCU	Rb,Mnk	[544-562]
148	CAGAAUUCCACCGGUGCAA	UUGCACCGGUGGAAUUCUG		[1418-1436]
149	CAAUGUGCACUUCACUGGA	UCCAGUGAAGUGCACAUUG	Cyn,Ms,Dog,Mnk	[765-783]
150	CAUGUAAAUGCUCAAAGAU	AUCUUUGAGCAUUUACAUG		[2509-2527]
151	CCCUUGAACCUCAUUAAAU	AUUUAAUGAGGUUCAAGGG	Mnk	[3354-3372]
152	UGGUGUUGAGCAAUGUGCA	UGCACAUUGCUCAACACCA	Cyn,Mnk	[755-773]
153	CAAUCCUACCUUUUGAUAA	UUAUCAAAAGGUAGGAUUG	Mnk	[3779-3797]
154	UGGAAAUGAGGGAGCUCAU	AUGAGCUCCCUCAUUUCCA	Ms,Rb,Mnk	[350-368]
155	UGCUUUACAGGAUCAUGUA	UACAUGAUCCUGUAAAGCA		[2496-2514]
156	GUUGUUGAGCGAAUUGUUA	UAACAAUUCGCUCAACAAC		[300-318]
157	GCAUUUGUACCUUAUUGAU	AUCAAUAAGGUACAAAUGC	Mnk	[2157-2175]
158	AAUCAACCUGCACUUCAUA	UAUGAAGUGCAGGUUGAUU	Mnk	[2369-2387]
159	AGGAUUUGGUUGUUUAAAU	AUUUAAACAACCAAAUCCU		[3231-3249]
160	AAGAGAAACUGCAGAAUUU	AAAUUCUGCAGUUUCUCUU	Mnk	[902-920]
161	AACCUUAGCUACAAUCCUA	UAGGAUUGUAGCUAAGGUU	Mnk	[3768-3786]
162	UGUUUCAGCUGCAGUUGAA	UUCAACUGCAGCUGAAACA	Mnk	[1744-1762]
163	CAUUUAUUGCAGUUUAUAU	AUAUAAACUGCAAUAAAUG	Mnk	[3592-3610]
164	GAUUGCUUUUAUUACAUUA	UAAUGUAAUAAAAGCAAUC	Mnk	[1867-1885]
165	CACCAAAUCUGUCUAGAAU	AUUCUAGACAGAUUUGGUG	Mnk	[2475-2493]
166	ACUUAUCAAGGAUCGGGAA	UUCCCGAUCCUUGAUAAGU	Cyn,Mnk	[1383-1401]
167	CCACAGGAGGUGUGAUAGA	UCUAUCACACCUCCUGUGG	Mnk	[1548-1566]
168	UGCUCAAAGAUGUAAUGUA	UACAUUACAUCUUUGAGCA		[2517-2535]
169	CUUUGAUCUUCAGGAUGCA	UGCAUCCUGAAGAUCAAAG	Mnk	[1569-1587]
170	GCUACUUUUACUUGUUCAU	AUGAACAAGUAAAAGUAGC	Mnk	[3615-3633]
171	UGUCUAGAAUCCUGCUUUA	UAAAGCAGGAUUCUAGACA	Mnk	[2484-2502]
172	UCACCUUGGUUUAUGAGAA	UUCUCAUAAACCAAGGUGA	Mnk	[3320-3338]
173	AACCUUUAUCCCUGCUUAU	AUAAGCAGGGAUAAAGGUU	Mnk	[2633-2651]
174	GGAGAGAAAGAACUGGAAU	AUUCCAGUUCUUUCUCUCC	Cyn,Mnk	[781-799]
175	GAGGUUCCUGGUACAUCGA	UCGAUGUACCAGGAACCUC	Cyn,Mnk	[1292-1310]
176	GUCGACAGAUACUGUGGAA	UUCCACAGUAUCUGUCGAC	Cyn,Mnk	[615-633]
177	GCAGUUUAUAUAUAUGCUA	UAGCAUAUAUAUAAACUGC		[3600-3618]
178	CACUUAUCAAGGAUCGGGA	UCCCGAUCCUUGAUAAGUG	Cyn,Mnk	[1382-1400]
179	AGCCUACAGAACAAACCAA	UUGGUUUGUUCUGUAGGCU	Mnk	[1066-1084]
180	ACACUCCCUAGACAAUAAA	UUUAUUGUCUAGGGAGUGU	Cyn,Mnk	[633-651]
181	ACAUUGCCUUGCAUUUGUA	UACAAAUGCAAGGCAAUGU		[2147-2165]
182	CUUGCACUCCUGAAUUUUA	UAAAAUUCAGGAGUGCAAG	Cyn,Mnk	[680-698]

183	ACAUCAUCACCUUGGAAAU	AUUUCCAAGGUGAUGAUGU	Cyn,Dog,Mnk	[338-356]
184	CACGCGCUCAGACAUGAUA	UAUCAUGUCUGAGCGCGUG	Cyn,Mnk	[1224-1242]
185	CUGGAGAAGGACAUCAUCA	UGAUGAUGUCCUUCUCCAG	Cyn,Rb,Dog,Mnk	[328-346]
186	CCUUAUUGAUCUUUGCCCA	UGGGCAAAGAUCAAUAAGG	Mnk	[2166-2184]
187	GGAACACUCCCUAGACAAU	AUUGUCUAGGGAGUGUUCC	Cyn,Mnk	[630-648]
188	CCCUGAGCAGUCUACUUCU	AGAAGUAGACUGCUCAGGG	Mnk	[3537-3555]
189	CAUGCGGAACACCAAACGA	UCGUUUGGUGUUCCGCAUG	Cyn,Mnk	[1275-1293]
190	UAGUAGUCAAGGUGCUCAA	UUGAGCACCUUGACUACUA	Mnk	[3956-3974]
191	CCUGCUUUCUCUUUCAGUA	UACUGAAAGAGAAAGCAGG		[2546-2564]
192	CAGUUGAAGAGCCUGACAA	UUGUCAGGCUCUUCAACUG	Mnk	[1755-1773]
193	UGGAAAGAACCACGCAGGA	UCCUGCGUGGUUCUUUCCA	Mnk	[1146-1164]
194	UGUUGUUGAGCGAAUUGUU	AACAAUUCGCUCAACAACA		[299-317]
195	GUGCAAGGAGAUGUCUGAA	UUCAGACAUCUCCUUGCAC	Mnk	[1431-1449]
196	UUUACAGGAUCAUGUAAAU	AUUUACAUGAUCCUGUAAA		[2499-2517]
197	CAGGAUGCACGGUUUCUGU	ACAGAAACCGUGCAUCCUG	Mnk	[1579-1597]
198	CAUAUCUCUCCCUUCUUUA	UAAAGAAGGGAGAGAUAUG		[2429-2447]
199	CCCAUGGUCCCUAGCAAAA	UUUUGCUAGGGACCAUGGG	Mnk	[3926-3944]
200	UCAAGGUGCUCAAUAAAUA	UAUUUAUUGAGCACCUUGA	Mnk	[3962-3980]
201	AGAAGGACAUCAUCACCUU	AAGGUGAUGAUGUCCUUCU	Cyn,Dog,Mnk	[332-350]
202	CCCAUGGAAGUCUCAAAGA	UCUUUGAGACUUCCAUGGG	Mnk	[2181-2199]
203	ACUGGAAUUUCGCUCUGGA	UCCAGAGCGAAAUUCCAGU	Cyn,Mnk	[792-810]
204	UCUGAGCUUUGUUACUGAA	UUCAGUAACAAAGCUCAGA	Dog,Mnk	[2218-2236]
205	GCAUUUAUUGCAGUUUAUA	UAUAAACUGCAAUAAAUGC	Mnk	[3591-3609]
206	GUUUGGAAGGUGUCCAAAU	AUUUGGACACCUUCCAAAC	Mnk	[1961-1979]
207	AAGAAAAGUUGCCGAAGAU	AUCUUCGGCAACUUUUCUU	Mnk	[1196-1214]
208	CAUUAGUUAAGAUGUCUGA	UCAGACAUCUUAACUAAUG	Mnk	[1881-1899]
209	GCAGAAACCUUGUUUGUUU	AAACAAACAAGGUUUCUGC	Mnk	[3665-3683]
210	AACUCUCCUUUGAUAUUAU	AUAAUAUCAAAGGAGAGUU	Mnk	[2568-2586]
211	AAAUGUUCCUUUUGACAAU	AUUGUCAAAAGGAACAUUU	Mnk	[3797-3815]
212	GCAAAAUGCUAGGCCUGUA	UACAGGCCUAGCAUUUUGC	Mnk	[3939-3957]
213	GCACAGGAAAUGCAAGAGA	UCUCUUGCAUUUCCUGUGC	Cyn,Rat,Ms, GP,Chn,Mnk	[889-907]
214	GCACAUAGUGGGCCUUCAU	AUGAAGGCCCACUAUGUGC		[3711-3729]
215	AGCUUAUCUCCCUGCUUCA	UGAAGCAGGGAGAUAAGCU	Mnk	[2412-2430]
216	UAUUGUUUUCAACCUAGAA	UUCUAGGUUGAAAACAAUA		[2615-2633]
217	GUGGAACACUCCCUAGACA	UGUCUAGGGAGUGUUCCAC	Cyn,Dog,Mnk	[628-646]
218	CUCCCUGCUUCAUAUCUCU	AGAGAUAUGAAGCAGGGAG	Mnk	[2419-2437]
219	CAUUUAAAAUGUAAACUCU	AGAGUUUACAUUUUAAAUG	Mnk	[3301-3319]
220	CGACAUAGUAUGGAAGUAU	AUACUUCCAUACUAUGUCG	Mnk	[4029-4047]
221	AAUGUUUGUUGAAUAAAAG	CUUUUAUUCAACAAACAUU	Mnk	[3732-3750]
222	CCAAAUUUAAUGUAGACAU	AUGUCUACAUUAAAUUUGG		[1974-1992]
223	UGAGAUAACUUCCUUCACA	UGUGAAGGAAGUUAUCUCA	Mnk	[3904-3922]
224	GAGCCUUUGAUCUUCAGGA	UCCUGAAGAUCAAAGGCUC	Mnk	[1565-1583]
225	CCUUUAUCCCUGCUUAUCU	AGAUAAGCAGGGAUAAAGG	Mnk	[2635-2653]
226	CGAAUUGUUAGAACAUCUU	AAGAUGUUCUAACAAUUCG		[309-327]
227	CUUUCUCUUUCAGUAUUAA	UUAAUACUGAAAGAGAAAG		[2550-2568]
228	GAGAGAGAGAACCUUUCCA	UGGAAAGGUUCUCUCUCUC	Mnk	[4050-4068]
229	CUGAGCUUUGUUACUGAAA	UUUCAGUAACAAAGCUCAG	Mnk	[2219-2237]
230	AUGUUUGUUGAAUAAAAGA	UCUUUUAUUCAACAAACAU	Mnk	[3733-3751]
231	AGUUAAGAUGUCUGAGAGA	UCUCUCAGACAUCUUAACU	Mnk	[1885-1903]
232	CUUCCUCAAGUCUUGACAA	UUGUCAAGACUUGAGGAAG		[3501-3519]
233	CUCCUAUCUUUUAUUUCAU	AUGAAAUAAAAGAUAGGAG	Mnk	[1908-1926]
234	GGUGUGAUAGAGCCUUUGA	UCAAAGGCUCUAUCACACC	Mnk	[1556-1574]
235	GGGCAGAAACCUUGUUUGU	ACAAACAAGGUUUCUGCCC	Mnk	[3663-3681]
236	GAGAUGUCUGAAUACUGCA	UGCAGUAUUCAGACAUCUC	Mnk	[1438-1456]
237	CCCACUUUCAUUCAAUCAA	UUGAUUGAAUGAAAGUGGG	Mnk	[2356-2374]
238	CCACUUUCAUUCAAUCAAC	GUUGAUUGAAUGAAAGUGG	Mnk	[2357-2375]

239	CAUCUCUCUCCCUUACUAU	AUAGUAAGGGAGAGAGAUG	Mnk	[2336-2354]
240	UGAGCGAAUUGUUAGAACA	UGUUCUAACAAUUCGCUCA		[305-323]
241	UUAGCUCCUUGAAGACAUA	UAUGUCUUCAAGGAGCUAA	Mnk	[3878-3896]
242	ACAGUUACCUGCACACCGA	UCGGUGUGCAGGUAACUGU	Mnk	[924-942]
243	ACAGGAUCAUGUAAAUGCU	AGCAUUUACAUGAUCCUGU		[2502-2520]
244	CGUUCCCUUCAGUACUGCA	UGCAGUACUGAAGGGAACG	Mnk	[2064-2082]
245	AAAUGCUAGGCCUGUAGUA	UACUACAGGCCUAGCAUUU	Mnk	[3942-3960]
246	GUGUGGAUGGGAAACUGCU	AGCAGUUUCCCAUCCACAC	Mnk	[1001-1019]
247	CUGUCUUUUUCCUUCCUGA	UCAGGAAGGAAAAAGACAG	Mnk	[2309-2327]
248	CCUAGACAAUAAAGAUGGU	ACCAUCUUUAUUGUCUAGG	Cyn,Mnk	[639-657]
249	UGGAAGUAUUUGAGAGAGA	UCUCUCUCAAAUACUUCCA	Mnk	[4039-4057]
250	CAGCCUUGGUUGGACCUAU	AUAGGUCCAACCAAGGCUG		[1716-1734]
251	GAACGCACUUAUCAAGGAU	AUCCUUGAUAAGUGCGUUC	Mnk	[1377-1395]
252	GCGAAUUGUUAGAACAUCU	AGAUGUUCUAACAAUUCGC		[308-326]
253	AAGCCUACAGAACAAACCA	UGGUUUGUUCUGUAGGCUU	Mnk	[1065-1083]
254	CGCCCUUUUUGUCCUAGAG	CUCUAGGACAAAAAGGGCG		[1937-1955]
255	GAGCCUGACAAGUGAAGUU	AACUUCACUUGUCAGGCUC	Mnk	[1763-1781]
256	GCCUGACAAGUGAAGUUGU	ACAACUUCACUUGUCAGGC	Mnk	[1765-1783]
257	GCUGUAAAUGAGGGCAGAA	UUCUGCCCUCAUUUACAGC	Mnk	[3652-3670]
258	UGUUGAGCGAAUUGUUAGA	UCUAACAAUUCGCUCAACA		[302-320]
259	AGCUGUUGUUGAGCGAAUU	AAUUCGCUCAACAACAGCU		[296-314]
260	CUGUGCGUUCCCUUCAGUA	UACUGAAGGGAACGCACAG	Mnk	[2059-2077]
261	UAGCACUGGUGUUGAGCAA	UUGCUCAACACCAGUGCUA	Cyn,Mnk	[749-767]
262	CGUCCAUGUUCUAUGUGAC	GUCACAUAGAACAUGGACG	Mnk	[864-882]
263	AGACCAUCUCCUAUCUUUU	AAAAGAUAGGAGAUGGUCU	Mnk	[1901-1919]
264	GCUUUUAUUACAUUAGUUA	UAACUAAUGUAAUAAAAGC	Mnk	[1871-1889]
265	AGCCUUUGAUCUUCAGGAU	AUCCUGAAGAUCAAAGGCU	Mnk	[1566-1584]
266	GGUCCCUAGCAAAAUGCUA	UAGCAUUUUGCUAGGGACC	Mnk	[3931-3949]
267	CAUUAAAUGGUGAUUUCUU	AAGAAAUCACCAUUUAAUG	Mnk	[3365-3383]
268	CAACCUUAGCUACAAUCCU	AGGAUUGUAGCUAAGGUUG	Mnk	[3767-3785]
269	GCAGUUGAAGAGCCUGACA	UGUCAGGCUCUUCAACUGC	Mnk	[1754-1772]
270	CAGAAACCUUGUUUGUUUU	AAAACAAACAAGGUUUCUG	Mnk	[3666-3684]
271	CAUCUUCUGGAGAAGGACA	UGUCCUUCUCCAGAAGAUG	Cyn,Mnk	[322-340]
272	CUUUGAGUGUGGGACUCCA	UGGAGUCCCACACUCAAAG	Mnk	[1658-1676]
273	UGCAUUUAUUGCAGUUUAU	AUAAACUGCAAUAAAUGCA	Mnk	[3590-3608]
274	GAACCUCAUUAAAUGGUGA	UCACCAUUUAAUGAGGUUC	Mnk	[3359-3377]
275	CGUUGGUUGUUUCUCUGAG	CUCAGAGAAACAACCAACG		[2205-2223]
276	UGACAAUAUACACGGAUUA	UAAUCCGUGUAUAUUGUCA	Mnk	[3809-3827]
277	GCCUUGCAUUUGUACCUUA	UAAGGUACAAAUGCAAGGC	Mnk	[2152-2170]
278	UCUUCACCUUGGUUUAUGA	UCAUAAACCAAGGUGAAGA	Mnk	[3317-3335]
279	UCAGGAAACUCUAAAAAAG	CUUUUUUAGAGUUUCCUGA	Cyn,Mnk	[255-273]
280	UCUCCUAUCUUUUAUUUCA	UGAAAUAAAAGAUAGGAGA	Mnk	[1907-1925]
281	GGAUCGGGAAGGUUAUGCU	AGCAUAACCUUCCCGAUCC	Mnk	[1392-1410]
282	AGUCUGUUCUCACAUAACA	UGUUAUGUGAGAACAGACU		[3044-3062]
283	AAGUAUUUGAGAGAGAGAA	UUCUCUCUCUCAAAUACUU	Mnk	[4042-4060]
284	AAAUGAGGGAGCUCAUCCA	UGGAUGAGCUCCCUCAUUU	Ms,Rb,Mnk	[353-371]
285	GUUCCUGCUUUCUCUUUCA	UGAAAGAGAAAGCAGGAAC		[2543-2561]
286	UGAAUAAAAGAGGGAAGAA	UUCUUCCCUCUUUUAUUCA	Mnk	[3741-3759]
287	GAGCAAUGUGCACUUCACU	AGUGAAGUGCACAUUGCUC	Cyn,Ms,Dog,Mnk	[762-780]
288	CUUUGGGUCGACAUAGUAU	AUACUAUGUCGACCCAAAG	Mnk	[4021-4039]
289	GAGAAACGUCCAUCUCUCU	AGAGAGAUGGACGUUUCUC	Mnk	[2326-2344]
290	UAUCUAGAUUUCUAGAAAA	UUUUCUAGAAAUCUAGAUA	Mnk	[2386-2404]
291	UGAGCUUUGUUACUGAAAU	AUUUCAGUAACAAAGCUCA	Mnk	[2220-2238]
292	GAUCAUGUAAAUGCUCAAA	UUUGAGCAUUUACAUGAUC	Mnk	[2506-2524]
293	GCUCAAAGAUGUAAUGUAG	CUACAUUACAUCUUUGAGC		[2518-2536]
294	CCAUCUCCUAUCUUUUAUU	AAUAAAAGAUAGGAGAUGG	Mnk	[1904-1922]

295	GGCCUGUAGUAGUCAAGGU	ACCUUGACUACUACAGGCC	Mnk	[3950-3968]
296	GACCACAGGAGGUGUGAUA	UAUCACACCUCCUGUGGUC	Mnk	[1546-1564]
297	AGGUUUUUCAGCUCUUUGA	UCAAAGAGCUGAAAAACCU	Mnk	[1031-1049]
298	GGUUAAGGUGAACGCACUU	AAGUGCGUUCACCUUAACC	Mnk	[1368-1386]
299	CUACCAGGCUGUAAAUGAG	CUCAUUUACAGCCUGGUAG	Mnk	[3645-3663]
300	GUUUCCCUAGACUCUGUAA	UUACAGAGUCUAGGGAAAC	Mnk	[2282-2300]
301	AGGAGAGUGAUGCCGGUAA	UUACCGGCAUCACUCUCCU	Cyn,Mnk	[1178-1196]
302	UCCCAUGGUCCCUAGCAAA	UUUGCUAGGGACCAUGGGA	Mnk	[3925-3943]
303	CUGUAAAUGAGGGCAGAAA	UUUCUGCCCUCAUUUACAG	Mnk	[3653-3671]
304	GAGAGAAAGAACUGGAAUU	AAUUCCAGUUCUUUCUCUC	Cyn,Mnk	[782-800]
305	CCAUGGUCCCUAGCAAAAU	AUUUUGCUAGGGACCAUGG	Mnk	[3927-3945]
306	GUGGUGUCCUUCUUCCUCA	UGAGGAAGAAGGACACCAC		[3490-3508]
307	GCUCCAAGAGGUUUUUCAG	CUGAAAAACCUCUUGGAGC		[1023-1041]
308	CAUGUUCUAUGUGACCAGA	UCUGGUCACAUAGAACAUG	Mnk	[868-886]
309	UUGUUUGGGUGGUUUGUGA	UCACAAACCACCCAAACAA		[3982-4000]
310	GAAAAGUUGCCGAAGAUGA	UCAUCUUCGGCAACUUUUC	Mnk	[1198-1216]
311	AUAGUAUGGAAGUAUUUGA	UCAAAUACUUCCAUACUAU	Mnk	[4033-4051]
312	CACCGUUGAGCUGUGACUA	UAGUCACAGCUCAACGGUG	Rat,Ms,Rb,GP,Dog,Mnk	[536-554]
313	CUUUAGUGAUUGCUUUUAU	AUAAAAGCAAUCACUAAAG	Mnk	[1860-1878]
314	CUUUACAGGAUCAUGUAAA	UUUACAUGAUCCUGUAAAG		[2498-2516]
315	AAACCUUGUUUGUUUUAUU	AAUAAAACAAACAAGGUUU	Mnk	[3669-3687]
316	GAAGCAAACAUGACUAGAG	CUCUAGUCAUGUUUGCUUC		[2010-2028]
317	UUGCACUCCUGAAUUUUAU	AUAAAAUUCAGGAGUGCAA	Cyn,Mnk	[681-699]
318	GCCUGUCGACAGAUACUGU	ACAGUAUCUGUCGACAGGC	Cyn,Mnk	[611-629]
319	GCAUGCAUCCUCAUCAUCA	UGAUGAUGAGGAUGCAUGC	Mnk	[239-257]
320	CCUACCAGGCUGUAAAUGA	UCAUUUACAGCCUGGUAGG	Mnk	[3644-3662]
321	ACUGCCCAAGCCUACAGAA	UUCUGUAGGCUUGGGCAGU	Cyn,Mnk	[1058-1076]
322	UGUGAAGCACUGAGGGAGA	UCUCCCUCAGUGCUUCACA	Cyn,Mnk	[454-472]
323	AGUUUGGAAGGUGUCCAAA	UUUGGACACCUUCCAAACU	Mnk	[1960-1978]
324	ACUGAGGGAGACCAAGCAA	UUGCUUGGUCUCCCUCAGU	Cyn,Mnk	[462-480]
325	GACAUCAUCACCUUGGAAA	UUUCCAAGGUGAUGAUGUC	Cyn,Dog,Mnk	[337-355]
326	GGUCGACAUAGUAUGGAAG	CUUCCAUACUAUGUCGACC	Mnk	[4026-4044]
327	AACUCUUCACCUUGGUUUA	UAAACCAAGGUGAAGAGUU	Mnk	[3314-3332]
328	CUGAGAGACCAUCUCCUAU	AUAGGAGAUGGUCUCUCAG	Mnk	[1896-1914]
329	CAAUAAAGAUGGUCCUGUC	GACAGGACCAUCUUUAUUG	Cyn,Mnk	[645-663]
330	UUUGGAAGGUGUCCAAAUU	AAUUUGGACACCUUCCAAA	Mnk	[1962-1980]
331	AGCCUUGGUUGGACCUAUU	AAUAGGUCCAACCAAGGCU		[1717-1735]
332	GAAUGUUUCAGCUGCAGUU	AACUGCAGCUGAAACAUUC	Mnk	[1741-1759]
333	GCUCUGAAGAAGCAAACAU	AUGUUUGCUUCUUCAGAGC		[2002-2020]
334	CUGUGACUACGACUUGAGU	ACUCAAGUCGUAGUCACAG	Rb,Mnk	[546-564]
335	CUUGCAUUUGUACCUUAUU	AAUAAGGUACAAAUGCAAG	Mnk	[2154-2172]
336	UUAUCUCCCUGCUUCAUAU	AUAUGAAGCAGGGAGAUAA	Mnk	[2415-2433]
337	GAUCUUUGCCCAUGGAAGU	ACUUCCAUGGGCAAAGAUC	Mnk	[2173-2191]
338	CCUUUUUGUCCUAGAGUGA	UCACUCUAGGACAAAAAGG	Mnk	[1940-1958]
339	GUGGGAAUCUCCCAGACUU	AAGUCUGGGAGAUUCCCAC	Mnk	[1615-1633]
340	CUCCUUGAAGACAUAUCAU	AUGAUAUGUCUUCAAGGAG	Mnk	[3882-3900]
341	CAUGUACUCCCACCGUUGA	UCAACGGUGGGAGUACAUG	Cyn,Mnk	[526-544]
342	AUUAAACUCUCCUUUGAUA	UAUCAAAGGAGAGUUUAAU	Mnk	[2564-2582]
343	CAAGUGAAGUUGUAAACAC	GUGUUUACAACUUCACUUG	Mnk	[1771-1789]
344	GCUUUCUCUUUCAGUAUUA	UAAUACUGAAAGAGAAAGC		[2549-2567]
345	CCUAGAAACCUUUAUCCCU	AGGGAUAAAGGUUUCUAGG	Mnk	[2627-2645]
346	GCCCAUGGAAGUCUCAAAG	CUUUGAGACUUCCAUGGGC	Mnk	[2180-2198]
347	GCACUUUAGUGAUUGCUUU	AAAGCAAUCACUAAAGUGC	Mnk	[1857-1875]
348	CAUUAAAUGUUUGUUGAAU	AUUCAACAAACAUUUAAUG		[3727-3745]
349	UGCCCAAGCCUACAGAACA	UGUUCUGUAGGCUUGGGCA	Cyn,Mnk	[1060-1078]
350	GAGGUGUGAUAGAGCCUUU	AAAGGCUCUAUCACACCUC	Mnk	[1554-1572]

351	CAAGCUUUUGGGCUAUGAC	GUCAUAGCCCAAAAGCUUG	Cyn,Mnk	[846-864]
352	CCUUCCUGAGAAACGUCCA	UGGACGUUUCUCAGGAAGG	Mnk	[2319-2337]
353	CCUGAAUUUUAUCAAACAC	GUGUUUGAUAAAAUUCAGG	Mnk	[688-706]
354	GAGACCAUCUCCUAUCUUU	AAAGAUAGGAGAUGGUCUC	Mnk	[1900-1918]
355	CUGCACAGGAAAUGCAAGA	UCUUGCAUUUCCUGUGCAG	Cyn,Rat,GP,Chn,Mnk	[887-905]
356	GUCCCUGAGCAGUCUACUU	AAGUAGACUGCUCAGGGAC	Mnk	[3535-3553]
357	GGAAGUAUUUGAGAGAGAG	CUCUCUCUCAAAUACUUCC	Mnk	[4040-4058]
358	CACGGAUUAUUAUUUGUAC	GUACAAAUAAUAAUCCGUG	Mnk	[3819-3837]
359	UCAAGGAUCGGGAAGGUUA	UAACCUUCCCGAUCCUUGA	Mnk	[1388-1406]
360	GGUGAUUUCUUGCUAAGCU	AGCUUAGCAAGAAAUCACC	Mnk	[3373-3391]
361	GAGAGACCAUCUCCUAUCU	AGAUAGGAGAUGGUCUCUC	Mnk	[1898-1916]
362	AAAUGGUGAUUUCUUGCUA	UAGCAAGAAAUCACCAUUU	Mnk	[3369-3387]
363	CUCAGGUGGUGUCCUUCUU	AAGAAGGACACCACCUGAG		[3485-3503]
364	AGAAAAGCUUCCUAGCUUA	UAAGCUAGGAAGCUUUUCU	Mnk	[2399-2417]
365	CCAACAAGAUGGAAAGAAC	GUUCUUUCCAUCUUGUUGG	Mnk	[1137-1155]
366	GGUGUCCAAAUUUAAUGUA	UACAUUAAAUUUGGACACC		[1969-1987]
367	CAAGGAGAUGUCUGAAUAC	GUAUUCAGACAUCUCCUUG	Mnk	[1434-1452]
368	GGCAUUUUUAGCUCCUUGA	UCAAGGAGCUAAAAAUGCC	Mnk	[3871-3889]
369	UGACGUCCAUGUUCUAUGU	ACAUAGAACAUGGACGUCA	Mnk	[861-879]
370	GUGAUUGCUUUUAUUACAU	AUGUAAUAAAAGCAAUCAC	Mnk	[1865-1883]
371	CAAGAGAAACUGCAGAAUU	AAUUCUGCAGUUUCUCUUG	Mnk	[901-919]
372	CCAACAUUGCCUUGCAUUU	AAAUGCAAGGCAAUGUUGG		[2144-2162]
373	UCGACAUAGUAUGGAAGUA	UACUUCCAUACUAUGUCGA	Mnk	[4028-4046]
374	GCUGGUUAAGGUGAACGCA	UGCGUUCACCUUAACCAGC	Mnk	[1365-1383]
375	UAGUGGGCCUUCAUUAAAU	AUUUAAUGAAGGCCCACUA		[3716-3734]
376	AAAGAAAAGUUGCCGAAGA	UCUUCGGCAACUUUUCUUU	Mnk	[1195-1213]
377	CUAGAAUCCUGCUUUACAG	CUGUAAAGCAGGAUUCUAG		[2487-2505]
378	AGAGUGAUGCCGGUAAAGA	UCUUUACCGGCAUCACUCU	Cyn,Mnk	[1181-1199]
379	AGAAGCAAACAUGACUAGA	UCUAGUCAUGUUUGCUUCU		[2009-2027]
380	UGCUACUUUUACUUGUUCA	UGAACAAGUAAAAGUAGCA	Mnk	[3614-3632]
381	UACAUGUUAUUGUUUUCAA	UUGAAAACAAUAACAUGUA		[2608-2626]
382	ACAUAGUAUGGAAGUAUUU	AAAUACUUCCAUACUAUGU	Mnk	[4031-4049]
383	AGUUGAAGAGCCUGACAAG	CUUGUCAGGCUCUUCAACU	Mnk	[1756-1774]
384	AUGGGAAACUGCUCCAGCU	AGCUGGAGCAGUUUCCCAU	Mnk	[1007-1025]
385	UGGAACACUCCCUAGACAA	UUGUCUAGGGAGUGUUCCA	Cyn,Dog,Mnk	[629-647]
386	AGAAUGUGGAACUCCUCAA	UUGAGGAGUUCCACAUUCU	Rat,Ms, GP,Chn,Mnk	[395-413]
387	UCUUUUUCCUUCCUGAGAA	UUCUCAGGAAGGAAAAAGA	Mnk	[2312-2330]
388	CCUUGAAGACAUAUCAUGU	ACAUGAUAUGUCUUCAAGG	Mnk	[3884-3902]
389	AAACAUGACUAGAGACGCA	UGCGUCUCUAGUCAUGUUU	Mnk	[2015-2033]
390	CCUCUCAGCUUCUAAUUUU	AAAAUUAGAAGCUGAGAGG	Mnk	[3408-3426]
391	GACAAUAUACACGGAUUAU	AUAAUCCGUGUAUAUUGUC	Mnk	[3810-3828]
392	AUAUCUAGAUUUCUAGAAA	UUUCUAGAAAUCUAGAUAU	Mnk	[2385-2403]
393	CCUAGAGUGAGAGUUUGGA	UCCAAACUCUCACUCUAGG	Mnk	[1949-1967]
394	UUCUGAGCGGGCUUGUGAU	AUCACAAGCCCGCUCAGAA	Mnk	[1329-1347]
395	GACGCAGGAUAUUGGGAGU	ACUCCCAAUAUCCUGCGUC	Cyn,Mnk	[215-233]
396	GGUGCUCAAUAAAUAUUUG	CAAAUAUUUAUUGAGCACC	Mnk	[3966-3984]
397	CUGUGGAACACUCCCUAGA	UCUAGGGAGUGUUCCACAG	Cyn,Dog,Mnk	[626-644]
398	AGAGAAACUGCAGAAUUUU	AAAAUUCUGCAGUUUCUCU	Mnk	[903-921]
399	UGUUGAAUAAAAGAGGGAA	UUCCCUCUUUUAUUCAACA	Mnk	[3738-3756]
400	GAGAGAGAACCUUUCCACU	AGUGGAAAGGUUCUCUCUC	Mnk	[4052-4070]
401	UGAACGCACUUAUCAAGGA	UCCUUGAUAAGUGCGUUCA	Mnk	[1376-1394]
402	ACGCGCUCAGACAUGAUAU	AUAUCAUGUCUGAGCGCGU	Cyn,Mnk	[1225-1243]
403	CUUCACUGGAGAGAAAGAA	UUCUUUCUCUCCAGUGAAG	Cyn,Mnk	[774-792]
404	CCUUGUUUGUUUUAUUCAC	GUGAAUAAAACAAACAAGG	Mnk	[3672-3690]
405	AGAACAAACCAAAAAUGUU	AACAUUUUUGGUUUGUUCU	Rat,Mnk	[1073-1091]
406	CGUGGAGAUGAGACUGAUC	GAUCAGUCUCAUCUCCACG	Cyn,GP,Chn,Mnk	[1108-1126]

407	CACUGGUGUUGAGCAAUGU	ACAUUGCUCAACACCAGUG	Cyn,Mnk	[752-770]
408	UGUAAAUGCUCAAAGAUGU	ACAUCUUUGAGCAUUUACA		[2511-2529]
409	CAUCAUCUCUGCCUUUGAG	CUCAAAGGCAGAGAUGAUG	Mnk	[1646-1664]
410	CUACCUUUUGAUAAAAUGU	ACAUUUUAUCAAAAGGUAG	Mnk	[3784-3802]
411	AAGGUGAACGCACUUAUCA	UGAUAAGUGCGUUCACCUU	Mnk	[1372-1390]
412	GAACACUCCCUAGACAAUA	UAUUGUCUAGGGAGUGUUC	Cyn,Mnk	[631-649]
413	ACCAGACUGCACAGGAAAU	AUUUCCUGUGCAGUCUGGU	Cyn,Rat,GP,Chn,Dog,Mnk	[881-899]
414	ACAAGUGAAGUUGUAAACA	UGUUUACAACUUCACUUGU	Mnk	[1770-1788]
415	CAUUCUUUCUUCCUCCAGU	ACUGGAGGAAGAAAGAAUG	Mnk	[3028-3046]
416	CAGACAUGAUAUGCGGCUA	UAGCCGCAUAUCAUGUCUG	Cyn,Mnk	[1232-1250]
417	CAACCUGCACUUCAUAUCU	AGAUAUGAAGUGCAGGUUG	Mnk	[2372-2390]
418	CUUUGUUCCUGCUUUCUCU	AGAGAAAGCAGGAACAAAG		[2539-2557]
419	CUUCUUUACCUUCAUUUCA	UGAAAUGAAGGUAAAGAAG		[2440-2458]
420	AACCCUUCUGCUUUCUAUU	AAUAGAAAGCAGAAGGGUU	Mnk	[3276-3294]
421	ACUUCACUGGAGAGAAAGA	UCUUUCUCUCCAGUGAAGU	Cyn,Rat,Ms,Dog,Mnk	[773-791]
422	GUCUCCUCUCAGCUUCUAA	UUAGAAGCUGAGAGGAGAC	Mnk	[3404-3422]
423	GGAAAGAACCACGCAGGAU	AUCCUGCGUGGUUCUUUCC	Mnk	[1147-1165]
424	ACUCCCUAGACAAUAAAGA	UCUUUAUUGUCUAGGGAGU	Cyn,Mnk	[635-653]
425	GUAAAGAAAAGUUGCCGAA	UUCGGCAACUUUUCUUUAC	Mnk	[1193-1211]
426	CUAUCUUUUAUUUCAUUCA	UGAAUGAAAUAAAAGAUAG	Mnk	[1911-1929]
427	AACCUGCACUUCAUAUCUA	UAGAUAUGAAGUGCAGGUU	Mnk	[2373-2391]
428	AGCGGGCUUGUGAUAUGCA	UGCAUAUCACAAGCCCGCU	Cyn,Mnk	[1334-1352]
429	UGCAAGAGAAACUGCAGAA	UUCUGCAGUUUCUCUUGCA	Mnk	[899-917]
430	CUGGAGAGAAAGAACUGGA	UCCAGUUCUUUCUCUCCAG	Cyn,Mnk	[779-797]
431	AAUAUACACGGAUUAUUAU	AUAAUAAUCCGUGUAUAUU	Mnk	[3813-3831]
432	UCUGAGAGACCAUCUCCUA	UAGGAGAUGGUCUCUCAGA	Mnk	[1895-1913]
433	UCUAUGGUGUGGAUGGGAA	UUCCCAUCCACACCAUAGA	Mnk	[995-1013]
434	CAGAAUGUGGAACUCCUCA	UGAGGAGUUCCACAUUCUG	Rat,Ms, GP,Chn,Mnk	[394-412]
435	ACAGAAUUCCACCGGUGCA	UGCACCGGUGGAAUUCUGU		[1417-1435]
436	CUUACUAUUCCCACUUUCA	UGAAAGUGGGAAUAGUAAG	Mnk	[2347-2365]
437	GCAAGAGAAACUGCAGAAU	AUUCUGCAGUUUCUCUUGC	Mnk	[900-918]
438	GAAUCUCCCAGACUUGUUU	AAACAAGUCUGGGAGAUUC	Mnk	[1619-1637]
439	UGGAGAAGGACAUCAUCAC	GUGAUGAUGUCCUUCUCCA	Cyn,Rb,Dog,Mnk	[329-347]
440	GAGAACCUUUCCACUCCCA	UGGGAGUGGAAAGGUUCUC	Mnk	[4056-4074]
441	ACUUCCCUGUUCUUUAAGA	UCUUAAAGAACAGGGAAGU	Mnk	[2665-2683]
442	GUGUUUCCCUAGACUCUGU	ACAGAGUCUAGGGAAACAC	Mnk	[2280-2298]
443	AGGAAAUGCAAGAGAAACU	AGUUUCUCUUGCAUUUCCU	Cyn,Rat,Ms, GP,Chn,Mnk	[893-911]
444	UUCAGUUCCAGCUUUUGUA	UACAAAAGCUGGAACUGAA	Mnk	[1834-1852]
445	CGCGCUCAGACAUGAUAUG	CAUAUCAUGUCUGAGCGCG	Cyn,Mnk	[1226-1244]
446	AUGUCUGAAUACUGCAGCA	UGCUGCAGUAUUCAGACAU	Mnk	[1441-1459]
447	UGGUUAAGGUGAACGCACU	AGUGCGUUCACCUUAACCA	Mnk	[1367-1385]
448	UGCAUUUGUACCUUAUUGA	UCAAUAAGGUACAAAUGCA	Mnk	[2156-2174]
449	CCCAAGCCUACAGAACAAA	UUUGUUCUGUAGGCUUGGG	Cyn,Mnk	[1062-1080]
450	CUUUCUUCCUCCAGUCUGU	ACAGACUGGAGGAAGAAAG	Mnk	[3032-3050]
451	AAGAUGUCUGAGAGACCAU	AUGGUCUCUCAGACAUCUU	Mnk	[1889-1907]
452	GCCUUGCACUCCUGAAUUU	AAAUUCAGGAGUGCAAGGC	Cyn,Mnk	[678-696]
453	CUUUAUCCCUGCUUAUCUG	CAGAUAAGCAGGGAUAAAG	Mnk	[2636-2654]
454	UGUUAUUGUUUUCAACCUA	UAGGUUGAAAACAAUAACA		[2612-2630]
455	AAAAGAGGGAAGAAGGCAA	UUGCCUUCUUCCCUCUUUU	Mnk	[3746-3764]
456	GAACCUUUCCACUCCCACU	AGUGGGAGUGGAAAGGUUC	Mnk	[4058-4076]
457	GUCCAAAUUUAAUGUAGAC	GUCUACAUUAAAUUUGGAC		[1972-1990]
458	AGUUCCAGCUUUUGUAGAU	AUCUACAAAAGCUGGAACU	Mnk	[1837-1855]
459	GGAGAUGUCUGAAUACUGC	GCAGUAUUCAGACAUCUCC	Mnk	[1437-1455]
460	ACAGCUGUUGUUGAGCGAA	UUCGCUCAACAACAGCUGU		[294-312]
461	CAUCUCCUAUCUUUUAUUU	AAAUAAAAGAUAGGAGAUG	Mnk	[1905-1923]
462	CCCUGCUUAUCUGAAACUU	AAGUUUCAGAUAAGCAGGG	Mnk	[2642-2660]

463	GGUGAACGCACUUAUCAAG	CUUGAUAAGUGCGUUCACC	Mnk	[1374-1392]
464	AACUGCUCCAGCUCCAAGA	UCUUGGAGCUGGAGCAGUU		[1013-1031]
465	UGAGCAAUGUGCACUUCAC	GUGAAGUGCACAUUGCUCA	Cyn,Ms, GP,Dog,Mnk	[761-779]
466	CAUCAUGUACCAAGUGCUU	AAGCACUUGGUACAUGAUG	Mnk	[3691-3709]
467	UGAAGAAGCAAACAUGACU	AGUCAUGUUUGCUUCUUCA		[2006-2024]
468	UACAGAACAAACCAAAAAU	AUUUUUGGUUUGUUCUGUA	Rat,Mnk	[1070-1088]
469	GUACAUCGAGGCUCUUGCU	AGCAAGAGCCUCGAUGUAC	Mnk	[1302-1320]
470	GAGCUUUGUUACUGAAAUG	CAUUUCAGUAACAAAGCUC	Mnk	[2221-2239]
471	ACCCUUCUGCUUUCUAUUA	UAAUAGAAAGCAGAAGGGU	Mnk	[3277-3295]
472	UUUAGUGAUUGCUUUUAUU	AAUAAAAGCAAUCACUAAA	Mnk	[1861-1879]
473	AACAGCUGUUGUUGAGCGA	UCGCUCAACAACAGCUGUU		[293-311]
474	GUUUCUCUGAGCUUUGUUA	UAACAAAGCUCAGAGAAAC	Mnk	[2213-2231]
475	CUCUAAAAAAGAACCGAGU	ACUCGGUUCUUUUUUAGAG	Cyn,Pig,Mnk	[263-281]
476	GAGAGUGAUGCCGGUAAAG	CUUUACCGGCAUCACUCUC	Cyn,Mnk	[1180-1198]
477	AGAGGUUUUUCAGCUCUUU	AAAGAGCUGAAAAACCUCU	Mnk	[1029-1047]
478	AGGAUAUGUUGCUCACCAC	GUGGUGAGCAACAUAUCCU	Cyn,Mnk	[491-509]
479	CCUUUUCUGUGAAGCCCUU	AAGGGCUUCACAGAAAAGG	Mnk	[1685-1703]
480	UGAUGCCGGUAAAGAAAAG	CUUUUCUUUACCGGCAUCA	Cyn,Mnk	[1185-1203]
481	CCUUCUUCCUCAAGUCUUG	CAAGACUUGAGGAAGAAGG		[3497-3515]
482	CUGAGAAACGUCCAUCUCU	AGAGAUGGACGUUUCUCAG	Mnk	[2324-2342]
483	GAUUUGGUUGUUUAAAUAU	AUAUUUAAACAACCAAAUC		[3233-3251]
484	UAUUAAACUCUCCUUUGAU	AUCAAAGGAGAGUUUAAUA	Mnk	[2563-2581]
485	UUCUGGAGAAGGACAUCAU	AUGAUGUCCUUCUCCAGAA	Cyn,Mnk	[326-344]
486	AGACUGCACAGGAAAUGCA	UGCAUUUCCUGUGCAGUCU	Cyn,Rat,GP,Chn,Mnk	[884-902]
487	GCUCAAUAAAUAUUUGUUU	AAACAAAUAUUUAUUGAGC		[3969-3987]
488	AAACCAAAAAUGUUCUUCA	UGAAGAACAUUUUUGGUUU	Rat,Mnk	[1078-1096]
489	CUCUGAAGAAGCAAACAUG	CAUGUUUGCUUCUUCAGAG		[2003-2021]
490	CUGUAGUAGUCAAGGUGCU	AGCACCUUGACUACUACAG	Mnk	[3953-3971]
491	UGCUUUUAUUACAUUAGUU	AACUAAUGUAAUAAAAGCA	Mnk	[1870-1888]
492	GUGCGUUCCCUUCAGUACU	AGUACUGAAGGGAACGCAC	Mnk	[2061-2079]
493	CAGUUCCAGCUUUUGUAGA	UCUACAAAAGCUGGAACUG	Mnk	[1836-1854]
494	GACAAGUGAAGUUGUAAAC	GUUUACAACUUCACUUGUC	Mnk	[1769-1787]
495	UUGCCCAUGGAAGUCUCAA	UUGAGACUUCCAUGGGCAA	Mnk	[2178-2196]
496	UAGCUACAAUCCUACCUUU	AAAGGUAGGAUUGUAGCUA	Mnk	[3773-3791]
497	CCAUGUUCUAUGUGACCAG	CUGGUCACAUAGAACAUGG	Mnk	[867-885]
498	GUAGUCAAGGUGCUCAAUA	UAUUGAGCACCUUGACUAC	Mnk	[3958-3976]
499	CCACCUGGAGGAUAUGUUG	CAACAUAUCCUCCAGGUGG	Cyn,Mnk	[483-501]
500	UCUGAGCGGGCUUGUGAUA	UAUCACAAGCCCGCUCAGA	Cyn,Mnk	[1330-1348]
501	GCCAGAAUGUGGAACUCCU	AGGAGUUCCACAUUCUGGC		

Table B 11 CASP3 - caspase 3, apoptosis-related cysteine peptidase

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-73622122:-
1	GGUGGUGAGGCAAUAAAAA	UUUUUAUUGCCUCACCACC		[2049-2067]
2	GGAACAUAUGAAAAUACAA	UUGUAUUUUCAUAUGUUCC	Mnk, Cyn	[1770-1788]
3	CCUGGACAACAGUUAUAAA	UUUAUAACUGUUGUCCAGG	Cyn,Chmp	[192-210]
4	GGUUGUAGAAGUUAAUAAA	UUUAUUAACUUCUACAACC		[71-89]
5	GAUUCAAAAUCCAUUAAAA	UUUUAAUGGAUUUUGAAUC	Mnk, Cyn,Chmp	[121-139]
6	AGGUGGUGAGGCAAUAAAA	UUUUAUUGCCUCACCACCU		[2048-2066]
7	GGCGGUUGUAGAAGUUAAU	AUUAACUUCUACAACCGCC		[68-86]
8	GCGUGAUGUUUCUAAAGAA	UUCUUUAGAAACAUCACGC	Chmp	[396-414]
9	GGUGGAGUUUUAACUGUAA	UUACAGUUAAAACUCCACC		[1593-1611]
10	CACUUUUGUUGUAAAAAAA	UUUUUUUACAACAAAAGUG	Mnk	[1470-1488]
11	CUGGAAUAUCCCUGGACAA	UUGUCCAGGGAUAUUCCAG	Cyn,Chmp	[182-200]

12	GCAUGUAAUGGUAUCUUAA	UUAAGAUACCAUUACAUGC		[2407-2425]
13	GAUCGUUGUAGAAGUCUAA	UUAGACUUCUACAACGAUC	Chmp	[532-550]
14	CAGCUUUCAUGAUUAGCAA	UUGCUAAUCAUGAAAGCUG	Mnk, Cyn	[1186-1204]
15	CAAUGAUUGUUAAUUUACA	UGUAAAUUAACAAUCAUUG		[1169-1187]
16	AGGCGGUUGUAGAAGUUAA	UUAACUUCUACAACCGCCU		[67-85]
17	GAAUAAAAAUGAUCUUACA	UGUAAGAUCAUUUUUAUUC	Rb,Chmp	[354-372]
18	GGCUAAAACUUAACAUUCA	UGAAUGUUAAGUUUUAGCC		[1568-1586]
19	GGAUCUACCAGCAUAAAUA	UAUUUAUGCUGGUAGAUCC		[1629-1647]
20	CCUGGAUCUACCAGCAUAA	UUAUGCUGGUAGAUCCAGG		[1626-1644]
21	GCUGCAGAGGGUACUUUAA	UUAAAGUACCCUCUGCAGC		[1028-1046]
22	CGGUUGUAGAAGUUAAUAA	UUAUUAACUUCUACAACCG		[70-88]
23	GAAGAGCUAUUAUAUAAAA	UUUUAUAUAAUAGCUCUUC		[1704-1722]
24	UCAGGUAGUUGCAAUUGAA	UUCAAUUGCAACUACCUGA		[1100-1118]
25	CAUGUAAUGGUAUCUUAAA	UUUAAGAUACCAUUACAUG		[2408-2426]
26	CCAGGUAAUGUGAAUAAAU	AUUUAUUCACAUUACCUGG		[1745-1763]
27	GGAAAAUAGUAAUGUUUUA	UAAAACAUUACUAUUUUCC		[2131-2149]
28	GAUGCGUGAUGUUUCUAAA	UUUAGAAACAUCACGCAUC	Chmp	[393-411]
29	GAGAGAAAGUGUGAGCAAA	UUUGCUCACACUUUCUCUC		[1533-1551]
30	CCGACAAGCUUGAAUUUAU	AUAAAUUCAAGCUUGUCGG	Mnk, Cyn,Chmp	[776-794]
31	GAAUAAUUUUUGGAACAAA	UUUGUUCCAAAAAUUAUUC	Mnk, Cyn,Chmp	[470-488]
32	GAAAGUGUGAGCAAACUAA	UUAGUUUGCUCACACUUUC		[1537-1555]
33	GGCAAUGAUUGUUAAUUUA	UAAAUUAACAAUCAUUGCC		[1167-1185]
34	AAAUGAUCUUACACGUGAA	UUCACGUGUAAGAUCAUUU	Rb,Chmp	[360-378]
35	CUGUUUACUGAAAGAAAAA	UUUUUCUUUCAGUAAACAG	Mnk, Cyn	[2152-2170]
36	ACUGUUUACUGAAAGAAAA	UUUUCUUUCAGUAAACAGU	Mnk, Cyn	[2151-2169]
37	GGGUGGAGUUUUAACUGUA	UACAGUUAAAACUCCACCC		[1592-1610]
38	GGAUCGUUGUAGAAGUCUA	UAGACUUCUACAACGAUCC	Chmp	[531-549]
39	GAGAUGGGUUUAUGUAUAA	UUAUACAUAAACCCAUCUC	Mnk, Cyn,Chmp	[223-241]
40	GAAUCAAUGGACUCUGGAA	UUCCAGAGUCCAUUGAUUC		[169-187]
41	AUGGGUUUAUGUAUAAUAA	UUAUUAUACAUAAACCCAU	Mnk, Cyn	[226-244]
42	GAGAGGCAAUGAUUGUUAA	UUAACAAUCAUUGCCUCUC		[1163-1181]
43	GAGGGUACUUUAAGACAUA	UAUGUCUUAAAGUACCCUC		[1034-1052]
44	CUGGACAACAGUUAUAAAA	UUUUAUAACUGUUGUCCAG	Cyn,Chmp	[193-211]
45	CGACAAGCUUGAAUUUAUG	CAUAAAUUCAAGCUUGUCG	Mnk, Cyn,Chmp	[777-795]
46	CAAAUAGAACCACUAUGAA	UUCAUAGUGGUUCUAUUUG		[1063-1081]
47	CCUUUAUUUUAGAAUUGAU	AUCAAUUCUAAAAUAAAGG		[1380-1398]
48	GGAAUAUAAGGAAAGCAAU	AUUGCUUUCCUUAUAUUCC	Mnk, Cyn	[1806-1824]
49	CCUGUUGACCUGAAAAAAA	UUUUUUUCAGGUCAACAGG	Chmp	[493-511]
50	GAUCAUACAUGGAAGCGAA	UUCGCUUCCAUGUAUGAUC		[153-171]
51	UGUUGAAGUUUACAAUCAA	UUGAUUGUAAACUUCAACA	Mnk, Cyn	[2111-2129]
52	GAACACUUUUGUUGUAAAA	UUUUACAACAAAAGUGUUC	Mnk, Cyn	[1467-1485]
53	GCAGCAAACCUCAGGGAAA	UUUCCCUGAGGUUUGCUGC	Mnk, Cyn,Chmp	[307-325]
54	CAGGUAAUGUGAAUAAAUU	AAUUUAUUCACAUUACCUG		[1746-1764]
55	CAGAAACUUGAAAUAUGAA	UUCAUAUUUCAAGUUUCUG	Chmp	[330-348]
56	GAAUAUAAGGAAAGCAAUA	UAUUGCUUUCCUUAUAUUC	Mnk, Cyn	[1807-1825]
57	CUGUCAGUAUGACAUUUCA	UGAAAUGUCAUACUGACAG		[2294-2312]
58	GAAAGUGAAGCAAAUCAGA	UCUGAUUUGCUUCACUUUC	Mnk, Cyn	[2004-2022]
59	CAAUAUAUCUGAAGAGCUA	UAGCUCUUCAGAUAUAUUG		[1694-1712]
60	GUUGAAGUUUACAAUCAAA	UUUGAUUGUAAACUUCAAC	Mnk, Cyn	[2112-2130]
61	GGAGAACACUGAAAACUCA	UGAGUUUUCAGUGUUCUCC	Mnk, Cyn	[99-117]
62	GUUUAAUAUUGAGAAAGAA	UUCUUUCUCAAUAUUAAAC		[1499-1517]
63	CCAUGGUGAAGAAGGAAUA	UAUUCCUUCUUCACCAUGG	Mnk, Cyn,Chmp	[456-474]
64	CCCUGGACAACAGUUAUAA	UUAUAACUGUUGUCCAGGG	Cyn,Chmp	[191-209]
65	CACGGAUGACUUAACUGCA	UGCAGUUAAGUCAUCCGUG		[1402-1420]
66	CUGAAGAGCUAUUAUAUAA	UUAUAUAAUAGCUCUUCAG		[1702-1720]
67	CAUGGUGAAGAAGGAAUAA	UUAUUCCUUCUUCACCAUG	Mnk, Cyn,Chmp	[457-475]

68	ACACUUUUGUUGUAAAAAA	UUUUUUACAACAAAAGUGU	Mnk, Cyn	[1469-1487]
69	CUCCUUCCAUCAAAUAGAA	UUCUAUUUGAUGGAAGGAG		[1053-1071]
70	GGAAUAUCCCUGGACAACA	UGUUGUCCAGGGAUAUUCC	Cyn,Chmp	[184-202]
71	CAAUAAAAAUCAUAGUACU	AGUACUAUGAUUUUUAUUG		[2059-2077]
72	UGACUUAACUGCAUUUUUA	UAAAAAUGCAGUUAAGUCA		[1408-1426]
73	AAGUGAAGCAAAUCAGAAA	UUUCUGAUUUGCUUCACUU	Mnk, Cyn	[2006-2024]
74	GACAGACAGUGGUGUUGAU	AUCAACACCACUGUCUGUC	Chmp	[615-633]
75	CAGUCAUUAUGAGAGGCAA	UUGCCUCUCAUAAUGACUG		[1153-1171]
76	GAGAUUUCUUGUUGCUCAA	UUGAGCAACAAGAAAUCUC	Mnk, Cyn	[2316-2334]
77	GGACCUGUUGACCUGAAAA	UUUUCAGGUCAACAGGUCC	Chmp	[490-508]
78	UGAUCUUACACGUGAAGAA	UUCUUCACGUGUAAGAUCA	Rb,Chmp	[363-381]
79	GAUGGGUUUAUGUAUAAUA	UAUUAUACAUAAACCCAUC	Mnk, Cyn	[225-243]
80	CUCUAUUUUUAUCACUAAA	UUUAGUGAUAAAAAUAGAG		[913-931]
81	GACCUGUAACUUUUGUAAA	UUUACAAAAGUUACAGGUC		[2380-2398]
82	GGAUUCAAAAUCCAUUAAA	UUUAAUGGAUUUUGAAUCC	Mnk, Cyn,Chmp	[120-138]
83	CCAUGGAGAACACUGAAAA	UUUUCAGUGUUCUCCAUGG	Mnk, Cyn	[95-113]
84	CAUCUGUGGGCAUGGUCAA	UUGACCAUGCCCACAGAUG		[1352-1370]
85	GAAGGAAUAAUUUUUGGAA	UUCCAAAAAUUAUUCCUUC	Mnk, Cyn,Chmp	[466-484]
86	GGAAUAAUUUUUGGAACAA	UUGUUCCAAAAAUUAUUCC	Mnk, Cyn,Chmp	[469-487]
87	GUGAGAAGAUGGUAUAUUU	AAAUAUACCAUCUUCUCAC		[972-990]
88	AAACUAACUUGACUUUUAA	UUAAAAGUCAAGUUAGUUU		[1549-1567]
89	CCGACUUCUUGUAUGCAUA	UAUGCAUACAAGAAGUCGG	Mnk, Cyn,Chmp	[668-686]
90	AAAUGAUGAUGUGGAAGAA	UUCUUCCACAUCAUCAUUU	Mnk, Cyn	[1327-1345]
91	GUAGCAAAAUUCUUAAGUA	UACUUAAGAAUUUUGCUAC		[2082-2100]
92	CAAUCAAAGGAAAAUAGUA	UACUAUUUUCCUUUGAUUG	Mnk, Cyn	[2123-2141]
93	CUAUUUUUAUCACUAAAGA	UCUUUAGUGAUAAAAAUAG		[915-933]
94	AAUAAACAGUGGAAUAUAA	UUAUAUUCCACUGUUUAUU		[1796-1814]
95	CAGUGAUGCUGUGCUAUGA	UCAUAGCACAGCAUCACUG	Cyn	[1209-1227]
96	CCCUAUGCAUAUCAGUUGA	UCAACUGAUAUGCAUAGGG		[1661-1679]
97	AGGAACAUAUGAAAAUACA	UGUAUUUUCAUAUGUUCCU	Mnk, Cyn	[1769-1787]
98	GCUAAAACUUAACAUUCAU	AUGAAUGUUAAGUUUUAGC		[1569-1587]
99	GAAGUGGAAAUGUUCUAAA	UUUAGAACAUUUCCACUUC	Mnk, Cyn	[2030-2048]
100	UUUUAAGGCUAAAACUUAA	UUAAGUUUUAGCCUUAAAA		[1562-1580]
101	CCAGCAAUAUAUCUGAAGA	UCUUCAGAUAUAUUGCUGG		[1690-1708]
102	CUGUUGACCUGAAAAAAAU	AUUUUUUUCAGGUCAACAG	Chmp	[494-512]
103	CUAUAGGAACAUAUGAAAA	UUUUCAUAUGUUCCUAUAG		[1765-1783]
104	CAAUUGAAUUAAAUUAGGA	UCCUAAUUUAAUUCAAUUG	Mnk	[1111-1129]
105	CUGGAUCUACCAGCAUAAA	UUUAUGCUGGUAGAUCCAG		[1627-1645]
106	ACCUGAAAAAAAUAACAAA	UUUGUUAUUUUUUUCAGGU	Chmp	[500-518]
107	AAAGAAGAUCACAGCAAAA	UUUUGCUGUGAUCUUCUUU	Mnk, Cyn,Chmp	[409-427]
108	GAUCUUACACGUGAAGAAA	UUUCUUCACGUGUAAGAUC	Rb,Mnk, Cyn,Chmp	[364-382]
109	AGUACUCUUUGUAGCAAAA	UUUUGCUACAAAGAGUACU		[2072-2090]
110	AGGAAUAAAUAAAAAUGGA	UCCAUUUUUAUUUAUUCCU	Mnk, Cyn	[1126-1144]
111	AAGAAAUUGUGGAAUUGAU	AUCAAUUCCACAAUUUCUU	Mnk, Cyn,Chmp	[377-395]
112	GUAGAAGUCUAACUGGAAA	UUUCCAGUUAGACUUCUAC	Rb,Mnk, Cyn,Chmp	[539-557]
113	GGUGAAGAAGGAAUAAUUU	AAAUUAUUCCUUCUUCACC	Mnk, Cyn,Chmp	[460-478]
114	CACUAUGAAGCUACCUCAA	UUGAGGUAGCUUCAUAGUG		[1073-1091]
115	GUAAGAAAGUGAAGCAAAU	AUUUGCUUCACUUUCUUAC	Mnk, Cyn	[2000-2018]
116	GGGUUUAUGUAUAAUAAUU	AAUUAUUAUACAUAAACCC	Mnk, Cyn	[228-246]
117	AGACCUGUAACUUUUGUAA	UUACAAAAGUUACAGGUCU		[2379-2397]
118	AAACAUUCAGAAACUUGAA	UUCAAGUUUCUGAAUGUUU	Chmp	[323-341]
119	AGUUUACAAUCAAAGGAAA	UUUCCUUUGAUUGUAAACU	Mnk, Cyn	[2117-2135]
120	CCCUGGAUCUACCAGCAUA	UAUGCUGGUAGAUCCAGGG		[1625-1643]
121	GUGAGGCAAUAAAAAUCAU	AUGAUUUUUAUUGCCUCAC		[2053-2071]

122	CAAACUAACUUGACUUUUA	UAAAAGUCAAGUUAGUUUG		[1548-1566]
123	UGAGCUGCCUGUAACUUGA	UCAAGUUACAGGCAGCUCA		[1837-1855]
124	AAGGUGGUGAGGCAAUAAA	UUUAUUGCCUCACCACCUU		[2047-2065]
125	UGAAGAGCUAUUAUAUAAA	UUUAUAUAAUAGCUCUUCA		[1703-1721]
126	UAAAGAAGAUCACAGCAAA	UUUGCUGUGAUCUUCUUUA	Mnk, Cyn,Chmp	[408-426]
127	CAAGUGAGAAGAUGGUAUA	UAUACCAUCUUCUCACUUG		[969-987]
128	AAGGAAAGCAAUAAAUGAA	UUCAUUUAUUGCUUUCCUU		[1813-1831]
129	GGCUCAAACCUUUAUUUUA	UAAAAUAAAGGUUUGAGCC		[1372-1390]
130	CACAGCACCUGGUUAUUAU	AUAAUAACCAGGUGCUGUG	Mnk, Cyn,Chmp	[690-708]
131	AUUUCUUGUUGCUCAAAAA	UUUUUGAGCAACAAGAAAU	Mnk, Cyn	[2319-2337]
132	UAGAAAUGAUGAUGUGGAA	UUCCACAUCAUCAUUUCUA	Mnk, Cyn	[1324-1342]
133	GGCAAUAAAAAUCAUAGUA	UACUAUGAUUUUUAUUGCC		[2057-2075]
134	CAGGUAGUUGCAAUUGAAU	AUUCAAUUGCAACUACCUG	Mnk, Cyn	[1101-1119]
135	GAAAAAGUUAAACAUUGAA	UUCAAUGUUUAACUUUUUC	Mnk, Cyn	[1244-1262]
136	CUGUGCUAUGAAUUUUCAA	UUGAAAAUUCAUAGCACAG	Mnk, Cyn	[1217-1235]
137	GUCUAACUGGAAAACCCAA	UUGGGUUUUCCAGUUAGAC	Mnk, Cyn,Chmp	[545-563]
138	UACUGUUUACUGAAAGAAA	UUUCUUUCAGUAAACAGUA	Mnk, Cyn	[2150-2168]
139	UAAGGAAAGCAAUAAAUGA	UCAUUUAUUGCUUUCCUUA		[1812-1830]
140	UUGUGAGGCGGUUGUAGAA	UUCUACAACCGCCUCACAA		[62-80]
141	GUGGUGAGGCAAUAAAAAU	AUUUUUAUUGCCUCACCAC		[2050-2068]
142	UGCAGAGGGUACUUUAAGA	UCUUAAAGUACCCUCUGCA		[1030-1048]
143	UACUUUUCAUGCAAAGAAA	UUUCUUUGCAUGAAAAGUA	Mnk, Cyn,Chmp	[858-876]
144	UGGGUUUAUGUAUAAUAAU	AUUAUUAUACAUAAACCCA	Mnk, Cyn	[227-245]
145	UCAGAAACUUGAAAUAUGA	UCAUAUUUCAAGUUUCUGA	Chmp	[329-347]
146	GCGGUUGUAGAAGUUAAUA	UAUUAACUUCUACAACCGC		[69-87]
147	GGAUACUGGUGCAGUCAUU	AAUGACUGCACCAGUAUCC	Mnk, Cyn	[1142-1160]
148	GAUCUACCAGCAUAAAUAU	AUAUUUAUGCUGGUAGAUC		[1630-1648]
149	UUGUGAUGUUUGUCCUGAA	UUCAGGACAAACAUCACAA		[1451-1469]
150	AGUGAUGCUGUGCUAUGAA	UUCAUAGCACAGCAUCACU	Cyn	[1210-1228]
151	AGUUAAACAUUGAAGUAAU	AUUACUUCAAUGUUUAACU	Mnk, Cyn	[1249-1267]
152	AGUUGCAAUUGAAUUAAAU	AUUUAAUUCAAUUGCAACU	Mnk	[1106-1124]
153	GGACAACAGUUAUAAAAUG	CAUUUUAUAACUGUUGUCC	Cyn,Chmp	[195-213]
154	AAAACUCAGUGGAUUCAAA	UUUGAAUCCACUGAGUUUU	Mnk, Cyn,Chmp	[110-128]
155	CUAGUUUUGUCAAACUGUA	UACAGUUUGACAAAACUAG		[1307-1325]
156	CAACAGUUAUAAAAUGGAU	AUCCAUUUUAUAACUGUUG	Cyn,Chmp	[198-216]
157	UGGAAUAUAAGGAAAGCAA	UUGCUUUCCUUAUAUUCCA	Mnk, Cyn	[1805-1823]
158	GAAACAGAUUCCAUGUAUU	AAUACAUGGAAUCUGUUUC	Rb,Mnk, Cyn,Chmp	[873-891]
159	GACUCAGCCUGUUCCAUGA	UCAUGGAACAGGCUGAGUC		[1887-1905]
160	UGGACAACAGUUAUAAAAU	AUUUUAUAACUGUUGUCCA	Cyn,Chmp	[194-212]
161	UGAUGUUUCUAAAGAAGAU	AUCUUCUUUAGAAACAUCA	Chmp	[399-417]
162	UAUGAAGUCAGGAAUAAAA	UUUUAUUCCUGACUUCAUA	Chmp	[343-361]
163	UGAAUAAAUUCUAUAGGAA	UUCCUAUAGAAUUUAUUCA		[1755-1773]
164	GUGAAUAAAUUCUAUAGGA	UCCUAUAGAAUUUAUUCAC		[1754-1772]
165	UCAUGAUUAGCAAGUUACA	UGUAACUUGCUAAUCAUGA		[1192-1210]
166	GGUUUUUUUUAGUUUGUAU	AUACAAACUAAAAAAAACC		[948-966]
167	UAAAGGUAUCCAUGGAGAA	UUCUCCAUGGAUACCUUUA	Mnk, Cyn	[86-104]
168	CCUGAACACUUUUGUUGUA	UACAACAAAAGUGUUCAGG	Mnk, Cyn	[1464-1482]
169	GACCUGAAAAAAAUAACAA	UUGUUAUUUUUUUCAGGUC	Chmp	[499-517]
170	UAUUGAGAAAGAAACUAAU	AUUAGUUUCUUUCUCAAUA		[1505-1523]
171	ACUCUAUUUUUAUCACUAA	UUAGUGAUAAAAAUAGAGU	Chmp	[912-930]
172	AGUUGAGCUUCAUAUACCA	UGGUAUAUGAAGCUCAACU		[1674-1692]
173	AUGAAGUCAGGAAUAAAAA	UUUUUAUUCCUGACUUCAU	Chmp	[344-362]
174	CCAUCAAAUAGAACCACUA	UAGUGGUUCUAUUUGAUGG		[1059-1077]
175	CGGAUGACUUAACUGCAUU	AAUGCAGUUAAGUCAUCCG		[1404-1422]
176	UAGUUGCAAUUGAAUUAAA	UUUAAUUCAAUUGCAACUA	Mnk	[1105-1123]

177	CCUGUAACUUUUGUAAAUA	UAUUUACAAAAGUUACAGG		[2382-2400]
178	GGUGAGGCAAUAAAAAUCA	UGAUUUUUAUUGCCUCACC		[2052-2070]
179	GCUUCAUAUACCAGCAAUA	UAUUGCUGGUAUAUGAAGC		[1680-1698]
180	CGAAUCAAUGGACUCUGGA	UCCAGAGUCCAUUGAUUCG		[168-186]
181	UGAGAUGGGUUUAUGUAUA	UAUACAUAAACCCAUCUCA	Mnk, Cyn,Chmp	[222-240]
182	UGGUAUAUUUGGUACUGUA	UACAGUACCAAAUAUACCA		[981-999]
183	AGAAACUUGUGAAGUGGAA	UUCCACUUCACAAGUUUCU	Mnk, Cyn	[2020-2038]
184	GGCGUGUCAUAAAAUACCA	UGGUAUUUUAUGACACGCC	Chmp	[642-660]
185	AUAUAAGGAAAGCAAUAAA	UUUAUUGCUUUCCUUAUAU	Mnk, Cyn	[1809-1827]
186	AAAGGUGGUGAGGCAAUAA	UUAUUGCCUCACCACCUUU		[2046-2064]
187	ACCUGUAACUUUUGUAAAU	AUUUACAAAAGUUACAGGU		[2381-2399]
188	UGUUUAAUAUUGAGAAAGA	UCUUUCUCAAUAUUAAACA		[1498-1516]
189	GACGCUACUUUUCAUGCAA	UUGCAUGAAAAGUAGCGUC	Chmp	[853-871]
190	UGAGAGAAAGUGUGAGCAA	UUGCUCACACUUUCUCUCA		[1532-1550]
191	CUAUGAAUUUUCAAGUAAU	AUUACUUGAAAAUUCAUAG	Mnk, Cyn	[1222-1240]
192	UGAACACUUUUGUUGUAAA	UUUACAACAAAAGUGUUCA	Mnk, Cyn	[1466-1484]
193	CAGCAUAAAUAUCUUCUGA	UCAGAAGAUAUUUAUGCUG		[1637-1655]
194	GAUAUACACGGAUGACUUA	UAAGUCAUCCGUGUAUAUC		[1396-1414]
195	UGAUGAUGUGGAAGAACUU	AAGUUCUUCCACAUCAUCA	Mnk, Cyn	[1330-1348]
196	GAAACAUUCAGAAACUUGA	UCAAGUUUCUGAAUGUUUC	Chmp	[322-340]
197	UGGUGAAGAAGGAAUAAUU	AAUUAUUCCUUCUUCACCA	Mnk, Cyn,Chmp	[459-477]
198	ACGUGAAGAAAUUGUGGAA	UUCCACAAUUUCUUCACGU	Mnk, Cyn,Chmp	[372-390]
199	CAUUCAGAAACUUGAAAUA	UAUUUCAAGUUUCUGAAUG	Chmp	[326-344]
200	GAAUUUAUGCACAUUCUUA	UAAGAAUGUGCAUAAAUUC	Mnk, Cyn,Chmp	[787-805]
201	CAAAAGAACUCUAUUUUUA	UAAAAAUAGAGUUCUUUUG	Chmp	[905-923]
202	CCUGAGAUGGGUUUAUGUA	UACAUAAACCCAUCUCAGG	Mnk, Cyn,Chmp	[220-238]
203	AGCAUGUAAUGGUAUCUUA	UAAGAUACCAUUACAUGCU		[2406-2424]
204	CAGGAAUAAAAAUGAUCUU	AAGAUCAUUUUUAUUCCUG	Rb,Ms,Chmp	[351-369]
205	GAAAGAAAAAGACCUAUGA	UCAUAGGUCUUUUUCUUUC		[2161-2179]
206	UGUUGACCUGAAAAAAAUA	UAUUUUUUUCAGGUCAACA	Chmp	[495-513]
207	UGUAGAAGUCUAACUGGAA	UUCCAGUUAGACUUCUACA	Rb,Mnk, Cyn,Chmp	[538-556]
208	UCUGAAGAGCUAUUAUAUA	UAUAUAAUAGCUCUUCAGA		[1701-1719]
209	GCAUAUCAGUUGAGCUUCA	UGAAGCUCAACUGAUAUGC		[1667-1685]
210	CCUGUAACUUGAGAGUAGA	UCUACUCUCAAGUUACAGG		[1844-1862]
211	CCUGUUCCAUGAAGGCAGA	UCUGCCUUCAUGGAACAGG		[1894-1912]
212	UGGACCUGUUGACCUGAAA	UUUCAGGUCAACAGGUCCA	Chmp	[489-507]
213	CAGUGGAUUCAAAAUCCAU	AUGGAUUUUGAAUCCACUG	Mnk, Cyn,Ms,Chmp	[116-134]
214	GACCUGUUGACCUGAAAAA	UUUUUCAGGUCAACAGGUC	Chmp	[491-509]
215	GACCUACUCUCAUGCUGCA	UGCAGCAUGAGAGUAGGUC		[1015-1033]
216	GGUAGUUGCAAUUGAAUUA	UAAUUCAAUUGCAACUACC	Mnk, Cyn	[1103-1121]
217	CUCAAACCUUUAUUUUAGA	UCUAAAAUAAAGGUUUGAG		[1374-1392]
218	ACGGAUGACUUAACUGCAU	AUGCAGUUAAGUCAUCCGU		[1403-1421]
219	AGGCAAUAAAAAUCAUAGU	ACUAUGAUUUUUAUUGCCU		[2056-2074]
220	AAAGUGAAGCAAAUCAGAA	UUCUGAUUUGCUUCACUUU	Mnk, Cyn	[2005-2023]
221	UGAGGCAAUAAAAAUCAUA	UAUGAUUUUUAUUGCCUCA		[2054-2072]
222	UGAAAAAGUUAAACAUUGA	UCAAUGUUUAACUUUUUCA	Mnk, Cyn	[1243-1261]
223	CUACCAGCAUAAAUAUCUU	AAGAUAUUUAUGCUGGUAG		[1633-1651]
224	AGACAGUGGUGUUGAUGAU	AUCAUCAACACCACUGUCU	Chmp	[618-636]
225	GUUUUAUACUGUUUACUGA	UCAGUAAACAGUAUAAAAC		[2144-2162]
226	GAAGAUCACAGCAAAAGGA	UCCUUUUGCUGUGAUCUUC	Rat,Mnk, Cyn,Chmp	[412-430]
227	UUAAAAAUUUGGAACCAAA	UUUGGUUCCAAAUUUUUAA	Chmp	[134-152]
228	CCAAACUUUUCAUUAUUCA	UGAAUAAUGAAAAGUUUGG	Mnk, Cyn,Chmp	[560-578]
229	ACUUGACUUUUAAGGCUAA	UUAGCCUUAAAAGUCAAGU		[1555-1573]

230	AUAUGAAGUCAGGAAUAAA	UUUAUUCCUGACUUCAUAU	Chmp	[342-360]
231	UCUGGAAUAUCCCUGGACA	UGUCCAGGGAUAUUCCAGA	Cyn,Chmp	[181-199]
232	CACAUAGCAUGUAAUGGUA	UACCAUUACAUGCUAUGUG	Mnk, Cyn	[2401-2419]
233	AGUUAAUAAAGGUAUCCAU	AUGGAUACCUUUAUUAACU	Mnk	[80-98]
234	GACCUAUGAGCACAUAGGA	UCCUAUGUGCUCAUAGGUC		[2171-2189]
235	AAGUAAUUGUGAAAAAGUU	AACUUUUUCACAAUUACUU		[1234-1252]
236	CUUUUAAGGCUAAAACUUA	UAAGUUUUAGCCUUAAAAG		[1561-1579]
237	CGCAUUUGUCAAUGACAGU	ACUGUCAUUGACAAAUGCG		[2345-2363]
238	AUGUGACAAUUUUGUACAA	UUGUACAAAAUUGUCACAU		[2437-2455]
239	CUGAGAUGGGUUUAUGUAU	AUACAUAAACCCAUCUCAG	Mnk, Cyn,Chmp	[221-239]
240	GAAGAAAUUGUGGAAUUGA	UCAAUUCCACAAUUUCUUC	Mnk, Cyn,Chmp	[376-394]
241	UCUAUAGGAACAUAUGAAA	UUUCAUAUGUUCCUAUAGA		[1764-1782]
242	AGUCUAACUGGAAAACCCA	UGGGUUUUCCAGUUAGACU	Mnk, Cyn,Chmp	[544-562]
243	GAAUAUCCCUGGACAACAG	CUGUUGUCCAGGGAUAUUC	Cyn,Chmp	[185-203]
244	GUGACAAUUUUGUACAAAU	AUUUGUACAAAAUUGUCAC	Mnk, Cyn	[2439-2457]
245	GCAAAAUUCUUAAGUAUGU	ACAUACUUAAGAAUUUUGC		[2085-2103]
246	GCCCAUUUCUCCAUACGCA	UGCGUAUGGAGAAAUGGGC		[1941-1959]
247	ACAGUGGAAUAUAAGGAAA	UUUCCUUAUAUUCCACUGU		[1801-1819]
248	GAGCACAUAGGACUCUAGA	UCUAGAGUCCUAUGUGCUC		[2178-2196]
249	ACUGGUGCAGUCAUUAUGA	UCAUAAUGACUGCACCAGU	Mnk, Cyn	[1146-1164]
250	GUGGAUUCAAAAUCCAUUA	UAAUGGAUUUUGAAUCCAC	Rat,Mnk, Cyn,Ms,Chmp	[118-136]
251	AGAAAGUGUGAGCAAACUA	UAGUUUGCUCACACUUUCU		[1536-1554]
252	GUAAUUGUGAAAAAGUUAA	UUAACUUUUUCACAAUUAC		[1236-1254]
253	CCACUAUGAAGCUACCUCA	UGAGGUAGCUUCAUAGUGG		[1072-1090]
254	ACCUGUUGACCUGAAAAAA	UUUUUUCAGGUCAACAGGU	Chmp	[492-510]
255	CUGGAAAACCCAAACUUUU	AAAAGUUUGGGUUUUCCAG	Mnk, Cyn,Chmp	[551-569]
256	GGAGAUUUCUUGUUGCUCA	UGAGCAACAAGAAAUCUCC	Mnk, Cyn	[2315-2333]
257	CUUUGACGCUACUUUUCAU	AUGAAAAGUAGCGUCAAAG	Chmp	[849-867]
258	UGCUGCAGAGGGUACUUUA	UAAAGUACCCUCUGCAGCA		[1027-1045]
259	GCUGUGCUAUGAAUUUUCA	UGAAAAUUCAUAGCACAGC	Cyn	[1216-1234]
260	AUAGGAACAUAUGAAAAUA	UAUUUUCAUAUGUUCCUAU	Mnk, Cyn	[1767-1785]
261	GAAUUUGAGUCCUUUUCCU	AGGAAAAGGACUCAAAUUC	Chmp	[832-850]
262	AAAACUUAACAUUCAUAGA	UCUAUGAAUGUUAAGUUUU		[1572-1590]
263	GUAUUCUAGUUUUGUCAAA	UUUGACAAAACUAGAAUAC	Mnk, Cyn	[1302-1320]
264	GCAAAGAAACAGAUUCCAU	AUGGAAUCUGUUUCUUUGC	Rb,Mnk, Cyn,Chmp	[868-886]
265	GCUAUGAAUUUUCAAGUAA	UUACUUGAAAAUUCAUAGC	Mnk, Cyn	[1221-1239]
266	CUCAGGGAAACAUUCAGAA	UUCUGAAUGUUUCCCUGAG	Chmp	[316-334]
267	CAUACUCCUUCCAUCAAAU	AUUUGAUGGAAGGAGUAUG		[1049-1067]
268	AGGAAUAAUUUUUGGAACA	UGUUCCAAAAAUUAUUCCU	Mnk, Cyn,Chmp	[468-486]
269	GUGGAAAUGUUCUAAAGGU	ACCUUUAGAACAUUUCCAC		[2033-2051]
270	CAGACAGUGGUGUUGAUGA	UCAUCAACACCACUGUCUG	Chmp	[617-635]
271	CUUUGUAGCAAAAUUCUUA	UAAGAAUUUUGCUACAAAG		[2078-2096]
272	AGUCAGGAAUAAAAAUGAU	AUCAUUUUUAUUCCUGACU	Rb,Ms,Chmp	[348-366]
273	UGACCUGAAAAAAAUAACA	UGUUAUUUUUUUCAGGUCA	Chmp	[498-516]
274	ACAUACUCCUUCCAUCAAA	UUUGAUGGAAGGAGUAUGU		[1048-1066]
275	GGAAUAAAUAAAAAUGGAU	AUCCAUUUUUAUUUAUUCC	Mnk, Cyn	[1127-1145]
276	GCACCUGGUUAUUAUUCUU	AAGAAUAAUAACCAGGUGC	Mnk, Cyn,Chmp	[694-712]
277	UGAAGUCAGGAAUAAAAAU	AUUUUUAUUCCUGACUUCA	Chmp	[345-363]
278	UGUAGAAGUUAAUAAAGGU	ACCUUUAUUAACUUCUACA		[74-92]
279	GAUUUCUUGUUGCUCAAAA	UUUUGAGCAACAAGAAAUC	Mnk, Cyn	[2318-2336]
280	GAUGAUGUGGAAGAACUUA	UAAGUUCUUCCACAUCAUC	Mnk, Cyn	[1331-1349]
281	CUUGACUUUUAAGGCUAAA	UUUAGCCUUAAAAGUCAAG		[1556-1574]
282	AUCAGUUGAGCUUCAUAUA	UAUAUGAAGCUCAACUGAU		[1671-1689]
283	GGAUUAUCCUGAGAUGGGU	ACCCAUCUCAGGAUAAUCC	Mnk, Cyn,Chmp	[213-231]

284	GUUGGUUGGUGGUUUUUUU	AAAAAAACCACCAACCAAC	Mnk, Cyn	[938-956]
285	CUCGCAUUUGUCAAUGACA	UGUCAUUGACAAAUGCGAG		[2343-2361]
286	AAUCCAUUAAAAAUUUGGA	UCCAAAUUUUUAAUGGAUU	Chmp	[128-146]
287	UAAACAUUGAAGUAAUGAA	UUCAUUACUUCAAUGUUUA		[1252-1270]
288	GUCAGGUAGUUGCAAUUGA	UCAAUUGCAACUACCUGAC		[1099-1117]
289	AGUAAUUGUGAAAAAGUUA	UAACUUUUUCACAAUUACU		[1235-1253]
290	GGAAUUGAUGCGUGAUGUU	AACAUCACGCAUCAAUUCC	Chmp	[387-405]
291	GGAAAACCCAAACUUUUCA	UGAAAAGUUUGGGUUUUCC	Mnk, Cyn,Chmp	[553-571]
292	GGAUGACUUAACUGCAUUU	AAAUGCAGUUAAGUCAUCC		[1405-1423]
293	UAGUACUCUUUGUAGCAAA	UUUGCUACAAAGAGUACUA		[2071-2089]
294	CGUGAUGUUUCUAAAGAAG	CUUCUUUAGAAACAUCACG	Chmp	[397-415]
295	AGGAAAGCAAUAAAUGAAU	AUUCAUUUAUUGCUUUCCU		[1814-1832]
296	AACAGUGGAAUAUAAGGAA	UUCCUUAUAUUCCACUGUU		[1800-1818]
297	GAGAAAGUGUGAGCAAACU	AGUUUGCUCACACUUUCUC		[1535-1553]
298	GCAUUUUUAGACCAUUUAU	AUAAAUGGUCUAAAAAUGC	Mnk, Cyn	[1418-1436]
299	AAACUCAGUGGAUUCAAAA	UUUUGAAUCCACUGAGUUU	Mnk, Cyn,Chmp	[111-129]
300	AGGCAAUGAUUGUUAAUUU	AAAUUAACAAUCAUUGCCU		[1166-1184]
301	GAGGCAAUAAAAAUCAUAG	CUAUGAUUUUUAUUGCCUC		[2055-2073]
302	UAUGUUAUUUUCUGUUGAA	UUCAACAGAAAAUAACAUA		[2099-2117]
303	CCCAAACUGUUGAUUAUUA	UAAUAAUCAACAGUUUGGG	Mnk, Cyn	[1725-1743]
304	GUCACUGCACCAAGUCUCA	UGAGACUUGGUGCAGUGAC		[2271-2289]
305	CAUGACUCAGCCUGUUCCA	UGGAACAGGCUGAGUCAUG		[1884-1902]
306	GUAGAAGUUAAUAAAGGUA	UACCUUUAUUAACUUCUAC		[75-93]
307	UAAAGGUGGUGAGGCAAUA	UAUUGCCUCACCACCUUUA		[2045-2063]
308	GUGAAGUGGAAAUGUUCUA	UAGAACAUUUCCACUUCAC	Mnk, Cyn	[2028-2046]
309	GAACAAAUGGACCUGUUGA	UCAACAGGUCCAUUUGUUC	Chmp	[482-500]
310	GUAAUGUGAAUAAAUUCUA	UAGAAUUUAUUCACAUUAC		[1749-1767]
311	CAGAUGUCGAUGCAGCAAA	UUUGCUGCAUCGACAUCUG	Chmp	[296-314]
312	GCAUAAAUAUCUUCUGAUU	AAUCAGAAGAUAUUUAUGC		[1639-1657]
313	UACCAGCAAUAUAUCUGAA	UUCAGAUAUAUUGCUGGUA		[1688-1706]
314	CAUCAAAUAGAACCACUAU	AUAGUGGUUCUAUUUGAUG		[1060-1078]
315	AUAUUUUAUGUGAGAGAAA	UUUCUCUCACAUAAAAUAU		[1522-1540]
316	CAAACUGUAGAAAUGAUGA	UCAUCAUUUCUACAGUUUG		[1317-1335]
317	CGUGGUACAGAACUGGACU	AGUCCAGUUCUGUACCACG	Chmp	[586-604]
318	ACGCUACUUUUCAUGCAAA	UUUGCAUGAAAAGUAGCGU	Chmp	[854-872]
319	GUCGAUGCAGCAAACCUCA	UGAGGUUUGCUGCAUCGAC	Chmp	[301-319]
320	AUAUUGAGAAAGAAACUAA	UUAGUUUCUUUCUCAAUAU		[1504-1522]
321	AUCCAUUAAAAAUUUGGAA	UUCCAAAUUUUUAAUGGAU	Chmp	[129-147]
322	UAGCAAAAUUCUUAAGUAU	AUACUUAAGAAUUUUGCUA		[2083-2101]
323	CUGAUUUGUCCCUAUGCAU	AUGCAUAGGGACAAAUCAG		[1652-1670]
324	AGAUGGGUUUAUGUAUAAU	AUUAUACAUAAACCCAUCU	Mnk, Cyn,Chmp	[224-242]
325	AUUGAGAAAGAAACUAAUA	UAUUAGUUUCUUUCUCAAU		[1506-1524]
326	GGUAUAUUUGGUACUGUAU	AUACAGUACCAAAUAUACC		[982-1000]
327	CAUAGUACUCUUUGUAGCA	UGCUACAAAGAGUACUAUG	Mnk, Cyn	[2069-2087]
328	GUUUACAAUCAAAGGAAAA	UUUUCCUUUGAUUGUAAAC	Mnk, Cyn	[2118-2136]
329	CAACAGAAUUUGAGUCCUU	AAGGACUCAAAUUCUGUUG	Mnk, Cyn,Chmp	[827-845]
330	GAGCUUCAUAUACCAGCAA	UUGCUGGUAUAUGAAGCUC		[1678-1696]
331	CUAAAACUUAACAUUCAUA	UAUGAAUGUUAAGUUUUAG		[1570-1588]
332	CAGAGGGUACUUUAAGACA	UGUCUUAAAGUACCCUCUG		[1032-1050]
333	GAUACUGGUGCAGUCAUUA	UAAUGACUGCACCAGUAUC	Mnk, Cyn	[1143-1161]
334	GUGAUGCUGUGCUAUGAAU	AUUCAUAGCACAGCAUCAC	Cyn	[1211-1229]
335	GAAGAUGGUAUAUUUGGUA	UACCAAAUAUACCAUCUUC		[976-994]
336	AAGUCAGGAAUAAAAAUGA	UCAUUUUUAUUCCUGACUU	Rat,Rb,Ms,Chmp	[347-365]
337	CAAGUAAUUGUGAAAAAGU	ACUUUUUCACAAUUACUUG		[1233-1251]
338	UGACAAUUUUGUACAAAUU	AAUUUGUACAAAAUUGUCA	Mnk, Cyn	[2440-2458]
339	UGGGAUUAUGGUUUUGUGA	UCACAAAACCAUAAUCCCA		[1438-1456]

340	GACAGUUUCUUUUUUCUUA	UAAGAAAAAAGAAACUGUC		[2358-2376]
341	AACCCAAACUUUUCAUUAU	AUAAUGAAAAGUUUGGGUU	Mnk, Cyn,Chmp	[557-575]
342	GACAUACUCCUUCCAUCAA	UUGAUGGAAGGAGUAUGUC		[1047-1065]
343	CAACUUAAAUAAUAAACAG	CUGUUUAUUAUUUAAGUUG		[1786-1804]
344	GAAACUUGUGAAGUGGAAA	UUUCCACUUCACAAGUUUC	Mnk, Cyn	[2021-2039]
345	CAGUCAGGUAGUUGCAAUU	AAUUGCAACUACCUGACUG		[1097-1115]
346	CUAGCGGAUGGGUGCUAUU	AAUAGCACCCAUCCGCUAG		[45-63]
347	CCAAGUGAGAAGAUGGUAU	AUACCAUCUUCUCACUUGG		[968-986]
348	GUUUACUGAAAGAAAAAGA	UCUUUUUCUUUCAGUAAAC	Mnk, Cyn	[2154-2172]
349	GUCAAACUGUAGAAAUGAU	AUCAUUUCUACAGUUUGAC		[1315-1333]
350	CAGUUAUAAAAUGGAUUAU	AUAAUCCAUUUUAUAACUG	Mnk, Cyn,Chmp	[201-219]
351	CCAGUCAGGUAGUUGCAAU	AUUGCAACUACCUGACUGG		[1096-1114]
352	AAAGGAAAAUAGUAAUGUU	AACAUUACUAUUUUCCUUU		[2128-2146]
353	CUACUUUUCAUGCAAAGAA	UUCUUUGCAUGAAAAGUAG	Mnk, Cyn,Chmp	[857-875]
354	GAUUUGUCCCUAUGCAUAU	AUAUGCAUAGGGACAAAUC		[1654-1672]
355	CAAUGACAGUUUCUUUUUU	AAAAAAGAAACUGUCAUUG		[2354-2372]
356	UAAUAAAGGUAUCCAUGGA	UCCAUGGAUACCUUUAUUA	Mnk, Cyn	[83-101]
357	GUUGCAAUUGAAUUAAAUU	AAUUUAAUUCAAUUGCAAC	Mnk	[1107-1125]
358	AAUCAAAGGAAAAUAGUAA	UUACUAUUUUCCUUUGAUU		[2124-2142]
359	GACUUAACUGCAUUUUUAG	CUAAAAAUGCAGUUAAGUC		[1409-1427]
360	CUGUAACUUGAGAGUAGAU	AUCUACUCUCAAGUUACAG		[1845-1863]
361	ACAGCACCUGGUUAUUAUU	AAUAAUAACCAGGUGCUGU	Mnk, Cyn,Chmp	[691-709]
362	GGUCAAAGGCUCAAACCUU	AAGGUUUGAGCCUUUGACC	Mnk, Cyn	[1365-1383]
363	GACUUUUAAGGCUAAAACU	AGUUUUAGCCUUAAAAGUC		[1559-1577]
364	AUCCAUGGAGAACACUGAA	UUCAGUGUUCUCCAUGGAU	Mnk, Cyn	[93-111]
365	CAGUGGUGUUGAUGAUGAC	GUCAUCAUCAACACCACUG	Chmp	[621-639]
366	CAGCAAAAGGAGCAGUUUU	AAAACUGCUCCUUUUGCUG	Rat,Mnk, Cyn,Chmp	[420-438]
367	UGAGAAAGAAACUAAUAUU	AAUAUUAGUUUCUUUCUCA		[1508-1526]
368	AGAGGGUACUUUAAGACAU	AUGUCUUAAAGUACCCUCU		[1033-1051]
369	AAGUGUGAGCAAACUAACU	AGUUAGUUUGCUCACACUU		[1539-1557]
370	CUGGGAUUAUGGUUUUGUG	CACAAAACCAUAAUCCCAG		[1437-1455]
371	UUGUUUCCAUGCUCACAAA	UUUGUGAGCAUGGAAACAA	Mnk, Cyn,Chmp	[890-908]
372	UCCCUGGACAACAGUUAUA	UAUAACUGUUGUCCAGGGA	Cyn,Chmp	[190-208]
373	UUUUAUACUGUUUACUGAA	UUCAGUAAACAGUAUAAAA	Mnk, Cyn	[2145-2163]
374	CACUGAAAACUCAGUGGAU	AUCCACUGAGUUUUCAGUG	Mnk, Cyn	[105-123]
375	AAGUUUACAAUCAAAGGAA	UUCCUUUGAUUGUAAACUU	Mnk, Cyn	[2116-2134]
376	CCUCAGGGAAACAUUCAGA	UCUGAAUGUUUCCCUGAGG	Chmp	[315-333]
377	GGUCUGGUACAGAUGUCGA	UCGACAUCUGUACCAGACC	Chmp	[287-305]
378	GGCUGUCAGUAUGACAUUU	AAAUGUCAUACUGACAGCC		[2292-2310]
379	GAGGCGGUUGUAGAAGUUA	UAACUUCUACAACCGCCUC		[66-84]
380	CAGAAACUUGUGAAGUGGA	UCCACUUCACAAGUUUCUG	Mnk, Cyn	[2019-2037]
381	AAGUGGAAAUGUUCUAAAG	CUUUAGAACAUUUCCACUU		[2031-2049]
382	CAAAAUUCUUAAGUAUGUU	AACAUACUUAAGAAUUUUG		[2086-2104]
383	UCAGGGAAACAUUCAGAAA	UUUCUGAAUGUUUCCCUGA	Chmp	[317-335]
384	UGUAACUUUUGUAAAUACA	UGUAUUUACAAAAGUUACA		[2384-2402]
385	UGCUAUGAAUUUUCAAGUA	UACUUGAAAAUUCAUAGCA	Mnk, Cyn	[1220-1238]
386	UGAGCUUCAUAUACCAGCA	UGCUGGUAUAUGAAGCUCA		[1677-1695]
387	GUCUGGUACAGAUGUCGAU	AUCGACAUCUGUACCAGAC	Chmp	[288-306]
388	CAAAUCAGAAACUUGUGAA	UUCACAAGUUUCUGAUUUG	Mnk, Cyn	[2014-2032]
389	AGUAAGAAAGUGAAGCAAA	UUUGCUUCACUUUCUUACU	Mnk, Cyn	[1999-2017]
390	UGGUGCAGUCAUUAUGAGA	UCUCAUAAUGACUGCACCA	Mnk, Cyn	[1148-1166]
391	GCAUGGUCAAAGGCUCAAA	UUUGAGCCUUUGACCAUGC	Mnk, Cyn	[1361-1379]
392	GGGAAACAUUCAGAAACUU	AAGUUUCUGAAUGUUUCCC	Chmp	[320-338]
393	CAUUAUGAGAGGCAAUGAU	AUCAUUGCCUCUCAUAAUG		[1157-1175]
394	UCAGUGGAUUCAAAAUCCA	UGGAUUUUGAAUCCACUGA	Mnk,	[115-133]

			Cyn,Ms,Chmp	
395	AGGGAAACAUUCAGAAACU	AGUUUCUGAAUGUUUCCCU	Chmp	[319-337]
396	UAUACUGUUUACUGAAAGA	UCUUUCAGUAAACAGUAUA	Mnk, Cyn	[2148-2166]
397	AAUUGAUAUACACGGAUGA	UCAUCCGUGUAUAUCAAUU		[1392-1410]
398	GUAUGUUAUUUUCUGUUGA	UCAACAGAAAAUAACAUAC		[2098-2116]
399	UUCUAUAGGAACAUAUGAA	UUCAUAUGUUCCUAUAGAA		[1763-1781]
400	CUUGUUGCUCAAAAAAUGA	UCAUUUUUUGAGCAACAAG	Mnk, Cyn	[2323-2341]
401	CGGGAGAUUUCUUGUUGCU	AGCAACAAGAAAUCUCCCG	Mnk	[2313-2331]
402	AUCUGAAGAGCUAUUAUAU	AUAUAAUAGCUCUUCAGAU		[1700-1718]
403	UCUGAUUUGUCCCUAUGCA	UGCAUAGGGACAAAUCAGA	Mnk, Cyn	[1651-1669]
404	GAGAAAGAAACUAAUAUUU	AAAUAUUAGUUUCUUUCUC		[1509-1527]
405	UAUCUGAAGAGCUAUUAUA	UAUAAUAGCUCUUCAGAUA		[1699-1717]
406	AUCCCUGGACAACAGUUAU	AUAACUGUUGUCCAGGGAU	Cyn,Chmp	[189-207]
407	AAUUUUUGGAACAAAUGGA	UCCAUUUGUUCCAAAAAUU	Mnk, Cyn,Chmp	[474-492]
408	GGAGGCCGACUUCUUGUAU	AUACAAGAAGUCGGCCUCC	Mnk, Cyn,Chmp	[663-681]
409	UAGAAUUGAUAUACACGGA	UCCGUGUAUAUCAAUUCUA		[1389-1407]
410	AGAAGAUGGUAUAUUUGGU	ACCAAAUAUACCAUCUUCU		[975-993]
411	UCAUAUACCAGCAAUAUAU	AUAUAUUGCUGGUAUAUGA		[1683-1701]
412	CGGAUGGGUGCUAUUGUGA	UCACAAUAGCACCCAUCCG		[49-67]
413	UUACCCGGGUUAACCGAAA	UUUCGGUUAACCCGGGUAA	Mnk, Cyn,Chmp	[803-821]
414	UUCAAGUAAUUGUGAAAAA	UUUUUCACAAUUACUUGAA		[1231-1249]
415	CAAACCUCAGGGAAACAUU	AAUGUUUCCCUGAGGUUUG	Mnk, Cyn,Chmp	[311-329]
416	GAAUUUUCAUAAAAGCACU	AGUGCUUUUAUGAAAAUUC	Mnk, Cyn,Chmp	[255-273]
417	UGAGCAGAGACAUGACUCA	UGAGUCAUGUCUCUGCUCA		[1874-1892]
418	UGGAUUCAAAAUCCAUUAA	UUAAUGGAUUUUGAAUCCA	Rat,Mnk, Cyn,Ms,Chmp	[119-137]
419	UGAUGCGUGAUGUUUCUAA	UUAGAAACAUCACGCAUCA	Chmp	[392-410]
420	CUUUUCAUGCAAAGAAACA	UGUUUCUUUGCAUGAAAAG	Rb,Mnk, Cyn,Chmp	[860-878]
421	UGGUUUUUUUUAGUUUGUA	UACAAACUAAAAAAAACCA		[947-965]
422	ACUAAUAUUUUAUGUGAGA	UCUCACAUAAAAUAUUAGU		[1518-1536]
423	GAAACAGUAUGCCGACAAG	CUUGUCGGCAUACUGUUUC	Chmp	[765-783]
424	GUAUGCCGACAAGCUUGAA	UUCAAGCUUGUCGGCAUAC	Chmp	[771-789]
425	GGAACCAAAGAUCAUACAU	AUGUAUGAUCUUUGGUUCC	Chmp	[144-162]
426	AGAAACAGAUUCCAUGUAU	AUACAUGGAAUCUGUUUCU	Rb,Mnk, Cyn,Chmp	[872-890]
427	ACAGUUAUAAAAUGGAUUA	UAAUCCAUUUUAUAACUGU	Mnk, Cyn,Chmp	[200-218]
428	CAAGUAAGAAAGUGAAGCA	UGCUUCACUUUCUUACUUG	Mnk, Cyn	[1997-2015]
429	ACUCUGGAAUAUCCCUGGA	UCCAGGGAUAUUCCAGAGU	Mnk, Cyn,Chmp	[179-197]
430	GGGAUUAUGGUUUUGUGAU	AUCACAAAACCAUAAUCCC		[1439-1457]
431	AAAAAUUUGGAACCAAAGA	UCUUUGGUUCCAAAUUUUU	Chmp	[136-154]
432	GUUGACCUGAAAAAAAUAA	UUAUUUUUUUCAGGUCAAC	Chmp	[496-514]
433	GUUUCUAUGUGACAAUUUU	AAAAUUGUCACAUAGAAAC		[2431-2449]
434	AACUGUAAGGUGCUACAAU	AUUGUAGCACCUUACAGUU		[1604-1622]
435	CCAAAGAUCAUACAUGGAA	UUCCAUGUAUGAUCUUUGG	Chmp	[148-166]
436	UGAAGUGGAAAUGUUCUAA	UUAGAACAUUUCCACUUCA	Mnk, Cyn	[2029-2047]
437	GCACAUUCUUACCCGGGUU	AACCCGGGUAAGAAUGUGC	Mnk, Cyn,Chmp	[795-813]
438	AGCUUGAAUUUAUGCACAU	AUGUGCAUAAAUUCAAGCU	Mnk, Cyn,Chmp	[782-800]
439	CAUACAUGGAAGCGAAUCA	UGAUUCGCUUCCAUGUAUG		[156-174]
440	AGAGGCAAUGAUUGUUAAU	AUUAACAAUCAUUGCCUCU		[1164-1182]
441	CAUGGAGAACACUGAAAAC	GUUUUCAGUGUUCUCCAUG	Mnk, Cyn	[96-114]
442	AGACAUACUCCUUCCAUCA	UGAUGGAAGGAGUAUGUCU		[1046-1064]
443	CAUAUGAAAAUACAACUUA	UAAGUUGUAUUUUCAUAUG	Mnk, Cyn	[1774-1792]
444	UGAUUUGUCCCUAUGCAUA	UAUGCAUAGGGACAAAUCA		[1653-1671]
445	CGCUACUUUUCAUGCAAAG	CUUUGCAUGAAAAGUAGCG	Chmp	[855-873]
446	GUUUUGUCAAACUGUAGAA	UUCUACAGUUUGACAAAAC		[1310-1328]

447	GUAGAUGGUUUGAGCCUGA	UCAGGCUCAAACCAUCUAC		[1858-1876]
448	GCAAUUGAAUUAAAUUAGG	CCUAAUUUAAUUCAAUUGC	Mnk	[1110-1128]
449	ACUGGAAAACCCAAACUUU	AAAGUUUGGGUUUUCCAGU	Mnk, Cyn,Chmp	[550-568]
450	GAAGUUUACAAUCAAAGGA	UCCUUUGAUUGUAAACUUC	Mnk, Cyn	[2115-2133]
451	UUUGUAGCAAAAUUCUUAA	UUAAGAAUUUUGCUACAAA		[2079-2097]
452	AAAUCAUAGUACUCUUUGU	ACAAAGAGUACUAUGAUUU	Mnk, Cyn	[2065-2083]
453	CUUGUGAAGUGGAAAUGUU	AACAUUUCCACUUCACAAG	Mnk, Cyn	[2025-2043]
454	AAGCUUGAAUUUAUGCACA	UGUGCAUAAAUUCAAGCUU	Mnk, Cyn,Chmp	[781-799]
455	GAUGCUGUGCUAUGAAUUU	AAAUUCAUAGCACAGCAUC	Cyn	[1213-1231]
456	UGGUACAGAUGUCGAUGCA	UGCAUCGACAUCUGUACCA	Chmp	[291-309]
457	ACUCCUUCCAUCAAAUAGA	UCUAUUUGAUGGAAGGAGU		[1052-1070]
458	UGGAUCUACCAGCAUAAAU	AUUUAUGCUGGUAGAUCCA		[1628-1646]
459	ACUUAACUGCAUUUUUAGA	UCUAAAAAUGCAGUUAAGU		[1410-1428]
460	GUAGUUGCAAUUGAAUUAA	UUAAUUCAAUUGCAACUAC	Mnk	[1104-1122]
461	CAAUUUUGUACAAAUUUGU	ACAAAUUUGUACAAAAUUG		[2443-2461]
462	AGAAGGAAUAAUUUUUGGA	UCCAAAAAUUAUUCCUUCU	Mnk, Cyn,Chmp	[465-483]
463	GCUCAAACCUUUAUUUUAG	CUAAAAUAAAGGUUUGAGC		[1373-1391]
464	AGAGAAAGUGUGAGCAAAC	GUUUGCUCACACUUUCUCU		[1534-1552]
465	CCACAGCACCUGGUUAUUA	UAAUAACCAGGUGCUGUGG	Mnk, Cyn,Chmp	[689-707]
466	UUUCCAUGCUCACAAAAGA	UCUUUUGUGAGCAUGGAAA	Mnk, Cyn,Chmp	[893-911]
467	CAAAUUUGUUAUUUUCCAU	AUGGAAAAUAACAAAUUUG		[2453-2471]
468	CAGAUUCCAUGUAUUGUUU	AAACAAUACAUGGAAUCUG	Mnk, Cyn,Chmp	[877-895]
469	AAACAUUGAAGUAAUGAAU	AUUCAUUACUUCAAUGUUU		[1253-1271]
470	GAAAACUCAGUGGAUUCAA	UUGAAUCCACUGAGUUUUC	Mnk, Cyn,Chmp	[109-127]
471	GCCGACUUCUUGUAUGCAU	AUGCAUACAAGAAGUCGGC	Mnk, Cyn,Chmp	[667-685]
472	UUCCAUGCUCACAAAAGAA	UUCUUUUGUGAGCAUGGAA	Mnk, Cyn,Chmp	[894-912]
473	ACAACAGUUAUAAAAUGGA	UCCAUUUUAUAACUGUUGU	Cyn,Chmp	[197-215]
474	UUACAGUGAUGCUGUGCUA	UAGCACAGCAUCACUGUAA		[1206-1224]
475	CAUUUUGACCUACUCUCAU	AUGAGAGUAGGUCAAAAUG		[1009-1027]
476	UGGAGGCCGACUUCUUGUA	UACAAGAAGUCGGCCUCCA	Mnk, Cyn,Chmp	[662-680]
477	AAUAUUUUAUGUGAGAGAA	UUCUCUCACAUAAAAUAUU		[1521-1539]
478	AAAGUUAAACAUUGAAGUA	UACUUCAAUGUUUAACUUU	Mnk, Cyn	[1247-1265]
479	UGAGGCGGUUGUAGAAGUU	AACUUCUACAACCGCCUCA		[65-83]
480	UACAGAUGUCGAUGCAGCA	UGCUGCAUCGACAUCUGUA	Chmp	[294-312]
481	GUCAUAAAAUACCAGUGGA	UCCACUGGUAUUUUAUGAC	Chmp	[647-665]
482	GUGAAGAAAUUGUGGAAUU	AAUUCCACAAUUUCUUCAC	Mnk, Cyn,Chmp	[374-392]
483	GAUUGUUAAUUUACAGCUU	AAGCUGUAAAUUAACAAUC	Mnk, Cyn	[1173-1191]
484	GGUUGGUGGUUUUUUUUAG	CUAAAAAAAACCACCAACC		[941-959]
485	AGAUGUCGAUGCAGCAAAC	GUUUGCUGCAUCGACAUCU	Chmp	[297-315]
486	GCAAAAGGAGCAGUUUUGU	ACAAAACUGCUCCUUUUGC	Rat,Mnk, Cyn,Chmp	[422-440]
487	AGUCAUUAUGAGAGGCAAU	AUUGCCUCUCAUAAUGACU		[1154-1172]
488	UUUCAUAAAAGCACUGGAA	UUCCAGUGCUUUUAUGAAA	Mnk, Cyn,Chmp	[259-277]
489	AUGACAUCUCGGUCUGGUA	UACCAGACCGAGAUGUCAU	Chmp	[277-295]
490	AAUAUGAAGUCAGGAAUAA	UUAUUCCUGACUUCAUAUU	Chmp	[341-359]
491	GUGAUGUUUCUAAAGAAGA	UCUUCUUUAGAAACAUCAC	Chmp	[398-416]
492	UCUAACUGGAAAACCCAAA	UUUGGGUUUUCCAGUUAGA	Mnk, Cyn,Chmp	[546-564]
493	UUCUAAAGGUGGUGAGGCA	UGCCUCACCACCUUUAGAA		[2042-2060]
494	UUGAGAAAGAAACUAAUAU	AUAUUAGUUUCUUUCUCAA		[1507-1525]
495	GACCAUUUAUCUGGGAUUA	UAAUCCCAGAUAAAUGGUC	Mnk	[1427-1445]
496	ACCUUUAUUUUAGAAUUGA	UCAAUUCUAAAAUAAAGGU		[1379-1397]
497	CUAUUGUGAGGCGGUUGUA	UACAACCGCCUCACAAUAG		[59-77]
498	AAUAAUAAACAGUGGAAUA	UAUUCCACUGUUUAUUAUU		[1793-1811]
499	GAGACAUGACUCAGCCUGU	ACAGGCUGAGUCAUGUCUC		[1880-1898]
500	AUAUCAGUUGAGCUUCAUA	UAUGAAGCUCAACUGAUAU		[1669-1687]

Table B 12 CTSD - cathepsin D

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-23110949 :134-1372
1	CUUGCUGGAUCCACCACAA	UUGUGGUGGAUCCAGCAAG		[480-498]
2	CCGAGGUGCUCAAGAACUA	UAGUUCUUGAGCACCUCGG		[336-354]
3	GGAUCCACCACAAGUACAA	UUGUACUUGUGGUGGAUCC		[486-504]
4	CAGCUGACAUGGAAAUACA	UGUAUUUCCAUGUCAGCUG		[2078-2096]
5	CAGACUCCAAGUAUUACAA	UUGUAAUACUUGGAGUCUG		[882-900]
6	GCUGGAUCCACCACAAGUA	UACUUGUGGUGGAUCCAGC		[483-501]
7	CCGUCUUCGACAACCUGAU	AUCAGGUUGUCGAAGACGG		[771-789]
8	CAGAGGACUACACGCUCAA	UUGAGCGUGUAGUCCUCUG		[1185-1203]
9	ACAACCUGAUGCAGCAGAA	UUCUGCUGCAUCAGGUUGU		[780-798]
10	ACCUGAAUGUCACCCGCAA	UUGCGGGUGACAUUCAGGU		[915-933]
11	AGAAGCUGGUGGACCAGAA	UUCUGGUCCACCAGCUUCU		[795-813]
12	CCAGCACCUACGUGAAGAA	UUCUUCACGUAGGUGCUGG		[516-534]
13	GGCACAGACUCCAAGUAUU	AAUACUUGGAGUCUGUGCC		[878-896]
14	ACUGAAGCUGGGAGGCAAA	UUUGCCUCCCAGCUUCAGU		[1150-1168]
15	AGAACUACAUGGACGCCCA	UGGGCGUCCAUGUAGUUCU		[348-366]
16	UGUUUGACCGUGACAACAA	UUGUUGUCACGGUCAAACA		[1320-1338]
17	GCACAGACUCCAAGUAUUA	UAAUACUUGGAGUCUGUGC		[879-897]
18	ACAUGGACGCCCAGUACUA	UAGUACUGGGCGUCCAUGU		[354-372]
19	CCUCGUUUGACAUCCACUA	UAGUGGAUGUCAAACGAGG		[540-558]
20	UCUGUUUCGUGCAUUGGAA	UUCCAAUGCACGAAACAGA		[1624-1642]
21	GUUUGACCGUGACAACAAC	GUUGUUGUCACGGUCAAAC		[1321-1339]
22	UCGACAACCUGAUGCAGCA	UGCUGCAUCAGGUUGUCGA		[777-795]
23	GGUUCUCUGUCCUACCUGA	UCAGGUAGGACAGAGAACC		[902-920]
24	AAUGGUACCUCGUUUGACA	UGUCAAACGAGGUACCAUU		[533-551]
25	AGUCCAGCACCUACGUGAA	UUCACGUAGGUGCUGGACU		[513-531]
26	AGAACAUCUUCUCCUUCUA	UAGAAGGAGAAGAUGUUCU	Rat,Ms	[810-828]
27	AGGUGCUCAAGAACUACAU	AUGUAGUUCUUGAGCACCU		[339-357]
28	UGAGCUGGAAGGAGUGAGA	UCUCACUCCUUCCAGCUCA		[1898-1916]
29	GCUUCACAGUCGUCUUCGA	UCGAAGACGACUGUGAAGC		[405-423]
30	GCUUCAUGGGCAUGGACAU	AUGUCCAUGCCCAUGAAGC		[1239-1257]
31	GUGUUUGACCGUGACAACA	UGUUGUCACGGUCAAACAC		[1319-1337]
32	UGCUCAAGAACUACAUGGA	UCCAUGUAGUUCUUGAGCA		[342-360]
33	GAGGUGCUCAAGAACUACA	UGUAGUUCUUGAGCACCUC		[338-356]
34	GAGGCAAAGGCUACAAGCU	AGCUUGUAGCCUUUGCCUC		[1161-1179]
35	GUGUCAAAGUGGAGAGGCA	UGCCUCUCCACUUUGACAC		[645-663]
36	UUCCCGAGGUGCUCAAGAA	UUCUUGAGCACCUCGGGAA		[333-351]
37	GCAUCUCCGUCAACAACGU	ACGUUGUUGACGGAGAUGC		[747-765]
38	AGGACUACACGCUCAAGGU	ACCUUGAGCGUGUAGUCCU		[1188-1206]
39	ACAUGGAAAUACAGUUGUU	AACAACUGUAUUUCCAUGU		[2084-2102]
40	GGACAAAACCCACCUUGUU	AACAAGGUGGGUUUUGUCC		[1919-1937]
41	GGCAAAGGCUACAAGCUGU	ACAGCUUGUAGCCUUUGCC		[1163-1181]
42	UGCACAAGUUCACGUCCAU	AUGGACGUGAACUUGUGCA		[210-228]
43	CGACUUGCUGUUUUGUUCU	AGAACAAAACAGCAAGUCG		[1515-1533]
44	GCUGAUCCAGAGCACAGAU	AUCUGUGCUCUGGAUCAGC		[1606-1624]
45	CUCUGUGGAGGACCUGAUU	AAUCAGGUCCUCCACAGAG		[256-274]
46	CGAGGUGCUCAAGAACUAC	GUAGUUCUUGAGCACCUCG		[337-355]
47	ACUACAUGGACGCCCAGUA	UACUGGGCGUCCAUGUAGU		[351-369]
48	AGCUGAUCCAGAGCACAGA	UCUGUGCUCUGGAUCAGCU		[1605-1623]
49	AGCUGGUGGACCAGAACAU	AUGUUCUGGUCCACCAGCU		[798-816]
50	GUACCUCGUUUGACAUCCA	UGGAUGUCAAACGAGGUAC		[537-555]
51	GUUCUCUGUCCUACCUGAA	UUCAGGUAGGACAGAGAAC		[903-921]
52	GCUGUUUUGUUCUGUGGUU	AACCACAGAACAAAACAGC		[1521-1539]
53	ACAAGUACAACAGCGACAA	UUGUCGCUGUUGUACUUGU		[495-513]

54	ACUGCAAACUGCUGGACAU	AUGUCCAGCAGUUUGCAGU		[459-477]
55	CCCGACUUGCUGUUUUGUU	AACAAAACAGCAAGUCGGG		[1513-1531]
56	CACAGAUCUGUUUCGUGCA	UGCACGAAACAGAUCUGUG		[1618-1636]
57	UGAUUCAGGGCGAGUACAU	AUGUACUCGCCCUGAAUCA		[1092-1110]
58	GAAACAGAGGAGAGUCCCA	UGGGACUCUCCUCUGUUUC		[1400-1418]
59	CAAGUACAACAGCGACAAG	CUUGUCGCUGUUGUACUUG		[496-514]
60	CUGUCCUACCUGAAUGUCA	UGACAUUCAGGUAGGACAG		[908-926]
61	UGGGAGGCAAAGGCUACAA	UUGUAGCCUUUGCCUCCCA		[1158-1176]
62	UGGUGGACCAGAACAUCUU	AAGAUGUUCUGGUCCACCA		[801-819]
63	GGGACAAAACCCACCUUGU	ACAAGGUGGGUUUUGUCCC		[1918-1936]
64	GAAGAAUGGUACCUCGUUU	AAACGAGGUACCAUUCUUC		[529-547]
65	CCCAGCUGACAUGGAAAUA	UAUUUCCAUGUCAGCUGGG		[2076-2094]
66	CCAGCACAGAAACAGAGGA	UCCUCUGUUUCUGUGCUGG		[1392-1410]
67	UGAGGAUGAGCUGGAAGGA	UCCUUCCAGCUCAUCCUCA		[1892-1910]
68	CCUCCCUGGGUUCAGAAAU	AUUUCUGAACCCAGGGAGG		[1544-1562]
69	GCUCAAGAACUACAUGGAC	GUCCAUGUAGUUCUUGAGC		[343-361]
70	ACCAGAACAUCUUCUCCUU	AAGGAGAAGAUGUUCUGGU		[807-825]
71	AGAGCUGAUCCAGAGCACA	UGUGCUCUGGAUCAGCUCU		[1603-1621]
72	CUGAUUCAGGGCGAGUACA	UGUACUCGCCCUGAAUCAG		[1091-1109]
73	CUGCACAAGUUCACGUCCA	UGGACGUGAACUUGUGCAG		[209-227]
74	AACAGAGGAGAGUCCCAGA	UCUGGGACUCUCCUCUGUU		[1402-1420]
75	AGGCAUCACCUUCAUCGCA	UGCGAUGAAGGUGAUGCCU		[691-709]
76	CCCUGGGUUCAGAAAUGCU	AGCAUUUCUGAACCCAGGG		[1547-1565]
77	ACCUGAUGCAGCAGAAGCU	AGCUUCUGCUGCAUCAGGU		[783-801]
78	CGUGAAGAAUGGUACCUCG	CGAGGUACCAUUCUUCACG		[526-544]
79	AAGUGGAGAGGCAGGUCUU	AAGACCUGCCUCUCCACUU		[651-669]
80	CACCCUACCUGUUCAGUGU	ACACUGAACAGGUAGGGUG		[1839-1857]
81	CCGUCUCAAAGUACUCCCA	UGGGAGUACUUUGAGACGG		[285-303]
82	ACAGACUCCAAGUAUUACA	UGUAAUACUUGGAGUCUGU		[881-899]
83	CGUCUUCGACAACCUGAUG	CAUCAGGUUGUCGAAGACG		[772-790]
84	GCCCGACUUGCUGUUUUGU	ACAAAACAGCAAGUCGGGC		[1512-1530]
85	CCGACUUGCUGUUUUGUUC	GAACAAAACAGCAAGUCGG		[1514-1532]
86	AGCCCGACUUGCUGUUUUG	CAAAACAGCAAGUCGGGCU		[1511-1529]
87	CACAAGUACAACAGCGACA	UGUCGCUGUUGUACUUGUG		[494-512]
88	AGCUGACAUGGAAAUACAG	CUGUAUUUCCAUGUCAGCU		[2079-2097]
89	UGGAUCCACCACAAGUACA	UGUACUUGUGGUGGAUCCA		[485-503]
90	CCUCCAUCCACUGCAAACU	AGUUUGCAGUGGAUGGAGG		[450-468]
91	CUGACAUGGAAAUACAGUU	AACUGUAUUUCCAUGUCAG		[2081-2099]
92	GCACCUACGUGAAGAAUGG	CCAUUCUUCACGUAGGUGC		[519-537]
93	GGUGCUCAAGAACUACAUG	CAUGUAGUUCUUGAGCACC		[340-358]
94	UCUUCAUCGGCCGCUACUA	UAGUAGCGGCCGAUGAAGA		[1296-1314]
95	UGUCCUACCUGAAUGUCAC	GUGACAUUCAGGUAGGACA		[909-927]
96	CUCCCUGGGUUCAGAAAUG	CAUUUCUGAACCCAGGGAG		[1545-1563]
97	CAAACUGCUGGACAUCGCU	AGCGAUGUCCAGCAGUUUG		[463-481]
98	CAAAACCCACCUUGUUGGA	UCCAACAAGGUGGGUUUUG		[1922-1940]
99	CCAUCCACUGCAAACUGCU	AGCAGUUUGCAGUGGAUGG		[453-471]
100	AUUCAGGGCGAGUACAUGA	UCAUGUACUCGCCCUGAAU		[1094-1112]
101	UUUGACCGUGACAACAACA	UGUUGUUGUCACGGUCAAA		[1322-1340]
102	AGUGGAGAGGCAGGUCUUU	AAAGACCUGCCUCUCCACU		[652-670]
103	CUGGAUCCACCACAAGUAC	GUACUUGUGGUGGAUCCAG		[484-502]
104	CUCGUUUGACAUCCACUAU	AUAGUGGAUGUCAAACGAG		[541-559]
105	GUCUGUCUCUCCAUCUGUU	AACAGAUGGAGAGACAGAC		[1574-1592]
106	ACAAGGGUUCUCUGUCCUA	UAGGACAGAGAACCCUUGU		[897-915]
107	UCUUCGACAACCUGAUGCA	UGCAUCAGGUUGUCGAAGA		[774-792]
108	CAACCUGAUGCAGCAGAAG	CUUCUGCUGCAUCAGGUUG		[781-799]
109	CCAGAGCACAGAUCUGUUU	AAACAGAUCUGUGCUCUGG		[1612-1630]

110	CACUGCAAACUGCUGGACA	UGUCCAGCAGUUUGCAGUG		[458-476]
111	UGCUGGAUCCACCACAAGU	ACUUGUGGUGGAUCCAGCA		[482-500]
112	CUCCAAGUAUUACAAGGGU	ACCCUUGUAAUACUUGGAG		[886-904]
113	AGGAUGAGCUGGAAGGAGU	ACUCCUUCCAGCUCAUCCU		[1894-1912]
114	AGUGCUUCACAGUCGUCUU	AAGACGACUGUGAAGCACU		[402-420]
115	AUCUGUUUCGUGCAUUGGA	UCCAAUGCACGAAACAGAU		[1623-1641]
116	ACCACAAGUACAACAGCGA	UCGCUGUUGUACUUGUGGU		[492-510]
117	CCACAAGUACAACAGCGAC	GUCGCUGUUGUACUUGUGG		[493-511]
118	AAGCCCGACUUGCUGUUUU	AAAACAGCAAGUCGGGCUU		[1510-1528]
119	CUGGUGGACCAGAACAUCU	AGAUGUUCUGGUCCACCAG		[800-818]
120	AGAAUGGUACCUCGUUUGA	UCAAACGAGGUACCAUUCU		[531-549]
121	AGAGGACUACACGCUCAAG	CUUGAGCGUGUAGUCCUCU		[1186-1204]
122	GAUUCAGGGCGAGUACAUG	CAUGUACUCGCCCUGAAUC		[1093-1111]
123	UGAAGAAUGGUACCUCGUU	AACGAGGUACCAUUCUUCA		[528-546]
124	ACAGAUCUGUUUCGUGCAU	AUGCACGAAACAGAUCUGU		[1619-1637]
125	GACAACCUGAUGCAGCAGA	UCUGCUGCAUCAGGUUGUC		[779-797]
126	UGAUGCAGCAGAAGCUGGU	ACCAGCUUCUGCUGCAUCA		[786-804]
127	CUCUGUCCUACCUGAAUGU	ACAUUCAGGUAGGACAGAG		[906-924]
128	CCACCACAAGUACAACAGC	GCUGUUGUACUUGUGGUGG		[490-508]
129	GCUGACAUGGAAAUACAGU	ACUGUAUUUCCAUGUCAGC		[2080-2098]
130	AAGCUGGUGGACCAGAACA	UGUUCUGGUCCACCAGCUU		[797-815]
131	GGUGGACCAGAACAUCUUC	GAAGAUGUUCUGGUCCACC		[802-820]
132	GCACAGAAACAGAGGAGAG	CUCUCCUCUGUUUCUGUGC		[1395-1413]
133	GAUCCACCACAAGUACAAC	GUUGUACUUGUGGUGGAUC		[487-505]
134	GACUACACGCUCAAGGUGU	ACACCUUGAGCGUGUAGUC		[1190-1208]
135	UCCAGAGCACAGAUCUGUU	AACAGAUCUGUGCUCUGGA		[1611-1629]
136	GAUCCAGAGCACAGAUCUG	CAGAUCUGUGCUCUGGAUC		[1609-1627]
137	CAGCACCUACGUGAAGAAU	AUUCUUCACGUAGGUGCUG		[517-535]
138	UGUUUUGUUCUGUGGUUUU	AAAACCACAGAACAAAACA		[1523-1541]
139	AGGCAAAGGCUACAAGCUG	CAGCUUGUAGCCUUUGCCU		[1162-1180]
140	AUGGUACCUCGUUUGACAU	AUGUCAAACGAGGUACCAU		[534-552]
141	CAGAACAUCUUCUCCUUCU	AGAAGGAGAAGAUGUUCUG		[809-827]
142	GAGCACAGAUCUGUUUCGU	ACGAAACAGAUCUGUGCUC		[1615-1633]
143	AGGGUUCUCUGUCCUACCU	AGGUAGGACAGAGAACCCU		[900-918]
144	CAAGUAUUACAAGGGUUCU	AGAACCCUUGUAAUACUUG		[889-907]
145	CUGUUUUGUUCUGUGGUUU	AAACCACAGAACAAAACAG		[1522-1540]
146	UUCAUCGGCCGCUACUACA	UGUAGUAGCGGCCGAUGAA		[1298-1316]
147	UGCCUGUCUGUCUCUCCAU	AUGGAGAGACAGACAGGCA		[1569-1587]
148	AUCCACCACAAGUACAACA	UGUUGUACUUGUGGUGGAU		[488-506]
149	AGCACAGAAACAGAGGAGA	UCUCCUCUGUUUCUGUGCU		[1394-1412]
150	UGACCGUGACAACAACAGG	CCUGUUGUUGUCACGGUCA		[1324-1342]
151	CUUGCUGUUUUGUUCUGUG	CACAGAACAAAACAGCAAG		[1518-1536]
152	AGAUCUGUUUCGUGCAUUG	CAAUGCACGAAACAGAUCU		[1621-1639]
153	GAUCACACUGAAGCUGGGA	UCCCAGCUUCAGUGUGAUC		[1144-1162]
154	AAGUCCAGCACCUACGUGA	UCACGUAGGUGCUGGACUU		[512-530]
155	CGUUUGACAUCCACUAUGG	CCAUAGUGGAUGUCAAACG		[543-561]
156	GAUGAGCUGGAAGGAGUGA	UCACUCCUUCCAGCUCAUC		[1896-1914]
157	GACAUGGAAAUACAGUUGU	ACAACUGUAUUUCCAUGUC		[2083-2101]
158	ACAACAACAGGGUGGGCUU	AAGCCCACCCUGUUGUUGU		[1332-1350]
159	UUCAGGGCGAGUACAUGAU	AUCAUGUACUCGCCCUGAA		[1095-1113]
160	GAAUGGUACCUCGUUUGAC	GUCAAACGAGGUACCAUUC		[532-550]
161	ACAUCUUCUCCUUCUACCU	AGGUAGAAGGAGAAGAUGU	Rat,Ms	[813-831]
162	CAAGGGUUCUCUGUCCUAC	GUAGGACAGAGAACCCUUG		[898-916]
163	UCCACUGCAAACUGCUGGA	UCCAGCAGUUUGCAGUGGA		[456-474]
164	ACCUACGUGAAGAAUGGUA	UACCAUUCUUCACGUAGGU		[521-539]
165	UGCUGUUUUGUUCUGUGGU	ACCACAGAACAAAACAGCA		[1520-1538]

166	CUGUUUCGUGCAUUGGAAG	CUUCCAAUGCACGAAACAG		[1625-1643]
167	CACCUACGUGAAGAAUGGU	ACCAUUCUUCACGUAGGUG		[520-538]
168	AUCUUCUCCUUCUACCUGA	UCAGGUAGAAGGAGAAGAU	Rat,Ms	[815-833]
169	GACCAGAACAUCUUCUCCU	AGGAGAAGAUGUUCUGGUC		[806-824]
170	GUAUUACAAGGGUUCUCUG	CAGAGAACCCUUGUAAUAC		[892-910]
171	UUCUCUGUCCUACCUGAAU	AUUCAGGUAGGACAGAGAA		[904-922]
172	UGUUUCGUGCAUUGGAAGA	UCUUCCAAUGCACGAAACA		[1626-1644]
173	CCUGGGUUCAGAAAUGCUG	CAGCAUUUCUGAACCCAGG		[1548-1566]
174	UCUGCAGCUGACCUCUGUU	AACAGAGGUCAGCUGCAGA		[2032-2050]
175	UGGACAUCGCUUGCUGGAU	AUCCAGCAAGCGAUGUCCA		[471-489]
176	CUACGUGAAGAAUGGUACC	GGUACCAUUCUUCACGUAG		[523-541]
177	AGAAAUGCUGCCUGCCUGU	ACAGGCAGGCAGCAUUUCU		[1557-1575]
178	UUGCUGGAUCCACCACAAG	CUUGUGGUGGAUCCAGCAA		[481-499]
179	CCAGCUGACAUGGAAAUAC	GUAUUUCCAUGUCAGCUGG		[2077-2095]
180	CACAGACUCCAAGUAUUAC	GUAAUACUUGGAGUCUGUG		[880-898]
181	CCUACGUGAAGAAUGGUAC	GUACCAUUCUUCACGUAGG		[522-540]
182	GACUUGCUGUUUUGUUCUG	CAGAACAAAACAGCAAGUC		[1516-1534]
183	GACUCCAAGUAUUACAAGG	CCUUGUAAUACUUGGAGUC		[884-902]
184	GGACCAGAACAUCUUCUCC	GGAGAAGAUGUUCUGGUCC		[805-823]
185	GUAGAGCUGAUCCAGAGCA	UGCUCUGGAUCAGCUCUAC		[1601-1619]
186	CUGUCUGUCUCUCCAUCUG	CAGAUGGAGAGACAGACAG		[1572-1590]
187	CAGAUCUGUUUCGUGCAUU	AAUGCACGAAACAGAUCUG		[1620-1638]
188	UGAUCCAGAGCACAGAUCU	AGAUCUGUGCUCUGGAUCA		[1608-1626]
189	CAUGGAAAUACAGUUGUUG	CAACAACUGUAUUUCCAUG		[2085-2103]
190	ACAAGUCCAGCACCUACGU	ACGUAGGUGCUGGACUUGU		[510-528]
191	AGUACAACAGCGACAAGUC	GACUUGUCGCUGUUGUACU		[498-516]
192	AUCCCGCUGCACAAGUUCA	UGAACUUGUGCAGCGGGAU		[203-221]
193	UACCUGAAUGUCACCCGCA	UGCGGGUGACAUUCAGGUA		[914-932]
194	ACAUCGCUUGCUGGAUCCA	UGGAUCCAGCAAGCGAUGU		[474-492]
195	CACCACAAGUACAACAGCG	CGCUGUUGUACUUGUGGUG		[491-509]
196	ACAACAGCGACAAGUCCAG	CUGGACUUGUCGCUGUUGU		[501-519]
197	CUUCGACAACCUGAUGCAG	CUGCAUCAGGUUGUCGAAG		[775-793]
198	GUGAAGAAUGGUACCUCGU	ACGAGGUACCAUUCUUCAC		[527-545]
199	AGACUCCAAGUAUUACAAG	CUUGUAAUACUUGGAGUCU		[883-901]
200	GAACAUCUUCUCCUUCUAC	GUAGAAGGAGAAGAUGUUC	Rat,Ms	[811-829]
201	AGCUGACCUCUGUUGUCCU	AGGACAACAGAGGUCAGCU		[2037-2055]
202	CUGGGUUCAGAAAUGCUGC	GCAGCAUUUCUGAACCCAG		[1549-1567]
203	ACUACACGCUCAAGGUGUC	GACACCUUGAGCGUGUAGU		[1191-1209]
204	CACAGAAACAGAGGAGAGU	ACUCUCCUCUGUUUCUGUG		[1396-1414]
205	CUCCAUCCACUGCAAACUG	CAGUUUGCAGUGGAUGGAG		[451-469]
206	UCUUCUCCUUCUACCUGAG	CUCAGGUAGAAGGAGAAGA		[816-834]
207	AUUCCCGAGGUGCUCAAGA	UCUUGAGCACCUCGGGAAU		[332-350]
208	CCUGUCUGUCUCUCCAUCU	AGAUGGAGAGACAGACAGG		[1571-1589]
209	CAUCCACUGCAAACUGCUG	CAGCAGUUUGCAGUGGAUG		[454-472]
210	UAGAGCUGAUCCAGAGCAC	GUGCUCUGGAUCAGCUCUA		[1602-1620]
211	CAGCACAGAAACAGAGGAG	CUCCUCUGUUUCUGUGCUG		[1393-1411]
212	ACCGUGACAACAACAGGGU	ACCCUGUUGUUGUCACGGU		[1326-1344]
213	GCACAAGUUCACGUCCAUC	GAUGGACGUGAACUUGUGC		[211-229]
214	UUCACAGUCGUCUUCGACA	UGUCGAAGACGACUGUGAA		[407-425]
215	AAGUACAACAGCGACAAGU	ACUUGUCGCUGUUGUACUU		[497-515]
216	CUCAAGAACUACAUGGACG	CGUCCAUGUAGUUCUUGAG		[344-362]
217	ACCUCGUUUGACAUCCACU	AGUGGAUGUCAAACGAGGU		[539-557]
218	UACAACAGCGACAAGUCCA	UGGACUUGUCGCUGUUGUA		[500-518]
219	CAAGCCCGACUUGCUGUUU	AAACAGCAAGUCGGGCUUG		[1509-1527]
220	GCAAAGGCUACAAGCUGUC	GACAGCUUGUAGCCUUUGC		[1164-1182]
221	UACAUGGACGCCCAGUACU	AGUACUGGGCGUCCAUGUA		[353-371]

222	UCUCCGUCAACAACGUGCU	AGCACGUUGUUGACGGAGA		[750-768]
223	AGAGCACAGAUCUGUUUCG	CGAAACAGAUCUGUGCUCU		[1614-1632]
224	UCUCCUUCUACCUGAGCAG	CUGCUCAGGUAGAAGGAGA		[819-837]
225	UCCAAGUAUUACAAGGGUU	AACCCUUGUAAUACUUGGA		[887-905]
226	AAGGGUUCUCUGUCCUACC	GGUAGGACAGAGAACCCUU		[899-917]
227	CGUCUCAAAGUACUCCCAG	CUGGGAGUACUUUGAGACG		[286-304]
228	GUGGACCAGAACAUCUUCU	AGAAGAUGUUCUGGUCCAC		[803-821]
229	AACAGCGACAAGUCCAGCA	UGCUGGACUUGUCGCUGUU		[503-521]
230	UGACAUGGAAAUACAGUUG	CAACUGUAUUUCCAUGUCA		[2082-2100]
231	ACUUGCUGUUUUGUUCUGU	ACAGAACAAAACAGCAAGU		[1517-1535]
232	UCCAGCACCUACGUGAAGA	UCUUCACGUAGGUGCUGGA		[515-533]
233	UCACAGUCGUCUUCGACAC	GUGUCGAAGACGACUGUGA		[408-426]
234	CCAAGUAUUACAAGGGUUC	GAACCCUUGUAAUACUUGG		[888-906]
235	GUCUCUCCAUCUGUUUGGU	ACCAAACAGAUGGAGAGAC		[1578-1596]
236	AGCACAGAUCUGUUUCGUG	CACGAAACAGAUCUGUGCU		[1616-1634]
237	UCCACCACAAGUACAACAG	CUGUUGUACUUGUGGUGGA	Rat	[489-507]
238	UCAAGAACUACAUGGACGC	GCGUCCAUGUAGUUCUUGA		[345-363]
239	CAUCUCCGUCAACAACGUG	CACGUUGUUGACGGAGAUG		[748-766]
240	UGUCUGUCUCUCCAUCUGU	ACAGAUGGAGAGACAGACA		[1573-1591]
241	UUCUCCUUCUACCUGAGCA	UGCUCAGGUAGAAGGAGAA		[818-836]
242	CCAGAACAUCUUCUCCUUC	GAAGGAGAAGAUGUUCUGG		[808-826]
243	GCACAGAUCUGUUUCGUGC	GCACGAAACAGAUCUGUGC		[1617-1635]
244	AAAGUGGAGAGGCAGGUCU	AGACCUGCCUCUCCACUUU		[650-668]
245	UGCAGCUGACCUCUGUUGU	ACAACAGAGGUCAGCUGCA		[2034-2052]
246	AAAUGCUGCCUGCCUGUCU	AGACAGGCAGGCAGCAUUU		[1559-1577]
247	AUGGAAAUACAGUUGUUGG	CCAACAACUGUAUUUCCAU		[2086-2104]
248	UCAGAAAUGCUGCCUGCCU	AGGCAGGCAGCAUUUCUGA		[1555-1573]
249	UCUGUCUCUCCAUCUGUUU	AAACAGAUGGAGAGACAGA		[1575-1593]
250	GUACAACAGCGACAAGUCC	GGACUUGUCGCUGUUGUAC		[499-517]
251	GGUUCAGAAAUGCUGCCUG	CAGGCAGCAUUUCUGAACC		[1552-1570]
252	GACAAAACCCACCUUGUUG	CAACAAGGUGGGUUUUGUC		[1920-1938]
253	UUGACCGUGACAACAACAG	CUGUUGUUGUCACGGUCAA		[1323-1341]
254	AGUAUUACAAGGGUUCUCU	AGAGAACCCUUGUAAUACU		[891-909]
255	UAUUACAAGGGUUCUCUGU	ACAGAGAACCCUUGUAAUA		[893-911]
256	ACAAGUUCACGUCCAUCCG	CGGAUGGACGUGAACUUGU		[213-231]
257	GUGCUCAAGAACUACAUGG	CCAUGUAGUUCUUGAGCAC		[341-359]
258	CAGUGCUUCACAGUCGUCU	AGACGACUGUGAAGCACUG		[401-419]
259	AAACUGCUGGACAUCGCUU	AAGCGAUGUCCAGCAGUUU		[464-482]
260	GUCCUACCUGAAUGUCACC	GGUGACAUUCAGGUAGGAC		[910-928]
261	GUCUCAAAGUACUCCCAGG	CCUGGGAGUACUUUGAGAC		[287-305]
262	CAAGAACUACAUGGACGCC	GGCGUCCAUGUAGUUCUUG		[346-364]
263	AACUACAUGGACGCCCAGU	ACUGGGCGUCCAUGUAGUU		[350-368]
264	CAGAGCACAGAUCUGUUUC	GAAACAGAUCUGUGCUCUG		[1613-1631]
265	UGUCAAAGUGGAGAGGCAG	CUGCCUCUCCACUUUGACA		[646-664]
266	GUUCAGAAAUGCUGCCUGC	GCAGGCAGCAUUUCUGAAC		[1553-1571]
267	UCAGGGCGAGUACAUGAUC	GAUCAUGUACUCGCCCUGA		[1096-1114]
268	UCUCUGUCCUACCUGAAUG	CAUUCAGGUAGGACAGAGA		[905-923]
269	UGGACCAGAACAUCUUCUC	GAGAAGAUGUUCUGGUCCA		[804-822]
270	UACAAGGGUUCUCUGUCCU	AGGACAGAGAACCCUUGUA		[896-914]
271	CAGAAACAGAGGAGAGUCC	GGACUCUCCUCUGUUUCUG		[1398-1416]
272	UCAAAGUGGAGAGGCAGGU	ACCUGCCUCUCCACUUUGA		[648-666]
273	CUUCAUGGGCAUGGACAUC	GAUGUCCAUGCCCAUGAAG		[1240-1258]
274	CUGCAAACUGCUGGACAUC	GAUGUCCAGCAGUUUGCAG		[460-478]
275	AGCACCUACGUGAAGAAUG	CAUUCUUCACGUAGGUGCU		[518-536]
276	AAGAAUGGUACCUCGUUUG	CAAACGAGGUACCAUUCUU		[530-548]
277	UACCUCGUUUGACAUCCAC	GUGGAUGUCAAACGAGGUA		[538-556]

278	CUUCACAGUCGUCUUCGAC	GUCGAAGACGACUGUGAAG		[406-424]
279	ACUCCAAGUAUUACAAGGG	CCCUUGUAAUACUUGGAGU		[885-903]
280	CUGUCUCUCCAUCUGUUUG	CAAACAGAUGGAGAGACAG		[1576-1594]
281	CAUCUUCUCCUUCUACCUG	CAGGUAGAAGGAGAAGAUG	Rat,Ms	[814-832]
282	GGGUUCAGAAAUGCUGCCU	AGGCAGCAUUUCUGAACCC		[1551-1569]
283	GUUUUGUUCUGUGGUUUUC	GAAAACCACAGAACAAAAC		[1524-1542]
284	CACAAGUUCACGUCCAUCC	GGAUGGACGUGAACUUGUG		[212-230]
285	UCGUUUGACAUCCACUAUG	CAUAGUGGAUGUCAAACGA		[542-560]
286	UUGCUGUUUUGUUCUGUGG	CCACAGAACAAAACAGCAA		[1519-1537]
287	UUUGUUCUGUGGUUUUCCC	GGGAAAACCACAGAACAAA		[1526-1544]
288	AACCUGAUGCAGCAGAAGC	GCUUCUGCUGCAUCAGGUU		[782-800]
289	AAACAGAGGAGAGUCCCAG	CUGGGACUCUCCUCUGUUU		[1401-1419]
290	GAUCUGUUUCGUGCAUUGG	CCAAUGCACGAAACAGAUC		[1622-1640]
291	GUGCUUCACAGUCGUCUUC	GAAGACGACUGUGAAGCAC		[403-421]
292	CAAAGGCUACAAGCUGUCC	GGACAGCUUGUAGCCUUUG		[1165-1183]
293	AAGUAUUACAAGGGUUCUC	GAGAACCCUUGUAAUACUU		[890-908]
294	UCCCUGGGUUCAGAAAUGC	GCAUUUCUGAACCCAGGGA		[1546-1564]
295	AUCCAGAGCACAGAUCUGU	ACAGAUCUGUGCUCUGGAU		[1610-1628]
296	ACGUGAAGAAUGGUACCUC	GAGGUACCAUUCUUCACGU		[525-543]
297	UUACAAGGGUUCUCUGUCC	GGACAGAGAACCCUUGUAA		[895-913]
298	GUUUCGUGCAUUGGAAGAC	GUCUUCCAAUGCACGAAAC		[1627-1645]
299	AUGAGCUGGAAGGAGUGAG	CUCACUCCUUCCAGCUCAU		[1897-1915]
300	ACAAAACCCACCUUGUUGG	CCAACAAGGUGGGUUUUGU		[1921-1939]
301	CUGAUCCAGAGCACAGAUC	GAUCUGUGCUCUGGAUCAG		[1607-1625]
302	UGGGUUCAGAAAUGCUGCC	GGCAGCAUUUCUGAACCCA		[1550-1568]
303	UCUGUGGAGGACCUGAUUG	CAAUCAGGUCCUCCACAGA		[257-275]
304	UCCAUCCACUGCAAACUGC	GCAGUUUGCAGUGGAUGGA		[452-470]
305	AACAUCUUCUCCUUCUACC	GGUAGAAGGAGAAGAUGUU	Rat,Ms	[812-830]
306	GGUACCUCGUUUGACAUCC	GGAUGUCAAACGAGGUACC		[536-554]
307	UGGUACCUCGUUUGACAUC	GAUGUCAAACGAGGUACCA		[535-553]
308	AAACCCACCUUGUUGGAGC	GCUCCAACAAGGUGGGUUU		[1924-1942]
309	AAAGGCUACAAGCUGUCCC	GGGACAGCUUGUAGCCUUU		[1166-1184]
310	AUUACAAGGGUUCUCUGUC	GACAGAGAACCCUUGUAAU		[894-912]
311	ACAGAAACAGAGGAGAGUC	GACUCUCCUCUGUUUCUGU		[1397-1415]
312	UACGUGAAGAAUGGUACCU	AGGUACCAUUCUUCACGUA		[524-542]
313	AUCACACUGAAGCUGGGAG	CUCCCAGCUUCAGUGUGAU		[1145-1163]
314	AACUGCUGGACAUCGCUUG	CAAGCGAUGUCCAGCAGUU		[465-483]
315	GUCUUCGACAACCUGAUGC	GCAUCAGGUUGUCGAAGAC		[773-791]
316	UUUCGUGCAUUGGAAGACC	GGUCUUCCAAUGCACGAAA		[1628-1646]
317	ACCCUACCUGUUCAGUGUC	GACACUGAACAGGUAGGGU		[1840-1858]
318	UGUCUCUCCAUCUGUUUGG	CCAAACAGAUGGAGAGACA		[1577-1595]
319	UUUUGUUCUGUGGUUUUCC	GGAAAACCACAGAACAAAA		[1525-1543]
320	UUCGACAACCUGAUGCAGC	GCUGCAUCAGGUUGUCGAA		[776-794]
321	AGAAACAGAGGAGAGUCCC	GGGACUCUCCUCUGUUUCU		[1399-1417]
322	CUUCUCCUUCUACCUGAGC	GCUCAGGUAGAAGGAGAAG		[817-835]
323	CUCUCCAUCUGUUUGGUGG	CCACCAAACAGAUGGAGAG		[1580-1598]
324	UUCGUGCAUUGGAAGACCC	GGGUCUUCCAAUGCACGAA		[1629-1647]
325	UGCAAACUGCUGGACAUCG	CGAUGUCCAGCAGUUUGCA		[461-479]
326	AAAACCCACCUUGUUGGAG	CUCCAACAAGGUGGGUUUU		[1923-1941]
327	AUCUCCGUCAACAACGUGC	GCACGUUGUUGACGGAGAU		[749-767]
328	UCUCCAUCUGUUUGGUGGG	CCCACCAAACAGAUGGAGA		[1581-1599]
329	AAGAACUACAUGGACGCCC	GGGCGUCCAUGUAGUUCUU		[347-365]
330	UCUGUCCUACCUGAAUGUC	GACAUUCAGGUAGGACAGA		[907-925]
331	UCUCAAAGUACUCCCAGGC	GCCUGGGAGUACUUUGAGA		[288-306]
332	UGCUUCACAGUCGUCUUCG	CGAAGACGACUGUGAAGCA		[404-422]
333	UUCAGAAAUGCUGCCUGCC	GGCAGGCAGCAUUUCUGAA		[1554-1572]

334	AUCCACUGCAAACUGCUGG	CCAGCAGUUUGCAGUGGAU		[455-473]
335	UCUCUCCAUCUGUUUGGUG	CACCAAACAGAUGGAGAGA		[1579-1597]
336	UUCAUGGGCAUGGACAUCC	GGAUGUCCAUGCCCAUGAA		[1241-1259]
337	UCCUACCUGAAUGUCACCC	GGGUGACAUUCAGGUAGGA		[911-929]

Table B 13 CYBA - cytochrome b-245, alpha polypeptide

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-68509913 :37-624
1	CCUUUACCAGGAAUUACUA	UAGUAAUUCCUGGUAAAGG	Chmp	[281-299]
2	GGCCCUUUACCAGGAAUUA	UAAUUCCUGGUAAAGGGCC	Chmp	[278-296]
3	AGAUCGGAGGCACCAUCAA	UUGAUGGUGCCUCCGAUCU	Mnk,Chmp	[464-482]
4	CCCUUUACCAGGAAUUACU	AGUAAUUCCUGGUAAAGGG	Chmp	[280-298]
5	GGGCCCUUUACCAGGAAUU	AAUUCCUGGUAAAGGGCCC	Chmp	[277-295]
6	AAGCUGUUCGGGCCCUUUA	UAAAGGGCCCGAACAGCUU	Chmp	[268-286]
7	UGCACCCACCUGCAAUAAA	UUUAUUGCAGGUGGGUGCA		[654-672]
8	GCCCUUUACCAGGAAUUAC	GUAAUUCCUGGUAAAGGGC	Chmp	[279-297]
9	CUUUACCAGGAAUUACUAU	AUAGUAAUUCCUGGUAAAG		[282-300]
10	CACCCAGUGGUACUUUGGU	ACCAAAGUACCACUGGGUG	Chmp	[135-153]
11	GUGCACCCACCUGCAAUAA	UUAUUGCAGGUGGGUGCAC		[653-671]
12	CAGGAAUUACUAUGUUCGG	CCGAACAUAGUAAUUCCUG		[288-306]
13	AGUGGUACUUUGGUGCCUA	UAGGCACCAAAGUACCACU	Chmp	[140-158]
14	AGAAGUACAUGACCGCCGU	ACGGCGGUCAUGUACUUCU	Chmp	[245-263]
15	UACCAGGAAUUACUAUGUU	AACAUAGUAAUUCCUGGUA		[285-303]
16	CUUUGGUGCCUACUCCAUU	AAUGGAGUAGGCACCAAAG	Chmp	[147-165]
17	GGGACAGAAGUACAUGACC	GGUCAUGUACUUCUGUCCC	Mnk,Chmp	[240-258]
18	UACUUUGGUGCCUACUCCA	UGGAGUAGGCACCAAAGUA	Chmp	[145-163]
19	GUGGUACUUUGGUGCCUAC	GUAGGCACCAAAGUACCAC	Chmp	[141-159]
20	GGACAGAAGUACAUGACCG	CGGUCAUGUACUUCUGUCC	Chmp	[241-259]
21	CCAGGAAUUACUAUGUUCG	CGAACAUAGUAAUUCCUGG		[287-305]
22	GCUUCACCCAGUGGUACUU	AAGUACCACUGGGUGAAGC	Rb,Mnk,Chmp	[131-149]
23	ACUUUGGUGCCUACUCCAU	AUGGAGUAGGCACCAAAGU	Chmp	[146-164]
24	UUACCAGGAAUUACUAUGU	ACAUAGUAAUUCCUGGUAA		[284-302]
25	CAGUGGUACUUUGGUGCCU	AGGCACCAAAGUACCACUG	Chmp	[139-157]
26	ACCAGGAAUUACUAUGUUC	GAACAUAGUAAUUCCUGGU		[286-304]
27	GGUACUUUGGUGCCUACUC	GAGUAGGCACCAAAGUACC	Chmp	[143-161]
28	GACAGAAGUACAUGACCGC	GCGGUCAUGUACUUCUGUC	Chmp	[242-260]
29	UUUGGUGCCUACUCCAUUG	CAAUGGAGUAGGCACCAAA	Chmp	[148-166]
30	ACCCAGUGGUACUUUGGUG	CACCAAAGUACCACUGGGU	Chmp	[136-154]
31	UGGUGCCUACUCCAUUGUG	CACAAUGGAGUAGGCACCA	Chmp	[150-168]
32	AAGAGGAAGAAGGGCUCCA	UGGAGCCCUUCUUCCUCUU	Mnk,Chmp	[208-226]
33	GAAUUACUAUGUUCGGGCC	GGCCCGAACAUAGUAAUUC		[291-309]
34	UGGUACUUUGGUGCCUACU	AGUAGGCACCAAAGUACCA	Chmp	[142-160]
35	CUUCACCCAGUGGUACUUU	AAAGUACCACUGGGUGAAG	Mnk,Chmp	[132-150]
36	GGAAUUACUAUGUUCGGGC	GCCCGAACAUAGUAAUUCC		[290-308]
37	GUACUUUGGUGCCUACUCC	GGAGUAGGCACCAAAGUAC	Chmp	[144-162]
38	UCACCCAGUGGUACUUUGG	CCAAAGUACCACUGGGUGA	Mnk,Chmp	[134-152]
39	AGGAAUUACUAUGUUCGGG	CCCGAACAUAGUAAUUCCU		[289-307]
40	UUCACCCAGUGGUACUUUG	CAAAGUACCACUGGGUGAA	Mnk,Chmp	[133-151]
41	UUGGUGCCUACUCCAUUGU	ACAAUGGAGUAGGCACCAA	Chmp	[149-167]
42	UUUACCAGGAAUUACUAUG	CAUAGUAAUUCCUGGUAAA		[283-301]
43	AUUACUAUGUUCGGGCCGU	ACGGCCCGAACAUAGUAAU		[293-311]
44	UUACUAUGUUCGGGCCGUC	GACGGCCCGAACAUAGUAA		[294-312]
45	ACAGAAGUACAUGACCGCC	GGCGGUCAUGUACUUCUGU	Chmp	[243-261]
46	AAUUACUAUGUUCGGGCCG	CGGCCCGAACAUAGUAAUU		[292-310]
47	UGGGGACAGAAGUACAUGA	UCAUGUACUUCUGUCCCCA		

Table B 14 DDIT4 - DNA-damage-inducible transcript 4

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-56676369 :203-901
1	GAGGAGUGUUGAACUUCAA	UUGAAGUUCAACACUCCUC	Cyn	[890-908]
2	CAGUGACCCUGAGGAUGAA	UUCAUCCUCAGGGUCACUG	Cyn,Chmp	[454-472]
3	CUAGAACUGUUUACAUGAA	UUCAUGUAAACAGUUCUAG	Cyn,Rat	[1635-1653]
4	CCAGGUGGGCAAAGAACUA	UAGUUCUUUGCCCACCUGG	Cyn,Chmp	[577-595]
5	GAUACUCACUGUUCAUGAA	UUCAUGAACAGUGAGUAUC	Cyn	[1659-1677]
6	CUGGGUCUUCCAUCUAGAA	UUCUAGAUGGAAGACCCAG	Rat,Ms	[1622-1640]
7	GAAUACACUUGAUGUUCAA	UUGAACAUCAAGUGUAUUC	Cyn,Rat,Ms	[1675-1693]
8	GCUUCCGAGUCAUCAAGAA	UUCUUGAUGACUCGGAAGC	Chmp	[840-858]
9	UCCGAGUCAUCAAGAAGAA	UUCUUCUUGAUGACUCGGA	Chmp	[843-861]
10	GCAGGACGCACUUGUCUUA	UAAGACAAGUGCGUCCUGC		[98-116]
11	GUUUGUUGUUUGUUUUGUA	UACAAAACAAACAACAAAC		[1365-1383]
12	GGAUCUUUGACACUUGAAA	UUUCAAGUGUCAAAGAUCC	Cyn	[1488-1506]
13	CAGCUAUCUUACAGACGCA	UGCGUCUGUAAGAUAGCUG	Cyn	[1427-1445]
14	AGUUAACAGUGGUGUGACA	UGUCACACCACUGUUAACU	Cyn	[1199-1217]
15	GGACGCACUUGUCUUAGCA	UGCUAAGACAAGUGCGUCC		[101-119]
16	GGUUCGCACACCCAUUCAA	UUGAAUGGGUGUGCGAACC		[76-94]
17	ACUUGAUGUUCAAGUAUUA	UAAUACUUGAACAUCAAGU	Ms	[1681-1699]
18	GCAUGUACCUUAUUAUUUU	AAAAUAAUAAGGUACAUGC	Cyn	[1170-1188]
19	UUUUGUUACUGACAGUUAA	UUAACUGUCAGUAACAAAA	Cyn	[1186-1204]
20	CACUGUUCAUGAAUACACU	AGUGUAUUCAUGAACAGUG	Cyn	[1665-1683]
21	CAGUGGUGUGACAUCCAGA	UCUGGAUGUCACACCACUG		[1205-1223]
22	CGGAACAGCUGCUCAUUGA	UCAAUGAGCAGCUGUUCCG	Cyn,Chmp	[873-891]
23	GAUUCCUGUGGUUGGAAAA	UUUUCCAACCACAGGAAUC	Cyn	[990-1008]
24	CUCAUUGAGGAGUGUUGAA	UUCAACACUCCUCAAUGAG	Cyn	[884-902]
25	GUUCAAGUAUUAAGACCUA	UAGGUCUUAAUACUUGAAC	Ms	[1688-1706]
26	UGAUGUUCAAGUAUUAAGA	UCUUAAUACUUGAACAUCA	Ms	[1684-1702]
27	AGAACUGUUUACAUGAAGA	UCUUCAUGUAAACAGUUCU	Cyn,Rat	[1637-1655]
28	CCAGGAAGCUCAUUGAGUU	AACUCAAUGAGCUUCCUGG		[1051-1069]
29	GAAGCUGUACAGCUCGGAA	UUCCGAGCUGUACAGCUUC	Cyn,Chmp	[859-877]
30	UACUGUAGCAUGAAACAAA	UUUGUUUCAUGCUACAGUA	Cyn,Rat,Ms,Rb	[1110-1128]
31	GAUCUUUGACACUUGAAAA	UUUUCAAGUGUCAAAGAUC	Cyn	[1489-1507]
32	UGAGGAGUGUUGAACUUCA	UGAAGUUCAACACUCCUCA	Cyn	[889-907]
33	ACGCAUGAAUGUAAGAGUA	UACUCUUACAUUCAUGCGU	Cyn	[1441-1459]
34	CAAGACAGAGACGACUGAA	UUCAGUCGUCUCUGUCUUG		[933-951]
35	CUGUUUACAUGAAGAUAAG	CUUAUCUUCAUGUAAACAG	Cyn	[1641-1659]
36	CUCUGAGUUCAUCAGCAAA	UUUGCUGAUGAACUCAGAG	Chmp	[162-180]
37	CGGCACUCUGAGUUCAUCA	UGAUGAACUCAGAGUGCCG	Chmp	[157-175]
38	CACUCUGAGUUCAUCAGCA	UGCUGAUGAACUCAGAGUG	Chmp	[160-178]
39	CCAAGACAGAGACGACUGA	UCAGUCGUCUCUGUCUUGG		[932-950]
40	CAGAGACGACUGAACUUUU	AAAAGUUCAGUCGUCUCUG		[938-956]
41	AAACAUGUUUGUUAAAACA	UGUUUUAACAAACAUGUUU	Rat	[1731-1749]
42	GAAUAGUGUUUCCCAGGAA	UUCCUGGGAAACACUAUUC		[1039-1057]
43	GUAGCAUGUACCUUAUUAU	AUAAUAAGGUACAUGCUAC	Cyn	[1167-1185]
44	CAGACGCAUGAAUGUAAGA	UCUUACAUUCAUGCGUCUG	Cyn	[1438-1456]
45	GGGAUCUUUGACACUUGAA	UUCAAGUGUCAAAGAUCCC	Cyn	[1487-1505]
46	GACAGAGACGACUGAACUU	AAGUUCAGUCGUCUCUGUC		[936-954]
47	CCUGUGGUUGGAAAACUGA	UCAGUUUUCCAACCACAGG	Cyn	[994-1012]
48	CAUCUAGAACUGUUUACAU	AUGUAAACAGUUCUAGAUG	Cyn,Rat	[1632-1650]
49	GGGACUGAUUCCUGUGGUU	AACCACAGGAAUCAGUCCC	Cyn	[984-1002]
50	UCUGGGUCUUCCAUCUAGA	UCUAGAUGGAAGACCCAGA		[1621-1639]
51	CGCACUUGUCUUAGCAGUU	AACUGCUAAGACAAGUGCG		[104-122]
52	GUUCAUGAAUACACUUGAU	AUCAAGUGUAUUCAUGAAC	Cyn,Rat,Ms	[1669-1687]
53	UCAGUACUGUAGCAUGAAA	UUUCAUGCUACAGUACUGA	Cyn,Rat,Ms	[1106-1124]

54	AGACCUAUGCAAUAUUUUU	AAAAAUAUUGCAUAGGUCU	Rat,Ms	[1700-1718]
55	ACUGUUUACAUGAAGAUAA	UUAUCUUCAUGUAAACAGU	Cyn	[1640-1658]
56	GAACUGUUUACAUGAAGAU	AUCUUCAUGUAAACAGUUC	Cyn,Rat	[1638-1656]
57	GAGUCAUCAAGAAGAAGCU	AGCUUCUUCUUGAUGACUC	Cyn,Chmp	[846-864]
58	CUUGAUGUUCAAGUAUUAA	UUAAUACUUGAACAUCAAG	Ms	[1682-1700]
59	AGUACUGUAGCAUGAAACA	UGUUUCAUGCUACAGUACU	Cyn,Rat,Ms,Rb	[1108-1126]
60	GGGUCUUCCAUCUAGAACU	AGUUCUAGAUGGAAGACCC	Cyn,Rat	[1624-1642]
61	CCUCAGUACUGUAGCAUGA	UCAUGCUACAGUACUGAGG	Cyn,Rat,Ms	[1104-1122]
62	ACUCUGAGUUCAUCAGCAA	UUGCUGAUGAACUCAGAGU	Chmp	[161-179]
63	AGUAUUAAGACCUAUGCAA	UUGCAUAGGUCUUAAUACU	Ms	[1693-1711]
64	UCAUCAAGAAGAAGCUGUA	UACAGCUUCUUCUUGAUGA	Cyn,Rb,Chmp	[849-867]
65	CAUGUUUGUUAAAACAGUU	AACUGUUUUAACAAACAUG		[1734-1752]
66	CAUGUACCUUAUUAUUUUU	AAAAAUAAUAAGGUACAUG	Cyn	[1171-1189]
67	CGUGUACUGCAGAGUUGAG	CUCAACUCUGCAGUACACG		[1544-1562]
68	CUAUCUUACAGACGCAUGA	UCAUGCGUCUGUAAGAUAG	Cyn	[1430-1448]
69	CAUGAAUGUAAGAGUAGGA	UCCUACUCUUACAUUCAUG	Cyn,Ms	[1444-1462]
70	GUGUUGAACUUCAACCUGA	UCAGGUUGAAGUUCAACAC		[895-913]
71	GUAUCUUACUGGUCUGAAG	CUUCAGACCAGUAAGAUAC	Cyn	[1335-1353]
72	CCCUGAGGAUGAACACUUG	CAAGUGUUCAUCCUCAGGG		[460-478]
73	UAUUAAGACCUAUGCAAUA	UAUUGCAUAGGUCUUAAUA	Ms	[1695-1713]
74	GUUGUAGGCAGCUAUCUUA	UAAGAUAGCUGCCUACAAC	Cyn	[1419-1437]
75	GCUCAUUGAGGAGUGUUGA	UCAACACUCCUCAAUGAGC	Cyn,Rb,Chmp	[883-901]
76	AUCGGAGCAUCACUACUGA	UCAGUAGUGAUGCUCCGAU	Cyn	[1397-1415]
77	GGAGCAUCACUACUGACCU	AGGUCAGUAGUGAUGCUCC	Cyn	[1400-1418]
78	UGGGAUCUUUGACACUUGA	UCAAGUGUCAAAGAUCCCA	Cyn	[1486-1504]
79	UGAUUCCUGUGGUUGGAAA	UUUCCAACCACAGGAAUCA	Cyn	[989-1007]
80	GUACUGUAGCAUGAAACAA	UUGUUUCAUGCUACAGUAC	Cyn,Rat,Ms,Rb	[1109-1127]
81	CAUGAAGAUAAGAUACUCA	UGAGUAUCUUAUCUUCAUG	Cyn	[1648-1666]
82	CAUCGUGUACUGCAGAGUU	AACUCUGCAGUACACGAUG		[1541-1559]
83	GGCUUCCGAGUCAUCAAGA	UCUUGAUGACUCGGAAGCC	Chmp	[839-857]
84	ACUGUAGCAUGAAACAAAG	CUUUGUUUCAUGCUACAGU	Cyn,Rat,Ms,Rb	[1111-1129]
85	UACUCACUGUUCAUGAAUA	UAUUCAUGAACAGUGAGUA	Cyn	[1661-1679]
86	UCUGAUCGGAGCAUCACUA	UAGUGAUGCUCCGAUCAGA	Cyn	[1393-1411]
87	GUAUUAAGACCUAUGCAAU	AUUGCAUAGGUCUUAAUAC	Ms	[1694-1712]
88	GAUCACUUGGGAUCUUUGA	UCAAAGAUCCCAAGUGAUC	Cyn	[1479-1497]
89	ACCUAUGCAAUAUUUUUUA	UAAAAAAUAUUGCAUAGGU		[1702-1720]
90	UCUAGAACUGUUUACAUGA	UCAUGUAAACAGUUCUAGA	Cyn,Rat	[1634-1652]
91	CUCAGUACUGUAGCAUGAA	UUCAUGCUACAGUACUGAG	Cyn,Rat,Ms	[1105-1123]
92	AAGUAUUAAGACCUAUGCA	UGCAUAGGUCUUAAUACUU	Ms	[1692-1710]
93	CCAUCUAGAACUGUUUACA	UGUAAACAGUUCUAGAUGG	Cyn,Rat	[1631-1649]
94	UGUUGAACUUCAACCUGAG	CUCAGGUUGAAGUUCAACA		[896-914]
95	GUACCUUAUUAUUUUUGUU	AACAAAAAUAAUAAGGUAC	Cyn	[1174-1192]
96	UCGUGUACUGCAGAGUUGA	UCAACUCUGCAGUACACGA		[1543-1561]
97	ACAUGUUUGUUAAAACAGU	ACUGUUUUAACAAACAUGU		[1733-1751]
98	CCUUAUUAUUUUUGUUACU	AGUAACAAAAAUAAUAAGG	Cyn	[1177-1195]
99	GCAUCACUACUGACCUGUU	AACAGGUCAGUAGUGAUGC	Cyn	[1403-1421]
100	CUUCCAUCUAGAACUGUUU	AAACAGUUCUAGAUGGAAG	Cyn,Rat	[1628-1646]
101	CAUUGAGGAGUGUUGAACU	AGUUCAACACUCCUCAAUG	Cyn	[886-904]
102	UACAGACGCAUGAAUGUAA	UUACAUUCAUGCGUCUGUA	Cyn	[1436-1454]
103	UGUUCAUGAAUACACUUGA	UCAAGUGUAUUCAUGAACA	Cyn	[1668-1686]
104	AUAAGAUACUCACUGUUCA	UGAACAGUGAGUAUCUUAU	Cyn	[1655-1673]
105	CUUUGACACUUGAAAAAUU	AAUUUUUCAAGUGUCAAAG		[1492-1510]
106	AGACAGAGACGACUGAACU	AGUUCAGUCGUCUCUGUCU		[935-953]
107	AGAUACUCACUGUUCAUGA	UCAUGAACAGUGAGUAUCU	Cyn	[1658-1676]
108	GGAAUAGUGUUUCCCAGGA	UCCUGGGAAACACUAUUCC		[1038-1056]
109	GACCUAUGCAAUAUUUUUU	AAAAAAUAUUGCAUAGGUC		[1701-1719]

110	GACGCAUGAAUGUAAGAGU	ACUCUUACAUUCAUGCGUC	Cyn	[1440-1458]
111	UAAGAUACUCACUGUUCAU	AUGAACAGUGAGUAUCUUA	Cyn	[1656-1674]
112	CAUGAAUACACUUGAUGUU	AACAUCAAGUGUAUUCAUG	Cyn,Rat,Ms	[1672-1690]
113	AACUGUUUACAUGAAGAUA	UAUCUUCAUGUAAACAGUU	Cyn,Rat	[1639-1657]
114	AGCUGUACAGCUCGGAACA	UGUUCCGAGCUGUACAGCU	Cyn,Chmp	[861-879]
115	CCUGAGGAUGAACACUUGU	ACAAGUGUUCAUCCUCAGG		[461-479]
116	CUGUGGUUGGAAAACUGAG	CUCAGUUUUCCAACCACAG	Cyn	[995-1013]
117	GCAGCUGCGUUUAAGCCUU	AAGGCUUAAACGCAGCUGC		[1518-1536]
118	CCAUCUGGGUCUUCCAUCU	AGAUGGAAGACCCAGAUGG		[1618-1636]
119	UUUUCUGAUCGGAGCAUCA	UGAUGCUCCGAUCAGAAAA		[1390-1408]
120	ACUGAUUCCUGUGGUUGGA	UCCAACCACAGGAAUCAGU	Cyn	[987-1005]
121	AGCAUGAAACAAAGGCUUA	UAAGCCUUUGUUUCAUGCU	Cyn,Ms	[1116-1134]
122	UGUAGCAUGUACCUUAUUA	UAAUAAGGUACAUGCUACA	Cyn	[1166-1184]
123	AACAAGGCUUCCAGCUGGA	UCCAGCUGGAAGCCUUGUU		[1141-1159]
124	ACCUGUUGUAGGCAGCUAU	AUAGCUGCCUACAACAGGU	Cyn	[1415-1433]
125	AGGUGGGCAAAGAACUACU	AGUAGUUCUUUGCCCACCU	Cyn,Chmp	[579-597]
126	GAGUGUUGAACUUCAACCU	AGGUUGAAGUUCAACACUC	Cyn	[893-911]
127	UACACUUGAUGUUCAAGUA	UACUUGAACAUCAAGUGUA	Rat,Ms	[1678-1696]
128	UAGCAUGUACCUUAUUAUU	AAUAAUAAGGUACAUGCUA	Cyn	[1168-1186]
129	UGGUCUGAAGGGACCAAGU	ACUUGGUCCCUUCAGACCA	Cyn	[1344-1362]
130	GACCUGUUGUAGGCAGCUA	UAGCUGCCUACAACAGGUC	Cyn	[1414-1432]
131	AACAGUGGUGUGACAUCCA	UGGAUGUCACACCACUGUU		[1203-1221]
132	UAGGCAGCUAUCUUACAGA	UCUGUAAGAUAGCUGCCUA	Cyn	[1423-1441]
133	UCCGGCACUCUGAGUUCAU	AUGAACUCAGAGUGCCGGA	Chmp	[155-173]
134	CAUCUGGGUCUUCCAUCUA	UAGAUGGAAGACCCAGAUG		[1619-1637]
135	CUGAGGGACUGAUUCCUGU	ACAGGAAUCAGUCCCUCAG	Cyn	[980-998]
136	UUCCCAGGAAGCUCAUUGA	UCAAUGAGCUUCCUGGGAA		[1048-1066]
137	UGACACUUGAAAAAUUACA	UGUAAUUUUUCAAGUGUCA		[1495-1513]
138	CCGAGUCAUCAAGAAGAAG	CUUCUUCUUGAUGACUCGG	Chmp	[844-862]
139	AGGAGCUGAGGGACUGAUU	AAUCAGUCCCUCAGCUCCU	Cyn	[975-993]
140	AGACACGGCUUACCUGGAU	AUCCAGGUAAGCCGUGUCU	Chmp	[406-424]
141	AAGACACGGCUUACCUGGA	UCCAGGUAAGCCGUGUCUU	Chmp	[405-423]
142	GUGGUGUGACAUCCAGAGA	UCUCUGGAUGUCACACCAC		[1207-1225]
143	UGUUGUAGGCAGCUAUCUU	AAGAUAGCUGCCUACAACA	Cyn	[1418-1436]
144	UAUCUUACAGACGCAUGAA	UUCAUGCGUCUGUAAGAUA	Cyn	[1431-1449]
145	UUUACAUGAAGAUAAGAUA	UAUCUUAUCUUCAUGUAAA	Cyn	[1644-1662]
146	UUCCGAGUCAUCAAGAAGA	UCUUCUUGAUGACUCGGAA	Chmp	[842-860]
147	UGUAGGCAGCUAUCUUACA	UGUAAGAUAGCUGCCUACA	Cyn	[1421-1439]
148	UCACUACUGACCUGUUGUA	UACAACAGGUCAGUAGUGA	Cyn	[1406-1424]
149	ACUUCGAGCUGCUCAGUGA	UCACUGAGCAGCUCGAAGU	Cyn,Chmp	[441-459]
150	GGUCUUCCAUCUAGAACUG	CAGUUCUAGAUGGAAGACC	Cyn,Rat	[1625-1643]
151	GGAAGCUCAUUGAGUUGUG	CACAACUCAAUGAGCUUCC		[1054-1072]
152	UGUCAGGGAUCACUUGGGA	UCCCAAGUGAUCCCUGACA	Cyn	[1472-1490]
153	CUCACUGUUCAUGAAUACA	UGUAUUCAUGAACAGUGAG	Cyn	[1663-1681]
154	CUUACAGACGCAUGAAUGU	ACAUUCAUGCGUCUGUAAG	Cyn	[1434-1452]
155	CUGAUUCCUGUGGUUGGAA	UUCCAACCACAGGAAUCAG	Cyn	[988-1006]
156	UGGGUGUCAGGGAUCACUU	AAGUGAUCCCUGACACCCA	Cyn	[1468-1486]
157	CACUUGAUGUUCAAGUAUU	AAUACUUGAACAUCAAGUG	Ms	[1680-1698]
158	UUUGACACUUGAAAAAUUA	UAAUUUUUCAAGUGUCAAA		[1493-1511]
159	UGUUUUGUAUCUUGUUUUU	AAAAACAAGAUACAAAACA		[1375-1393]
160	CUAAUAAACAUGUUUGUUA	UAACAAACAUGUUUAUUAG	Rat	[1726-1744]
161	GCAUGAAACAAAGGCUUAG	CUAAGCCUUUGUUUCAUGC	Cyn,Ms	[1117-1135]
162	GUUUGUUUUGUAUCUUGUU	AACAAGAUACAAAACAAAC		[1372-1390]
163	GUGUAGCAUGUACCUUAUU	AAUAAGGUACAUGCUACAC	Cyn	[1165-1183]
164	UGAAGAUAAGAUACUCACU	AGUGAGUAUCUUAUCUUCA	Cyn	[1650-1668]
165	CACUUGUCUUAGCAGUUCU	AGAACUGCUAAGACAAGUG		[106-124]

166	AAGACCUAUGCAAUAUUUU	AAAAUAUUGCAUAGGUCUU	Rat,Ms	[1699-1717]
167	UGUUGUUUGUUUUGUAUCU	AGAUACAAAACAAACAACA		[1368-1386]
168	GGAACAGCUGCUCAUUGAG	CUCAAUGAGCAGCUGUUCC	Cyn,Chmp	[874-892]
169	GGUGGGCAAAGAACUACUG	CAGUAGUUCUUUGCCCACC	Chmp	[580-598]
170	UGAAUACACUUGAUGUUCA	UGAACAUCAAGUGUAUUCA	Cyn,Rat,Ms	[1674-1692]
171	GAGCAUCACUACUGACCUG	CAGGUCAGUAGUGAUGCUC	Cyn	[1401-1419]
172	CUUUUCUAAUAAACAUGUU	AACAUGUUUAUUAGAAAAG	Rat,Ms	[1721-1739]
173	UAAGACCUAUGCAAUAUUU	AAAUAUUGCAUAGGUCUUA	Rat,Ms	[1698-1716]
174	UCAGUGACCCUGAGGAUGA	UCAUCCUCAGGGUCACUGA	Cyn,Chmp	[453-471]
175	GUAGCAUGAAACAAAGGCU	AGCCUUUGUUUCAUGCUAC	Cyn,Rat,Ms	[1114-1132]
176	AGAGACGACUGAACUUUUG	CAAAAGUUCAGUCGUCUCU		[939-957]
177	UUCUGAUCGGAGCAUCACU	AGUGAUGCUCCGAUCAGAA	Cyn	[1392-1410]
178	GUGUUUCCCAGGAAGCUCA	UGAGCUUCCUGGGAAACAC		[1044-1062]
179	AAGGCUUCCAGCUGGAUGU	ACAUCCAGCUGGAAGCCUU	Cyn	[1144-1162]
180	ACAGACGCAUGAAUGUAAG	CUUACAUUCAUGCGUCUGU	Cyn	[1437-1455]
181	GUGACCCUGAGGAUGAACA	UGUUCAUCCUCAGGGUCAC	Cyn,Chmp	[456-474]
182	CCUGUUGUAGGCAGCUAUC	GAUAGCUGCCUACAACAGG	Cyn	[1416-1434]
183	UUCCAUCUAGAACUGUUUA	UAAACAGUUCUAGAUGGAA	Cyn,Rat	[1629-1647]
184	UCUUGUUUUUCUGAUCGGA	UCCGAUCAGAAAAACAAGA		[1384-1402]
185	UUUGUUGUUUGUUUUGUAU	AUACAAAACAAACAACAAA		[1366-1384]
186	UGACCCUGAGGAUGAACAC	GUGUUCAUCCUCAGGGUCA	Cyn,Chmp	[457-475]
187	AUCUUUGACACUUGAAAAA	UUUUUCAAGUGUCAAAGAU	Cyn	[1490-1508]
188	UGUUUUUCUGAUCGGAGCA	UGCUCCGAUCAGAAAAACA		[1387-1405]
189	CCCAGGAAGCUCAUUGAGU	ACUCAAUGAGCUUCCUGGG		[1050-1068]
190	GGAUCACUUGGGAUCUUUG	CAAAGAUCCCAAGUGAUCC	Cyn	[1478-1496]
191	GACAGUUAACAGUGGUGUG	CACACCACUGUUAACUGUC	Cyn	[1196-1214]
192	UGUUUACAUGAAGAUAAGA	UCUUAUCUUCAUGUAAACA	Cyn	[1642-1660]
193	ACUGGUCUGAAGGGACCAA	UUGGUCCCUUCAGACCAGU	Cyn	[1342-1360]
194	GGGAUCACUUGGGAUCUUU	AAAGAUCCCAAGUGAUCCC	Cyn	[1477-1495]
195	ACAGUUAACAGUGGUGUGA	UCACACCACUGUUAACUGU	Cyn	[1197-1215]
196	GUUCGCACACCCAUUCAAG	CUUGAAUGGGUGUGCGAAC		[77-95]
197	UCUUCCAUCUAGAACUGUU	AACAGUUCUAGAUGGAAGA	Cyn,Rat	[1627-1645]
198	CGCAUGAAUGUAAGAGUAG	CUACUCUUACAUUCAUGCG	Cyn	[1442-1460]
199	GUGUGACAUCCAGAGAGCA	UGCUCUCUGGAUGUCACAC		[1210-1228]
200	GACUGAUUCCUGUGGUUGG	CCAACCACAGGAAUCAGUC	Cyn	[986-1004]
201	AUGAAUGUAAGAGUAGGAA	UUCCUACUCUUACAUUCAU	Cyn,Ms	[1445-1463]
202	ACGCACUUGUCUUAGCAGU	ACUGCUAAGACAAGUGCGU		[103-121]
203	UGUUUCCCAGGAAGCUCAU	AUGAGCUUCCUGGGAAACA		[1045-1063]
204	AGGAAGACACGGCUUACCU	AGGUAAGCCGUGUCUUCCU	Chmp	[402-420]
205	GACGCACUUGUCUUAGCAG	CUGCUAAGACAAGUGCGUC		[102-120]
206	UCAUGAAUACACUUGAUGU	ACAUCAAGUGUAUUCAUGA	Cyn,Rat,Ms	[1671-1689]
207	UGAUCGGAGCAUCACUACU	AGUAGUGAUGCUCCGAUCA	Cyn	[1395-1413]
208	GAUGUUCAAGUAUUAAGAC	GUCUUAAUACUUGAACAUC	Ms	[1685-1703]
209	CAGUUAACAGUGGUGUGAC	GUCACACCACUGUUAACUG	Cyn	[1198-1216]
210	UCAAGAAGAAGCUGUACAG	CUGUACAGCUUCUUCUUGA	Cyn,Rb,Chmp	[852-870]
211	ACUCACUGUUCAUGAAUAC	GUAUUCAUGAACAGUGAGU	Cyn	[1662-1680]
212	GGCACUCUGAGUUCAUCAG	CUGAUGAACUCAGAGUGCC	Chmp	[158-176]
213	GACCCUGAGGAUGAACACU	AGUGUUCAUCCUCAGGGUC		[458-476]
214	UAAACAUGUUUGUUAAAAC	GUUUUAACAAACAUGUUUA	Rat	[1730-1748]
215	UGGUUGGAAAACUGAGGCA	UGCCUCAGUUUUCCAACCA	Cyn	[998-1016]
216	CUUCCGAGUCAUCAAGAAG	CUUCUUGAUGACUCGGAAG	Chmp	[841-859]
217	UGUAUCUUACUGGUCUGAA	UUCAGACCAGUAAGAUACA	Cyn	[1334-1352]
218	UCCUGUGGUUGGAAAACUG	CAGUUUUCCAACCACAGGA	Cyn	[993-1011]
219	AGGGAUCACUUGGGAUCUU	AAGAUCCCAAGUGAUCCCU	Cyn	[1476-1494]
220	GCAUGAAUGUAAGAGUAGG	CCUACUCUUACAUUCAUGC	Cyn,Ms	[1443-1461]
221	GUUACUGACAGUUAACAGU	ACUGUUAACUGUCAGUAAC	Cyn	[1190-1208]

222	AACAGCUGCUCAUUGAGGA	UCCUCAAUGAGCAGCUGUU	Cyn,Chmp	[876-894]
223	AGAUAAGAUACUCACUGUU	AACAGUGAGUAUCUUAUCU	Cyn	[1653-1671]
224	CUGAGUUCAUCAGCAAACG	CGUUUGCUGAUGAACUCAG	Chmp	[164-182]
225	AGUGGUGUGACAUCCAGAG	CUCUGGAUGUCACACCACU		[1206-1224]
226	ACAGUGGUGUGACAUCCAG	CUGGAUGUCACACCACUGU		[1204-1222]
227	AGGCAGCUAUCUUACAGAC	GUCUGUAAGAUAGCUGCCU	Cyn,Rat,Ms	[1424-1442]
228	UGUACCUUAUUAUUUUUGU	ACAAAAAUAAUAAGGUACA	Cyn	[1173-1191]
229	GACACUUGAAAAAUUACAC	GUGUAAUUUUUCAAGUGUC		[1496-1514]
230	AAGAUAAGAUACUCACUGU	ACAGUGAGUAUCUUAUCUU	Cyn	[1652-1670]
231	AGGAGUGUUGAACUUCAAC	GUUGAAGUUCAACACUCCU	Cyn	[891-909]
232	UGUACAGCUCGGAACAGCU	AGCUGUUCCGAGCUGUACA	Cyn,Chmp	[864-882]
233	GUCUGAAGGGACCAAGUGU	ACACUUGGUCCCUUCAGAC	Cyn	[1346-1364]
234	CAGUACUGUAGCAUGAAAC	GUUUCAUGCUACAGUACUG	Cyn,Rat,Ms,Rb	[1107-1125]
235	CAGGAAGCUCAUUGAGUUG	CAACUCAAUGAGCUUCCUG		[1052-1070]
236	AGGGACUGAUUCCUGUGGU	ACCACAGGAAUCAGUCCCU	Cyn	[983-1001]
237	GCAAAGAACUACUGCGCCU	AGGCGCAGUAGUUCUUUGC	Chmp	[585-603]
238	CUCGGAACAGCUGCUCAUU	AAUGAGCAGCUGUUCCGAG	Cyn,Chmp	[871-889]
239	CCAUCGUGUACUGCAGAGU	ACUCUGCAGUACACGAUGG		[1540-1558]
240	AAGACAGAGACGACUGAAC	GUUCAGUCGUCUCUGUCUU		[934-952]
241	CAGGGAUCACUUGGGAUCU	AGAUCCCAAGUGAUCCCUG	Cyn	[1475-1493]
242	GUAGGCAGCUAUCUUACAG	CUGUAAGAUAGCUGCCUAC	Cyn	[1422-1440]
243	UAGCAUGAAACAAAGGCUU	AAGCCUUUGUUUCAUGCUA	Cyn,Rat,Ms	[1115-1133]
244	ACUGUUCAUGAAUACACUU	AAGUGUAUUCAUGAACAGU	Cyn	[1666-1684]
245	GUCAGGGAUCACUUGGGAU	AUCCCAAGUGAUCCCUGAC	Cyn	[1473-1491]
246	UUAAGACCUAUGCAAUAUU	AAUAUUGCAUAGGUCUUAA	Ms	[1697-1715]
247	CCUAUGCAAUAUUUUUUAC	GUAAAAAAUAUUGCAUAGG		[1703-1721]
248	UUUUGUAUCUUGUUUUUCU	AGAAAAACAAGAUACAAAA		[1377-1395]
249	GCUGCUCAUUGAGGAGUGU	ACACUCCUCAAUGAGCAGC	Cyn,Rb,Chmp	[880-898]
250	UAGAACUGUUUACAUGAAG	CUUCAUGUAAACAGUUCUA	Cyn,Rat	[1636-1654]
251	ACUGACAGUUAACAGUGGU	ACCACUGUUAACUGUCAGU	Cyn	[1193-1211]
252	GAGACGACUGAACUUUUGG	CCAAAAGUUCAGUCGUCUC		[940-958]
253	AGCUAUCUUACAGACGCAU	AUGCGUCUGUAAGAUAGCU	Cyn	[1428-1446]
254	GUUGUUUGUUUUGUAUCUU	AAGAUACAAAACAAACAAC		[1369-1387]
255	CAUCAAGAAGAAGCUGUAC	GUACAGCUUCUUCUUGAUG	Cyn,Rb,Chmp	[850-868]
256	ACACUUGAUGUUCAAGUAU	AUACUUGAACAUCAAGUGU	Ms	[1679-1697]
257	UAUUUUUGUUACUGACAGU	ACUGUCAGUAACAAAAAUA	Cyn	[1183-1201]
258	CCCUCAGUACUGUAGCAUG	CAUGCUACAGUACUGAGGG	Cyn,Rat,Ms	[1103-1121]
259	AGCAUGUACCUUAUUAUUU	AAAUAAUAAGGUACAUGCU	Cyn	[1169-1187]
260	AUCUUACAGACGCAUGAAU	AUUCAUGCGUCUGUAAGAU	Cyn	[1432-1450]
261	UGUUUGUUUUGUAUCUUGU	ACAAGAUACAAAACAAACA		[1371-1389]
262	GUUUACAUGAAGAUAAGAU	AUCUUAUCUUCAUGUAAAC	Cyn	[1643-1661]
263	UCUUAGCAGUUCUCGCUGA	UCAGCGAGAACUGCUAAGA		[112-130]
264	GCAAUAUUUUUUACUUUUC	GAAAAGUAAAAAAUAUUGC		[1708-1726]
265	UGGGCAAAGAACUACUGCG	CGCAGUAGUUCUUUGCCCA	Chmp	[582-600]
266	CUGAUCGGAGCAUCACUAC	GUAGUGAUGCUCCGAUCAG	Cyn	[1394-1412]
267	CAUCACUACUGACCUGUUG	CAACAGGUCAGUAGUGAUG	Cyn	[1404-1422]
268	UGUAUCUUGUUUUUCUGAU	AUCAGAAAAACAAGAUACA		[1380-1398]
269	CUGUUGUAGGCAGCUAUCU	AGAUAGCUGCCUACAACAG	Cyn	[1417-1435]
270	CUAUGCAAUAUUUUUUACU	AGUAAAAAAUAUUGCAUAG		[1704-1722]
271	UUCUAAUAAACAUGUUUGU	ACAAACAUGUUUAUUAGAA	Rat,Ms	[1724-1742]
272	UUACAGACGCAUGAAUGUA	UACAUUCAUGCGUCUGUAA	Cyn	[1435-1453]
273	CAGGACGCACUUGUCUUAG	CUAAGACAAGUGCGUCCUG		[99-117]
274	GUGUAUCUUACUGGUCUGA	UCAGACCAGUAAGAUACAC	Cyn	[1333-1351]
275	UCACUUGGGAUCUUUGACA	UGUCAAAGAUCCCAAGUGA	Cyn	[1481-1499]
276	UUGUAUCUUGUUUUUCUGA	UCAGAAAAACAAGAUACAA		[1379-1397]
277	CUUGAAAAAUUACACCUGG	CCAGGUGUAAUUUUUCAAG		[1500-1518]

278	CAAGUAUUAAGACCUAUGC	GCAUAGGUCUUAAUACUUG	Ms	[1691-1709]
279	AGAAGCUGUACAGCUCGGA	UCCGAGCUGUACAGCUUCU	Cyn,Rb,Chmp	[858-876]
280	UGUUACUGACAGUUAACAG	CUGUUAACUGUCAGUAACA	Cyn	[1189-1207]
281	CUGAGGAUGAACACUUGUG	CACAAGUGUUCAUCCUCAG		[462-480]
282	AUUGAGGAGUGUUGAACUU	AAGUUCAACACUCCUCAAU	Cyn	[887-905]
283	CUCCAAGACAGAGACGACU	AGUCGUCUCUGUCUUGGAG		[930-948]
284	UGUGGUUGGAAAACUGAGG	CCUCAGUUUUCCAACCACA	Cyn	[996-1014]
285	GCAGCUAUCUUACAGACGC	GCGUCUGUAAGAUAGCUGC	Cyn	[1426-1444]
286	GAUCGGAGCAUCACUACUG	CAGUAGUGAUGCUCCGAUC	Cyn	[1396-1414]
287	GUUAACAGUGGUGUGACAU	AUGUCACACCACUGUUAAC		[1200-1218]
288	CUUGUUUUUCUGAUCGGAG	CUCCGAUCAGAAAAACAAG		[1385-1403]
289	AGAAGAAGCUGUACAGCUC	GAGCUGUACAGCUUCUUCU	Cyn,Rb,Chmp	[855-873]
290	UGUACUGCAGAGUUGAGCU	AGCUCAACUCUGCAGUACA		[1546-1564]
291	CACUUGAAAAAUUACACCU	AGGUGUAAUUUUUCAAGUG		[1498-1516]
292	GAAGAUAAGAUACUCACUG	CAGUGAGUAUCUUAUCUUC	Cyn	[1651-1669]
293	AUCUAGAACUGUUUACAUG	CAUGUAAACAGUUCUAGAU	Cyn,Rat	[1633-1651]
294	GGGAAUAGUGUUUCCCAGG	CCUGGGAAACACUAUUCCC		[1037-1055]
295	GUUCAUCAGCAAACGCCCU	AGGGCGUUUGCUGAUGAAC	Cyn,Chmp	[168-186]
296	ACAAGGCUUCCAGCUGGAU	AUCCAGCUGGAAGCCUUGU		[1142-1160]
297	GAAUGUAAGAGUAGGAAGG	CCUUCCUACUCUUACAUUC	Cyn	[1447-1465]
298	CAGCUGCGUUUAAGCCUUC	GAAGGCUUAAACGCAGCUG		[1519-1537]
299	GUGUUUGUUGUUUGUUUUG	CAAAACAAACAACAAACAC		[1363-1381]
300	UUUUUGUUACUGACAGUUA	UAACUGUCAGUAACAAAAA	Cyn	[1185-1203]
301	AGGACGCACUUGUCUUAGC	GCUAAGACAAGUGCGUCCU		[100-118]
302	ACCCUGAGGAUGAACACUU	AAGUGUUCAUCCUCAGGGU		[459-477]
303	AGACGACUGAACUUUUGGG	CCCAAAAGUUCAGUCGUCU		[941-959]
304	UCUUACUGGUCUGAAGGGA	UCCCUUCAGACCAGUAAGA	Cyn	[1338-1356]
305	UUGUUACUGACAGUUAACA	UGUUAACUGUCAGUAACAA	Cyn	[1188-1206]
306	CUGUAGCAUGAAACAAAGG	CCUUUGUUUCAUGCUACAG	Cyn,Rat,Ms,Rb	[1112-1130]
307	ACAGAGACGACUGAACUUU	AAAGUUCAGUCGUCUCUGU		[937-955]
308	UGUUCAAGUAUUAAGACCU	AGGUCUUAAUACUUGAACA	Ms	[1687-1705]
309	CAGGUGGGCAAAGAACUAC	GUAGUUCUUUGCCCACCUG	Cyn,Chmp	[578-596]
310	AGCUGAGGGACUGAUUCCU	AGGAAUCAGUCCCUCAGCU	Cyn	[978-996]
311	AUACUCACUGUUCAUGAAU	AUUCAUGAACAGUGAGUAU	Cyn	[1660-1678]
312	AUUAAGACCUAUGCAAUAU	AUAUUGCAUAGGUCUUAAU	Ms	[1696-1714]
313	CUUAGCAGUUCUCGCUGAC	GUCAGCGAGAACUGCUAAG		[113-131]
314	CACUUGGGAUCUUUGACAC	GUGUCAAAGAUCCCAAGUG	Cyn	[1482-1500]
315	AAGAAGAAGCUGUACAGCU	AGCUGUACAGCUUCUUCUU	Cyn,Rb,Chmp	[854-872]
316	UAUUAUUUUUGUUACUGAC	GUCAGUAACAAAAAUAAUA	Cyn	[1180-1198]
317	ACCUUAUUAUUUUUGUUAC	GUAACAAAAAUAAUAAGGU	Cyn	[1176-1194]
318	AAUAGUGUUUCCCAGGAAG	CUUCCUGGGAAACACUAUU		[1040-1058]
319	UACUGGUCUGAAGGGACCA	UGGUCCCUUCAGACCAGUA	Cyn	[1341-1359]
320	ACAUGAAGAUAAGAUACUC	GAGUAUCUUAUCUUCAUGU	Cyn	[1647-1665]
321	AUCAAGAAGAAGCUGUACA	UGUACAGCUUCUUCUUGAU	Cyn,Rb,Chmp	[851-869]
322	GUAUCUUGUUUUUCUGAUC	GAUCAGAAAAACAAGAUAC		[1381-1399]
323	UCGGAGCAUCACUACUGAC	GUCAGUAGUGAUGCUCCGA	Cyn	[1398-1416]
324	UGUUUGUUGUUUGUUUUGU	ACAAAACAAACAACAAACA		[1364-1382]
325	GUUUUUCUGAUCGGAGCAU	AUGCUCCGAUCAGAAAAAC		[1388-1406]
326	UGGUGUGACAUCCAGAGAG	CUCUCUGGAUGUCACACCA		[1208-1226]
327	CAUGAAACAAAGGCUUAGG	CCUAAGCCUUUGUUUCAUG	Cyn,Ms	[1118-1136]
328	CGAGUCAUCAAGAAGAAGC	GCUUCUUCUUGAUGACUCG	Cyn,Chmp	[845-863]
329	UAGUGUUUCCCAGGAAGCU	AGCUUCCUGGGAAACACUA		[1042-1060]
330	AGUUCAUCAGCAAACGCCC	GGGCGUUUGCUGAUGAACU	Cyn,Chmp	[167-185]
331	UCUGUCCUCACCAUGCCUA	UAGGCAUGGUGAGGACAGA	Cyn,Chmp	[191-209]
332	CUCACCAUGCCUAGCCUUU	AAAGGCUAGGCAUGGUGAG	Cyn,Rb,Chmp	[197-215]
333	CUGACAGUUAACAGUGGUG	CACCACUGUUAACUGUCAG	Cyn	[1194-1212]

334	AUCUGGGUCUUCCAUCUAG	CUAGAUGGAAGACCCAGAU		[1620-1638]
335	UUCAAGUAUUAAGACCUAU	AUAGGUCUUAAUACUUGAA	Ms	[1689-1707]
336	UGGGUCUUCCAUCUAGAAC	GUUCUAGAUGGAAGACCCA	Rat,Ms	[1623-1641]
337	UCCCAGGAAGCUCAUUGAG	CUCAAUGAGCUUCCUGGGA		[1049-1067]
338	GGUUGGAAAACUGAGGCAG	CUGCCUCAGUUUUCCAACC	Cyn	[999-1017]
339	UGAAUGUAAGAGUAGGAAG	CUUCCUACUCUUACAUUCA	Cyn	[1446-1464]
340	GGCAGCUAUCUUACAGACG	CGUCUGUAAGAUAGCUGCC	Cyn	[1425-1443]
341	UUUGUUACUGACAGUUAAC	GUUAACUGUCAGUAACAAA	Cyn	[1187-1205]
342	GUUGAACUUCAACCUGAGG	CCUCAGGUUGAAGUUCAAC		[897-915]
343	GUUGGAAAACUGAGGCAGC	GCUGCCUCAGUUUUCCAAC	Cyn	[1000-1018]
344	UGUCUUAGCAGUUCUCGCU	AGCGAGAACUGCUAAGACA		[110-128]
345	CUUACUGGUCUGAAGGGAC	GUCCCUUCAGACCAGUAAG	Cyn	[1339-1357]
346	UGACCUGUUGUAGGCAGCU	AGCUGCCUACAACAGGUCA	Cyn	[1413-1431]
347	GCUAUCUUACAGACGCAUG	CAUGCGUCUGUAAGAUAGC	Cyn	[1429-1447]
348	UUUGUAUCUUGUUUUUCUG	CAGAAAAACAAGAUACAAA		[1378-1396]
349	UACUGACAGUUAACAGUGG	CCACUGUUAACUGUCAGUA	Cyn	[1192-1210]
350	UUGACACUUGAAAAAUUAC	GUAAUUUUUCAAGUGUCAA		[1494-1512]
351	CACUACUGACCUGUUGUAG	CUACAACAGGUCAGUAGUG	Cyn	[1407-1425]
352	UGACAUCCAGAGAGCAGCU	AGCUGCUCUCUGGAUGUCA		[1213-1231]
353	ACUUUUCUAAUAAACAUGU	ACAUGUUUAUUAGAAAAGU	Rat,Ms	[1720-1738]
354	AUUAUUUUUGUUACUGACA	UGUCAGUAACAAAAAUAAU	Cyn	[1181-1199]
355	GAAGAAGCUGUACAGCUCG	CGAGCUGUACAGCUUCUUC	Cyn,Rb,Chmp	[856-874]
356	GUGGGCAAAGAACUACUGC	GCAGUAGUUCUUUGCCCAC	Chmp	[581-599]
357	GCACUUGUCUUAGCAGUUC	GAACUGCUAAGACAAGUGC		[105-123]
358	AUCGUGUACUGCAGAGUUG	CAACUCUGCAGUACACGAU		[1542-1560]
359	UGCUCAUUGAGGAGUGUUG	CAACACUCCUCAAUGAGCA	Cyn,Rb,Chmp	[882-900]
360	GGAGUGUUGAACUUCAACC	GGUUGAAGUUCAACACUCC	Cyn	[892-910]
361	CUUGGGAUCUUUGACACUU	AAGUGUCAAAGAUCCCAAG	Cyn	[1484-1502]
362	UGAGGGACUGAUUCCUGUG	CACAGGAAUCAGUCCCUCA	Cyn	[981-999]
363	UCAAGUAUUAAGACCUAUG	CAUAGGUCUUAAUACUUGA	Ms	[1690-1708]
364	UUGAUGUUCAAGUAUUAAG	CUUAAUACUUGAACAUCAA	Ms	[1683-1701]
365	UCACUGUUCAUGAAUACAC	GUGUAUUCAUGAACAGUGA	Cyn	[1664-1682]
366	GUUUCCCAGGAAGCUCAUU	AAUGAGCUUCCUGGGAAAC		[1046-1064]
367	UCUUUGACACUUGAAAAAU	AUUUUUCAAGUGUCAAAGA		[1491-1509]
368	CUACUGACCUGUUGUAGGC	GCCUACAACAGGUCAGUAG	Cyn	[1409-1427]
369	CAAGAAGAAGCUGUACAGC	GCUGUACAGCUUCUUCUUG	Cyn,Rb,Chmp	[853-871]
370	AGUGUUGAACUUCAACCUG	CAGGUUGAAGUUCAACACU	Cyn	[894-912]
371	AUGAAGAUAAGAUACUCAC	GUGAGUAUCUUAUCUUCAU	Cyn	[1649-1667]
372	UUGGGAUCUUUGACACUUG	CAAGUGUCAAAGAUCCCAA	Cyn	[1485-1503]
373	ACUUGGGAUCUUUGACACU	AGUGUCAAAGAUCCCAAGU	Cyn	[1483-1501]
374	UGACAGUUAACAGUGGUGU	ACACCACUGUUAACUGUCA	Cyn	[1195-1213]
375	UCUAAUAAACAUGUUUGUU	AACAAACAUGUUUAUUAGA	Rat,Ms	[1725-1743]
376	AACAUGUUUGUUAAAACAG	CUGUUUUAACAAACAUGUU		[1732-1750]
377	ACAGCUGCUCAUUGAGGAG	CUCCUCAAUGAGCAGCUGU	Cyn,Chmp	[877-895]
378	ACUUGUCUUAGCAGUUCUC	GAGAACUGCUAAGACAAGU		[107-125]
379	AUCACUACUGACCUGUUGU	ACAACAGGUCAGUAGUGAU	Cyn	[1405-1423]
380	UCACCAUGCCUAGCCUUUG	CAAAGGCUAGGCAUGGUGA	Cyn,Rb,Chmp	[198-216]
381	ACUUGAAAAAUUACACCUG	CAGGUGUAAUUUUUCAAGU		[1499-1517]
382	UUGUUUUUCUGAUCGGAGC	GCUCCGAUCAGAAAAACAA		[1386-1404]
383	GCACUCUGAGUUCAUCAGC	GCUGAUGAACUCAGAGUGC	Chmp	[159-177]
384	GUCUUCCAUCUAGAACUGU	ACAGUUCUAGAUGGAAGAC	Cyn,Rat	[1626-1644]
385	UUCGCACACCCAUUCAAGC	GCUUGAAUGGGUGUGCGAA		[78-96]
386	UUGUUUGUUUUGUAUCUUG	CAAGAUACAAAACAAACAA		[1370-1388]
387	UUUGUUUUGUAUCUUGUUU	AAACAAGAUACAAAACAAA		[1373-1391]
388	UACUGACCUGUUGUAGGCA	UGCCUACAACAGGUCAGUA	Cyn	[1410-1428]
389	UACAUGAAGAUAAGAUACU	AGUAUCUUAUCUUCAUGUA	Cyn	[1646-1664]

390	UUAUUUUUGUUACUGACAG	CUGUCAGUAACAAAAAUAA	Cyn	[1182-1200]
391	ACUGACCUGUUGUAGGCAG	CUGCCUACAACAGGUCAGU	Cyn	[1411-1429]
392	UUGUAGGCAGCUAUCUUAC	GUAAGAUAGCUGCCUACAA	Cyn	[1420-1438]
393	UCUUACAGACGCAUGAAUG	CAUUCAUGCGUCUGUAAGA	Cyn	[1433-1451]
394	UUGUUUUGUAUCUUGUUUU	AAAACAAGAUACAAAACAA		[1374-1392]
395	UCUGAGUUCAUCAGCAAAC	GUUUGCUGAUGAACUCAGA	Chmp	[163-181]
396	UUACAUGAAGAUAAGAUAC	GUAUCUUAUCUUCAUGUAA	Cyn	[1645-1663]
397	AGACGCAUGAAUGUAAGAG	CUCUUACAUUCAUGCGUCU	Cyn	[1439-1457]
398	UUCCUGUGGUUGGAAAACU	AGUUUUCCAACCACAGGAA	Cyn	[992-1010]
399	AGUCAUCAAGAAGAAGCUG	CAGCUUCUUCUUGAUGACU	Cyn,Chmp	[847-865]
400	CUGCUCAUUGAGGAGUGUU	AACACUCCUCAAUGAGCAG	Cyn,Rb,Chmp	[881-899]
401	GUCAUCAAGAAGAAGCUGU	ACAGCUUCUUCUUGAUGAC	Cyn,Rb,Chmp	[848-866]
402	AAGCUGUACAGCUCGGAAC	GUUCCGAGCUGUACAGCUU	Cyn,Chmp	[860-878]
403	UUAACAGUGGUGUGACAUC	GAUGUCACACCACUGUUAA		[1201-1219]
404	ACUACUGACCUGUUGUAGG	CCUACAACAGGUCAGUAGU	Cyn	[1408-1426]
405	AGCUGCUCAUUGAGGAGUG	CACUCCUCAAUGAGCAGCU	Cyn,Rb,Chmp	[879-897]
406	GGACUGAUUCCUGUGGUUG	CAACCACAGGAAUCAGUCC	Cyn	[985-1003]
407	UUUCUGAUCGGAGCAUCAC	GUGAUGCUCCGAUCAGAAA	Cyn	[1391-1409]
408	GUACUGCAGAGUUGAGCUG	CAGCUCAACUCUGCAGUAC		[1547-1565]
409	UGAGUUCAUCAGCAAACGC	GCGUUUGCUGAUGAACUCA	Cyn,Chmp	[165-183]
410	GAGUUCAUCAGCAAACGCC	GGCGUUUGCUGAUGAACUC	Cyn,Chmp	[166-184]
411	UCGGAACAGCUGCUCAUUG	CAAUGAGCAGCUGUUCCGA	Cyn,Chmp	[872-890]
412	AGUGACCCUGAGGAUGAAC	GUUCAUCCUCAGGGUCACU	Cyn,Chmp	[455-473]
413	GUGGUUGGAAAACUGAGGC	GCCUCAGUUUUCCAACCAC	Cyn	[997-1015]
414	GAUAAGAUACUCACUGUUC	GAACAGUGAGUAUCUUAUC	Cyn	[1654-1672]
415	GAACAGCUGCUCAUUGAGG	CCUCAAUGAGCAGCUGUUC	Cyn,Chmp	[875-893]
416	UCUGAAGGGACCAAGUGUG	CACACUUGGUCCCUUCAGA	Cyn	[1347-1365]
417	UACUUUUCUAAUAAACAUG	CAUGUUUAUUAGAAAAGUA	Rat,Ms	[1719-1737]
418	ACACUUGAAAAAUUACACC	GGUGUAAUUUUUCAAGUGU		[1497-1515]
419	UAUCUUACUGGUCUGAAGG	CCUUCAGACCAGUAAGAUA	Cyn	[1336-1354]
420	UCCAUCUAGAACUGUUUAC	GUAAACAGUUCUAGAUGGA	Cyn,Rat	[1630-1648]
421	CAAAGAACUACUGCGCCUG	CAGGCGCAGUAGUUCUUUG	Chmp	[586-604]
422	AUCACUUGGGAUCUUUGAC	GUCAAAGAUCCCAAGUGAU	Cyn	[1480-1498]
423	GUCUUAGCAGUUCUCGCUG	CAGCGAGAACUGCUAAGAC		[111-129]
424	AAAGAACUACUGCGCCUGG	CCAGGCGCAGUAGUUCUUU	Chmp	[587-605]
425	AUACACUUGAUGUUCAAGU	ACUUGAACAUCAAGUGUAU	Cyn,Rat,Ms	[1677-1695]
426	AGGAAGCUCAUUGAGUUGU	ACAACUCAAUGAGCUUCCU		[1053-1071]
427	GUGUACUGCAGAGUUGAGC	GCUCAACUCUGCAGUACAC		[1545-1563]
428	UGUGACAUCCAGAGAGCAG	CUGCUCUCUGGAUGUCACA		[1211-1229]
429	UUGUCUUAGCAGUUCUCGC	GCGAGAACUGCUAAGACAA		[109-127]
430	UUGGAAAACUGAGGCAGCC	GGCUGCCUCAGUUUUCCAA	Cyn	[1001-1019]
431	UAACAGUGGUGUGACAUCC	GGAUGUCACACCACUGUUA		[1202-1220]
432	UCCAAGACAGAGACGACUG	CAGUCGUCUCUGUCUUGGA		[931-949]
433	AGUGUUUCCCAGGAAGCUC	GAGCUUCCUGGGAAACACU		[1043-1061]
434	AAGAAGCUGUACAGCUCGG	CCGAGCUGUACAGCUUCUU	Cyn,Rb,Chmp	[857-875]
435	AUGAAACAAAGGCUUAGGG	CCCUAAGCCUUUGUUUCAU	Cyn	[1119-1137]
436	CUUAUUAUUUUUGUUACUG	CAGUAACAAAAAUAAUAAG	Cyn	[1178-1196]
437	AUCUUGUUUUUCUGAUCGG	CCGAUCAGAAAAACAAGAU		[1383-1401]
438	AGCAUCACUACUGACCUGU	ACAGGUCAGUAGUGAUGCU	Cyn	[1402-1420]
439	AUGUUCAAGUAUUAAGACC	GGUCUUAAUACUUGAACAU	Ms	[1686-1704]
440	UCAUUGAGGAGUGUUGAAC	GUUCAACACUCCUCAAUGA	Cyn	[885-903]
441	AGCUGCGUUUAAGCCUUCC	GGAAGGCUUAAACGCAGCU		[1520-1538]
442	UUACUGACAGUUAACAGUG	CACUGUUAACUGUCAGUAA	Cyn	[1191-1209]
443	AUUCCUGUGGUUGGAAAAC	GUUUUCCAACCACAGGAAU	Cyn	[991-1009]
444	AAUACACUUGAUGUUCAAG	CUUGAACAUCAAGUGUAUU	Cyn,Rat,Ms	[1676-1694]
445	CUGUUCAUGAAUACACUUG	CAAGUGUAUUCAUGAACAG	Cyn	[1667-1685]

446	UUGUUGUUUGUUUUGUAUC	GAUACAAAACAAACAACAA		[1367-1385]
447	UUUCUAAUAAACAUGUUUG	CAAACAUGUUUAUUAGAAA	Rat,Ms	[1723-1741]
448	AUCUUACUGGUCUGAAGGG	CCCUUCAGACCAGUAAGAU	Cyn	[1337-1355]
449	UUACUGGUCUGAAGGGACC	GGUCCCUUCAGACCAGUAA	Cyn	[1340-1358]
450	AAGAUACUCACUGUUCAUG	CAUGAACAGUGAGUAUCUU	Cyn	[1657-1675]
451	AUUUUUGUUACUGACAGUU	AACUGUCAGUAACAAAAAU	Cyn	[1184-1202]
452	CAGCUGCUCAUUGAGGAGU	ACUCCUCAAUGAGCAGCUG	Cyn,Rb,Chmp	[878-896]
453	GUUUUGUAUCUUGUUUUUC	GAAAAACAAGAUACAAAAC		[1376-1394]
454	AUAGUGUUUCCCAGGAAGC	GCUUCCUGGGAAACACUAU		[1041-1059]
455	UGUAGCAUGAAACAAAGGC	GCCUUUGUUUCAUGCUACA	Cyn,Rat,Ms,Rb	[1113-1131]
456	UCAGGGAUCACUUGGGAUC	GAUCCCAAGUGAUCCCUGA	Cyn	[1474-1492]
457	AAUGUAAGAGUAGGAAGGG	CCCUUCCUACUCUUACAUU	Cyn	[1448-1466]
458	UUCAUGAAUACACUUGAUG	CAUCAAGUGUAUUCAUGAA	Cyn,Rat,Ms	[1670-1688]
459	UUUUUCUGAUCGGAGCAUC	GAUGCUCCGAUCAGAAAAA		[1389-1407]
460	CUUGUCUUAGCAGUUCUCG	CGAGAACUGCUAAGACAAG		[108-126]
461	AUGUACCUUAUUAUUUUUG	CAAAAAUAAUAAGGUACAU	Cyn	[1172-1190]
462	UAUCUUGUUUUUCUGAUCG	CGAUCAGAAAAACAAGAUA		[1382-1400]
463	UUUCCCAGGAAGCUCAUUG	CAAUGAGCUUCCUGGGAAA		[1047-1065]
464	UACUGCAGAGUUGAGCUGG	CCAGCUCAACUCUGCAGUA		[1548-1566]
465	AUGAAUACACUUGAUGUUC	GAACAUCAAGUGUAUUCAU	Cyn,Rat,Ms	[1673-1691]
466	UUAGCAGUUCUCGCUGACC	GGUCAGCGAGAACUGCUAA		[114-132]
467	UUGAGGAGUGUUGAACUUC	GAAGUUCAACACUCCUCAA	CYN	[888-906]
468	UUCAUCAGCAAACGCCCUG	CAGGGCGUUUGCUGAUGAA	CYN,CHMP	[169-187]
469	UUGAACUUCAACCUGAGGG	CCCUCAGGUUGAAGUUCAA		[898-916]
470	GUGCCAACCUGAUGCAGCU	AGCAGCAUCAGGUUGGCAC		

Table B 15 DDIT4L - DNA-damage-inducible transcript 4-like

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-34222182 :204-785
1	GGAUUAUGUUGUUCCUGAA	UUCAGGAACAACAUAAUCC	Cyn,Chmp	[308-326]
2	GGCUUUUCUGGGAAUUGAA	UUCAAUUCCCAGAAAAGCC		[1726-1744]
3	CGUGAACUUGGAAAUUGAA	UUCAAUUUCCAAGUUCACG	Rat,Chn,Dog, Cyn,GP	[530-548]
4	CAGUGUUCUAACAAACUAA	UUAGUUUGUUAGAACACUG		[2244-2262]
5	CCUGUUAAAGGAAAUUAAA	UUUAAUUUCCUUUAACAGG		[2534-2552]
6	GCCUGUUAUGCUUACAAAA	UUUUGUAAGCAUAACAGGC		[2479-2497]
7	CGGCAAUAAUGGAACUGCU	AGCAGUUCCAUUAUUGCCG		[1353-1371]
8	GUCUAUUUUUGACAAUAAA	UUUAUUGUCAAAAAUAGAC		[2557-2575]
9	GUAGGUGAGUUUAAUUAAA	UUUAAUUAAACUCACCUAC		[1299-1317]
10	GAAUUUAGCCUCCACUCAA	UUGAGUGGAGGCUAAAUUC		[2017-2035]
11	GUCACUAGGGAAUAAUAAA	UUUAUUAUUCCCUAGUGAC		[1931-1949]
12	GAUGGAAUAGGUAAGCAAA	UUUGCUUACCUAUUCCAUC		[1031-1049]
13	GAGUUUAAUUAAAGCUUAA	UUAAGCUUUAAUUAAACUC		[1305-1323]
14	CCUAAAAAGGGAAAAUAUA	UAUAUUUUCCCUUUUUAGG		[781-799]
15	GGUCCUUGUCCCUGAGAAA	UUUCUCAGGGACAAGGACC	Cyn,Chmp	[434-452]
16	GUUGAAUACUGUCUUUAAA	UUUAAAGACAGUAUUCAAC		[1499-1517]
17	GGAUGGAAUAGGUAAGCAA	UUGCUUACCUAUUCCAUCC		[1030-1048]
18	CUGUCACUAGGGAAUAAUA	UAUUAUUCCCUAGUGACAG		[1929-1947]
19	GAGGAUUUUUUAAAUCACA	UGUGAUUUAAAAAAUCCUC		[1177-1195]
20	GGAGAACUGUCUGUCCAAA	UUUGGACAGACAGUUCUCC	Rb,Dog, Cyn,Chmp	[386-404]
21	UGGUUAAAAUGCUGGAGAA	UUCUCCAGCAUUUUAACCA	Rb,Cyn,Chmp	[373-391]
22	GAGUAAAUGAGAAAUAUUA	UAAUAUUUCUCAUUUACUC		[1334-1352]
23	GCAAAAUAUUGAACUGAUA	UAUCAGUUCAAUAUUUUGC		[1528-1546]
24	GAAGGCUGUUAAAUUAAUA	UAUUAAUUUAACAGCCUUC		[2513-2531]
25	CUUGGAAAUUGAAAAUGUA	UACAUUUUCAAUUUCCAAG	Cyn,Chmp	[536-554]
26	CAGGAUUUCGACUUGUUAA	UUAACAAGUCGAAAUCCUG	Rb	[718-736]

27	GUGACUUCCUCACUCUAAU	AUUAGAGUGAGGAAGUCAC		[1385-1403]
28	UGGAGAACUGUCUGUCCAA	UUGGACAGACAGUUCUCCA	Rat,Rb,Dog,Cyn,GP,Chmp	[385-403]
29	AACUGUCUGUCCAAAUCAA	UUGAUUUGGACAGACAGUU	Rb,Dog, Cyn,Chmp	[390-408]
30	CUAGAAAAAUGCAAAAUAU	AUAUUUUGCAUUUUUCUAG		[1518-1536]
31	GGUGACUUCCUCACUCUAA	UUAGAGUGAGGAAGUCACC		[1384-1402]
32	UCAUGAUUGGGUAGUAAAA	UUUUACUACCCAAUCAUGA		[811-829]
33	AAGGGAAAAUAUAUAAAGA	UCUUUAUAUAUUUUCCCUU		[787-805]
34	CCAGUGUUCUAACAAACUA	UAGUUUGUUAGAACACUGG		[2243-2261]
35	GAUUGAAGGGUCCUAAAAA	UUUUUAGGACCCUUCAAUC		[770-788]
36	CCAUUGAGUGAAUGAUGAA	UUCAUCAUUCACUCAAUGG		[1572-1590]
37	GGAGAUAUGGUUUAUAGUA	UACUAUAAACCAUAUCUCC		[1841-1859]
38	UGGUAAUAGACUAUAUAAA	UUUAUAUAGUCUAUUACCA		[1106-1124]
39	GGGCUUUUCUGGGAAUUGA	UCAAUUCCCAGAAAAGCCC		[1725-1743]
40	CCACCUGCCCUAAAUAAGA	UCUUAUUUAGGGCAGGUGG		[868-886]
41	UGCUGUGGGUCGUGGAUAA	UUAUCCACGACCCACAGCA		[2068-2086]
42	ACGUGAACUUGGAAAUUGA	UCAAUUUCCAAGUUCACGU	Rat,Chn,Dog, Cyn,GP	[529-547]
43	CUGUCCAAAUCAAAGCAAA	UUUGCUUUGAUUUGGACAG	Rb,Dog, Cyn,Chmp	[396-414]
44	GUGCUUAAUCUCAGAUGAA	UUCAUCUGAGAUUAAGCAC		[1674-1692]
45	UGUUGAAUACUGUCUUUAA	UUAAAGACAGUAUUCAACA		[1498-1516]
46	AGGUAAGAGUAAAUGAGAA	UUCUCAUUUACUCUUACCU		[1328-1346]
47	GGAAGGCUGUUAAAUUAAU	AUUAAUUUAACAGCCUUCC		[2512-2530]
48	GCUUGGAAAGAUACUACAA	UUGUAGUAUCUUUCCAAGC		[2274-2292]
49	UGAUAUUUAGCCUAUCAAA	UUUGAUAGGCUAAAUAUCA		[1209-1227]
50	GAAAUAUUACGGCAAUAAU	AUUAUUGCCGUAAUAUUUC		[1344-1362]
51	CCAGAUUUGCCUAUUUUGA	UCAAAAUAGGCAAAUCUGG		[1125-1143]
52	CAGUAUUACAUGUGCUUAA	UUAAGCACAUGUAAUACUG		[1663-1681]
53	AGUGUUCUAACAAACUAAA	UUUAGUUUGUUAGAACACU		[2245-2263]
54	CAAGGGUAGUAGCUGUAUA	UAUACAGCUACUACCCUUG		[1769-1787]
55	CCACGGUGUUGUUUUAGAU	AUCUAAAACAACACCGUGG		[1446-1464]
56	CGAGGUAAUAUUUGAGGAA	UUCCUCAAAUAUUACCUCG	Cyn,Chmp	[338-356]
57	CAAUAAUGGAACUGCUUCA	UGAAGCAGUUCCAUUAUUG		[1356-1374]
58	GAAUGAAACUCACCGUCCA	UGGACGGUGAGUUUCAUUC		[1869-1887]
59	AGGUAGGCUUGGUAAUAGA	UCUAUUACCAAGCCUACCU		[1097-1115]
60	UCCUGUUACUGAUACUAUA	UAUAGUAUCAGUAACAGGA		[2194-2212]
61	GUGUGAUCCUGUUACUGAU	AUCAGUAACAGGAUCACAC		[2188-2206]
62	CAGAGAGCCUGCUAAGUGA	UCACUUAGCAGGCUCUCUG	Cyn,Chmp	[277-295]
63	CAGGAGAACUGCUCAUGGA	UCCAUGAGCAGUUCUCCUG	Dog, Cyn,Chmp	[627-645]
64	CACCAGUUCCUGACUCAAA	UUUGAGUCAGGAACUGGUG		[1246-1264]
65	CCCAGAGAAUUGCUCAAGA	UCUUGAGCAAUUCUCUGGG	Cyn,Ms,Chmp	[457-475]
66	UACUAUAAGUGACCUAAAA	UUUUAGGUCACUUAUAGUA		[2206-2224]
67	UUGGAGAAGUGAUUCAAAA	UUUUGAAUCACUUCUCCAA		[964-982]
68	CAAAUCAAAGCAAACUAAA	UUUAGUUUGCUUUGAUUUG	Cyn,Chmp	[401-419]
69	CUGUCUUUAAACUAGAAAA	UUUUCUAGUUUAAAGACAG		[1507-1525]
70	CGUGGAUAAGGAGCUUAUU	AAUAAGCUCCUUAUCCACG		[2078-2096]
71	UGCCUGUUAUGCUUACAAA	UUUGUAAGCAUAACAGGCA		[2478-2496]
72	AUGGAAUAGGUAAGCAAAA	UUUUGCUUACCUAUUCCAU		[1032-1050]
73	UGUCACUAGGGAAUAAUAA	UUAUUAUUCCCUAGUGACA		[1930-1948]
74	CUAAAAUGUCACUGUUCAA	UUGAACAGUGACAUUUUAG		[2219-2237]
75	GAAGGGUCCUAAAAAGGGA	UCCCUUUUUAGGACCCUUC		[774-792]
76	AAGGGUUUUUAGACAGGAA	UUCCUGUCUAAAAACCCUU		[1269-1287]
77	CACCUGCCCUAAAUAAGAA	UUCUUAUUUAGGGCAGGUG		[869-887]
78	CCAGAGAAUUGCUCAAGAU	AUCUUGAGCAAUUCUCUGG	Cyn,Ms,Chmp	[458-476]
79	GGAUUUUUUAAAUCACAGA	UCUGUGAUUUAAAAAAUCC		[1179-1197]
80	GGAGAAGUGAUUCAAAAUA	UAUUUUGAAUCACUUCUCC		[966-984]
81	CUUGGGCAUCGAUGUAGAA	UUCUACAUCGAUGCCCAAG		[2419-2437]
82	ACCUGUCACUAGGGAAUAA	UUAUUCCCUAGUGACAGGU		[1927-1945]

83	CCAAAUCAAAGCAAACUAA	UUAGUUUGCUUUGAUUUGG	Cyn,Chmp	[400-418]
84	CUUGGAAAGAUACUACAAA	UUUGUAGUAUCUUUCCAAG		[2275-2293]
85	GAUAUUUAGCCUAUCAAAA	UUUUGAUAGGCUAAAUAUC		[1210-1228]
86	UGCCUAUUUUGAUUUUCAU	AUGAAAAUCAAAAUAGGCA		[1132-1150]
87	CCGUCCAGAUAACCAUGCA	UGCAUGGUUAUCUGGACGG		[1881-1899]
88	GUUCCUGACUCAAAUUUGA	UCAAAUUUGAGUCAGGAAC		[1251-1269]
89	GAAUAGGUAAGCAAAAGUA	UACUUUUGCUUACCUAUUC		[1035-1053]
90	ACAUGUGCUUAAUCUCAGA	UCUGAGAUUAAGCACAUGU		[1670-1688]
91	GUUUUAGAUGCCUUUAUAA	UUAUAAAGGCAUCUAAAAC		[1456-1474]
92	CCACCAGUUCCUGACUCAA	UUGAGUCAGGAACUGGUGG		[1245-1263]
93	GGGUAGUAGCUGUAUACUA	UAGUAUACAGCUACUACCC		[1772-1790]
94	GGGAAAAUAUAUAAAGAUU	AAUCUUUAUAUAUUUUCCC		[789-807]
95	AGUAGGUGAGUUUAAUUAA	UUAAUUAAACUCACCUACU		[1298-1316]
96	GUAAAAAGCUGGAUAGGAU	AUCCUAUCCAGCUUUUUAC	Rat,Rb,Chn,Cyn,Ms, GP,Chmp	[556-574]
97	GAGAAAUAUUACGGCAAUA	UAUUGCCGUAAUAUUUCUC		[1342-1360]
98	GACCCAGAGAAUUGCUCAA	UUGAGCAAUUCUCUGGGUC	Cyn,Ms,Chmp	[455-473]
99	UGUUUUAGAUGCCUUUAUA	UAUAAAGGCAUCUAAAACA		[1455-1473]
100	AUCACAGAAUCAUACUAAA	UUUAGUAUGAUUCUGUGAU		[1190-1208]
101	CCUGUUCUUAAGUGUUGAA	UUCAACACUUAAGAACAGG		[1486-1504]
102	GGCCUUAUUUUUUGUCUUA	UAAGACAAAAAAUAAGGCC		[1950-1968]
103	CCUGUUACUGAUACUAUAA	UUAUAGUAUCAGUAACAGG		[2195-2213]
104	UCCACUCAACAAUGUUCAA	UUGAACAUUGUUGAGUGGA		[2027-2045]
105	CAGAUUUGCCUAUUUUGAU	AUCAAAAUAGGCAAAUCUG		[1126-1144]
106	GUGAUUGAAGGGUCCUAAA	UUUAGGACCCUUCAAUCAC		[768-786]
107	ACUGUCUGUCCAAAUCAAA	UUUGAUUUGGACAGACAGU	Rb,Dog, Cyn,Chmp	[391-409]
108	CCACUUUGAAUUAUUGAAA	UUUCAAUAAUUCAAAGUGG		[1791-1809]
109	GGCAGUUUGAGCAGCAAGA	UCUUGCUGCUCAAACUGCC	Chmp	[216-234]
110	UCCUGUUAAAGGAAAUUAA	UUAAUUUCCUUUAACAGGA		[2533-2551]
111	ACAGAAUCAUACUAAAUGA	UCAUUUAGUAUGAUUCUGU		[1193-1211]
112	GCGUCGUACCUACUUUUGA	UCAAAAGUAGGUACGACGC		[589-607]
113	GAAUGGGAUGGAAUAGGUA	UACCUAUUCCAUCCCAUUC		[1025-1043]
114	UCGACUUGUUAAGAAAAAA	UUUUUUCUUAACAAGUCGA	Rat,Rb	[725-743]
115	CUGUGAGGAUAGGAAAUUA	UAAUUUCCUAUCCUCACAG		[1594-1612]
116	GCUUGGUAAUAGACUAUAU	AUAUAGUCUAUUACCAAGC		[1103-1121]
117	CCAACUAAGUAGAUCAUUA	UAAUGAUCUACUUAGUUGG		[1971-1989]
118	GAUUCAAAAUAGUGUAGAU	AUCUACACUAUUUUGAAUC		[974-992]
119	CAUCCUGGUGUUACUGAAA	UUUCAGUAACACCAGGAUG		[2164-2182]
120	CUCUCUGAUUCACUUAGUA	UACUAAGUGAAUCAGAGAG		[1630-1648]
121	UCCUGGUGUUACUGAAAAA	UUUUUCAGUAACACCAGGA		[2166-2184]
122	CCCUGUUCUUAAGUGUUGA	UCAACACUUAAGAACAGGG		[1485-1503]
123	UGUCUUUAAACUAGAAAAA	UUUUUCUAGUUUAAAGACA		[1508-1526]
124	GAUUUUUUAAAUCACAGAA	UUCUGUGAUUUAAAAAAUC		[1180-1198]
125	CUUGGUAAUAGACUAUAUA	UAUAUAGUCUAUUACCAAG		[1104-1122]
126	ACCAGUUCCUGACUCAAAU	AUUUGAGUCAGGAACUGGU		[1247-1265]
127	CUAAAAAGGGAAAAUAUAU	AUAUAUUUUCCCUUUUUAG		[782-800]
128	GGUAAGAGUAAAUGAGAAA	UUUCUCAUUUACUCUUACC		[1329-1347]
129	AGAUUUUUUCCACCUUGGA	UCCAAGGUGGAAAAAAUCU		[1907-1925]
130	GCAGUUUGAGCAGCAAGAA	UUCUUGCUGCUCAAACUGC	Chmp	[217-235]
131	CUCACUCUAAUGUUUUAAA	UUUAAAACAUUAGAGUGAG		[1393-1411]
132	CGUCGUACCUACUUUUGAG	CUCAAAAGUAGGUACGACG		[590-608]
133	AAACUAGAAAAAUGCAAAA	UUUUGCAUUUUUCUAGUUU		[1515-1533]
134	UGGUGACUUCCUCACUCUA	UAGAGUGAGGAAGUCACCA		[1383-1401]
135	CAAACUAAACUCUUCAAAU	AUUUGAAGAGUUUAGUUUG		[2255-2273]
136	GACAGGAAGGUAGGAUUAA	UUAAUCCUACCUUCCUGUC		[1280-1298]
137	GUGUGAUUCUAGCGUCGUA	UACGACGCUAGAAUCACAC		[578-596]

138	GCUUAUGGAAGGCUGUUAA	UUAACAGCCUUCCAUAAGC		[2506-2524]
139	AGCCCAUUUGAGUUUUACA	UGUAAAACUCAAAUGGGCU		[1056-1074]
140	CUUAUGGAAGGCUGUUAAA	UUUAACAGCCUUCCAUAAG		[2507-2525]
141	GAAACUCACCGUCCAGAUA	UAUCUGGACGGUGAGUUUC		[1873-1891]
142	GGCAAUAAUGGAACUGCUU	AAGCAGUUCCAUUAUUGCC		[1354-1372]
143	CACUAACAGUUAUCUUUGA	UCAAAGAUAACUGUUAGUG		[2453-2471]
144	AGGGAAAAUAUAUAAAGAU	AUCUUUAUAUAUUUUCCCU		[788-806]
145	CAACUAAGUAGAUCAUUAU	AUAAUGAUCUACUUAGUUG		[1972-1990]
146	AGAUAUGGUUUAUAGUACA	UGUACUAUAAACCAUAUCU		[1843-1861]
147	GAAAAAUGCAAAAUAUUGA	UCAAUAUUUUGCAUUUUUC		[1521-1539]
148	UGUGGGUCGUGGAUAAGGA	UCCUUAUCCACGACCCACA		[2071-2089]
149	AGAAGUGAUUCAAAAUAGU	ACUAUUUUGAAUCACUUCU		[968-986]
150	CACUCUAAUGUUUUAAAGA	UCUUUAAAACAUUAGAGUG		[1395-1413]
151	CCACCUUGGAUACCUGUCA	UGACAGGUAUCCAAGGUGG		[1916-1934]
152	UGUCUAUUUUUGACAAUAA	UUAUUGUCAAAAAUAGACA		[2556-2574]
153	GGGUCCUAAAAAGGGAAAA	UUUUCCCUUUUUAGGACCC		[777-795]
154	GGACUUUUUCUUUAGUAGA	UCUACUAAAGAAAAAGUCC		[656-674]
155	CAGUAACCACGGUGUUGUU	AACAACACCGUGGUUACUG		[1440-1458]
156	CAGGAAGGUAGGAUUAAGU	ACUUAAUCCUACCUUCCUG		[1282-1300]
157	UCCUCACUCUAAUGUUUUA	UAAAACAUUAGAGUGAGGA		[1391-1409]
158	GAAUCAUACUAAAUGAUAU	AUAUCAUUUAGUAUGAUUC		[1196-1214]
159	CCUGUUAUGCUUACAAAAU	AUUUUGUAAGCAUAACAGG		[2480-2498]
160	AACCAUGCAUGCACCCAGA	UCUGGGUGCAUGCAUGGUU		[1891-1909]
161	UCAUCCUGGUGUUACUGAA	UUCAGUAACACCAGGAUGA		[2163-2181]
162	GUUUUAAAGAGGCAACAAA	UUUGUUGCCUCUUUAAAAC		[1404-1422]
163	UUUGGAGAAGUGAUUCAAA	UUUGAAUCACUUCUCCAAA		[963-981]
164	CGUUGACCAUGGUUGCAAC	GUUGCAACCAUGGUCAACG	Rat,Cyn,Ms,Chmp	[196-214]
165	UGUCCUUUUUCCACUAACA	UGUUAGUGGAAAAAGGACA		[2442-2460]
166	UUUUAAAGAGGCAACAAAA	UUUUGUUGCCUCUUUAAAA		[1405-1423]
167	CAGAGGAUUUUUUAAAUCA	UGAUUUAAAAAAUCCUCUG		[1175-1193]
168	UGAACUUGGAAAUUGAAAA	UUUUCAAUUUCCAAGUUCA	Rat,Chn,Dog, Cyn,GP,Chmp	[532-550]
169	GGAUACCUGUCACUAGGGA	UCCCUAGUGACAGGUAUCC		[1923-1941]
170	AGGAAGGUAGGAUUAAGUA	UACUUAAUCCUACCUUCCU		[1283-1301]
171	UUGGUAAUAGACUAUAUAA	UUAUAUAGUCUAUUACCAA		[1105-1123]
172	AGAAUUGAAUGGGAUGGAA	UUCCAUCCCAUUCAAUUCU		[1019-1037]
173	GAAUGAUGAAUACCUGUGA	UCACAGGUAUUCAUCAUUC		[1581-1599]
174	AUGGAAGGCUGUUAAAUUA	UAAUUUAACAGCCUUCCAU		[2510-2528]
175	AAUUGAAUGGGAUGGAAUA	UAUUCCAUCCCAUUCAAUU		[1021-1039]
176	UACUGUCUUUAAACUAGAA	UUCUAGUUUAAAGACAGUA		[1505-1523]
177	GAUACCUGUCACUAGGGAA	UUCCCUAGUGACAGGUAUC		[1924-1942]
178	GCUAGUCAGCUAAAGUCAU	AUGACUUUAGCUGACUAGC		[837-855]
179	CAGCUAAAGUCAUUUGUAG	CUACAAAUGACUUUAGCUG		[843-861]
180	GCCUAUUUUGAUUUUCAUA	UAUGAAAAUCAAAAUAGGC		[1133-1151]
181	GAGAACUGCUCAUGGACUA	UAGUCCAUGAGCAGUUCUC	Dog, Cyn,Chmp	[630-648]
182	GUUUUCAGAGGAUUUUUUA	UAAAAAAUCCUCUGAAAAC		[1170-1188]
183	CCUUAUUUUUUGUCUUAUU	AAUAAGACAAAAAAUAAGG		[1952-1970]
184	GGGAUUAUGUUGUUCCUGA	UCAGGAACAACAUAAUCCC	Rb,Cyn,Chmp	[307-325]
185	UAGGUAAGCAAAAGUAGAA	UUCUACUUUUGCUUACCUA		[1038-1056]
186	AUACUAUAAGUGACCUAAA	UUUAGGUCACUUAUAGUAU		[2205-2223]
187	CUGGAGAACUGUCUGUCCA	UGGACAGACAGUUCUCCAG	Rb,Dog, Cyn,Chmp	[384-402]
188	UUUGCAUGUCUAUUGUUAA	UUAACAAUAGACAUGCAAA		[2335-2353]
189	CUCACUGAUUGGAACAACA	UGUUGUUCCAAUCAGUGAG		[749-767]
190	AUAGGUAAGCAAAAGUAGA	UCUACUUUUGCUUACCUAU		[1037-1055]
191	UGGAGAAGUGAUUCAAAAU	AUUUUGAAUCACUUCUCCA		[965-983]
192	GAGAAACUGACCCAGAGAA	UUCUCUGGGUCAGUUUCUC	Rat,Chn,Cyn,Ms, GP,Chmp	[447-465]
193	UGUGCUUAAUCUCAGAUGA	UCAUCUGAGAUUAAGCACA		[1673-1691]

194	UUUUCAGAGGAUUUUUUAA	UUAAAAAAUCCUCUGAAAA		[1171-1189]
195	UGGAGAUAUGGUUUAUAGU	ACUAUAAACCAUAUCUCCA		[1840-1858]
196	GUGAACUUGGAAAUUGAAA	UUUCAAUUUCCAAGUUCAC	Rat,Chn,Dog, Cyn,GP,Chmp	[531-549]
197	GAAUAAUAAAGGCCUUAUU	AAUAAGGCCUUUAUUAUUC		[1940-1958]
198	UAACCACGGUGUUGUUUUA	UAAAACAACACCGUGGUUA		[1443-1461]
199	UCAGCUAAAGUCAUUUGUA	UACAAAUGACUUUAGCUGA		[842-860]
200	UGGAAGGCUGUUAAAUUAA	UUAAUUUAACAGCCUUCCA		[2511-2529]
201	AGAGUAAAUGAGAAAUAUU	AAUAUUUCUCAUUUACUCU		[1333-1351]
202	CUGGAGUUGUCACCACUGA	UCAGUGGUGACAACUCCAG		[2387-2405]
203	GGAUUAAGUAGGUGAGUUU	AAACUCACCUACUUAAUCC		[1292-1310]
204	CUUUCCUUUUUUAUGUUAA	UUAACAUAAAAAAGGAAAG		[1993-2011]
205	CAGCUAACAGGCUGAUUUU	AAAAUCAGCCUGUUAGCUG		[938-956]
206	GAUUAAGUAGGUGAGUUUA	UAAACUCACCUACUUAAUC		[1293-1311]
207	GAAGCCCAUUUGAGUUUUA	UAAAACUCAAAUGGGCUUC		[1054-1072]
208	CUCUGAUUCACUUAGUAAU	AUUACUAAGUGAAUCAGAG		[1632-1650]
209	CCUAGAGAAUGAAACUCAC	GUGAGUUUCAUUCUCUAGG		[1863-1881]
210	CAACCUCAACGAGGUAAUA	UAUUACCUCGUUGAGGUUG	Cyn,Chmp	[329-347]
211	GAUUUCGACUUGUUAAGAA	UUCUUAACAAGUCGAAAUC	Rat,Rb	[721-739]
212	GAAACAGAGCCGUUGACCA	UGGUCAACGGCUCUGUUUC	Rat,Dog, Cyn,Ms,Chmp	[186-204]
213	CCUAAAAUGUCACUGUUCA	UGAACAGUGACAUUUUAGG		[2218-2236]
214	GCCUAUCAAAACUUCCAAA	UUUGGAAGUUUUGAUAGGC		[1218-1236]
215	AGACAGGAAGGUAGGAUUA	UAAUCCUACCUUCCUGUCU		[1279-1297]
216	CAAGAUAAAUCAAUGUUGU	ACAACAUUGAUUUAUCUUG		[2316-2334]
217	GAGAACUGUCUGUCCAAAU	AUUUGGACAGACAGUUCUC	Rb,Dog, Cyn,Chmp	[387-405]
218	UCAGGAUUUCGACUUGUUA	UAACAAGUCGAAAUCCUGA	Rb	[717-735]
219	UGAUUCACUUAGUAAUCUA	UAGAUUACUAAGUGAAUCA		[1635-1653]
220	CAAAUUUGAAGGGUUUUUA	UAAAAACCCUUCAAAUUUG		[1261-1279]
221	GAAACGGGUCAAUUUACGA	UCGUAAAUUGACCCGUUUC		[1806-1824]
222	AACCCUAGGUAAGAGUAAA	UUUACUCUUACCUAGGGUU		[1322-1340]
223	CUAUUAGCUCCACUUCACA	UGUGAAGUGGAGCUAAUAG		[2114-2132]
224	GGUAAUAUUUGAGGAAUCA	UGAUUCCUCAAAUAUUACC	Cyn,Chmp	[341-359]
225	GCCCAUUUGAGUUUUACAU	AUGUAAAACUCAAAUGGGC		[1057-1075]
226	UCAAAUGCUUGGAAAGAUA	UAUCUUUCCAAGCAUUUGA		[2268-2286]
227	CAUAGAUCCCAUUUUUGUA	UACAAAAAUGGGAUCUAUG		[999-1017]
228	CACUCAACAAUGUUCAAUU	AAUUGAACAUUGUUGAGUG		[2029-2047]
229	CGUCCAGAUAACCAUGCAU	AUGCAUGGUUAUCUGGACG		[1882-1900]
230	AAGCAAAAGUAGAAGCCCA	UGGGCUUCUACUUUUGCUU		[1043-1061]
231	GGAUAAGGAGCUUAUUCAG	CUGAAUAAGCUCCUUAUCC		[2081-2099]
232	GCAUGCACCCAGAUUUUUU	AAAAAAUCUGGGUGCAUGC		[1897-1915]
233	AAGAGUAAAUGAGAAAUAU	AUAUUUCUCAUUUACUCUU		[1332-1350]
234	CCUUGGAUACCUGUCACUA	UAGUGACAGGUAUCCAAGG		[1919-1937]
235	UGUUCUUAAGUGUUGAAUA	UAUUCAACACUUAAGAACA		[1488-1506]
236	UGAGAAAUAUUACGGCAAU	AUUGCCGUAAUAUUUCUCA		[1341-1359]
237	GGUCCUAAAAAGGGAAAAU	AUUUUCCCUUUUUAGGACC		[778-796]
238	AGGUCCUUGUCCCUGAGAA	UUCUCAGGGACAAGGACCU	Cyn,Chmp	[433-451]
239	AUUUUUGUACAGAAUUGAA	UUCAAUUCUGUACAAAAAU		[1009-1027]
240	AAGGGUCCUAAAAAGGGAA	UUCCCUUUUUAGGACCCUU		[775-793]
241	GUCUAUUGUUAAGCUCCAA	UUGGAGCUUAACAAUAGAC		[2342-2360]
242	UCAACGAGGUAAUAUUUGA	UCAAAUAUUACCUCGUUGA	Cyn,Chmp	[334-352]
243	CAUGCAUGCACCCAGAUUU	AAAUCUGGGUGCAUGCAUG		[1894-1912]
244	UGAGUUUAAUUAAAGCUUA	UAAGCUUUAAUUAAACUCA		[1304-1322]
245	GAACUGUCUGUCCAAAUCA	UGAUUUGGACAGACAGUUC	Rb,Dog, Cyn,Chmp	[389-407]
246	UCCUAAAAAGGGAAAAUAU	AUAUUUUCCCUUUUUAGGA		[780-798]
247	CCUAGGUAAGAGUAAAUGA	UCAUUUACUCUUACCUAGG		[1325-1343]
248	GGAAAUUGAAAAUGUAUGU	ACAUACAUUUUCAAUUUCC	Cyn,Chmp	[539-557]
249	CUCUUCAAAUGCUUGGAAA	UUUCCAAGCAUUUGAAGAG		[2264-2282]

250	AAAGCUUAACCCUAGGUAA	UUACCUAGGGUUAAGCUUU		[1315-1333]
251	GGAAAUUAAAGUUUGUCUA	UAGACAAACUUUAAUUUCC		[2543-2561]
252	GGAAUAGGUAAGCAAAAGU	ACUUUUGCUUACCUAUUCC		[1034-1052]
253	GUAUGUAAAAAGCUGGAUA	UAUCCAGCUUUUUACAUAC	Dog, Cyn,Ms,Chmp	[552-570]
254	GAUUGGGUAGUAAAACUAU	AUAGUUUUACUACCCAAUC		[815-833]
255	GCCUCCACUCAACAAUGUU	AACAUUGUUGAGUGGAGGC		[2024-2042]
256	UGAUUGAAGGGUCCUAAAA	UUUUAGGACCCUUCAAUCA		[769-787]
257	CUUUGGAGAAGUGAUUCAA	UUGAAUCACUUCUCCAAAG		[962-980]
258	GAUGAAUACCUGUGAGGAU	AUCCUCACAGGUAUUCAUC		[1585-1603]
259	CUAUGGAGAUAUGGUUUAU	AUAAACCAUAUCUCCAUAG		[1837-1855]
260	GAAGGGUUUUUAGACAGGA	UCCUGUCUAAAAACCCUUC		[1268-1286]
261	GAGAAUUGCUCAAGAUGUC	GACAUCUUGAGCAAUUCUC	Cyn,Ms,Chmp	[461-479]
262	AAAGUAGAAGCCCAUUUGA	UCAAAUGGGCUUCUACUUU		[1048-1066]
263	UUGAAGUAUCUCUCCUUAA	UUAAGGAGAGAUACUUCAA		[1740-1758]
264	AUCCCAUUUUUGUACAGAA	UUCUGUACAAAAAUGGGAU		[1004-1022]
265	GUAAUAUUUGAGGAAUCAA	UUGAUUCCUCAAAUAUUAC	Cyn,Chmp	[342-360]
266	AGAUCUAGUCCCUCUCUGA	UCAGAGAGGGACUAGAUCU		[1619-1637]
267	AACAAACUAAACUCUUCAA	UUGAAGAGUUUAGUUUGUU		[2253-2271]
268	GUCCUAAAAAGGGAAAAUA	UAUUUUCCCUUUUUAGGAC		[779-797]
269	GUAGUUGAUUACUCUUCCA	UGGAAGAGUAAUCAACUAC		[1556-1574]
270	GUGAGGAUAGGAAAUUAGU	ACUAAUUUCCUAUCCUCAC		[1596-1614]
271	CCUCACUCUAAUGUUUUAA	UUAAAACAUUAGAGUGAGG		[1392-1410]
272	UCACCGUCCAGAUAACCAU	AUGGUUAUCUGGACGGUGA		[1878-1896]
273	GAUUCACUUAGUAAUCUAU	AUAGAUUACUAAGUGAAUC		[1636-1654]
274	UGUUUCACAUUCAUAGCAA	UUGCUAUGAAUGUGAAACA		[916-934]
275	UAGGCUUGGUAAUAGACUA	UAGUCUAUUACCAAGCCUA		[1100-1118]
276	AAUGGGAUGGAAUAGGUAA	UUACCUAUUCCAUCCCAUU		[1026-1044]
277	UCUUGGGCAUCGAUGUAGA	UCUACAUCGAUGCCCAAGA		[2418-2436]
278	AAAGCAAACUAAACUUGGU	ACCAAGUUUAGUUUGCUUU	Cyn,Chmp	[407-425]
279	CAGAAUCAUACUAAAUGAU	AUCAUUUAGUAUGAUUCUG		[1194-1212]
280	GGUAGGAUUAAGUAGGUGA	UCACCUACUUAAUCCUACC		[1288-1306]
281	AAAUCAAUGUUGUUUUGCA	UGCAAAACAACAUUGAUUU		[2322-2340]
282	AGCCUAUCAAAACUUCCAA	UUGGAAGUUUUGAUAGGCU		[1217-1235]
283	UACCUGUGAGGAUAGGAAA	UUUCCUAUCCUCACAGGUA		[1591-1609]
284	AUAUUACGGCAAUAAUGGA	UCCAUUAUUGCCGUAAUAU		[1347-1365]
285	UGUAUACUACCACUUUGAA	UUCAAAGUGGUAGUAUACA		[1782-1800]
286	GGUAAUAGACUAUAUAAAC	GUUUAUAUAGUCUAUUACC		[1107-1125]
287	CAUACUAAAUGAUAUUUAG	CUAAAUAUCAUUUAGUAUG		[1200-1218]
288	GAACUUGGAAAUUGAAAAU	AUUUUCAAUUUCCAAGUUC	Rat,Chn,Cyn,GP,Chmp	[533-551]
289	CUGGGAUUAUGUUGUUCCU	AGGAACAACAUAAUCCCAG	Rb,Cyn,Chmp	[305-323]
290	GGCCUUUGGAGAAGUGAUU	AAUCACUUCUCCAAAGGCC		[959-977]
291	AUUUCGACUUGUUAAGAAA	UUUCUUAACAAGUCGAAAU	Rat,Rb	[722-740]
292	GUCUUAUUCCAACUAAGUA	UACUUAGUUGGAAUAAGAC		[1963-1981]
293	AGAAAUAUUACGGCAAUAA	UUAUUGCCGUAAUAUUUCU		[1343-1361]
294	CUAGCUUCAGGGACUUUUU	AAAAAGUCCCUGAAGCUAG	Rb,Cyn,Chmp	[646-664]
295	GGGAUGGAAUAGGUAAGCA	UGCUUACCUAUUCCAUCCC		[1029-1047]
296	UGUUGUUUUGCAUGUCUAU	AUAGACAUGCAAAACAACA		[2329-2347]
297	CCUGCUAAGUGAUUUUGAC	GUCAAAAUCACUUAGCAGG	Cyn,Chmp	[284-302]
298	CUGGUGUUACUGAAAAACA	UGUUUUUCAGUAACACCAG		[2168-2186]
299	CUGUAUACUACCACUUUGA	UCAAAGUGGUAGUAUACAG		[1781-1799]
300	ACUAGAAAAAUGCAAAAUA	UAUUUUGCAUUUUUCUAGU		[1517-1535]
301	CCUGAGAAACUGACCCAGA	UCUGGGUCAGUUUCUCAGG	Rat,Chn,Dog, Cyn,Ms, GP,Chmp	[444-462]
302	CCUUUUUUAUGUUAAUGAG	CUCAUUAACAUAAAAAAGG		[1997-2015]
303	AGGGACUUUUUCUUUAGUA	UACUAAAGAAAAAGUCCCU	Cyn	[654-672]
304	UGGUGUUACUGAAAAACAG	CUGUUUUUCAGUAACACCA		[2169-2187]

305	UUCGACUUGUUAAGAAAAA	UUUUUCUUAACAAGUCGAA	Rat,Rb	[724-742]
306	CAUGGACUAGCUUCAGGGA	UCCCUGAAGCUAGUCCAUG	Dog, Cyn,Chmp	[640-658]
307	UUAUCUCUUUCCUUUUUUA	UAAAAAAGGAAAGAGAUAA		[1987-2005]
308	GUUUGUCUAUUUUUGACAA	UUGUCAAAAAUAGACAAAC		[2553-2571]
309	UGGAUAAGGAGCUUAUUCA	UGAAUAAGCUCCUUAUCCA		[2080-2098]
310	CUAGCGUCGUACCUACUUU	AAAGUAGGUACGACGCUAG		[586-604]
311	UGCAAAAUAUUGAACUGAU	AUCAGUUCAAUAUUUUGCA		[1527-1545]
312	UUUAAAUCACAGAAUCAUA	UAUGAUUCUGUGAUUUAAA		[1185-1203]
313	AAACGGGUCAAUUUACGAA	UUCGUAAAUUGACCCGUUU		[1807-1825]
314	AUUGAAACGGGUCAAUUUA	UAAAUUGACCCGUUUCAAU		[1803-1821]
315	AGCUAUUAGCUCCACUUCA	UGAAGUGGAGCUAAUAGCU		[2112-2130]
316	CGCUUCUCCUCUGGUUUCA	UGAAACCAGAGGAGAAGCG		[678-696]
317	CUUGGAUACCUGUCACUAG	CUAGUGACAGGUAUCCAAG		[1920-1938]
318	CAGGGACUUUUUCUUUAGU	ACUAAAGAAAAAGUCCCUG	Cyn	[653-671]
319	CCUCAACGAGGUAAUAUUU	AAAUAUUACCUCGUUGAGG	Cyn,Chmp	[332-350]
320	AGUAGAUCAUUAUCUCUUU	AAAGAGAUAAUGAUCUACU		[1978-1996]
321	UAUAGUACAGCCUAGAGAA	UUCUCUAGGCUGUACUAUA		[1853-1871]
322	GAAUACUGUCUUUAAACUA	UAGUUUAAAGACAGUAUUC		[1502-1520]
323	AGUGAUUCAAAAUAGUGUA	UACACUAUUUUGAAUCACU		[971-989]
324	GGGUAGUAAAACUAUUCAG	CUGAAUAGUUUUACUACCC		[819-837]
325	UUGCCUAUUUUGAUUUUCA	UGAAAAUCAAAAUAGGCAA		[1131-1149]
326	ACCACUUUGAAUUAUUGAA	UUCAAUAAUUCAAAGUGGU		[1790-1808]
327	CAGGUGUGAUCCUGUUACU	AGUAACAGGAUCACACCUG		[2185-2203]
328	GUUCCUGAACCCAACCUCA	UGAGGUUGGGUUCAGGAAC	Cyn,Chmp	[318-336]
329	UGCUCAUGGACUAGCUUCA	UGAAGCUAGUCCAUGAGCA	Dog, Cyn,Chmp	[636-654]
330	AGGGAAUAAUAAAGGCCUU	AAGGCCUUUAUUAUUCCCU		[1937-1955]
331	UAUGCACGUGAACUUGGAA	UUCCAAGUUCACGUGCAUA	Rat,Chn,Dog, Cyn,GP	[524-542]
332	GAGAAGUGAUUCAAAAUAG	CUAUUUUGAAUCACUUCUC		[967-985]
333	AAUCAAUGUUGUUUUGCAU	AUGCAAAACAACAUUGAUU		[2323-2341]
334	AAGGAAACAGAGCCGUUGA	UCAACGGCUCUGUUUCCUU	Chmp	[183-201]
335	CAUUUUUGUACAGAAUUGA	UCAAUUCUGUACAAAAAUG		[1008-1026]
336	AAGGCUUCUUGGGCAUCGA	UCGAUGCCCAAGAAGCCUU		[2412-2430]
337	CAGCCUAGAGAAUGAAACU	AGUUUCAUUCUCUAGGCUG		[1860-1878]
338	AGUACAGCCUAGAGAAUGA	UCAUUCUCUAGGCUGUACU		[1856-1874]
339	UGAGGAUAGGAAAUUAGUU	AACUAAUUUCCUAUCCUCA		[1597-1615]
340	ACUAAACUUGGUUGCUCAA	UUGAGCAACCAAGUUUAGU	Cyn,Chmp	[414-432]
341	AAACUCACCGUCCAGAUAA	UUAUCUGGACGGUGAGUUU		[1874-1892]
342	GACUCAAAUUUGAAGGGUU	AACCCUUCAAAUUUGAGUC		[1257-1275]
343	AAGGUAGGAUUAAGUAGGU	ACCUACUUAAUCCUACCUU		[1286-1304]
344	GAAUUGAAUGGGAUGGAAU	AUUCCAUCCCAUUCAAUUC		[1020-1038]
345	AAAUUAGUUCUGAGAUCUA	UAGAUCUCAGAACUAAUUU		[1607-1625]
346	CCUGUCACUAGGGAAUAAU	AUUAUUCCCUAGUGACAGG		[1928-1946]
347	CUCCACUCAACAAUGUUCA	UGAACAUUGUUGAGUGGAG		[2026-2044]
348	CUACUGGGAUUAUGUUGUU	AACAACAUAAUCCCAGUAG	Rb,Cyn,Chmp	[302-320]
349	AAUUUGAAGGGUUUUUAGA	UCUAAAAACCCUUCAAAUU		[1263-1281]
350	CCGUUGACCAUGGUUGCAA	UUGCAACCAUGGUCAACGG	Rat,Cyn,Ms,Chmp	[195-213]
351	AGCUAGUCAGCUAAAGUCA	UGACUUUAGCUGACUAGCU		[836-854]
352	GGCUUUUUUUUCUCUAAGU	ACUUAGAGAAAAAAAAGCC		[1153-1171]
353	GUCCCUCUCUGAUUCACUU	AAGUGAAUCAGAGAGGGAC		[1626-1644]
354	GGACUAGCUUCAGGGACUU	AAGUCCCUGAAGCUAGUCC	Rb,Cyn,Chmp	[643-661]
355	CCCAGAUUUUUUCCACCUU	AAGGUGGAAAAAAUCUGGG		[1904-1922]
356	AAGGCUGUUAAAUUAAUAU	AUAUUAAUUUAACAGCCUU		[2514-2532]
357	ACCACGGUGUUGUUUUAGA	UCUAAAACAACACCGUGGU		[1445-1463]
358	CAAAGGUCCUUGUCCCUGA	UCAGGGACAAGGACCUUUG	Cyn,Chmp	[430-448]
359	CACUGAUUGGAACAACAGU	ACUGUUGUUCCAAUCAGUG		[751-769]
360	CAAUUUACGAAGUCUGCAU	AUGCAGACUUCGUAAAUUG		[1815-1833]

361	UGUUGUCCUUUUUCCACUA	UAGUGGAAAAAGGACAACA		[2439-2457]
362	CAAAAUAUUGAACUGAUAU	AUAUCAGUUCAAUAUUUUG		[1529-1547]
363	GCAUGUCUAUUGUUAAGCU	AGCUUAACAAUAGACAUGC		[2338-2356]
364	GGAGAACUCUGAUCCUCAG	CUGAGGAUCAGAGUUCUCC	Cyn	[697-715]
365	UUAUGCACGUGAACUUGGA	UCCAAGUUCACGUGCAUAA	Rat,Chn,Dog, Cyn,Ms, GP	[523-541]
366	CUGUUAUGCUUACAAAAUG	CAUUUUGUAAGCAUAACAG		[2481-2499]
367	CUGUUAAAUUAAUAUUCCU	AGGAAUAUUAAUUUAACAG		[2518-2536]
368	CCAGAUAACCAUGCAUGCA	UGCAUGCAUGGUUAUCUGG		[1885-1903]
369	CGAAGGAAACAGAGCCGUU	AACGGCUCUGUUUCCUUCG	Chmp	[181-199]
370	CAGAUGAACCAUUUCACCA	UGGUGAAAUGGUUCAUCUG		[1685-1703]
371	UUCAGAGGAUUUUUUAAAU	AUUUAAAAAAUCCUCUGAA		[1173-1191]
372	GGUUUAUAGUACAGCCUAG	CUAGGCUGUACUAUAAACC		[1849-1867]
373	CCAGUUCCUGACUCAAAUU	AAUUUGAGUCAGGAACUGG		[1248-1266]
374	CCAUGCAUGCACCCAGAUU	AAUCUGGGUGCAUGCAUGG		[1893-1911]
375	CUGUCUGUCCAAAUCAAAG	CUUUGAUUUGGACAGACAG	Rb,Dog, Cyn,Chmp	[392-410]
376	UAAUAUUCCUGUUAAAGGA	UCCUUUAACAGGAAUAUUA		[2527-2545]
377	AGGCCUUAUUUUUUGUCUU	AAGACAAAAAAUAAGGCCU		[1949-1967]
378	AAAGUUUGUCUAUUUUUGA	UCAAAAAUAGACAAACUUU		[2550-2568]
379	UCCUCUGGUUUCAGGAGAA	UUCUCCUGAAACCAGAGGA		[684-702]
380	UGUCUAUUGUUAAGCUCCA	UGGAGCUUAACAAUAGACA		[2341-2359]
381	GAUACUAUAAGUGACCUAA	UUAGGUCACUUAUAGUAUC		[2204-2222]
382	GCCUGCUAAGUGAUUUUGA	UCAAAAUCACUUAGCAGGC	Cyn,Chmp	[283-301]
383	AUUAAGUAGGUGAGUUUAA	UUAAACUCACCUACUUAAU		[1294-1312]
384	AGAAACUGACCCAGAGAAU	AUUCUCUGGGUCAGUUUCU	Rat,Chn,Cyn,Ms, GP,Chmp	[448-466]
385	GGGAAUAAUAAAGGCCUUA	UAAGGCCUUUAUUAUUCCC		[1938-1956]
386	ACAGGAAGGUAGGAUUAAG	CUUAAUCCUACCUUCCUGU		[1281-1299]
387	AACUGUUGUCCUUUUUCCA	UGGAAAAAGGACAACAGUU		[2436-2454]
388	UAGGUAAGAGUAAAUGAGA	UCUCAUUUACUCUUACCUA		[1327-1345]
389	GAUCUAGUCCCUCUCUGAU	AUCAGAGAGGGACUAGAUC		[1620-1638]
390	AAAUGUCACUGUUCAAAUU	AAUUUGAACAGUGACAUUU		[2222-2240]
391	CCAUUUGAGUUUUACAUUU	AAAUGUAAAACUCAAAUGG		[1059-1077]
392	GGUUUCAGGAGAACUCUGA	UCAGAGUUCUCCUGAAACC	Cyn	[690-708]
393	GCCUUAUUUUUUGUCUUAU	AUAAGACAAAAAAUAAGGC		[1951-1969]
394	GUCUUUAAACUAGAAAAAU	AUUUUUCUAGUUUAAAGAC		[1509-1527]
395	GGGACUUUUUCUUUAGUAG	CUACUAAAGAAAAAGUCCC	Cyn	[655-673]
396	UGUACAGAAUUGAAUGGGA	UCCCAUUCAAUUCUGUACA		[1014-1032]
397	UAAACUAGAAAAAUGCAAA	UUUGCAUUUUUCUAGUUUA		[1514-1532]
398	GCAUCGAUGUAGAACUGUU	AACAGUUCUACAUCGAUGC		[2424-2442]
399	AUACCUGUGAGGAUAGGAA	UUCCUAUCCUCACAGGUAU		[1590-1608]
400	AACUAAACUUGGUUGCUCA	UGAGCAACCAAGUUUAGUU	Cyn,Chmp	[413-431]
401	UGAGAAACUGACCCAGAGA	UCUCUGGGUCAGUUUCUCA	Rat,Chn,Cyn,Ms, GP,Chmp	[446-464]
402	AGUAGAAGCCCAUUUGAGU	ACUCAAAUGGGCUUCUACU		[1050-1068]
403	AGGCUUCUUGGGCAUCGAU	AUCGAUGCCCAAGAAGCCU		[2413-2431]
404	CAACGAGGUAAUAUUUGAG	CUCAAAUAUUACCUCGUUG	Cyn,Chmp	[335-353]
405	AUUGAAGUAUCUCUCCUUA	UAAGGAGAGAUACUUCAAU		[1739-1757]
406	UUAAGUAGGUGAGUUUAAU	AUUAAACUCACCUACUUAA		[1295-1313]
407	GAUUCUAGCGUCGUACCUA	UAGGUACGACGCUAGAAUC		[582-600]
408	AGAUGAACCAUUUCACCAU	AUGGUGAAAUGGUUCAUCU		[1686-1704]
409	GACCUAAAAUGUCACUGUU	AACAGUGACAUUUUAGGUC		[2216-2234]
410	CCUCUCUGAUUCACUUAGU	ACUAAGUGAAUCAGAGAGG		[1629-1647]
411	AUGAUAUUUAGCCUAUCAA	UUGAUAGGCUAAAUAUCAU		[1208-1226]
412	GAGUGAAUGAUGAAUACCU	AGGUAUUCAUCAUUCACUC		[1577-1595]
413	GCGUAGGGACAGAUGUAUU	AAUACAUCUGUCCCUACGC		[2145-2163]
414	CUUCCUCACUCUAAUGUUU	AAACAUUAGAGUGAGGAAG		[1389-1407]
415	GGCGUAGGGACAGAUGUAU	AUACAUCUGUCCCUACGCC		[2144-2162]
416	UCCAUUGAGUGAAUGAUGA	UCAUCAUUCACUCAAUGGA		[1571-1589]

417	CUGCAUAGAUCCCAUUUUU	AAAAAUGGGAUCUAUGCAG		[996-1014]
418	CAUAGCAACUGCAGCUAAC	GUUAGCUGCAGUUGCUAUG		[927-945]
419	ACAAACUAAACUCUUCAAA	UUUGAAGAGUUUAGUUUGU		[2254-2272]
420	CUUUUUUAUGUUAAUGAGA	UCUCAUUAACAUAAAAAAG		[1998-2016]
421	CCAGAAUUUGGUUAAAAUG	CAUUUUAACCAAAUUCUGG	Rat,Rb,Cyn,Ms, GP,Chmp	[365-383]
422	GGUGUGAUCCUGUUACUGA	UCAGUAACAGGAUCACACC		[2187-2205]
423	AGCAAAAGUAGAAGCCCAU	AUGGGCUUCUACUUUUGCU		[1044-1062]
424	CACAAUUUGGUUUCAGGUA	UACCUGAAACCAAAUUGUG		[1083-1101]
425	AGAGGAUUUUUUAAAUCAC	GUGAUUUAAAAAAUCCUCU		[1176-1194]
426	AAACCAGAUUUGCCUAUUU	AAAUAGGCAAAUCUGGUUU		[1122-1140]
427	UCGUGGAUAAGGAGCUUAU	AUAAGCUCCUUAUCCACGA		[2077-2095]
428	CUUUACUCACUGAUUGGAA	UUCCAAUCAGUGAGUAAAG		[744-762]
429	CCUCAGCUCAGGAUUUCGA	UCGAAAUCCUGAGCUGAGG	Rb,Cyn	[710-728]
430	UGAAACUCACCGUCCAGAU	AUCUGGACGGUGAGUUUCA		[1872-1890]
431	CGACUUGUUAAGAAAAAAC	GUUUUUUCUUAACAAGUCG	Rat,Rb	[726-744]
432	AGAAUUUAGCCUCCACUCA	UGAGUGGAGGCUAAAUUCU		[2016-2034]
433	UUUCAUGAUUGGGUAGUAA	UUACUACCCAAUCAUGAAA		[809-827]
434	CCACAAUUUGGUUUCAGGU	ACCUGAAACCAAAUUGUGG		[1082-1100]
435	UUCAUGAUUGGGUAGUAAA	UUUACUACCCAAUCAUGAA		[810-828]
436	UAGACUAUAUAAACCAGAU	AUCUGGUUUAUAUAGUCUA		[1112-1130]
437	AGAUUUGCCUAUUUUGAUU	AAUCAAAAUAGGCAAAUCU		[1127-1145]
438	GUACAGAAUUGAAUGGGAU	AUCCCAUUCAAUUCUGUAC		[1015-1033]
439	GGAAGGUAGGAUUAAGUAG	CUACUUAAUCCUACCUUCC		[1284-1302]
440	UUUCAGAGGAUUUUUUAAA	UUUAAAAAAAUCCUCUGAAA		[1172-1190]
441	GCUAUGGAGAUAUGGUUUA	UAAACCAUAUCUCCAUAGC		[1836-1854]
442	GUUUCAGGAGAACUCUGAU	AUCAGAGUUCUCCUGAAAC	Cyn	[691-709]
443	CAGUGAUUGAAGGGUCCUA	UAGGACCCUUCAAUCACUG		[766-784]
444	AGGGUCCUAAAAAGGGAAA	UUUCCCUUUUUAGGACCCU		[776-794]
445	GGAACAACAGUGAUUGAAG	CUUCAAUCACUGUUGUUCC		[759-777]
446	CUCACCGUCCAGAUAACCA	UGGUUAUCUGGACGGUGAG		[1877-1895]
447	UAGCGUCGUACCUACUUUU	AAAAGUAGGUACGACGCUA		[587-605]
448	CCAGCAUUUCAGAAUUGCU	AGCAAUUCUGAAAUGCUGG	Cyn,Chmp	[241-259]
449	CUCAGAUGAACCAUUUCAC	GUGAAAUGGUUCAUCUGAG		[1683-1701]
450	UUCCUGACUCAAAUUUGAA	UUCAAAUUUGAGUCAGGAA		[1252-1270]
451	AAAGGAAAUUAAAGUUUGU	ACAAACUUUAAUUUCCUUU		[2540-2558]
452	AAUCUCAGAUGAACCAUUU	AAAUGGUUCAUCUGAGAUU		[1680-1698]
453	GGCUAUGGAGAUAUGGUUU	AAACCAUAUCUCCAUAGCC		[1835-1853]
454	GAUUUUUUCCACCUUGGAU	AUCCAAGGUGGAAAAAAUC		[1908-1926]
455	UAUGGAGAUAUGGUUUAUA	UAUAAACCAUAUCUCCAUA		[1838-1856]
456	UCAAAAUAGUGUAGAUUUU	AAAAUCUACACUAUUUUGA		[977-995]
457	GCUUCAGGGACUUUUUCUU	AAGAAAAAGUCCCUGAAGC	Rb,Cyn,Chmp	[649-667]
458	AUGCAUGCACCCAGAUUUU	AAAAUCUGGGUGCAUGCAU		[1895-1913]
459	UGACUACUGGGAUUAUGUU	AACAUAAUCCCAGUAGUCA	Rb,Cyn,Chmp	[299-317]
460	AUACUGUCUUUAAACUAGA	UCUAGUUUAAAGACAGUAU		[1504-1522]
461	GGGUCAAUUUACGAAGUCU	AGACUUCGUAAAUUGACCC		[1811-1829]
462	CCUAUCAAAACUUCCAAAA	UUUUGGAAGUUUUGAUAGG		[1219-1237]
463	CUUCUUGGGCAUCGAUGUA	UACAUCGAUGCCCAAGAAG		[2416-2434]
464	UAUUCAUCCUGGUGUUACU	AGUAACACCAGGAUGAAUA		[2160-2178]
465	UGCUUGGAAAGAUACUACA	UGUAGUAUCUUUCCAAGCA		[2273-2291]
466	GGAUUUCGACUUGUUAAGA	UCUUAACAAGUCGAAAUCC	Rat,Rb	[720-738]
467	UCUCUGAUUCACUUAGUAA	UUACUAAGUGAAUCAGAGA		[1631-1649]
468	ACCUGCCCUAAAUAAGAAA	UUUCUUAUUUAGGGCAGGU		[870-888]
469	CACAUUCAUAGCAACUGCA	UGCAGUUGCUAUGAAUGUG		[921-939]
470	GUAGAUUUUCUGCAUAGAU	AUCUAUGCAGAAAAUCUAC		[987-1005]
471	UAGUAAAACUAUUCAGCUA	UAGCUGAAUAGUUUUACUA		[822-840]
472	GCACGUGAACUUGGAAAUU	AAUUUCCAAGUUCACGUGC	Rat,Chn,Dog, Cyn,GP	[527-545]

473	CUGUUAAAGGAAAUUAAAG	CUUUAAUUUCCUUUAACAG		[2535-2553]
474	CACCUUGGAUACCUGUCAC	GUGACAGGUAUCCAAGGUG		[1917-1935]
475	GGCUUGGUAAUAGACUAUA	UAUAGUCUAUUACCAAGCC		[1102-1120]
476	UUUUUAUGUUAAUGAGAGA	UCUCUCAUUAACAUAAAAA		[2000-2018]
477	GAUAGGAAAUUAGUUCUGA	UCAGAACUAAUUUCCUAUC		[1601-1619]
478	AGGAUUUUUUAAAUCACAG	CUGUGAUUUAAAAAAUCCU		[1178-1196]
479	GAUUUUGACUACUGGGAUU	AAUCCCAGUAGUCAAAAUC	Rb,Dog, Cyn,Chmp	[294-312]
480	AACUCACCGUCCAGAUAAC	GUUAUCUGGACGGUGAGUU		[1875-1893]
481	UGUUUUAAAGAGGCAACAA	UUGUUGCCUCUUUAAAACA		[1403-1421]
482	AUUUGAGUUUUACAUUUGA	UCAAAUGUAAAACUCAAAU		[1061-1079]
483	UUUCGACUUGUUAAGAAAA	UUUUCUUAACAAGUCGAAA	Rat,Rb	[723-741]
484	CAAGAUGUCCUGCGGCUUU	AAAGCCGCAGGACAUCUUG	Cyn,Chmp	[471-489]
485	UCAUAGCAACUGCAGCUAA	UUAGCUGCAGUUGCUAUGA		[926-944]
486	UAUUGAAACGGGUCAAUUU	AAAUUGACCCGUUUCAAUA		[1802-1820]
487	UAAGAGUAAAUGAGAAAUA	UAUUUCUCAUUUACUCUUA		[1331-1349]
488	AGAAUCAUACUAAAUGAUA	UAUCAUUUAGUAUGAUUCU		[1195-1213]
489	UGUUAAUGAGAGAAUUUAG	CUAAAUUCUCUCAUUAACA		[2006-2024]
490	UGAUUGGGUAGUAAAACUA	UAGUUUUACUACCCAAUCA		[814-832]
491	GAAACUGACCCAGAGAAUU	AAUUCUCUGGGUCAGUUUC	Rat,Chn,Cyn,Ms, GP,Chmp	[449-467]
492	UGUAAAAAGCUGGAUAGGA	UCCUAUCCAGCUUUUUACA	Rat,Rb,Chn,Cyn,Ms, GP,Chmp	[555-573]
493	ACCUCAACGAGGUAAUAUU	AAUAUUACCUCGUUGAGGU	Cyn,Chmp	[331-349]
494	AGAGAAUUGCUCAAGAUGU	ACAUCUUGAGCAAUUCUCU	Cyn,Ms,Chmp	[460-478]
495	GUUUCAGGUAGGCUUGGUA	UACCAAGCCUACCUGAAAC		[1092-1110]
496	CCUUUGGAGAAGUGAUUCA	UGAAUCACUUCUCCAAAGG		[961-979]
497	ACGAGGUAAUAUUUGAGGA	UCCUCAAAUAUUACCUCGU	Cyn,Chmp	[337-355]
498	CAACAAUGUUCAAUUCAGC	GCUGAAUUGAACAUUGUUG		[2033-2051]
499	GCUUUUCUGGGAAUUGAAG	CUUCAAUUCCCAGAAAAGC		[1727-1745]
500	AGCCUCCACUCAACAAUGU	ACAUUGUUGAGUGGAGGCU		[2023-2041]

Table B 16 FAS - Fas (TNF receptor superfamily, member 6) (FAS)

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-23510419 :347-1354
1	GGUCUAGAGUGAAAAACAA	UUGUUUUUCACUCUAGACC		[1348-1366]
2	CUGUGAAGAUAGUUAUAAA	UUUAUAACUAUCUUCACAG		[2553-2571]
3	GCUAGAUUAUCGUCCAAAA	UUUUGGACGAUAAUCUAGC		[392-410]
4	CCUGGAACCACCUAAAGAA	UUCUUUAGGUGGUUCCAGG		[2584-2602]
5	CAAACUUCAUCAAGAGUAA	UUACUCUUGAUGAAGUUUG		[1552-1570]
6	GCUUAGAAGUGGAAAUAAA	UUUAUUUCCACUUCUAAGC		[681-699]
7	CCAGCAACACCAAGUGCAA	UUGCACUUGGUGUUGCUGG		[825-843]
8	CCAAAAUAGAUGAGAUCAA	UUGAUCUCAUCUAUUUUGG		[1116-1134]
9	GACACUAAGUCAAGUUAAA	UUUAACUUGACUUAGUGUC		[1066-1084]
10	GAUUAAAGAUCUCAAAAAA	UUUUUUGAGAUCUUUAAUC		[1228-1246]
11	CAAGAAUGACAAUGUCCAA	UUGGACAUUGUCAUUCUUG		[1132-1150]
12	CAUGAAUCUCCAACCUUAA	UUAAGGUUGGAGAUUCAUG		[974-992]
13	GGUAAAAGUACGUAAUUAA	UUAAUUACGUACUUUUACC		[2656-2674]
14	GAGGAAGGAUCCAGAUCUA	UAGAUCUGGAUCCUUCCUC		[845-863]
15	GCACAGAAAGGAAAACCAA	UUGGUUUUCCUUUCUGUGC		[949-967]
16	CAAGGAUGUUUAAAAUCUA	UAGAUUUUAAACAUCCUUG		[1523-1541]
17	GAAAUAUCACCAAAAAAUA	UAUUUUUUGGUGAUAUUUC		[2159-2177]
18	CAGAAAGCACAGAAAGGAA	UUCCUUUCUGUGCUUUCUG		[943-961]
19	CCUGGUUUGGAGAUACUAA	UUAGUAUCUCCAAACCAGG		[2222-2240]
20	CUACUAUCCUACGUUUAAA	UUUAAACGUAGGAUAGUAG		[2468-2486]
21	GUAAAAGUACGUAAUUAAA	UUUAAUUACGUACUUUUAC		[2657-2675]
22	CACCAAAUGUGAACAUGGA	UCCAUGUUCACAUUUGGUG		[784-802]

23	CAAUAAUGUCCCAUGUAAA	UUUACAUGGGACAUUAUUG		[2342-2360]
24	CUGUGACCCUUGCACCAAA	UUUGGUGCAAGGGUCACAG		[772-790]
25	CAUGGAAAUAUCACCAAAA	UUUUGGUGAUAUUUCCAUG		[2155-2173]
26	AGCAGAACAGAAAGUUCAA	UUGAACUUUCUGUUCUGCU		[1156-1174]
27	CCUCCAAGGAUGUUUAAAA	UUUUAAACAUCCUUGGAGG		[1519-1537]
28	CCUUGGUGCUCAUCUUAAU	AUUAAGAUGAGCACCAAGG		[2117-2135]
29	GCAGGAGAGUAUUACUAGA	UCUAGUAAUACUCUCCUGC		[2075-2093]
30	ACUUAAUAGUCCACCAAAA	UUUUGGUGGACUAUUAAGU		[2177-2195]
31	CUGAGAAGAUCAUAUUUAU	AUAAAUAUGAUCUUCUCAG		[1849-1867]
32	UGGAAAUAUCACCAAAAAA	UUUUUUGGUGAUAUUUCCA		[2157-2175]
33	CAAAGAUGAUAAAAUAGAU	AUCUAUUUUAUCAUCUUUG		[2293-2311]
34	UCAACUUCAUGGAAAGAAA	UUUCUUUCCAUGAAGUUGA		[1192-1210]
35	GGAAAACAAACUUCAUCAA	UUGAUGAAGUUUGUUUUCC		[1546-1564]
36	CCAUGUUUGCAAUCAAAGA	UCUUUGAUUGCAAACAUGG		[2280-2298]
37	CAUGCUAAGUACCCAAAUA	UAUUUGGGUACUUAGCAUG		[1580-1598]
38	AAAGAAUGGUGUCAAUGAA	UUCAUUGACACCAUUCUUU		[1096-1114]
39	AGUGACUCAGAAAAUUCAA	UUGAAUUUUCUGAGUCACU		[1304-1322]
40	CAAAAGUGUUAAUGCCCAA	UUGGGCAUUAACACUUUUG		[406-424]
41	GAGAAAGGAAGUACAGAAA	UUUCUGUACUUCCUUUCUC		[919-937]
42	CACCAAGUGCAAAGAGGAA	UUCCUCUUUGCACUUGGUG		[832-850]
43	AUGGAAAUAUCACCAAAAA	UUUUUGGUGAUAUUUCCAU		[2156-2174]
44	CAUUACUAGUGACUCAGAA	UUCUGAGUCACUAGUAAUG		[1297-1315]
45	CAGUGUAUGUUAGUACAAA	UUUGUACUAACAUACACUG		[1674-1692]
46	CAUGCAGAAAGCACAGAAA	UUUCUGUGCUUUCUGCAUG		[939-957]
47	CCAAGUUUCUAAGAUUUAA	UUAAAUCUUAGAAACUUGG		[2438-2456]
48	CUUCAGAAAUGAAAUCCAA	UUGGAUUUCAUUUCUGAAG		[1324-1342]
49	ACGUUUAAAUAUCUUUGAA	UUCAAAGAUAUUUAAACGU		[2478-2496]
50	GAAAGCACAGAAAGGAAAA	UUUUCCUUUCUGUGCUUUC		[945-963]
51	AUUUGAGUGCAGAAUUUAA	UUAAAUUCUGCACUCAAAU		[1881-1899]
52	GCAGAGGAUGAAAGAUUAA	UUAAUCUUUCAUCCUCUGC		[1608-1626]
53	CCAGGUGAAAGGAAAGCUA	UAGCUUUCCUUUCACCUGG		[539-557]
54	CAAAGAGGAAGGAUCCAGA	UCUGGAUCCUUCCUCUUUG		[841-859]
55	GUUUAUUGGUGUCAUAUUA	UAAUAUGACACCAAUAAAC		[1930-1948]
56	GAAAAUUCAAACUUCAGAA	UUCUGAAGUUUGAAUUUUC		[1313-1331]
57	GAGGAAGACUGUUACUACA	UGUAGUAACAGUCUUCCUC		[457-475]
58	ACCCAUGUUUGCAAUCAAA	UUUGAUUGCAAACAUGGGU		[2278-2296]
59	CGUUUAAAUAUCUUUGAAA	UUUCAAAGAUAUUUAAACG		[2479-2497]
60	GAGUGCAGAAUUUAAAUAA	UUAUUUAAAUUCUGCACUC		[1885-1903]
61	GGACAUUACUAGUGACUCA	UGAGUCACUAGUAAUGUCC		[1294-1312]
62	GCAAGACUGCCCUUAGAAA	UUUCUAAGGGCAGUCUUGC		[2197-2215]
63	AGAGAAAGGAAGUACAGAA	UUCUGUACUUCCUUUCUCU		[918-936]
64	AAACCAAGGUUCUCAUGAA	UUCAUGAGAACCUUGGUUU		[961-979]
65	CACCAAAAAAUACUUAAUA	UAUUAAGUAUUUUUUGGUG		[2166-2184]
66	CAUUGAUUAAAGAUCUCAA	UUGAGAUCUUUAAUCAAUG		[1224-1242]
67	AGGCAAGACUGCCCUUAGA	UCUAAGGGCAGUCUUGCCU		[2195-2213]
68	CCCACUCUAUGAAUCAAUA	UAUUGAUUCAUAGAGUGGG		[1712-1730]
69	ACAGUUUAUUGGUGUCAUA	UAUGACACCAAUAAACUGU		[1927-1945]
70	AGUGCAGAUGUAAACCAAA	UUUGGUUUACAUCUGCACU		[723-741]
71	GAGGAUUGCUCAACAACCA	UGGUUGUUGAGCAAUCCUC		[329-347]
72	GGCUUAGAAGUGGAAAUAA	UUAUUUCCACUUCUAAGCC		[680-698]
73	AACCAAACUUUUUUUGUAA	UUACAAAAAAAGUUUGGUU		[735-753]
74	GGAAAUAUCACCAAAAAAU	AUUUUUUGGUGAUAUUUCC		[2158-2176]
75	CACUCACCAGCAACACCAA	UUGGUGUUGCUGGUGAGUG		[819-837]
76	AGAAGAUCAUAUUUAUGUA	UACAUAAAUAUGAUCUUCU		[1852-1870]
77	GUAGCUUUGUGACAUGUCA	UGACAUGUCACAAAGCUAC		[2256-2274]
78	GGUUCUCAUGAAUCUCCAA	UUGGAGAUUCAUGAGAACC		[968-986]

79	CCACUUUGCCUCUAAAUUA	UAAUUUAGAGGCAAAGUGG		[1779-1797]
80	CUGUAAAUGUAAACUGUGA	UCACAGUUUACAUUUACAG		[2540-2558]
81	AGCCCAUUUUUCUUCCAAA	UUUGGAAGAAAAAUGGGCU		[628-646]
82	CAGCAACACCAAGUGCAAA	UUUGCACUUGGUGUUGCUG		[826-844]
83	GGCAGCUUAUACAUAGCAA	UUGCUAUGUAUAAGCUGCC		[2374-2392]
84	AAACCAAACUUUUUUUGUA	UACAAAAAAAGUUUGGUUU		[734-752]
85	AGGAAUUGCUCUUGUCAUA	UAUGACAAGAGCAAUUCCU		[2416-2434]
86	GAUGUUGACUUGAGUAAAU	AUUUACUCAAGUCAACAUC		[1022-1040]
87	AACCCAUGUUUGCAAUCAA	UUGAUUGCAAACAUGGGUU		[2277-2295]
88	CGAAAAUGUUCAAUAAUGU	ACAUUAUUGAACAUUUUCG		[2332-2350]
89	CCCAAGUGACUGACAUCAA	UUGAUGUCAGUCACUUGGG		[420-438]
90	CUUGGUCUAGAGUGAAAAA	UUUUUCACUCUAGACCAAG		[1345-1363]
91	GGUGUCAUAUUAUACAAUA	UAUUGUAUAAUAUGACACC		[1937-1955]
92	UUGUUUGGGUGAAGAGAAA	UUUCUCUUCACCCAAACAA		[906-924]
93	GUGACUCAGAAAAUUCAAA	UUUGAAUUUUCUGAGUCAC		[1305-1323]
94	CAGAGAAAAUUCAGACUAU	AUAGUCUGAAUUUUCUCUG		[1266-1284]
95	ACAUGGAAAUAUCACCAAA	UUUGGUGAUAUUUCCAUGU		[2154-2172]
96	CUAGGGACUGCACAGUCAA	UUGACUGUGCAGUCCCUAG		[555-573]
97	GAUACUAACUGCUCUCAGA	UCUGAGAGCAGUUAGUAUC		[2233-2251]
98	CUAACUGCUCUCAGAGAAA	UUUCUCUGAGAGCAGUUAG		[2237-2255]
99	CUCCAAGGAUGUUUAAAAU	AUUUUAAACAUCCUUGGAG		[1520-1538]
100	CUUUGUGACAUGUCAUGAA	UUCAUGACAUGUCACAAAG		[2260-2278]
101	CUUUGAAAGUUUGUAUUAA	UUAAUACAAACUUUCAAAG		[2490-2508]
102	AAGUGCAGAUGUAAACCAA	UUGGUUUACAUCUGCACUU		[722-740]
103	GAAGAUAGUUAUAAACUGA	UCAGUUUAUAACUAUCUUC		[2557-2575]
104	GGGUGAAGAGAAAGGAAGU	ACUUCCUUUCUCUUCACCC		[912-930]
105	AAAUAGAUGAGAUCAAGAA	UUCUUGAUCUCAUCUAUUU		[1119-1137]
106	UCAGAAAAUUCAAACUUCA	UGAAGUUUGAAUUUUCUGA		[1310-1328]
107	CCCGAAAAUGUUCAAUAAU	AUUAUUGAACAUUUUCGGG		[2330-2348]
108	CUAGAGUGAAAAACAACAA	UUGUUGUUUUUCACUCUAG		[1351-1369]
109	UGACUGACAUCAACUCCAA	UUGGAGUUGAUGUCAGUCA		[426-444]
110	GGUACAUUUUAUCAUUUAU	AUAAAUGAUAAAAUGUACC		[1449-1467]
111	GUACAGAAAACAUGCAGAA	UUCUGCAUGUUUUCUGUAC		[929-947]
112	GGGUACAUUUUAUCAUUUA	UAAAUGAUAAAAUGUACCC		[1448-1466]
113	CCCUUGCACCAAAUGUGAA	UUCACAUUUGGUGCAAGGG		[778-796]
114	CAGUUCUGAGUAUAUGCAA	UUGCAUAUACUCAGAACUG		[1373-1391]
115	GGAAAACCAAGGUUCUCAU	AUGAGAACCUUGGUUUUCC		[958-976]
116	GUGAACAUGGAAUCAUCAA	UUGAUGAUUCCAUGUUCAC		[792-810]
117	GAAAUAAACUGCACCCGGA	UCCGGGUGCAGUUUAUUUC		[692-710]
118	GGGAAAACAAACUUCAUCA	UGAUGAAGUUUGUUUUCCC		[1545-1563]
119	UGCAAUUAGUGUUUGAAAA	UUUUCAAACACUAAUUGCA		[1387-1405]
120	AGACCUUUGCACAGUUUAU	AUAAACUGUGCAAAGGUCU		[1917-1935]
121	GCUAAGUACCCAAAUAGGA	UCCUAUUUGGGUACUUAGC		[1583-1601]
122	ACUACUAUCCUACGUUUAA	UUAAACGUAGGAUAGUAGU		[2467-2485]
123	ACCUUUUGCUGAAAUAUCA	UGAUAUUUCAGCAAAAGGU		[1743-1761]
124	UGCAAUCAAAGAUGAUAAA	UUUAUCAUCUUUGAUUGCA		[2287-2305]
125	AGUGUAUGUUAGUACAAAU	AUUUGUACUAACAUACACU		[1675-1693]
126	AAUGCACACUCACCAGCAA	UUGCUGGUGAGUGUGCAUU		[813-831]
127	CCCAAACAUGGAAAUAUCA	UGAUAUUUCCAUGUUUGGG		[2149-2167]
128	CUAAAUUACCUCUGAUAAU	AUUAUCAGAGGUAAUUUAG		[1790-1808]
129	GUGUCAUAUUAUACAAUAU	AUAUUGUAUAAUAUGACAC		[1938-1956]
130	UUUGAGUGCAGAAUUUAAA	UUUAAAUUCUGCACUCAAA		[1882-1900]
131	CCAAGUUGCUGAAUCAAUG	CAUUGAUUCAGCAACUUGG		[17-35]
132	AAAACAAACUUCAUCAAGA	UCUUGAUGAAGUUUGUUUU		[1548-1566]
133	CAGCAGAACAGAAAGUUCA	UGAACUUUCUGUUCUGCUG		[1155-1173]
134	GGCAAGACUGCCCUUAGAA	UUCUAAGGGCAGUCUUGCC		[2196-2214]

135	CUAUGAAUCAAUAGAAGAA	UUCUUCUAUUGAUUCAUAG		[1718-1736]
136	AAUCUAGUUGGGAAAACAA	UUGUUUUCCCAACUAGAUU		[1536-1554]
137	UGAUGUUGACUUGAGUAAA	UUUACUCAAGUCAACAUCA		[1021-1039]
138	GAGUGAAAAACAACAAAUU	AAUUUGUUGUUUUUCACUC		[1354-1372]
139	UGCAGAGGAUGAAAGAUUA	UAAUCUUUCAUCCUCUGCA		[1607-1625]
140	UGUGAAUUCACAUAGAAAA	UUUUCUAUGUGAAUUCACA		[1963-1981]
141	GUUUGAAAAGAUUCUUAAU	AUUAAGAAUCUUUUCAAAC		[1397-1415]
142	CUACAGUUGAGACUCAGAA	UUCUGAGUCUCAACUGUAG		[471-489]
143	AAAUAAGGCUCUACCUCAA	UUGAGGUAGAGCCUUAUUU		[1898-1916]
144	GCCUCUAAAUUACCUCUGA	UCAGAGGUAAUUUAGAGGC		[1786-1804]
145	AGAAAGGAAGUACAGAAAA	UUUUCUGUACUUCCUUUCU		[920-938]
146	AUACCUGGAACCACCUAAA	UUUAGGUGGUUCCAGGUAU		[2581-2599]
147	AGGCUUUGUUCGAAAGAAU	AUUCUUUCGAACAAAGCCU		[1084-1102]
148	CCAUGUAAAACCUGCUACA	UGUAGCAGGUUUUACAUGG		[2352-2370]
149	UGCCUCCAAGGAUGUUUAA	UUAAACAUCCUUGGAGGCA		[1517-1535]
150	UAGAGUGAAAAACAACAAA	UUUGUUGUUUUUCACUCUA		[1352-1370]
151	UCACAUAGAAAACAUUAAA	UUUAAUGUUUUCUAUGUGA		[1970-1988]
152	UCCUCCAGGUGAAAGGAAA	UUUCCUUUCACCUGGAGGA		[535-553]
153	UGAUUAAAGAUCUCAAAAA	UUUUUGAGAUCUUUAAUCA		[1227-1245]
154	AGCUUGGUCUAGAGUGAAA	UUUCACUCUAGACCAAGCU		[1343-1361]
155	UCGGAGGAUUGCUCAACAA	UUGUUGAGCAAUCCUCCGA		[326-344]
156	GAUGAAAGAUUAAGAUUAU	AUAAUCUUAAUCUUUCAUC		[1614-1632]
157	GGAAGGCCUGCAUCAUGAU	AUCAUGAUGCAGGCCUUCC		[493-511]
158	GCUAUGACCUUUUGCUGAA	UUCAGCAAAAGGUCAUAGC		[1737-1755]
159	GAAAGAAAGAAGCGUAUGA	UCAUACGCUUCUUUCUUUC		[1203-1221]
160	GCCUUGGUGCUCAUCUUAA	UUAAGAUGAGCACCAAGGC		[2116-2134]
161	ACCAAAUGUGAACAUGGAA	UUCCAUGUUCACAUUUGGU		[785-803]
162	GAAGAUCAUAUUUAUGUAA	UUACAUAAAUAUGAUCUUC		[1853-1871]
163	CAUUUUUCUUCCAAAUGCA	UGCAUUUGGAAGAAAAAUG		[632-650]
164	AAUAAUGUCCCAUGUAAAA	UUUUACAUGGGACAUUAUU		[2343-2361]
165	GCAUGCUAAGUACCCAAAU	AUUUGGGUACUUAGCAUGC		[1579-1597]
166	UCAUGAAUCUCCAACCUUA	UAAGGUUGGAGAUUCAUGA		[973-991]
167	UGAAAUAUCAGUUACUGAA	UUCAGUAACUGAUAUUUCA		[1752-1770]
168	GCCCAUUUUUCUUCCAAAU	AUUUGGAAGAAAAAUGGGC		[629-647]
169	AGAGGAUGAAAGAUUAAGA	UCUUAAUCUUUCAUCCUCU		[1610-1628]
170	AGACUAUCAUCCUCAAGGA	UCCUUGAGGAUGAUAGUCU		[1278-1296]
171	GGAUUGGAAUUGAGGAAGA	UCUUCCUCAAUUCCAAUCC		[446-464]
172	CAAACUUCAGAAAUGAAAU	AUUUCAUUUCUGAAGUUUG		[1320-1338]
173	GAAAGAAUGGUGUCAAUGA	UCAUUGACACCAUUCUUUC		[1095-1113]
174	CCUCUAAAUUACCUCUGAU	AUCAGAGGUAAUUUAGAGG		[1787-1805]
175	UGUUUGAAAAGAUUCUUAA	UUAAGAAUCUUUUCAAACA		[1396-1414]
176	UAGUGACUCAGAAAAUUCA	UGAAUUUUCUGAGUCACUA		[1303-1321]
177	AACUUUUUUUGUAACUCUA	UAGAGUUACAAAAAAAGUU		[740-758]
178	CCUCAAAGACCUUUGCACA	UGUGCAAAGGUCUUUGAGG		[1911-1929]
179	UGGUCUAGAGUGAAAAACA	UGUUUUUCACUCUAGACCA		[1347-1365]
180	CAUUUAUUAGCGCUGAAGA	UCUUCAGCGCUAAUAAAUG		[1461-1479]
181	CUCUGAUAAUUCUAGAGAU	AUCUCUAGAAUUAUCAGAG		[1799-1817]
182	CCAGAAUACCAAGUGCAGA	UCUGCACUUGGUAUUCUGG		[712-730]
183	CUGCCUCCAAGGAUGUUUA	UAAACAUCCUUGGAGGCAG		[1516-1534]
184	GCCUGGUUUGGAGAUACUA	UAGUAUCUCCAAACCAGGC		[2221-2239]
185	CAAUCAAAGAUGAUAAAAU	AUUUUAUCAUCUUUGAUUG		[2289-2307]
186	CAAAAUAGAUGAGAUCAAG	CUUGAUCUCAUCUAUUUUG		[1117-1135]
187	AGUUUGUAUUAAAUGUGAA	UUCACAUUUAAUACAAACU		[2497-2515]
188	CAAUCUUUGUACUCUUGCA	UGCAAGAGUACAAAGAUUG		[1249-1267]
189	GCUGGAGUCAUGACACUAA	UUAGUGUCAUGACUCCAGC		[1055-1073]
190	CUGAGUAUAUGCAAUUAGU	ACUAAUUGCAUAUACUCAG		[1378-1396]

191	CCAUAUUUCUAAACUUUGU	ACAAAGUUUAGAAAUAUGG		[1822-1840]
192	GCUUGGUCUAGAGUGAAAA	UUUUCACUCUAGACCAAGC		[1344-1362]
193	UAGAUGAGAUCAAGAAUGA	UCAUUCUUGAUCUCAUCUA		[1122-1140]
194	AGGGAUUGGAAUUGAGGAA	UUCCUCAAUUCCAAUCCCU		[444-462]
195	AACUGUGAAGAUAGUUAUA	UAUAACUAUCUUCACAGUU		[2551-2569]
196	GGCAAUAAAUUUAUCUGAU	AUCAGAUAAAUUUAUUGCC		[1006-1024]
197	GGCUCAAAACUACCUACUU	AAGUAGGUAGUUUUGAGCC		[2029-2047]
198	GAAUUUAAAUAAGGCUCUA	UAGAGCCUUAUUUAAAUUC		[1892-1910]
199	AAUUGUGAAUUCACAUAGA	UCUAUGUGAAUUCACAAUU		[1960-1978]
200	GUUGCUAGAUUAUCGUCCA	UGGACGAUAAUCUAGCAAC		[389-407]
201	AUGAGAUCAAGAAUGACAA	UUGUCAUUCUUGAUCUCAU		[1125-1143]
202	AAGAAAGAAGCGUAUGACA	UGUCAUACGCUUCUUUCUU		[1205-1223]
203	UGAAGAGAAAGGAAGUACA	UGUACUUCCUUUCUCUUCA		[915-933]
204	GAGUGUAUGCAGAGGAUGA	UCAUCCUCUGCAUACACUC		[1600-1618]
205	UUGGGUGAAGAGAAAGGAA	UUCCUUUCUCUUCACCCAA		[910-928]
206	CAUCAUCUGGAUUUAGGAA	UUCCUAAAUCCAGAUGAUG		[2402-2420]
207	GAGUGAGGGAAGCGGUUUA	UAAACCGCUUCCCUCACUC		[165-183]
208	CUAUGACCUUUUGCUGAAA	UUUCAGCAAAAGGUCAUAG		[1738-1756]
209	AGGAGUGUAUGCAGAGGAU	AUCCUCUGCAUACACUCCU		[1598-1616]
210	AGAAAGCACAGAAAGGAAA	UUUCCUUUCUGUGCUUUCU		[944-962]
211	GUACGUAAUUAAAUAAUGU	ACAUUAUUUAAUUACGUAC		[2663-2681]
212	UGUAAAUGUAAACUGUGAA	UUCACAGUUUACAUUUACA		[2541-2559]
213	GAAGGAUCCAGAUCUAACU	AGUUAGAUCUGGAUCCUUC		[848-866]
214	GUUGGGAAAACAAACUUCA	UGAAGUUUGUUUUCCCAAC		[1542-1560]
215	AUCUAGUUGGGAAAACAAA	UUUGUUUUCCCAACUAGAU		[1537-1555]
216	GUAUUUGAGUGCAGAAUUU	AAAUUCUGCACUCAAAUAC		[1879-1897]
217	GAAGUGGAAAUAAACUGCA	UGCAGUUUAUUUCCACUUC		[686-704]
218	GGCAUCAACUUCAUGGAAA	UUUCCAUGAAGUUGAUGCC		[1188-1206]
219	CAACAUAUUUGUAGAUUUU	AAAAUCUACAAAUAUGUUG		[1482-1500]
220	CUGAAAUAUCAGUUACUGA	UCAGUAACUGAUAUUUCAG		[1751-1769]
221	UACCAAGUGCAGAUGUAAA	UUUACAUCUGCACUUGGUA		[718-736]
222	CACUAAUUGUUUGGGUGAA	UUCACCCAAACAAUUAGUG		[900-918]
223	CCACCUAAAGAACUUCCAU	AUGGAAGUUCUUUAGGUGG		[2591-2609]
224	AGGUAAAAGUACGUAAUUA	UAAUUACGUACUUUUACCU		[2655-2673]
225	GUUAUAAACUGAAGCAGAU	AUCUGCUUCAGUUUAUAAC		[2564-2582]
226	GUACAAAUGUCUAUCCACA	UGUGGAUAGACAUUUGUAC		[1686-1704]
227	CCAAAAGUGUUAAUGCCCA	UGGGCAUUAACACUUUUGG		[405-423]
228	GCAGAAAGCACAGAAAGGA	UCCUUUCUGUGCUUUCUGC		[942-960]
229	GCAGCUUAUACAUAGCAAU	AUUGCUAUGUAUAAGCUGC		[2375-2393]
230	GAGGAUGAAAGAUUAAGAU	AUCUUAAUCUUUCAUCCUC		[1611-1629]
231	AAAAUAGAUGAGAUCAAGA	UCUUGAUCUCAUCUAUUUU		[1118-1136]
232	UGUGAACAUGGAAUCAUCA	UGAUGAUUCCAUGUUCACA		[791-809]
233	GAGAAAAUUCAGACUAUCA	UGAUAGUCUGAAUUUUCUC		[1268-1286]
234	AUGCAAUUAGUGUUUGAAA	UUUCAAACACUAAUUGCAU		[1386-1404]
235	AAGGCUUUGUUCGAAAGAA	UUCUUUCGAACAAAGCCUU		[1083-1101]
236	UGUAAAACCUGCUACAAAU	AUUUGUAGCAGGUUUUACA		[2355-2373]
237	GCCUCCAAGGAUGUUUAAA	UUUAAACAUCCUUGGAGGC		[1518-1536]
238	UUGUGAAUUCACAUAGAAA	UUUCUAUGUGAAUUCACAA		[1962-1980]
239	UCUGUAGUAUGAAUGUAAU	AUUACAUUCAUACUACAGA		[1655-1673]
240	UCAUCAUCUGGAUUUAGGA	UCCUAAAUCCAGAUGAUGA		[2401-2419]
241	ACACCAAGUGCAAAGAGGA	UCCUCUUUGCACUUGGUGU		[831-849]
242	UUGCUAGAUUAUCGUCCAA	UUGGACGAUAAUCUAGCAA		[390-408]
243	AAGGAAGUACAGAAAACAU	AUGUUUUCUGUACUUCCUU		[923-941]
244	AGCACAGAAAGGAAAACCA	UGGUUUUCCUUUCUGUGCU		[948-966]
245	UUAUUGGUGUCAUAUUAUA	UAUAAUAUGACACCAAUAA		[1932-1950]
246	UUGGUGUCAUAUUAUACAA	UUGUAUAAUAUGACACCAA		[1935-1953]

247	GGCAUGCUAAGUACCCAAA	UUUGGGUACUUAGCAUGCC		[1578-1596]
248	GAAUCAAUAGAAGAAGCUA	UAGCUUCUUCUAUUGAUUC		[1722-1740]
249	GUAAAUAUAUCACCACUAU	AUAGUGGUGAUAUAUUUAC		[1035-1053]
250	CCUUAAAUCCUGAAACAGU	ACUGUUUCAGGAUUUAAGG		[987-1005]
251	UCGAAAGAAUGGUGUCAAU	AUUGACACCAUUCUUUCGA		[1093-1111]
252	UAUGUAUUUGAGUGCAGAA	UUCUGCACUCAAAUACAUA		[1876-1894]
253	CAACAACCAUGCUGGGCAU	AUGCCCAGCAUGGUUGUUG		[339-357]
254	CAUGAACCCAUGUUUGCAA	UUGCAAACAUGGGUUCAUG		[2273-2291]
255	AACCUUAAAUCCUGAAACA	UGUUUCAGGAUUUAAGGUU		[985-1003]
256	CUAUCAUCCUCAAGGACAU	AUGUCCUUGAGGAUGAUAG		[1281-1299]
257	GAGUCAUGACACUAAGUCA	UGACUUAGUGUCAUGACUC		[1059-1077]
258	GGUGAAGAGAAAGGAAGUA	UACUUCCUUUCUCUUCACC		[913-931]
259	UUGAGUGCAGAAUUUAAAU	AUUUAAAUUCUGCACUCAA		[1883-1901]
260	CAGAAUACCAAGUGCAGAU	AUCUGCACUUGGUAUUCUG		[713-731]
261	ACAUGGAAUCAUCAAGGAA	UUCCUUGAUGAUUCCAUGU		[796-814]
262	AAUAGAUGAGAUCAAGAAU	AUUCUUGAUCUCAUCUAUU		[1120-1138]
263	GUGUAUGCAGAGGAUGAAA	UUUCAUCCUCUGCAUACAC		[1602-1620]
264	ACCUGGAACCACCUAAAGA	UCUUUAGGUGGUUCCAGGU		[2583-2601]
265	AAUACUGCUUGGUUUUUUA	UAAAAAACCAAGCAGUAUU		[1427-1445]
266	AUUGAUUAAAGAUCUCAAA	UUUGAGAUCUUUAAUCAAU		[1225-1243]
267	CAUGGAAUCAUCAAGGAAU	AUUCCUUGAUGAUUCCAUG		[797-815]
268	CCAAAAAAUACUUAAUAGU	ACUAUUAAGUAUUUUUUGG		[2168-2186]
269	GGAUGUUUAAAAUCUAGUU	AACUAGAUUUUAAACAUCC		[1526-1544]
270	GAGCAGGAGAGUAUUACUA	UAGUAAUACUCUCCUGCUC		[2073-2091]
271	GUAGAUUUUUAAUAUCUCA	UGAGAUAUUAAAAAUCUAC		[1492-1510]
272	UCUCCUUACUACUAUCCUA	UAGGAUAGUAGUAAGGAGA		[2460-2478]
273	ACUCUAUGAAUCAAUAGAA	UUCUAUUGAUUCAUAGAGU		[1715-1733]
274	UGAGACUCAGAACUUGGAA	UUCCAAGUUCUGAGUCUCA		[478-496]
275	UGAGGGAAGCGGUUUACGA	UCGUAAACCGCUUCCCUCA		[168-186]
276	GUAUGCAGAGGAUGAAAGA	UCUUUCAUCCUCUGCAUAC		[1604-1622]
277	CUCUAAAUUACCUCUGAUA	UAUCAGAGGUAAUUUAGAG		[1788-1806]
278	GGAUGAAAGAUUAAGAUUA	UAAUCUUAAUCUUUCAUCC		[1613-1631]
279	CCAAGUGACUGACAUCAAC	GUUGAUGUCAGUCACUUGG		[421-439]
280	UCUAAAUUACCUCUGAUAA	UUAUCAGAGGUAAUUUAGA		[1789-1807]
281	GCAUCAACUUCAUGGAAAG	CUUUCCAUGAAGUUGAUGC		[1189-1207]
282	GGAACCACCUAAAGAACUU	AAGUUCUUUAGGUGGUUCC		[2587-2605]
283	AAGUUCAACUGCUUCGUAA	UUACGAAGCAGUUGAACUU		[1167-1185]
284	UGACACUAAGUCAAGUUAA	UUAACUUGACUUAGUGUCA		[1065-1083]
285	AGUGUAUGCAGAGGAUGAA	UUCAUCCUCUGCAUACACU		[1601-1619]
286	AGAUGUAAACCAAACUUUU	AAAAGUUUGGUUUACAUCU		[728-746]
287	UGAGAUCAAGAAUGACAAU	AUUGUCAUUCUUGAUCUCA		[1126-1144]
288	AAAGCUUGGUCUAGAGUGA	UCACUCUAGACCAAGCUUU		[1341-1359]
289	CCUCAAGGACAUUACUAGU	ACUAGUAAUGUCCUUGAGG		[1288-1306]
290	CAUGUAAAACCUGCUACAA	UUGUAGCAGGUUUUACAUG		[2353-2371]
291	CUUGCAGAGAAAAUUCAGA	UCUGAAUUUUCUCUGCAAG		[1262-1280]
292	GAUUUUACCAUAUUUCUAA	UUAGAAAUAUGGUAAAAUC		[1815-1833]
293	GGAAGCGGUUUACGAGUGA	UCACUCGUAAACCGCUUCC		[172-190]
294	UAUACAUAGCAAUGGUAAA	UUUACCAUUGCUAUGUAUA		[2381-2399]
295	GAUACCUGGAACCACCUAA	UUAGGUGGUUCCAGGUAUC		[2580-2598]
296	GGCUCUACCUCAAAGACCU	AGGUCUUUGAGGUAGAGCC		[1904-1922]
297	GAAGUACAGAAAACAUGCA	UGCAUGUUUUCUGUACUUC		[926-944]
298	GCAUCAAAAGCAUUUUGAG	CUCAAAAUGCUUUUGAUGC		[2057-2075]
299	CAACUCCAAGGGAUUGGAA	UUCCAAUCCCUUGGAGUUG		[436-454]
300	AAAUGUAAACUGUGAAGAU	AUCUUCACAGUUUACAUUU		[2544-2562]
301	AAACUUCAUCAAGAGUAAA	UUUACUCUUGAUGAAGUUU		[1553-1571]
302	CUGGUUUGGAGAUACUAAC	GUUAGUAUCUCCAAACCAG		[2223-2241]

303	AGAGAAAGUAGCUUUGUGA	UCACAAAGCUACUUUCUCU		[2249-2267]
304	UUCAGACUAUCAUCCUCAA	UUGAGGAUGAUAGUCUGAA		[1275-1293]
305	UUGGGAAAACAAACUUCAU	AUGAAGUUUGUUUUCCCAA		[1543-1561]
306	AGGAAGGAUCCAGAUCUAA	UUAGAUCUGGAUCCUUCCU		[846-864]
307	UCACCAAAAAAUACUUAAU	AUUAAGUAUUUUUUGGUGA		[2165-2183]
308	CCUCCAGGUGAAAGGAAAG	CUUUCCUUUCACCUGGAGG		[536-554]
309	AAAAAUACUUAAUAGUCCA	UGGACUAUUAAGUAUUUUU		[2171-2189]
310	AGUGCAGAAUUUAAAUAAG	CUUAUUUAAAUUCUGCACU		[1886-1904]
311	AGAAAAUUCAAACUUCAGA	UCUGAAGUUUGAAUUUUCU		[1312-1330]
312	UCAAUAAUGUCCCAUGUAA	UUACAUGGGACAUUAUUGA		[2341-2359]
313	AAGGGAUUGGAAUUGAGGA	UCCUCAAUUCCAAUCCCUU		[443-461]
314	AUGAAUCUCCAACCUUAAA	UUUAAGGUUGGAGAUUCAU		[975-993]
315	UAUAGGUAAAAGUACGUAA	UUACGUACUUUUACCUAUA		[2652-2670]
316	CUGGGUACAUUUUAUCAUU	AAUGAUAAAAUGUACCCAG		[1446-1464]
317	AUAUGAUUCUGUAGUAUGA	UCAUACUACAGAAUCAUAU		[1648-1666]
318	ACCCUUGCACCAAAUGUGA	UCACAUUUGGUGCAAGGGU		[777-795]
319	GGAAUUAUAAAAUAUAGGU	ACCUAUAUUUUAUAAUUCC		[2640-2658]
320	GAAUUCACAUAGAAAACAU	AUGUUUUCUAUGUGAAUUC		[1966-1984]
321	AAAGAGGAAGGAUCCAGAU	AUCUGGAUCCUUCCUCUUU		[842-860]
322	CAAAGACCUUUGCACAGUU	AACUGUGCAAAGGUCUUUG		[1914-1932]
323	AUUACUAGUGACUCAGAAA	UUUCUGAGUCACUAGUAAU		[1298-1316]
324	GAAUGUAAUCAGUGUAUGU	ACAUACACUGAUUACAUUC		[1665-1683]
325	AGAUUUUACCAUAUUUCUA	UAGAAAUAUGGUAAAAUCU		[1814-1832]
326	GUGAAAAACAACAAAUUCA	UGAAUUUGUUGUUUUUCAC		[1356-1374]
327	UUCAGAAAUGAAAUCCAAA	UUUGGAUUUCAUUUCUGAA		[1325-1343]
328	CCUAAAGAACUUCCAUUUA	UAAAUGGAAGUUCUUUAGG		[2594-2612]
329	CCUACUUCUUUCUCAGGCA	UGCCUGAGAAAGAAGUAGG		[2041-2059]
330	CAAUUAGUGUUUGAAAAGA	UCUUUUCAAACACUAAUUG		[1389-1407]
331	AAAUAGGAGUGUAUGCAGA	UCUGCAUACACUCCUAUUU		[1594-1612]
332	GAAAGUUUGUAUUAAAUGU	ACAUUUAAUACAAACUUUC		[2494-2512]
333	ACUUCAUGGAAAGAAAGAA	UUCUUUCUUUCCAUGAAGU		[1195-1213]
334	ACAAUAUUUCAAUUGUGAA	UUCACAAUUGAAAUAUUGU		[1950-1968]
335	UGGAAGGCCUGCAUCAUGA	UCAUGAUGCAGGCCUUCCA		[492-510]
336	UCCAAAUGCAGAAGAUGUA	UACAUCUUCUGCAUUUGGA		[641-659]
337	CCCAGAAUACCAAGUGCAG	CUGCACUUGGUAUUCUGGG	Rat	[711-729]
338	AUUGUGAAUUCACAUAGAA	UUCUAUGUGAAUUCACAAU		[1961-1979]
339	CUCCAACCUUAAAUCCUGA	UCAGGAUUUAAGGUUGGAG		[981-999]
340	AAGAUAGUUAUAAACUGAA	UUCAGUUUAUAACUAUCUU		[2558-2576]
341	CAGAAAAUUCAAACUUCAG	CUGAAGUUUGAAUUUUCUG		[1311-1329]
342	ACGUCUGUUGCUAGAUUAU	AUAAUCUAGCAACAGACGU		[383-401]
343	AGAUCAUAUUUAUGUAAAG	CUUUACAUAAAUAUGAUCU		[1855-1873]
344	AGUUAUAAACUGAAGCAGA	UCUGCUUCAGUUUAUAACU		[2563-2581]
345	AUUGUUUGGGUGAAGAGAA	UUCUCUUCACCCAAACAAU		[905-923]
346	GAACACUGUGACCCUUGCA	UGCAAGGGUCACAGUGUUC		[767-785]
347	CUGAUGUUGACUUGAGUAA	UUACUCAAGUCAACAUCAG		[1020-1038]
348	GCAAUCAAAGAUGAUAAAA	UUUUAUCAUCUUUGAUUGC		[2288-2306]
349	AAACAAACUUCAUCAAGAG	CUCUUGAUGAAGUUUGUUU		[1549-1567]
350	GGCUGUAAAUACUGCUUGG	CCAAGCAGUAUUUACAGCC		[1420-1438]
351	CAAGACUGCCCUUAGAAAU	AUUUCUAAGGGCAGUCUUG		[2198-2216]
352	AACAUAUGAUUCUGUAGUA	UACUACAGAAUCAUAUGUU		[1645-1663]
353	CCAACCUUAAAUCCUGAAA	UUUCAGGAUUUAAGGUUGG		[983-1001]
354	GUGUUUGAAAAGAUUCUUA	UAAGAAUCUUUUCAAACAC		[1395-1413]
355	AAAGGAAGUACAGAAAACA	UGUUUUCUGUACUUCCUUU		[922-940]
356	UUGCAAUCAAAGAUGAUAA	UUAUCAUCUUUGAUUGCAA		[2286-2304]
357	AAAUCUAGUUGGGAAAACA	UGUUUUCCCAACUAGAUUU		[1535-1553]
358	UCAUGAUUCUGCCUCCAAG	CUUGGAGGCAGAAUCAUGA		[1508-1526]

359	GAAGCUCUUUCACUUCGGA	UCCGAAGUGAAAGAGCUUC		[312-330]
360	CCAAGGGAUUGGAAUUGAG	CUCAAUUCCAAUCCCUUGG		[441-459]
361	GGCUUUGUCUUCUUCUUUU	AAAAGAAGAAGACAAAGCC		[873-891]
362	AUAGGUAAAAGUACGUAAU	AUUACGUACUUUUACCUAU		[2653-2671]
363	GUAAAAUCAUCAUCUGGAU	AUCCAGAUGAUGAUUUUAC		[2395-2413]
364	UGGAAAGAAAGAAGCGUAU	AUACGCUUCUUUCUUUCCA		[1201-1219]
365	AUGUAAAACCUGCUACAAA	UUUGUAGCAGGUUUUACAU		[2354-2372]
366	GAUGUAAACCAAACUUUUU	AAAAAGUUUGGUUUACAUC		[729-747]
367	AUGACCUUUUGCUGAAAUA	UAUUUCAGCAAAAGGUCAU		[1740-1758]
368	CCAACAUAUUUGUAGAUUU	AAAUCUACAAAUAUGUUGG		[1481-1499]
369	UGCAGAAGAUGUAGAUUGU	ACAAUCUACAUCUUCUGCA		[647-665]
370	CAUCAAGAGUAAAUGCAGU	ACUGCAUUUACUCUUGAUG		[1559-1577]
371	CACAUAGAAAACAUUAAAU	AUUUAAUGUUUUCUAUGUG		[1971-1989]
372	GCAACACCAAGUGCAAAGA	UCUUUGCACUUGGUGUUGC		[828-846]
373	AGGUUCUCAUGAAUCUCCA	UGGAGAUUCAUGAGAACCU		[967-985]
374	CAAGAAGGGAAGGAGUACA	UGUACUCCUUCCCUUCUUG		[602-620]
375	CACAGAAAGGAAAACCAAG	CUUGGUUUUCCUUUCUGUG		[950-968]
376	UUGUACUCUUGCAGAGAAA	UUUCUCUGCAAGAGUACAA		[1255-1273]
377	CAAGGACAUUACUAGUGAC	GUCACUAGUAAUGUCCUUG		[1291-1309]
378	AGUUCAACUGCUUCGUAAU	AUUACGAAGCAGUUGAACU		[1168-1186]
379	AGUUCUGAGUAUAUGCAAU	AUUGCAUAUACUCAGAACU		[1374-1392]
380	CUAUCCUACGUUUAAAUAU	AUAUUUAAACGUAGGAUAG		[2471-2489]
381	AGUUUAUUGGUGUCAUAUU	AAUAUGACACCAAUAAACU		[1929-1947]
382	ACAUGCAGAAAGCACAGAA	UUCUGUGCUUUCUGCAUGU		[938-956]
383	GAAAUGAAAUCCAAAGCUU	AAGCUUUGGAUUUCAUUUC		[1329-1347]
384	GAAAGGAAGUACAGAAAAC	GUUUUCUGUACUUCCUUUC		[921-939]
385	UACUUAAUAGUCCACCAAA	UUUGGUGGACUAUUAAGUA		[2176-2194]
386	AUGUCUAUCCACAGGCUAA	UUAGCCUGUGGAUAGACAU		[1692-1710]
387	GAAUGCACACUCACCAGCA	UGCUGGUGAGUGUGCAUUC		[812-830]
388	UUCUGUAGUAUGAAUGUAA	UUACAUUCAUACUACAGAA		[1654-1672]
389	CUUAGAAGUGGAAAUAAAC	GUUUAUUUCCACUUCUAAG		[682-700]
390	UACUAGUGACUCAGAAAAU	AUUUUCUGAGUCACUAGUA		[1300-1318]
391	GAAGAGAAAGGAAGUACAG	CUGUACUUCCUUUCUCUUC		[916-934]
392	AGUGUUAAUGCCCAAGUGA	UCACUUGGGCAUUAACACU		[410-428]
393	AGAGUGAAAAACAACAAAU	AUUUGUUGUUUUUCACUCU		[1353-1371]
394	CAGUUUAUUGGUGUCAUAU	AUAUGACACCAAUAAACUG		[1928-1946]
395	AUGUUAGUACAAAUGUCUA	UAGACAUUUGUACUAACAU		[1680-1698]
396	GGCAUCAAAAGCAUUUUGA	UCAAAAUGCUUUUGAUGCC		[2056-2074]
397	CACUCUAUGAAUCAAUAGA	UCUAUUGAUUCAUAGAGUG		[1714-1732]
398	ACUAACUGCUCUCAGAGAA	UUCUCUGAGAGCAGUUAGU		[2236-2254]
399	CCCAAGUUUCUAAGAUUUA	UAAAUCUUAGAAACUUGGG		[2437-2455]
400	AAGUUUGUAUUAAAUGUGA	UCACAUUUAAUACAAACUU		[2496-2514]
401	AAAUGCAGAAGAUGUAGAU	AUCUACAUCUUCUGCAUUU		[644-662]
402	GAUUUUUAAUAUCUCAUGA	UCAUGAGAUAUUAAAAAUC		[1495-1513]
403	CCGAAAAUGUUCAAUAAUG	CAUUAUUGAACAUUUUCGG		[2331-2349]
404	CAACAAAUUCAGUUCUGAG	CUCAGAACUGAAUUUGUUG		[1364-1382]
405	AAUACCAAGUGCAGAUGUA	UACAUCUGCACUUGGUAUU		[716-734]
406	AAGCUUGGUCUAGAGUGAA	UUCACUCUAGACCAAGCUU		[1342-1360]
407	GAGUAAAUAUAUCACCACU	AGUGGUGAUAUAUUUACUC		[1033-1051]
408	GUGUUUGGAAUUAUAAAAU	AUUUUAUAAUUCCAAACAC		[2634-2652]
409	AACCAAGGUUCUCAUGAAU	AUUCAUGAGAACCUUGGUU		[962-980]
410	AAAUCAUCAUCUGGAUUUA	UAAAUCCAGAUGAUGAUUU		[2398-2416]
411	GGAAGACUGUUACUACAGU	ACUGUAGUAACAGUCUUCC		[459-477]
412	CCAAGGUUCUCAUGAAUCU	AGAUUCAUGAGAACCUUGG		[964-982]
413	UUACUAGUGACUCAGAAAA	UUUUCUGAGUCACUAGUAA		[1299-1317]
414	UAGGGACUGCACAGUCAAU	AUUGACUGUGCAGUCCCUA		[556-574]

415	CUCAUGAUUCUGCCUCCAA	UUGGAGGCAGAAUCAUGAG		[1507-1525]
416	CUAAAGAACUUCCAUUUAU	AUAAAUGGAAGUUCUUUAG		[2595-2613]
417	UCAAACUUCAGAAAUGAAA	UUUCAUUUCUGAAGUUUGA		[1319-1337]
418	AUACCAAGUGCAGAUGUAA	UUACAUCUGCACUUGGUAU		[717-735]
419	CAGGUGAAAGGAAAGCUAG	CUAGCUUUCCUUUCACCUG		[540-558]
420	CCAAAUGUGAACAUGGAAU	AUUCCAUGUUCACAUUUGG		[786-804]
421	AUGUAAUCAGUGUAUGUUA	UAACAUACACUGAUUACAU		[1667-1685]
422	UGUUGACUUGAGUAAAUAU	AUAUUUACUCAAGUCAACA		[1024-1042]
423	GUAACUCUACUGUAUGUGA	UCACAUACAGUAGAGUUAC		[750-768]
424	GUUUGCAAUCAAAGAUGAU	AUCAUCUUUGAUUGCAAAC		[2284-2302]
425	GCUUAUACAUAGCAAUGGU	ACCAUUGCUAUGUAUAAGC		[2378-2396]
426	UGAGCAGGAGAGUAUUACU	AGUAAUACUCUCCUGCUCA		[2072-2090]
427	CUUCUUUCUCAGGCAUCAA	UUGAUGCCUGAGAAAGAAG		[2045-2063]
428	UCUUUCUCAGGCAUCAAAA	UUUUGAUGCCUGAGAAAGA		[2047-2065]
429	UUCACAUAGAAAACAUUAA	UUAAUGUUUUCUAUGUGAA		[1969-1987]
430	AAGUUUCUAAGAUUUAAGA	UCUUAAAUCUUAGAAACUU		[2440-2458]
431	GACUGUUACUACAGUUGAG	CUCAACUGUAGUAACAGUC		[463-481]
432	ACUAGUGACUCAGAAAAUU	AAUUUUCUGAGUCACUAGU		[1301-1319]
433	CAAAUGCAGAAGAUGUAGA	UCUACAUCUUCUGCAUUUG		[643-661]
434	CAAAUUCAGUUCUGAGUAU	AUACUCAGAACUGAAUUUG		[1367-1385]
435	GAAAAACAACAAAUUCAGU	ACUGAAUUUGUUGUUUUUC		[1358-1376]
436	AGAAAAUUCAGACUAUCAU	AUGAUAGUCUGAAUUUUCU		[1269-1287]
437	GAUUAUCGUCCAAAAGUGU	ACACUUUUGGACGAUAAUC		[396-414]
438	UAGGUAAAAGUACGUAAUU	AAUUACGUACUUUUACCUA		[2654-2672]
439	AAUGUAAACUGUGAAGAUA	UAUCUUCACAGUUUACAUU		[2545-2563]
440	AUCACCAAAAAAUACUUAA	UUAAGUAUUUUUUGGUGAU		[2164-2182]
441	UCGUGAGCUCGUCUCUGAU	AUCAGAGACGAGCUCACGA		[103-121]
442	CAAUAUUUCAAUUGUGAAU	AUUCACAAUUGAAAUAUUG		[1951-1969]
443	AGUUAAAGGCUUUGUUCGA	UCGAACAAAGCCUUUAACU		[1078-1096]
444	GAAAGUAGCUUUGUGACAU	AUGUCACAAAGCUACUUUC		[2252-2270]
445	GUUUGACUAUUAUAUAUGU	ACAUAUAUAAUAGUCAAAC		[1996-2014]
446	GAAAGCUAGGGACUGCACA	UGUGCAGUCCCUAGCUUUC		[550-568]
447	CACAGUUUAUUGGUGUCAU	AUGACACCAAUAAACUGUG		[1926-1944]
448	CAUGUUUGCAAUCAAAGAU	AUCUUUGAUUGCAAACAUG		[2281-2299]
449	UGAGUGCAGAAUUUAAAUA	UAUUUAAAUUCUGCACUCA		[1884-1902]
450	AAAACAUGCAGAAAGCACA	UGUGCUUUCUGCAUGUUUU		[935-953]
451	UACCUCUGAUAAUUCUAGA	UCUAGAAUUAUCAGAGGUA		[1796-1814]
452	AAUUAGUGUUUGAAAAGAU	AUCUUUUCAAACACUAAUU		[1390-1408]
453	GUUUGUAUUAAAUGUGAAU	AUUCACAUUUAAUACAAAC		[2498-2516]
454	AGACAAAGCCCAUUUUUCU	AGAAAAAUGGGCUUUGUCU		[622-640]
455	UACGUUUAAAUAUCUUUGA	UCAAAGAUAUUUAAACGUA		[2477-2495]
456	AACAUGGAAUCAUCAAGGA	UCCUUGAUGAUUCCAUGUU		[795-813]
457	UGUUUGCAAUCAAAGAUGA	UCAUCUUUGAUUGCAAACA		[2283-2301]
458	CCUCCUACCUCUGGUUCUU	AAGAACCAGAGGUAGGAGG		[364-382]
459	CUUUUUUUGUAACUCUACU	AGUAGAGUUACAAAAAAAG		[742-760]
460	UACAGAAAACAUGCAGAAA	UUUCUGCAUGUUUUCUGUA		[930-948]
461	GUUAAAGGCUUUGUUCGAA	UUCGAACAAAGCCUUUAAC		[1079-1097]
462	ACAGAAAGUUCAACUGCUU	AAGCAGUUGAACUUUCUGU		[1162-1180]
463	GAUGAGAUCAAGAAUGACA	UGUCAUUCUUGAUCUCAUC		[1124-1142]
464	GUCCUCCAGGUGAAAGGAA	UUCCUUUCACCUGGAGGAC		[534-552]
465	AGUACAGAAAACAUGCAGA	UCUGCAUGUUUUCUGUACU		[928-946]
466	UAUCGUCCAAAAGUGUUAA	UUAACACUUUUGGACGAUA		[399-417]
467	GGAUUUAGGAAUUGCUCUU	AAGAGCAAUUCCUAAAUCC		[2410-2428]
468	UAACUCUACUGUAUGUGAA	UUCACAUACAGUAGAGUUA		[751-769]
469	CACAGACAAAGCCCAUUUU	AAAAUGGGCUUUGUCUGUG		[619-637]
470	AGUCAUGACACUAAGUCAA	UUGACUUAGUGUCAUGACU		[1060-1078]

471	GUUGACUUGAGUAAAUAUA	UAUAUUUACUCAAGUCAAC		[1025-1043]
472	UUCAAACUUCAGAAAUGAA	UUCAUUUCUGAAGUUUGAA		[1318-1336]
473	CAUUUAUGGAGGAUUUUUU	AAAAAAUCCUCCAUAAAUG		[2607-2625]
474	AAGAGAAAGGAAGUACAGA	UCUGUACUUCCUUUCUCUU		[917-935]
475	CUAGAUUAUCGUCCAAAAG	CUUUUGGACGAUAAUCUAG		[393-411]
476	UCAGUGUAUGUUAGUACAA	UUGUACUAACAUACACUGA		[1673-1691]
477	AAAAUUCAAACUUCAGAAA	UUUCUGAAGUUUGAAUUUU		[1314-1332]
478	CAACUUCAUGGAAAGAAAG	CUUUCUUUCCAUGAAGUUG		[1193-1211]
479	ACUUCGGAGGAUUGCUCAA	UUGAGCAAUCCUCCGAAGU		[323-341]
480	ACAACAAAUUCAGUUCUGA	UCAGAACUGAAUUUGUUGU		[1363-1381]
481	CAGAAAACAUGCAGAAAGC	GCUUUCUGCAUGUUUUCUG		[932-950]
482	CAUCCUCAAGGACAUUACU	AGUAAUGUCCUUGAGGAUG		[1285-1303]
483	UGUUAGUACAAAUGUCUAU	AUAGACAUUUGUACUAACA		[1681-1699]
484	CUGUAUGUGAACACUGUGA	UCACAGUGUUCACAUACAG		[759-777]
485	CCACUAAUUGUUUGGGUGA	UCACCCAAACAAUUAGUGG		[899-917]
486	AUCAUUUAUUAGCGCUGAA	UUCAGCGCUAAUAAAUGAU		[1459-1477]
487	AAACUGUGAAGAUAGUUAU	AUAACUAUCUUCACAGUUU		[2550-2568]
488	GAGAUUUUACCAUAUUUCU	AGAAAUAUGGUAAAAUCUC		[1813-1831]
489	UUUCAAUUGUGAAUUCACA	UGUGAAUUCACAAUUGAAA		[1956-1974]
490	UGUGACCCUUGCACCAAAU	AUUUGGUGCAAGGGUCACA		[773-791]
491	ACUACAGUUGAGACUCAGA	UCUGAGUCUCAACUGUAGU		[470-488]
492	GAAUCAUCAAGGAAUGCAC	GUGCAUUCCUUGAUGAUUC		[801-819]
493	UGAUCUCGCGCAAGAGUGA	UCACUCUUGCGCGAGAUCA		[118-136]
494	CAGGCAUCAAAAGCAUUUU	AAAAUGCUUUUGAUGCCUG		[2054-2072]
495	ACUGAAGCAGAUACCUGGA	UCCAGGUAUCUGCUUCAGU		[2571-2589]
496	CAGAAAGGAAAACCAAGGU	ACCUUGGUUUUCCUUUCUG		[952-970]
497	GCAAUGGUAAAAUCAUCAU	AUGAUGAUUUUACCAUUGC		[2389-2407]
498	GUGAAAGGAAAGCUAGGGA	UCCCUAGCUUUCCUUUCAC		[543-561]
499	CUGAAGCAGAUACCUGGAA	UUCCAGGUAUCUGCUUCAG		[2572-2590]
500	AGUAAAUAUAUCACCACUA	UAGUGGUGAUAUAUUUACU		[1034-1052]

Table B 17 FASLG - Fas ligand (TNF superfamily, member 6)

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-4557328 :158-1003
1	CGGUGAAACUAACAGAUAA	UUAUCUGUUAGUUUCACCG		[1515-1533]
2	GAGGGAGAAGCAUGAAAAA	UUUUUCAUGCUUCUCCCUC		[1240-1258]
3	CUCUAAUAGUGCUUAAAAA	UUUUUAAGCACUAUUAGAG		[1729-1747]
4	GGAUUUAAGGGAUGGAAAA	UUUUCCAUCCCUUAAAUCC		[1400-1418]
5	GGAGGAAUAUGACGGAAGA	UCUUCCGUCAUAUUCCUCC		[1194-1212]
6	GCAUUUUUGUGAAAUGAAA	UUUCAUUUCACAAAAAUGC		[1809-1827]
7	GGAGAAGCAUGAAAAAGCA	UGCUUUUUCAUGCUUCUCC		[1243-1261]
8	GCAGCAUCUUCACUUCUAA	UUAGAAGUGAAGAUGCUGC		[1478-1496]
9	GGACUGAGAAGAAGUAAAA	UUUUACUUCUUCUCAGUCC		[104-122]
10	GGAAUAUGACGGAAGAACA	UGUUCUUCCGUCAUAUUCC		[1197-1215]
11	CGUUUUUCGGCUUAUAUAA	UUAUAUAAGCCGAAAAACG		[978-996]
12	CAGUGAGGGUCUUCUUACA	UGUAAGAAGACCCUCACUG		[1067-1085]
13	CCAUUAUGAUUCUUUGUUA	UAACAAAGAAUCAUAAUGG		[1026-1044]
14	CAACUCUAAUAGUGCUUAA	UUAAGCACUAUUAGAGUUG		[1726-1744]
15	CUAGAGGCUUGCAUAAUAA	UUAUUAUGCAAGCCUCUAG		[1425-1443]
16	CGAGAAUGUUGUAUUCAGU	ACUGAAUACAACAUUCUCG		[1052-1070]
17	GAGGAAUAUGACGGAAGAA	UUCUUCCGUCAUAUUCCUC		[1195-1213]
18	GGAUGUUUCAGCUCUUCCA	UGGAAGAGCUGAAACAUCC		[456-474]
19	CGGCUUAUAUAAGCUCUAA	UUAGAGCUUAUAUAAGCCG		[985-1003]

20	GGACUCAUUUCAUUCCUAA	UUAGGAAUGAAAUGAGUCC		[1552-1570]
21	CAUUUUUGUGAAAUGAAAA	UUUUCAUUUCACAAAAAUG		[1810-1828]
22	AGAGGGAGAAGCAUGAAAA	UUUUCAUGCUUCUCCCUCU		[1239-1257]
23	CUGGAGUGAAGUAUAAGAA	UUCUUAUACUUCACUCCAG	Rat,Ms	[672-690]
24	GGUUGCAUUUGGUCAAGAU	AUCUUGACCAAAUGCAACC		[1687-1705]
25	GAGUAUUUAGGCAGAUUGA	UCAAUCUGCCUAAAUACUC		[1297-1315]
26	GAAACUAACAGAUAAGCAA	UUGCUUAUCUGUUAGUUUC		[1519-1537]
27	GAAUAUGACGGAAGAACAU	AUGUUCUUCCGUCAUAUUC		[1198-1216]
28	CAGCAUCUUCACUUCUAAA	UUUAGAAGUGAAGAUGCUG		[1479-1497]
29	CCUCUUGAGCAGUCAGCAA	UUGCUGACUGCUCAAGAGG		[52-70]
30	AGGAUUUAAGGGAUGGAAA	UUUCCAUCCCUUAAAUCCU		[1399-1417]
31	AGAUGUGCAUUUUUGUGAA	UUCACAAAAAUGCACAUCU		[1803-1821]
32	GGACUGUCUUUCAGAUACA	UGUAUCUGAAAGACAGUCC		[1367-1385]
33	CCAGACAAAUGGAGGAAUA	UAUUCCUCCAUUUGUCUGG		[1184-1202]
34	GAGGAUUUAAGGGAUGGAA	UUCCAUCCCUUAAAUCCUC		[1398-1416]
35	ACAGGCAAGUCCAACUCAA	UUGAGUUGGACUUGCCUGU		[605-623]
36	GAGACCACAGGGUUCAAAA	UUUUGAACCCUGUGGUCUC		[1129-1147]
37	AGCUCUUCCACCUACAGAA	UUCUGUAGGUGGAAGAGCU		[465-483]
38	GGGACUCAUUUCAUUCCUA	UAGGAAUGAAAUGAGUCCC		[1551-1569]
39	GUGAAAUGAAAACAUGUAA	UUACAUGUUUUCAUUUCAC		[1817-1835]
40	GGCCUUGUGAUCAAUGAAA	UUUCAUUGAUCACAAGGCC		[695-713]
41	GCCUCUACAGGACUGAGAA	UUCUCAGUCCUGUAGAGGC		[95-113]
42	GGUUCUGGUUGCCUUGGUA	UACCAAGGCAACCAGAACC		[424-442]
43	CAUUUGAGGUCAAGUAAGA	UCUUACUUGACCUCAAAUG		[1088-1106]
44	GUAUUUAGGCAGAUUGAAA	UUUCAAUCUGCCUAAAUAC		[1299-1317]
45	GAAGAGGGAGAAGCAUGAA	UUCAUGCUUCUCCCUCUUC		[1237-1255]
46	AGACUAGAGGCUUGCAUAA	UUAUGCAAGCCUCUAGUCU		[1422-1440]
47	GGAUGGAAAAGGAAGACUA	UAGUCUUCCUUUUCCAUCC		[1409-1427]
48	CCCUGAAGAAGAGAGGGAA	UUCCCUCUCUUCUUCAGGG		[366-384]
49	AAGAGAGAAUGUAGAUAUU	AAUAUCUACAUUCUCUCUU		[1643-1661]
50	CCAGGUGUUCUACACUCAU	AUGAGUGUAGAACACCUGG		[1266-1284]
51	ACUCUAAUAGUGCUUAAAA	UUUUAAGCACUAUUAGAGU		[1728-1746]
52	AGGACUGAGAAGAAGUAAA	UUUACUUCUUCUCAGUCCU		[103-121]
53	GAUGUUUUCCUAUAAUAUA	UAUAUUAUAGGAAAACAUC		[1770-1788]
54	UAAUGAUGUUUUCCUAUAA	UUAUAGGAAAACAUCAUUA		[1766-1784]
55	UGAAGUACAUAUUAGGAAA	UUUCCUAAUAUGUACUUCA		[1663-1681]
56	CAUGGUUGUGACCUGAGGA	UCCUCAGGUCACAACCAUG		[1384-1402]
57	UUGUGACCUGAGGAUUUAA	UUAAAUCCUCAGGUCACAA		[1389-1407]
58	GACAAAUGGAGGAAUAUGA	UCAUAUUCCUCCAUUUGUC		[1187-1205]
59	GACUGUCUUUCAGAUACAU	AUGUAUCUGAAAGACAGUC		[1368-1386]
60	AGCUAAAGAGGCUGAAAGA	UCUUUCAGCCUCUUUAGCU		[1443-1461]
61	CAGUGCUGAUCAUUUAUAU	AUAUAAAUGAUCAGCACUG		[913-931]
62	GCAGCUACCAGGUGUUCUA	UAGAACACCUGGUAGCUGC		[1259-1277]
63	UCUACAUGAGGAACUCUAA	UUAGAGUUCCUCAUGUAGA		[789-807]
64	GGGAUUCUUUCCAUUAUGA	UCAUAAUGGAAAGAAUCCC		[1016-1034]
65	AGACGUUUUUCGGCUUAUA	UAUAAGCCGAAAAACGUCU		[975-993]
66	CCGAGAAUGUUGUAUUCAG	CUGAAUACAACAUUCUCGG		[1051-1069]
67	CUAUGGAAACUCUAUAAGA	UCUUAUAGAGUUUCCAUAG		[17-35]
68	ACGUUUUUCGGCUUAUAUA	UAUAUAAGCCGAAAAACGU		[977-995]
69	CCCAGGAUCUGGUGAUGAU	AUCAUCACCAGAUCCUGGG		[813-831]
70	AAUAGUGCUUAAAAAUCAU	AUGAUUUUUAAGCACUAUU		[1733-1751]
71	AAUGCUUCCUGACAAUCAA	UUGAUUGUCAGGAAGCAUU		[1710-1728]
72	AAGGGAUGGAAAAGGAAGA	UCUUCCUUUUCCAUCCCUU		[1406-1424]
73	CAUGCAGCAGCCCUUCAAU	AUUGAAGGGCUGCUGCAUG		[157-175]
74	GAGAGAAUGUAGAUAUUGU	ACAAUAUCUACAUUCUCUC		[1645-1663]
75	ACUAGAGGCUUGCAUAAUA	UAUUAUGCAAGCCUCUAGU		[1424-1442]

76	UCCUGACAAUCAACUCUAA	UUAGAGUUGAUUGUCAGGA		[1716-1734]
77	UGAAAAGGACACCUUUUAA	UUAAAAGGUGUCCUUUUCA		[1313-1331]
78	GAGGUGUUUCCCUUAGCUA	UAGCUAAGGGAAACACCUC		[1-19]
79	CAUCGGUGAAACUAACAGA	UCUGUUAGUUUCACCGAUG		[1512-1530]
80	AUUUGGUCAAGAUUUUGAA	UUCAAAAUCUUGACCAAAU		[1693-1711]
81	CAACUCACCUAAUGUUUAU	AUAAACAUUAGGUGAGUUG		[1162-1180]
82	CAGACAAAUGGAGGAAUAU	AUAUUCCUCCAUUUGUCUG		[1185-1203]
83	UGAAGAGGGAGAAGCAUGA	UCAUGCUUCUCCCUCUUCA		[1236-1254]
84	CAGCAUCAUCUUUGGAGAA	UUCUCCAAAGAUGAUGCUG		[525-543]
85	AGCUAUGGAAACUCUAUAA	UUAUAGAGUUUCCAUAGCU		[15-33]
86	AGGUGUUUCCCUUAGCUAU	AUAGCUAAGGGAAACACCU		[2-20]
87	GGGUUGCAUUUGGUCAAGA	UCUUGACCAAAUGCAACCC		[1686-1704]
88	UGCAUUUGAGGUCAAGUAA	UUACUUGACCUCAAAUGCA		[1086-1104]
89	CACUCAUCUUAGUGCCUGA	UCAGGCACUAAGAUGAGUG		[1278-1296]
90	CACAGUUCUUCCCUGUCCA	UGGACAGGGAAGAACUGUG		[238-256]
91	CAGGACUGAGAAGAAGUAA	UUACUUCUUCUCAGUCCUG		[102-120]
92	UGGGAAGACACCUAUGGAA	UUCCAUAGGUGUCUUCCCA		[641-659]
93	GAAAUGAAAACAUGUAAUA	UAUUACAUGUUUUCAUUUC		[1819-1837]
94	CAUCUUUGGAGAAGCAAAU	AUUUGCUUCUCCAAAGAUG		[531-549]
95	CUUUCUGGAGUGAAGUAUA	UAUACUUCACUCCAGAAAG		[668-686]
96	UAGAUAUUGUGAAGUACAU	AUGUACUUCACAAUAUCUA		[1654-1672]
97	GCUCCUCAACUCACCUAAU	AUUAGGUGAGUUGAGGAGC		[1156-1174]
98	UGCAUUUUUGUGAAAUGAA	UUCAUUUCACAAAAAUGCA		[1808-1826]
99	UCUGGAGUGAAGUAUAAGA	UCUUAUACUUCACUCCAGA	Rat,Ms	[671-689]
100	GAUGUGCAUUUUUGUGAAA	UUUCACAAAAAUGCACAUC		[1804-1822]
101	GGCAGCAUCUUCACUUCUA	UAGAAGUGAAGAUGCUGCC		[1477-1495]
102	UGAUGUUUUCCUAUAAUAU	AUAUUAUAGGAAAACAUCA		[1769-1787]
103	AUGGGUUGCAUUUGGUCAA	UUGACCAAAUGCAACCCAU		[1684-1702]
104	AAGAGGGAGAAGCAUGAAA	UUUCAUGCUUCUCCCUCUU		[1238-1256]
105	AGUAUUUAGGCAGAUUGAA	UUCAAUCUGCCUAAAUACU		[1298-1316]
106	CAGGCAAGUCCAACUCAAG	CUUGAGUUGGACUUGCCUG		[606-624]
107	AAAAGUAUAUGUUAGGAUA	UAUCCUAACAUAUACUUUU		[1838-1856]
108	GACGUUUUUCGGCUUAUAU	AUAUAAGCCGAAAAACGUC		[976-994]
109	GCUUGCAUAAUAAGCUAAA	UUUAGCUUAUUAUGCAAGC		[1431-1449]
110	AGAUAUUGUGAAGUACAUA	UAUGUACUUCACAAUAUCU		[1655-1673]
111	CAUUGAUUGUCAGCUACUA	UAGUAGCUGACAAUCAAUG		[1749-1767]
112	GUAGAUAUUGUGAAGUACA	UGUACUUCACAAUAUCUAC		[1653-1671]
113	GCUUAUAUAAGCUCUAAGA	UCUUAGAGCUUAUAUAAGC		[987-1005]
114	UUAAGGGAUGGAAAAGGAA	UUCCUUUUCCAUCCCUUAA		[1404-1422]
115	GGAUUCUUUCCAUUAUGAU	AUCAUAAUGGAAAGAAUCC		[1017-1035]
116	AGUGCUUAAAAAUCAUUGA	UCAAUGAUUUUUAAGCACU		[1736-1754]
117	UGACUAAAGAGAGAAUGUA	UACAUUCUCUCUUUAGUCA		[1637-1655]
118	GAUUGUCAGCUACUAAUGA	UCAUUAGUAGCUGACAAUC		[1753-1771]
119	CCUGCUUUCUGGAGUGAAG	CUUCACUCCAGAAAGCAGG		[664-682]
120	UCUUGAGCAGUCAGCAACA	UGUUGCUGACUGCUCAAGA		[54-72]
121	UCAUCUUUGGAGAAGCAAA	UUUGCUUCUCCAAAGAUGA		[530-548]
122	CAUGCCUCUGGAAUGGGAA	UUCCCAUUCCAGAGGCAUG		[628-646]
123	CAUUUAACAGGCAAGUCCA	UGGACUUGCCUGUUAAAUG		[599-617]
124	GGAAAAUAUGGGUUGCAUU	AAUGCAACCCAUAUUUUCC		[1677-1695]
125	UUUCUGGAGUGAAGUAUAA	UUAUACUUCACUCCAGAAA		[669-687]
126	AUGUGAAGAGGGAGAAGCA	UGCUUCUCCCUCUUCACAU		[1233-1251]
127	GGUGAAACUAACAGAUAAG	CUUAUCUGUUAGUUUCACC		[1516-1534]
128	GCCCUUCAAUUACCCAUAU	AUAUGGGUAAUUGAAGGGC		[166-184]
129	AACAGAUAAGCAAGAGAGA	UCUCUCUUGCUUAUCUGUU		[1525-1543]
130	ACAGUUCUUCCCUGUCCAA	UUGGACAGGGAAGAACUGU		[239-257]
131	AGGCUUGCAUAAUAAGCUA	UAGCUUAUUAUGCAAGCCU		[1429-1447]

132	GGGUCUUCUUACAUGCAUU	AAUGCAUGUAAGAAGACCC		[1073-1091]
133	GAAGUACAUAUUAGGAAAA	UUUUCCUAAUAUGUACUUC		[1664-1682]
134	UAUUGUGAAGUACAUAUUA	UAAUAUGUACUUCACAAUA		[1658-1676]
135	GCAGAACUCCGAGAGUCUA	UAGACUCUCGGAGUUCUGC		[491-509]
136	ACAGGACUGAGAAGAAGUA	UACUUCUUCUCAGUCCUGU		[101-119]
137	UCUACAGGACUGAGAAGAA	UUCUUCUCAGUCCUGUAGA		[98-116]
138	GAUGGAAAAGGAAGACUAG	CUAGUCUUCCUUUUCCAUC		[1410-1428]
139	UAAUAGUGCUUAAAAAUCA	UGAUUUUUAAGCACUAUUA		[1732-1750]
140	GGAAGACACCUAUGGAAUU	AAUUCCAUAGGUGUCUUCC		[643-661]
141	CUUUGUAUAUUCCAAAGUA	UACUUUGGAAUAUACAAAG		[724-742]
142	UACUAAUGAUGUUUUCCUA	UAGGAAAACAUCAUUAGUA		[1763-1781]
143	UAUUUAGGCAGAUUGAAAA	UUUUCAAUCUGCCUAAAUA		[1300-1318]
144	GAGAAGAAGUAAAACCGUU	AACGGUUUUACUUCUUCUC		[109-127]
145	CUGAGCUCUCUCUGGUCAA	UUGACCAGAGAGAGCUCAG		[942-960]
146	GAUUGAAAAGGACACCUUU	AAAGGUGUCCUUUUCAAUC		[1310-1328]
147	GUUGUGACCUGAGGAUUUA	UAAAUCCUCAGGUCACAAC		[1388-1406]
148	GGUUGUGACCUGAGGAUUU	AAAUCCUCAGGUCACAACC		[1387-1405]
149	GGGCAGUGUUCAAUCUUAC	GUAAGAUUGAACACUGCCC		[894-912]
150	AACUCUAAUAGUGCUUAAA	UUUAAGCACUAUUAGAGUU		[1727-1745]
151	AAGACUAGAGGCUUGCAUA	UAUGCAAGCCUCUAGUCUU		[1421-1439]
152	GUACUUUGUAUAUUCCAAA	UUUGGAAUAUACAAAGUAC		[721-739]
153	GUUUCCCUUAGCUAUGGAA	UUCCAUAGCUAAGGGAAAC		[6-24]
154	UGUGAAAUGAAAACAUGUA	UACAUGUUUUCAUUUCACA		[1816-1834]
155	AUGAUGUUUUCCUAUAAUA	UAUUAUAGGAAAACAUCAU		[1768-1786]
156	CCUUGUGAUCAAUGAAACU	AGUUUCAUUGAUCACAAGG		[697-715]
157	CCUUUUAACUCACCUCUCA	UGAGAGGUGAGUUAAAAGG		[1324-1342]
158	UACCAGUGCUGAUCAUUUA	UAAAUGAUCAGCACUGGUA		[910-928]
159	CAUCAUCUUUGGAGAAGCA	UGCUUCUCCAAAGAUGAUG		[528-546]
160	GAUUUUGAAUGCUUCCUGA	UCAGGAAGCAUUCAAAAUC		[1703-1721]
161	GUGCAUUUUUGUGAAAUGA	UCAUUUCACAAAAAUGCAC		[1807-1825]
162	CUUUUAACUCACCUCUCAA	UUGAGAGGUGAGUUAAAAG		[1325-1343]
163	AGACCACAGGGUUCAAAAU	AUUUUGAACCCUGUGGUCU		[1130-1148]
164	GAGAAUGUAGAUAUUGUGA	UCACAAUAUCUACAUUCUC		[1647-1665]
165	AGUACAUAUUAGGAAAAUA	UAUUUUCCUAAUAUGUACU		[1666-1684]
166	AGGAUCUGGUGAUGAUGGA	UCCAUCAUCACCAGAUCCU		[816-834]
167	CUAAAGAGAGAAUGUAGAU	AUCUACAUUCUCUCUUUAG		[1640-1658]
168	AAUGAUGUUUUCCUAUAAU	AUUAUAGGAAAACAUCAUU		[1767-1785]
169	AAAAAAAGGAGCUGAGGAA	UUCCUCAGCUCCUUUUUUU		[573-591]
170	GACGGAAGAACAUAGAACU	AGUUCUAUGUUCUUCCGUC		[1204-1222]
171	CUGAGAGUAUUUAGGCAGA	UCUGCCUAAAUACUCUCAG		[1293-1311]
172	GAAUGUAGAUAUUGUGAAG	CUUCACAAUAUCUACAUUC		[1649-1667]
173	AAUGGAGGAAUAUGACGGA	UCCGUCAUAUUCCUCCAUU		[1191-1209]
174	UGUACUUUGUAUAUUCCAA	UUGGAAUAUACAAAGUACA		[720-738]
175	ACAGCAUCAUCUUUGGAGA	UCUCCAAAGAUGAUGCUGU		[524-542]
176	GUGAAGUACAUAUUAGGAA	UUCCUAAUAUGUACUUCAC		[1662-1680]
177	CAAUCUUACCAGUGCUGAU	AUCAGCACUGGUAAGAUUG		[904-922]
178	ACUAAAGAGAGAAUGUAGA	UCUACAUUCUCUCUUUAGU		[1639-1657]
179	CAGCUCUUCCACCUACAGA	UCUGUAGGUGGAAGAGCUG		[464-482]
180	CUUAGCUAUGGAAACUCUA	UAGAGUUUCCAUAGCUAAG		[12-30]
181	UGGAGUGAAGUAUAAGAAG	CUUCUUAUACUUCACUCCA		[673-691]
182	GUACAUAUUAGGAAAAUAU	AUAUUUUCCUAAUAUGUAC		[1667-1685]
183	UAUAUAAGCUCUAAGAGAA	UUCUCUUAGAGCUUAUAUA		[990-1008]
184	AAGUCCAACUCAAGGUCCA	UGGACCUUGAGUUGGACUU		[611-629]
185	UGUGAAGUACAUAUUAGGA	UCCUAAUAUGUACUUCACA		[1661-1679]
186	GCUGAUCAUUUAUAUGUCA	UGACAUAUAAAUGAUCAGC		[917-935]
187	UGAAGAAGAGAGGGAACCA	UGGUUCCCUCUCUUCUUCA		[369-387]

188	CAUUUAUAUGUCAACGUAU	AUACGUUGACAUAUAAAUG		[923-941]
189	AGAAUGUAGAUAUUGUGAA	UUCACAAUAUCUACAUUCU		[1648-1666]
190	AUGACGGAAGAACAUAGAA	UUCUAUGUUCUUCCGUCAU		[1202-1220]
191	UCAAGUAAGAAGACAUGAA	UUCAUGUCUUCUUACUUGA		[1097-1115]
192	GUAAGAAGACAUGAACCAA	UUGGUUCAUGUCUUCUUAC		[1101-1119]
193	GACUAAAGAGAGAAUGUAG	CUACAUUCUCUCUUUAGUC		[1638-1656]
194	GGAAGACUAGAGGCUUGCA	UGCAAGCCUCUAGUCUUCC		[1419-1437]
195	GAUAUUGUGAAGUACAUAU	AUAUGUACUUCACAAUAUC		[1656-1674]
196	CCUCAACUCACCUAAUGUU	AACAUUAGGUGAGUUGAGG		[1159-1177]
197	CAUUUGGUCAAGAUUUUGA	UCAAAAUCUUGACCAAAUG		[1692-1710]
198	UCUAAUAGUGCUUAAAAAU	AUUUUUAAGCACUAUUAGA		[1730-1748]
199	AUUUAACAGGCAAGUCCAA	UUGGACUUGCCUGUUAAAU		[600-618]
200	GGAAUGGGAAGACACCUAU	AUAGGUGUCUUCCCAUUCC		[637-655]
201	UGGGCUGUACUUUGUAUAU	AUAUACAAAGUACAGCCCA		[715-733]
202	GGAAGAACAUAGAACUCUG	CAGAGUUCUAUGUUCUUCC		[1207-1225]
203	CUGACAAUCAACUCUAAUA	UAUUAGAGUUGAUUGUCAG		[1718-1736]
204	CUAAUGAUGUUUUCCUAUA	UAUAGGAAAACAUCAUUAG		[1765-1783]
205	CUGGGCUGUACUUUGUAUA	UAUACAAAGUACAGCCCAG		[714-732]
206	GGGAAGACACCUAUGGAAU	AUUCCAUAGGUGUCUUCCC		[642-660]
207	UGAGGAUUUAAGGGAUGGA	UCCAUCCCUUAAAUCCUCA		[1397-1415]
208	AGUGGACCUUGAGACCACA	UGUGGUCUCAAGGUCCACU		[1119-1137]
209	AUGCAUUUGAGGUCAAGUA	UACUUGACCUCAAAUGCAU		[1085-1103]
210	UGAUGUUUUUCAUGGUUCU	AGAACCAUGAAAAACAUCA		[411-429]
211	GAGGGUCUUCUUACAUGCA	UGCAUGUAAGAAGACCCUC		[1071-1089]
212	UAUUUCCAGUGCAAUUGUA	UACAAUUGCACUGGAAAUA		[1582-1600]
213	ACCUGAGGAUUUAAGGGAU	AUCCCUUAAAUCCUCAGGU		[1394-1412]
214	GAAAAAAAGGAGCUGAGGA	UCCUCAGCUCCUUUUUUUC		[572-590]
215	GAACCAAGUGGACCUUGAG	CUCAAGGUCCACUUGGUUC		[1113-1131]
216	CCAGUGCUGAUCAUUUAUA	UAUAAAUGAUCAGCACUGG		[912-930]
217	ACAUGAGGAACUCUAAGUA	UACUUAGAGUUCCUCAUGU		[792-810]
218	AGCUCCUCAACUCACCUAA	UUAGGUGAGUUGAGGAGCU		[1155-1173]
219	GCCUGAGAGUAUUUAGGCA	UGCCUAAAUACUCUCAGGC		[1291-1309]
220	CUAACAGAUAAGCAAGAGA	UCUCUUGCUUAUCUGUUAG		[1523-1541]
221	UGCAUUUGGUCAAGAUUUU	AAAAUCUUGACCAAAUGCA		[1690-1708]
222	CAUUAUGAUUCUUUGUUAC	GUAACAAAGAAUCAUAAUG		[1027-1045]
223	ACAAGGUCUACAUGAGGAA	UUCCUCAUGUAGACCUUGU		[783-801]
224	GUUCUACACUCAUCUUAGU	ACUAAGAUGAGUGUAGAAC		[1272-1290]
225	AGCCCUUCAAUUACCCAUA	UAUGGGUAAUUGAAGGGCU		[165-183]
226	AUGUAGAUAUUGUGAAGUA	UACUUCACAAUAUCUACAU		[1651-1669]
227	UCGGUGAAACUAACAGAUA	UAUCUGUUAGUUUCACCGA		[1514-1532]
228	AUUUGAGGUCAAGUAAGAA	UUCUUACUUGACCUCAAAU		[1089-1107]
229	AGUCCAACUCAAGGUCCAU	AUGGACCUUGAGUUGGACU		[612-630]
230	GGUGUUCUACACUCAUCUU	AAGAUGAGUGUAGAACACC		[1269-1287]
231	UCUGGUCAAUUUUGAGGAA	UUCCUCAAAAUUGACCAGA		[952-970]
232	GUGCUUAAAAAUCAUUGAU	AUCAAUGAUUUUUAAGCAC		[1737-1755]
233	UAGCUAUGGAAACUCUAUA	UAUAGAGUUUCCAUAGCUA		[14-32]
234	AGGCACCGAGAAUGUUGUA	UACAACAUUCUCGGUGCCU		[1046-1064]
235	CAUGAAAAAGCAGCUACCA	UGGUAGCUGCUUUUUCAUG		[1250-1268]
236	CCAUGUGAAGAGGGAGAAG	CUUCUCCCUCUUCACAUGG		[1231-1249]
237	UGAAAUGAAAACAUGUAAU	AUUACAUGUUUUCAUUUCA		[1818-1836]
238	AAGAAGAGAGGGAACCACA	UGUGGUUCCCUCUCUUCUU		[371-389]
239	CUUUCAGAUACAUGGUUGU	ACAACCAUGUAUCUGAAAG		[1374-1392]
240	CAAUUUUGAGGAAUCUCAG	CUGAGAUUCCUCAAAAUUG		[958-976]
241	UGAACCAAGUGGACCUUGA	UCAAGGUCCACUUGGUUCA		[1112-1130]
242	UCAUUUAUAUGUCAACGUA	UACGUUGACAUAUAAAUGA		[922-940]
243	GCAUUUGAGGUCAAGUAAG	CUUACUUGACCUCAAAUGC		[1087-1105]

244	GGGCUGUACUUUGUAUAUU	AAUAUACAAAGUACAGCCC		[716-734]
245	AUGGAAACUCUAUAAGAGA	UCUCUUAUAGAGUUUCCAU		[19-37]
246	AGGCAGAUUGAAAAGGACA	UGUCCUUUUCAAUCUGCCU		[1305-1323]
247	CAUGAGGAACUCUAAGUAU	AUACUUAGAGUUCCUCAUG		[793-811]
248	ACUCUAUAAGAGAGAUCCA	UGGAUCUCUCUUAUAGAGU		[25-43]
249	CACCGAGAAUGUUGUAUUC	GAAUACAACAUUCUCGGUG		[1049-1067]
250	AUGGAAAAGGAAGACUAGA	UCUAGUCUUCCUUUUCCAU		[1411-1429]
251	UUUAAGGGAUGGAAAAGGA	UCCUUUUCCAUCCCUUAAA		[1403-1421]
252	AGAAGGCCUGGUCAAAGGA	UCCUUUGACCAGGCCUUCU		[269-287]
253	UUGUAUAUUCCAAAGUAUA	UAUACUUUGGAAUAUACAA		[726-744]
254	CACAAGGUCUACAUGAGGA	UCCUCAUGUAGACCUUGUG		[782-800]
255	GGGUCAAUCUUGCAACAAC	GUUGUUGCAAGAUUGACCC		[751-769]
256	GGAGUGAAGUAUAAGAAGG	CCUUCUUAUACUUCACUCC		[674-692]
257	GUGUAUUUCCAGUGCAAUU	AAUUGCACUGGAAAUACAC		[1579-1597]
258	AAUUUUGAGGAAUCUCAGA	UCUGAGAUUCCUCAAAAUU		[959-977]
259	AAUUGUCCUGCUUUCUGGA	UCCAGAAAGCAGGACAAUU		[658-676]
260	GAAAACAUGUAAUAAAAAG	CUUUUUAUUACAUGUUUUC		[1824-1842]
261	AAGGUCCAUGCCUCUGGAA	UUCCAGAGGCAUGGACCUU		[622-640]
262	GUCUCCUUGUGAUGUUUUU	AAAAACAUCACAAGGAGAC		[402-420]
263	GGAAACUCUAUAAGAGAGA	UCUCUCUUAUAGAGUUUCC		[21-39]
264	GGGAGAAGCAUGAAAAAGC	GCUUUUUCAUGCUUCUCCC		[1242-1260]
265	AUGGAGGAAUAUGACGGAA	UUCCGUCAUAUUCCUCCAU		[1192-1210]
266	AUGGGAAGACACCUAUGGA	UCCAUAGGUGUCUUCCCAU		[640-658]
267	AGAAUGUUGUAUUCAGUGA	UCACUGAAUACAACAUUCU		[1054-1072]
268	GUCAGCUACUAAUGAUGUU	AACAUCAUUAGUAGCUGAC		[1757-1775]
269	CUUCACUUCUAAAUGCAUA	UAUGCAUUUAGAAGUGAAG		[1485-1503]
270	AGGUCAAGUAAGAAGACAU	AUGUCUUCUUACUUGACCU		[1094-1112]
271	UGUAGAUGUGCAUUUUUGU	ACAAAAAUGCACAUCUACA		[1800-1818]
272	GAUUCUUUCCAUUAUGAUU	AAUCAUAAUGGAAAGAAUC		[1018-1036]
273	CUGAUCAUUUAUAUGUCAA	UUGACAUAUAAAUGAUCAG		[918-936]
274	AGGAAAAUAUGGGUUGCAU	AUGCAACCCAUAUUUUCCU		[1676-1694]
275	UGUGAAGAGGGAGAAGCAU	AUGCUUCUCCCUCUUCACA		[1234-1252]
276	GAGGAAUCUCAGACGUUUU	AAAACGUCUGAGAUUCCUC		[965-983]
277	UCCUUGUGAUGUUUUUCAU	AUGAAAAACAUCACAAGGA		[405-423]
278	GGCUUGCAUAAUAAGCUAA	UUAGCUUAUUAUGCAAGCC		[1430-1448]
279	UUAGGCAGAUUGAAAAGGA	UCCUUUUCAAUCUGCCUAA		[1303-1321]
280	GUUGCAUUUGGUCAAGAUU	AAUCUUGACCAAAUGCAAC		[1688-1706]
281	CAGAUCUACUGGGUGGACA	UGUCCACCCAGUAGAUCUG		[188-206]
282	GAAAAUAUGGGUUGCAUUU	AAAUGCAACCCAUAUUUUC		[1678-1696]
283	CCUGACAAUCAACUCUAAU	AUUAGAGUUGAUUGUCAGG		[1717-1735]
284	CAACGUAUCUGAGCUCUCU	AGAGAGCUCAGAUACGUUG		[934-952]
285	AACUAACAGAUAAGCAAGA	UCUUGCUUAUCUGUUAGUU		[1521-1539]
286	GAGAGUAUUUAGGCAGAUU	AAUCUGCCUAAAUACUCUC		[1295-1313]
287	CCUCUGGAAUGGGAAGACA	UGUCUUCCCAUUCCAGAGG	Rat,Ms	[632-650]
288	CAAUGAAACUGGGCUGUAC	GUACAGCCCAGUUUCAUUG		[706-724]
289	UGCUUUCUGGAGUGAAGUA	UACUUCACUCCAGAAAGCA		[666-684]
290	UAAGCUAAAGAGGCUGAAA	UUUCAGCCUCUUUAGCUUA		[1441-1459]
291	AGAAGAAGUAAAACCGUUU	AAACGGUUUUACUUCUUCU		[110-128]
292	UGAGAAGAAGUAAAACCGU	ACGGUUUUACUUCUUCUCA		[108-126]
293	UCAGAUACAUGGUUGUGAC	GUCACAACCAUGUAUCUGA		[1377-1395]
294	GAAACUCUAUAAGAGAGAU	AUCUCUCUUAUAGAGUUUC		[22-40]
295	GGUCAAUUUUGAGGAAUCU	AGAUUCCUCAAAAUUGACC		[955-973]
296	UGCAGCAGCCCUUCAAUUA	UAAUUGAAGGGCUGCUGCA		[159-177]
297	CUAUGGAAUUGUCCUGCUU	AAGCAGGACAAUUCCAUAG		[652-670]
298	GGCUGUACUUUGUAUAUUC	GAAUAUACAAAGUACAGCC		[717-735]
299	UCGGCUUAUAUAAGCUCUA	UAGAGCUUAUAUAAGCCGA		[984-1002]

300	CAGACGUUUUUCGGCUUAU	AUAAGCCGAAAAACGUCUG		[974-992]
301	ACCAGGUGUUCUACACUCA	UGAGUGUAGAACACCUGGU		[1265-1283]
302	AAGACAUGAACCAAGUGGA	UCCACUUGGUUCAUGUCUU		[1106-1124]
303	UUGGGAUUCUUUCCAUUAU	AUAAUGGAAAGAAUCCCAA		[1014-1032]
304	AGAUCUACUGGGUGGACAG	CUGUCCACCCAGUAGAUCU		[189-207]
305	AUUGAUUGUCAGCUACUAA	UUAGUAGCUGACAAUCAAU		[1750-1768]
306	CUUCUUACAUGCAUUUGAG	CUCAAAUGCAUGUAAGAAG		[1077-1095]
307	GCAGCAGCCCUUCAAUUAC	GUAAUUGAAGGGCUGCUGC		[160-178]
308	UGGAAUGGGAAGACACCUA	UAGGUGUCUUCCCAUUCCA		[636-654]
309	CCUGAAGAAGAGAGGGAAC	GUUCCCUCUCUUCUUCAGG		[367-385]
310	UACAUGCAUUUGAGGUCAA	UUGACCUCAAAUGCAUGUA		[1082-1100]
311	CUGUACUUUGUAUAUUCCA	UGGAAUAUACAAAGUACAG		[719-737]
312	GCAGCCCUUCAAUUACCCA	UGGGUAAUUGAAGGGCUGC		[163-181]
313	UGUUUCCCUUAGCUAUGGA	UCCAUAGCUAAGGGAAACA		[5-23]
314	CAGGCACCGAGAAUGUUGU	ACAACAUUCUCGGUGCCUG		[1045-1063]
315	CAUGCAUUUGAGGUCAAGU	ACUUGACCUCAAAUGCAUG		[1084-1102]
316	CAGGGUUCAAAAUGUCUGU	ACAGACAUUUUGAACCCUG		[1136-1154]
317	UCAACUCACCUAAUGUUUA	UAAACAUUAGGUGAGUUGA		[1161-1179]
318	AACUGGGCUGUACUUUGUA	UACAAAGUACAGCCCAGUU		[712-730]
319	UGAAACUAACAGAUAAGCA	UGCUUAUCUGUUAGUUUCA		[1518-1536]
320	GAAGCAUGAAAAAGCAGCU	AGCUGCUUUUUCAUGCUUC		[1246-1264]
321	UAUGACGGAAGAACAUAGA	UCUAUGUUCUUCCGUCAUA		[1201-1219]
322	AAUCAUUGAUUGUCAGCUA	UAGCUGACAAUCAAUGAUU		[1746-1764]
323	AGCUCUCUCUGGUCAAUUU	AAAUUGACCAGAGAGAGCU		[945-963]
324	CUUGCAUAAUAAGCUAAAG	CUUUAGCUUAUUAUGCAAG		[1432-1450]
325	GAAGCACUUUGGGAUUCUU	AAGAAUCCCAAAGUGCUUC		[1006-1024]
326	AAAGAGAGAAUGUAGAUAU	AUAUCUACAUUCUCUCUUU		[1642-1660]
327	GGUCAAGAUUUUGAAUGCU	AGCAUUCAAAAUCUUGACC		[1697-1715]
328	GUCUACAUGAGGAACUCUA	UAGAGUUCCUCAUGUAGAC		[788-806]
329	GAGGUCAAGUAAGAAGACA	UGUCUUCUUACUUGACCUC		[1093-1111]
330	CAGCUACUAAUGAUGUUUU	AAAACAUCAUUAGUAGCUG		[1759-1777]
331	UAGGCAGAUUGAAAAGGAC	GUCCUUUUCAAUCUGCCUA		[1304-1322]
332	GGCCCAUUUAACAGGCAAG	CUUGCCUGUUAAAUGGGCC		[595-613]
333	GAGUGAAGUAUAAGAAGGG	CCCUUCUUAUACUUCACUC		[675-693]
334	ACCAGUGCUGAUCAUUUAU	AUAAAUGAUCAGCACUGGU		[911-929]
335	GCCUUGUGAUCAAUGAAAC	GUUUCAUUGAUCACAAGGC		[696-714]
336	AGAGAAUGUAGAUAUUGUG	CACAAUAUCUACAUUCUCU		[1646-1664]
337	CUCCUUGUGAUGUUUUUCA	UGAAAAACAUCACAAGGAG		[404-422]
338	GAAGUAAAACCGUUUGCUG	CAGCAAACGGUUUUACUUC		[114-132]
339	GAAGACUAGAGGCUUGCAU	AUGCAAGCCUCUAGUCUUC		[1420-1438]
340	CCUUAGCUAUGGAAACUCU	AGAGUUUCCAUAGCUAAGG		[11-29]
341	AGCUCUAAGAGAAGCACUU	AAGUGCUUCUCUUAGAGCU		[996-1014]
342	UUGUUACAGGCACCGAGAA	UUCUCGGUGCCUGUAACAA		[1039-1057]
343	UUGAGACCACAGGGUUCAA	UUGAACCCUGUGGUCUCAA		[1127-1145]
344	AAUGUCUGUAGCUCCUCAA	UUGAGGAGCUACAGACAUU		[1146-1164]
345	AAAAAAGGAGCUGAGGAAA	UUUCCUCAGCUCCUUUUUU		[574-592]
346	CUACAUGAGGAACUCUAAG	CUUAGAGUUCCUCAUGUAG		[790-808]
347	CUUUGGGAUUCUUUCCAUU	AAUGGAAAGAAUCCCAAAG		[1012-1030]
348	AACCAAGUGGACCUUGAGA	UCUCAAGGUCCACUUGGUU		[1114-1132]
349	UGUUUUUCAUGGUUCUGGU	ACCAGAACCAUGAAAAACA		[414-432]
350	AGAAGAGAGGGAACCACAG	CUGUGGUUCCCUCUCUUCU		[372-390]
351	AUGGUUGUGACCUGAGGAU	AUCCUCAGGUCACAACCAU		[1385-1403]
352	GGCUUAUAUAAGCUCUAAG	CUUAGAGCUUAUAUAAGCC		[986-1004]
353	UUUGAAUGCUUCCUGACAA	UUGUCAGGAAGCAUUCAAA		[1706-1724]
354	GAAUGUUGUAUUCAGUGAG	CUCACUGAAUACAACAUUC		[1055-1073]
355	GACUAGAGGCUUGCAUAAU	AUUAUGCAAGCCUCUAGUC		[1423-1441]

356	GGUGUUUCCCUUAGCUAUG	CAUAGCUAAGGGAAACACC		[3-21]
357	CCUGAAAAAAAGGAGCUGA	UCAGCUCCUUUUUUUCAGG		[569-587]
358	GACUCAUUUCAUUCCUAAC	GUUAGGAAUGAAAUGAGUC		[1553-1571]
359	GACAAUCAACUCUAAUAGU	ACUAUUAGAGUUGAUUGUC		[1720-1738]
360	GGAAGAUGAUGAGCUACUG	CAGUAGCUCAUCAUCUUCC		[837-855]
361	AAAUGUCUGUAGCUCCUCA	UGAGGAGCUACAGACAUUU		[1145-1163]
362	GGCAGAUUGAAAAGGACAC	GUGUCCUUUUCAAUCUGCC		[1306-1324]
363	GUUUCAGCUCUUCCACCUA	UAGGUGGAAGAGCUGAAAC		[460-478]
364	GACCUGAGGAUUUAAGGGA	UCCCUUAAAUCCUCAGGUC		[1393-1411]
365	UUAUAUAAGCUCUAAGAGA	UCUCUUAGAGCUUAUAUAA		[989-1007]
366	ACUGGGCUGUACUUUGUAU	AUACAAAGUACAGCCCAGU		[713-731]
367	GUAUUUCCAGUGCAAUUGU	ACAAUUGCACUGGAAAUAC		[1581-1599]
368	GUGUUCUACACUCAUCUUA	UAAGAUGAGUGUAGAACAC		[1270-1288]
369	UAAGCAAGAGAGAUGUUUU	AAAACAUCUCUCUUGCUUA		[1531-1549]
370	CAAAAUGUCUGUAGCUCCU	AGGAGCUACAGACAUUUUG		[1143-1161]
371	CUGCUUUCUGGAGUGAAGU	ACUUCACUCCAGAAAGCAG		[665-683]
372	GAAUGCUUCCUGACAAUCA	UGAUUGUCAGGAAGCAUUC		[1709-1727]
373	GCUUAAAAAUCAUUGAUUG	CAAUCAAUGAUUUUUAAGC		[1739-1757]
374	CAGCCCUUCAAUUACCCAU	AUGGGUAAUUGAAGGGCUG		[164-182]
375	UCCUCUUGAGCAGUCAGCA	UGCUGACUGCUCAAGAGGA		[51-69]
376	GGGACUGUCUUUCAGAUAC	GUAUCUGAAAGACAGUCCC		[1366-1384]
377	UAUGGAAACUCUAUAAGAG	CUCUUAUAGAGUUUCCAUA		[18-36]
378	UGAGAGUAUUUAGGCAGAU	AUCUGCCUAAAUACUCUCA		[1294-1312]
379	CCAUCGGUGAAACUAACAG	CUGUUAGUUUCACCGAUGG		[1511-1529]
380	UUGCAUAAUAAGCUAAAGA	UCUUUAGCUUAUUAUGCAA		[1433-1451]
381	UCUCUCUGGUCAAUUUUGA	UCAAAAUUGACCAGAGAGA		[948-966]
382	GACUGAGAAGAAGUAAAAC	GUUUUACUUCUUCUCAGUC		[105-123]
383	AUGAUGAGCUACUGCACUA	UAGUGCAGUAGCUCAUCAU		[842-860]
384	GCACCGAGAAUGUUGUAUU	AAUACAACAUUCUCGGUGC		[1048-1066]
385	UGUGAUCAAUGAAACUGGG	CCCAGUUUCAUUGAUCACA		[700-718]
386	CUGAAAAAAAGGAGCUGAG	CUCAGCUCCUUUUUUUCAG		[570-588]
387	GUGACCUGAGGAUUUAAGG	CCUUAAAUCCUCAGGUCAC		[1391-1409]
388	GAACUCCGAGAGUCUACCA	UGGUAGACUCUCGGAGUUC		[494-512]
389	GAAAAAGCAGCUACCAGGU	ACCUGGUAGCUGCUUUUUC		[1253-1271]
390	UUUGUAUAUUCCAAAGUAU	AUACUUUGGAAUAUACAAA		[725-743]
391	UGAGCUCUCUCUGGUCAAU	AUUGACCAGAGAGAGCUCA		[943-961]
392	UUUGGUCAAGAUUUUGAAU	AUUCAAAAUCUUGACCAAA		[1694-1712]
393	AGGUGUUCUACACUCAUCU	AGAUGAGUGUAGAACACCU		[1268-1286]
394	GAUAAGCAAGAGAGAUGUU	AACAUCUCUCUUGCUUAUC		[1529-1547]
395	AUACAUGGUUGUGACCUGA	UCAGGUCACAACCAUGUAU		[1381-1399]
396	CACUUUGGGAUUCUUUCCA	UGGAAAGAAUCCCAAAGUG		[1010-1028]
397	AAGAAGACAUGAACCAAGU	ACUUGGUUCAUGUCUUCUU		[1103-1121]
398	AUCGGUGAAACUAACAGAU	AUCUGUUAGUUUCACCGAU		[1513-1531]
399	GGUCAAGUAAGAAGACAUG	CAUGUCUUCUUACUUGACC		[1095-1113]
400	AGGGUCUUCUUACAUGCAU	AUGCAUGUAAGAAGACCCU		[1072-1090]
401	UUGUGAAAUGAAAACAUGU	ACAUGUUUUCAUUUCACAA		[1815-1833]
402	UGAGACCACAGGGUUCAAA	UUUGAACCCUGUGGUCUCA		[1128-1146]
403	GAGGCUUGCAUAAUAAGCU	AGCUUAUUAUGCAAGCCUC		[1428-1446]
404	UCUUCCACCUACAGAAGGA	UCCUUCUGUAGGUGGAAGA		[468-486]
405	ACUUCUAAAUGCAUAUCCU	AGGAUAUGCAUUUAGAAGU		[1489-1507]
406	AGUGAAGUAUAAGAAGGGU	ACCCUUCUUAUACUUCACU		[676-694]
407	CUCACCUAAUGUUUAUGAG	CUCAUAAACAUUAGGUGAG		[1165-1183]
408	GUUCUUCCCUGUCCAACCU	AGGUUGGACAGGGAAGAAC		[242-260]
409	AUGACUAAAGAGAGAAUGU	ACAUUCUCUCUUUAGUCAU		[1636-1654]
410	AUUGUCAGCUACUAAUGAU	AUCAUUAGUAGCUGACAAU		[1754-1772]
411	GGCAAGUCCAACUCAAGGU	ACCUUGAGUUGGACUUGCC		[608-626]

412	CUGGUUGCCUUGGUAGGAU	AUCCUACCAAGGCAACCAG		[428-446]
413	GGUCAAUCUUGCAACAACC	GGUUGUUGCAAGAUUGACC		[752-770]
414	GAUACAUGGUUGUGACCUG	CAGGUCACAACCAUGUAUC		[1380-1398]
415	UGGGAUUCUUUCCAUUAUG	CAUAAUGGAAAGAAUCCCA		[1015-1033]
416	UAAGAGAAGCACUUUGGGA	UCCCAAAGUGCUUCUCUUA		[1001-1019]
417	AGGGAGAAGCAUGAAAAAG	CUUUUUCAUGCUUCUCCCU		[1241-1259]
418	UUGAAAAGGACACCUUUUA	UAAAAGGUGUCCUUUUCAA		[1312-1330]
419	UAAAAAUCAUUGAUUGUCA	UGACAAUCAAUGAUUUUUA		[1742-1760]
420	AAUAUGGGUUGCAUUUGGU	ACCAAAUGCAACCCAUAUU		[1681-1699]
421	ACUUUGGGAUUCUUUCCAU	AUGGAAAGAAUCCCAAAGU		[1011-1029]
422	GGGAAGAUGAUGAGCUACU	AGUAGCUCAUCAUCUUCCC		[836-854]
423	GAAGAAGUAAAACCGUUUG	CAAACGGUUUUACUUCUUC		[111-129]
424	GCUCUCUCUGGUCAAUUUU	AAAAUUGACCAGAGAGAGC		[946-964]
425	UUCAGCUCUUCCACCUACA	UGUAGGUGGAAGAGCUGAA		[462-480]
426	UUUCCCUUAGCUAUGGAAA	UUUCCAUAGCUAAGGGAAA		[7-25]
427	AGAGAAGCACUUUGGGAUU	AAUCCCAAAGUGCUUCUCU		[1003-1021]
428	GCAUAAUAAGCUAAAGAGG	CCUCUUUAGCUUAUUAUGC		[1435-1453]
429	ACAAAUGGAGGAAUAUGAC	GUCAUAUUCCUCCAUUUGU		[1188-1206]
430	CUGAGAAGAAGUAAAACCG	CGGUUUUACUUCUUCUCAG		[107-125]
431	UGUGACCUGAGGAUUUAAG	CUUAAAUCCUCAGGUCACA		[1390-1408]
432	GCUCUAAGAGAAGCACUUU	AAAGUGCUUCUCUUAGAGC		[997-1015]
433	CCUAUGGAAUUGUCCUGCU	AGCAGGACAAUUCCAUAGG		[651-669]
434	AAGGACACCUUUUAACUCA	UGAGUUAAAAGGUGUCCUU		[1317-1335]
435	UCCUGCUUUCUGGAGUGAA	UUCACUCCAGAAAGCAGGA		[663-681]
436	UCUGUAGCUCCUCAACUCA	UGAGUUGAGGAGCUACAGA		[1150-1168]
437	UUGAUUGUCAGCUACUAAU	AUUAGUAGCUGACAAUCAA		[1751-1769]
438	UUAGCUAUGGAAACUCUAU	AUAGAGUUUCCAUAGCUAA		[13-31]
439	AAGAGAAGCACUUUGGGAU	AUCCCAAAGUGCUUCUCUU		[1002-1020]
440	UCAUGGUUCUGGUUGCCUU	AAGGCAACCAGAACCAUGA		[420-438]
441	UGUUCUACACUCAUCUUAG	CUAAGAUGAGUGUAGAACA		[1271-1289]
442	GAUUUAAGGGAUGGAAAAG	CUUUUCCAUCCCUUAAAUC		[1401-1419]
443	AAUGAAACUGGGCUGUACU	AGUACAGCCCAGUUUCAUU		[707-725]
444	AGGUCCAUGCCUCUGGAAU	AUUCCAGAGGCAUGGACCU		[623-641]
445	ACAGAUAAGCAAGAGAGAU	AUCUCUCUUGCUUAUCUGU		[1526-1544]
446	CUGUCUUUCAGAUACAUGG	CCAUGUAUCUGAAAGACAG		[1370-1388]
447	AAGAGAGGGAACCACAGCA	UGCUGUGGUUCCCUCUCUU		[374-392]
448	UCUUCUUACAUGCAUUUGA	UCAAAUGCAUGUAAGAAGA		[1076-1094]
449	UGGGUUGCAUUUGGUCAAG	CUUGACCAAAUGCAACCCA		[1685-1703]
450	AGAAGUAAAACCGUUUGCU	AGCAAACGGUUUUACUUCU		[113-131]
451	CAGUGUUCAAUCUUACCAG	CUGGUAAGAUUGAACACUG		[897-915]
452	ACUCAUUUCAUUCCUAACA	UGUUAGGAAUGAAAUGAGU		[1554-1572]
453	GCCCAUUUAACAGGCAAGU	ACUUGCCUGUUAAAUGGGC		[596-614]
454	GUAGCUCCUCAACUCACCU	AGGUGAGUUGAGGAGCUAC		[1153-1171]
455	AGUAAGAAGACAUGAACCA	UGGUUCAUGUCUUCUUACU		[1100-1118]
456	AGCCUCUACAGGACUGAGA	UCUCAGUCCUGUAGAGGCU		[94-112]
457	UUGAGGUCAAGUAAGAAGA	UCUUCUUACUUGACCUCAA		[1091-1109]
458	UUGUGAUGUUUUUCAUGGU	ACCAUGAAAAACAUCACAA		[408-426]
459	UAUGGGUUGCAUUUGGUCA	UGACCAAAUGCAACCCAUA		[1683-1701]
460	CAAGUAAGAAGACAUGAAC	GUUCAUGUCUUCUUACUUG		[1098-1116]
461	CUACAGGACUGAGAAGAAG	CUUCUUCUCAGUCCUGUAG		[99-117]
462	GAAUGGGAAGACACCUAUG	CAUAGGUGUCUUCCCAUUC		[638-656]
463	UAAAGAGAGAAUGUAGAUA	UAUCUACAUUCUCUCUUUA		[1641-1659]
464	GGUCUUCUUACAUGCAUUU	AAAUGCAUGUAAGAAGACC		[1074-1092]
465	UGUUGUAUUCAGUGAGGGU	ACCCUCACUGAAUACAACA		[1058-1076]
466	CAUCUUAGUGCCUGAGAGU	ACUCUCAGGCACUAAGAUG		[1282-1300]
467	UUUUGUGAAAUGAAAACAU	AUGUUUUCAUUUCACAAAA		[1813-1831]

468	GCAUGAAAAAGCAGCUACC	GGUAGCUGCUUUUUCAUGC		[1249-1267]
469	AUCUUUGGAGAAGCAAAUA	UAUUUGCUUCUCCAAAGAU		[532-550]
470	CAUGGUUCUGGUUGCCUUG	CAAGGCAACCAGAACCAUG		[421-439]
471	AAGCAAGAGAGAUGUUUUG	CAAAACAUCUCUCUUGCUU		[1532-1550]
472	ACAUGGUUGUGACCUGAGG	CCUCAGGUCACAACCAUGU		[1383-1401]
473	CUCAUUUCAUUCCUAACAC	GUGUUAGGAAUGAAAUGAG		[1555-1573]
474	UUGAAUGCUUCCUGACAAU	AUUGUCAGGAAGCAUUCAA		[1707-1725]
475	UCCUCAACUCACCUAAUGU	ACAUUAGGUGAGUUGAGGA		[1158-1176]
476	CUUGACACCUCAGCCUCUA	UAGAGGCUGAGGUGUCAAG		[83-101]
477	AUUAUGAUUCUUUGUUACA	UGUAACAAAGAAUCAUAAU		[1028-1046]
478	CUAAGAGAAGCACUUUGGG	CCCAAAGUGCUUCUCUUAG		[1000-1018]
479	UUCAGUGAGGGUCUUCUUA	UAAGAAGACCCUCACUGAA		[1065-1083]
480	UAAAAAGUAUAUGUUAGGA	UCCUAACAUAUACUUUUUA		[1836-1854]
481	AUAUUGUGAAGUACAUAUU	AAUAUGUACUUCACAAUAU		[1657-1675]
482	UGUGCAUUUUUGUGAAAUG	CAUUUCACAAAAAUGCACA		[1806-1824]
483	AAGUACAUAUUAGGAAAAU	AUUUUCCUAAUAUGUACUU		[1665-1683]
484	ACACCUAUGGAAUUGUCCU	AGGACAAUUCCAUAGGUGU		[648-666]
485	CUUAGUGCCUGAGAGUAUU	AAUACUCUCAGGCACUAAG		[1285-1303]
486	GCAAGAGAGAUGUUUUGGG	CCCAAAACAUCUCUCUUGC		[1534-1552]
487	GAGAAGCAUGAAAAAGCAG	CUGCUUUUUCAUGCUUCUC		[1244-1262]
488	GCAUCUUCACUUCUAAAUG	CAUUUAGAAGUGAAGAUGC		[1481-1499]
489	CCUCUACAGGACUGAGAAG	CUUCUCAGUCCUGUAGAGG		[96-114]
490	GGAAAAGGAAGACUAGAGG	CCUCUAGUCUUCCUUUUCC		[1413-1431]
491	UCAAUUUUGAGGAAUCUCA	UGAGAUUCCUCAAAAUUGA		[957-975]
492	UGGAAAAGGAAGACUAGAG	CUCUAGUCUUCCUUUUCCA		[1412-1430]
493	CCUGAGGAUUUAAGGGAUG	CAUCCCUUAAAUCCUCAGG		[1395-1413]
494	AAAAGGAGCUGAGGAAAGU	ACUUUCCUCAGCUCCUUUU		[576-594]
495	UGUCUUUCAGAUACAUGGU	ACCAUGUAUCUGAAAGACA		[1371-1389]
496	AGCUACUAAUGAUGUUUUC	GAAAACAUCAUUAGUAGCU		[1760-1778]
497	CUAUAAGAGAGAUCCAGCU	AGCUGGAUCUCUCUUAUAG		[28-46]
498	UUCUAAAUGCAUAUCCUGA	UCAGGAUAUGCAUUUAGAA		[1491-1509]
499	GCAGUGUUCAAUCUUACCA	UGGUAAGAUUGAACACUGC		[896-914]
500	UGGUUGCCUUGGUAGGAUU	AAUCCUACCAAGGCAACCA		[429-447]

Table B 18 HTRA2 - HtrA serine peptidase 2

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-73747817 :603-1979	Human-73747818 :603-1688
1	CGCUGAGGAUUCAGACUAA	UUAGUCUGAAUCCUCAGCG		[1294-1312]	[1294-1312]
2	GCAACAUAUUAUAGUAAAA	UUUUACUAUAAUAUGUUGC		[2166-2184]	[1875-1893]
3	GAGAAACACUGACCUUAUA	UAUAAGGUCAGUGUUUCUC		[1936-1954]	[1645-1663]
4	GGGAGCAGAUGGUACAAAA	UUUUGUACCAUCUGCUCCC		[1852-1870]	[1561-1579]
5	CAAUGUGGAAUACAUUCAA	UUGAAUGUAUUCCACAUUG		[1472-1490]	-
6	CGAGAAACACUGACCUUAU	AUAAGGUCAGUGUUUCUCG		[1935-1953]	[1644-1662]
7	CCAAAAGGCUAGAGGUAAA	UUUACCUCUAGCCUUUUGG		[2217-2235]	[1926-1944]
8	GGGAGGUGAUUGGAGUGAA	UUCACUCCAAUCACCUCCC	Rat,Ms,GP	[1546-1564]	[1351-1369]
9	CGGAGUCAGUACAACUUCA	UGAAGUUGUACUGACUCCG		[1032-1050]	[1032-1050]
10	CCUGAGGGAAGCUCCAUAA	UUAUGGAGCUUCCCUCAGG		[209-227]	[209-227]
11	UGCUGAAGAUGUUUAUGAA	UUCAUAAACAUCUUCAGCA	Ms	[1871-1889]	[1580-1598]
12	CGAUGUUCAGCAUGGUGUA	UACACCAUGCUGAACAUCG		[1757-1775]	-
13	GGUGAAAACUUCUGCUUGA	UCAAGCAGAAGUUUUCACC		[2447-2465]	[2156-2174]
14	AAACCAAUGUGGAAUACAU	AUGUAUUCCACAUUGGUUU	GP	[1468-1486]	-
15	UGGUGUACUCAUCCAUAAA	UUUAUGGAUGAGUACACCA		[1769-1787]	-
16	GGCUCUGAAGAAUCACAGA	UCUGUGAUUCUUCAGAGCC		[2115-2133]	[1824-1842]
17	CACCGAGACAGAGGGUUAA	UUAACCCUCUGUCUCGGUG		[2049-2067]	[1758-1776]

18	GAGACAGAGGGUUAAAUGA	UCAUUUAACCCUCUGUCUC		[2053-2071]	[1762-1780]
19	CCUGGGCUCUGAAGAAUCA	UGAUUCUUCAGAGCCCAGG		[2111-2129]	[1820-1838]
20	GCAGCUAUUGAUUUUGGAA	UUCCAAAAUCAAUAGCUGC	Chn,Ms,GP	[1497-1515]	-
21	GGAAUACAUUCAAACUGAU	AUCAGUUUGAAUGUAUUCC		[1478-1496]	-
22	CAGCAUCCUUGCUGAACUA	UAGUUCAGCAAGGAUGCUG	GP	[1715-1733]	-
23	CAGAAUGAAUAGAUCACCA	UGGUGAUCUAUUCAUUCUG		[1972-1990]	[1681-1699]
24	CAUGAAGGUCACAGCUGGA	UCCAGCUGUGACCUUCAUG		[1568-1586]	[1373-1391]
25	AGACAGAGGGUUAAAUGAA	UUCAUUUAACCCUCUGUCU		[2054-2072]	[1763-1781]
26	GAAGCUGUUCGAACCCAAU	AUUGGGUUCGAACAGCUUC	Ms	[1887-1905]	[1596-1614]
27	GGCUAGAGGUAAAGCUGUA	UACAGCUUUACCUCUAGCC		[2223-2241]	[1932-1950]
28	CCCUGAGGUCACAGAAUGA	UCAUUCUGUGACCUCAGGG		[1961-1979]	[1670-1688]
29	GGAGCAGAUGGUACAAAAU	AUUUUGUACCAUCUGCUCC		[1853-1871]	[1562-1580]
30	GGAGGUGAUUGGAGUGAAC	GUUCACUCCAAUCACCUCC	Rat,Ms,GP	[1547-1565]	[1352-1370]
31	CAGAAACACUUUUUAUAUA	UAUAUAAAAAGUGUUUCUG		[2130-2148]	[1839-1857]
32	GAUGGUACAAAAUGCUGAA	UUCAGCAUUUUGUACCAUC		[1859-1877]	[1568-1586]
33	AAUGUGGAAUACAUUCAAA	UUUGAAUGUAUUCCACAUU		[1473-1491]	-
34	CUAGCAACAUAUUAUAGUA	UACUAUAAUAUGUUGCUAG		[2163-2181]	[1872-1890]
35	ACUCCUGGGCUCUGAAGAA	UUCUUCAGAGCCCAGGAGU		[2108-2126]	[1817-1835]
36	CAUCCUGACCUCCUAUUAA	UUAAUAGGAGGUCAGGAUG		[2276-2294]	[1985-2003]
37	CAUGGUGUACUCAUCCAUA	UAUGGAUGAGUACACCAUG	Chn,GP	[1767-1785]	-
38	GGUACAAAAUGCUGAAGAU	AUCUUCAGCAUUUUGUACC		[1862-1880]	[1571-1589]
39	CAAGCUUUCCCGAUGUUCA	UGAACAUCGGGAAAGCUUG		[1747-1765]	-
40	CACAGAAACACUUUUUAUA	UAUAAAAAGUGUUUCUGUG		[2128-2146]	[1837-1855]
41	CAGCUAUUGAUUUUGGAAA	UUUCCAAAAUCAAUAGCUG	Chn,Ms, GP	[1498-1516]	-
42	CUCUGAAGAAUCACAGAAA	UUUCUGUGAUUCUUCAGAG		[2117-2135]	[1826-1844]
43	CUUACCGGUGCGAGUCAAA	UUUGACUCGCACCGGUAAG		[171-189]	[171-189]
44	GUCCCUUUGCACUGCAGAA	UUCUGCAGUGCAAAGGGAC		[1387-1405]	-
45	AAUAGAUCACCAAGAGUAU	AUACUCUUGGUGAUCUAUU		[1979-1997]	[1688-1706]
46	CAUGGGAAGUCCCUUUGCA	UGCAAAGGGACUUCCCAUG		[1379-1397]	-
47	AUGGUGUACUCAUCCAUAA	UUAUGGAUGAGUACACCAU	Chn,GP	[1768-1786]	-
48	AACUGAUGCAGCUAUUGAU	AUCAAUAGCUGCAUCAGUU		[1490-1508]	-
49	CUCUGAAGGAGGGUGAAAA	UUUUCACCCUCCUUCAGAG		[2436-2454]	[2145-2163]
50	AGAAUGAAUAGAUCACCAA	UUGGUGAUCUAUUCAUUCU		[1973-1991]	[1682-1700]
51	CUGACCUCCUAUUAAAGAA	UUCUUUAAUAGGAGGUCAG		[2280-2298]	[1989-2007]
52	AGCAACAUAUUAUAGUAAA	UUUACUAUAAUAUGUUGCU		[2165-2183]	[1874-1892]
53	GACCUCCUAUUAAAGAAAA	UUUUCUUUAAUAGGAGGUC		[2282-2300]	[1991-2009]
54	GAAUAGAUCACCAAGAGUA	UACUCUUGGUGAUCUAUUC		[1978-1996]	[1687-1705]
55	UACCUAGCAACAUAUUAUA	UAUAAUAUGUUGCUAGGUA		[2160-2178]	[1869-1887]
56	GAGUGAACACCAUGAAGGU	ACCUUCAUGGUGUUCACUC	Rat,Ms	[1558-1576]	[1363-1381]
57	CCUCUGAAGGAGGGUGAAA	UUUCACCCUCCUUCAGAGG		[2435-2453]	[2144-2162]
58	AAGAAUUCCUCCUCCGGAA	UUCCGGAGGAGGAAUUCUU		[1644-1662]	[1449-1467]
59	AAUUAUACCUAGCAACAUA	UAUGUUGCUAGGUAUAAUU		[2155-2173]	[1864-1882]
60	CCGAGACAGAGGGUUAAAU	AUUUAACCCUCUGUCUCGG		[2051-2069]	[1760-1778]
61	UGAAGCUGUUCGAACCCAA	UUGGGUUCGAACAGCUUCA	Ms	[1886-1904]	[1595-1613]
62	GUCCGUGUGAGACUGCUAA	UUAGCAGUCUCACACGGAC		[1218-1236]	[1218-1236]
63	UGACCAUCCUGACCUCCUA	UAGGAGGUCAGGAUGGUCA		[2272-2290]	[1981-1999]
64	CGGCAUUGUUAGCUCUGCU	AGCAGAGCUAACAAUGCCG		[1418-1436]	-
65	UGCAGCUAUUGAUUUUGGA	UCCAAAAUCAAUAGCUGCA	Chn,Ms,GP	[1496-1514]	-
66	GAGGGAAGCUCCAUAACUG	CAGUUAUGGAGCUUCCCUC		[212-230]	[212-230]
67	UGGAAUACAUUCAAACUGA	UCAGUUUGAAUGUAUUCCA		[1477-1495]	-
68	UGAUGAGUGCGGUUGCUGA	UCAGCAACCGCACUCAUCA		[2492-2510]	[2201-2219]
69	CCCUUCUGAUCGUCUUCGA	UCGAAGACGAUCAGAAGGG		[1601-1619]	[1406-1424]
70	CUGCCGUGGUCUAUAUCGA	UCGAUAUAGACCACGGCAG		[1078-1096]	[1078-1096]
71	GAAGAAUCACAGAAACACU	AGUGUUUCUGUGAUUCUUC		[2121-2139]	[1830-1848]
72	CAUUCAAACUGAUGCAGCU	AGCUGCAUCAGUUUGAAUG		[1484-1502]	-

73	GCUCUGAAGAAUCACAGAA	UUCUGUGAUUCUUCAGAGC		[2116-2134]	[1825-1843]
74	CACCUGCCGUGGUCUAUAU	AUAUAGACCACGGCAGGUG		[1075-1093]	[1075-1093]
75	UUGGAGUGAACACCAUGAA	UUCAUGGUGUUCACUCCAA	Rat,Ms	[1555-1573]	[1360-1378]
76	ACCGAGACAGAGGGUUAAA	UUUAACCCUCUGUCUCGGU		[2050-2068]	[1759-1777]
77	AUCCUGACCUCCUAUUAAA	UUUAAUAGGAGGUCAGGAU		[2277-2295]	[1986-2004]
78	UGAGGUCACAGAAUGAAUA	UAUUCAUUCUGUGACCUCA		[1964-1982]	[1673-1691]
79	CCUGAGGUCACAGAAUGAA	UUCAUUCUGUGACCUCAGG		[1962-1980]	[1671-1689]
80	UCGCAGAUGUGGUGGAGAA	UUCUCCACCACAUCUGCGA	Ms	[1051-1069]	[1051-1069]
81	GCCUCAGAGAACUCUGGAA	UUCCAGAGUUCUCUGAGGC		[885-903]	[885-903]
82	GGGCAGUGCUGUUGUUGUU	AACAACAACAGCACUGCCC		[946-964]	[946-964]
83	CCCAAACCAAUGUGGAAUA	UAUUCCACAUUGGUUUGGG	GP	[1465-1483]	-
84	AGAUGUUUAUGAAGCUGUU	AACAGCUUCAUAAACAUCU	Ms	[1877-1895]	[1586-1604]
85	CUGAGGUCACAGAAUGAAU	AUUCAUUCUGUGACCUCAG		[1963-1981]	[1672-1690]
86	UACCGGUGCGAGUCAAAGA	UCUUUGACUCGCACCGGUA		[173-191]	[173-191]
87	AAUGAAUAGAUCACCAAGA	UCUUGGUGAUCUAUUCAUU		[1975-1993]	[1684-1702]
88	GGACGAGAAACACUGACCU	AGGUCAGUGUUUCUCGUCC		[1932-1950]	[1641-1659]
89	CGAGACAGAGGGUUAAAUG	CAUUUAACCCUCUGUCUCG		[2052-2070]	[1761-1779]
90	GAAGGAGGGUGAAAACUUC	GAAGUUUUCACCCUCCUUC		[2440-2458]	[2149-2167]
91	GAAUGAAUAGAUCACCAAG	CUUGGUGAUCUAUUCAUUC		[1974-1992]	[1683-1701]
92	GGUCACAGAAUGAAUAGAU	AUCUAUUCAUUCUGUGACC		[1967-1985]	[1676-1694]
93	AGUACAACUUCAUCGCAGA	UCUGCGAUGAAGUUGUACU		[1039-1057]	[1039-1057]
94	UGAUUGGAGUGAACACCAU	AUGGUGUUCACUCCAAUCA	Rat,Ms	[1552-1570]	[1357-1375]
95	CACCAAAAGGCUAGAGGUA	UACCUCUAGCCUUUUGGUG		[2215-2233]	[1924-1942]
96	UGAUGAUGCUGACCCUGAG	CUCAGGGUCAGCAUCAUCA		[1693-1711]	[1498-1516]
97	CUCCAUAACUGCUGCUUCA	UGAAGCAGCAGUUAUGGAG		[220-238]	[220-238]
98	GGAGUCAGUACAACUUCAU	AUGAAGUUGUACUGACUCC		[1033-1051]	[1033-1051]
99	CCCGGAGUCAGUACAACUU	AAGUUGUACUGACUCCGGG		[1030-1048]	[1030-1048]
100	UGACAGUUCCACAUCCAUA	UAUGGAUGUGGAACUGUCA		[2463-2481]	[2172-2190]
101	UGACCUCCUAUUAAAGAAA	UUUCUUUAAUAGGAGGUCA		[2281-2299]	[1990-2008]
102	UGGGCUCUGAAGAAUCACA	UGUGAUUCUUCAGAGCCCA		[2113-2131]	[1822-1840]
103	CUGAAGAAUCACAGAAACA	UGUUUCUGUGAUUCUUCAG		[2119-2137]	[1828-1846]
104	GACAUGGGUUUCUUGGUAA	UUACCAAGAAACCCAUGUC		[2509-2527]	[2218-2236]
105	GAAGAAUUCCUCCUCCGGA	UCCGGAGGAGGAAUUCUUC		[1643-1661]	[1448-1466]
106	CCCUUUGCACUGCAGAACA	UGUUCUGCAGUGCAAAGGG	Ms	[1389-1407]	-
107	CUCCUAUUAAAGAAAAUGA	UCAUUUUCUUUAAUAGGAG		[2285-2303]	[1994-2012]
108	CAUCUUUUGUGGGCAGUUA	UAACUGCCCACAAAAGAUG		[2312-2330]	[2021-2039]
109	AACCAAUGUGGAAUACAUU	AAUGUAUUCCACAUUGGUU	GP	[1469-1487]	-
110	GACAGAGGGUUAAAUGAAC	GUUCAUUUAACCCUCUGUC		[2055-2073]	[1764-1782]
111	AUAAAAUUAUACCUAGCAA	UUGCUAGGUAUAAUUUUAU	Rat,Ms	[2151-2169]	[1860-1878]
112	GUGAUUGGAGUGAACACCA	UGGUGUUCACUCCAAUCAC	Rat,Ms	[1551-1569]	[1356-1374]
113	CAGAGGGUUAAAUGAACCA	UGGUUCAUUUAACCCUCUG		[2057-2075]	[1766-1784]
114	CUGCUUGACAGUUCCACAU	AUGUGGAACUGUCAAGCAG		[2458-2476]	[2167-2185]
115	CUGCAGAACACGAUCACAU	AUGUGAUCGUGUUCUGCAG	Chn,Ms	[1398-1416]	-
116	AUGGGCUCAUUGUCACCAA	UUGGUGACAAUGAGCCCAU		[1171-1189]	[1171-1189]
117	GCCGUGGUCUAUAUCGAGA	UCUCGAUAUAGACCACGGC		[1080-1098]	[1080-1098]
118	CAAACCAAUGUGGAAUACA	UGUAUUCCACAUUGGUUUG	GP	[1467-1485]	-
119	CCGUGGUCUAUAUCGAGAU	AUCUCGAUAUAGACCACGG		[1081-1099]	[1081-1099]
120	AAAUGCUGAAGAUGUUUAU	AUAAACAUCUUCAGCAUUU	Rat,Ms	[1868-1886]	[1577-1595]
121	CUACAGCUUCGAGAACCAA	UUGGUUCUCGAAGCUGUAG	Chn,GP	[1731-1749]	-
122	GCAUGGUGUACUCAUCCAU	AUGGAUGAGUACACCAUGC	Chn,GP	[1766-1784]	-
123	CUUGACAGUUCCACAUCCA	UGGAUGUGGAACUGUCAAG		[2461-2479]	[2170-2188]
124	ACAAAAUGCUGAAGAUGUU	AACAUCUUCAGCAUUUUGU	Rat,Ms	[1865-1883]	[1574-1592]
125	GCAUCCUUGCUGAACUACA	UGUAGUUCAGCAAGGAUGC	GP	[1717-1735]	-
126	CCUGACCUCCUAUUAAAGA	UCUUUAAUAGGAGGUCAGG		[2279-2297]	[1988-2006]
127	AGAUGUGGUGGAGAAGACA	UGUCUUCUCCACCACAUCU	Ms	[1055-1073]	[1055-1073]
128	CCAUCCUGACCUCCUAUUA	UAAUAGGAGGUCAGGAUGG		[2275-2293]	[1984-2002]

129	GAGGGUGAAAACUUCUGCU	AGCAGAAGUUUUCACCCUC		[2444-2462]	[2153-2171]
130	GUUCGAACCCAAUCCCAGU	ACUGGGAUUGGGUUCGAAC		[1893-1911]	[1602-1620]
131	ACUACAGCUUCGAGAACCA	UGGUUCUCGAAGCUGUAGU	GP	[1730-1748]	-
132	ACCUCCUAUUAAAGAAAAU	AUUUUCUUUAAUAGGAGGU		[2283-2301]	[1992-2010]
133	GUUCCACAUCCAUAGUGCA	UGCACUAUGGAUGUGGAAC		[2468-2486]	[2177-2195]
134	CCAAUGUGGAAUACAUUCA	UGAAUGUAUUCCACAUUGG	Chn,GP	[1471-1489]	-
135	GUGUACUCAUCCAUAAAGU	ACUUUAUGGAUGAGUACAC		[1771-1789]	-
136	UCUGCUUGACAGUUCCACA	UGUGGAACUGUCAAGCAGA		[2457-2475]	[2166-2184]
137	CGAUCACAUCCGGCAUUGU	ACAAUGCCGGAUGUGAUCG		[1408-1426]	-
138	GUCAGGUGCUGCUCUUUGU	ACAAAGAGCAGCACCUGAC		[2331-2349]	[2040-2058]
139	GGUAAGCUCCUGAGGUAAU	AUUACCUCAGGAGCUUACC	Rat	[2523-2541]	[2232-2250]
140	UGGUAAGCUCCUGAGGUAA	UUACCUCAGGAGCUUACCA	Rat	[2522-2540]	[2231-2249]
141	UGAGGAUUCAGACUAAGGA	UCCUUAGUCUGAAUCCUCA		[1297-1315]	[1297-1313](17/17)
142	CAUCCAUAGUGCAUGGUCU	AGACCAUGCACUAUGGAUG		[2474-2492]	[2183-2201]
143	AGGUCACAGAAUGAAUAGA	UCUAUUCAUUCUGUGACCU		[1966-1984]	[1675-1693]
144	CAUAACUGCUGCUUCAGGA	UCCUGAAGCAGCAGUUAUG		[223-241]	[223-241]
145	ACAGAAACACUUUUUAUAU	AUAUAAAAAGUGUUUCUGU		[2129-2147]	[1838-1856]
146	CCAGCAUCCUUGCUGAACU	AGUUCAGCAAGGAUGCUGG	GP	[1714-1732]	-
147	GAGGUGAUUGGAGUGAACA	UGUUCACUCCAAUCACCUC	Rat,Ms,GP	[1548-1566]	[1353-1371]
148	CAUAGUGCAUGGUCUGAUG	CAUCAGACCAUGCACUAUG		[2478-2496]	[2187-2205]
149	GACGAGAAACACUGACCUU	AAGGUCAGUGUUUCUCGUC		[1933-1951]	[1642-1660]
150	UGACGUCAGGAACUUCUGA	UCAGAAGUUCCUGACGUCA		[718-736]	[718-736]
151	UGAAGGUCACAGCUGGAAU	AUUCCAGCUGUGACCUUCA	GP	[1570-1588]	[1375-1393]
152	CCACCAAAAGGCUAGAGGU	ACCUCUAGCCUUUUGGUGG		[2214-2232]	[1923-1941]
153	CCAAGAGUAUGAGGCUCCU	AGGAGCCUCAUACUCUUGG		[1988-2006]	[1697-1715]
154	CUGGGAGCAAAGAUUCCCA	UGGGAAUCUUUGCUCCCAG		[2389-2407]	[2098-2116]
155	GAGGGUUAAAUGAACCAGU	ACUGGUUCAUUUAACCCUC		[2059-2077]	[1768-1786]
156	AUACCUAGCAACAUAUUAU	AUAAUAUGUUGCUAGGUAU		[2159-2177]	[1868-1886]
157	ACUGCAGAACACGAUCACA	UGUGAUCGUGUUCUGCAGU	Ms	[1397-1415]	-
158	UGGGAGGGCUGGAUCUUUU	AAAAGAUCCAGCCCUCCCA		[2192-2210]	[1901-1919]
159	AGAGUAUGAGGCUCCUGCU	AGCAGGAGCCUCAUACUCU		[1991-2009]	[1700-1718]
160	GCAGAUGUGGUGGAGAAGA	UCUUCUCCACCACAUCUGC	Ms, GP	[1053-1071]	[1053-1071]
161	GGGCUCUGAAGAAUCACAG	CUGUGAUUCUUCAGAGCCC		[2114-2132]	[1823-1841]
162	AGUCCGUGUGAGACUGCUA	UAGCAGUCUCACACGGACU		[1217-1235]	[1217-1235]
163	GAGCAGUAGGAAGCAGUCA	UGACUGCUUCCUACUGCUC		[68-86]	[68-86]
164	UGGAGUGAACACCAUGAAG	CUUCAUGGUGUUCACUCCA	Rat,Ms	[1556-1574]	[1361-1379]
165	CAUUGUCACCAACGCCCAU	AUGGGCGUUGGUGACAAUG		[1178-1196]	[1178-1196]
166	GAGAACCAAGCUUUCCCGA	UCGGGAAAGCUUGGUUCUC		[1741-1759]	-
167	AAACUGAUGCAGCUAUUGA	UCAAUAGCUGCAUCAGUUU		[1489-1507]	-
168	GCAACGCUGAGGAUUCAGA	UCUGAAUCCUCAGCGUUGC		[1290-1308]	[1290-1308]
169	CACAAUUCCCGGCAUUCGU	ACGAAUGCCGGGAAUUGUG		[427-445]	[427-445]
170	UGACAUGGGUUUCUUGGUA	UACCAAGAAACCCAUGUCA		[2508-2526]	[2217-2235]
171	ACACUGACCUUAUAUGUGA	UCACAUAUAAGGUCAGUGU		[1941-1959]	[1650-1668]
172	UGUUUAUGAAGCUGUUCGA	UCGAACAGCUUCAUAAACA	Ms	[1880-1898]	[1589-1607]
173	UGUGGAAUACAUUCAAACU	AGUUUGAAUGUAUUCCACA		[1475-1493]	-
174	UGAUGCAGCUAUUGAUUUU	AAAAUCAAUAGCUGCAUCA	Chn,GP	[1493-1511]	-
175	GAGGUCACAGAAUGAAUAG	CUAUUCAUUCUGUGACCUC		[1965-1983]	[1674-1692]
176	AGAUCACCAAGAGUAUGAG	CUCAUACUCUUGGUGAUCU		[1982-2000]	[1691-1709]
177	UGAGGGAAGCUCCAUAACU	AGUUAUGGAGCUUCCCUCA		[211-229]	[211-229]
178	UUGGUAAGCUCCUGAGGUA	UACCUCAGGAGCUUACCAA		[2521-2539]	[2230-2248]
179	UAGAUCACCAAGAGUAUGA	UCAUACUCUUGGUGAUCUA		[1981-1999]	[1690-1708]
180	UCUUACCGGUGCGAGUCAA	UUGACUCGCACCGGUAAGA		[170-188]	[170-188]
181	GUUUAUGAAGCUGUUCGAA	UUCGAACAGCUUCAUAAAC	Ms	[1881-1899]	[1590-1608]
182	AGUAAAAAAUGAGGUGGGA	UCCCACCUCAUUUUUUACU		[2178-2196]	[1887-1905]
183	CAUUGUUAGCUCUGCUCAG	CUGAGCAGAGCUAACAAUG		[1421-1439]	-

184	CUGUUCGAACCCAAUCCCA	UGGGAUUGGGUUCGAACAG		[1891-1909]	[1600-1618]
185	UCACAGAAACACUUUUUAU	AUAAAAAGUGUUUCUGUGA		[2127-2145]	[1836-1854]
186	UCAAACUGAUGCAGCUAUU	AAUAGCUGCAUCAGUUUGA		[1487-1505]	-
187	CAUCCUUGCUGAACUACAG	CUGUAGUUCAGCAAGGAUG	GP	[1718-1736]	-
188	GAGCAAAGAUUCCCAUGCU	AGCAUGGGAAUCUUUGCUC		[2393-2411]	[2102-2120]
189	AGAAACACUGACCUUAUAU	AUAUAAGGUCAGUGUUUCU		[1937-1955]	[1646-1664]
190	GAAUCACAGAAACACUUUU	AAAAGUGUUUCUGUGAUUC		[2124-2142]	[1833-1851]
191	UGGUCUAUAUCGAGAUCCU	AGGAUCUCGAUAUAGACCA	Rat,Ms	[1084-1102]	[1084-1102]
192	AUCACAUCCGGCAUUGUUA	UAACAAUGCCGGAUGUGAU		[1410-1428]	-
193	UGAGGCUCCUGCUCUGAUU	AAUCAGAGCAGGAGCCUCA		[1997-2015]	[1706-1724]
194	UGAACUACAGCUUCGAGAA	UUCUCGAAGCUGUAGUUCA	GP	[1727-1745]	-
195	UAGCAACAUAUUAUAGUAA	UUACUAUAAUAUGUUGCUA		[2164-2182]	[1873-1891]
196	AGACCACAAUUCCCGGCAU	AUGCCGGGAAUUGUGGUCU		[423-441]	[423-441]
197	CUCCUGGGCUCUGAAGAAU	AUUCUUCAGAGCCCAGGAG		[2109-2127]	[1818-1836]
198	UGAAAACUUCUGCUUGACA	UGUCAAGCAGAAGUUUUCA		[2449-2467]	[2158-2176]
199	AGGUGAUUGGAGUGAACAC	GUGUUCACUCCAAUCACCU	Rat,Ms,GP	[1549-1567]	[1354-1372]
200	GAAGUCCCUUUGCACUGCA	UGCAGUGCAAAGGGACUUC		[1384-1402]	-
201	UCCCAGCAUCCUUGCUGAA	UUCAGCAAGGAUGCUGGGA	GP	[1712-1730]	-
202	CAUCCCUUCUGAUCGUCUU	AAGACGAUCAGAAGGGAUG		[1598-1616]	[1403-1421]
203	GCACUGCAGAACACGAUCA	UGAUCGUGUUCUGCAGUGC	Ms	[1395-1413]	-
204	UAUACCUAGCAACAUAUUA	UAAUAUGUUGCUAGGUAUA		[2158-2176]	[1867-1885]
205	AAGCUUUCCCGAUGUUCAG	CUGAACAUCGGGAAAGCUU		[1748-1766]	-
206	UACUCAUCCAUAAAGUCAU	AUGACUUUAUGGAUGAGUA		[1774-1792]	-
207	AAAAUUAUACCUAGCAACA	UGUUGCUAGGUAUAAUUUU	Rat	[2153-2171]	[1862-1880]
208	AGAGAACUCUGGAACCCGU	ACGGGUUCCAGAGUUCUCU		[890-908]	[890-908]
209	UGAAGGAGGGUGAAAACUU	AAGUUUUCACCCUCCUUCA		[2439-2457]	[2148-2166]
210	CUUCUGCUUGACAGUUCCA	UGGAACUGUCAAGCAGAAG		[2455-2473]	[2164-2182]
211	UCGCAACGCUGAGGAUUCA	UGAAUCCUCAGCGUUGCGA		[1288-1306]	[1288-1306]
212	AUGAAUAGAUCACCAAGAG	CUCUUGGUGAUCUAUUCAU		[1976-1994]	[1685-1703]
213	UGAGUGCGGUUGCUGACAU	AUGUCAGCAACCGCACUCA		[2495-2513]	[2204-2222]
214	CAGAUGUGGUGGAGAAGAC	GUCUUCUCCACCACAUCUG	Ms, GP	[1054-1072]	[1054-1072]
215	AUACAUUCAAACUGAUGCA	UGCAUCAGUUUGAAUGUAU		[1481-1499]	-
216	GAACCAAGCUUUCCCGAUG	CAUCGGGAAAGCUUGGUUC		[1743-1761]	-
217	UCACAGAAUGAAUAGAUCA	UGAUCUAUUCAUUCUGUGA		[1969-1987]	[1678-1696]
218	AUUGGAGUGAACACCAUGA	UCAUGGUGUUCACUCCAAU	Rat,Ms	[1554-1572]	[1359-1377]
219	UGAAUAGAUCACCAAGAGU	ACUCUUGGUGAUCUAUUCA		[1977-1995]	[1686-1704]
220	CCUAGCAACAUAUUAUAGU	ACUAUAAUAUGUUGCUAGG		[2162-2180]	[1871-1889]
221	GCAGAUGGUACAAAAUGCU	AGCAUUUUGUACCAUCUGC		[1856-1874]	[1565-1583]
222	GACAGUUCCACAUCCAUAG	CUAUGGAUGUGGAACUGUC		[2464-2482]	[2173-2191]
223	ACUGAUGCAGCUAUUGAUU	AAUCAAUAGCUGCAUCAGU	Chn,GP	[1491-1509]	-
224	ACGAGAAACACUGACCUUA	UAAGGUCAGUGUUUCUCGU		[1934-1952]	[1643-1661]
225	UGGUCUGAUGAGUGCGGUU	AACCGCACUCAUCAGACCA		[2487-2505]	[2196-2214]
226	GGGAAGCUCCAUAACUGCU	AGCAGUUAUGGAGCUUCCC		[214-232]	[214-232]
227	ACACGAUCACAUCCGGCAU	AUGCCGGAUGUGAUCGUGU		[1405-1423]	-
228	UUGGGAAGGCGGAGUCUUU	AAAGACUCCGCCUUCCCAA		[293-311]	[293-311]
229	GAUCACAUCCGGCAUUGUU	AACAAUGCCGGAUGUGAUC		[1409-1427]	-
230	GACCAUCCUGACCUCCUAU	AUAGGAGGUCAGGAUGGUC		[2273-2291]	[1982-2000]
231	UAAGCGGCGACACGUAUGA	UCAUACGUGUCGCCGCUUA		[1234-1252]	[1234-1252]
232	AGUGCAUGGUCUGAUGAGU	ACUCAUCAGACCAUGCACU		[2481-2499]	[2190-2208]
233	GAAAACUUCUGCUUGACAG	CUGUCAAGCAGAAGUUUUC		[2450-2468]	[2159-2177]
234	CUUCUGAUCGUCUUCGAGA	UCUCGAAGACGAUCAGAAG		[1603-1621]	[1408-1426]
235	GAGAACUCUGGAACCCGUU	AACGGGUUCCAGAGUUCUC		[891-909]	[891-909]
236	GGUGUACUCAUCCAUAAAG	CUUUAUGGAUGAGUACACC		[1770-1788]	-
237	CACCAUGAAGGUCACAGCU	AGCUGUGACCUUCAUGGUG		[1565-1583]	[1370-1388]
238	CCAUAGUGCAUGGUCUGAU	AUCAGACCAUGCACUAUGG		[2477-2495]	[2186-2204]
239	GCAUUGUUAGCUCUGCUCA	UGAGCAGAGCUAACAAUGC		[1420-1438]	-

240	GAUGAUGCUGACCCUGAGU	ACUCAGGGUCAGCAUCAUC		[1694-1712]	[1499-1517]
241	CUUCGAGAACCAAGCUUUC	GAAAGCUUGGUUCUCGAAG	Chn,GP	[1737-1755]	-
242	UGAUCGUCUUCGAGAGUUU	AAACUCUCGAAGACGAUCA		[1607-1625]	[1412-1430]
243	CAGCUUCGAGAACCAAGCU	AGCUUGGUUCUCGAAGCUG	Chn,GP	[1734-1752]	-
244	GCUUCGAGAACCAAGCUUU	AAAGCUUGGUUCUCGAAGC	Chn,GP	[1736-1754]	-
245	CCUUCUGAUCGUCUUCGAG	CUCGAAGACGAUCAGAAGG		[1602-1620]	[1407-1425]
246	UUGACAGUUCCACAUCCAU	AUGGAUGUGGAACUGUCAA		[2462-2480]	[2171-2189]
247	AGCAUGGUGUACUCAUCCA	UGGAUGAGUACACCAUGCU	Chn,GP	[1765-1783]	-
248	CGUGCACUUCUGAAGGACU	AGUCCUUCAGAAGUGCACG		[486-504]	[486-504]
249	UGAAGAUGUUUAUGAAGCU	AGCUUCAUAAACAUCUUCA	Ms	[1874-1892]	[1583-1601]
250	UGAACACCAUGAAGGUCAC	GUGACCUUCAUGGUGUUCA		[1561-1579]	[1366-1384]
251	AGAACCAAGCUUUCCCGAU	AUCGGGAAAGCUUGGUUCU		[1742-1760]	-
252	AUCACAGAAACACUUUUUA	UAAAAAGUGUUUCUGUGAU		[2126-2144]	[1835-1853]
253	CAACGCUGAGGAUUCAGAC	GUCUGAAUCCUCAGCGUUG		[1291-1309]	[1291-1309]
254	CUGAGGGAAGCUCCAUAAC	GUUAUGGAGCUUCCCUCAG		[210-228]	[210-228]
255	CUGCUGACGUCAGGAACUU	AAGUUCCUGACGUCAGCAG		[714-732]	[714-732]
256	GGGUGAAAACUUCUGCUUG	CAAGCAGAAGUUUUCACCC		[2446-2464]	[2155-2173]
257	GACCACAAUUCCCGGCAUU	AAUGCCGGGAAUUGUGGUC		[424-442]	[424-442]
258	AACCAAGCUUUCCCGAUGU	ACAUCGGGAAAGCUUGGUU		[1744-1762]	-
259	CAGUUAGUCAGGUGCUGCU	AGCAGCACCUGACUAACUG		[2325-2343]	[2034-2052]
260	GUCACAGCUGGAAUCUCCU	AGGAGAUUCCAGCUGUGAC	GP	[1575-1593]	[1380-1398]
261	CGGUUGCUGACAUGGGUUU	AAACCCAUGUCAGCAACCG		[2501-2519]	[2210-2228]
262	ACCAAAAGGCUAGAGGUAA	UUACCUCUAGCCUUUUGGU		[2216-2234]	[1925-1943]
263	AGAUGGUACAAAAUGCUGA	UCAGCAUUUUGUACCAUCU		[1858-1876]	[1567-1585]
264	ACAUCGCAACGCUGAGGAU	AUCCUCAGCGUUGCGAUGU		[1285-1303]	[1285-1303]
265	AAAUUAUACCUAGCAACAU	AUGUUGCUAGGUAUAAUUU	Rat	[2154-2172]	[1863-1881]
266	GUACAACUUCAUCGCAGAU	AUCUGCGAUGAAGUUGUAC		[1040-1058]	[1040-1058]
267	UCUGAAGGAGGGUGAAAAC	GUUUUCACCCUCCUUCAGA		[2437-2455]	[2146-2164]
268	UGAUUUUGGAAACUCUGGA	UCCAGAGUUUCCAAAAUCA	Chn,GP	[1505-1523]	[1314-1328](15/15)
269	AGUCCCUUUGCACUGCAGA	UCUGCAGUGCAAAGGGACU		[1386-1404]	-
270	GUGAUGAUGCUGACCCUGA	UCAGGGUCAGCAUCAUCAC	Ms	[1692-1710]	[1497-1515]
271	GUGCACUUCUGAAGGACUU	AAGUCCUUCAGAAGUGCAC		[487-505]	[487-505]
272	UGCAGAACACGAUCACAUC	GAUGUGAUCGUGUUCUGCA	Chn,Ms	[1399-1417]	-
273	CCACAUCCAUAGUGCAUGG	CCAUGCACUAUGGAUGUGG		[2471-2489]	[2180-2198]
274	UAUUGAUUUUGGAAACUCU	AGAGUUUCCAAAAUCAAUA	Chn,GP	[1502-1520]	[1314-1325](12/12)
275	CACAGAAUGAAUAGAUCAC	GUGAUCUAUUCAUUCUGUG		[1970-1988]	[1679-1697]
276	UCUAUAUCGAGAUCCUGGA	UCCAGGAUCUCGAUAUAGA		[1087-1105]	[1087-1105]
277	AGAUACUGGAGCUGACCAU	AUGGUCAGCUCCAGUAUCU		[2260-2278]	[1969-1987]
278	CAAAGAUUCCCAUGCUUGG	CCAAGCAUGGGAAUCUUUG		[2396-2414]	[2105-2123]
279	UUUGCACUGCAGAACACGA	UCGUGUUCUGCAGUGCAAA	Ms	[1392-1410]	-
280	CUUUCCCGAUGUUCAGCAU	AUGCUGAACAUCGGGAAAG		[1751-1769]	-
281	AAGGAGGGUGAAAACUUCU	AGAAGUUUUCACCCUCCUU		[2441-2459]	[2150-2168]
282	AGCAAAGAUUCCCAUGCUU	AAGCAUGGGAAUCUUUGCU		[2394-2412]	[2103-2121]
283	UGCCGUGGUCUAUAUCGAG	CUCGAUAUAGACCACGGCA		[1079-1097]	[1079-1097]
284	UUUUGUGGGCAGUUAGUCA	UGACUAACUGCCCACAAAA		[2316-2334]	[2025-2043]
285	GAGGCUCCUGCUCUGAUUU	AAAUCAGAGCAGGAGCCUC		[1998-2016]	[1707-1725]
286	GUACUCAUCCAUAAAGUCA	UGACUUUAUGGAUGAGUAC		[1773-1791]	-
287	GAACACCAUGAAGGUCACA	UGUGACCUUCAUGGUGUUC		[1562-1580]	[1367-1385]
288	ACCAAGCUUUCCCGAUGUU	AACAUCGGGAAAGCUUGGU		[1745-1763]	-
289	GCUGAAGAUGUUUAUGAAG	CUUCAUAAACAUCUUCAGC	Ms	[1872-1890]	[1581-1599]
290	CCUUUGCACUGCAGAACAC	GUGUUCUGCAGUGCAAAGG	Ms	[1390-1408]	-
291	AAGAAUCACAGAAACACUU	AAGUGUUUCUGUGAUUCUU		[2122-2140]	[1831-1849]
292	GAAACACUGACCUUAUAUG	CAUAUAAGGUCAGUGUUUC		[1938-1956]	[1647-1665]
293	GAGAUACUGGAGCUGACCA	UGGUCAGCUCCAGUAUCUC		[2259-2277]	[1968-1986]

294	AGGGAAGCUCCAUAACUGC	GCAGUUAUGGAGCUUCCCU		[213-231]	[213-231]
295	GCUGAGGAUUCAGACUAAG	CUUAGUCUGAAUCCUCAGC		[1295-1313]	[1295-1313]
296	GCUGACGUCAGGAACUUCU	AGAAGUUCCUGACGUCAGC		[716-734]	[716-734]
297	CACUGACCUUAUAUGUGAC	GUCACAUAUAAGGUCAGUG		[1942-1960]	[1651-1669]
298	AGGCUAGAGGUAAAGCUGU	ACAGCUUUACCUCUAGCCU		[2222-2240]	[1931-1949]
299	UUGCACUGCAGAACACGAU	AUCGUGUUCUGCAGUGCAA	Ms	[1393-1411]	-
300	ACAUGGGUUUCUUGGUAAG	CUUACCAAGAAACCCAUGU		[2510-2528]	[2219-2237]
301	GAAGGUCACAGCUGGAAUC	GAUUCCAGCUGUGACCUUC	GP	[1571-1589]	[1376-1394]
302	CAGUGCUGUUGUUGUUGUG	CACAACAACAACAGCACUG		[949-967]	[949-967]
303	GAGGAUUCAGACUAAGGAG	CUCCUUAGUCUGAAUCCUC		[1298-1316]	[1298-1313](16/16)
304	ACAACUUCAUCGCAGAUGU	ACAUCUGCGAUGAAGUUGU		[1042-1060]	[1042-1060]
305	GGGAAAAGAAGAAUUCCUC	GAGGAAUUCUUCUUUUCCC		[1636-1654]	[1441-1459]
306	CUGACAUGGGUUUCUUGGU	ACCAAGAAACCCAUGUCAG		[2507-2525]	[2216-2234]
307	GAGAGUUUCUGCAUCGUGG	CCACGAUGCAGAAACUCUC		[1618-1636]	[1423-1441]
308	AAAACUUCUGCUUGACAGU	ACUGUCAAGCAGAAGUUUU		[2451-2469]	[2160-2178]
309	UCUUUUGUGGGCAGUUAGU	ACUAACUGCCCACAAAAGA		[2314-2332]	[2023-2041]
310	GUCACAGAAUGAAUAGAUC	GAUCUAUUCAUUCUGUGAC		[1968-1986]	[1677-1695]
311	CACUGCAGAACACGAUCAC	GUGAUCGUGUUCUGCAGUG	Ms	[1396-1414]	-
312	AUUAUACCUAGCAACAUAU	AUAUGUUGCUAGGUAUAAU		[2156-2174]	[1865-1883]
313	AUGAAGGUCACAGCUGGAA	UUCCAGCUGUGACCUUCAU	GP	[1569-1587]	[1374-1392]
314	GAUUGGAGUGAACACCAUG	CAUGGUGUUCACUCCAAUC	Rat,Ms	[1553-1571]	[1358-1376]
315	UCCCGAUGUUCAGCAUGGU	ACCAUGCUGAACAUCGGGA		[1754-1772]	-
316	CGUGGUCUAUAUCGAGAUC	GAUCUCGAUAUAGACCACG		[1082-1100]	[1082-1100]
317	AAUUCCUCCUCCGGAAUCA	UGAUUCCGGAGGAGGAAUU		[1647-1665]	[1452-1470]
318	CAUCCAUAAAGUCAUCCUG	CAGGAUGACUUUAUGGAUG		[1778-1796]	-
319	CGGCCUGGUGAUGUGAUUU	AAAUCACAUCACCAGGCCG		[1824-1842]	[1533-1551]
320	AAACACUGACCUUAUAUGU	ACAUAUAAGGUCAGUGUUU		[1939-1957]	[1648-1666]
321	UCUGAAGAAUCACAGAAAC	GUUUCUGUGAUUCUUCAGA		[2118-2136]	[1827-1845]
322	AGAAUUCCUCCUCCGGAAU	AUUCCGGAGGAGGAAUUCU		[1645-1663]	[1450-1468]
323	UCACCAAGAGUAUGAGGCU	AGCCUCAUACUCUUGGUGA		[1985-2003]	[1694-1712]
324	CACUUCUGAAGGACUUCAG	CUGAAGUCCUUCAGAAGUG		[490-508]	[490-508]
325	UGGGAGCAAAGAUUCCCAU	AUGGGAAUCUUUGCUCCCA		[2390-2408]	[2099-2117]
326	AGGGUGAAAACUUCUGCUU	AAGCAGAAGUUUUCACCCU		[2445-2463]	[2154-2172]
327	AGGUGCUGCUCUUUGUGGU	ACCACAAAGAGCAGCACCU		[2334-2352]	[2043-2061]
328	AGCUAUUGAUUUUGGAAAC	GUUUCCAAAAUCAAUAGCU	Chn,GP	[1499-1517]	-
329	UGUGGUGGAGAAGACAGCA	UGCUGUCUUCUCCACCACA		[1058-1076]	[1058-1076]
330	UCCUAUUAAAGAAAAUGAG	CUCAUUUUCUUUAAUAGGA		[2286-2304]	[1995-2013]
331	CUGACGUCAGGAACUUCUG	CAGAAGUUCCUGACGUCAG		[717-735]	[717-735]
332	CACGAUCACAUCCGGCAUU	AAUGCCGGAUGUGAUCGUG		[1406-1424]	-
333	GAUCACCAAGAGUAUGAGG	CCUCAUACUCUUGGUGAUC		[1983-2001]	[1692-1710]
334	CGAGAGUUUCUGCAUCGUG	CACGAUGCAGAAACUCUCG		[1617-1635]	[1422-1440]
335	CUGAAGGAGGGUGAAAACU	AGUUUUCACCCUCCUUCAG		[2438-2456]	[2147-2165]
336	AGGGUUAAAUGAACCAGUG	CACUGGUUCAUUUAACCCU		[2060-2078]	[1769-1787]
337	CUGAUGCAGCUAUUGAUUU	AAAUCAAUAGCUGCAUCAG	Chn,GP	[1492-1510]	-
338	UGGGAAGUCCCUUUGCACU	AGUGCAAAGGGACUUCCCA		[1381-1399]	-
339	CAAAAGGCUAGAGGUAAAG	CUUUACCUCUAGCCUUUUG		[2218-2236]	[1927-1945]
340	CUGGGCUCUGAAGAAUCAC	GUGAUUCUUCAGAGCCCAG		[2112-2130]	[1821-1839]
341	GAGUCAGUACAACUUCAUC	GAUGAAGUUGUACUGACUC		[1034-1052]	[1034-1052]
342	GCUAGAGGUAAAGCUGUAU	AUACAGCUUUACCUCUAGC		[2224-2242]	[1933-1951]
343	AAUAAAAUUAUACCUAGCA	UGCUAGGUAUAAUUUUAUU	Rat,Ms	[2150-2168]	[1859-1877]
344	CCAUCUUUUGUGGGCAGUU	AACUGCCCACAAAAGAUGG		[2311-2329]	[2020-2038]
345	UGGGCUCAUUGUCACCAAC	GUUGGUGACAAUGAGCCCA		[1172-1190]	[1172-1190]
346	GGCUACAGAUACUGACAGC	GCUGUCAGUAUCUGUAGCC		[2413-2431]	[2122-2140]
347	GCACUUCUGAAGGACUUCA	UGAAGUCCUUCAGAAGUGC		[489-507]	[489-507]
348	UUCUGAAGGACUUCAGGUA	UACCUGAAGUCCUUCAGAA		[493-511]	[493-511]

349	CAGCUGGAAUCUCCUUUGC	GCAAAGGAGAUUCCAGCUG	Rat,Ms,GP	[1579-1597]	[1384-1402]
350	GGCCUGGUGAUGUGAUUUU	AAAAUCACAUCACCAGGCC		[1825-1843]	[1534-1552]
351	CCGGAGUCAGUACAACUUC	GAAGUUGUACUGACUCCGG		[1031-1049]	[1031-1049]
352	UCUGAUGAGUGCGGUUGCU	AGCAACCGCACUCAUCAGA		[2490-2508]	[2199-2217]
353	CAACUUCAUCGCAGAUGUG	CACAUCUGCGAUGAAGUUG		[1043-1061]	[1043-1061]
354	GGAGGGUGAAAACUUCUGC	GCAGAAGUUUUCACCCUCC		[2443-2461]	[2152-2170]
355	CAGUACAACUUCAUCGCAG	CUGCGAUGAAGUUGUACUG		[1038-1056]	[1038-1056]
356	CUGAUUUCCUCCUUGCCUU	AAGGCAAGGAGGAAAUCAG		[2010-2028]	[1719-1737]
357	UGCUGAACUACAGCUUCGA	UCGAAGCUGUAGUUCAGCA	GP	[1724-1742]	-
358	AUAGUGCAUGGUCUGAUGA	UCAUCAGACCAUGCACUAU		[2479-2497]	[2188-2206]
359	AAAGGCUAGAGGUAAAGCU	AGCUUUACCUCUAGCCUUU		[2220-2238]	[1929-1947]
360	GGAGUGAACACCAUGAAGG	CCUUCAUGGUGUUCACUCC	Rat,Ms	[1557-1575]	[1362-1380]
361	AUGAGUGCGGUUGCUGACA	UGUCAGCAACCGCACUCAU		[2494-2512]	[2203-2221]
362	AUCUCGAACGGCUCAGGAU	AUCCUGAGCCGUUCGAGAU		[1137-1155]	[1137-1155]
363	UCAGUACAACUUCAUCGCA	UGCGAUGAAGUUGUACUGA		[1037-1055]	[1037-1055]
364	ACAGUUCCACAUCCAUAGU	ACUAUGGAUGUGGAACUGU		[2465-2483]	[2174-2192]
365	CAAAAUGCUGAAGAUGUUU	AAACAUCUUCAGCAUUUUG	Rat,Ms	[1866-1884]	[1575-1593]
366	ACGAGCAGUAGGAAGCAGU	ACUGCUUCCUACUGCUCGU		[66-84]	[66-84]
367	GGUCUAUAUCGAGAUCCUG	CAGGAUCUCGAUAUAGACC		[1085-1103]	[1085-1103]
368	UACUGGAGCUGACCAUCCU	AGGAUGGUCAGCUCCAGUA		[2263-2281]	[1972-1990]
369	UCCGUGUGAGACUGCUAAG	CUUAGCAGUCUCACACGGA		[1219-1237]	[1219-1237]
370	UUAUACCUAGCAACAUAUU	AAUAUGUUGCUAGGUAUAA		[2157-2175]	[1866-1884]
371	UGUUCGAACCCAAUCCCAG	CUGGGAUUGGGUUCGAACA		[1892-1910]	[1601-1619]
372	UCACAUCCGGCAUUGUUAG	CUAACAAUGCCGGAUGUGA		[1411-1429]	-
373	ACGCUGAGGAUUCAGACUA	UAGUCUGAAUCCUCAGCGU		[1293-1311]	[1293-1311]
374	GCUCCUGCUCUGAUUUCCU	AGGAAAUCAGAGCAGGAGC		[2001-2019]	[1710-1728]
375	CCUGGUGAUGUGAUUUUGG	CCAAAAUCACAUCACCAGG		[1827-1845]	[1536-1554]
376	AGAAUCACAGAAACACUUU	AAAGUGUUUCUGUGAUUCU		[2123-2141]	[1832-1850]
377	CAAACUGAUGCAGCUAUUG	CAAUAGCUGCAUCAGUUUG		[1488-1506]	-
378	GUGAAAACUUCUGCUUGAC	GUCAAGCAGAAGUUUUCAC		[2448-2466]	[2157-2175]
379	GUGAACACCAUGAAGGUCA	UGACCUUCAUGGUGUUCAC		[1560-1578]	[1365-1383]
380	UAGUGCAUGGUCUGAUGAG	CUCAUCAGACCAUGCACUA		[2480-2498]	[2189-2207]
381	GCAGUGCUGUUGUUGUUGU	ACAACAACAACAGCACUGC		[948-966]	[948-966]
382	CUGAACUACAGCUUCGAGA	UCUCGAAGCUGUAGUUCAG	GP	[1726-1744]	-
383	CCAAACCAAUGUGGAAUAC	GUAUUCCACAUUGGUUUGG	GP	[1466-1484]	-
384	ACUCAUCCAUAAAGUCAUC	GAUGACUUUAUGGAUGAGU		[1775-1793]	-
385	AUGUGGAAUACAUUCAAAC	GUUUGAAUGUAUUCCACAU		[1474-1492]	-
386	AUGCUGAAGAUGUUUAUGA	UCAUAAACAUCUUCAGCAU	Rat,Ms	[1870-1888]	[1579-1597]
387	GAGCAGAUGGUACAAAAUG	CAUUUUGUACCAUCUGCUC		[1854-1872]	[1563-1581]
388	UCUCGAACGGCUCAGGAUU	AAUCCUGAGCCGUUCGAGA		[1138-1156]	[1138-1156]
389	UUCUGAUCGUCUUCGAGAG	CUCUCGAAGACGAUCAGAA		[1604-1622]	[1409-1427]
390	UCAUUGUCACCAACGCCCA	UGGGCGUUGGUGACAAUGA		[1177-1195]	[1177-1195]
391	ACCUAGCAACAUAUUAUAG	CUAUAAUAUGUUGCUAGGU		[2161-2179]	[1870-1888]
392	UCCUGACCUCCUAUUAAAG	CUUUAAUAGGAGGUCAGGA		[2278-2296]	[1987-2005]
393	ACUUCAUCGCAGAUGUGGU	ACCACAUCUGCGAUGAAGU		[1045-1063]	[1045-1063]
394	CUAUUAAAGAAAAUGAGCU	AGCUCAUUUUCUUUAAUAG		[2288-2306]	[1997-2015]
395	GUAAGCUCCUGAGGUAAUG	CAUUACCUCAGGAGCUUAC	Rat	[2524-2542]	[2233-2251]
396	GCUUUCCCGAUGUUCAGCA	UGCUGAACAUCGGGAAAGC		[1750-1768]	-
397	CUUGGUAAGCUCCUGAGGU	ACCUCAGGAGCUUACCAAG		[2520-2538]	[2229-2247]
398	UGCUCUUUGUGGUGUGGUG	CACCACACCACAAAGAGCA		[2340-2358]	[2049-2067]
399	UAUCUCGAACGGCUCAGGA	UCCUGAGCCGUUCGAGAUA		[1136-1154]	[1136-1154]
400	GCUUGACAGUUCCACAUCC	GGAUGUGGAACUGUCAAGC		[2460-2478]	[2169-2187]
401	AUUCAAACUGAUGCAGCUA	UAGCUGCAUCAGUUUGAAU		[1485-1503]	-
402	GCCUGGUGAUGUGAUUUUG	CAAAAUCACAUCACCAGGC		[1826-1844]	[1535-1553]
403	AUGGGAAGUCCCUUUGCAC	GUGCAAAGGGACUUCCCAU		[1380-1398]	-
404	GGAAAAGAAGAAUUCCUCC	GGAGGAAUUCUUCUUUUCC		[1637-1655]	[1442-1460]

405	GUGGAAUACAUUCAAACUG	CAGUUUGAAUGUAUUCCAC		[1476-1494]	-
406	CACAGCUGGAAUCUCCUUU	AAAGGAGAUUCCAGCUGUG	GP	[1577-1595]	[1382-1400]
407	AUAGAUCACCAAGAGUAUG	CAUACUCUUGGUGAUCUAU		[1980-1998]	[1689-1707]
408	AGCAGAUGGUACAAAAUGC	GCAUUUUGUACCAUCUGCU		[1855-1873]	[1564-1582]
409	GUGCAUGGUCUGAUGAGUG	CACUCAUCAGACCAUGCAC		[2482-2500]	[2191-2209]
410	CCUCCUAUUAAAGAAAAUG	CAUUUUCUUUAAUAGGAGG		[2284-2302]	[1993-2011]
411	UGGUACAAAAUGCUGAAGA	UCUUCAGCAUUUUGUACCA		[1861-1879]	[1570-1588]
412	AGAACACGAUCACAUCCGG	CCGGAUGUGAUCGUGUUCU		[1402-1420]	-
413	GGUUUCUUGGUAAGCUCCU	AGGAGCUUACCAAGAAACC		[2515-2533]	[2224-2242]
414	UGGGUUUCUUGGUAAGCUC	GAGCUUACCAAGAAACCCA		[2513-2531]	[2222-2240]
415	UGUUCAGCAUGGUGUACUC	GAGUACACCAUGCUGAACA	Chn	[1760-1778]	-
416	GAAAAGAAGAAUUCCUCCU	AGGAGGAAUUCUUCUUUUC		[1638-1656]	[1443-1461]
417	GUCUUCGAGAGUUUCUGCA	UGCAGAAACUCUCGAAGAC		[1612-1630]	[1417-1435]
418	AGCAGUAGGAAGCAGUCAC	GUGACUGCUUCCUACUGCU		[69-87]	[69-87]
419	AACACGAUCACAUCCGGCA	UGCCGGAUGUGAUCGUGUU		[1404-1422]	-
420	AAGGCUAGAGGUAAAGCUG	CAGCUUUACCUCUAGCCUU		[2221-2239]	[1930-1948]
421	AAAAUGCUGAAGAUGUUUA	UAAACAUCUUCAGCAUUUU	Rat,Ms	[1867-1885]	[1576-1594]
422	GCUGAACUACAGCUUCGAG	CUCGAAGCUGUAGUUCAGC	GP	[1725-1743]	-
423	AACGCUGAGGAUUCAGACU	AGUCUGAAUCCUCAGCGUU		[1292-1310]	[1292-1310]
424	GCUAUUGAUUUUGGAAACU	AGUUUCCAAAAUCAAUAGC	Chn,GP	[1500-1518]	-
425	AGGAGGGUGAAAACUUCUG	CAGAAGUUUUCACCCUCCU		[2442-2460]	[2151-2169]
426	UGAAGAAUCACAGAAACAC	GUGUUUCUGUGAUUCUUCA		[2120-2138]	[1829-1847]
427	UCACAGCUGGAAUCUCCUU	AAGGAGAUUCCAGCUGUGA	GP	[1576-1594]	[1381-1399]
428	GGAAGCUCCAUAACUGCUG	CAGCAGUUAUGGAGCUUCC		[215-233]	[215-233]
429	ACACCAUGAAGGUCACAGC	GCUGUGACCUUCAUGGUGU		[1564-1582]	[1369-1387]
430	UCAGCAUGGUGUACUCAUC	GAUGAGUACACCAUGCUGA	Chn,GP	[1763-1781]	-
431	CCAUAAAGUCAUCCUGGGC	GCCCAGGAUGACUUUAUGG		[1781-1799]	-
432	CUUCUGAAGGACUUCAGGU	ACCUGAAGUCCUUCAGAAG		[492-510]	[492-510]
433	CCGAUGUUCAGCAUGGUGU	ACACCAUGCUGAACAUCGG		[1756-1774]	-
434	GCAGAACACGAUCACAUCC	GGAUGUGAUCGUGUUCUGC		[1400-1418]	-
435	GGGUUAAAUGAACCAGUGG	CCACUGGUUCAUUUAACCC		[2061-2079]	[1770-1788]
436	ACUUCUGCUUGACAGUUCC	GGAACUGUCAAGCAGAAGU		[2454-2472]	[2163-2181]
437	UGCUGACAUGGGUUUCUUG	CAAGAAACCCAUGUCAGCA		[2505-2523]	[2214-2232]
438	AUGAGGCUCCUGCUCUGAU	AUCAGAGCAGGAGCCUCAU		[1996-2014]	[1705-1723]
439	AAAUAAAAUUAUACCUAGC	GCUAGGUAUAAUUUUAUUU	Rat,Ms	[2149-2167]	[1858-1876]
440	UGUUAGCUCUGCUCAGCGU	ACGCUGAGCAGAGCUAACA		[1424-1442]	-
441	CAUCCGGCAUUGUUAGCUC	GAGCUAACAAUGCCGGAUG		[1414-1432]	-
442	UACAGAUACUGACAGCUGG	CCAGCUGUCAGUAUCUGUA		[2416-2434]	[2125-2143]
443	CCAUCCCUUCUGAUCGUCU	AGACGAUCAGAAGGGAUGG		[1597-1615]	[1402-1420]
444	UCGAGAGUUUCUGCAUCGU	ACGAUGCAGAAACUCUCGA		[1616-1634]	[1421-1439]
445	AAUCACAGAAACACUUUUU	AAAAAGUGUUUCUGUGAUU		[2125-2143]	[1834-1852]
446	UCCAUAAAGUCAUCCUGGG	CCCAGGAUGACUUUAUGGA		[1780-1798]	-
447	CGUCUUCGAGAGUUUCUGC	GCAGAAACUCUCGAAGACG		[1611-1629]	[1416-1434]
448	CCUAUUAAAGAAAAUGAGC	GCUCAUUUUCUUUAAUAGG		[2287-2305]	[1996-2014]
449	GAUGUGGUGGAGAAGACAG	CUGUCUUCUCCACCACAUC	Ms	[1056-1074]	[1056-1074]
450	UCUUCGAGAGUUUCUGCAU	AUGCAGAAACUCUCGAAGA		[1613-1631]	[1418-1436]
451	UCAGGUGCUGCUCUUUGUG	CACAAAGAGCAGCACCUGA		[2332-2350]	[2041-2059]
452	AAGUCCCUUUGCACUGCAG	CUGCAGUGCAAAGGGACUU		[1385-1403]	-
453	CUACAGAUACUGACAGCUG	CAGCUGUCAGUAUCUGUAG		[2415-2433]	[2124-2142]
454	GCUACAGAUACUGACAGCU	AGCUGUCAGUAUCUGUAGC		[2414-2432]	[2123-2141]
455	UUACCGGUGCGAGUCAAAG	CUUUGACUCGCACCGGUAA		[172-190]	[172-190]
456	CAUCGCAACGCUGAGGAUU	AAUCCUCAGCGUUGCGAUG		[1286-1304]	[1286-1304]
457	UCCAUAGUGCAUGGUCUGA	UCAGACCAUGCACUAUGGA		[2476-2494]	[2185-2203]
458	GAACUACAGCUUCGAGAAC	GUUCUCGAAGCUGUAGUUC	GP	[1728-1746]	-
459	GAAGCUCCAUAACUGCUGC	GCAGCAGUUAUGGAGCUUC		[216-234]	[216-234]
460	GAAUACAUUCAAACUGAUG	CAUCAGUUUGAAUGUAUUC		[1479-1497]	-

461	GCUCCAUAACUGCUGCUUC	GAAGCAGCAGUUAUGGAGC		[219-237]	[219-237]
462	CUGAGGAUUCAGACUAAGG	CCUUAGUCUGAAUCCUCAG		[1296-1314]	[1296-1313](18/18)
463	CCUUGCUGAACUACAGCUU	AAGCUGUAGUUCAGCAAGG	GP	[1721-1739]	-
464	ACAGCUUCGAGAACCAAGC	GCUUGGUUCUCGAAGCUGU	Chn,GP	[1733-1751]	-
465	UCAUCGCAGAUGUGGUGGA	UCCACCACAUCUGCGAUGA	Ms	[1048-1066]	[1048-1066]
466	CCAAGCUUUCCCGAUGUUC	GAACAUCGGGAAAGCUUGG		[1746-1764]	-
467	GGUGAUUGGAGUGAACACC	GGUGUUCACUCCAAUCACC	Rat,Ms	[1550-1568]	[1355-1373]
468	UGUGGGCAGUUAGUCAGGU	ACCUGACUAACUGCCCACA		[2319-2337]	[2028-2046]
469	AGGUCACAGCUGGAAUCUC	GAGAUUCCAGCUGUGACCU	GP	[1573-1591]	[1378-1396]
470	GAUUUUGGAAACUCUGGAG	CUCCAGAGUUUCCAAAAUC	Chn,GP	[1506-1524]	[1314-1329](16/16)
471	GGGAGCAAAGAUUCCCAUG	CAUGGGAAUCUUUGCUCCC		[2391-2409]	[2100-2118]
472	UGCACUGCAGAACACGAUC	GAUCGUGUUCUGCAGUGCA	Ms	[1394-1412]	-
473	AUCUUUUGUGGGCAGUUAG	CUAACUGCCCACAAAAGAU		[2313-2331]	[2022-2040]
474	ACAGCUGGAAUCUCCUUUG	CAAAGGAGAUUCCAGCUGU	Rat,Ms, GP	[1578-1596]	[1383-1401]
475	CUGCUCUGAUUUCCUCCUU	AAGGAGGAAAUCAGAGCAG		[2005-2023]	[1714-1732]
476	UUUCUUGGUAAGCUCCUGA	UCAGGAGCUUACCAAGAAA		[2517-2535]	[2226-2244]
477	GAUUCAGACUAAGGAGCCU	AGGCUCCUUAGUCUGAAUC		[1301-1319]	[1301-1313](13/13)
478	CCAUAACUGCUGCUUCAGG	CCUGAAGCAGCAGUUAUGG		[222-240]	[222-240]
479	GAUGCAGCUAUUGAUUUUG	CAAAAUCAAUAGCUGCAUC	Chn,Ms, GP	[1494-1512]	-
480	UAAAGAAAAUGAGCUGCUG	CAGCAGCUCAUUUUCUUUA		[2292-2310]	[2001-2019]
481	GUGCUGUUGUUGUUGUGGG	CCCACAACAACAACAGCAC		[951-969]	[951-969]
482	ACUUCUGAAGGACUUCAGG	CCUGAAGUCCUUCAGAAGU		[491-509]	[491-509]
483	UGUACUCAUCCAUAAAGUC	GACUUUAUGGAUGAGUACA		[1772-1790]	-
484	GAUGGGCUCAUUGUCACCA	UGGUGACAAUGAGCCCAUC		[1170-1188]	[1170-1188]
485	UUCAAACUGAUGCAGCUAU	AUAGCUGCAUCAGUUUGAA		[1486-1504]	-
486	GGCAUUGUUAGCUCUGCUC	GAGCAGAGCUAACAAUGCC		[1419-1437]	-
487	UCAUCCAUAAAGUCAUCCU	AGGAUGACUUUAUGGAUGA		[1777-1795]	-
488	GACGUCAGGAACUUCUGAC	GUCAGAAGUUCCUGACGUC		[719-737]	[719-737]
489	AUCCGGCAUUGUUAGCUCU	AGAGCUAACAAUGCCGGAU		[1415-1433]	-
490	UCCUGGGCUCUGAAGAAUC	GAUUCUUCAGAGCCCAGGA		[2110-2128]	[1819-1837]
491	AGCUUCGAGAACCAAGCUU	AAGCUUGGUUCUCGAAGCU	Chn,GP	[1735-1753]	-
492	CAGCAUGGUGUACUCAUCC	GGAUGAGUACACCAUGCUG	Chn,GP	[1764-1782]	-
493	CCUCAGAGAACUCUGGAAC	GUUCCAGAGUUCUCUGAGG		[886-904]	[886-904]
494	AAGAAGAAUUCCUCCUCCG	CGGAGGAGGAAUUCUUCUU		[1641-1659]	[1446-1464]
495	AUCGCAGAUGUGGUGGAGA	UCUCCACCACAUCUGCGAU	Ms	[1050-1068]	[1050-1068]
496	UUGCUGACAUGGGUUUCUU	AAGAAACCCAUGUCAGCAA		[2504-2522]	[2213-2231]
497	UUAGUCAGGUGCUGCUCUU	AAGAGCAGCACCUGACUAA		[2328-2346]	[2037-2055]
498	AGAGUUUCUGCAUCGUGGG	CCCACGAUGCAGAAACUCU		[1619-1637]	[1424-1442]
499	UGAUUUCCUCCUUGCCUUU	AAAGGCAAGGAGGAAAUCA		[2011-2029]	[1720-1738]
500	AUGGGUUUCUUGGUAAGCU	AGCUUACCAAGAAACCCAU		[2512-2530]	[2221-2239]

Table B 19 KEAP1 - kelch-like ECH-associated protein 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-45269144 :186-2060	Human-45269143 :157-2031
1	GGGCAAAAAUACAGUCCAA	UUGGACUGUAUUUUUGCCC		[2077-2095]	[2048-2066]
2	CAUGGAGCGCCUCAUUGAA	UUCAAUGAGGCGCUCCAUG		[581-599]	[552-570]
3	GAAUGAUCACAGCAAUGAA	UUCAUUGCUGUGAUCAUUC	Chmp	[1678-1696]	[1649-1667]
4	CAUUGUUUUUGUACAAAAA	UUUUUGUACAAAAACAAUG	Chmp	[2106-2124]	[2077-2095]
5	GGCGAAUGAUCACAGCAAU	AUUGCUGUGAUCAUUCGCC	Chmp	[1675-1693]	[1646-1664]
6	CGAACUUCCUGCAGAUGCA	UGCAUCUGCAGGAAGUUCG	Chmp	[1018-1036]	[989-1007]

7	GGAUGGGCCUGUACAUAGA	UCUAUGUACAGGCCCAUCC	Chmp	[2465-2483]	[2436-2454]
8	GGUCAAGUACGACUGCGAA	UUCGCAGUCGUACUUGACC	Chmp	[941-959]	[912-930]
9	CUGUAAUUUUCCAAGGAAA	UUUCCUUGGAAAAUUACAG	Chmp	[2540-2558]	[2511-2529]
10	GGGAGUACAUCUACAUGCA	UGCAUGUAGAUGUACUCCC	Chmp	[796-814]	[767-785]
11	CAGGAUGCCUCAGUGUUAA	UUAACACUGAGGCAUCCUG	Chmp	[2181-2199]	[2152-2170]
12	CAUCCAGCCCUGUCUUCAA	UUGAAGACAGGGCUGGAUG	Chmp	[490-508]	[461-479]
13	CGGGACAAACCGCCUUAAU	AUUAAGGCGGUUUGUCCCG	Chmp	[1622-1640]	[1593-1611]
14	GAGUGUUACGACCCAGAUA	UAUCUGGGUCGUAACACUC	Chmp	[1929-1947]	[1900-1918]
15	AAAUGACAUCUCAAAAGAA	UUCUUUUGAGAUGUCAUUU	Chmp	[2199-2217]	[2170-2188]
16	AACCGGGACUAAAAGAAAA	UUUUCUUUUAGUCCCGGUU	Chmp	[2123-2141]	[2094-2112]
17	ACAAAAACCGGGACUAAAA	UUUUAGUCCCGGUUUUUGU	Chmp	[2118-2136]	[2089-2107]
18	CCAGGAUGCCUCAGUGUUA	UAACACUGAGGCAUCCUGG	Chmp	[2180-2198]	[2151-2169]
19	GCAUCAACUGGGUCAAGUA	UACUUGACCCAGUUGAUGC	Chn,GP,Chmp	[931-949]	[902-920]
20	GCUACGAUGUGGAAACAGA	UCUGUUUCCACAUCGUAGC	Chmp	[1792-1810]	[1763-1781]
21	GGGACUAAAAGAAAAGACA	UGUCUUUUCUUUUAGUCCC	Chmp	[2127-2145]	[2098-2116]
22	GAGUGUUACUACCCAGAGA	UCUCUGGGUAGUAACACUC	Chmp	[1647-1665]	[1618-1636]
23	CGUCCUUGGAGGCUAUGAU	AUCAUAGCCUCCAAGGACG	Chmp	[1886-1904]	[1857-1875]
24	UGCAGAUGCAGCUGCAGAA	UUCUGCAGCUGCAUCUGCA	Chn,GP,Chmp	[1027-1045]	[998-1016]
25	GAGUAUCAUUGUUUUUGUA	UACAAAAACAAUGAUACUC	Chmp	[2100-2118]	[2071-2089]
26	CCUGUAAUUUUCCAAGGAA	UUCCUUGGAAAAUUACAGG	Chmp	[2539-2557]	[2510-2528]
27	GGAGUGUUACGACCCAGAU	AUCUGGGUCGUAACACUCC	Chmp	[1928-1946]	[1899-1917]
28	GAUGGGCCUGUACAUAGAA	UUCUAUGUACAGGCCCAUC	Chmp	[2466-2484]	[2437-2455]
29	GUGUUACGACCCAGAUACA	UGUAUCUGGGUCGUAACAC	Chmp	[1931-1949]	[1902-1920]
30	GUGUUAAAAUGACAUCUCA	UGAGAUGUCAUUUUAACAC	Chmp	[2193-2211]	[2164-2182]
31	GGGACAAACCGCCUUAAUU	AAUUAAGGCGGUUUGUCCC	Chmp	[1623-1641]	[1594-1612]
32	AGGUGGUGGUGUUGCUUAU	AUAAGCAACACCACCACCU		[154-172]	[125-143]
33	UGGACAGUGUGGAGUGUUA	UAACACUCCACACUGUCCA	Chmp	[1918-1936]	[1889-1907]
34	ACGUCACACUGCAGGUCAA	UUGACCUGCAGUGUGACGU	Chmp	[418-436]	[389-407]
35	GUGUCCUCCACGUCAUGAA	UUCAUGACGUGGAGGACAC	Chmp	[637-655]	[608-626]
36	CCCUGGAGGAUCAUACCAA	UUGGUAUGAUCCUCCAGGG	Chmp	[349-367]	[320-338]
37	AAACCGGGACUAAAAGAAA	UUUCUUUUAGUCCCGGUUU	Chmp	[2122-2140]	[2093-2111]
38	CCAGAUACAGACACCUGGA	UCCAGGUGUCUGUAUCUGG	Chmp	[1941-1959]	[1912-1930]
39	AGCAGAUUGACCAGCAGAA	UUCUGCUGGUCAAUCUGCU	Chmp	[2029-2047]	[2000-2018]
40	GGACAGUUAUUUUGUUGAU	AUCAACAAAAUAACUGUCC	Chmp	[2513-2531]	[2484-2502]
41	GUUAAAAUGACAUCUCAAA	UUUGAGAUGUCAUUUUAAC	Chmp	[2195-2213]	[2166-2184]
42	UGUUAAAAUGACAUCUCAA	UUGAGAUGUCAUUUUAACA	Chmp	[2194-2212]	[2165-2183]
43	UGGAGGUGGUGUCCAUUGA	UCAAUGGACACCACCUCCA	Rat,Chmp	[544-562]	[515-533]
44	AAGACAGCACUGCAAAUAA	UUAUUUGCAGUGCUGUCUU	Chmp	[2140-2158]	[2111-2129]
45	GGAGUAUCAUUGUUUUUGU	ACAAAAACAAUGAUACUCC	Chmp	[2099-2117]	[2070-2088]
46	CCUCAAUCGUCUCCUUUAU	AUAAAGGAGACGAUUGAGG		[1586-1604]	[1557-1575]
47	CCUCAGUGUUAAAAUGACA	UGUCAUUUUAACACUGAGG	Chmp	[2188-2206]	[2159-2177]
48	GCAAGGACUACCUGGUCAA	UUGACCAGGUAGUCCUUGC	Chmp	[1075-1093]	[1046-1064]
49	CCGGGACUAAAAGAAAAGA	UCUUUUCUUUUAGUCCCGG	Chmp	[2125-2143]	[2096-2114]
50	CCACCGGAUGGACAGUUAU	AUAACUGUCCAUCCGGUGG	Chmp	[2504-2522]	[2475-2493]
51	CCGGAUGGACAGUUAUUUU	AAAAUAACUGUCCAUCCGG	Chmp	[2507-2525]	[2478-2496]
52	CAAGGAAAAUAAAGAACAG	CUGUUCUUUAUUUUCCUUG	Chmp	[2551-2569]	[2522-2540]
53	GUACAAAAACCGGGACUAA	UUAGUCCCGGUUUUUGUAC	Chmp	[2116-2134]	[2087-2105]
54	AGGAUGCCUCAGUGUUAAA	UUUAACACUGAGGCAUCCU	Chmp	[2182-2200]	[2153-2171]
55	AGGACUACCUGGUCAAGAU	AUCUUGACCAGGUAGUCCU	Chmp	[1078-1096]	[1049-1067]
56	CCUGGAGGAUCAUACCAAG	CUUGGUAUGAUCCUCCAGG	Chmp	[350-368]	[321-339]
57	ACAGUUAUUUUGUUGAUAA	UUAUCAACAAAAUAACUGU	Chmp	[2515-2533]	[2486-2504]
58	CCGCCUUAAUUCAGCUGAG	CUCAGCUGAAUUAAGGCGG	Chmp	[1631-1649]	[1602-1620]
59	GGUCAAGUACCAGGAUGCA	UGCAUCCUGGUACUUGACC	Chmp	[431-449]	[402-420]
60	GUGGAAACAGAGACGUGGA	UCCACGUCUCUGUUUCCAC	Chmp	[1800-1818]	[1771-1789]
61	UGUUGCUUAUCUUCUGGAA	UUCCAGAAGAUAAGCAACA	Chmp	[163-181]	[134-152]
62	GAAAAGACAGCACUGCAAA	UUUGCAGUGCUGUCUUUUC	Chmp	[2137-2155]	[2108-2126]

63	GCGCUACGAUGUGGAAACA	UGUUUCCACAUCGUAGCGC	Chmp	[1790-1808]	[1761-1779]
64	UGUGGAGUGUUACGACCCA	UGGGUCGUAACACUCCACA	Chmp	[1925-1943]	[1896-1914]
65	UGUAAUUUUCCAAGGAAAA	UUUUCCUUGGAAAAUUACA	Chmp	[2541-2559]	[2512-2530]
66	UGGUCAAGAUCUUCGAGGA	UCCUCGAAGAUCUUGACCA	Chmp	[1087-1105]	[1058-1076]
67	CAGUUAUUUUGUUGAUAAG	CUUAUCAACAAAAUAACUG	Chmp	[2516-2534]	[2487-2505]
68	CCCUGUAAUUUUCCAAGGA	UCCUUGGAAAAUUACAGGG	Chmp	[2538-2556]	[2509-2527]
69	CUGUCAUGUACCAGAUCGA	UCGAUCUGGUACAUGACAG	Chmp	[661-679]	[632-650]
70	GGUGCUGUCAUGUACCAGA	UCUGGUACAUGACAGCACC		[657-675]	[628-646]
71	CCCGGGAGUACAUCUACAU	AUGUAGAUGUACUCCCGGG	Chmp	[793-811]	[764-782]
72	CUACGAUGUGGAAACAGAG	CUCUGUUUCCACAUCGUAG	Chmp	[1793-1811]	[1764-1782]
73	GCAGAACUGUACCUGUUGA	UCAACAGGUACAGUUCUGC	Chmp	[2042-2060]	[2013-2031]
74	ACAACAGUGUGGAGAGGUA	UACCUCUCCACACUGUUGU	Chmp	[1495-1513]	[1466-1484]
75	CCAAGGAAAAUAAAGAACA	UGUUCUUUAUUUUCCUUGG	Chmp	[2550-2568]	[2521-2539]
76	AGAAAAGACAGCACUGCAA	UUGCAGUGCUGUCUUUUCU	Chmp	[2136-2154]	[2107-2125]
77	CAUCUCAAAAGAAGUCCAA	UUGGACUUCUUUUGAGAUG	Chmp	[2205-2223]	[2176-2194]
78	GGAGUACAUCUACAUGCAU	AUGCAUGUAGAUGUACUCC	Chmp	[797-815]	[768-786]
79	GGAUGCCUCAGUGUUAAAA	UUUUAACACUGAGGCAUCC	Chmp	[2183-2201]	[2154-2172]
80	GAUGCCUCAGUGUUAAAAU	AUUUUAACACUGAGGCAUC	Chmp	[2184-2202]	[2155-2173]
81	GUUACUACCCAGAGAGGAA	UUCCUCUCUGGGUAGUAAC	Chmp	[1651-1669]	[1622-1640]
82	ACGGGACAAACCGCCUUAA	UUAAGGCGGUUUGUCCCGU	Chmp	[1621-1639]	[1592-1610]
83	UCAUGGAGCGCCUCAUUGA	UCAAUGAGGCGCUCCAUGA		[580-598]	[551-569]
84	AGCAAGAGGAGUUCUUCAA	UUGAAGAACUCCUCUUGCU	Chmp	[832-850]	[803-821]
85	CACUGCAGGUCAAGUACCA	UGGUACUUGACCUGCAGUG	Chmp	[424-442]	[395-413]
86	GUUACGACCCAGAUACAGA	UCUGUAUCUGGGUCGUAAC	Chmp	[1933-1951]	[1904-1922]
87	CUACGUCCUUGGAGGCUAU	AUAGCCUCCAAGGACGUAG	Chmp	[1883-1901]	[1854-1872]
88	UGGUGGUGUUGCUUAUCUU	AAGAUAAGCAACACCACCA		[157-175]	[128-146]
89	CCUGCACAACUGUAUCUAU	AUAGAUACAGUUGUGCAGG	Chmp	[1727-1745]	[1698-1716]
90	AGCUGAGUGUUACUACCCA	UGGGUAGUAACACUCAGCU	Chmp	[1643-1661]	[1614-1632]
91	UCAUUGUUUUUGUACAAAA	UUUUGUACAAAAACAAUGA	Chmp	[2105-2123]	[2076-2094]
92	GAGAAUCUACGUCCUUGGA	UCCAAGGACGUAGAUUCUC	Chmp	[1877-1895]	[1848-1866]
93	AAUUUUCCAAGGAAAAUAA	UUAUUUUCCUUGGAAAAUU	Chmp	[2544-2562]	[2515-2533]
94	GGAGGAUCAUACCAAGCAG	CUGCUUGGUAUGAUCCUCC	Chmp	[353-371]	[324-342]
95	GCUACCUGGAGGCUUACAA	UUGUAAGCCUCCAGGUAGC	Chmp	[1204-1222]	[1175-1193]
96	AGGGAUGGGCCUGUACAUA	UAUGUACAGGCCCAUCCCU	Chmp	[2463-2481]	[2434-2452]
97	GAAAAUAAAGAACAGACUA	UAGUCUGUUCUUUAUUUUC	Chmp	[2555-2573]	[2526-2544]
98	UUCCAAGGAAAAUAAAGAA	UUCUUUAUUUUCCUUGGAA	Chmp	[2548-2566]	[2519-2537]
99	UAUCAUUGUUUUUGUACAA	UUGUACAAAAACAAUGAUA	Chmp	[2103-2121]	[2074-2092]
100	UACAAAAACCGGGACUAAA	UUUAGUCCCGGUUUUUGUA	Chmp	[2117-2135]	[2088-2106]
101	GGAAGCAGAUUGACCAGCA	UGCUGGUCAAUCUGCUUCC	Chmp	[2026-2044]	[1997-2015]
102	CACCGGAUGGACAGUUAUU	AAUAACUGUCCAUCCGGUG	Chmp	[2505-2523]	[2476-2494]
103	UGGAGUGUUACGACCCAGA	UCUGGGUCGUAACACUCCA	Chmp	[1927-1945]	[1898-1916]
104	GUAUCAUUGUUUUUGUACA	UGUACAAAAACAAUGAUAC	Chmp	[2102-2120]	[2073-2091]
105	GUUGAUAAGUAACCCUGUA	UACAGGGUUACUUAUCAAC	Chmp	[2526-2544]	[2497-2515]
106	GCAAUGAACACCAUCCGAA	UUCGGAUGGUGUUCAUUGC	Chmp	[1689-1707]	[1660-1678]
107	CAGACUAACUAGUGUCUUU	AAAGACACUAGUUAGUCUG	Chmp	[2567-2585]	[2538-2556]
108	CGCCUUAAUUCAGCUGAGU	ACUCAGCUGAAUUAAGGCG	Chmp	[1632-1650]	[1603-1621]
109	AAGCAAGAGGAGUUCUUCA	UGAAGAACUCCUCUUGCUU	Chmp	[831-849]	[802-820]
110	AAAAUGACAUCUCAAAAGA	UCUUUUGAGAUGUCAUUUU	Chmp	[2198-2216]	[2169-2187]
111	GAGCGCUACGAUGUGGAAA	UUUCCACAUCGUAGCGCUC	Chmp	[1788-1806]	[1759-1777]
112	UGGUGUCCAUUGAGGGUAU	AUACCCUCAAUGGACACCA	Chmp	[550-568]	[521-539]
113	CAACAGUGUGGAGAGGUAU	AUACCUCUCCACACUGUUG	Chmp	[1496-1514]	[1467-1485]
114	GAUGGACAGUUAUUUUGUU	AACAAAAUAACUGUCCAUC	Chmp	[2510-2528]	[2481-2499]
115	UUAAAAUGACAUCUCAAAA	UUUUGAGAUGUCAUUUUAA	Chmp	[2196-2214]	[2167-2185]
116	CUGUCACCAUGUGAUUUAU	AUAAAUCACAUGGUGACAG		[2377-2395]	[2348-2366]
117	CAGUGUGGAGUGUUACGAC	GUCGUAACACUCCACACUG	Chmp	[1922-1940]	[1893-1911]
118	UCAACUGGGUCAAGUACGA	UCGUACUUGACCCAGUUGA	Chn,GP,Chmp	[934-952]	[905-923]

119	GUGCUGUCAUGUACCAGAU	AUCUGGUACAUGACAGCAC		[658-676]	[629-647]
120	GACUAACUAGUGUCUUUCA	UGAAAGACACUAGUUAGUC	Chmp	[2569-2587]	[2540-2558]
121	ACCUGGUCAAGAUCUUCGA	UCGAAGAUCUUGACCAGGU	Chmp	[1084-1102]	[1055-1073]
122	GCCUCAUUGAAUUCGCCUA	UAGGCGAAUUCAAUGAGGC		[589-607]	[560-578]
123	AACUGUACCUGUUGAGGCA	UGCCUCAACAGGUACAGUU	Chmp	[2046-2064]	[2017-2035]
124	CCUGCAUCAACUGGGUCAA	UUGACCCAGUUGAUGCAGG	GP,Chmp	[928-946]	[899-917]
125	GAGGUGACCCGAAUGACAU	AUGUCAUUCGGGUCACCUC	Chmp	[1962-1980]	[1933-1951]
126	CAAUGAACACCAUCCGAAG	CUUCGGAUGGUGUUCAUUG	Chmp	[1690-1708]	[1661-1679]
127	GACAGUUAUUUUGUUGAUA	UAUCAACAAAAUAACUGUC	Chmp	[2514-2532]	[2485-2503]
128	GCAGGUCAAGUACCAGGAU	AUCCUGGUACUUGACCUGC	Chmp	[428-446]	[399-417]
129	GGAGGCUAUGAUGGUCACA	UGUGACCAUCAUAGCCUCC	Chmp	[1893-1911]	[1864-1882]
130	CAGCAGAACUGUACCUGUU	AACAGGUACAGUUCUGCUG	Chmp	[2040-2058]	[2011-2029]
131	CCAACUUCGCUGAGCAGAU	AUCUGCUCAGCGAAGUUGG	Chmp	[748-766]	[719-737]
132	AACCGCACCUUCAGCUACA	UGUAGCUGAAGGUGCGGUU	GP,Chmp	[330-348]	[301-319]
133	GGAAAAUAAAGAACAGACU	AGUCUGUUCUUUAUUUUCC	Chmp	[2554-2572]	[2525-2543]
134	UCAGCUACCUGGAGGCUUA	UAAGCCUCCAGGUAGCUGA	Chmp	[1201-1219]	[1172-1190]
135	CAGUGUGGAGAGGUAUGAG	CUCAUACCUCUCCACACUG	Chmp	[1499-1517]	[1470-1488]
136	GUUAUUUUGUUGAUAAGUA	UACUUAUCAACAAAAUAAC	Chmp	[2518-2536]	[2489-2507]
137	GCCUCAGUGUUAAAAUGAC	GUCAUUUUAACACUGAGGC	Chmp	[2187-2205]	[2158-2176]
138	AAAAUAAAGAACAGACUAA	UUAGUCUGUUCUUUAUUUU	Chmp	[2556-2574]	[2527-2545]
139	GGACUAAAAGAAAAGACAG	CUGUCUUUUCUUUUAGUCC	Chmp	[2128-2146]	[2099-2117]
140	AUUUUCCAAGGAAAAUAAA	UUUAUUUUCCUUGGAAAAU	Chmp	[2545-2563]	[2516-2534]
141	CGAAUGAUCACAGCAAUGA	UCAUUGCUGUGAUCAUUCG	Chmp	[1677-1695]	[1648-1666]
142	CCAGCAGAACUGUACCUGU	ACAGGUACAGUUCUGCUGG	Chmp	[2039-2057]	[2010-2028]
143	GACAAACCGCCUUAAUUCA	UGAAUUAAGGCGGUUUGUC	Chmp	[1625-1643]	[1596-1614]
144	AGAAGUGCGAGAUCCUGCA	UGCAGGAUCUCGCACUUCU	Chn,GP,Chmp	[1042-1060]	[1013-1031]
145	CAGAGACGUGGACUUUCGU	ACGAAAGUCCACGUCUCUG	Chmp	[1807-1825]	[1778-1796]
146	CAAAAACCGGGACUAAAAG	CUUUUAGUCCCGGUUUUUG	Chmp	[2119-2137]	[2090-2108]
147	GCGUCCUGCACAACUGUAU	AUACAGUUGUGCAGGACGC	Chmp	[1723-1741]	[1694-1712]
148	UACGAUGUGGAAACAGAGA	UCUCUGUUUCCACAUCGUA	Chmp	[1794-1812]	[1765-1783]
149	CCUGUUGAGGCACUUUUGU	ACAAAAGUGCCUCAACAGG	Chmp	[2053-2071]	[2024-2042]
150	CAGCUGUCACCAUGUGAUU	AAUCACAUGGUGACAGCUG		[2374-2392]	[2345-2363]
151	CAUGUGAUUUAUUCUUGGA	UCCAAGAAUAAAUCACAUG		[2384-2402]	[2355-2373]
152	ACACGUUCCUGGACAGUGU	ACACUGUCCAGGAACGUGU	Chn,GP,Chmp	[1909-1927]	[1880-1898]
153	GAAGCAGAUUGACCAGCAG	CUGCUGGUCAAUCUGCUUC	Chmp	[2027-2045]	[1998-2016]
154	UGUUUCUUGGGCAAAAAUA	UAUUUUUGCCCAAGAAACA	Chmp	[2069-2087]	[2040-2058]
155	AAAACCGGGACUAAAAGAA	UUCUUUUAGUCCCGGUUUU	Chmp	[2121-2139]	[2092-2110]
156	GAGGUGGUGGUGUUGCUUA	UAAGCAACACCACCACCUC		[153-171]	[124-142]
157	CUCAUUGAAUUCGCCUACA	UGUAGGCGAAUUCAAUGAG		[591-609]	[562-580]
158	UGUGAUUUAUUCUUGGAUA	UAUCCAAGAAUAAAUCACA	Chmp	[2386-2404]	[2357-2375]
159	GCAGCUGUCACCAUGUGAU	AUCACAUGGUGACAGCUGC		[2373-2391]	[2344-2362]
160	UGGGCAAAAAUACAGUCCA	UGGACUGUAUUUUUGCCCA		[2076-2094]	[2047-2065]
161	UUUGUUUCUUGGGCAAAAA	UUUUUGCCCAAGAAACAAA	Chmp	[2067-2085]	[2038-2056]
162	CCUUGGAGGCUAUGAUGGU	ACCAUCAUAGCCUCCAAGG	Chmp	[1889-1907]	[1860-1878]
163	GGAUGGACAGUUAUUUUGU	ACAAAAUAACUGUCCAUCC	Chmp	[2509-2527]	[2480-2498]
164	CUGAGUGUUACUACCCAGA	UCUGGGUAGUAACACUCAG	Chmp	[1645-1663]	[1616-1634]
165	GGCUAUGAUGGUCACACGU	ACGUGUGACCAUCAUAGCC	Chmp	[1896-1914]	[1867-1885]
166	UGGAGCGCCUCAUUGAAUU	AAUUCAAUGAGGCGCUCCA		[583-601]	[554-572]
167	CGGGACUAAAAGAAAAGAC	GUCUUUUCUUUUAGUCCCG	Chmp	[2126-2144]	[2097-2115]
168	GAUAAGUAACCCUGUAAUU	AAUUACAGGGUUACUUAUC	Chmp	[2529-2547]	[2500-2518]
169	AAAAGACAGCACUGCAAAU	AUUUGCAGUGCUGUCUUUU	Chmp	[2138-2156]	[2109-2127]
170	GCUGAGUGUUACUACCCAG	CUGGGUAGUAACACUCAGC	Chmp	[1644-1662]	[1615-1633]
171	CUGGAAAUGUGGUUCCCAG	CUGGGAACCACAUUUCCAG	Chmp	[2446-2464]	[2417-2435]
172	AUGGUCAGGACCAGCUGAA	UUCAGCUGGUCCUGACCAU	Chmp	[1762-1780]	[1733-1751]
173	CAUGGAGGUGGUGUCCAUU	AAUGGACACCACCUCCAUG	Rat,Chmp	[542-560]	[513-531]
174	AUCUCAAAAGAAGUCCAAA	UUUGGACUUCUUUUGAGAU	Chmp	[2206-2224]	[2177-2195]

175	AGUCCAAAGCGGGAAUCAU	AUGAUUCCCGCUUUGGACU	Chmp	[2217-2235]	[2188-2206]
176	ACGGUGCUGUCAUGUACCA	UGGUACAUGACAGCACCGU		[655-673]	[626-644]
177	AAGAAAAGACAGCACUGCA	UGCAGUGCUGUCUUUUCUU	Chmp	[2135-2153]	[2106-2124]
178	AAAUGUGGUUCCCAGGGAU	AUCCCUGGGAACCACAUUU	Chmp	[2450-2468]	[2421-2439]
179	GAACGGUGCUGUCAUGUAC	GUACAUGACAGCACCGUUC		[653-671]	[624-642]
180	CAAUGCUGACACGAAGGAU	AUCCUUCGUGUCAGCAUUG	Chmp	[1549-1567]	[1520-1538]
181	GCUGUCACCAUGUGAUUUA	UAAAUCACAUGGUGACAGC		[2376-2394]	[2347-2365]
182	UGAUAAGUAACCCUGUAAU	AUUACAGGGUUACUUAUCA	Chmp	[2528-2546]	[2499-2517]
183	GAUUGACCAGCAGAACUGU	ACAGUUCUGCUGGUCAAUC	Chmp	[2033-2051]	[2004-2022]
184	UGAACGGUGCUGUCAUGUA	UACAUGACAGCACCGUUCA		[652-670]	[623-641]
185	UCACAGCAAUGAACACCAU	AUGGUGUUCAUUGCUGUGA	Chmp	[1684-1702]	[1655-1673]
186	AGAGACGUGGACUUUCGUA	UACGAAAGUCCACGUCUCU	Chmp	[1808-1826]	[1779-1797]
187	GUACCAGAUCGACAGCGUU	AACGCUGUCGAUCUGGUAC	Chmp	[668-686]	[639-657]
188	GAGUACAUCUACAUGCAUU	AAUGCAUGUAGAUGUACUC	Chmp	[798-816]	[769-787]
189	AAAGAAGUCCAAAGCGGGA	UCCCGCUUUGGACUUCUUU	Chmp	[2212-2230]	[2183-2201]
190	CAUUGAAUUCGCCUACACG	CGUGUAGGCGAAUUCAAUG		[593-611]	[564-582]
191	CAGCACUGCAAAUAACCCA	UGGGUUAUUUGCAGUGCUG	Chmp	[2144-2162]	[2115-2133]
192	AGUUCUUCAACCUGUCCCA	UGGGACAGGUUGAAGAACU	GP, Chmp	[841-859]	[812-830]
193	UUUUGUUUCUUGGGCAAAA	UUUUGCCCAAGAAACAAAA	Chmp	[2066-2084]	[2037-2055]
194	ACUCGUUGACGCCGAACUU	AAGUUCGGCGUCAACGAGU	Chmp	[1006-1024]	[977-995]
195	AGAACAGACUAACUAGUGU	ACACUAGUUAGUCUGUUCU	Chmp	[2563-2581]	[2534-2552]
196	CAGAUUGACCAGCAGAACU	AGUUCUGCUGGUCAAUCUG	Chmp	[2031-2049]	[2002-2020]
197	CCGGGAGUACAUCUACAUG	CAUGUAGAUGUACUCCCGG	Chmp	[794-812]	[765-783]
198	AGGCUAUGAUGGUCACACG	CGUGUGACCAUCAUAGCCU	Chmp	[1895-1913]	[1866-1884]
199	ACAGUGUGGAGAGGUAUGA	UCAUACCUCUCCACACUGU	Chmp	[1498-1516]	[1469-1487]
200	GAGGAGUUCUUCAACCUGU	ACAGGUUGAAGAACUCCUC	Rat, Chn, Ms, GP, Chmp	[837-855]	[808-826]
201	AGAUGCAGCUGCAGAAGUG	CACUUCUGCAGCUGCAUCU	Chn, GP, Chmp	[1030-1048]	[1001-1019]
202	GCGAAUGAUCACAGCAAUG	CAUUGCUGUGAUCAUUCGC	Chmp	[1676-1694]	[1647-1665]
203	AGACAGCACUGCAAAUAAC	GUUAUUUGCAGUGCUGUCU	Chmp	[2141-2159]	[2112-2130]
204	CAACUGGUGACCCUCAUCA	UGAUGAGGGUCACCAGUUG	Chmp	[864-882]	[835-853]
205	CGAUGUGGAAACAGAGACG	CGUCUCUGUUUCCACAUCG	Chmp	[1796-1814]	[1767-1785]
206	UGAUGUACGCCUCCACUGA	UCAGUGGAGGCGUACAUCA	Chmp	[277-295]	[248-266]
207	GAAACAGAGACGUGGACUU	AAGUCCACGUCUCUGUUUC	Chmp	[1803-1821]	[1774-1792]
208	GGCAAAAAUACAGUCCAAU	AUUGGACUGUAUUUUUGCC		[2078-2096]	[2049-2067]
209	AGCAAUGAACACCAUCCGA	UCGGAUGGUGUUCAUUGCU	Chmp	[1688-1706]	[1659-1677]
210	CACUUUUGUUUCUUGGGCA	UGCCCAAGAAACAAAAGUG	Chmp	[2063-2081]	[2034-2052]
211	GGACAAACCGCCUUAAUUC	GAAUUAAGGCGGUUUGUCC	Chmp	[1624-1642]	[1595-1613]
212	CCAAGCAAGAGGAGUUCUU	AAGAACUCCUCUUGCUUGG	Chmp	[829-847]	[800-818]
213	UGUCCAUUGAGGGUAUCCA	UGGAUACCCUCAAUGGACA	Chmp	[553-571]	[524-542]
214	AGUACAUCUACAUGCAUUU	AAAUGCAUGUAGAUGUACU	Chmp	[799-817]	[770-788]
215	CUACCUGGAGGCUUACAAC	GUUGUAAGCCUCCAGGUAG	Chmp	[1205-1223]	[1176-1194]
216	CUGUUGAGGCACUUUUGUU	AACAAAAGUGCCUCAACAG	Chmp	[2054-2072]	[2025-2043]
217	CCUUAAUUCAGCUGAGUGU	ACACUCAGCUGAAUUAAGG	Chmp	[1634-1652]	[1605-1623]
218	AAGGAAAAUAAAGAACAGA	UCUGUUCUUUAUUUUCCUU	Chmp	[2552-2570]	[2523-2541]
219	UGGAAAGAGCAGGCUUCCA	UGGAAGCCUGCUCUUUCCA	Chmp	[2293-2311]	[2264-2282]
220	GAAAUGUGGUUCCCAGGGA	UCCCUGGGAACCACAUUUC	Chmp	[2449-2467]	[2420-2438]
221	GGACAGUGUGGAGUGUUAC	GUAACACUCCACACUGUCC	Chmp	[1919-1937]	[1890-1908]
222	AUGACAUCUCAAAAGAAGU	ACUUCUUUUGAGAUGUCAU	Chmp	[2201-2219]	[2172-2190]
223	UUUCCAAGGAAAAUAAAGA	UCUUUAUUUUCCUUGGAAA	Chmp	[2547-2565]	[2518-2536]
224	CAACUUCGCUGAGCAGAUU	AAUCUGCUCAGCGAAGUUG	Chmp	[749-767]	[720-738]
225	ACUUUUGUUUCUUGGGCAA	UUGCCCAAGAAACAAAAGU	Chmp	[2064-2082]	[2035-2053]
226	UGGUGUUGCUUAUCUUCUG	CAGAAGAUAAGCAACACCA	Chmp	[160-178]	[131-149]
227	AAAAACCGGGACUAAAAGA	UCUUUUAGUCCCGGUUUUU	Chmp	[2120-2138]	[2091-2109]
228	CCAUGUGAUUUAUUCUUGG	CCAAGAAUAAAUCACAUGG		[2383-2401]	[2354-2372]
229	CAAGUACGACUGCGAACAG	CUGUUCGCAGUCGUACUUG	Chmp	[944-962]	[915-933]

230	CUCAGUGUUAAAAUGACAU	AUGUCAUUUUAACACUGAG	Chmp	[2189-2207]	[2160-2178]
231	GCAAGAGGAGUUCUUCAAC	GUUGAAGAACUCCUCUUGC	Chmp	[833-851]	[804-822]
232	ACUACCUGGUCAAGAUCUU	AAGAUCUUGACCAGGUAGU	Chmp	[1081-1099]	[1052-1070]
233	GUCCAUUGAGGGUAUCCAC	GUGGAUACCCUCAAUGGAC	Chmp	[554-572]	[525-543]
234	GUAAUUUUCCAAGGAAAAU	AUUUUCCUUGGAAAAUUAC	Chmp	[2542-2560]	[2513-2531]
235	UUUCUUGGGCAAAAAUACA	UGUAUUUUUGCCCAAGAAA		[2071-2089]	[2042-2060]
236	UCCUCAAUCGUCUCCUUUA	UAAAGGAGACGAUUGAGGA		[1585-1603]	[1556-1574]
237	UGCAGAAGUGCGAGAUCCU	AGGAUCUCGCACUUCUGCA	Chn,GP,Chmp	[1039-1057]	[1010-1028]
238	AAAGAGCAGGCUUCCAGGA	UCCUGGAAGCCUGCUCUUU	Chmp	[2296-2314]	[2267-2285]
239	CAUGAACGGUGCUGUCAUG	CAUGACAGCACCGUUCAUG		[650-668]	[621-639]
240	AACUGGUGACCCUCAUCAG	CUGAUGAGGGUCACCAGUU	Chmp	[865-883]	[836-854]
241	CCAAUGCUGACACGAAGGA	UCCUUCGUGUCAGCAUUGG	Chmp	[1548-1566]	[1519-1537]
242	AAGCAGAUUGACCAGCAGA	UCUGCUGGUCAAUCUGCUU	Chmp	[2028-2046]	[1999-2017]
243	GUCAUGUACCAGAUCGACA	UGUCGAUCUGGUACAUGAC	Chn,Chmp	[663-681]	[634-652]
244	GCACAACUGUAUCUAUGCU	AGCAUAGAUACAGUUGUGC	Chmp	[1730-1748]	[1701-1719]
245	CAGAUGCAGCUGCAGAAGU	ACUUCUGCAGCUGCAUCUG	Chn,GP,Chmp	[1029-1047]	[1000-1018]
246	CACCAUGUGAUUUAUUCUU	AAGAAUAAAUCACAUGGUG		[2381-2399]	[2352-2370]
247	GGAGAAUCUACGUCCUUGG	CCAAGGACGUAGAUUCUCC	Chmp	[1876-1894]	[1847-1865]
248	CACUGCAAAUAACCCAUCU	AGAUGGGUUAUUUGCAGUG	Chmp	[2147-2165]	[2118-2136]
249	GCAGAUUGACCAGCAGAAC	GUUCUGCUGGUCAAUCUGC	Chmp	[2030-2048]	[2001-2019]
250	AAUGACAUCUCAAAAGAAG	CUUCUUUUGAGAUGUCAUU	Chmp	[2200-2218]	[2171-2189]
251	GUAACCCUGUAAUUUUCCA	UGGAAAAUUACAGGGUUAC	Chmp	[2534-2552]	[2505-2523]
252	GUUUCUUGGGCAAAAAUAC	GUAUUUUUGCCCAAGAAAC		[2070-2088]	[2041-2059]
253	GACAGUGUGGAGUGUUACG	CGUAACACUCCACACUGUC	Chmp	[1920-1938]	[1891-1909]
254	UCAUGAACGGUGCUGUCAU	AUGACAGCACCGUUCAUGA		[649-667]	[620-638]
255	CUAUGAUGGUCAGGACCAG	CUGGUCCUGACCAUCAUAG	Chmp	[1757-1775]	[1728-1746]
256	AAUUCAGCUGAGUGUUACU	AGUAACACUCAGCUGAAUU	Chmp	[1638-1656]	[1609-1627]
257	UGCCUCAGUGUUAAAAUGA	UCAUUUUAACACUGAGGCA	Chmp	[2186-2204]	[2157-2175]
258	ACCGGAUGGACAGUUAUUU	AAAUAACUGUCCAUCCGGU	Chmp	[2506-2524]	[2477-2495]
259	UCAAGAUCUUCGAGGAGCU	AGCUCCUCGAAGAUCUUGA	Chmp	[1090-1108]	[1061-1079]
260	CUGCAUCCACCACAACAGU	ACUGUUGUGGUGGAUGCAG	Chmp	[1484-1502]	[1455-1473]
261	CGCCUCAUUGAAUUCGCCU	AGGCGAAUUCAAUGAGGCG		[588-606]	[559-577]
262	GAGGCACUUUUGUUUCUUG	CAAGAAACAAAAGUGCCUC	Chmp	[2059-2077]	[2030-2048]
263	AAAGAACAGACUAACUAGU	ACUAGUUAGUCUGUUCUUU	Chmp	[2561-2579]	[2532-2550]
264	UACCCAGAGAGGAACGAGU	ACUCGUUCCUCUCUGGGUA	Chmp	[1656-1674]	[1627-1645]
265	CCUGGUCAAGAUCUUCGAG	CUCGAAGAUCUUGACCAGG	Chmp	[1085-1103]	[1056-1074]
266	CUACACCCUGGAGGAUCAU	AUGAUCCUCCAGGGUGUAG	Chmp	[344-362]	[315-333]
267	AUUGACCAGCAGAACUGUA	UACAGUUCUGCUGGUCAAU	Chmp	[2034-2052]	[2005-2023]
268	ACCUGUUGAGGCACUUUUG	CAAAAGUGCCUCAACAGGU	Chmp	[2052-2070]	[2023-2041]
269	CAACUGUAUCUAUGCUGCU	AGCAGCAUAGAUACAGUUG	Chmp	[1733-1751]	[1704-1722]
270	CAGUGUUAAAAUGACAUCU	AGAUGUCAUUUUAACACUG	Chmp	[2191-2209]	[2162-2180]
271	CGUCCUGCACAACUGUAUC	GAUACAGUUGUGCAGGACG	Chmp	[1724-1742]	[1695-1713]
272	CGGAUGGACAGUUAUUUUG	CAAAAUAACUGUCCAUCCG	Chmp	[2508-2526]	[2479-2497]
273	GGUCAAGAUCUUCGAGGAG	CUCCUCGAAGAUCUUGACC	Chmp	[1088-1106]	[1059-1077]
274	AUGGAGCGCCUCAUUGAAU	AUUCAAUGAGGCGCUCCAU		[582-600]	[553-571]
275	UAAAGAACAGACUAACUAG	CUAGUUAGUCUGUUCUUUA	Chmp	[2560-2578]	[2531-2549]
276	AUAAAGAACAGACUAACUA	UAGUUAGUCUGUUCUUUAU	Chmp	[2559-2577]	[2530-2548]
277	ACCGGGACUAAAAGAAAAG	CUUUUCUUUUAGUCCCGGU	Chmp	[2124-2142]	[2095-2113]
278	UCUUCCACGCCUGCAUCAA	UUGAUGCAGGCGUGGAAGA	Chmp	[919-937]	[890-908]
279	GUGUUGCUUAUCUUCUGGA	UCCAGAAGAUAAGCAACAC	Chmp	[162-180]	[133-151]
280	GAAUCUACGUCCUUGGAGG	CCUCCAAGGACGUAGAUUC	Chmp	[1879-1897]	[1850-1868]
281	UGGACAGUUAUUUUGUUGA	UCAACAAAAUAACUGUCCA	Chmp	[2512-2530]	[2483-2501]
282	GGUGGUGUUGCUUAUCUUC	GAAGAUAAGCAACACCACC		[158-176]	[129-147]
283	UCACACUGCAGGUCAAGUA	UACUUGACCUGCAGUGUGA	Chmp	[421-439]	[392-410]
284	ACAUCUCAAAAGAAGUCCA	UGGACUUCUUUUGAGAUGU	Chmp	[2204-2222]	[2175-2193]
285	UGCAGGUCAAGUACCAGGA	UCCUGGUACUUGACCUGCA	Chmp	[427-445]	[398-416]

286	UAAUUUUCCAAGGAAAAUA	UAUUUUCCUUGGAAAAUUA	Chmp	[2543-2561]	[2514-2532]
287	UGCGUCCUGCACAACUGUA	UACAGUUGUGCAGGACGCA	Chmp	[1722-1740]	[1693-1711]
288	UAACCCUGUAAUUUUCCAA	UUGGAAAAUUACAGGGUUA	Chmp	[2535-2553]	[2506-2524]
289	UGGAGGCUAUGAUGGUCAC	GUGACCAUCAUAGCCUCCA	Chmp	[1892-1910]	[1863-1881]
290	UUGAUAAGUAACCCUGUAA	UUACAGGGUUACUUAUCAA	Chmp	[2527-2545]	[2498-2516]
291	UGAUCACAGCAAUGAACAC	GUGUUCAUUGCUGUGAUCA	Chmp	[1681-1699]	[1652-1670]
292	GUGUGGAAAGAGCAGGCUU	AAGCCUGCUCUUUCCACAC	Chmp	[2290-2308]	[2261-2279]
293	CAGAACUGUACCUGUUGAG	CUCAACAGGUACAGUUCUG	Chmp	[2043-2061]	[2014-2032]
294	CAAGGACUACCUGGUCAAG	CUUGACCAGGUAGUCCUUG	Chmp	[1076-1094]	[1047-1065]
295	ACCCUGGAGGAUCAUACCA	UGGUAUGAUCCUCCAGGGU	Chmp	[348-366]	[319-337]
296	ACAUCUACAUGCAUUUUGG	CCAAAAUGCAUGUAGAUGU	Chmp	[802-820]	[773-791]
297	AAUAAAGAACAGACUAACU	AGUUAGUCUGUUCUUUAUU	Chmp	[2558-2576]	[2529-2547]
298	AUGAUCACAGCAAUGAACA	UGUUCAUUGCUGUGAUCAU	Chmp	[1680-1698]	[1651-1669]
299	GUGGUGGUGUUGCUUAUCU	AGAUAAGCAACACCACCAC		[156-174]	[127-145]
300	UAAGUAACCCUGUAAUUUU	AAAAUUACAGGGUUACUUA	Chmp	[2531-2549]	[2502-2520]
301	ACAGUGUGGAGUGUUACGA	UCGUAACACUCCACACUGU	Chmp	[1921-1939]	[1892-1910]
302	AGAAGUCCAAAGCGGGAAU	AUUCCCGCUUUGGACUUCU	Chmp	[2214-2232]	[2185-2203]
303	UUGUUUCUUGGGCAAAAAU	AUUUUUGCCCAAGAAACAA	Chmp	[2068-2086]	[2039-2057]
304	AAGGACUACCUGGUCAAGA	UCUUGACCAGGUAGUCCUU	Chmp	[1077-1095]	[1048-1066]
305	UGUUGAUAAGUAACCCUGU	ACAGGGUUACUUAUCAACA	Chmp	[2525-2543]	[2496-2514]
306	CUAUGAUGGUCACACGUUC	GAACGUGUGACCAUCAUAG	Chmp	[1898-1916]	[1869-1887]
307	UUACGACCCAGAUACAGAC	GUCUGUAUCUGGGUCGUAA	Chmp	[1934-1952]	[1905-1923]
308	GGACUACCUGGUCAAGAUC	GAUCUUGACCAGGUAGUCC	Chmp	[1079-1097]	[1050-1068]
309	GCUAUGAUGGUCAGGACCA	UGGUCCUGACCAUCAUAGC	Chmp	[1756-1774]	[1727-1745]
310	UGUUGAGGCACUUUUGUUU	AAACAAAAGUGCCUCAACA	Chmp	[2055-2073]	[2026-2044]
311	UGUACAAAAACCGGGACUA	UAGUCCCGGUUUUUGUACA	Chmp	[2115-2133]	[2086-2104]
312	UACGACCCAGAUACAGACA	UGUCUGUAUCUGGGUCGUA	Chmp	[1935-1953]	[1906-1924]
313	CAUCAACUGGGUCAAGUAC	GUACUUGACCCAGUUGAUG	Chn,GP,Chmp	[932-950]	[903-921]
314	AAACCGCCUUAAUUCAGCU	AGCUGAAUUAAGGCGGUUU	Chmp	[1628-1646]	[1599-1617]
315	AGAGGUGGUGGUGUUGCUU	AAGCAACACCACCACCUCU		[152-170]	[123-141]
316	CGCUACGAUGUGGAAACAG	CUGUUUCCACAUCGUAGCG	Chmp	[1791-1809]	[1762-1780]
317	UCACCAUGUGAUUUAUUCU	AGAAUAAAUCACAUGGUGA		[2380-2398]	[2351-2369]
318	UGGAGGAUCAUACCAAGCA	UGCUUGGUAUGAUCCUCCA	Chmp	[352-370]	[323-341]
319	UAUUCUUGGAUACCUGGGA	UCCCAGGUAUCCAAGAAUA	Chmp	[2393-2411]	[2364-2382]
320	ACUGCAAAUAACCCAUCUU	AAGAUGGGUUAUUUGCAGU	Chmp	[2148-2166]	[2119-2137]
321	GUACAUCUACAUGCAUUUU	AAAAUGCAUGUAGAUGUAC	Chmp	[800-818]	[771-789]
322	ACGUCCUUGGAGGCUAUGA	UCAUAGCCUCCAAGGACGU	Chmp	[1885-1903]	[1856-1874]
323	AUGCCUCAGUGUUAAAAUG	CAUUUUAACACUGAGGCAU	Chmp	[2185-2203]	[2156-2174]
324	AGCACUGCAAAUAACCCAU	AUGGGUUAUUUGCAGUGCU	Chmp	[2145-2163]	[2116-2134]
325	GCAAAAAUACAGUCCAAUG	CAUUGGACUGUAUUUUUGC		[2079-2097]	[2050-2068]
326	UGUCCUCAAUCGUCUCCUU	AAGGAGACGAUUGAGGACA		[1583-1601]	[1554-1572]
327	GACCAGCAGAACUGUACCU	AGGUACAGUUCUGCUGGUC	Chmp	[2037-2055]	[2008-2026]
328	AAGAGGAGUUCUUCAACCU	AGGUUGAAGAACUCCUCUU	Chmp	[835-853]	[806-824]
329	GUACCUGUUGAGGCACUUU	AAAGUGCCUCAACAGGUAC	Chmp	[2050-2068]	[2021-2039]
330	GACCCAGAUACAGACACCU	AGGUGUCUGUAUCUGGGUC	Chmp	[1938-1956]	[1909-1927]
331	UCAUUGAAUUCGCCUACAC	GUGUAGGCGAAUUCAAUGA		[592-610]	[563-581]
332	GUCCAAAGCGGGAAUCAUG	CAUGAUUCCCGCUUUGGAC	Chmp	[2218-2236]	[2189-2207]
333	UGUCACCAUGUGAUUUAUU	AAUAAAUCACAUGGUGACA		[2378-2396]	[2349-2367]
334	GUCCUUGGAGGCUAUGAUG	CAUCAUAGCCUCCAAGGAC	Chmp	[1887-1905]	[1858-1876]
335	UGCAAGGACUACCUGGUCA	UGACCAGGUAGUCCUUGCA	Chmp	[1074-1092]	[1045-1063]
336	UUUUGUACAAAAACCGGGA	UCCCGGUUUUUGUACAAAA	Chmp	[2112-2130]	[2083-2101]
337	GGGAGAAUCUACGUCCUUG	CAAGGACGUAGAUUCUCCC	Chmp	[1875-1893]	[1846-1864]
338	GAACUUCCUGCAGAUGCAG	CUGCAUCUGCAGGAAGUUC	Chmp	[1019-1037]	[990-1008]
339	CAGAUACAGACACCUGGAG	CUCCAGGUGUCUGUAUCUG	Chmp	[1942-1960]	[1913-1931]
340	UCAUGUACCAGAUCGACAG	CUGUCGAUCUGGUACAUGA	Chn,Chmp	[664-682]	[635-653]
341	GGUGGUGGUGUUGCUUAUC	GAUAAGCAACACCACCACC		[155-173]	[126-144]

342	CAGCAAUGAACACCAUCCG	CGGAUGGUGUUCAUUGCUG	Chmp	[1687-1705]	[1658-1676]
343	AUGGUCACACGUUCCUGGA	UCCAGGAACGUGUGACCAU	Chmp	[1903-1921]	[1874-1892]
344	CCUCAUUGAAUUCGCCUAC	GUAGGCGAAUUCAAUGAGG		[590-608]	[561-579]
345	CUUUUGUUUCUUGGGCAAA	UUUGCCCAAGAAACAAAAG	Chmp	[2065-2083]	[2036-2054]
346	GGAGCGCCUCAUUGAAUUC	GAAUUCAAUGAGGCGCUCC		[584-602]	[555-573]
347	AGUGUUACGACCCAGAUAC	GUAUCUGGGUCGUAACACU	Chmp	[1930-1948]	[1901-1919]
348	UGUACCUGUUGAGGCACUU	AAGUGCCUCAACAGGUACA	Chmp	[2049-2067]	[2020-2038]
349	GGUGUUGCUUAUCUUCUGG	CCAGAAGAUAAGCAACACC	Chmp	[161-179]	[132-150]
350	GCUAUGAUGGUCACACGUU	AACGUGUGACCAUCAUAGC	Chmp	[1897-1915]	[1868-1886]
351	UUAAUUCAGCUGAGUGUUA	UAACACUCAGCUGAAUUAA	Chmp	[1636-1654]	[1607-1625]
352	AGCGCUACGAUGUGGAAAC	GUUUCCACAUCGUAGCGCU	Chmp	[1789-1807]	[1760-1778]
353	AUCAUUGUUUUUGUACAAA	UUUGUACAAAAACAAUGAU	Chmp	[2104-2122]	[2075-2093]
354	GCAUCCACCACAACAGUGU	ACACUGUUGUGGUGGAUGC	Chmp	[1486-1504]	[1457-1475]
355	UGUCCUCCACGUCAUGAAC	GUUCAUGACGUGGAGGACA	Chmp	[638-656]	[609-627]
356	CAUCUACAUGCAUUUUGGG	CCCAAAAUGCAUGUAGAUG	Chmp	[803-821]	[774-792]
357	AUCACAGCAAUGAACACCA	UGGUGUUCAUUGCUGUGAU	Chmp	[1683-1701]	[1654-1672]
358	AGGAGUUCUUCAACCUGUC	GACAGGUUGAAGAACUCCU	Rat,Chn,Ms, GP,Chmp	[838-856]	[809-827]
359	AGAUCUUCGAGGAGCUCAC	GUGAGCUCCUCGAAGAUCU	Chmp	[1093-1111]	[1064-1082]
360	CAAGCAAGAGGAGUUCUUC	GAAGAACUCCUCUUGCUUG	Chmp	[830-848]	[801-819]
361	UGUUACUACCCAGAGAGGA	UCCUCUCUGGGUAGUAACA	Chmp	[1650-1668]	[1621-1639]
362	CAAGAGGAGUUCUUCAACC	GGUUGAAGAACUCCUCUUG	Chmp	[834-852]	[805-823]
363	GUGGUGUUGCUUAUCUUCU	AGAAGAUAAGCAACACCAC	Chmp	[159-177]	[130-148]
364	AGGAAAAUAAAGAACAGAC	GUCUGUUCUUUAUUUUCCU	Chmp	[2553-2571]	[2524-2542]
365	CGGGAGUACAUCUACAUGC	GCAUGUAGAUGUACUCCCG	Chmp	[795-813]	[766-784]
366	AAGAAGUCCAAAGCGGGAA	UUCCCGCUUUGGACUUCUU	Chmp	[2213-2231]	[2184-2202]
367	CUGUACCUGUUGAGGCACU	AGUGCCUCAACAGGUACAG	Chmp	[2048-2066]	[2019-2037]
368	UCUCAAAAGAAGUCCAAAG	CUUUGGACUUCUUUUGAGA	Chmp	[2207-2225]	[2178-2196]
369	AAUGAUCACAGCAAUGAAC	GUUCAUUGCUGUGAUCAUU	Chmp	[1679-1697]	[1650-1668]
370	GAUUUAUUCUUGGAUACCU	AGGUAUCCAAGAAUAAAUC	Chmp	[2389-2407]	[2360-2378]
371	UCCAAAGCGGGAAUCAUGU	ACAUGAUUCCCGCUUUGGA	Chmp	[2219-2237]	[2190-2208]
372	GAGACGUGGACUUUCGUAG	CUACGAAAGUCCACGUCUC	Chmp	[1809-1827]	[1780-1798]
373	UCUGGAAAUGUGGUUCCCA	UGGGAACCACAUUUCCAGA	Chmp	[2445-2463]	[2416-2434]
374	CACCACAACAGUGUGGAGA	UCUCCACACUGUUGUGGUG	Chmp	[1491-1509]	[1462-1480]
375	CCAUGACCAAUCAGUGGUC	GACCACUGAUUGGUCAUGG	Chn,Chmp	[1378-1396]	[1349-1367]
376	AACAGUGUGGAGAGGUAUG	CAUACCUCUCCACACUGUU	Chmp	[1497-1515]	[1468-1486]
377	ACUUCCUGCAGAUGCAGCU	AGCUGCAUCUGCAGGAAGU	Chn,GP,Chmp	[1021-1039]	[992-1010]
378	AGCUGCAGAAGUGCGAGAU	AUCUCGCACUUCUGCAGCU	Chn,GP,Chmp	[1036-1054]	[1007-1025]
379	UCAAGUACGACUGCGAACA	UGUUCGCAGUCGUACUUGA	Chmp	[943-961]	[914-932]
380	AAAGACAGCACUGCAAAUA	UAUUUGCAGUGCUGUCUUU	Chmp	[2139-2157]	[2110-2128]
381	UACCUGUUGAGGCACUUUU	AAAAGUGCCUCAACAGGUA	Chmp	[2051-2069]	[2022-2040]
382	ACAGAGACGUGGACUUUCG	CGAAAGUCCACGUCUCUGU	Chmp	[1806-1824]	[1777-1795]
383	CAUCCACCACAACAGUGUG	CACACUGUUGUGGUGGAUG	Chmp	[1487-1505]	[1458-1476]
384	AAGUAACCCUGUAAUUUUC	GAAAAUUACAGGGUUACUU	Chmp	[2532-2550]	[2503-2521]
385	GCAAAUAACCCAUCUUCCG	CGGAAGAUGGGUUAUUUGC	Chmp	[2151-2169]	[2122-2140]
386	AGGUGACCCGAAUGACAUC	GAUGUCAUUCGGGUCACCU	Chmp	[1963-1981]	[1934-1952]
387	UAAAAUGACAUCUCAAAAG	CUUUUGAGAUGUCAUUUUA	Chmp	[2197-2215]	[2168-2186]
388	GGUGUCCAUUGAGGGUAUC	GAUACCCUCAAUGGACACC	Chmp	[551-569]	[522-540]
389	GCCUUAAUUCAGCUGAGUG	CACUCAGCUGAAUUAAGGC	Chmp	[1633-1651]	[1604-1622]
390	CACACUGCAGGUCAAGUAC	GUACUUGACCUGCAGUGUG	Chmp	[422-440]	[393-411]
391	UGGAAACAGAGACGUGGAC	GUCCACGUCUCUGUUUCCA	Chmp	[1801-1819]	[1772-1790]
392	CUUAAUUCAGCUGAGUGUU	AACACUCAGCUGAAUUAAG	Chmp	[1635-1653]	[1606-1624]
393	GGCACUUUUGUUUCUUGGG	CCCAAGAAACAAAAGUGCC	Chmp	[2061-2079]	[2032-2050]
394	GAUCAUACCAAGCAGGCCU	AGGCCUGCUUGGUAUGAUC	Chmp	[357-375]	[328-346]
395	UGAGGCACUUUUGUUUCUU	AAGAAACAAAAGUGCCUCA	Chmp	[2058-2076]	[2029-2047]
396	UGUUACGACCCAGAUACAG	CUGUAUCUGGGUCGUAACA	Chmp	[1932-1950]	[1903-1921]

397	ACCACAACAGUGUGGAGAG	CUCUCCACACUGUUGUGGU	Chmp	[1492-1510]	[1463-1481]
398	GUGGUGUCCAUUGAGGGUA	UACCCUCAAUGGACACCAC	Chmp	[549-567]	[520-538]
399	CAAACCGCCUUAAUUCAGC	GCUGAAUUAAGGCGGUUUG	Chmp	[1627-1645]	[1598-1616]
400	GUCAAGUACGACUGCGAAC	GUUCGCAGUCGUACUUGAC	Chmp	[942-960]	[913-931]
401	ACCGCCUUAAUUCAGCUGA	UCAGCUGAAUUAAGGCGGU	Chmp	[1630-1648]	[1601-1619]
402	CAGGUCAAGUACCAGGAUG	CAUCCUGGUACUUGACCUG	Chmp	[429-447]	[400-418]
403	AAGUCCAAAGCGGGAAUCA	UGAUUCCCGCUUUGGACUU	Chmp	[2216-2234]	[2187-2205]
404	AUGGGCCUGUACAUAGAAG	CUUCUAUGUACAGGCCCAU	Chmp	[2467-2485]	[2438-2456]
405	CUGCACAACUGUAUCUAUG	CAUAGAUACAGUUGUGCAG	Ms, Chmp	[1728-1746]	[1699-1717]
406	AGUUAUUUUGUUGAUAAGU	ACUUAUCAACAAAAUAACU	Chmp	[2517-2535]	[2488-2506]
407	GAGGCUAUGAUGGUCACAC	GUGUGACCAUCAUAGCCUC	Chmp	[1894-1912]	[1865-1883]
408	CAAAAGAAGUCCAAAGCGG	CCGCUUUGGACUUCUUUUG	Chmp	[2210-2228]	[2181-2199]
409	AGGCACUUUUGUUUCUUGG	CCAAGAAACAAAAGUGCCU	Chmp	[2060-2078]	[2031-2049]
410	AAAUAAAGAACAGACUAAC	GUUAGUCUGUUCUUUAUUU	Chmp	[2557-2575]	[2528-2546]
411	AACAGCGACGGUUCUACGU	ACGUAGAACCGUCGCUGUU	Chmp	[958-976]	[929-947]
412	AGAUUGACCAGCAGAACUG	CAGUUCUGCUGGUCAAUCU	Chmp	[2032-2050]	[2003-2021]
413	CCCAUGACCAAUCAGUGGU	ACCACUGAUUGGUCAUGGG	Chn, Chmp	[1377-1395]	[1348-1366]
414	AGCGCCUCAUUGAAUUCGC	GCGAAUUCAAUGAGGCGCU		[586-604]	[557-575]
415	UCAGCUGAGUGUUACUACC	GGUAGUAACACUCAGCUGA	Chmp	[1641-1659]	[1612-1630]
416	UGACCAGCAGAACUGUACC	GGUACAGUUCUGCUGGUCA	Chmp	[2036-2054]	[2007-2025]
417	UCUACGUCCUUGGAGGCUA	UAGCCUCCAAGGACGUAGA	Chmp	[1882-1900]	[1853-1871]
418	AGCUACCUGGAGGCUUACA	UGUAAGCCUCCAGGUAGCU	Chmp	[1203-1221]	[1174-1192]
419	AGUGUGGAGUGUUACGACC	GGUCGUAACACUCCACACU	Chmp	[1923-1941]	[1894-1912]
420	AUGUGAUUUAUUCUUGGAU	AUCCAAGAAUAAAUCACAU		[2385-2403]	[2356-2374]
421	CUGGACAGUGUGGAGUGUU	AACACUCCACACUGUCCAG	Chmp	[1917-1935]	[1888-1906]
422	GUGAUUUAUUCUUGGAUAC	GUAUCCAAGAAUAAAUCAC	Chmp	[2387-2405]	[2358-2376]
423	AAACAGAGACGUGGACUUU	AAAGUCCACGUCUCUGUUU	Chmp	[1804-1822]	[1775-1793]
424	CUGUAUCUAUGCUGCUGGG	CCCAGCAGCAUAGAUACAG	Chmp	[1736-1754]	[1707-1725]
425	ACACCCUGGAGGAUCAUAC	GUAUGAUCCUCCAGGGUGU	Chmp	[346-364]	[317-335]
426	GAGGAUCAUACCAAGCAGG	CCUGCUUGGUAUGAUCCUC	Chmp	[354-372]	[325-343]
427	AGUGUUACUACCCAGAGAG	CUCUCUGGGUAGUAACACU	Chmp	[1648-1666]	[1619-1637]
428	CCAAAGCGGGAAUCAUGUG	CACAUGAUUCCCGCUUUGG	Chmp	[2220-2238]	[2191-2209]
429	UGAGUGUUACUACCCAGAG	CUCUGGGUAGUAACACUCA	Chmp	[1646-1664]	[1617-1635]
430	AAAAGAAAAGACAGCACUG	CAGUGCUGUCUUUUCUUUU	Chmp	[2133-2151]	[2104-2122]
431	UCCUGCACAACUGUAUCUA	UAGAUACAGUUGUGCAGGA	Chmp	[1726-1744]	[1697-1715]
432	UGUACCAGAUCGACAGCGU	ACGCUGUCGAUCUGGUACA	Chn, Chmp	[667-685]	[638-656]
433	GACUACCUGGUCAAGAUCU	AGAUCUUGACCAGGUAGUC	Chmp	[1080-1098]	[1051-1069]
434	GUGUUACUACCCAGAGAGG	CCUCUCUGGGUAGUAACAC	Chmp	[1649-1667]	[1620-1638]
435	GGGAGUAUCAUUGUUUUUG	CAAAAACAAUGAUACUCCC	Chmp	[2098-2116]	[2069-2087]
436	GGAAACAGAGACGUGGACU	AGUCCACGUCUCUGUUUCC	Chmp	[1802-1820]	[1773-1791]
437	GUUGCUUAUCUUCUGGAAC	GUUCCAGAAGAUAAGCAAC	Chmp	[164-182]	[135-153]
438	CAAAAAUACAGUCCAAUGG	CCAUUGGACUGUAUUUUUG		[2080-2098]	[2051-2069]
439	ACUAAAAGAAAAGACAGCA	UGCUGUCUUUUCUUUUAGU	Chmp	[2130-2148]	[2101-2119]
440	AGAGGAGUUCUUCAACCUG	CAGGUUGAAGAACUCCUCU	Chmp	[836-854]	[807-825]
441	CUGCAUCAACUGGGUCAAG	CUUGACCCAGUUGAUGCAG	GP, Chmp	[929-947]	[900-918]
442	AACUAGUGUCUUUCACCCU	AGGGUGAAAGACACUAGUU	Chmp	[2573-2591]	[2544-2562]
443	UCUUGGGCAAAAAUACAGU	ACUGUAUUUUUGCCCAAGA		[2073-2091]	[2044-2062]
444	UACACCCUGGAGGAUCAUA	UAUGAUCCUCCAGGGUGUA	Chmp	[345-363]	[316-334]
445	UCAUCCAGCCCUGUCUUCA	UGAAGACAGGGCUGGAUGA	Chmp	[489-507]	[460-478]
446	CUACCUGGUCAAGAUCUUC	GAAGAUCUUGACCAGGUAG	Chmp	[1082-1100]	[1053-1071]
447	UUCCACGCCUGCAUCAACU	AGUUGAUGCAGGCGUGGAA	GP, Chmp	[921-939]	[892-910]
448	CUGCAAAUAACCCAUCUUC	GAAGAUGGGUUAUUUGCAG	Chmp	[2149-2167]	[2120-2138]
449	CUUGGAGGCUAUGAUGGUC	GACCAUCAUAGCCUCCAAG	Chmp	[1890-1908]	[1861-1879]
450	UGUCAUGUACCAGAUCGAC	GUCGAUCUGGUACAUGACA	Chmp	[662-680]	[633-651]
451	AUCCAGCCCUGUCUUCAAG	CUUGAAGACAGGGCUGGAU	Chmp	[491-509]	[462-480]
452	UGGAAAUGUGGUUCCCAGG	CCUGGGAACCACAUUUCCA	Chmp	[2447-2465]	[2418-2436]

453	AGGUCAAGUACCAGGAUGC	GCAUCCUGGUACUUGACCU	Chmp	[430-448]	[401-419]
454	UUGGAGGCUAUGAUGGUCA	UGACCAUCAUAGCCUCCAA	Chmp	[1891-1909]	[1862-1880]
455	ACAGACUAACUAGUGUCUU	AAGACACUAGUUAGUCUGU	Chmp	[2566-2584]	[2537-2555]
456	CAACUGGGUCAAGUACGAC	GUCGUACUUGACCCAGUUG	Chn,GP,Chmp	[935-953]	[906-924]
457	CAAUCGUCUCCUUUAUGCC	GGCAUAAAGGAGACGAUUG		[1589-1607]	[1560-1578]
458	AAUAACCCAUCUUCCGGGA	UCCCGGAAGAUGGGUUAUU	Chmp	[2154-2172]	[2125-2143]
459	AUACAGACACCUGGAGCGA	UCGCUCCAGGUGUCUGUAU	Chmp	[1945-1963]	[1916-1934]
460	ACUAACUAGUGUCUUUCAC	GUGAAAGACACUAGUUAGU	Chmp	[2570-2588]	[2541-2559]
461	AGUGUUAAAAUGACAUCUC	GAGAUGUCAUUUUAACACU	Chmp	[2192-2210]	[2163-2181]
462	AACUGGGUCAAGUACGACU	AGUCGUACUUGACCCAGUU	Chn,GP,Chmp	[936-954]	[907-925]
463	CUCAAUCGUCUCCUUUAUG	CAUAAAGGAGACGAUUGAG		[1587-1605]	[1558-1576]
464	AGCUGUCACCAUGUGAUUU	AAAUCACAUGGUGACAGCU		[2375-2393]	[2346-2364]
465	GUCACCAUGUGAUUUAUUC	GAAUAAAUCACAUGGUGAC		[2379-2397]	[2350-2368]
466	ACCAGAUCGACAGCGUUGU	ACAACGCUGUCGAUCUGGU	Chmp	[670-688]	[641-659]
467	GAACUGUACCUGUUGAGGC	GCCUCAACAGGUACAGUUC	Chmp	[2045-2063]	[2016-2034]
468	ACUACCCAGAGAGGAACGA	UCGUUCCUCUCUGGGUAGU	Chmp	[1654-1672]	[1625-1643]
469	UGGGCCUGUACAUAGAAGC	GCUUCUAUGUACAGGCCCA	Chmp	[2468-2486]	[2439-2457]
470	GAUGUGGAAACAGAGACGU	ACGUCUCUGUUUCCACAUC	Chmp	[1797-1815]	[1768-1786]
471	CUAAAAGAAAAGACAGCAC	GUGCUGUCUUUUCUUUUAG	Chmp	[2131-2149]	[2102-2120]
472	GUCACACUGCAGGUCAAGU	ACUUGACCUGCAGUGUGAC	Chmp	[420-438]	[391-409]
473	GACAGCACUGCAAAUAACC	GGUUAUUUGCAGUGCUGUC	Chmp	[2142-2160]	[2113-2131]
474	CUCAAAAGAAGUCCAAAGC	GCUUUGGACUUCUUUUGAG	Chmp	[2208-2226]	[2179-2197]
475	AGACGUGGACUUUCGUAGC	GCUACGAAAGUCCACGUCU	Chmp	[1810-1828]	[1781-1799]
476	GUCAUGAACGGUGCUGUCA	UGACAGCACCGUUCAUGAC		[648-666]	[619-637]
477	CUAACUAGUGUCUUUCACC	GGUGAAAGACACUAGUUAG	Chmp	[2571-2589]	[2542-2560]
478	AGCAGAACUGUACCUGUUG	CAACAGGUACAGUUCUGCU	Chmp	[2041-2059]	[2012-2030]
479	GAACAGACUAACUAGUGUC	GACACUAGUUAGUCUGUUC	Chmp	[2564-2582]	[2535-2553]
480	AACAGACUAACUAGUGUCU	AGACACUAGUUAGUCUGUU	Chmp	[2565-2583]	[2536-2554]
481	GUUUUUGUACAAAAACCGG	CCGGUUUUUGUACAAAAAC	Chmp	[2110-2128]	[2081-2099]
482	UUGAGGCACUUUUGUUUCU	AGAAACAAAAGUGCCUCAA	Chmp	[2057-2075]	[2028-2046]
483	AGUGUGGAGAGGUAUGAGC	GCUCAUACCUCUCCACACU	Chmp	[1500-1518]	[1471-1489]
484	UUUUCCAAGGAAAAUAAAG	CUUUAUUUUCCUUGGAAAA	Chmp	[2546-2564]	[2517-2535]
485	AAAAGAAGUCCAAAGCGGG	CCCGCUUUGGACUUCUUUU	Chmp	[2211-2229]	[2182-2200]
486	UGUGGAAAGAGCAGGCUUC	GAAGCCUGCUCUUUCCACA	Chmp	[2291-2309]	[2262-2280]
487	UGACAUCUCAAAAGAAGUC	GACUUCUUUUGAGAUGUCA	Chmp	[2202-2220]	[2173-2191]
488	ACGAUGUGGAAACAGAGAC	GUCUCUGUUUCCACAUCGU	Chmp	[1795-1813]	[1766-1784]
489	AUAAGUAACCCUGUAAUUU	AAAUUACAGGGUUACUUAU	Chmp	[2530-2548]	[2501-2519]
490	UGCAUCAACUGGGUCAAGU	ACUUGACCCAGUUGAUGCA	Chn,GP,Chmp	[930-948]	[901-919]
491	CAUGUACCAGAUCGACAGC	GCUGUCGAUCUGGUACAUG	Chn,Chmp	[665-683]	[636-654]
492	ACGUCAUGAACGGUGCUGU	ACAGCACCGUUCAUGACGU		[646-664]	[617-635]
493	GACUAAAAGAAAAGACAGC	GCUGUCUUUUCUUUUAGUC	Chmp	[2129-2147]	[2100-2118]
494	AAUGCUGACACGAAGGAUC	GAUCCUUCGUGUCAGCAUU	Chmp	[1550-1568]	[1521-1539]
495	AAGAACAGACUAACUAGUG	CACUAGUUAGUCUGUUCUU	Chmp	[2562-2580]	[2533-2551]
496	UCGUCUCCUUUAUGCCGUG	CACGGCAUAAAGGAGACGA		[1592-1610]	[1563-1581]
497	AUGUGGAAACAGAGACGUG	CACGUCUCUGUUUCCACAU	Chmp	[1798-1816]	[1769-1787]
498	UGUGGAAACAGAGACGUGG	CCACGUCUCUGUUUCCACA	Chmp	[1799-1817]	[1770-1788]
499	ACUAGUGUCUUUCACCCUG	CAGGGUGAAAGACACUAGU	Chmp	[2574-2592]	[2545-2563]
500	GUCCUGCACAACUGUAUCU	AGAUACAGUUGUGCAGGAC	Chmp	[1725-1743]	[1696-1714]

Table B 20 LGALS3 - lectin, galactoside-binding, soluble, 3

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-115430222:152-904	Human-115430224:-
1	CGGUGAAGCCCAAUGCAAA	UUUGCAUUGGGCUUCACCG		[561-579]	[1249-1267]
2	GGGAAUUUCUGGUGACAUA	UAUGUCACCAGAAAUUCCC		[853-871]	[1541-1559]

3	CAAUCAUCGGGUUAAAAAA	UUUUUUAACCCGAUGAUUG		[814-832]	[1502-1520]
4	CACUGAUUGUGCCUUAUAA	UUAUAAGGCACAAUCAGUG		[489-507]	[1177-1195]
5	GGAGAGUCAUUGUUUGCAA	UUGCAAACAAUGACUCUCC		[654-672]	[1342-1360]
6	CUCGCAUGCUGAUAACAAU	AUUGUUAUCAGCAUGCGAG		[534-552]	[1222-1240]
7	AUACAAAGCUGGAUAAUAA	UUAUUAUCCAGCUUUGUAU		[672-690]	[1360-1378]
8	CAUCAAUAUCCCUCUUGUA	UACAAGAGGGAUAUUGAUG		[995-1013]	[1683-1701]
9	GUCAUUGUUUGCAAUACAA	UUGUAUUGCAAACAAUGAC		[659-677]	[1347-1365]
10	GCGUUAUCUGGGUCUGGAA	UUCCAGACCCAGAUAACGC		[179-197]	[867-885]
11	GCAAUACAAAGCUGGAUAA	UUAUCCAGCUUUGUAUUGC		[669-687]	[1357-1375]
12	CCUCGCAUGCUGAUAACAA	UUGUUAUCAGCAUGCGAGG		[533-551]	[1221-1239]
13	GUCGGUUUUCCCAUUUGAA	UUCAAAUGGGAAAACCGAC		[712-730]	[1400-1418]
14	AGUGGGAAACCAUUCAAAA	UUUUGAAUGGUUUCCCACU		[731-749]	[1419-1437]
15	CUUCAUAUACCAUGAUAUA	UAUAUCAUGGUAUAUGAAG		[885-903]	[1573-1591]
16	CACGCUUCAAUGAGAACAA	UUGUUCUCAUUGAAGCGUG		[633-651]	[1321-1339]
17	AAGUCAUCUACUUAAUAAA	UUUAUUAAGUAGAUGACUU		[1013-1031]	[1701-1719]
18	GUACAAUCAUCGGGUUAAA	UUUAACCCGAUGAUUGUAC		[811-829]	[1499-1517]
19	CUGGGUCUGGAAACCCAAA	UUUGGGUUUCCAGACCCAG		[186-204]	[874-892]
20	GGUUAAAAAACUCAAUGAA	UUCAUUGAGUUUUUUAACC		[823-841]	[1511-1529]
21	GGAAACCAUUCAAAAUACA	UGUAUUUUGAAUGGUUUCC		[735-753]	[1423-1441]
22	CUCACUUGUUGCAGUACAA	UUGUACUGCAACAAGUGAG		[798-816]	[1486-1504]
23	ACGGUGAAGCCCAAUGCAA	UUGCAUUGGGCUUCACCGU		[560-578]	[1248-1266]
24	CAGCAAACUGGGAAUUUCU	AGAAAUUCCCAGUUUGCUG		[844-862]	[1532-1550]
25	AGUCAUUGUUUGCAAUACA	UGUAUUGCAAACAAUGACU		[658-676]	[1346-1364]
26	CUUCAAGGUUGCAGUGAAU	AUUCACUGCAACCUUGAAG		[775-793]	[1463-1481]
27	CCCUCUUGUAAGUCAUCUA	UAGAUGACUUACAAGAGGG		[1004-1022]	[1692-1710]
28	CGUUAUCUGGGUCUGGAAA	UUUCCAGACCCAGAUAACG		[180-198]	[868-886]
29	ACUUCAAGGUUGCAGUGAA	UUCACUGCAACCUUGAAGU		[774-792]	[1462-1480]
30	GAAGCCCAAUGCAAACAGA	UCUGUUUGCAUUGGGCUUC		[565-583]	[1253-1271]
31	GAAACCAUUCAAAAUACAA	UUGUAUUUUGAAUGGUUUC		[736-754]	[1424-1442]
32	CAAACAGAAUUGCUUUAGA	UCUAAAGCAAUUCUGUUUG		[576-594]	[1264-1282]
33	CAAUGAGAACAACAGGAGA	UCUCCUGUUGUUCUCAUUG	Ms	[640-658]	[1328-1346]
34	CACUGUGAGUGAAAAUUUU	AAAAUUUUCACUCACAGUG		[970-988]	[1658-1676]
35	GUGCCUCGCAUGCUGAUAA	UUAUCAGCAUGCGAGGCAC		[530-548]	[1218-1236]
36	GAGAGUCAUUGUUUGCAAU	AUUGCAAACAAUGACUCUC		[655-673]	[1343-1361]
37	GCUUCAUAUACCAUGAUAU	AUAUCAUGGUAUAUGAAGC		[884-902]	[1572-1590]
38	GAUGUUGCCUUCCACUUUA	UAAAGUGGAAGGCAACAUC	Ms	[611-629]	[1299-1317]
39	UCGGUUUUCCCAUUUGAAA	UUUCAAAUGGGAAAACCGA		[713-731]	[1401-1419]
40	GAAUUUCUGGUGACAUAGA	UCUAUGUCACCAGAAAUUC		[855-873]	[1543-1561]
41	GUGGGAAACCAUUCAAAAU	AUUUUGAAUGGUUUCCCAC		[732-750]	[1420-1438]
42	UCAUUGUUUGCAAUACAAA	UUUGUAUUGCAAACAAUGA		[660-678]	[1348-1366]
43	AGUGCUUCAUAUACCAUGA	UCAUGGUAUAUGAAGCACU		[881-899]	[1569-1587]
44	CUGUGAGUGAAAAUUUUUA	UAAAAAUUUUCACUCACAG		[972-990]	[1660-1678]
45	AAGUGGGAAACCAUUCAAA	UUUGAAUGGUUUCCCACUU		[730-748]	[1418-1436]
46	CAUUCAAAAUACAAGUACU	AGUACUUGUAUUUUGAAUG		[741-759]	[1429-1447]
47	AAGCCCAAUGCAAACAGAA	UUCUGUUUGCAUUGGGCUU		[566-584]	[1254-1272]
48	CGCUUCAAUGAGAACAACA	UGUUGUUCUCAUUGAAGCG	Rat,Ms	[635-653]	[1323-1341]
49	GAGUGAAAAUUUUUACAUU	AAUGUAAAAAUUUUCACUC		[976-994]	[1664-1682]
50	CAAUUCUGGGCACGGUGAA	UUCACCGUGCCCAGAAUUG		[549-567]	[1237-1255]
51	AGUCGGUUUUCCCAUUUGA	UCAAAUGGGAAAACCGACU		[711-729]	[1399-1417]
52	ACCCACGCUUCAAUGAGAA	UUCUCAUUGAAGCGUGGGU		[630-648]	[1318-1336]
53	GGAGUAUUUGAGGCUCGGA	UCCGAGCCUCAAAUACUCC		[63-81]	-
54	GUUAAAAAACUCAAUGAAA	UUUCAUUGAGUUUUUUAAC		[824-842]	[1512-1530]
55	CAUUGUUUGCAAUACAAAG	CUUUGUAUUGCAAACAAUG		[661-679]	[1349-1367]
56	CAAGGUUGCAGUGAAUGAU	AUCAUUCACUGCAACCUUG		[778-796]	[1466-1484]
57	UCUGGGUCUGGAAACCCAA	UUGGGUUUCCAGACCCAGA		[185-203]	[873-891]
58	GGGUUAAAAAACUCAAUGA	UCAUUGAGUUUUUUAACCC		[822-840]	[1510-1528]

59	CCUCACCAGUGCUUCAUAU	AUAUGAAGCACUGGUGAGG		[874-892]	[1562-1580]
60	AACCCACGCUUCAAUGAGA	UCUCAUUGAAGCGUGGGUU		[629-647]	[1317-1335]
61	ACCAUGAUAUAAUCUGAAA	UUUCAGAUUAUAUCAUGGU		[893-911]	[1581-1599]
62	GGAAGGGAAGAAAGACAGU	ACUGUCUUUCUUCCCUUCC	Rat	[695-713]	[1383-1401]
63	GAAUCUAAACCUUACAUGU	ACAUGUAAGGUUUAGAUUC		[935-953]	[1623-1641]
64	AUGUUGCCUUCCACUUUAA	UUAAAGUGGAAGGCAACAU	Ms	[612-630]	[1300-1318]
65	CAAUAUCCCUCUUGUAAGU	ACUUACAAGAGGGAUAUUG		[998-1016]	[1686-1704]
66	GGUGAAGCCCAAUGCAAAC	GUUUGCAUUGGGCUUCACC		[562-580]	[1250-1268]
67	GAAAGUGGGAAACCAUUCA	UGAAUGGUUUCCCACUUUC		[728-746]	[1416-1434]
68	AGACCUCACCAGUGCUUCA	UGAAGCACUGGUGAGGUCU		[871-889]	[1559-1577]
69	ACCAGUGCUUCAUAUACCA	UGGUAUAUGAAGCACUGGU		[878-896]	[1566-1584]
70	CCCAUUUGAAAGUGGGAAA	UUUCCCACUUUCAAAUGGG		[721-739]	[1409-1427]
71	GUAAGUCAUCUACUUAAUA	UAUUAAGUAGAUGACUUAC		[1011-1029]	[1699-1717]
72	CUGGGAAUUUCUGGUGACA	UGUCACCAGAAAUUCCCAG		[851-869]	[1539-1557]
73	AGCCCAAUGCAAACAGAAU	AUUCUGUUUGCAUUGGGCU		[567-585]	[1255-1273]
74	GGAAUGAUGUUGCCUUCCA	UGGAAGGCAACAUCAUUCC	Ms	[606-624]	[1294-1312]
75	AAAGUGGGAAACCAUUCAA	UUGAAUGGUUUCCCACUUU		[729-747]	[1417-1435]
76	UGGAGCACCUGGAGCUUAU	AUAAGCUCCAGGUGCUCCA		[343-361]	[1031-1049]
77	CAGUGAAUUACCUGUCUCA	UGAGACAGGUAAUUCACUG		[1037-1055]	[1725-1743]
78	UGGGAAACCAUUCAAAAUA	UAUUUUGAAUGGUUUCCCA		[733-751]	[1421-1439]
79	GGGAAACCAUUCAAAAUAC	GUAUUUUGAAUGGUUUCCC		[734-752]	[1422-1440]
80	GUCAUCUACUUAAUAAAUA	UAUUUAUUAAGUAGAUGAC		[1015-1033]	[1703-1721]
81	GGGAAGGGAAGAAAGACAG	CUGUCUUUCUUCCCUUCCC	Rat	[694-712]	[1382-1400]
82	CAAUACAAAGCUGGAUAAU	AUUAUCCAGCUUUGUAUUG		[670-688]	[1358-1376]
83	AUACCAUGAUAUAAUCUGA	UCAGAUUAUAUCAUGGUAU		[891-909]	[1579-1597]
84	GGUGACAUAGACCUCACCA	UGGUGAGGUCUAUGUCACC		[863-881]	[1551-1569]
85	GAAUGAUGUUGCCUUCCAC	GUGGAAGGCAACAUCAUUC	Ms	[607-625]	[1295-1313]
86	CUGGAAACCCAAACCCUCA	UGAGGGUUUGGGUUUCCAG	Ms	[192-210]	[880-898]
87	UGCUUCAUAUACCAUGAUA	UAUCAUGGUAUAUGAAGCA		[883-901]	[1571-1589]
88	AAUACAAAGCUGGAUAAUA	UAUUAUCCAGCUUUGUAUU		[671-689]	[1359-1377]
89	GUGAAAAUUUUUACAUUCA	UGAAUGUAAAAAUUUUCAC		[978-996]	[1666-1684]
90	GCAUGCUGAUAACAAUUCU	AGAAUUGUUAUCAGCAUGC		[537-555]	[1225-1243]
91	ACCUCACCAGUGCUUCAUA	UAUGAAGCACUGGUGAGGU		[873-891]	[1561-1579]
92	AAACAGAAUUGCUUUAGAU	AUCUAAAGCAAUUCUGUUU		[577-595]	[1265-1283]
93	CACUUUAACCCACGCUUCA	UGAAGCGUGGGUUAAAGUG		[623-641]	[1311-1329]
94	AAAUACAAGUACUGGUUGA	UCAACCAGUACUUGUAUUU		[747-765]	[1435-1453]
95	UACCAUGAUAUAAUCUGAA	UUCAGAUUAUAUCAUGGUA		[892-910]	[1580-1598]
96	UGUAAGUCAUCUACUUAAU	AUUAAGUAGAUGACUUACA		[1010-1028]	[1698-1716]
97	GUGAGUGAAAAUUUUUACA	UGUAAAAAUUUUCACUCAC		[974-992]	[1662-1680]
98	UUUGCAAUACAAAGCUGGA	UCCAGCUUUGUAUUGCAAA		[666-684]	[1354-1372]
99	CAAUUUUUCGCUCCAUGAU	AUCAUGGAGCGAAAAAUUG		[160-178]	-
100	AACUCAAUGAAAUCAGCAA	UUGCUGAUUUCAUUGAGUU		[831-849]	[1519-1537]
101	UAAGUCAUCUACUUAAUAA	UUAUUAAGUAGAUGACUUA		[1012-1030]	[1700-1718]
102	AAGUACUGGUUGAACCUGA	UCAGGUUCAACCAGUACUU		[753-771]	[1441-1459]
103	UGUUCACUGUGAGUGAAAA	UUUUCACUCACAGUGAACA		[966-984]	[1654-1672]
104	CCAAAGAGGGAAUGAUGUU	AACAUCAUUCCCUCUUUGG		[598-616]	[1286-1304]
105	GAAGAAAGACAGUCGGUUU	AAACCGACUGUCUUUCUUC		[701-719]	[1389-1407]
106	UGGAAACCCAAACCCUCAA	UUGAGGGUUUGGGUUUCCA	Ms	[193-211]	[881-899]
107	CCACUGAUUGUGCCUUAUA	UAUAAGGCACAAUCAGUGG		[488-506]	[1176-1194]
108	AGUGAAUUACCUGUCUCAA	UUGAGACAGGUAAUUCACU		[1038-1056]	[1726-1744]
109	AAUACAAGUACUGGUUGAA	UUCAACCAGUACUUGUAUU		[748-766]	[1436-1454]
110	GAACAACAGGAGAGUCAUU	AAUGACUCUCCUGUUGUUC	Ms	[646-664]	[1334-1352]
111	GCUCCAUGAUGCGUUAUCU	AGAUAACGCAUCAUGGAGC		[169-187]	[857-875]
112	UCGGGUUAAAAAACUCAAU	AUUGAGUUUUUUAACCCGA		[820-838]	[1508-1526]
113	CUCACCAGUGCUUCAUAUA	UAUAUGAAGCACUGGUGAG		[875-893]	[1563-1581]
114	ACAAUCAUCGGGUUAAAAA	UUUUUAACCCGAUGAUUGU		[813-831]	[1501-1519]

115	UUGUAAGUCAUCUACUUAA	UUAAGUAGAUGACUUACAA		[1009-1027]	[1697-1715]
116	UCAUAUACCAUGAUAUAAU	AUUAUAUCAUGGUAUAUGA		[887-905]	[1575-1593]
117	UGCUUUAGAUUUCCAAAGA	UCUUUGGAAAUCUAAAGCA		[586-604]	[1274-1292]
118	CAGACAAUUUUUCGCUCCA	UGGAGCGAAAAAUUGUCUG		[156-174]	[191-204](14/14)
119	ACUCAAUGAAAUCAGCAAA	UUUGCUGAUUUCAUUGAGU		[832-850]	[1520-1538]
120	GCCUCGCAUGCUGAUAACA	UGUUAUCAGCAUGCGAGGC		[532-550]	[1220-1238]
121	AGUCAUCUACUUAAUAAAU	AUUUAUUAAGUAGAUGACU		[1014-1032]	[1702-1720]
122	AUCGGGUUAAAAAACUCAA	UUGAGUUUUUUAACCCGAU		[819-837]	[1507-1525]
123	UCAAGGUUGCAGUGAAUGA	UCAUUCACUGCAACCUUGA		[777-795]	[1465-1483]
124	GCCCAAUGCAAACAGAAUU	AAUUCUGUUUGCAUUGGGC		[568-586]	[1256-1274]
125	CGGUUUUCCCAUUUGAAAG	CUUUCAAAUGGGAAAACCG		[714-732]	[1402-1420]
126	CAUGAUGCGUUAUCUGGGU	ACCCAGAUAACGCAUCAUG		[173-191]	[861-879]
127	GGGAAGAAAGACAGUCGGU	ACCGACUGUCUUUCUUCCC		[699-717]	[1387-1405]
128	UGCAAUACAAAGCUGGAUA	UAUCCAGCUUUGUAUUGCA		[668-686]	[1356-1374]
129	CAUGUUCACUGUGAGUGAA	UUCACUCACAGUGAACAUG		[964-982]	[1652-1670]
130	GUGCUUCAUAUACCAUGAU	AUCAUGGUAUAUGAAGCAC		[882-900]	[1570-1588]
131	CAGUGAAUGAUGCUCACUU	AAGUGAGCAUCAUUCACUG		[786-804]	[1474-1492]
132	AUUGCUUUAGAUUUCCAAA	UUUGGAAAUCUAAAGCAAU		[584-602]	[1272-1290]
133	UCAUCAAUAUCCCUCUUGU	ACAAGAGGGAUAUUGAUGA		[994-1012]	[1682-1700]
134	UGCAGUGAAUGAUGCUCAC	GUGAGCAUCAUUCACUGCA		[784-802]	[1472-1490]
135	CAUCGGGUUAAAAAACUCA	UGAGUUUUUUAACCCGAUG		[818-836]	[1506-1524]
136	GAGGGAAUGAUGUUGCCUU	AAGGCAACAUCAUUCCCUC	Ms	[603-621]	[1291-1309]
137	AGAACAACAGGAGAGUCAU	AUGACUCUCCUGUUGUUCU	Ms	[645-663]	[1333-1351]
138	AUCAAUAUCCCUCUUGUAA	UUACAAGAGGGAUAUUGAU		[996-1014]	[1684-1702]
139	ACUUUAACCCACGCUUCAA	UUGAAGCGUGGGUUAAAGU		[624-642]	[1312-1330]
140	CUUGUAAGUCAUCUACUUA	UAAGUAGAUGACUUACAAG		[1008-1026]	[1696-1714]
141	GGUUGCAGUGAAUGAUGCU	AGCAUCAUUCACUGCAACC		[781-799]	[1469-1487]
142	GAAUUGCUUUAGAUUUCCA	UGGAAAUCUAAAGCAAUUC		[582-600]	[1270-1288]
143	UCUUGUAAGUCAUCUACUU	AAGUAGAUGACUUACAAGA		[1007-1025]	[1695-1713]
144	AAUUGCUUUAGAUUUCCAA	UUGGAAAUCUAAAGCAAUU		[583-601]	[1271-1289]
145	GUUGAACCUGACCACUUCA	UGAAGUGGUCAGGUUCAAC		[761-779]	[1449-1467]
146	CCAUGAUAUAAUCUGAAAG	CUUUCAGAUUAUAUCAUGG		[894-912]	[1582-1600]
147	GGUUGAACCUGACCACUUC	GAAGUGGUCAGGUUCAACC		[760-778]	[1448-1466]
148	GAGUAUUUGAGGCUCGGAG	CUCCGAGCCUCAAAUACUC		[64-82]	-
149	GGAAUUUCUGGUGACAUAG	CUAUGUCACCAGAAAUUCC		[854-872]	[1542-1560]
150	AGUACUGGUUGAACCUGAC	GUCAGGUUCAACCAGUACU		[754-772]	[1442-1460]
151	CAAAAUACAAGUACUGGUU	AACCAGUACUUGUAUUUUG		[745-763]	[1433-1451]
152	AGAGUCAUUGUUUGCAAUA	UAUUGCAAACAAUGACUCU		[656-674]	[1344-1362]
153	CAAUGCAAACAGAAUUGCU	AGCAAUUCUGUUUGCAUUG		[571-589]	[1259-1277]
154	AAGACAGUCGGUUUUCCCA	UGGGAAAACCGACUGUCUU		[706-724]	[1394-1412]
155	GCUUUAGAUUUCCAAAGAG	CUCUUUGGAAAUCUAAAGC		[587-605]	[1275-1293]
156	CUGGUGACAUAGACCUCAC	GUGAGGUCUAUGUCACCAG		[861-879]	[1549-1567]
157	GCUUCAAUGAGAACAACAG	CUGUUGUUCUCAUUGAAGC	Rat,Ms	[636-654]	[1324-1342]
158	GAAAUCAGCAAACUGGGAA	UUCCCAGUUUGCUGAUUUC		[839-857]	[1527-1545]
159	UUCAUAUACCAUGAUAUAA	UUAUAUCAUGGUAUAUGAA		[886-904]	[1574-1592]
160	GCUCACUUGUUGCAGUACA	UGUACUGCAACAAGUGAGC		[797-815]	[1485-1503]
161	CAUAUACCAUGAUAUAAUC	GAUUAUAUCAUGGUAUAUG		[888-906]	[1576-1594]
162	UUCGCUCCAUGAUGCGUUA	UAACGCAUCAUGGAGCGAA		[166-184]	[857-872](16/16)
163	AAAUCAGCAAACUGGGAAU	AUUCCCAGUUUGCUGAUUU		[840-858]	[1528-1546]
164	UGAAAUCAGCAAACUGGGA	UCCCAGUUUGCUGAUUUCA		[838-856]	[1526-1544]
165	UGCGUUAUCUGGGUCUGGA	UCCAGACCCAGAUAACGCA		[178-196]	[866-884]
166	CUUUAACCCACGCUUCAAU	AUUGAAGCGUGGGUUAAAG		[625-643]	[1313-1331]
167	AAACCCAAACCCUCAAGGA	UCCUUGAGGGUUUGGGUUU	Ms	[196-214]	[884-902]
168	UGACCACUUCAAGGUUGCA	UGCAACCUUGAAGUGGUCA		[769-787]	[1457-1475]
169	GGAAGAAAGACAGUCGGUU	AACCGACUGUCUUUCUUCC		[700-718]	[1388-1406]
170	GACAGUCGGUUUUCCCAUU	AAUGGGAAAACCGACUGUC		[708-726]	[1396-1414]

171	UGUAAAGGUUUCAUGUUCA	UGAACAUGAAACCUUUACA		[953-971]	[1641-1659]
172	GAGAACAACAGGAGAGUCA	UGACUCUCCUGUUGUUCUC	Ms	[644-662]	[1332-1350]
173	CAUUCAUCAAUAUCCCUCU	AGAGGGAUAUUGAUGAAUG		[991-1009]	[1679-1697]
174	UAUCCCUCUUGUAAGUCAU	AUGACUUACAAGAGGGAUA		[1001-1019]	[1689-1707]
175	AUUUGAAAGUGGGAAACCA	UGGUUUCCCACUUUCAAAU		[724-742]	[1412-1430]
176	AAAGCUGGAUAAUAACUGG	CCAGUUAUUAUCCAGCUUU		[676-694]	[1364-1382]
177	GAAUGAUGCUCACUUGUUG	CAACAAGUGAGCAUCAUUC		[790-808]	[1478-1496]
178	CUUGUUGCAGUACAAUCAU	AUGAUUGUACUGCAACAAG		[802-820]	[1490-1508]
179	AACCCAAACCCUCAAGGAU	AUCCUUGAGGGUUUGGGUU	Ms	[197-215]	[885-903]
180	UACAAAGCUGGAUAAUAAC	GUUAUUAUCCAGCUUUGUA		[673-691]	[1361-1379]
181	UGCCUCGCAUGCUGAUAAC	GUUAUCAGCAUGCGAGGCA		[531-549]	[1219-1237]
182	UGGGAAUUUCUGGUGACAU	AUGUCACCAGAAAUUCCCA		[852-870]	[1540-1558]
183	UCGCAUGCUGAUAACAAUU	AAUUGUUAUCAGCAUGCGA		[535-553]	[1223-1241]
184	ACAAGUACUGGUUGAACCU	AGGUUCAACCAGUACUUGU		[751-769]	[1439-1457]
185	GGUUUCAUGUUCACUGUGA	UCACAGUGAACAUGAAACC		[959-977]	[1647-1665]
186	UUUGAAAGUGGGAAACCAU	AUGGUUUCCCACUUUCAAA		[725-743]	[1413-1431]
187	ACAAUUUUUCGCUCCAUGA	UCAUGGAGCGAAAAAUUGU		[159-177]	[194-204](11/11)
188	AUCUGGGUCUGGAAACCCA	UGGGUUUCCAGACCCAGAU		[184-202]	[872-890]
189	CAACAGGAGAGUCAUUGUU	AACAAUGACUCUCCUGUUG		[649-667]	[1337-1355]
190	UGACAUAGACCUCACCAGU	ACUGGUGAGGUCUAUGUCA		[865-883]	[1553-1571]
191	AGACAAUUUUUCGCUCCAU	AUGGAGCGAAAAAUUGUCU		[157-175]	[192-204](13/13)
192	AGGGAAUGAUGUUGCCUUC	GAAGGCAACAUCAUUCCCU	Ms	[604-622]	[1292-1310]
193	GUUCACUGUGAGUGAAAAU	AUUUUCACUCACAGUGAAC		[967-985]	[1655-1673]
194	CAAACUGGGAAUUUCUGGU	ACCAGAAAUUCCCAGUUUG		[847-865]	[1535-1553]
195	AGACAGUCGGUUUUCCCAU	AUGGGAAAACCGACUGUCU		[707-725]	[1395-1413]
196	GAUUGUGCCUUAUAACCUG	CAGGUUAUAAGGCACAAUC		[493-511]	[1181-1199]
197	AGUGAAUGAUGCUCACUUG	CAAGUGAGCAUCAUUCACU		[787-805]	[1475-1493]
198	CCAGUGCUUCAUAUACCAU	AUGGUAUAUGAAGCACUGG		[879-897]	[1567-1585]
199	GCAGUACAAUCAUCGGGUU	AACCCGAUGAUUGUACUGC		[808-826]	[1496-1514]
200	UACAAUCAUCGGGUUAAAA	UUUUAACCCGAUGAUUGUA		[812-830]	[1500-1518]
201	UCAAAAUACAAGUACUGGU	ACCAGUACUUGUAUUUUGA		[744-762]	[1432-1450]
202	ACUUGUUGCAGUACAAUCA	UGAUUGUACUGCAACAAGU		[801-819]	[1489-1507]
203	CAUAGACCUCACCAGUGCU	AGCACUGGUGAGGUCUAUG		[868-886]	[1556-1574]
204	GUGACAUAGACCUCACCAG	CUGGUGAGGUCUAUGUCAC		[864-882]	[1552-1570]
205	UGCAAACAGAAUUGCUUUA	UAAAGCAAUUCUGUUUGCA		[574-592]	[1262-1280]
206	AACCAUUCAAAAUACAAGU	ACUUGUAUUUUGAAUGGUU	Ms	[738-756]	[1426-1444]
207	UUGAAAGUGGGAAACCAUU	AAUGGUUUCCCACUUUCAA		[726-744]	[1414-1432]
208	CAAUGAAAUCAGCAAACUG	CAGUUUGCUGAUUUCAUUG		[835-853]	[1523-1541]
209	ACAGGAGAGUCAUUGUUUG	CAAACAAUGACUCUCCUGU		[651-669]	[1339-1357]
210	UGAUGUUGCCUUCCACUUU	AAAGUGGAAGGCAACAUCA	Ms	[610-628]	[1298-1316]
211	AGGAGAGUCAUUGUUUGCA	UGCAAACAAUGACUCUCCU		[653-671]	[1341-1359]
212	GAGUCAUUGUUUGCAAUAC	GUAUUGCAAACAAUGACUC		[657-675]	[1345-1363]
213	GAUGCUCACUUGUUGCAGU	ACUGCAACAAGUGAGCAUC		[794-812]	[1482-1500]
214	CGGGUUAAAAAACUCAAUG	CAUUGAGUUUUUUAACCCG		[821-839]	[1509-1527]
215	UUAGAUUUCCAAAGAGGGA	UCCCUCUUUGGAAAUCUAA		[590-608]	[1278-1296]
216	AACUGGGAAUUUCUGGUGA	UCACCAGAAAUUCCCAGUU		[849-867]	[1537-1555]
217	ACAACAGGAGAGUCAUUGU	ACAAUGACUCUCCUGUUGU	Ms	[648-666]	[1336-1354]
218	AAUGCAAACAGAAUUGCUU	AAGCAAUUCUGUUUGCAUU		[572-590]	[1260-1278]
219	CCAUGAUGCGUUAUCUGGG	CCCAGAUAACGCAUCAUGG		[172-190]	[860-878]
220	UCAUGUUCACUGUGAGUGA	UCACUCACAGUGAACAUGA		[963-981]	[1651-1669]
221	CCACGCUUCAAUGAGAACA	UGUUCUCAUUGAAGCGUGG		[632-650]	[1320-1338]
222	UCUGGUGACAUAGACCUCA	UGAGGUCUAUGUCACCAGA		[860-878]	[1548-1566]
223	GUGCCUUAUAACCUGCCUU	AAGGCAGGUUAUAAGGCAC		[497-515]	[1185-1203]
224	AGUACAAUCAUCGGGUUAA	UUAACCCGAUGAUUGUACU		[810-828]	[1498-1516]
225	AAACCAUUCAAAAUACAAG	CUUGUAUUUUGAAUGGUUU	Ms	[737-755]	[1425-1443]
226	GUGAAUGAUGCUCACUUGU	ACAAGUGAGCAUCAUUCAC		[788-806]	[1476-1494]

227	CUACCCAUCUUCUGGACAG	CUGUCCAGAAGAUGGGUAG		[415-433]	[1103-1121]
228	GAAAAUUUUUACAUUCAUC	GAUGAAUGUAAAAAUUUUC		[980-998]	[1668-1686]
229	AGAUUUCCAAAGAGGGAAU	AUUCCCUCUUUGGAAAUCU		[592-610]	[1280-1298]
230	AAUUUCUGGUGACAUAGAC	GUCUAUGUCACCAGAAAUU		[856-874]	[1544-1562]
231	UGCCUUAUAACCUGCCUUU	AAAGGCAGGUUAUAAGGCA		[498-516]	[1186-1204]
232	CAGUACAAUCAUCGGGUUA	UAACCCGAUGAUUGUACUG		[809-827]	[1497-1515]
233	AAGAAAGACAGUCGGUUUU	AAAACCGACUGUCUUUCUU		[702-720]	[1390-1408]
234	UGCCUUCCACUUUAACCCA	UGGGUUAAAGUGGAAGGCA		[616-634]	[1304-1322]
235	UUGCAAUACAAAGCUGGAU	AUCCAGCUUUGUAUUGCAA		[667-685]	[1355-1373]
236	GAACCUGACCACUUCAAGG	CCUUGAAGUGGUCAGGUUC		[764-782]	[1452-1470]
237	ACUGAUUGUGCCUUAUAAC	GUUAUAAGGCACAAUCAGU		[490-508]	[1178-1196]
238	ACUGGUUGAACCUGACCAC	GUGGUCAGGUUCAACCAGU		[757-775]	[1445-1463]
239	CUGGUUGAACCUGACCACU	AGUGGUCAGGUUCAACCAG		[758-776]	[1446-1464]
240	GCUGGGAGUAUUUGAGGCU	AGCCUCAAAUACUCCCAGC		[59-77]	-
241	UUGAACCUGACCACUUCAA	UUGAAGUGGUCAGGUUCAA		[762-780]	[1450-1468]
242	AAGGUUUCAUGUUCACUGU	ACAGUGAACAUGAAACCUU		[957-975]	[1645-1663]
243	CCACUUCAAGGUUGCAGUG	CACUGCAACCUUGAAGUGG		[772-790]	[1460-1478]
244	UUUCCAAAGAGGGAAUGAU	AUCAUUCCCUCUUUGGAAA		[595-613]	[1283-1301]
245	AUGCUCACUUGUUGCAGUA	UACUGCAACAAGUGAGCAU		[795-813]	[1483-1501]
246	CUCUUGUAAGUCAUCUACU	AGUAGAUGACUUACAAGAG		[1006-1024]	[1694-1712]
247	UGAGUGAAAAUUUUUACAU	AUGUAAAAAUUUUCACUCA		[975-993]	[1663-1681]
248	GACCUCACCAGUGCUUCAU	AUGAAGCACUGGUGAGGUC		[872-890]	[1560-1578]
249	ACCAUUCAAAAUACAAGUA	UACUUGUAUUUUGAAUGGU		[739-757]	[1427-1445]
250	GUCUGGAAACCCAAACCCU	AGGGUUUGGGUUUCCAGAC		[190-208]	[878-896]
251	GGUUUUCCCAUUUGAAAGU	ACUUUCAAAUGGGAAAACC		[715-733]	[1403-1421]
252	CAUGCUGAUAACAAUUCUG	CAGAAUUGUUAUCAGCAUG		[538-556]	[1226-1244]
253	UCCAAAGAGGGAAUGAUGU	ACAUCAUUCCCUCUUUGGA		[597-615]	[1285-1303]
254	AAACUCAAUGAAAUCAGCA	UGCUGAUUUCAUUGAGUUU		[830-848]	[1518-1536]
255	AUGUUCACUGUGAGUGAAA	UUUCACUCACAGUGAACAU		[965-983]	[1653-1671]
256	ACCACUUCAAGGUUGCAGU	ACUGCAACCUUGAAGUGGU		[771-789]	[1459-1477]
257	AACAGAAUUGCUUUAGAUU	AAUCUAAAGCAAUUCUGUU		[578-596]	[1266-1284]
258	ACUGUGAGUGAAAAUUUUU	AAAAAUUUUCACUCACAGU		[971-989]	[1659-1677]
259	UGGUUGAACCUGACCACUU	AAGUGGUCAGGUUCAACCA		[759-777]	[1447-1465]
260	CCUCUUGUAAGUCAUCUAC	GUAGAUGACUUACAAGAGG		[1005-1023]	[1693-1711]
261	UUCCCAUUUGAAAGUGGGA	UCCCACUUUCAAAUGGGAA		[719-737]	[1407-1425]
262	CCUUAUAACCUGCCUUUGC	GCAAAGGCAGGUUAUAAGG		[500-518]	[1188-1206]
263	UUCAAUGAGAACAACAGGA	UCCUGUUGUUCUCAUUGAA	Ms	[638-656]	[1326-1344]
264	CCCACGCUUCAAUGAGAAC	GUUCUCAUUGAAGCGUGGG		[631-649]	[1319-1337]
265	CUUCAAUGAGAACAACAGG	CCUGUUGUUCUCAUUGAAG	Ms	[637-655]	[1325-1343]
266	AUAUCCCUCUUGUAAGUCA	UGACUUACAAGAGGGAUAU		[1000-1018]	[1688-1706]
267	UCAAUAUCCCUCUUGUAAG	CUUACAAGAGGGAUAUUGA		[997-1015]	[1685-1703]
268	UCAGCAAACUGGGAAUUUC	GAAAUUCCCAGUUUGCUGA		[843-861]	[1531-1549]
269	CAUGAUAUAAUCUGAAAGG	CCUUUCAGAUUAUAUCAUG		[895-913]	[1583-1601]
270	UGCUGAUAACAAUUCUGGG	CCCAGAAUUGUUAUCAGCA		[540-558]	[1228-1246]
271	ACGCUUCAAUGAGAACAAC	GUUGUUCUCAUUGAAGCGU		[634-652]	[1322-1340]
272	UACUGGUUGAACCUGACCA	UGGUCAGGUUCAACCAGUA		[756-774]	[1444-1462]
273	ACAGAAUUGCUUUAGAUUU	AAAUCUAAAGCAAUUCUGU		[579-597]	[1267-1285]
274	AGCAAACUGGGAAUUUCUG	CAGAAAUUCCCAGUUUGCU		[845-863]	[1533-1551]
275	CUCCAUGAUGCGUUAUCUG	CAGAUAACGCAUCAUGGAG		[170-188]	[858-876]
276	AUGCAAACAGAAUUGCUUU	AAAGCAAUUCUGUUUGCAU		[573-591]	[1261-1279]
277	ACAAUUCUGGGCACGGUGA	UCACCGUGCCCAGAAUUGU		[548-566]	[1236-1254]
278	CCUACCCAUCUUCUGGACA	UGUCCAGAAGAUGGGUAGG		[414-432]	[1102-1120]
279	CAGUGCUUCAUAUACCAUG	CAUGGUAUAUGAAGCACUG		[880-898]	[1568-1586]
280	GUGAAGCCCAAUGCAAACA	UGUUUGCAUUGGGCUUCAC		[563-581]	[1251-1269]
281	CAAAGCUGGAUAAUAACUG	CAGUUAUUAUCCAGCUUUG		[675-693]	[1363-1381]
282	UGAACCUGACCACUUCAAG	CUUGAAGUGGUCAGGUUCA		[763-781]	[1451-1469]

283	AAGAGGGAAUGAUGUUGCC	GGCAACAUCAUUCCCUCUU		[601-619]	[1289-1307]
284	AUUCAUCAAUAUCCCUCUU	AAGAGGGAUAUUGAUGAAU		[992-1010]	[1680-1698]
285	ACAAAGCUGGAUAAUAACU	AGUUAUUAUCCAGCUUUGU		[674-692]	[1362-1380]
286	CACCAGUGCUUCAUAUACC	GGUAUAUGAAGCACUGGUG		[877-895]	[1565-1583]
287	ACUGGGAAUUUCUGGUGAC	GUCACCAGAAAUUCCCAGU		[850-868]	[1538-1556]
288	GUAAAGGUUUCAUGUUCAC	GUGAACAUGAAACCUUUAC		[954-972]	[1642-1660]
289	GGAAACCCAAACCCUCAAG	CUUGAGGGUUUGGGUUUCC	Ms	[194-212]	[882-900]
290	AAUGAUGUUGCCUUCCACU	AGUGGAAGGCAACAUCAUU	Ms	[608-626]	[1296-1314]
291	AAGGUUGCAGUGAAUGAUG	CAUCAUUCACUGCAACCUU		[779-797]	[1467-1485]
292	UAGAUUUCCAAAGAGGGAA	UUCCCUCUUUGGAAAUCUA		[591-609]	[1279-1297]
293	CAGGAGAGUCAUUGUUUGC	GCAAACAAUGACUCUCCUG		[652-670]	[1340-1358]
294	AGGGAAGAAAGACAGUCGG	CCGACUGUCUUUCUUCCCU		[698-716]	[1386-1404]
295	CAGAAUUGCUUUAGAUUUC	GAAAUCUAAAGCAAUUCUG		[580-598]	[1268-1286]
296	GACAUAGACCUCACCAGUG	CACUGGUGAGGUCUAUGUC		[866-884]	[1554-1572]
297	CACUUCAAGGUUGCAGUGA	UCACUGCAACCUUGAAGUG		[773-791]	[1461-1479]
298	CCAUUCAAAAUACAAGUAC	GUACUUGUAUUUUGAAUGG		[740-758]	[1428-1446]
299	GUUUCAUGUUCACUGUGAG	CUCACAGUGAACAUGAAAC		[960-978]	[1648-1666]
300	CAGUCGGUUUUCCCAUUUG	CAAAUGGGAAAACCGACUG		[710-728]	[1398-1416]
301	UCACUGUGAGUGAAAAUUU	AAAUUUUCACUCACAGUGA		[969-987]	[1657-1675]
302	GACAAUUUUUCGCUCCAUG	CAUGGAGCGAAAAAUUGUC		[158-176]	[193-204](12/12)
303	UCCCAUUUGAAAGUGGGAA	UUCCCACUUUCAAAUGGGA		[720-738]	[1408-1426]
304	CUUAUAACCUGCCUUUGCC	GGCAAAGGCAGGUUAUAAG		[501-519]	[1189-1207]
305	UGUGCCUUAUAACCUGCCU	AGGCAGGUUAUAAGGCACA		[496-514]	[1184-1202]
306	GCAGUGAAUGAUGCUCACU	AGUGAGCAUCAUUCACUGC		[785-803]	[1473-1491]
307	UCACCAGUGCUUCAUAUAC	GUAUAUGAAGCACUGGUGA		[876-894]	[1564-1582]
308	UGAAUGAUGCUCACUUGUU	AACAAGUGAGCAUCAUUCA		[789-807]	[1477-1495]
309	ACCUGACCACUUCAAGGUU	AACCUUGAAGUGGUCAGGU		[766-784]	[1454-1472]
310	AACAGGAGAGUCAUUGUUU	AAACAAUGACUCUCCUGUU		[650-668]	[1338-1356]
311	GAAAGACAGUCGGUUUUCC	GGAAAACCGACUGUCUUUC		[704-722]	[1392-1410]
312	GCCUUAUAACCUGCCUUUG	CAAAGGCAGGUUAUAAGGC		[499-517]	[1187-1205]
313	UUGCAGUGAAUGAUGCUCA	UGAGCAUCAUUCACUGCAA		[783-801]	[1471-1489]
314	AUAUUACAGUGAAUUACCU	AGGUAAUUCACUGUAAUAU		[1031-1049]	[1719-1737]
315	UCACUUGUUGCAGUACAAU	AUUGUACUGCAACAAGUGA		[799-817]	[1487-1505]
316	UUCCAAAGAGGGAAUGAUG	CAUCAUUCCCUCUUUGGAA		[596-614]	[1284-1302]
317	UGGUGACAUAGACCUCACC	GGUGAGGUCUAUGUCACCA		[862-880]	[1550-1568]
318	UGUUGCCUUCCACUUUAAC	GUUAAAGUGGAAGGCAACA	Ms	[613-631]	[1301-1319]
319	AAAACUCAAUGAAAUCAGC	GCUGAUUUCAUUGAGUUUU		[829-847]	[1517-1535]
320	AAUCUAAACCUUACAUGUG	CACAUGUAAGGUUUAGAUU		[936-954]	[1624-1642]
321	UUAACCCACGCUUCAAUGA	UCAUUGAAGCGUGGGUUAA		[627-645]	[1315-1333]
322	CUUUAGAUUUCCAAAGAGG	CCUCUUUGGAAAUCUAAAG		[588-606]	[1276-1294]
323	CGCUCCAUGAUGCGUUAUC	GAUAACGCAUCAUGGAGCG		[168-186]	[857-874](18/18)
324	UUGUUUGCAAUACAAAGCU	AGCUUUGUAUUGCAAACAA		[663-681]	[1351-1369]
325	UGUGAGUGAAAAUUUUUAC	GUAAAAAUUUUCACUCACA		[973-991]	[1661-1679]
326	CCCAAUGCAAACAGAAUUG	CAAUUCUGUUUGCAUUGGG		[569-587]	[1257-1275]
327	AGUGAAAAUUUUUACAUUC	GAAUGUAAAAAUUUUCACU		[977-995]	[1665-1683]
328	CUGAUAACAAUUCUGGGCA	UGCCCAGAAUUGUUAUCAG		[542-560]	[1230-1248]
329	GCAAACUGGGAAUUUCUGG	CCAGAAAUUCCCAGUUUGC		[846-864]	[1534-1552]
330	UAACAAUUCUGGGCACGGU	ACCGUGCCCAGAAUUGUUA		[546-564]	[1234-1252]
331	AGGUUGCAGUGAAUGAUGC	GCAUCAUUCACUGCAACCU		[780-798]	[1468-1486]
332	CAAAGAGGGAAUGAUGUUG	CAACAUCAUUCCCUCUUUG		[599-617]	[1287-1305]
333	UGUUUGCAAUACAAAGCUG	CAGCUUUGUAUUGCAAACA		[664-682]	[1352-1370]
334	UGGGAGUAUUUGAGGCUCG	CGAGCCUCAAAUACUCCCA		[61-79]	-
335	CCACUUUAACCCACGCUUC	GAAGCGUGGGGUUAAAGUGG		[622-640]	[1310-1328]
336	GGCAGACAAUUUUUCGCUC	GAGCGAAAAAUUGUCUGCC		[154-172]	[189-204](16/16)
337	UGAUUGUGCCUUAUAACCU	AGGUUAUAAGGCACAAUCA		[492-510]	[1180-1198]
338	AUUUCCAAAGAGGGAAUGA	UCAUUCCCUCUUUGGAAAU		[594-612]	[1282-1300]

339	CUGGGAGUAUUUGAGGCUC	GAGCCUCAAAUACUCCCAG		[60-78]	-
340	AUUCAAAAUACAAGUACUG	CAGUACUUGUAUUUUGAAU		[742-760]	[1430-1448]
341	UGAUAACAAUUCUGGGCAC	GUGCCCAGAAUUGUUAUCA		[543-561]	[1231-1249]
342	UUAUAACCUGCCUUUGCCU	AGGCAAAGGCAGGUUAUAA		[502-520]	[1190-1208]
343	AGAGGGAAUGAUGUUGCCU	AGGCAACAUCAUUCCCUCU	Ms	[602-620]	[1290-1308]
344	AUGAGAACAACAGGAGAGU	ACUCUCCUGUUGUUCUCAU	Ms	[642-660]	[1330-1348]
345	UUACAUUCAUCAAUAUCCC	GGGAUAUUGAUGAAUGUAA		[988-1006]	[1676-1694]
346	AAGGGAAGAAAGACAGUCG	CGACUGUCUUUCUUCCCUU		[697-715]	[1385-1403]
347	AGUAUUUGAGGCUCGGAGC	GCUCCGAGCCUCAAAUACU		[65-83]	-
348	CUCAAUGAAAUCAGCAAAC	GUUUGCUGAUUUCAUUGAG		[833-851]	[1521-1539]
349	AAAAAACUCAAUGAAAUCA	UGAUUUCAUUGAGUUUUUU		[827-845]	[1515-1533]
350	UACAUUCAUCAAUAUCCCU	AGGGAUAUUGAUGAAUGUA		[989-1007]	[1677-1695]
351	GUGUAAAGGUUUCAUGUUC	GAACAUGAAACCUUUACAC		[952-970]	[1640-1658]
352	CCAUUUGAAAGUGGGAAAC	GUUUCCCACUUUCAAAUGG		[722-740]	[1410-1428]
353	UAACCCACGCUUCAAUGAG	CUCAUUGAAGCGUGGGUUA		[628-646]	[1316-1334]
354	CUGACCACUUCAAGGUUGC	GCAACCUUGAAGUGGUCAG	Ms	[768-786]	[1456-1474]
355	UCUGGAAACCCAAACCCUC	GAGGGUUUGGGUUUCCAGA	Rat,Ms	[191-209]	[879-897]
356	UGAAGCCCAAUGCAAACAG	CUGUUUGCAUUGGGCUUCA		[564-582]	[1252-1270]
357	UAAAAAACUCAAUGAAAUC	GAUUUCAUUGAGUUUUUUA		[826-844]	[1514-1532]
358	AAUCAUCGGGUUAAAAAAC	GUUUUUUAACCCGAUGAUU		[815-833]	[1503-1521]
359	UCAAUGAAAUCAGCAAACU	AGUUUGCUGAUUUCAUUGA		[834-852]	[1522-1540]
360	AAUUCUGGGCACGGUGAAG	CUUCACCGUGCCCAGAAUU		[550-568]	[1238-1256]
361	GUUUGCAAUACAAAGCUGG	CCAGCUUUGUAUUGCAAAC		[665-683]	[1353-1371]
362	AUGAAAUCAGCAAACUGGG	CCCAGUUUGCUGAUUUCAU		[837-855]	[1525-1543]
363	ACCCAAACCCUCAAGGAUG	CAUCCUUGAGGGUUUGGGU		[198-216]	[886-904]
364	GAAGGGAAGAAAGACAGUC	GACUGUCUUUCUUCCCUUC	Rat	[696-714]	[1384-1402]
365	CUGAUUGUGCCUUAUAACC	GGUUAUAAGGCACAAUCAG		[491-509]	[1179-1197]
366	ACAGUCGGUUUUCCCAUUU	AAAUGGGAAAACCGACUGU		[709-727]	[1397-1415]
367	CACUUGUUGCAGUACAAUC	GAUUGUACUGCAACAAGUG		[800-818]	[1488-1506]
368	AAGCUGGAUAAUAACUGGG	CCCAGUUAUUAUCCAGCUU		[677-695]	[1365-1383]
369	CCUUCCACUUUAACCCACG	CGUGGGUUAAAGUGGAAGG		[618-636]	[1306-1324]
370	AUGAUGUUGCCUUCCACUU	AAGUGGAAGGCAACAUCAU	Ms	[609-627]	[1297-1315]
371	CUUAAUAAAUAUUACAGUG	CACUGUAAUAUUUAUUAAG		[1023-1041]	[1711-1729]
372	CCUGACCACUUCAAGGUUG	CAACCUUGAAGUGGUCAGG		[767-785]	[1455-1473]
373	GCCUUCCACUUUAACCCAC	GUGGGUUAAAGUGGAAGGC		[617-635]	[1305-1323]
374	UACAGUGAAUUACCUGUCU	AGACAGGUAAUUCACUGUA		[1035-1053]	[1723-1741]
375	AAAUAUUACAGUGAAUUAC	GUAAUUCACUGUAAUAUUU		[1029-1047]	[1717-1735]
376	CGCAUGCUGAUAACAAUUC	GAAUUGUUAUCAGCAUGCG		[536-554]	[1224-1242]
377	CAAGUACUGGUUGAACCUG	CAGGUUCAACCAGUACUUG		[752-770]	[1440-1458]
378	UCAUCGGGUUAAAAAACUC	GAGUUUUUUAACCCGAUGA		[817-835]	[1505-1523]
379	UGAAAGUGGGAAACCAUUC	GAAUGGUUUCCCACUUUCA		[727-745]	[1415-1433]
380	AAUGAAAUCAGCAAACUGG	CCAGUUUGCUGAUUUCAUU		[836-854]	[1524-1542]
381	AAUGAGAACAACAGGAGAG	CUCUCCUGUUGUUCUCAUU	Ms	[641-659]	[1329-1347]
382	AUGAUGCUCACUUGUUGCA	UGCAACAAGUGAGCAUCAU		[792-810]	[1480-1498]
383	AUACAAGUACUGGUUGAAC	GUUCAACCAGUACUUGUAU		[749-767]	[1437-1455]
384	GUUGCAGUACAAUCAUCGG	CCGAUGAUUGUACUGCAAC		[805-823]	[1493-1511]
385	UCCACUUUAACCCACGCUU	AAGCGUGGGUUAAAGUGGA		[621-639]	[1309-1327]
386	UCAAUGAGAACAACAGGAG	CUCCUGUUGUUCUCAUUGA	Ms	[639-657]	[1327-1345]
387	UGGGUCUGGAAACCCAAAC	GUUUGGGUUUCCAGACCCA		[187-205]	[875-893]
388	ACAUAGACCUCACCAGUGC	GCACUGGUGAGGUCUAUGU		[867-885]	[1555-1573]
389	AACCUGACCACUUCAAGGU	ACCUUGAAGUGGUCAGGUU		[765-783]	[1453-1471]
390	AUCAUCGGGUUAAAAAACU	AGUUUUUUAACCCGAUGAU		[816-834]	[1504-1522]
391	UACAAGUACUGGUUGAACC	GGUUCAACCAGUACUUGUA		[750-768]	[1438-1456]
392	AAAAACUCAAUGAAAUCAG	CUGAUUUCAUUGAGUUUUU		[828-846]	[1516-1534]
393	UUUCUGGUGACAUAGACCU	AGGUCUAUGUCACCAGAAA		[858-876]	[1546-1564]
394	GAUGCGUUAUCUGGGUCUG	CAGACCCAGAUAACGCAUC		[176-194]	[864-882]

395	UGCAGUACAAUCAUCGGGU	ACCCGAUGAUUGUACUGCA		[807-825]	[1495-1513]
396	AUCAGCAAACUGGGAAUUU	AAAUUCCCAGUUUGCUGAU		[842-860]	[1530-1548]
397	UCCCUCUUGUAAGUCAUCU	AGAUGACUUACAAGAGGGA		[1003-1021]	[1691-1709]
398	GGGAAUGAUGUUGCCUUCC	GGAAGGCAACAUCAUUCCC	Ms	[605-623]	[1293-1311]
399	UUGCUUUAGAUUUCCAAAG	CUUUGGAAAUCUAAAGCAA		[585-603]	[1273-1291]
400	GAAACCCAAACCCUCAAGG	CCUUGAGGGUUUGGGUUUC	Ms	[195-213]	[883-901]
401	GUUAUCUGGGUCUGGAAAC	GUUUCCAGACCCAGAUAAC		[181-199]	[869-887]
402	UACCCAUCUUCUGGACAGC	GCUGUCCAGAAGAUGGGUA		[416-434]	[1104-1122]
403	AAUCAGCAAACUGGGAAUU	AAUUCCCAGUUUGCUGAUU		[841-859]	[1529-1547]
404	AUGAUAUAAUCUGAAAGGG	CCCUUUCAGAUUAUAUCAU		[896-914]	[1584-1602]
405	UGAUGCGUUAUCUGGGUCU	AGACCCAGAUAACGCAUCA		[175-193]	[863-881]
406	AAUUUUUCGCUCCAUGAUG	CAUCAUGGAGCGAAAAAUU		[161-179]	[857-867](11/11)
407	AAAGACAGUCGGUUUUCCC	GGGAAAACCGACUGUCUUU		[705-723]	[1393-1411]
408	GUACUGGUUGAACCUGACC	GGUCAGGUUCAACCAGUAC		[755-773]	[1443-1461]
409	UCGCUCCAUGAUGCGUUAU	AUAACGCAUCAUGGAGCGA		[167-185]	[857-873](17/17)
410	GACCACUUCAAGGUUGCAG	CUGCAACCUUGAAGUGGUC		[770-788]	[1458-1476]
411	GUUGCCUUCCACUUUAACC	GGUUAAAGUGGAAGGCAAC	Ms	[614-632]	[1302-1320]
412	AACAAUUCUGGGCACGGUG	CACCGUGCCCAGAAUUGUU		[547-565]	[1235-1253]
413	AGAAAGACAGUCGGUUUUC	GAAAACCGACUGUCUUUCU		[703-721]	[1391-1409]
414	UUCUGGUGACAUAGACCUC	GAGGUCUAUGUCACCAGAA		[859-877]	[1547-1565]
415	AUCCCUCUUGUAAGUCAUC	GAUGACUUACAAGAGGGAU		[1002-1020]	[1690-1708]
416	AUAGACCUCACCAGUGCUU	AAGCACUGGUGAGGUCUAU		[869-887]	[1557-1575]
417	AAAAUACAAGUACUGGUUG	CAACCAGUACUUGUAUUUU		[746-764]	[1434-1452]
418	AAAGGUUUCAUGUUCACUG	CAGUGAACAUGAAACCUUU		[956-974]	[1644-1662]
419	UUUAGAUUUCCAAAGAGGG	CCCUCUUUGGAAAUCUAAA		[589-607]	[1277-1295]
420	AUAUACCAUGAUAUAAUCU	AGAUUAUAUCAUGGUAUAU		[889-907]	[1577-1595]
421	CUUCCACUUUAACCCACGC	GCGUGGGUUAAAGUGGAAG		[619-637]	[1307-1325]
422	GCAAACAGAAUUGCUUUAG	CUAAAGCAAUUCUGUUUGC		[575-593]	[1263-1281]
423	AUUGUUUGCAAUACAAAGC	GCUUUGUAUUGCAAACAAU		[662-680]	[1350-1368]
424	UGAUGCUCACUUGUUGCAG	CUGCAACAAGUGAGCAUCA		[793-811]	[1481-1499]
425	AUUUCUGGUGACAUAGACC	GGUCUAUGUCACCAGAAAU		[857-875]	[1545-1563]
426	UGAGAACAACAGGAGAGUC	GACUCUCCUGUUGUUCUCA	Ms	[643-661]	[1331-1349]
427	AAAGAGGGAAUGAUGUUGC	GCAACAUCAUUCCCUCUUU		[600-618]	[1288-1306]
428	AGGUUUCAUGUUCACUGUG	CACAGUGAACAUGAAACCU		[958-976]	[1646-1664]
429	AAUAUUACAGUGAAUUACC	GGUAAUUCACUGUAAUAUU		[1030-1048]	[1718-1736]
430	UUUCAUGUUCACUGUGAGU	ACUCACAGUGAACAUGAAA		[961-979]	[1649-1667]
431	GCUGAUAACAAUUCUGGGC	GCCCAGAAUUGUUAUCAGC		[541-559]	[1229-1247]
432	AAUGAUGCUCACUUGUUGC	GCAACAAGUGAGCAUCAUU		[791-809]	[1479-1497]
433	UUCACUGUGAGUGAAAAUU	AAUUUUCACUCACAGUGAA		[968-986]	[1656-1674]
434	AUGCUGAUAACAAUUCUGG	CCAGAAUUGUUAUCAGCAU		[539-557]	[1227-1245]
435	AUUACAGUGAAUUACCUGU	ACAGGUAAUUCACUGUAAU		[1033-1051]	[1721-1739]
436	UCCAUGAUGCGUUAUCUGG	CCAGAUAACGCAUCAUGGA		[171-189]	[859-877]
437	UUCAAAAUACAAGUACUGG	CCAGUACUUGUAUUUUGAA		[743-761]	[1431-1449]
438	CAUUUGAAAGUGGGAAACC	GGUUUCCCACUUUCAAAUG		[723-741]	[1411-1429]
439	AUGCGUUAUCUGGGUCUGG	CCAGACCCAGAUAACGCAU		[177-195]	[865-883]
440	UUUCGCUCCAUGAUGCGUU	AACGCAUCAUGGAGCGAAA		[165-183]	[857-871](15/15)
441	CCAAUGCAAACAGAAUUGC	GCAAUUCUGUUUGCAUUGG		[570-588]	[1258-1276]
442	GCAGACAAUUUUUCGCUCC	GGAGCGAAAAAUUGUCUGC		[155-173]	[190-204](15/15)
443	AGAAUUGCUUUAGAUUUCC	GGAAAUCUAAAGCAAUUCU		[581-599]	[1269-1287]
444	ACAGUGAAUUACCUGUCUC	GAGACAGGUAAUUCACUGU		[1036-1054]	[1724-1742]
445	UUUAACCCACGCUUCAAUG	CAUUGAAGCGUGGGUUAAA		[626-644]	[1314-1332]
446	GAUUUCCAAAGAGGGAAUG	CAUUCCCUCUUUGGAAAUC		[593-611]	[1281-1299]
447	AAACUGGGAAUUUCUGGUG	CACCAGAAAUUCCCAGUUU		[848-866]	[1536-1554]
448	UAAAGGUUUCAUGUUCACU	AGUGAACAUGAAACCUUUA		[955-973]	[1643-1661]
449	UAUACCAUGAUAUAAUCUG	CAGAUUAUAUCAUGGUAUA		[890-908]	[1578-1596]
450	UGUUGCAGUACAAUCAUCG	CGAUGAUUGUACUGCAACA		[804-822]	[1492-1510]

451	UUGUUGCAGUACAAUCAUC	GAUGAUUGUACUGCAACAA		[803-821]	[1491-1509]
452	UUUACAUUCAUCAAUAUCC	GGAUAUUGAUGAAUGUAAA		[987-1005]	[1675-1693]
453	UUUUACAUUCAUCAAUAUC	GAUAUUGAUGAAUGUAAAA		[986-1004]	[1674-1692]
454	UUAUCUGGGUCUGGAAACC	GGUUUCCAGACCCAGAUAA		[182-200]	[870-888]
455	UUUCCCAUUUGAAAGUGGG	CCCACUUUCAAAUGGGAAA		[718-736]	[1406-1424]
456	UUGCCUUCCACUUUAACCC	GGGUUAAAGUGGAAGGCAA	Ms	[615-633]	[1303-1321]
457	GUUGCAGUGAAUGAUGCUC	GAGCAUCAUUCACUGCAAC		[782-800]	[1470-1488]
458	AUUUUUCGCUCCAUGAUGC	GCAUCAUGGAGCGAAAAAU		[162-180]	[857-868](12/12)
459	UAUUACAGUGAAUUACCUG	CAGGUAAUUCACUGUAAUA		[1032-1050]	[1720-1738]
460	UGCUCACUUGUUGCAGUAC	GUACUGCAACAAGUGAGCA		[796-814]	[1484-1502]
461	GAUAACAAUUCUGGGCACG	CGUGCCCAGAAUUGUUAUC		[544-562]	[1232-1250]
462	UUAUCCUGGACAGGCACCU	AGGUGCCUGUCCAGGAUAA		[310-328]	[998-1016]
463	UAGACCUCACCAGUGCUUC	GAAGCACUGGUGAGGUCUA		[870-888]	[1558-1576]
464	AUUGUGCCUUAUAACCUGC	GCAGGUUAUAAGGCACAAU		[494-512]	[1182-1200]
465	ACAUUCAUCAAUAUCCCUC	GAGGGAUAUUGAUGAAUGU		[990-1008]	[1678-1696]
466	UUCAAGGUUGCAGUGAAUG	CAUUCACUGCAACCUUGAA		[776-794]	[1464-1482]
467	UUUUUCGCUCCAUGAUGCG	CGCAUCAUGGAGCGAAAAA		[163-181]	[857-869](13/13)
468	AACAACAGGAGAGUCAUUG	CAAUGACUCUCCUGUUGUU	Ms	[647-665]	[1335-1353]
469	AUAACCUGCCUUUGCCUGG	CCAGGCAAAGGCAGGUUAU		[504-522]	[1192-1210]
470	UUCCACUUUAACCCACGCU	AGCGUGGGUUAAAGUGGAA		[620-638]	[1308-1326]
471	GUUUUCCCAUUUGAAAGUG	CACUUUCAAAUGGGAAAAC		[716-734]	[1404-1422]
472	UAUAACCUGCCUUUGCCUG	CAGGCAAAGGCAGGUUAUA		[503-521]	[1191-1209]
473	AUGAUGCGUUAUCUGGGUC	GACCCAGAUAACGCAUCAU		[174-192]	[862-880]
474	UUGUGCCUUAUAACCUGCC	GGCAGGUUAUAAGGCACAA		[495-513]	[1183-1201]
475	AUAACAAUUCUGGGCACGG	CCGUGCCCAGAAUUGUUAU		[545-563]	[1233-1251]
476	UUCAUCAAUAUCCCUCUUG	CAAGAGGGAUAUUGAUGAA		[993-1011]	[1681-1699]
477	UUUUCGCUCCAUGAUGCGU	ACGCAUCAUGGAGCGAAAA		[164-182]	[857-870](14/14)
478	UUACAGUGAAUUACCUGUC	GACAGGUAAUUCACUGUAA		[1034-1052]	[1722-1740]
479	UUUUCCCAUUUGAAAGUGG	CCACUUUCAAAUGGGAAAA		[717-735]	[1405-1423]
480	UUGCAGUACAAUCAUCGGG	CCCGAUGAUUGUACUGCAA		[806-824]	[1494-1512]
481	UAUCUGGGUCUGGAAACCC	GGGUUUCCAGACCCAGAUA		[183-201]	[871-889]
482	AAUAUCCCUCUUGUAAGUC	GACUUACAAGAGGGAUAUU		[999-1017]	[1687-1705]
483	UUCAUGUUCACUGUGAGUG	CACUCACAGUGAACAUGAA		[962-980]	[1650-1668]

Table B 21 LRDD - leucine-rich repeats and death domain containing

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-61742781:641-2902
1	CGCUCUUGCUGUCUCACAA	UUGUGAGACAGCAAGAGCG		[657-675]
2	GACUGUUCCUGACCUCAGA	UCUGAGGUCAGGAACAGUC		[1149-1167]
3	CGCACCUGAAGAAUGUGAA	UUCACAUUCUUCAGGUGCG	Mnk	[2256-2274]
4	GGUCCCUGUGAGCAACAAA	UUUGUUGCUCACAGGGACC		[2989-3007]
5	AGACCUACCUGGAGGAAGA	UCUUCCUCCAGGUAGGUCU		[1476-1494]
6	UCAGGACCCGGAAUGACAA	UUGUCAUUCCGGGUCCUGA	Mnk	[1440-1458]
7	GUCCCUGUGAGCAACAAAA	UUUUGUUGCUCACAGGGAC		[2990-3008]
8	GCCUCGAUCUCUCUCAGAA	UUCUGAGAGAGAUCGAGGC	Mnk	[795-813]
9	GAAUCUGCUUUGUCUUCUA	UAGAAGACAAAGCAGAUUC	Ms,Mnk	[2235-2253]
10	UCUGGUACACCACCAAGAA	UUCUUGGUGGUGUACCAGA	Mnk	[1944-1962]
11	UCUUCUACUCGCACCUGAA	UUCAGGUGCGAGUAGAAGA	Mnk	[2247-2265]
12	AGGAGAUGCUUCAGAGGAU	AUCCUCUGAAGCAUCUCCU		[190-208]
13	CCUCGAUCUCUCUCAGAAU	AUUCUGAGAGAGAUCGAGG		[796-814]
14	GAGGUAUACGUGACCACCA	UGGUGGUCACGUAUACCUC		[2276-2294]
15	CACCUGGGAUGACAUCACA	UGUGAUGUCAUCCCAGGUG	GP,Chn,Mnk	[1888-1906]
16	GGGAUGACAUCACAGCUCA	UGAGCUGUGAUGUCAUCCC	Mnk	[1893-1911]
17	GCUUUCUGACGCAGAGCAA	UUGCUCUGCGUCAGAAAGC		[2523-2541]

18	ACCUGGACCUGAGCUUCAA	UUGAAGCUCAGGUCCAGGU	Mnk	[588-606]
19	GUGGAAUUCUUGCGUCUGA	UCAGACGCAAGAAUUCCAC	Mnk	[332-350]
20	CUGACACGGUGGAGAUGUU	AACAUCUCCACCGUGUCAG	Mnk	[2139-2157]
21	CCACCUUCAAGUCUCUCCA	UGGAGAGACUUGAAGGUGG		[2957-2975]
22	GGAGAUGCUUCAGAGGAUU	AAUCCUCUGAAGCAUCUCC		[191-209]
23	GGAUGAUCUGGAUGAGCAG	CUGCUCAUCCAGAUCAUCC		[2644-2662]
24	GGGAUGAUCUGGAUGAGCA	UGCUCAUCCAGAUCAUCCC		[2643-2661]
25	GAAGAAUGUGAAGGAGGUA	UACCUCCUUCACAUUCUUC	Mnk	[2263-2281]
26	CUCUGGUACACCACCAAGA	UCUUGGUGGUGUACCAGAG	Mnk	[1943-1961]
27	UCCUUGUCCUGCACAGCAA	UUGCUGUGCAGGACAAGGA	Mnk	[933-951]
28	GCACCUGAAGAAUGUGAAG	CUUCACAUUCUUCAGGUGC	Mnk	[2257-2275]
29	CAGGAGAUGCUUCAGAGGA	UCCUCUGAAGCAUCUCCUG		[189-207]
30	CCAGAAAUGCCCAGACUGU	ACAGUCUGGGCAUUUCUGG	Mnk	[1136-1154]
31	AGAAUGUGAAGGAGGUAUA	UAUACCUCCUUCACAUUCU	Mnk	[2265-2283]
32	ACCUGAAGAAUGUGAAGGA	UCCUUCACAUUCUUCAGGU	Mnk	[2259-2277]
33	GGAUGACAUCACAGCUCAG	CUGAGCUGUGAUGUCAUCC	Mnk	[1894-1912]
34	GCUUUGUCUUCUACUCGCA	UGCGAGUAGAAGACAAAGC	Mnk	[2241-2259]
35	GGCAGAAUCUGCUUUGUCU	AGACAAAGCAGAUUCUGCC	Ms,Mnk	[2231-2249]
36	GCAAGUACCAGGACAGCAU	AUGCUGUCCUGGUACUUGC		[2802-2820]
37	UCCUGACCUCAGAUUUGGA	UCCAAAUCUGAGGUCAGGA		[1155-1173]
38	CACGCUACCUCCUGAGAUU	AAUCUCAGGAGGUAGCGUG		[823-841]
39	CACCUUCCUCACAGUGACA	UGUCACUGUGAGGAAGGUG		[721-739]
40	UCUACUCGCACCUGAAGAA	UUCUUCAGGUGCGAGUAGA	Mnk	[2250-2268]
41	CCUCAGAUUUGGACAGCUU	AAGCUGUCCAAAUCUGAGG	Ms,Mnk	[1161-1179]
42	GUUCCGGGAUGAUCUGGAU	AUCCAGAUCAUCCCGGAAC	Mnk	[2638-2656]
43	GUGUGAACCUCAUCGCUCU	AGAGCGAUGAGGUUCACAC	Mnk	[2013-2031]
44	CAGAAAUGCCCAGACUGUU	AACAGUCUGGGCAUUUCUG	Mnk	[1137-1155]
45	GUCUUCUACUCGCACCUGA	UCAGGUGCGAGUAGAAGAC	Mnk	[2246-2264]
46	ACACGGUGGAGAUGUUCGA	UCGAACAUCUCCACCGUGU		[2142-2160]
47	AGAGCAACCUGCUGAGUGU	ACACUCAGCAGGUUGCUCU	Rat,Ms, GP,Chn	[2535-2553]
48	AGUUCUUUGCGGCCUUCGA	UCGAAGGCCGCAAAGAACU	Mnk	[2169-2187]
49	GUGAAGGAGGUAUACGUGA	UCACGUAUACCUCCUUCAC	Mnk	[2270-2288]
50	UGAAGAAUGUGAAGGAGGU	ACCUCCUUCACAUUCUUCA	Mnk	[2262-2280]
51	ACUCGCACCUGAAGAAUGU	ACAUUCUUCAGGUGCGAGU	Mnk	[2253-2271]
52	GAAUCUGCUGGACACGCUA	UAGCGUGUCCAGCAGAUUC		[811-829]
53	CAGCCCUCAUUCCAGAAAU	AUUUCUGGAAUGAGGGCUG	Mnk	[1125-1143]
54	GAAUGUGAAGGAGGUAUAC	GUAUACCUCCUUCACAUUC	Mnk	[2266-2284]
55	CUCACAACUGCCUCUCUGA	UCAGAGAGGCAGUUGUGAG		[669-687]
56	CUGGACCUGAGCUUCAACA	UGUUGAAGCUCAGGUCCAG	Mnk	[590-608]
57	GCUACCUCCUGAGAUUGGA	UCCAAUCUCAGGAGGUAGC	Mnk	[826-844]
58	CACCCUUGAAUCUGGGAGA	UCUCCCAGAUUCAAGGGUG		[2493-2511]
59	UGCUGCAGGUGGAAUUCUU	AAGAAUUCCACCUGCAGCA	Mnk	[324-342]
60	UGAACCUCAUCGCUCUGCA	UGCAGAGCGAUGAGGUUCA	Mnk	[2016-2034]
61	GCAGAAUCUGCUUUGUCUU	AAGACAAAGCAGAUUCUGC	Ms,Mnk	[2232-2250]
62	CUGGGAUGACAUCACAGCU	AGCUGUGAUGUCAUCCCAG	Mnk	[1891-1909]
63	UGAGCUUCAACAGCCUGGA	UCCAGGCUGUUGAAGCUCA	Mnk	[597-615]
64	GGGUCAAAGUCAUCUUCCC	GGGAAGAUGACUUUGACCC		[1626-1644]
65	AGGUAUACGUGACCACCAC	GUGGUGGUCACGUAUACCU		[2277-2295]
66	UCAAAGGGUCGAUCUGGGA	UCCCAGAUCGACCCUUUGA		[432-450]
67	CUCAGAUUUGGACAGCUUU	AAAGCUGUCCAAAUCUGAG	Mnk	[1162-1180]
68	CAGACUGUUCCUGACCUCA	UGAGGUCAGGAACAGUCUG		[1147-1165]
69	CGAUCUCUCUCAGAAUCUG	CAGAUUCUGAGAGAGAUCG		[799-817]
70	GGUACACCACCAAGAACUG	CAGUUCUUGGUGGUGUACC	Mnk	[1947-1965]
71	AUGUGAAGGAGGUAUACGU	ACGUAUACCUCCUUCACAU	Mnk	[2268-2286]
72	CCUGAAGAAUGUGAAGGAG	CUCCUUCACAUUCUUCAGG	Mnk	[2260-2278]

73	UGCACCGUGUGAACCUCAU	AUGAGGUUCACACGGUGCA	Mnk	[2007-2025]
74	AGAUGUUCGAGGGCGAAGA	UCUUCGCCCUCGAACAUCU		[2151-2169]
75	ACCUGAGCUUCAACAGCCU	AGGCUGUUGAAGCUCAGGU	Mnk	[594-612]
76	CGAGGGCGAAGAGUUCUUU	AAAGAACUCUUCGCCCUCG		[2158-2176]
77	CAUCAAGCUGCCGAGACUU	AAGUCUCGGCAGCUUGAUG	GP,Chn,Mnk	[2431-2449]
78	GAUGAGCAGAUCCGUCACA	UGUGACGGAUCUGCUCAUC		[2654-2672]
79	UCAACAGCCUGGAGACACU	AGUGUCUCCAGGCUGUUGA		[603-621]
80	GAAUUCUUGCGUCUGAGCA	UGCUCAGACGCAAGAAUUC	Mnk	[335-353]
81	GGUAUACGUGACCACCACU	AGUGGUGGUCACGUAUACC		[2278-2296]
82	AGCAGAUCCGUCACAUGCU	AGCAUGUGACGGAUCUGCU		[2658-2676]
83	ACUGUUCCUGACCUCAGAU	AUCUGAGGUCAGGAACAGU		[1150-1168]
84	CCUGGUUCCUUGUGGUUUC	GAAACCACAAGGAACCAGG	Mnk	[1539-1557]
85	UGAGCAGAUCCGUCACAUG	CAUGUGACGGAUCUGCUCA		[2656-2674]
86	AGAUUUGGACAGCUUUCCU	AGGAAAGCUGUCCAAAUCU	Mnk	[1165-1183]
87	CUGACCUCAGAUUUGGACA	UGUCCAAAUCUGAGGUCAG	Ms	[1157-1175]
88	AAGGAGGUAUACGUGACCA	UGGUCACGUAUACCUCCUU		[2273-2291]
89	CUACUCGCACCUGAAGAAU	AUUCUUCAGGUGCGAGUAG	Mnk	[2251-2269]
90	CUUCAAGUCUCUCCAGUGU	ACACUGGAGAGACUUGAAG		[2961-2979]
91	UGGAUGAGCAGAUCCGUCA	UGACGGAUCUGCUCAUCCA		[2652-2670]
92	AGGGCAGAAUCUGCUUUGU	ACAAAGCAGAUUCUGCCCU	Mnk	[2229-2247]
93	AUGCCCAGACUGUUCCUGA	UCAGGAACAGUCUGGGCAU		[1142-1160]
94	UCGCACCUGAAGAAUGUGA	UCACAUUCUUCAGGUGCGA	Mnk	[2255-2273]
95	CGUCACAUGCUCUUCUCCU	AGGAGAAGAGCAUGUGACG		[2666-2684]
96	GCUGCAGGUGGAAUUCUUG	CAAGAAUUCCACCUGCAGC	Mnk	[325-343]
97	AUGCUUCAGAGGAUUCGGA	UCCGAAUCCUCUGAAGCAU		[195-213]
98	ACGAGUUCCGGGAUGAUCU	AGAUCAUCCCGGAACUCGU		[2634-2652]
99	CUUCUACUCGCACCUGAAG	CUUCAGGUGCGAGUAGAAG	Mnk	[2248-2266]
100	CUGGUACACCACCAAGAAC	GUUCUUGGUGGUGUACCAG	Mnk	[1945-1963]
101	GCAGCCCUCAUUCCAGAAA	UUUCUGGAAUGAGGGCUGC	Mnk	[1124-1142]
102	AGCUGCUGCAGGUGGAAUU	AAUUCCACCUGCAGCAGCU	Mnk	[321-339]
103	AUGAGCAGAUCCGUCACAU	AUGUGACGGAUCUGCUCAU		[2655-2673]
104	CCUUCAAGUCUCUCCAGUG	CACUGGAGAGACUUGAAGG		[2960-2978]
105	UCACCUUCCUCACAGUGAC	GUCACUGUGAGGAAGGUGA		[720-738]
106	AAGAGUUCUUUGCGGCCUU	AAGGCCGCAAAGAACUCUU	Mnk	[2166-2184]
107	GAUGAUCUGGAUGAGCAGA	UCUGCUCAUCCAGAUCAUC		[2645-2663]
108	GUUCCUGACCUCAGAUUUG	CAAAUCUGAGGUCAGGAAC		[1153-1171]
109	AGAUCCGUCACAUGCUCUU	AAGAGCAUGUGACGGAUCU		[2661-2679]
110	AGGUGGAAUUCUUGCGUCU	AGACGCAAGAAUUCCACCU	Mnk	[330-348]
111	UGGACAGCUUUCCUGUGAC	GUCACAGGAAAGCUGUCCA	Mnk	[1170-1188]
112	AGGAGGUAUACGUGACCAC	GUGGUCACGUAUACCUCCU		[2274-2292]
113	AGACUGUUCCUGACCUCAG	CUGAGGUCAGGAACAGUCU		[1148-1166]
114	UGUGAAGGAGGUAUACGUG	CACGUAUACCUCCUUCACA	Mnk	[2269-2287]
115	CUUCAACAGCCUGGAGACA	UGUCUCCAGGCUGUUGAAG		[601-619]
116	GAGGGCGAAGAGUUCUUUG	CAAAGAACUCUUCGCCCUC	Mnk	[2159-2177]
117	UGGACCUGAGCUUCAACAG	CUGUUGAAGCUCAGGUCCA	Mnk	[591-609]
118	UCUUGCGUCUGAGCACUCA	UGAGUGCUCAGACGCAAGA	Mnk	[339-357]
119	AGUUCCGGGAUGAUCUGGA	UCCAGAUCAUCCCGGAACU	Mnk	[2637-2655]
120	AGCUUCAACAGCCUGGAGA	UCUCCAGGCUGUUGAAGCU	Mnk	[599-617]
121	CUCAUUCCAGAAAUGCCCA	UGGGCAUUUCUGGAAUGAG	Mnk	[1130-1148]
122	UGUUCCUGACCUCAGAUUU	AAAUCUGAGGUCAGGAACA		[1152-1170]
123	UGUUCGAGGGCGAAGAGUU	AACUCUUCGCCCUCGAACA		[2154-2172]
124	UGAAGGAGGUAUACGUGAC	GUCACGUAUACCUCCUUCA	Mnk	[2271-2289]
125	GCUCUUGCUGUCUCACAAC	GUUGUGAGACAGCAAGAGC		[658-676]
126	UGGAGGGCAGAAUCUGCUU	AAGCAGAUUCUGCCCUCCA	Mnk	[2226-2244]
127	CUCACCUUCCUCACAGUGA	UCACUGUGAGGAAGGUGAG		[719-737]
128	ACCCGGAAUGACAACAGCU	AGCUGUUGUCAUUCCGGGU	Mnk	[1445-1463]

129	ACCCUUGAAUCUGGGAGAU	AUCUCCCAGAUUCAAGGGU		[2494-2512]
130	CAUUCCAGAAAUGCCCAGA	UCUGGGCAUUUCUGGAAUG	Mnk	[1132-1150]
131	UCUCCUGGUUCCUUGUGGU	ACCACAAGGAACCAGGAGA	GP,Chn,Mnk	[1536-1554]
132	AGGACCCGGAAUGACAACA	UGUUGUCAUUCCGGGUCCU	Mnk	[1442-1460]
133	CAAGUACCAGGACAGCAUC	GAUGCUGUCCUGGUACUUG		[2803-2821]
134	UUCUACUCGCACCUGAAGA	UCUUCAGGUGCGAGUAGAA	Mnk	[2249-2267]
135	GGAGGGCAGAAUCUGCUUU	AAAGCAGAUUCUGCCCUCC	Mnk	[2227-2245]
136	CUCUUGCUGUCUCACAACU	AGUUGUGAGACAGCAAGAG	Mnk	[659-677]
137	GGGCAGAAUCUGCUUUGUC	GACAAAGCAGAUUCUGCCC	Mnk	[2230-2248]
138	UGGUACACCACCAAGAACU	AGUUCUUGGUGGUGUACCA	Mnk	[1946-1964]
139	CACCUUCAAGUCUCUCCAG	CUGGAGAGACUUGAAGGUG		[2958-2976]
140	UUGGACAGCUUUCCUGUGA	UCACAGGAAAGCUGUCCAA	Mnk	[1169-1187]
141	UCUGGAUGAGCAGAUCCGU	ACGGAUCUGCUCAUCCAGA		[2650-2668]
142	ACAACUGCCUCUCUGAGCU	AGCUCAGAGAGGCAGUUGU		[672-690]
143	ACCUCAGAUUUGGACAGCU	AGCUGUCCAAAUCUGAGGU	Ms,Mnk	[1160-1178]
144	CUCAGAAUCUGCUGGACAC	GUGUCCAGCAGAUUCUGAG		[807-825]
145	UCCGGGAUGAUCUGGAUGA	UCAUCCAGAUCAUCCCGGA		[2640-2658]
146	UGGAAUUCUUGCGUCUGAG	CUCAGACGCAAGAAUUCCA	Mnk	[333-351]
147	AAAUGCCCAGACUGUUCCU	AGGAACAGUCUGGGCAUUU		[1140-1158]
148	CUGUUCCUGACCUCAGAUU	AAUCUGAGGUCAGGAACAG		[1151-1169]
149	GAAGGAGGUAUACGUGACC	GGUCACGUAUACCUCCUUC		[2272-2290]
150	CUCGCACCUGAAGAAUGUG	CACAUUCUUCAGGUGCGAG	Mnk	[2254-2272]
151	AUACGUGACCACCACUCUG	CAGAGUGGUGGUCACGUAU		[2281-2299]
152	UGGUCCUCAAAGGGUCGAU	AUCGACCCUUUGAGGACCA		[426-444]
153	GCAGGUGGAAUUCUUGCGU	ACGCAAGAAUUCCACCUGC	Mnk	[328-346]
154	UCGAGGGCGAAGAGUUCUU	AAGAACUCUUCGCCCUCGA		[2157-2175]
155	CCACUUCUCCUGGUUCCUU	AAGGAACCAGGAGAAGUGG	GP,Chn,Mnk	[1531-1549]
156	AGCCCUCAUUCCAGAAAUG	CAUUUCUGGAAUGAGGGCU	Mnk	[1126-1144]
157	CUCGAUCUCUCUCAGAAUC	GAUUCUGAGAGAGAUCGAG		[797-815]
158	ACACGCUACCUCCUGAGAU	AUCUCAGGAGGUAGCGUGU		[822-840]
159	CCCUCAUUCCAGAAAUGCC	GGCAUUUCUGGAAUGAGGG	Mnk	[1128-1146]
160	GAUGCUUCAGAGGAUUCGG	CCGAAUCCUCUGAAGCAUC		[194-212]
161	AAUUCUUGCGUCUGAGCAC	GUGCUCAGACGCAAGAAUU	Mnk	[336-354]
162	CUUGCUGUCUCACAACUGC	GCAGUUGUGAGACAGCAAG		[661-679]
163	UCACAACUGCCUCUCUGAG	CUCAGAGAGGCAGUUGUGA		[670-688]
164	UCCUCAAAGGGUCGAUCUG	CAGAUCGACCCUUUGAGGA		[429-447]
165	ACUUCUCCUGGUUCCUUGU	ACAAGGAACCAGGAGAAGU	GP,Chn,Mnk	[1533-1551]
166	CUACCUCCUGAGAUUGGAG	CUCCAAUCUCAGGAGGUAG	Mnk	[827-845]
167	UGAAUCUGGGAGAUGCCGA	UCGGCAUCUCCCAGAUUCA		[2499-2517]
168	UAUACGUGACCACCACUCU	AGAGUGGUGGUCACGUAUA		[2280-2298]
169	UUCAGAGGAUUCGGACGCA	UGCGUCCGAAUCCUCUGAA		[199-217]
170	ACCUGGGAUGACAUCACAG	CUGUGAUGUCAUCCCAGGU	GP,Chn,Mnk	[1889-1907]
171	CUGUCUCACAACUGCCUCU	AGAGGCAGUUGUGAGACAG		[665-683]
172	GUCCUCAAAGGGUCGAUCU	AGAUCGACCCUUUGAGGAC		[428-446]
173	CCUGACCUCAGAUUUGGAC	GUCCAAAUCUGAGGUCAGG		[1156-1174]
174	GUACACCACCAAGAACUGU	ACAGUUCUUGGUGGUGUAC		[1948-1966]
175	GGAAUUCUUGCGUCUGAGC	GCUCAGACGCAAGAAUUCC	Mnk	[334-352]
176	AAGAAUGUGAAGGAGGUAU	AUACCUCCUUCACAUUCUU	Mnk	[2264-2282]
177	CCUUGAAUCUGGGAGAUGC	GCAUCUCCCAGAUUCAAGG		[2496-2514]
178	UUCCAGAAAUGCCCAGACU	AGUCUGGGCAUUUCUGGAA	Mnk	[1134-1152]
179	CACUUCUCCUGGUUCCUUG	CAAGGAACCAGGAGAAGUG	GP,Chn,Mnk	[1532-1550]
180	CUUGAAUCUGGGAGAUGCC	GGCAUCUCCCAGAUUCAAG		[2497-2515]
181	AUGACAUCACAGCUCAGGU	ACCUGAGCUGUGAUGUCAU	Mnk	[1896-1914]
182	GUCACAUGCUCUUCUCCUG	CAGGAGAAGAGCAUGUGAC		[2667-2685]
183	CUCCUGGUUCCUUGUGGUU	AACCACAAGGAACCAGGAG	GP,Mnk	[1537-1555]
184	UGACCUCAGAUUUGGACAG	CUGUCCAAAUCUGAGGUCA	Ms,Mnk	[1158-1176]

185	UGAUCUGGAUGAGCAGAUC	GAUCUGCUCAUCCAGAUCA		[2647-2665]
186	AUUUGGACAGCUUUCCUGU	ACAGGAAAGCUGUCCAAAU	Mnk	[1167-1185]
187	ACAUCACAGCUCAGGUGGU	ACCACCUGAGCUGUGAUGU	Mnk	[1899-1917]
188	UGCUGUCUCACAACUGCCU	AGGCAGUUGUGAGACAGCA		[663-681]
189	GUCUCACAACUGCCUCUCU	AGAGAGGCAGUUGUGAGAC		[667-685]
190	CUUUGUCUUCUACUCGCAC	GUGCGAGUAGAAGACAAAG	Mnk	[2242-2260]
191	CAGAUCCGUCACAUGCUCU	AGAGCAUGUGACGGAUCUG		[2660-2678]
192	GAUUUGGACAGCUUUCCUG	CAGGAAAGCUGUCCAAAUC	Mnk	[1166-1184]
193	UCGAUCUCUCUCAGAAUCU	AGAUUCUGAGAGAGAUCGA		[798-816]
194	CUUUCUGACGCAGAGCAAC	GUUGCUCUGCGUCAGAAAG		[2524-2542]
195	AGAAAUGCCCAGACUGUUC	GAACAGUCUGGGCAUUUCU	Mnk	[1138-1156]
196	CUGCUGCAGGUGGAAUUCU	AGAAUUCCACCUGCAGCAG	Mnk	[323-341]
197	UCAGAUUUGGACAGCUUUC	GAAAGCUGUCCAAAUCUGA	Mnk	[1163-1181]
198	ACCUUCAAGUCUCUCCAGU	ACUGGAGAGACUUGAAGGU		[2959-2977]
199	GGUGGAAUUCUUGCGUCUG	CAGACGCAAGAAUUCCACC	Mnk	[331-349]
200	CCUCAUUCCAGAAAUGCCC	GGGCAUUUCUGGAAUGAGG	Mnk	[1129-1147]
201	UCUGCUUUGUCUUCUACUC	GAGUAGAAGACAAAGCAGA	GP,Chn,Mnk	[2238-2256]
202	UUGUCUUCUACUCGCACCU	AGGUGCGAGUAGAAGACAA	Mnk	[2244-2262]
203	UCUCUCAGAAUCUGCUGGA	UCCAGCAGAUUCUGAGAGA		[804-822]
204	AGGGCGAAGAGUUCUUUGC	GCAAAGAACUCUUCGCCCU	Mnk	[2160-2178]
205	GAGGGCAGAAUCUGCUUUG	CAAAGCAGAUUCUGCCCUC	Mnk	[2228-2246]
206	AAUCUGGGAGAUGCCGAGA	UCUCGGCAUCUCCCAGAUU		[2501-2519]
207	UCUCAGAAUCUGCUGGACA	UGUCCAGCAGAUUCUGAGA		[806-824]
208	CUGAAGAAUGUGAAGGAGG	CCUCCUUCACAUUCUUCAG	Mnk	[2261-2279]
209	AUCUGCUUUGUCUUCUACU	AGUAGAAGACAAAGCAGAU	GP,Mnk	[2237-2255]
210	UACUCGCACCUGAAGAAUG	CAUUCUUCAGGUGCGAGUA	Mnk	[2252-2270]
211	AUGAUCUGGAUGAGCAGAU	AUCUGCUCAUCCAGAUCAU		[2646-2664]
212	AUCUCUCUCAGAAUCUGCU	AGCAGAUUCUGAGAGAGAU		[801-819]
213	CUGGUUCCUUGUGGUUUCC	GGAAACCACAAGGAACCAG	Mnk	[1540-1558]
214	CAGGUGGAAUUCUUGCGUC	GACGCAAGAAUUCCACCUG	Mnk	[329-347]
215	CAGAUUUGGACAGCUUUCC	GGAAAGCUGUCCAAAUCUG	Mnk	[1164-1182]
216	UCCAGAAAUGCCCAGACUG	CAGUCUGGGCAUUUCUGGA	Mnk	[1135-1153]
217	UGCUUUGUCUUCUACUCGC	GCGAGUAGAAGACAAAGCA	Mnk	[2240-2258]
218	GAGAUGCUUCAGAGGAUUC	GAAUCCUCUGAAGCAUCUC		[192-210]
219	CUGCUUUGUCUUCUACUCG	CGAGUAGAAGACAAAGCAG	Mnk	[2239-2257]
220	UCCGUCACAUGCUCUUCUC	GAGAAGAGCAUGUGACGGA		[2664-2682]
221	UGCUUCAGAGGAUUCGGAC	GUCCGAAUCCUCUGAAGCA		[196-214]
222	AGAAUCUGCUGGACACGCU	AGCGUGUCCAGCAGAUUCU		[810-828]
223	AUCCGUCACAUGCUCUUCU	AGAAGAGCAUGUGACGGAU		[2663-2681]
224	UGUGAACCUCAUCGCUCUG	CAGAGCGAUGAGGUUCACA	Mnk	[2014-2032]
225	UUCUGACGCAGAGCAACCU	AGGUUGCUCUGCGUCAGAA		[2526-2544]
226	CUCUCAGAAUCUGCUGGAC	GUCCAGCAGAUUCUGAGAG		[805-823]
227	GAAGAGUUCUUUGCGGCCU	AGGCCGCAAAGAACUCUUC	Mnk	[2165-2183]
228	CUGCAGGUGGAAUUCUUGC	GCAAGAAUUCCACCUGCAG	Mnk	[326-344]
229	AGAUGCUUCAGAGGAUUCG	CGAAUCCUCUGAAGCAUCU		[193-211]
230	GAUCUCUCUCAGAAUCUGC	GCAGAUUCUGAGAGAGAUC		[800-818]
231	CAGAAUCUGCUUUGUCUUC	GAAGACAAAGCAGAUUCUG	Ms,Mnk	[2233-2251]
232	AAUCUGCUUUGUCUUCUAC	GUAGAAGACAAAGCAGAUU	Mnk	[2236-2254]
233	CCACAGACUUUUAGGCUGG	CCAGCCUAAAAGUCUGUGG		[2906-2924]
234	UGGGAUGACAUCACAGCUC	GAGCUGUGAUGUCAUCCCA	Mnk	[1892-1910]
235	CCCACAGACUUUUAGGCUG	CAGCCUAAAAGUCUGUGGG		[2905-2923]
236	AGAAUCUGCUUUGUCUUCU	AGAAGACAAAGCAGAUUCU	Ms,Mnk	[2234-2252]
237	UUUGGACAGCUUUCCUGUG	CACAGGAAAGCUGUCCAAA	Mnk	[1168-1186]
238	UCUUGCUGUCUCACAACUG	CAGUUGUGAGACAGCAAGA	Mnk	[660-678]
239	UGACAUCACAGCUCAGGUG	CACCUGAGCUGUGAUGUCA	Mnk	[1897-1915]
240	GAUCUGGAUGAGCAGAUCC	GGAUCUGCUCAUCCAGAUC		[2648-2666]

241	AUUCCAGAAAUGCCCAGAC	GUCUGGGCAUUUCUGGAAU	Mnk	[1133-1151]
242	GAUCCGUCACAUGCUCUUC	GAAGAGCAUGUGACGGAUC		[2662-2680]
243	GAAAUGCCCAGACUGUUCC	GGAACAGUCUGGGCAUUUC		[1139-1157]
244	AUUCUUGCGUCUGAGCACU	AGUGCUCAGACGCAAGAAU	Mnk	[337-355]
245	GUAUACGUGACCACCACUC	GAGUGGUGGUCACGUAUAC		[2279-2297]
246	CCCUUGAAUCUGGGAGAUG	CAUCUCCCAGAUUCAAGGG		[2495-2513]
247	AAUGUGAAGGAGGUAUACG	CGUAUACCUCCUUCACAUU	Mnk	[2267-2285]
248	UCUCACAACUGCCUCUCUG	CAGAGAGGCAGUUGUGAGA		[668-686]
249	AGAGUUCUUUGCGGCCUUC	GAAGGCCGCAAAGAACUCU	Mnk	[2167-2185]
250	UCCUGGUUCCUUGUGGUUU	AAACCACAAGGAACCAGGA	GP,Mnk	[1538-1556]
251	UCUGACACGGUGGAGAUGU	ACAUCUCCACCGUGUCAGA	Mnk	[2138-2156]
252	UGACACGGUGGAGAUGUUC	GAACAUCUCCACCGUGUCA		[2140-2158]
253	UACACCACCAAGAACUGUG	CACAGUUCUUGGUGGUGUA		[1949-1967]
254	AUGUUCGAGGGCGAAGAGU	ACUCUUCGCCCUCGAACAU		[2153-2171]
255	UUCCUGACCUCAGAUUUGG	CCAAAUCUGAGGUCAGGAA		[1154-1172]
256	GACCUCAGAUUUGGACAGC	GCUGUCCAAAUCUGAGGUC	Ms,Mnk	[1159-1177]
257	CACCUGAAGAAUGUGAAGG	CCUUCACAUUCUUCAGGUG	Mnk	[2258-2276]
258	AUCUGGAUGAGCAGAUCCG	CGGAUCUGCUCAUCCAGAU		[2649-2667]
259	GAUGACAUCACAGCUCAGG	CCUGAGCUGUGAUGUCAUC	Mnk	[1895-1913]
260	UGUCUUCUACUCGCACCUG	CAGGUGCGAGUAGAAGACA	Mnk	[2245-2263]
261	UUCGAGGGCGAAGAGUUCU	AGAACUCUUCGCCCUCGAA		[2156-2174]
262	UUGUCCUGCACAGCAACCU	AGGUUGCUGUGCAGGACAA	Mnk	[936-954]
263	GCCCUCAUUCCAGAAAUGC	GCAUUUCUGGAAUGAGGGC	Mnk	[1127-1145]
264	UGCAGGUGGAAUUCUUGCG	CGCAAGAAUUCCACCUGCA	Mnk	[327-345]
265	UCUCUCUCAGAAUCUGCUG	CAGCAGAUUCUGAGAGAGA		[802-820]
266	UUUCUGACGCAGAGCAACC	GGUUGCUCUGCGUCAGAAA		[2525-2543]
267	UCAUUCCAGAAAUGCCCAG	CUGGGCAUUUCUGGAAUGA	Mnk	[1131-1149]
268	ACGCUACCUCCUGAGAUUG	CAAUCUCAGGAGGUAGCGU	Mnk	[824-842]
269	UUGCUGUCUCACAACUGCC	GGCAGUUGUGAGACAGCAA		[662-680]
270	AUCAAGCUGCCGAGACUUC	GAAGUCUCGGCAGCUUGAU	GP,Chn,Mnk	[2432-2450]
271	UUCAAGUCUCUCCAGUGUG	CACACUGGAGAGACUUGAA		[2962-2980]
272	AAGUACCAGGACAGCAUCC	GGAUGCUGUCCUGGUACUU		[2804-2822]
273	UCAGAAUCUGCUGGACACG	CGUGUCCAGCAGAUUCUGA		[808-826]
274	UCACAUGCUCUUCUCCUGG	CCAGGAGAAGAGCAUGUGA		[2668-2686]
275	CUUCUCCUGGUUCCUUGUG	CACAAGGAACCAGGAGAAG	GP,Chn,Mnk	[1534-1552]
276	CUCUCUCAGAAUCUGCUGG	CCAGCAGAUUCUGAGAGAG		[803-821]
277	UUUGUCUUCUACUCGCACC	GGUGCGAGUAGAAGACAAA	Mnk	[2243-2261]
278	UUCCGGGAUGAUCUGGAUG	CAUCCAGAUCAUCCCGGAA	Mnk	[2639-2657]
279	UGGUUCCUUGUGGUUUCCC	GGGAAACCACAAGGAACCA	Mnk	[1541-1559]
280	UUCUCCUGGUUCCUUGUGG	CCACAAGGAACCAGGAGAA	GP,Chn,Mnk	[1535-1553]
281	UUCUUGCGUCUGAGCACUC	GAGUGCUCAGACGCAAGAA	Mnk	[338-356]
282	AAUCUGCUGGACACGCUAC	GUAGCGUGUCCAGCAGAUU		[812-830]
283	ACCUUCCUCACAGUGACAC	GUGUCACUGUGAGGAAGGU		[722-740]
284	AAUGCCCAGACUGUUCCUG	CAGGAACAGUCUGGGCAUU		[1141-1159]
285	UUGAAUCUGGGAGAUGCCG	CGGCAUCUCCCAGAUUCAA		[2498-2516]
286	UUCAACAGCCUGGAGACAC	GUGUCUCCAGGCUGUUGAA		[602-620]
287	UGUCUCACAACUGCCUCUC	GAGAGGCAGUUGUGAGACA		[666-684]
288	UACCUCCUGAGAUUGGAGG	CCUCCAAUCUCAGGAGGUA	Mnk	[828-846]

Table B 22 NOS1 - nitric oxide synthase 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-10835172 :686-4990
1	CCAAGAAGAUGAACUUAGA	UCUAAGUUCAUCUUCUUGG		[2532-2550]
2	GGAGGGACAUUAAGAAAUA	UAUUUCUUAAUGUCCCUCC		[104-122]
3	CGGUGUAAUUCCUCCCUAA	UUAGGGAGGAAUUACACCG		[6376-6394]
4	GCGGCAAUUUGAUAUCCAA	UUGGAUAUCAAAUUGCCGC		[4486-4504]

5	CCACAGAUAUAAAGAACAA	UUGUUCUUUAUAUCUGUGG		[6895-6913]
6	AGAUGAUGUCAACAUUGAA	UUCAAUGUUGACAUCAUCU		[3535-3553]
7	GAGGGACAUUAAGAAAUAA	UUAUUUCUUAAUGUCCCUC		[105-123]
8	CAUUGAAGAGAGCAAAAAA	UUUUUUGCUCUCUUCAAUG	Ms	[4945-4963]
9	CGAACCUAAAGAAUAUGAA	UUCAUAUUCUUUAGGUUCG		[6016-6034]
10	GGGAGAGGAUCCUGAAGAU	AUCUUCAGGAUCCUCUCCC		[3423-3441]
11	GAACGUACGAAGUGACCAA	UUGGUCACUUCGUACGUUC		[4899-4917]
12	GGAGACUGUUAAAGUGAAA	UUUCACUUUAACAGUCUCC		[6737-6755]
13	GGGACAUUAAGAAAUAAAU	AUUUAUUUCUUAAUGUCCC		[107-125]
14	GAAUAUGAAUGGAUUAAAU	AUUUAAUCCAUUCAUAUUC		[6026-6044]
15	CGAUGCAAUGCUUUUCUAA	UUAGAAAAGCAUUGCAUCG		[5186-5204]
16	AGAGGAGUGGGAAAUUGAU	AUCAAUUUCCCACUCCUCU		[5675-5693]
17	GGCUGUGCUUUGAUGGAAA	UUUCCAUCAAAGCACAGCC		[3164-3182]
18	GGGCUGUCUCCCAAUGAAA	UUUCAUUGGGAGACAGCCC		[5699-5717]
19	CCGGCUGCAAGUUUUGUAA	UUACAAAACUUGCAGCCGG		[5009-5027]
20	CGCGAAGAAAGCAACCAGA	UCUGGUUGCUUUCUUCGCG		[1246-1264]
21	GAUAAAGGAGGGACAUUAA	UUAAUGUCCCUCCUUUAUC		[98-116]
22	GGCUCAUGAUGCCUCAGAU	AUCUGAGGCAUCAUGAGCC		[265-283]
23	GAAUGGAUUAAAUGUUAAA	UUUAACAUUUAAUCCAUUC		[6032-6050]
24	GGCUGGAAGAGGUGAACAA	UUGUUCACCUCUUCCAGCC		[1839-1857]
25	GAAACAAUAUCAAGUAACA	UGUUACUUGAUAUUGUUUC		[6064-6082]
26	GAGAGGAGUGGGAAAUUGA	UCAAUUUCCCACUCCUCUC		[5674-5692]
27	GGAGUGGGAAAUUGAUUAA	UUAAUCAAUUUCCCACUCC		[5678-5696]
28	CAAUGAAGAUACCCAGAGA	UCUCUGGGUAUCUUCAUUG		[307-325]
29	CCCAGAAAGAGACAAGAAA	UUUCUUGUCUCUUUCUGGG		[6490-6508]
30	CAAAGAGUUUAUUGAUCAA	UUGAUCAAUAAACUCUUUG		[1774-1792]
31	CACGCUUCCUCAAGGUCAA	UUGACCUUGAGGAAGCGUG		[1593-1611]
32	CGAGAUGGAGAAGGACCAA	UUGGUCCUUCUCCAUCUCG		[4298-4316]
33	GGUUGGACGUCACUGCUAA	UUAGCAGUGACGUCCAACC		[60-78]
34	UGAUGUCCAUGGAAGAAUA	UAUUCUUCCAUGGACAUCA		[3054-3072]
35	AGGUGAUGUCCAUGGAAGA	UCUUCCAUGGACAUCACCU		[3051-3069]
36	CCAGAUGGUGAAAGUGGAA	UUCCACUUUCACCAUCUGG		[3874-3892]
37	GUGUCUUGCUAUACAGAAA	UUUCUGUAUAGCAAGACAC		[6583-6601]
38	CCAUGAGGAUAUUUUUGGA	UCCAAAAAUAUCCUCAUGG		[4870-4888]
39	CGGGAUGCACUGAGUACAU	AUGUACUCAGUGCAUCCCG		[1671-1689]
40	GGAUGACAACCGAUACCAU	AUGGUAUCGGUUGUCAUCC		[4855-4873]
41	AAGGGAAGCCCAUUCUAAA	UUUAGAAUGGGCUUCCCUU		[6950-6968]
42	CAGGCAAAUCGCAAGCUUA	UAAGCUUGCGAUUUGCCUG		[2988-3006]
43	CAAGGUGAUGUCCAUGGAA	UUCCAUGGACAUCACCUUG		[3049-3067]
44	UAUCCAAUGUCCACAAAAA	UUUUUGUGGACAUUGGAUA		[3651-3669]
45	GAUCGCAGCUGGAAGAGAA	UUCUCUUCCAGCUGCGAUC		[3581-3599]
46	GCUGGAAGAGGUGAACAAA	UUUGUUCACCUCUUCCAGC		[1840-1858]
47	CCCUCAACUCAGAUCAAAA	UUUUGAUCUGAGUUGAGGG		[6324-6342]
48	AGGAGACUGUUAAAGUGAA	UUCACUUUAACAGUCUCCU		[6736-6754]
49	GGACAUUAAGAAAUAAAUU	AAUUUAUUUCUUAAUGUCC		[108-126]
50	CAUGUUCGGUGUUCAGCAA	UUGCUGAACACCGAACAUG		[697-715]
51	GAUCAAUACUAUUCAUCAA	UUGAUGAAUAGUAUUGAUC		[1787-1805]
52	CGCCCAUGUACCUGAAACA	UGUUUCAGGUACAUGGGCG		[5607-5625]
53	CCAUCUUCCAGGCCUUCAA	UUGAAGGCCUGGAAGAUGG	Rat,Ms	[3966-3984]
54	CACUCUUCCACAGAUAUAA	UUAUAUCUGUGGAAGAGUG		[6888-6906]
55	AGAGAAUAGUUCACAUCUA	UAGAUGUGAACUAUUCUCU		[321-339]
56	CCAUGUACCUGAAACAUUU	AAAUGUUUCAGGUACAUGG		[5610-5628]
57	GGAGUACGAGGAAUGGAAA	UUUCCAUUCCUCGUACUCC		[4099-4117]
58	CAUAAUUGUUCUAGUUAGA	UCUAACUAGAACAAUUAUG		[5637-5655]
59	GCUACAAGGUCCGAUUCAA	UUGAAUCGGACCUUGUAGC	Rat,Ms	[3219-3237]
60	CAGACAAACCAAAGAAGUA	UACUUCUUUGGUUUGUCUG		[4647-4665]

61	GGGAGAUGAUGUCAACAUU	AAUGUUGACAUCAUCUCCC		[3532-3550]
62	AAAGGAGGGACAUUAAGAA	UUCUUAAUGUCCCUCCUUU		[101-119]
63	GGCUGCUGAUGUCCUCAAA	UUUGAGGACAUCAGCAGCC		[4762-4780]
64	CAGAUAUAAAGAACAAACA	UGUUUGUUCUUUAUAUCUG		[6898-6916]
65	UGUGCACCUGGAACAUGAA	UUCAUGUUCCAGGUGCACA		[3079-3097]
66	CACAGAUAUAAAGAACAAA	UUUGUUCUUUAUAUCUGUG		[6896-6914]
67	CCCAGAGAAUAGUUCACAU	AUGUGAACUAUUCUCUGGG		[318-336]
68	GAGUGGGAAAUUGAUUAAA	UUUAAUCAAUUUCCCACUC		[5679-5697]
69	CUACCAGCGAGAAGGAGAA	UUCUCCUUCUCGCUGGUAG		[4047-4065]
70	GAGAAUAGUUCACAUCUAU	AUAGAUGUGAACUAUUCUC		[322-340]
71	CCUGGAGACCACCUUUACA	UGUAAAGGUGGUCUCCAGG		[1003-1021]
72	GGGAAGGGAUCCCUUUGUA	UACAAAGGGAUCCCUUCCC		[6434-6452]
73	CUGACACCCUCCACCUUAA	UUAAGGUGGAGGGUGUCAG		[1638-1656]
74	GAGGCAACCUGUUGAAUUU	AAAUUCAACAGGUUGCCUC		[6395-6413]
75	GAAGGGAAGCCCAUUCUAA	UUAGAAUGGGCUUCCCUUC		[6949-6967]
76	GGCGGAUGCAGGAAAUCAU	AUGAUUUCCUGCAUCCGCC		[470-488]
77	CCAGAAAGAGACAAGAAAU	AUUUCUUGUCUCUUUCUGG		[6491-6509]
78	UGGAAACAAUAUCAAGUAA	UUACUUGAUAUUGUUUCCA		[6062-6080]
79	GGAUGAGGUUGGAAAGAGU	ACUCUUUCCAACCUCAUCC		[6165-6183]
80	ACGGGAUGUUCAACUACAU	AUGUAGUUGAACAUCCCGU		[2007-2025]
81	CUCCAAAGCCCACAUGGAA	UUCCAUGUGGGCUUUGGAG		[1819-1837]
82	GAUGAUGUCAACAUUGAAA	UUUCAAUGUUGACAUCAUC		[3536-3554]
83	CCUUAAGAGCACAUUGGAA	UUCCAAUGUGCUCUUAAGG		[1651-1669]
84	GAACACGCAUGUCUGGAAA	UUUCCAGACAUGCGUGUUC		[2833-2851]
85	GGAACACGCAUGUCUGGAA	UUCCAGACAUGCGUGUUCC		[2832-2850]
86	CUCUGCAGUUGAUCUCCAA	UUGGAGAUCAACUGCAGAG		[6266-6284]
87	CCGAGUCCUUCAUUAAGCA	UGCUUAAUGAAGGACUCGG		[2664-2682]
88	CCUCAACUCAGAUCAAAAA	UUUUUGAUCUGAGUUGAGG		[6325-6343]
89	CUUCCACAGAUAUAAAGAA	UUCUUUAUAUCUGUGGAAG		[6892-6910]
90	AGGCAAAUCGCAAGCUUAU	AUAAGCUUGCGAUUUGCCU		[2989-3007]
91	GCCUGGGAUUUCUGGUGAA	UUCACCAGAAAUCCCAGGC		[765-783]
92	ACUCUUCCACAGAUAUAAA	UUUAUAUCUGUGGAAGAGU		[6889-6907]
93	GCUCACUCUUCCACAGAUA	UAUCUGUGGAAGAGUGAGC		[6885-6903]
94	GCAGCUGGAAGAGAAACAA	UUGUUUCUCUUCCAGCUGC		[3585-3603]
95	GCGAUGCAAUGCUUUUCUA	UAGAAAAGCAUUGCAUCGC		[5185-5203]
96	UGAAGACGUCCGCACAAAA	UUUUGUGCGGACGUCUUCA		[1735-1753]
97	UGACAUUGUGCACCUGGAA	UUCCAGGUGCACAAUGUCA		[3073-3091]
98	ACGCUGAGCUGACGUCAAA	UUUGACGUCAGCUCAGCGU		[521-539]
99	CGGUGUUCAGCAAAUCCAG	CUGGAUUUGCUGAACACCG		[703-721]
100	CACUCGAGAUGGAGAAGGA	UCCUUCUCCAUCUCGAGUG		[4294-4312]
101	AAGCUUUGGUGCCUGGAAA	UUUCCAGGCACCAAAGCUU		[6049-6067]
102	AGGGACAUUAAGAAAUAAA	UUUAUUUCUUAAUGUCCCU		[106-124]
103	CGGCUGUGCUUUGAUGGAA	UUCCAUCAAAGCACAGCCG		[3163-3181]
104	CAAUGUCCACAAAAAGCGA	UCGCUUUUUGUGGACAUUG		[3655-3673]
105	GGGUCUUCAGAGAGCUGUA	UACAGCUCUCUGAAGACCC		[4608-4626]
106	GAACCUAAAGAAUAUGAAU	AUUCAUAUUCUUUAGGUUC		[6017-6035]
107	CCAUCACUUCCUUAGAGAA	UUCUCUAAGGAAGUGAUGG		[441-459]
108	CAGGCAGUUCCCAGAAAGA	UCUUUCUGGGAACUGCCUG		[6481-6499]
109	GGAAGCUAGUUACCAUGGA	UCCAUGGUAACUAGCUUCC		[672-690]
110	CCAACAUGCUCCUAGAGAU	AUCUCUAGGAGCAUGUUGG		[2403-2421]
111	CGCUGGUGGAGAUCAAUAU	AUAUUGAUCUCCACCAGCG		[2586-2604]
112	CUUCAAGAAGCUAGCAGAA	UUCUGCUAGCUUCUUGAAG		[2890-2908]
113	GCAAGGGUUUGCAGGAGUA	UACUCCUGCAAACCCUUGC		[4086-4104]
114	CAGAGAUAUGCAUACAGCA	UGCUGUAUGCAUAUCUCUG		[2205-2223]
115	AGGCAGAGAUGAAAGAUAU	AUAUCUUUCAUCUCUGCCU		[1374-1392]
116	AGAAUUUGCUGCAUUUAGA	UCUAAAUGCAGCAAAUUCU		[5729-5747]

117	CCAACUCUGUGCAGGAAGA	UCUUCCUGCACAGAGUUGG		[3192-3210]
118	UGGAAGAGGUGAACAAAGA	UCUUUGUUCACCUCUUCCA		[1842-1860]
119	CCACCGAGUCCUUCAUUAA	UUAAUGAAGGACUCGGUGG		[2661-2679]
120	CUGUCAACCAGAUGGUGAA	UUCACCAUCUGGUUGACAG		[3867-3885]
121	CCAAGGCAGAGAUGAAAGA	UCUUUCAUCUCUGCCUUGG		[1371-1389]
122	GUCUUGCUAUACAGAAAAA	UUUUUCUGUAUAGCAAGAC		[6585-6603]
123	CUUUAGGUGUCAUCAGUAA	UUACUGAUGACACCUAAAG		[3915-3933]
124	CACGGGAUGUUCAACUACA	UGUAGUUGAACAUCCCGUG		[2006-2024]
125	CCAAGUUUGAGUGGUUCAA	UUGAACCACUCAAACUUGG		[2346-2364]
126	CCCUUUGUAUACUUUUUUA	UAAAAAAGUAUACAAAGGG		[6444-6462]
127	GGGCAUAUCUUGUUGUUCA	UGAACAACAAGAUAUGCCC		[6630-6648]
128	GCAACAGCGGCAAUUUGAU	AUCAAAUUGCCGCUGUUGC		[4480-4498]
129	GCAUGAAACCACUGGAACA	UGUUCCAGUGGUUUCAUGC		[5271-5289]
130	CCACAAAAAGCGAGUCUCA	UGAGACUCGCUUUUUGUGG		[3661-3679]
131	AGAUCUGAUCCGCAUCUAA	UUAGAUGCGGAUCAGAUCU		[280-298]
132	CCAAGGUGAUGUCCAUGGA	UCCAUGGACAUCACCUUGG		[3048-3066]
133	AAGUUUUAAACCUGUUAAA	UUUAACAGGUUUAAAACUU		[6284-6302]
134	GCCGGCAAUCCAAGAUAGA	UCUAUCUUGGAUUGCCGGC		[4548-4566]
135	GGAAGCUGGUUAAAGUGGA	UCCACUUUAACCAGCUUCC		[6149-6167]
136	GUGACAUGAACCCAUCCAA	UUGGAUGGGUUCAUGUCAC		[5776-5794]
137	CCAUUAAAGACAAAUUGAU	AUCAAUUUGUCUUUAAUGG		[7095-7113]
138	CUCGGAAGCUAGUUACCAU	AUGGUAACUAGCUUCCGAG		[669-687]
139	GAGAUGAUGUCAACAUUGA	UCAAUGUUGACAUCAUCUC		[3534-3552]
140	GAAGCUGGUUAAAGUGGAU	AUCCACUUUAACCAGCUUC		[6150-6168]
141	GCUGCAUUUAGAUUUUGAU	AUCAAAAUCUAAAUGCAGC		[5736-5754]
142	GUACCUGAAACAUUUGGAA	UUCCAAAUGUUUCAGGUAC		[5614-5632]
143	CUCUGACUCCCAAAAAUCA	UGAUUUUUGGGAGUCAGAG		[3253-3271]
144	AGACAUGUACCCUGAUGAA	UUCAUCAGGGUACAUGUCU		[4243-4261]
145	CUGGAAACAAUAUCAAGUA	UACUUGAUAUUGUUUCCAG		[6061-6079]
146	CAUCCUUCUCAGCAUGCAA	UUGCAUGCUGAGAAGGAUG		[1709-1727]
147	GGCAGUUCCCAGAAAGAGA	UCUCUUUCUGGGAACUGCC		[6483-6501]
148	CAAUACUAUUCAUCAAUUA	UAAUUGAUGAAUAGUAUUG		[1790-1808]
149	GUCAUACGAACCUAAAGAA	UUCUUUAGGUUCGUAUGAC		[6010-6028]
150	CCUUCAUUGAAGAGAGCAA	UUGCUCUCUUCAAUGAAGG	Ms	[4941-4959]
151	UGAAUGGAUUAAAUGUUAA	UUAACAUUUAAUCCAUUCA		[6031-6049]
152	UGAAGGAGCGGGUCAGUAA	UUACUGACCCGCUCCUUCA		[780-798]
153	GAAUCCAGGUGGACAGAGA	UCUCUGUCCACCUGGAUUC	Rat,Ms	[1395-1413]
154	GGUGAUGUCCAUGGAAGAA	UUCUUCCAUGGACAUCACC		[3052-3070]
155	CGAAGAAAGCAACCAGAGU	ACUCUGGUUGCUUUCUUCG		[1248-1266]
156	AAGGAGGGACAUUAAGAAA	UUUCUUAAUGUCCCUCCUU		[102-120]
157	ACCAGAUGGUGAAAGUGGA	UCCACUUUCACCAUCUGGU		[3873-3891]
158	GAGGAGUGGGAAAUUGAUU	AAUCAAUUUCCCACUCCUC		[5676-5694]
159	CCGAGUCUUCAAUGACCUA	UAGGUCAUUGAAGACUCGG		[1462-1480]
160	GUCCAUUGCCUUCAUUGAA	UUCAAUGAAGGCAAUGGAC		[4933-4951]
161	GGUCCAAGCUGCAGGUAUU	AAUACCUGCAGCUUGGACC		[1962-1980]
162	UGGGAUUUCUGGUGAAGGA	UCCUUCACCAGAAAUCCCA		[768-786]
163	UAAGAGGCAACCUGUUGAA	UUCAACAGGUUGCCUCUUA		[6392-6410]
164	GCGCUGGUGGAGAUCAAUA	UAUUGAUCUCCACCAGCGC		[2585-2603]
165	CUCCUUUCCUGCAAACCCA	UGGGUUUGCAGGAAAGGAG		[6969-6987]
166	GGUGUCUGCUAAAGAGGAA	UUCCUCUUUAGCAGACACC		[6654-6672]
167	CCUGUUAAAUUAAUUUUGA	UCAAAAUUAAUUUAACAGG		[6294-6312]
168	GCCGGCUGCAAGUUUUGUA	UACAAAACUUGCAGCCGGC		[5008-5026]
169	AGAGGAUCCUGAAGAUGAG	CUCAUCUUCAGGAUCCUCU		[3426-3444]
170	AGGAGUACGAGGAAUGGAA	UUCCAUUCCUCGUACUCCU		[4098-4116]
171	CAAUAUCAAGUAACAAUAU	AUAUUGUUACUUGAUAUUG		[6068-6086]
172	CUAGUAGCUUUCCUCCCAA	UUGGGAGGAAAGCUACUAG		[6998-7016]

173	GGCAACAGCGGCAAUUUGA	UCAAAUUGCCGCUGUUGCC		[4479-4497]
174	AAGAGUUUAUUGAUCAAUA	UAUUGAUCAAUAAACUCUU		[1776-1794]
175	UGAUCUCCAAAGUUUUAAA	UUUAAAACUUUGGAGAUCA		[6275-6293]
176	AGAACGACCGAGUCUUCAA	UUGAAGACUCGGUCGUUCU		[1455-1473]
177	AUACGAACCUAAAGAAUAU	AUAUUCUUUAGGUUCGUAU		[6013-6031]
178	CAUACGAACCUAAAGAAUA	UAUUCUUUAGGUUCGUAUG		[6012-6030]
179	AGAAUAUGAAUGGAUUAAA	UUUAAUCCAUUCAUAUUCU		[6025-6043]
180	CAGUUUGGGUGUCUGCUAA	UUAGCAGACACCCAAACUG		[6647-6665]
181	CUUCAAACACGCCUUUGAU	AUCAAAGGCGUGUUUGAAG		[3028-3046]
182	UGUCCAACAUGCUCCUAGA	UCUAGGAGCAUGUUGGACA		[2400-2418]
183	CAUACAGCAGGGCUGGAAA	UUUCCAGCCCUGCUGUAUG		[2215-2233]
184	UGAGGUUUUCAGCUCCUAA	UUAGGAGCUGAAAACCUCA	Rat,Ms	[4972-4990]
185	CCUAAAUCCAGUCGGUCAA	UUGACCGACUGGAUUUAGG		[3716-3734]
186	CCCAUUAAAGACAAAUUGA	UCAAUUUGUCUUUAAUGGG		[7094-7112]
187	CUGCAUUUAGAUUUUGAUA	UAUCAAAAUCUAAAUGCAG		[5737-5755]
188	CAGGAAGAGGCUUUCAGGA	UCCUGAAAGCCUCUUCCUG	Ms	[3467-3485]
189	AAACAAUAUCAAGUAACAA	UUGUUACUUGAUAUUGUUU		[6065-6083]
190	UGCCUGUCGUCCUCAACAA	UUGUUGAGGACGACAGGCA		[1497-1515]
191	CUGCGAACGUACGAAGUGA	UCACUUCGUACGUUCGCAG		[4895-4913]
192	CGAAGCUCCAGAACUCACA	UGUGAGUUCUGGAGCUUCG		[3625-3643]
193	AAGUGAAAAGGCAAUCUAU	AUAGAUUGCCUUUUCACUU		[6748-6766]
194	AGAACAAUGAACUGCUCAA	UUGAGCAGUUCAUUGUUCU		[1287-1305]
195	CCAAGAUAGAUCAUAUCUA	UAGAUAUGAUCUAUCUUGG	Rat,Ms	[4557-4575]
196	GAAUGUUCUGCUGGUUCUA	UAGAACCAGCAGAACAUUC		[6553-6571]
197	AGGUGAACAAAGAGAUCGA	UCGAUCUCUUUGUUCACCU		[1848-1866]
198	AGGAGUGGGAAAUUGAUUA	UAAUCAAUUUCCCACUCCU		[5677-5695]
199	CCCUAAGAGGCAACCUGUU	AACAGGUUGCCUCUUAGGG		[6389-6407]
200	CGGCUCAGUCCCUACAUAU	AUAUGUAGGGACUGAGCCG		[153-171]
201	ACAUCAUUCUUGCGGUCAA	UUGACCGCAAGAAUGAUGU		[870-888]
202	GGCAAUGAAGAUACCCAGA	UCUGGGUAUCUUCAUUGCC		[305-323]
203	CCUUUGUAUACUUUUUUAA	UUAAAAAAGUAUACAAAGG		[6445-6463]
204	CAGAGACAGGCAAAUCGCA	UGCGAUUUGCCUGUCUCUG		[2982-3000]
205	AUCGCAGCUGGAAGAGAAA	UUUCUCUUCCAGCUGCGAU		[3582-3600]
206	GCUUCAAGAAGCUAGCAGA	UCUGCUAGCUUCUUGAAGC		[2889-2907]
207	CAAGUAACAAUAUGAUUAU	AUAAUCAUAUUGUUACUUG		[6074-6092]
208	CUGUGCAGGAAGAAAGGAA	UUCCUUUCUUCCUGCACAG		[3198-3216]
209	CCAUUGCCUUCAUUGAAGA	UCUUCAAUGAAGGCAAUGG		[4935-4953]
210	AGAGAUGAAAGAUAUGGGA	UCCCAUAUCUUUCAUCUCU		[1378-1396]
211	CAACCAUCACUUCCUUAGA	UCUAAGGAAGUGAUGGUUG		[438-456]
212	CUGUUAAAGUGAAAAGGCA	UGCCUUUUCACUUUAACAG		[6742-6760]
213	GGAUAAAGGAGGGACAUUA	UAAUGUCCCUCCUUUAUCC		[97-115]
214	GAGCAAAAAAGACACCGAU	AUCGGUGUCUUUUUUGCUC		[4954-4972]
215	CUAUCCAAUGUCCACAAAA	UUUUGUGGACAUUGGAUAG		[3650-3668]
216	GGAAGAAUAUGACAUUGUG	CACAAUGUCAUAUUCUUCC		[3064-3082]
217	GAAGAAAGGAAGAGCUACA	UGUAGCUCUUCCUUUCUUC		[3206-3224]
218	CUAGCACUUACCAGCUCAA	UUGAGCUGGUAAGUGCUAG		[1872-1890]
219	AGUCAUAAUGUCAUACGAA	UUCGUAUGACAUUAUGACU		[6001-6019]
220	GCUGGAAGAGAAACAAGUU	AACUUGUUUCUCUUCCAGC		[3588-3606]
221	GGUGCAUGAAACCACUGGA	UCCAGUGGUUUCAUGCACC		[5268-5286]
222	AAUGUCAUACGAACCUAAA	UUUAGGUUCGUAUGACAUU		[6007-6025]
223	CAUCCAAUGGAUUGUGCAA	UUGCACAAUCCAUUGGAUG		[5788-5806]
224	UGGAAGUUAUGUUGUUCAA	UUGAACAACAUAACUUCCA		[5903-5921]
225	CAACUUUGAGAGUGCUGGA	UCCAGCACUCUCAAAGUUG		[3298-3316]
226	GAGAAGGACCAAUUCACCA	UGGUGAAUUGGUCCUUCUC		[4305-4323]
227	GUGAAAAGGCAAUCUAUGA	UCAUAGAUUGCCUUUUCAC		[6750-6768]
228	GUUUAUUGAUCAAUACUAU	AUAGUAUUGAUCAAUAAAC		[1780-1798]

229	UGAAGAUACCCAGAGAAUA	UAUUCUCUGGGUAUCUUCA		[310-328]
230	UGCCUGGAAACAAUAUCAA	UUGAUAUUGUUUCCAGGCA		[6058-6076]
231	GACAACUCCCGCUACAAUA	UAUUGUAGCGGGAGUUGUC		[2498-2516]
232	GAUGCAAUGCUUUUCUAAU	AUUAGAAAAGCAUUGCAUC		[5187-5205]
233	CCCAAGGAUGGAAAGGGAA	UUCCCUUUCCAUCCUUGGG		[6537-6555]
234	UGGAGGAGUUCCCAUCUAU	AUAGAUGGGAACUCCUCCA		[4149-4167]
235	GCCUGGAAACAAUAUCAAG	CUUGAUAUUGUUUCCAGGC		[6059-6077]
236	GUGCAUGAAACCACUGGAA	UUCCAGUGGUUUCAUGCAC		[5269-5287]
237	GGAAGAGGUGAACAAAGAG	CUCUUUGUUCACCUCUUCC		[1843-1861]
238	CGUCCUCAACAACCCAUAU	AUAUGGGUUGUUGAGGACG		[1504-1522]
239	CACGCCCAUGUACCUGAAA	UUUCAGGUACAUGGGCGUG		[5605-5623]
240	GAAUAGUUCACAUCUAUCA	UGAUAGAUGUGAACUAUUC		[324-342]
241	GAUGAGGGAUGACAACCGA	UCGGUUGUCAUCCCUCAUC		[4849-4867]
242	CCGGCAAUCCAAGAUAGAU	AUCUAUCUUGGAUUGCCGG		[4549-4567]
243	GCUUCCUCAAGGUCAAGAA	UUCUUGACCUUGAGGAAGC		[1596-1614]
244	GAAGGGAUCCCUUUGUAUA	UAUACAAAGGGAUCCCUUC		[6436-6454]
245	CAACAGCGGCAAUUUGAUA	UAUCAAAUUGCCGCUGUUG		[4481-4499]
246	GGAAUUGGAGCCGGUGUAA	UUACACCGGCUCCAAUUCC		[6365-6383]
247	CAUGGAAGAAUAUGACAUU	AAUGUCAUAUUCUUCCAUG		[3061-3079]
248	GGCUCCUUAGCCGUCAAAA	UUUUGACGGCUAAGGAGCC		[3687-3705]
249	UAGCUUCCAGAGUGACAAA	UUUGUCACUCUGGAAGCUA		[2617-2635]
250	GUGUGGGAGAUGAUGUCAA	UUGACAUCAUCUCCCACAC		[3528-3546]
251	GAGCACAUUGGAAACGGGA	UCCCGUUUCCAAUGUGCUC		[1657-1675]
252	CCAAAGGCUUUCUUUCCAA	UUGGAAAGAAAGCCUUUGG		[7013-7031]
253	GAGAUGAAAGAUAUGGGAA	UUCCCAUAUCUUUCAUCUC		[1379-1397]
254	CAUGAUGCCUCAGAUCUGA	UCAGAUCUGAGGCAUCAUG		[269-287]
255	UGAACUUAGACAUGAGGAA	UUCCUCAUGUCUAAGUUCA		[2541-2559]
256	GAAUUUGCUGCAUUUAGAU	AUCUAAAUGCAGCAAAUUC		[5730-5748]
257	AAACCACAUUUCUUUUAUA	UAUAAAAGAAAUGUGGUUU		[6601-6619]
258	CUGGAGGAGUUCCCAUCUA	UAGAUGGGAACUCCUCCAG		[4148-4166]
259	GAACGACCGAGUCUUCAAU	AUUGAAGACUCGGUCGUUC		[1456-1474]
260	ACGACUUCCGAGUCUGGAA	UUCCAGACUCGGAAGUCGU		[2109-2127]
261	CAGUUUGCCUCCCUAGCUA	UAGCUAGGGAGGCAAACUG		[4031-4049]
262	UGGUGGACCUGAGCUAUGA	UCAUAGCUCAGGUCCACCA		[900-918]
263	CAGUUUUUCCUAGUCAUAA	UUAUGACUAGGAAAAACUG		[5990-6008]
264	GUUGGACGUCACUGCUAAU	AUUAGCAGUGACGUCCAAC		[61-79]
265	GGGAGAGGAGUGGGAAAUU	AAUUUCCCACUCCUCUCCC		[5672-5690]
266	AGAAGUACGUGCAGGACAU	AUGUCCUGCACGUACUUCU		[4659-4677]
267	CUAUCAUGCGUCACUUCUA	UAGAAGUGACGCAUGAUAG		[337-355]
268	UCACUUCCUUAGAGAAUAA	UUAUUCUCUAAGGAAGUGA		[444-462]
269	CUCCAGCAAUAGCAUCCAA	UUGGAUGCUAUUGCUGGAG		[5878-5896]
270	GGGAAGAACUUGUCCCUCA	UGAGGGACAAGUUCUUCCC		[6236-6254]
271	CCCACGGGAUGUUCAACUA	UAGUUGAACAUCCCGUGGG		[2004-2022]
272	AAUGAAGAUACCCAGAGAA	UUCUCUGGGUAUCUUCAUU		[308-326]
273	GGCAAUCCAAGAUAGAUCA	UGAUCUAUCUUGGAUUGCC		[4551-4569]
274	CUAAGAGGCAACCUGUUGA	UCAACAGGUUGCCUCUUAG		[6391-6409]
275	UGUUCAACUACAUCUGUAA	UUACAGAUGUAGUUGAACA	Rat,Ms	[2013-2031]
276	ACAAUAUCAAGUAACAAUA	UAUUGUUACUUGAUAUUGU		[6067-6085]
277	GGGUGUCUGCUAAAGAGGA	UCCUCUUUAGCAGACACCC		[6653-6671]
278	GAAGAGGUGAACAAAGAGA	UCUCUUUGUUCACCUCUUC		[1844-1862]
279	AAAGAAUAUGAAUGGAUUA	UAAUCCAUUCAUAUUCUUU		[6023-6041]
280	UAGUAGCUUUCCUCCCAAA	UUUGGGAGGAAAGCUACUA		[6999-7017]
281	CUCCUACUCUGACUCCCAA	UUGGGAGUCAGAGUAGGAG		[3247-3265]
282	CUGAAGACGUCCGCACAAA	UUUGUGCGGACGUCUUCAG		[1734-1752]
283	AAGGCAGAGAUGAAAGAUA	UAUCUUUCAUCUCUGCCUU		[1373-1391]
284	CGCCUUAGAUCUGAGUCCA	UGGACUCAGAUCUAAGGCG	Rat,Ms	[4919-4937]

285	GUGCAGGAAGAAAGGAAGA	UCUUCCUUUCUUCCUGCAC		[3200-3218]
286	GGAAGGGAUCCCUUUGUAU	AUACAAAGGGAUCCCUUCC		[6435-6453]
287	GCUGUGCUUUGAUGGAAAU	AUUUCCAUCAAAGCACAGC		[3165-3183]
288	GCUACAAUAUCCUGGAGGA	UCCUCCAGGAUAUUGUAGC		[2508-2526]
289	CAAGCUGCAGGUAUUCGAU	AUCGAAUACCUGCAGCUUG		[1966-1984]
290	AGCCCUCAUGUGACAUGAA	UUCAUGUCACAUGAGGGCU		[5767-5785]
291	AGACGUCCGCACAAAAGGA	UCCUUUUGUGCGGACGUCU		[1738-1756]
292	CAACCGAUACCAUGAGGAU	AUCCUCAUGGUAUCGGUUG		[4861-4879]
293	GUGCACCUGGAACAUGAAA	UUUCAUGUUCCAGGUGCAC		[3080-3098]
294	CCUUUUUUAUGAUGACAUU	AAUGUCAUCAUAAAAAAGG		[5398-5416]
295	GAGAGGAUCCUGAAGAUGA	UCAUCUUCAGGAUCCUCUC		[3425-3443]
296	UAAUGUCAUACGAACCUAA	UUAGGUUCGUAUGACAUUA		[6006-6024]
297	AGUGACCAACCGCCUUAGA	UCUAAGGCGGUUGGUCACU	Rat,Ms	[4909-4927]
298	AGUUUUUCCUAGUCAUAAU	AUUAUGACUAGGAAAAACU		[5991-6009]
299	GAAAGAUAUGGGAAUCCAG	CUGGAUUCCCAUAUCUUUC		[1384-1402]
300	CAAAGAAGUACGUGCAGGA	UCCUGCACGUACUUCUUUG		[4656-4674]
301	CAACUCUGUGCAGGAAGAA	UUCUUCCUGCACAGAGUUG		[3193-3211]
302	AGAUGAAAGAUAUGGGAAU	AUUCCCAUAUCUUUCAUCU		[1380-1398]
303	CCAAGUCUUCGGUAGGAAU	AUUCCUACCGAAGACUUGG		[6351-6369]
304	CUUUGGUGCCUGGAAACAA	UUGUUUCCAGGCACCAAAG		[6052-6070]
305	GGCUCAGUCCCUACAUAUU	AAUAUGUAGGGACUGAGCC		[154-172]
306	CUGUAACCAUGUCAAGUAU	AUACUUGACAUGGUUACAG	Rat	[2026-2044]
307	GGUACAUGGGCACAGAGAU	AUCUCUGUGCCCAUGUACC	Rat	[2460-2478]
308	GCAUUGUGAGGUCUUCAGA	UCUGAAGACCUCACAAUGC		[642-660]
309	CUCAGUCCCUACAUAUUUA	UAAAUAUGUAGGGACUGAG		[156-174]
310	ACGGCUCAGUCCCUACAUA	UAUGUAGGGACUGAGCCGU		[152-170]
311	UGUCUUGCUAUACAGAAAA	UUUUCUGUAUAGCAAGACA		[6584-6602]
312	GUGCUUUGAUGGAAAUGAG	CUCAUUUCCAUCAAAGCAC		[3168-3186]
313	CCUCCUCCAGCAAUAGCAU	AUGCUAUUGCUGGAGGAGG		[5874-5892]
314	CCUUCAUUAAGCACAUGGA	UCCAUGUGCUUAAUGAAGG		[2670-2688]
315	CGAGCAUACCCUCACUUUU	AAAAGUGAGGGUAUGCUCG		[3359-3377]
316	CUGAGUCCAUUGCCUUCAU	AUGAAGGCAAUGGACUCAG		[4929-4947]
317	CGCAGCUGGAAGAGAAACA	UGUUUCUCUUCCAGCUGCG		[3584-3602]
318	CGAACGUACGAAGUGACCA	UGGUCACUUCGUACGUUCG		[4898-4916]
319	GGCUUUAGGUGUCAUCAGU	ACUGAUGACACCUAAAGCC		[3913-3931]
320	ACAAAUAAGUUACCCUCAA	UUGAGGGUAACUUAUUUGU		[6312-6330]
321	CAUGCAUCCUUCUCAGCAU	AUGCUGAGAAGGAUGCAUG		[1705-1723]
322	CCUAAAGAAUAUGAAUGGA	UCCAUUCAUAUUCUUUAGG		[6020-6038]
323	UAGUCAUAAUGUCAUACGA	UCGUAUGACAUUAUGACUA		[6000-6018]
324	GCUUUAGGUGUCAUCAGUA	UACUGAUGACACCUAAAGC		[3914-3932]
325	GUGCCUGGAAACAAUAUCA	UGAUAUUGUUUCCAGGCAC		[6057-6075]
326	GACAGACACUGCUGAACCU	AGGUUCAGCAGUGUCUGUC		[5033-5051]
327	UGUCCAUGGAAGAAUAUGA	UCAUAUUCUUCCAUGGACA		[3057-3075]
328	AGUCCAUUGCCUUCAUUGA	UCAAUGAAGGCAAUGGACU		[4932-4950]
329	AGCCCAUUCUAAACUCCUU	AAGGAGUUUAGAAUGGGCU		[6956-6974]
330	UGGUGAAAGUGGAACUGCU	AGCAGUUCCACUUUCACCA		[3879-3897]
331	GUGACAAAGUGACCAUUGU	ACAAUGGUCACUUUGUCAC		[2628-2646]
332	AAAGCUUUGGUGCCUGGAA	UUCCAGGCACCAAAGCUUU		[6048-6066]
333	ACGGGUGCAUGAAACCACU	AGUGGUUUCAUGCACCCGU		[5265-5283]
334	AGGAGUUCCCAUCUAUCCA	UGGAUAGAUGGGAACUCCU		[4152-4170]
335	UGUUGAAUUUACUCUCUCA	UGAGAGAGUAAAUUCAACA		[6404-6422]
336	CGGCUUUAGGUGUCAUCAG	CUGAUGACACCUAAAGCCG		[3912-3930]
337	GAUGUCCAUGGAAGAAUAU	AUAUUCUUCCAUGGACAUC		[3055-3073]
338	GUGACAACUCCCGCUACAA	UUGUAGCGGGAGUUGUCAC		[2496-2514]
339	GAAACGGGAUGCACUGAGU	ACUCAGUGCAUCCCGUUUC		[1667-1685]
340	GAGACUGUUAAAGUGAAAA	UUUUCACUUUAACAGUCUC		[6738-6756]

341	AGGGUUUGCAGGAGUACGA	UCGUACUCCUGCAAACCCU		[4089-4107]
342	UGUUAAAGUGAAAAGGCAA	UUGCCUUUUCACUUUAACA		[6743-6761]
343	UGACCAUUGUUGACCAUCA	UGAUGGUCAACAAUGGUCA		[2637-2655]
344	AAGUUAUGUUGUUCAAAGA	UCUUUGAACAACAUAACUU		[5906-5924]
345	AAUAAUGGAAGCUGGUUAA	UUAACCAGCUUCCAUUAUU		[6143-6161]
346	GACCAUUGUUGACCAUCAC	GUGAUGGUCAACAAUGGUC		[2638-2656]
347	GUGUAAUUCCUCCCUAAGA	UCUUAGGGAGGAAUUACAC		[6378-6396]
348	CAAAGAGAUCGACACCACU	AGUGGUGUCGAUCUCUUUG		[1855-1873]
349	AGCACAUGGAGAAUGAGUA	UACUCAUUCUCCAUGUGCU		[2679-2697]
350	GAAGAGAGCAAAAAAGACA	UGUCUUUUUUGCUCUCUUC	Ms	[4949-4967]
351	UACUCUGACUCCCAAAAAU	AUUUUUGGGAGUCAGAGUA		[3251-3269]
352	CACCCAUACCAGCUAGAAU	AUUCUAGCUGGUAUGGGUG		[5823-5841]
353	AUGACAUUGUGCACCUGGA	UCCAGGUGCACAAUGUCAU		[3072-3090]
354	ACCAGGAGAUGCUCAACUA	UAGUUGAGCAUCUCCUGGU	Rat,Ms	[2775-2793]
355	GCAACCUGUUGAAUUUACU	AGUAAAUUCAACAGGUUGC		[6398-6416]
356	AGAUCAUAUCUACAGGGAA	UUCCCUGUAGAUAUGAUCU		[4564-4582]
357	GCACCUGGAACAUGAAACU	AGUUUCAUGUUCCAGGUGC		[3082-3100]
358	GCUGUCUCCCAAUGAAAGA	UCUUUCAUUGGGAGACAGC		[5701-5719]
359	GGAAGUUAUGUUGUUCAAA	UUUGAACAACAUAACUUCC		[5904-5922]
360	UUUGGUGCCUGGAAACAAU	AUUGUUUCCAGGCACCAAA		[6053-6071]
361	ACCAAUUCACCACGGCGUA	UACGCCGUGGUGAAUUGGU		[4312-4330]
362	GAGUUCCCAUCUAUCCAGA	UCUGGAUAGAUGGGAACUC		[4154-4172]
363	GAAAGAGGCAUUCCCAGAA	UUCUGGGAAUGCCUCUUUC		[5714-5732]
364	AAUCCAAGAUAGAUCAUAU	AUAUGAUCUAUCUUGGAUU	Rat,Ms	[4554-4572]
365	AGCUGACGUCAAAGACAGA	UCUGUCUUUGACGUCAGCU		[527-545]
366	GCAAAAAAGACACCGAUGA	UCAUCGGUGUCUUUUUUGC		[4956-4974]
367	GGUUAAAGUGGAUGAGGUU	AACCUCAUCCACUUUAACC		[6156-6174]
368	CCAUAAUUGUUCUAGUUAG	CUAACUAGAACAAUUAUGG		[5636-5654]
369	GUGACCAACCGCCUUAGAU	AUCUAAGGCGGUUGGUCAC	Rat,Ms	[4910-4928]
370	ACAUGGAAAGGCUGGAAGA	UCUUCCAGCCUUUCCAUGU		[1830-1848]
371	GUGGGAAAUUGAUUAAAGG	CCUUUAAUCAAUUUCCCAC		[5681-5699]
372	AGUGGGAAAUUGAUUAAAG	CUUUAAUCAAUUUCCCACU		[5680-5698]
373	ACAAUUCCCUCAUCAGCAA	UUGCUGAUGAGGGAAUUGU		[3561-3579]
374	ACAGAGAUUUGGACGGCAA	UUGCCGUCCAAAUCUCUGU		[1407-1425]
375	CCACUGCUUUCAUUGAAGA	UCUUCAAUGAAAGCAGUGG		[5522-5540]
376	AGGUGGACAGAGAUUUGGA	UCCAAAUCUCUGUCCACCU		[1401-1419]
377	CCGAUACCAUGAGGAUAUU	AAUAUCCUCAUGGUAUCGG		[4864-4882]
378	CCUGGAAACAAUAUCAAGU	ACUUGAUAUUGUUUCCAGG		[6060-6078]
379	AGGAAGAAAGGAAGAGCUA	UAGCUCUUCCUUUCUUCCU		[3204-3222]
380	GGAAGAACUUGUCCCUCAG	CUGAGGGACAAGUUCUUCC		[6237-6255]
381	CAGUGAUGAUAGGAUAAAG	CUUUAUCCUAUCAUCACUG		[86-104]
382	AAGUGGAACUGCUGGAGGA	UCCUCCAGCAGUUCCACUU		[3885-3903]
383	UGACAUGAACCCAUCCAAU	AUUGGAUGGGUUCAUGUCA		[5777-5795]
384	CCUGAUGAAGUGCACCUCA	UGAGGUGCACUUCAUCAGG		[4253-4271]
385	UAAUUGUUCUAGUUAGAAA	UUUCUAACUAGAACAAUUA		[5639-5657]
386	CUUCAUUGAAGAGAGCAAA	UUUGCUCUCUUCAAUGAAG	Ms	[4942-4960]
387	AAAGAGACAAGAAAUCCUA	UAGGAUUUCUUGUCUCUUU		[6495-6513]
388	AUGAAUGGAUUAAAUGUUA	UAACAUUUAAUCCAUUCAU		[6030-6048]
389	GCACAAAAGGACAGCUCUU	AAGAGCUGUCCUUUUGUGC		[1746-1764]
390	GAAGUGACCAACCGCCUUA	UAAGGCGGUUGGUCACUUC	Rat,Ms	[4907-4925]
391	AAUCCUUUAUAGCUUUGGA	UCCAAAGCUAUAAAGGAUU		[7030-7048]
392	CUUCUAAUCCUGAAGGGAA	UUCCCUUCAGGAUUAGAAG		[6938-6956]
393	CCCAGAAUUUGCUGCAUUU	AAAUGCAGCAAAUUCUGGG		[5726-5744]
394	CCCAGGGAAGGAAACUGUU	AACAGUUUCCUUCCCUGGG		[7065-7083]
395	GUUGAUCUCCAAAGUUUUA	UAAAACUUUGGAGAUCAAC		[6273-6291]
396	UCCCAGAAAGAGACAAGAA	UUCUUGUCUCUUUCUGGGA		[6489-6507]

397	CUACUCUGACUCCCAAAAA	UUUUUGGGAGUCAGAGUAG		[3250-3268]
398	CCUCAACAACCCAUAUUCA	UGAAUAUGGGUUGUUGAGG		[1507-1525]
399	CAAUGUCAUUUCUGUUCGU	ACGAACAGAAAUGACAUUG		[724-742]
400	GGAGGAGUUCCCAUCUAUC	GAUAGAUGGGAACUCCUCC		[4150-4168]
401	AGUCCUUCAUUAAGCACAU	AUGUGCUUAAUGAAGGACU		[2667-2685]
402	GCCUUAGAUCUGAGUCCAU	AUGGACUCAGAUCUAAGGC	Rat,Ms	[4920-4938]
403	GGCAUAUCUUGUUGUUCAG	CUGAACAACAAGAUAUGCC		[6631-6649]
404	CAAAGUUUUAAACCUGUUA	UAACAGGUUUAAAACUUUG		[6282-6300]
405	CUGCCUUCCUUUAAUCCCA	UGGGAUUAAAGGAAGGCAG		[6857-6875]
406	CGACCUCAGAGACAACUUU	AAAGUUGUCUCUGAGGUCG	Rat	[3286-3304]
407	CUGAGGUGGUUCUCACUGA	UCAGUGAGAACCACCUCAG		[1623-1641]
408	CCCGCUACAAUAUCCUGGA	UCCAGGAUAUUGUAGCGGG		[2505-2523]
409	GGCAAUUUGAUAUCCAACA	UGUUGGAUAUCAAAUUGCC		[4488-4506]
410	CCCACCUCAGGAAAACAGU	ACUGUUUUCCUGAGGUGGG		[1541-1559]
411	CCAAGCUGCAGGUAUUCGA	UCGAAUACCUGCAGCUUGG		[1965-1983]
412	UGCUCACUCUUCCACAGAU	AUCUGUGGAAGAGUGAGCA		[6884-6902]
413	CCUGGAACAUGAAACUCUG	CAGAGUUUCAUGUUCCAGG		[3085-3103]
414	UCCAAAGCCCACAUGGAAA	UUUCCAUGUGGGCUUUGGA		[1820-1838]
415	GCCCAAUGUCAUUUCUGUU	AACAGAAAUGACAUUGGGC		[721-739]
416	ACAUGUUCGGUGUUCAGCA	UGCUGAACACCGAACAUGU		[696-714]
417	GCUAAUUCGUUUCAGUGAU	AUCACUGAAACGAAUUAGC		[74-92]
418	CAGACACUGCUGAACCUUU	AAAGGUUCAGCAGUGUCUG		[5035-5053]
419	UGAGGGAUGACAACCGAUA	UAUCGGUUGUCAUCCCUCA		[4851-4869]
420	AAGUUACCCUCAACUCAGA	UCUGAGUUGAGGGUAACUU		[6318-6336]
421	UCAUUAAGCACAUGGAGAA	UUCUCCAUGUGCUUAAUGA		[2673-2691]
422	ACAAUGAACUGCUCAAGGA	UCCUUGAGCAGUUCAUUGU		[1290-1308]
423	GAAGAUACCCAGAGAAUAG	CUAUUCUCUGGGUAUCUUC		[311-329]
424	AGAUGAACUUAGACAUGAG	CUCAUGUCUAAGUUCAUCU		[2538-2556]
425	CUGGGUGAGGAGCUACUUA	UAAGUAGCUCCUCACCCAG		[192-210]
426	CGCACAAAAGGACAGCUCU	AGAGCUGUCCUUUUGUGCG		[1745-1763]
427	CCACCCAUACCAGCUAGAA	UUCUAGCUGGUAUGGGUGG		[5822-5840]
428	AACUCUGUGCAGGAAGAAA	UUUCUUCCUGCACAGAGUU		[3194-3212]
429	ACAUCUGUAACCAUGUCAA	UUGACAUGGUUACAGAUGU	Rat	[2022-2040]
430	UCACUCUUCCACAGAUAUA	UAUAUCUGUGGAAGAGUGA		[6887-6905]
431	ACGCAUGUCUGGAAAGGCA	UGCCUUUCCAGACAUGCGU		[2837-2855]
432	AGAGACAGGCAAAUCGCAA	UUGCGAUUUGCCUGUCUCU		[2983-3001]
433	AGUUUGGGUGUCUGCUAAA	UUUAGCAGACACCCAAACU		[6648-6666]
434	UGUGCAGUUCACAGAGAUA	UAUCUCUGUGAACUGCACA		[2194-2212]
435	CAAUAUCGCGGUUCUCUAU	AUAGAGAACCGCGAUAUUG		[2599-2617]
436	GGAUCCUGAAGAUGAGGGA	UCCCUCAUCUUCAGGAUCC		[3429-3447]
437	CUACAAUAUCCUGGAGGAA	UUCCUCCAGGAUAUUGUAG		[2509-2527]
438	AGAUUUGGACGGCAAGUCA	UGACUUGCCGUCCAAAUCU		[1411-1429]
439	CGGCUUCAAGAAGCUAGCA	UGCUAGCUUCUUGAAGCCG		[2887-2905]
440	GCCUGGAAGUUAUGUUGUU	AACAACAUAACUUCCAGGC		[5900-5918]
441	AAACCUCCAGAGCCCUAAA	UUUAGGGCUCUGGAGGUUU		[3703-3721]
442	CCAGAAUUUGCUGCAUUUA	UAAAUGCAGCAAAUUCUGG		[5727-5745]
443	UGCCUUCCUUUAAUCCCAA	UUGGGAUUAAAGGAAGGCA		[6858-6876]
444	CCUAGUAGCUUUCCUCCCA	UGGGAGGAAAGCUACUAGG		[6997-7015]
445	CCAUCGGCUUCAAGAAGCU	AGCUUCUUGAAGCCGAUGG		[2883-2901]
446	UGCUGCAUUUAGAUUUUGA	UCAAAAUCUAAAUGCAGCA		[5735-5753]
447	GGCUGUCUCCCAAUGAAAG	CUUUCAUUGGGAGACAGCC		[5700-5718]
448	AAAUCCAGUCGGUCAACUA	UAGUUGACCGACUGGAUUU		[3719-3737]
449	AACUCACGGGUGCAUGAAA	UUUCAUGCACCCGUGAGUU		[5260-5278]
450	CAGGAGACUGUUAAAGUGA	UCACUUUAACAGUCUCCUG		[6735-6753]
451	CGCUACUAUUCCAUCAGCU	AGCUGAUGGAAUAGUAGCG	Ms	[4217-4235]
452	UCAAGAACUGGGAGACUGA	UCAGUCUCCCAGUUCUUGA		[1608-1626]

453	UGUCAUACGAACCUAAAGA	UCUUUAGGUUCGUAUGACA		[6009-6027]
454	GGCAGAGAUGAAAGAUAUG	CAUAUCUUUCAUCUCUGCC		[1375-1393]
455	GGAUUAAAUGUUAAAGCUU	AAGCUUUAACAUUUAAUCC		[6036-6054]
456	CUCAGUUUUUCCUAGUCAU	AUGACUAGGAAAAACUGAG		[5988-6006]
457	CCGGUGUAAUUCCUCCCUA	UAGGGAGGAAUUACACCGG		[6375-6393]
458	AGAUGGAGAAGGACCAAUU	AAUUGGUCCUUCUCCAUCU		[4300-4318]
459	AGCCCAAUGUCAUUUCUGU	ACAGAAAUGACAUUGGGCU		[720-738]
460	GCUGAGCUGACGUCAAAGA	UCUUUGACGUCAGCUCAGC		[523-541]
461	CAAUAAGGAUCUUCCCACU	AGUGGGAAGAUCCUUAUUG		[5935-5953]
462	AGUUGAUCUCCAAAGUUUU	AAAACUUUGGAGAUCAACU		[6272-6290]
463	CCUUCAAGUACUACCUGGA	UCCAGGUAGUACUUGAAGG	Rat,Ms	[3978-3996]
464	AGUUAUGUUGUUCAAAGAA	UUCUUUGAACAACAUAACU		[5907-5925]
465	UCCUAGUCAUAAUGUCAUA	UAUGACAUUAUGACUAGGA		[5997-6015]
466	UAGCUACCAGCGAGAAGGA	UCCUUCUCGCUGGUAGCUA		[4044-4062]
467	AGCUAGUUACCAUGGAGGA	UCCUCCAUGGUAACUAGCU		[675-693]
468	CCUCAGAUCUGAUCCGCAU	AUGCGGAUCAGAUCUGAGG		[276-294]
469	GCACUUACCAGCUCAAGGA	UCCUUGAGCUGGUAAGUGC		[1875-1893]
470	GUGAUGAUAGGAUAAAGGA	UCCUUUAUCCUAUCAUCAC		[88-106]
471	UCGAGAUGGAGAAGGACCA	UGGUCCUUCUCCAUCUCGA		[4297-4315]
472	AGGCAACCUGUUGAAUUUA	UAAAUUCAACAGGUUGCCU		[6396-6414]
473	AUGAUGUCAACAUUGAAAA	UUUUCAAUGUUGACAUCAU		[3537-3555]
474	CUUAAGAGCACAUUGGAAA	UUUCCAAUGUGCUCUUAAG		[1652-1670]
475	AGAAGAUGAACUUAGACAU	AUGUCUAAGUUCAUCUUCU		[2535-2553]
476	CUUUGAUGGAAAUGAGGCA	UGCCUCAUUUCCAUCAAAG		[3171-3189]
477	GUGGGCAUAUCUUGUUGUU	AACAACAAGAUAUGCCCAC		[6628-6646]
478	UAAACUCCUUUCCUGCAAA	UUUGCAGGAAAGGAGUUUA		[6965-6983]
479	CCACAUGGAAAGGCUGGAA	UUCCAGCCUUUCCAUGUGG		[1828-1846]
480	GGAAUGUUCUGCUGGUUCU	AGAACCAGCAGAACAUUCC		[6552-6570]
481	CCAUGGAAGAAUAUGACAU	AUGUCAUAUUCUUCCAUGG		[3060-3078]
482	UCGUGAAUGCCCUGAUCGA	UCGAUCAGGGCAUUCACGA		[3828-3846]
483	CAUUGUGCACCUGGAACAU	AUGUUCCAGGUGCACAAUG		[3076-3094]
484	GGUCAACCAUCACUUCCUU	AAGGAAGUGAUGGUUGACC		[435-453]
485	CCAAAGAGUUUAUUGAUCA	UGAUCAAUAAACUCUUUGG		[1773-1791]
486	CGACCGAGUCUUCAAUGAC	GUCAUUGAAGACUCGGUCG		[1459-1477]
487	AAGUGACCAUUGUUGACCA	UGGUCAACAAUGGUCACUU		[2634-2652]
488	CAAGAAGGUCUUCAAGGCA	UGCCUUGAAGACCUUCUUG		[3493-3511]
489	ACCUUAAGAGCACAUUGGA	UCCAAUGUGCUCUUAAGGU		[1650-1668]
490	AAAGGCUGGAAGAGGUGAA	UUCACCUCUUCCAGCCUUU		[1836-1854]
491	GAUUAAAUGUUAAAGCUUU	AAAGCUUUAACAUUUAAUC		[6037-6055]
492	GUCUAUCCAAUGUCCACAA	UUGUGGACAUUGGAUAGAC		[3648-3666]
493	GAUGGAAAGGGAAUGUUCU	AGAACAUUCCCUUUCCAUC		[6543-6561]
494	UUGUGCACCUGGAACAUGA	UCAUGUUCCAGGUGCACAA		[3078-3096]
495	GGAGAAGGACCAAUUCACC	GGUGAAUUGGUCCUUCUCC		[4304-4322]
496	AAGUGGAUGAGGUUGGAAA	UUUCCAACCUCAUCCACUU		[6161-6179]
497	UAUAAAGAACAAACACUUA	UAAGUGUUUGUUCUUUAUA		[6902-6920]
498	CUCACUCUUCCACAGAUAU	AUAUCUGUGGAAGAGUGAG		[6886-6904]
499	GCGUAUUCAUCAGCCGGAU	AUCCGGCUGAUGAAUACGC		[4833-4851]
500	GGACGUCACUGCUAAUUCG	CGAAUUAGCAGUGACGUCC		[64-82]

Table B 23 NOS2A - nitric oxide synthase 2A

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-24041028 :265-3726
1	CGGCAUGUGAGGAUCAAAA	UUUUGAUCCUCACAUGCCG		[511-529]
2	CCUCAUUCCUGCUUUAAAA	UUUUAAAGCAGGAAUGAGG		[51-69]
3	GGGUGGAAGCGGUAACAAA	UUUGUUACCGCUUCCACCC		[758-776]
4	CGGUAACAAAGGAGAUAGA	UCUAUCUCCUUUGUUACCG		[767-785]

5	CGCUCUUCAUGCUGAAAGA	UCUUUCAGCAUGAAGAGCG		[2087-2105]
6	CUUCAAAGAGGCAAAAAUA	UAUUUUUGCCUCUUUGAAG	Rat	[723-741]
7	GAAGAGAGAUUCCAUUGAA	UUCAAUGGAAUCUCUCUUC		[1793-1811]
8	GUAACAAAGGAGAUAGAAA	UUUCUAUCUCCUUUGUUAC		[769-787]
9	GAAAGAGCUCAACAACAAA	UUUGUUGUUGAGCUCUUUC		[2100-2118]
10	GGCAUGUGAGGAUCAAAAA	UUUUUGAUCCUCACAUGCC		[512-530]
11	GGGAAAGAAGUCUCCAGAA	UUCUGGAGACUUCUUUCCC		[453-471]
12	AAGAGAGAUUCCAUUGAAA	UUUCAAUGGAAUCUCUCUU		[1794-1812]
13	CCACCAGUAUGCAAUGAAU	AUUCAUUGCAUACUGGUGG		[303-321]
14	GGUCCAUUAUGACUCCCAA	UUGGGAGUCAUAAUGGACC		[614-632]
15	GGGAAAAAGACAUCAACAA	UUGUUGAUGUCUUUUUCCC		[323-341]
16	CCUUCAAAGAGGCAAAAAU	AUUUUUGCCUCUUUGAAGG	Rat	[722-740]
17	GAGAUAGAAACAACAGGAA	UUCCUGUUGUUUCUAUCUC		[778-796]
18	GCCUCAUUCCUGCUUUAAA	UUUAAAGCAGGAAUGAGGC		[50-68]
19	GCCUUUGGACCUCAGCAAA	UUUGCUGAGGUCCAAAGGC		[2412-2430]
20	AGAUGAGCUUCUACCUCAA	UUGAGGUAGAAGCUCAUCU		[672-690]
21	CUUUGUAGCGAGUCGAAAA	UUUUCGACUCGCUACAAAG		[5-23]
22	CAACAACAAUGUGGAGAAA	UUUCUCCACAUUGUUGUUG		[336-354]
23	GUGCGUUACUCCACCAACA	UGUUGGUGGAGUAACGCAC		[955-973]
24	CGCCUUUGCUCAUGACAUU	AAUGUCAUGAGCAAAGGCG		[2169-2187]
25	CAUUGAAAGUCUUGGUCAA	UUGACCAAGACUUUCAAUG		[1805-1823]
26	GGAGAUAGAAACAACAGGA	UCCUGUUGUUUCUAUCUCC		[777-795]
27	CCUGUAUGCUGAUGCGCAA	UUGCGCAUCAGCAUACAGG		[1838-1856]
28	CUUGGAGACAAAAUCUUAA	UUAAGAUUUUGUCUCCAAG		[3954-3972]
29	CAGGUAGAGGCCUGGAAAA	UUUUCCAGGCCUCUACCUG		[1738-1756]
30	GCUCCUUCAAAGAGGCAAA	UUUGCCUCUUUGAAGGAGC	Rat	[719-737]
31	CCAGAAGCGCUAUCACGAA	UUCGUGAUAGCGCUUCUGG		[3621-3639]
32	GCGGGAUGACUUUCCAAGA	UCUUGGAAAGUCAUCCCGC		[539-557]
33	GGUAACAAAGGAGAUAGAA	UUCUAUCUCCUUUGUUACC		[768-786]
34	CUCUGUAUUUAAAAAACUA	UAGUUUUUUAAAUACAGAG		[4096-4114]
35	CUUGGAAAUUUCUGUUCAA	UUGAACAGAAAUUUCCAAG		[275-293]
36	CAGAGUACAGCAAGUGGAA	UUCCACUUGCUGUACUCUG		[2861-2879]
37	GCAAUGGAGAGAAACUGAA	UUCAGUUUCUCUCCAUUGC		[2063-2081]
38	GAAGAACAUCUGAGCUCAA	UUGAGCUCAGAUGUUCUUC		[201-219]
39	CAGAAUCCUUCAUGAAGUA	UACUUCAUGAAGGAUUCUG		[1583-1601]
40	AGACCAAAUUCCACCAGUA	UACUGGUGGAAUUUGGUCU		[293-311]
41	AAAGGAGAUAGAAACAACA	UGUUGUUUCUAUCUCCUUU		[774-792]
42	GGAGAGAAACUGAAGAAAU	AUUUCUUCAGUUUCUCUCC		[2068-2086]
43	CGGGAAAGAAGUCUCCAGA	UCUGGAGACUUCUUUCCCG		[452-470]
44	CACGGCAUGUGAGGAUCAA	UUGAUCCUCACAUGCCGUG		[509-527]
45	CAGCGGGAUGACUUUCCAA	UUGGAAAGUCAUCCCGCUG		[537-555]
46	CCUUGGAGACAAAAUCUUA	UAAGAUUUUGUCUCCAAGG		[3953-3971]
47	CCAGAUAAGUGACAUAAGU	ACUUAUGUCACUUAUCUGG		[222-240]
48	GCUGAGUGCACCACUUCAA	UUGAAGUGGUGCACUCAGC		[4012-4030]
49	GCUGCAGAAUCCUUCAUGA	UCAUGAAGGAUUCUGCAGC		[1579-1597]
50	GGCAAUGGAGAGAAACUGA	UCAGUUUCUCUCCAUUGCC		[2062-2080]
51	GACCCUGAGCUCUUCGAAA	UUUCGAAGAGCUCAGGGUC		[1207-1225]
52	CAGCCUCAUUCCUGCUUUA	UAAAGCAGGAAUGAGGCUG		[48-66]
53	CCAAGAACGUGUUCACCAU	AUGGUGAACACGUUCUUGG	Rat	[2450-2468]
54	AAGCGGAGACCCAAGAGAA	UUCUCUUGGGUCUCCGCUU		[1777-1795]
55	GUUUGAUGUCCGAGGCAAA	UUUGCCUCGGACAUCAAAC		[2313-2331]
56	CAAUAUUACGGCUCCUUCA	UGAAGGAGCCGUAAUAUUG		[709-727]
57	GGAGAUGGAGGAAAGUGAU	AUCACUUUCCUCCAUCUCC		[3810-3828]
58	CACAGAAGAGCCUGAGAGA	UCUCUCAGGCUCUUCUGUG		[2814-2832]
59	UGCGUUACUCCACCAACAA	UUGUUGGUGGAGUAACGCA		[956-974]
60	CAAGCUAUCGAAUUUGUCA	UGACAAAUUCGAUAGCUUG		[688-706]

61	UGAAAGAGCUCAACAACAA	UUGUUGUUGAGCUCUUUCA		[2099-2117]
62	UGUUCAAGACCAAAUUCCA	UGGAAUUUGGUCUUGAACA		[287-305]
63	ACGGCAUGUGAGGAUCAAA	UUUGAUCCUCACAUGCCGU		[510-528]
64	AAAAAGACAUCAACAACAA	UUGUUGUUGAUGUCUUUUU		[326-344]
65	AGCCUUUGGACCUCAGCAA	UUGCUGAGGUCCAAAGGCU		[2411-2429]
66	GAGGCAAACAGCACAUUCA	UGAAUGUGCUGUUUGCCUC		[2324-2342]
67	GCAAGUGGAAGUUCACCAA	UUGGUGAACUUCCACUUGC		[2870-2888]
68	UGCUGAAAGAGCUCAACAA	UUGUUGAGCUCUUUCAGCA		[2096-2114]
69	AAUCGCUCUUCAUGCUGAA	UUCAGCAUGAAGAGCGAUU		[2084-2102]
70	CUUUGCUCAUGACAUUGAU	AUCAAUGUCAUGAGCAAAG		[2172-2190]
71	GUAGCGAGUCGAAAACUGA	UCAGUUUUCGACUCGCUAC		[9-27]
72	GGGAGAUGGAGGAAAGUGA	UCACUUUCCUCCAUCUCCC		[3809-3827]
73	CAGAGACAGGAAAAUCAGA	UCUGAUUUUCCUGUCUCUG		[1898-1916]
74	AAGUGACCUGCUUUGUAAA	UUUACAAAGCAGGUCACUU		[237-255]
75	GGCAAACAGCACAUUCAGA	UCUGAAUGUGCUGUUUGCC		[2326-2344]
76	CGAAUUUGUCAACCAAUAU	AUAUUGGUUGACAAAUUCG		[696-714]
77	ACAGGAACCUACCAACUGA	UCAGUUGGUAGGUUCCUGU		[790-808]
78	CUGCCGGCACAGAACUUAA	UUAAGUUCUGUGCCGGCAG		[3749-3767]
79	CUACAAAGUCCGACAUCCA	UGGAUGUCGGACUUUGUAG		[2491-2509]
80	AAUCCUUCAUGAAGUACAU	AUGUACUUCAUGAAGGAUU		[1586-1604]
81	AGGCUGUCGUUGAGAUCAA	UUGAUCUCAACGACAGCCU		[1502-1520]
82	CUGCAGAAUCCUUCAUGAA	UUCAUGAAGGAUUCUGCAG		[1580-1598]
83	UGUUCACCAUGAGGCUCAA	UUGAGCCUCAUGGUGAACA		[2459-2477]
84	GCUACUGGGUCAGUGACAA	UUGUCACUGACCCAGUAGC		[2696-2714]
85	UGGAGAUAUUUACAUGAAU	AUUCAUGUAAAUAUCUCCA		[4168-4186]
86	GCGCCUUUGCUCAUGACAU	AUGUCAUGAGCAAAGGCGC	Ms	[2168-2186]
87	AGCUGAAAUUGAAUGAGGA	UCCUCAUUCAAUUUCAGCU		[3569-3587]
88	GCGUUACUCCCACCAACAAU	AUUGUUGGUGGAGUAACGC		[957-975]
89	UGAAGUACAUGCAGAAUGA	UCAUUCUGCAUGUACUUCA		[1595-1613]
90	GAGUCAGAGUCACCAUCCU	AGGAUGGUGACUCUGACUC		[1871-1889]
91	GAAGUACAUGCAGAAUGAA	UUCAUUCUGCAUGUACUUC		[1596-1614]
92	GGAGAUAUUUACAUGAAUU	AAUUCAUGUAAAUAUCUCC		[4169-4187]
93	AGGCAAAAAUAGAGGAACA	UGUUCCUCUAUUUUUGCCU	Rat,Ms	[731-749]
94	GGCUCAAAUCUCGGCAGAA	UUCUGCCGAGAUUUGAGCC		[2471-2489]
95	UGCUGAUGCGCAAGACAAU	AUUGUCUUGCGCAUCAGCA		[1844-1862]
96	GGAAAGAAGUCUCCAGAAU	AUUCUGGAGACUUCUUUCC		[454-472]
97	CAGCCUGUGAGACGUUUGA	UCAAACGUCUCACAGGCUG		[2300-2318]
98	ACCUCAGCAAGCAGCAGAA	UUCUGCUGCUUGCUGAGGU		[407-425]
99	AACUUUGUAGCGAGUCGAA	UUCGACUCGCUACAAAGUU		[3-21]
100	UCAUGAAGUACAUGCAGAA	UUCUGCAUGUACUUCAUGA		[1592-1610]
101	GGUACAUGGGCACAGAGAU	AUCUCUGUGCCCAUGUACC		[1379-1397]
102	AGCAGAAUGUGACCAUCAU	AUGAUGGUCACAUUCUGCU	Rat,Ms	[1547-1565]
103	GACCAAAUUCCACCAGUAU	AUACUGGUGGAAUUUGGUC		[294-312]
104	AUGCCUCUGUAUUUAAAAA	UUUUUAAAUACAGAGGCAU		[4092-4110]
105	UAUCGAAUUUGUCAACCAA	UUGGUUGACAAAUUCGAUA		[693-711]
106	UGAGCUCAAAUCCAGAUAA	UUAUCUGGAUUUGAGCUCA		[211-229]
107	UGGAGAGAAACUGAAGAAA	UUUCUUCAGUUUCUCUCCA		[2067-2085]
108	GGUCGAGGACUAUUUCUUU	AAAGAAAUAGUCCUCGACC		[3591-3609]
109	GACAGAGACAGGAAAAUCA	UGAUUUUCCUGUCUCUGUC		[1896-1914]
110	GCUACAACAUCCUGGAGGA	UCCUCCAGGAUGUUGUAGC	Rat,Ms	[1427-1445]
111	UUCGGGAACUGGAGCUAAA	UUUAGCUCCAGUUCCCGAA		[1280-1298]
112	CAAAGGAGAUAGAAACAAC	GUUGUUUCUAUCUCCUUUG		[773-791]
113	CGUUGAGAUCAACAUUGCU	AGCAAUGUUGAUCUCAACG		[1509-1527]
114	GAGAGAUUCCAUUGAAAGU	ACUUUCAAUGGAAUCUCUC		[1796-1814]
115	AGGUUGUCUGCAUGGAUAA	UUAUCCAUGCAGACAACCU		[1967-1985]
116	CUCCUUCAAAGAGGCAAAA	UUUUGCCUCUUUGAAGGAG	Rat	[720-738]

117	ACCAGGAGAUGCUGAACUA	UAGUUCAGCAUCUCCUGGU		[1694-1712]
118	UCGAAUUUGUCAACCAAUA	UAUUGGUUGACAAAUUCGA		[695-713]
119	UCAAAGAGGCAAAAAUAGA	UCUAUUUUUGCCUCUUUGA	Rat	[725-743]
120	AAGAGAAGAGAGAUUCCAU	AUGGAAUCUCUCUUCUCUU		[1789-1807]
121	UGAAGAAAUCGCUCUUCAU	AUGAAGAGCGAUUUCUUCA		[2078-2096]
122	CUGGUCCCUUGGAGACAAA	UUUGUCUCCAAGGGACCAG		[3947-3965]
123	CCCGGGAAAUGUUUGAACA	UGUUCAAACAUUUCCCGGG		[923-941]
124	AGGAGGAGAUGCUGGAGAU	AUCUCCAGCAUCUCCUCCU		[3341-3359]
125	UAAGUGACCUGCUUUGUAA	UUACAAAGCAGGUCACUUA		[236-254]
126	CACAGUGAAGAACAUCUGA	UCAGAUGUUCUUCACUGUG		[195-213]
127	GAAGAGCCUGAGAGACAGA	UCUGUCUCUCAGGCUCUUC		[2818-2836]
128	GUCCAUUAUGACUCCCAAA	UUUGGGAGUCAUAAUGGAC		[615-633]
129	CCAAGCUCUACACCUCCAA	UUGGAGGUGUAGAGCUUGG		[2348-2366]
130	CUCAAAUCCAGAUAAGUGA	UCACUUAUCUGGAUUUGAG		[215-233]
131	GAAGCGGUAACAAAGGAGA	UCUCCUUUGUUACCGCUUC		[763-781]
132	UCGUGGAGACGGGAAAGAA	UUCUUUCCCGUCUCCACGA		[443-461]
133	GAGCUUCUACCUCAAGCUA	UAGCUUGAGGUAGAAGCUC		[676-694]
134	CAAGAGAAGAGAGAUUCCA	UGGAAUCUCUCUUCUCUUG		[1788-1806]
135	CGUGCAAACCUUCAAGGCA	UGCCUUGAAGGUUUGCACG		[2283-2301]
136	AGAGGCAAAAAUAGAGGAA	UUCCUCUAUUUUUGCCUCU	Rat,Ms	[729-747]
137	CAAGGUUGUCUGCAUGGAU	AUCCAUGCAGACAACCUUG		[1965-1983]
138	AGUGGUUUCGGGAACUGGA	UCCAGUUCCCGAAACCACU		[1274-1292]
139	GAAGCGCUAUCACGAAGAU	AUCUUCGUGAUAGCGCUUC		[3624-3642]
140	CAUAGUUUCCAGAAGCAGA	UCUGCUUCUGGAAACUAUG	Ms	[1534-1552]
141	CCUUCAUGAAGUACAUGCA	UGCAUGUACUUCAUGAAGG		[1589-1607]
142	AAGCGGUAACAAAGGAGAU	AUCUCCUUUGUUACCGCUU		[764-782]
143	GAGCUCAAAUCCAGAUAAG	CUUAUCUGGAUUUGAGCUC		[212-230]
144	UCAGGUAGAGGCCUGGAAA	UUUCCAGGCCUCUACCUGA		[1737-1755]
145	UUAUGCCUCUGUAUUUAAA	UUUAAAUACAGAGGCAUAA		[4090-4108]
146	AACAAAGGAGAUAGAAACA	UGUUUCUAUCUCCUUUGUU		[771-789]
147	AGUUAUUUAUGCCUCUGUA	UACAGAGGCAUAAAUAACU		[4084-4102]
148	CUCAUGACAUUGAUCAGAA	UUCUGAUCAAUGUCAUGAG		[2177-2195]
149	AGAGAAGAGAGAUUCCAUU	AAUGGAAUCUCUCUUCUCU		[1790-1808]
150	CUGAAAGAGCUCAACAACA	UGUUGUUGAGCUCUUUCAG		[2098-2116]
151	CAAAGAGGCAAAAAUAGAG	CUCUAUUUUUGCCUCUUUG	Rat	[726-744]
152	AGGAGAUGCUGAACUACGU	ACGUAGUUCAGCAUCUCCU		[1697-1715]
153	AGCCCAAGGUCUAUGUUCA	UGAACAUAGACCUUGGGCU		[3416-3434]
154	GCAGAAUCCUUCAUGAAGU	ACUUCAUGAAGGAUUCUGC		[1582-1600]
155	GGGUCUUCCCUGUAUGAUU	AAUCAUACAGGGAAGACCC		[4143-4161]
156	GGUCCCUUGGAGACAAAAU	AUUUUGUCUCCAAGGGACC		[3949-3967]
157	AGAUAAGUGACAUAAGUGA	UCACUUAUGUCACUUAUCU		[224-242]
158	CGAGGACUAUUUCUUUCAG	CUGAAAGAAAUAGUCCUCG		[3594-3612]
159	GAAAAAGACAUCAACAACA	UGUUGUUGAUGUCUUUUUC		[325-343]
160	CUCCAGAAUCUCUGGUCAA	UUGACCAGAGAUUCUGGAG		[464-482]
161	GAAUCUACAAAGUCCGACA	UGUCGGACUUUGUAGAUUC		[2487-2505]
162	CCUCUUUGCGACAGAGACA	UGUCUCUGUCGCAAAGAGG		[1887-1905]
163	CAGAAGAGCCUGAGAGACA	UGUCUCUCAGGCUCUUCUG		[2816-2834]
164	CUUACGAGGCGAAGAAGGA	UCCUUCUUCGCCUCGUAAG		[3662-3680]
165	CAUCAAGCCCUUUACUUGA	UCAAGUAAAGGGCUUGAUG		[3869-3887]
166	CUACCUCAAGCUAUCGAAU	AUUCGAUAGCUUGAGGUAG		[682-700]
167	UAUGCCUCUGUAUUUAAAA	UUUUAAAUACAGAGGCAUA		[4091-4109]
168	ACUAUUUCUUUCAGCUCAA	UUGAGCUGAAAGAAAUAGU		[3599-3617]
169	AAUCCAGAUAAGUGACAUA	UAUGUCACUUAUCUGGAUU		[219-237]
170	GCAGAGAACUCAGCCUCAU	AUGAGGCUGAGUUCUCUGC		[38-56]
171	UUGGAGACAAAAUCUUAAA	UUUAAGAUUUUGUCUCCAA		[3955-3973]
172	CACAGAACUUAAGGAUGGA	UCCAUCCUUAAGUUCUGUG		[3756-3774]

173	AAGCUAUCGAAUUUGUCAA	UUGACAAAUUCGAUAGCUU		[689-707]
174	AGUACAUGCAGAAUGAAUA	UAUUCAUUCUGCAUGUACU		[1598-1616]
175	AAUUUCUGUUCAAGACCAA	UUGGUCUUGAACAGAAAUU		[281-299]
176	AUGGAGAGAAACUGAAGAA	UUCUUCAGUUUCUCUCCAU		[2066-2084]
177	GGGAUGACUUUCCAAGACA	UGUCUUGGAAAGUCAUCCC		[541-559]
178	CAAGCUCUACACCUCCAAU	AUUGGAGGUGUAGAGCUUG		[2349-2367]
179	CAGAGAACUCAGCCUCAUU	AAUGAGGCUGAGUUCUCUG		[39-57]
180	AAGUGGAAGUUCACCAACA	UGUUGGUGAACUUCCACUU		[2872-2890]
181	AGAUAUCUUUGGUGCUGUA	UACAGCACCAAAGAUAUCU		[3639-3657]
182	UCAGCAAGCAGCAGAAUGA	UCAUUCUGCUGCUUGCUGA		[410-428]
183	CUGAAGAAAUCGCUCUUCA	UGAAGAGCGAUUUCUUCAG		[2077-2095]
184	GGUGGAAGCGGUAACAAAG	CUUUGUUACCGCUUCCACC		[759-777]
185	AAAGGGAUUUUAACUUGCA	UGCAAGUUAAAAUCCCUUU		[577-595]
186	CCCUUUACUUGACCUCCUA	UAGGAGGUCAAGUAAAGGG		[3876-3894]
187	CACCUGACCUUGUGCUUGA	UCAAGCACAAGGUCAGGUG		[1229-1247]
188	AGCGGUAACAAAGGAGAUA	UAUCUCCUUUGUUACCGCU		[765-783]
189	CGUUUGAUGUCCGAGGCAA	UUGCCUCGGACAUCAAACG		[2312-2330]
190	AGAACAUCUGAGCUCAAAU	AUUUGAGCUCAGAUGUUCU		[203-221]
191	UGACCAUCAUGGACCACCA	UGGUGGUCCAUGAUGGUCA	Rat,Ms	[1556-1574]
192	UCAACAACAAUGUGGAGAA	UUCUCCACAUUGUUGUUGA		[335-353]
193	CGGGAACUGGAGCUAAAGU	ACUUUAGCUCCAGUUCCCG		[1282-1300]
194	GAGAGAAACUGAAGAAAUC	GAUUUCUUCAGUUUCUCUC		[2069-2087]
195	AGUUCUAGACAGUCCCGAA	UUCGGGACUGUCUAGAACU		[102-120]
196	AGACCCAAGAGAAGAGAGA	UCUCUCUUCUCUUGGGUCU		[1783-1801]
197	GACCCAAGAGAAGAGAGAU	AUCUCUCUUCUCUUGGGUC		[1784-1802]
198	CAUUAUGACUCCCAAAAGU	ACUUUUGGGAGUCAUAAUG		[618-636]
199	AUGGAGAUAUUUACAUGAA	UUCAUGUAAAUAUCUCCAU		[4167-4185]
200	UGGAAGCGGUAACAAAGGA	UCCUUUGUUACCGCUUCCA		[761-779]
201	CCGGCACAGAACUUAAGGA	UCCUUAAGUUCUGUGCCGG		[3752-3770]
202	CCUCUGUAUUUAAAAAACU	AGUUUUUUAAAUACAGAGG		[4095-4113]
203	CCCUCCAGAUGAGCUUCUA	UAGAAGCUCAUCUGGAGGG		[666-684]
204	GAGAUGGAGGAAAGUGAUA	UAUCACUUUCCUCCAUCUC		[3811-3829]
205	CCAUCCUCUUUGCGACAGA	UCUGUCGCAAAGAGGAUGG		[1883-1901]
206	AAUCUCUGGUCAAGCUGGA	UCCAGCUUGACCAGAGAUU		[470-488]
207	AGGAGAAUGGGCCUGGAAA	UUUCCAGGCCCAUUCUCCU		[1453-1471]
208	ACAGGAUGACCUUCAGUAU	AUACUGAAGGUCAUCCUGU		[384-402]
209	AUAGUUUCCAGAAGCAGAA	UUCUGCUUCUGGAAACUAU	Ms	[1535-1553]
210	GAUGGAGAUAUUUACAUGA	UCAUGUAAAUAUCUCCAUC		[4166-4184]
211	UGCGACAGAGACAGGAAAA	UUUUCCUGUCUCUGUCGCA		[1893-1911]
212	UGACCCUGAGCUCUUCGAA	UUCGAAGAGCUCAGGGUCA		[1206-1224]
213	AAUAUUACGGCUCCUUCAA	UUGAAGGAGCCGUAAUAUU		[710-728]
214	ACAUCUGAGCUCAAAUCCA	UGGAUUUGAGCUCAGAUGU		[206-224]
215	ACUUUGUAGCGAGUCGAAA	UUUCGACUCGCUACAAAGU		[4-22]
216	CAGAAUCUACAAAGUCCGA	UCGGACUUUGUAGAUUCUG		[2485-2503]
217	CCUACUUCCUGGACAUCAC	GUGAUGUCCAGGAAGUAGG	Rat	[2750-2768]
218	AGGGUGGAAGCGGUAACAA	UUGUUACCGCUUCCACCCU		[757-775]
219	CCAUGGAACAUCCCAAAUA	UAUUUGGGAUGUUCCAUGG		[1253-1271]
220	UGGAAAUUUCUGUUCAAGA	UCUUGAACAGAAAUUUCCA		[277-295]
221	UCGGCAGAAUCUACAAAGU	ACUUUGUAGAUUCUGCCGA		[2481-2499]
222	UUGUCUGCAUGGAUAAGUA	UACUUAUCCAUGCAGACAA		[1970-1988]
223	CACAGGAUGACCUUCAGUA	UACUGAAGGUCAUCCUGUG		[383-401]
224	UCACCUACUUCCUGGACAU	AUGUCCAGGAAGUAGGUGA	Rat,Ms	[2747-2765]
225	GGAACUCUCCUGUGAGGAU	AUCCUCACAGGAGAGUUCC		[2529-2547]
226	CCGUGUUUCACCAGGAGAU	AUCUCCUGGUGAAACACGG		[1685-1703]
227	AAGGUUGUCUGCAUGGAUA	UAUCCAUGCAGACAACCUU		[1966-1984]
228	UGCUGAGUGCACCACUUCA	UGAAGUGGUGCACUCAGCA		[4011-4029]

229	CAGAUGAGGACCACAUCUA	UAGAUGUGGUCCUCAUCUG		[3320-3338]
230	GGCUCCUUCAAAGAGGCAA	UUGCCUCUUUGAAGGAGCC	Rat	[718-736]
231	CUUGAUGGAGAUAUUUACA	UGUAAAUAUCUCCAUCAAG		[4163-4181]
232	UGCCUCUGUAUUUAAAAAA	UUUUUUAAAUACAGAGGCA		[4093-4111]
233	CCAGCUCUGCAUUAUCUGA	UCAGAUAAUGCAGAGCUGG		[3776-3794]
234	AUGCUGAUGCGCAAGACAA	UUGUCUUGCGCAUCAGCAU		[1843-1861]
235	GGAUGACCUUCAGUAUCAC	GUGAUACUGAAGGUCAUCC		[387-405]
236	CUCUACACCUCCAAUGUGA	UCACAUUGGAGGUGUAGAG		[2353-2371]
237	AUAUUACGGCUCCUUCAAA	UUUGAAGGAGCCGUAAUAU		[711-729]
238	GCUCAAAUCUCGGCAGAAU	AUUCUGCCGAGAUUUGAGC		[2472-2490]
239	CAGAUGAGCUUCUACCUCA	UGAGGUAGAAGCUCAUCUG		[671-689]
240	CAUUCCUGGAGGUGCUAGA	UCUAGCACCUCCAGGAAUG		[2897-2915]
241	CGGCACAGAACUUAAGGAU	AUCCUUAAGUUCUGUGCCG		[3753-3771]
242	GAUAUUUACAUGAAUUGCA	UGCAAUUCAUGUAAAUAUC		[4172-4190]
243	CCUUGAUGGAGAUAUUUAC	GUAAAUAUCUCCAUCAAGG		[4162-4180]
244	UCUACCUCAAGCUAUCGAA	UUCGAUAGCUUGAGGUAGA		[681-699]
245	ACAAAGGAGAUAGAAACAA	UUGUUUCUAUCUCCUUUGU		[772-790]
246	AAGAACAUCUGAGCUCAAA	UUUGAGCUCAGAUGUUCUU		[202-220]
247	CCAUGAGGCUCAAAUCUCG	CGAGAUUUGAGCCUCAUGG		[2465-2483]
248	GGCAAAAAUAGAGGAACAU	AUGUUCCUCUAUUUUUGCC	Rat,Ms	[732-750]
249	GAUGGAACUUGCUGCUGAG	CUCAGCAGCAAGUUCCAUC		[3999-4017]
250	CAAAUUCCACCAGUAUGCA	UGCAUACUGGUGGAAUUUG		[297-315]
251	CCUUUACUUGACCUCCUAA	UUAGGAGGUCAAGUAAAGG		[3877-3895]
252	AUAUUUACAUGAAUUGCAU	AUGCAAUUCAUGUAAAUAU		[4173-4191]
253	AGGCAAACAGCACAUUCAG	CUGAAUGUGCUGUUUGCCU		[2325-2343]
254	CGGGAGAUGAGCUCAUCUU	AAGAUGAGCUCAUCUCCCG		[809-827]
255	CUGAGCUCAAAUCCAGAUA	UAUCUGGAUUUGAGCUCAG		[210-228]
256	GGAGACCCAAGAGAAGAGA	UCUCUUCUCUUGGGUCUCC		[1781-1799]
257	GGUGGUGACCAGUACGUUU	AAACGUACUGGUCACCACC		[2025-2043]
258	ACAUCAACAACAAUGUGGA	UCCACAUUGUUGUUGAUGU		[332-350]
259	AGUGGAAGUUCACCAACAG	CUGUUGGUGAACUUCCACU		[2873-2891]
260	AAAUUCCACCAGUAUGCAA	UUGCAUACUGGUGGAAUUU		[298-316]
261	CCAAGGUUGUCUGCAUGGA	UCCAUGCAGACAACCUUGG	Rat,Ms	[1964-1982]
262	AGCGCUACAACAUCCUGGA	UCCAGGAUGUUGUAGCGCU	Rat,Ms	[1424-1442]
263	CAACAUUGCUGUGCUCCAU	AUGGAGCACAGCAAUGUUG		[1518-1536]
264	AUCUCGGCAGAAUCUACAA	UUGUAGAUUCUGCCGAGAU		[2478-2496]
265	CAGCAAGCAGCAGAAUGAG	CUCAUUCUGCUGCUUGCUG		[411-429]
266	CUAUCGAAUUUGUCAACCA	UGGUUGACAAAUUCGAUAG		[692-710]
267	CAGAAUCUCUGGUCAAGCU	AGCUUGACCAGAGAUUCUG		[467-485]
268	CCUUGGAAAUUUCUGUUCA	UGAACAGAAAUUUCCAAGG		[274-292]
269	AACUGGAGCUAAAGUGGUA	UACCACUUUAGCUCCAGUU		[1286-1304]
270	AGGAUGACCUUCAGUAUCA	UGAUACUGAAGGUCAUCCU		[386-404]
271	UAACAAGUAGCACCCUGGA	UCCAGGGUGCUACUUGUUA		[3893-3911]
272	UGUGGAAUGCUCAGCUCAU	AUGAGCUGAGCAUUCCACA		[1040-1058]
273	GCCUCUGUAUUUAAAAAAC	GUUUUUUAAAUACAGAGGC		[4094-4112]
274	GCUUCUACCUCAAGCUAUC	GAUAGCUUGAGGUAGAAGC		[678-696]
275	GAUGACCUUCAGUAUCACA	UGUGAUACUGAAGGUCAUC		[388-406]
276	AUCUGAGCUCAAAUCCAGA	UCUGGAUUUGAGCUCAGAU		[208-226]
277	ACCUCAAGCUAUCGAAUUU	AAAUUCGAUAGCUUGAGGU		[684-702]
278	UUGCGACAGAGACAGGAAA	UUUCCUGUCUCUGUCGCAA		[1892-1910]
279	CCAACAUGCUGCUUGAGGU	ACCUCAAGCAGCAUGUUGG		[1322-1340]
280	CAUGGAACAUCCCAAAUAC	GUAUUUGGGAUGUUCCAUG		[1254-1272]
281	CUCAUUCCUGCUUUAAAAU	AUUUUAAAGCAGGAAUGAG		[52-70]
282	CGGCUGCAGAAUCCUUCAU	AUGAAGGAUUCUGCAGCCG		[1577-1595]
283	CAGUAUCACAACCUCAGCA	UGCUGAGGUUGUGAUACUG		[397-415]
284	AGCUCAAAUCCAGAUAAGU	ACUUAUCUGGAUUUGAGCU		[213-231]

285	GCGACAGAGACAGGAAAAU	AUUUUCCUGUCUCUGUCGC		[1894-1912]
286	AAACAACAGGAACCUACCA	UGGUAGGUUCCUGUUGUUU	Rat,Ms	[785-803]
287	UAUUCAGCUGUGCCUUCAA	UUGAAGGCACAGCUGAAUA		[1943-1961]
288	GGAUGACUUUCCAAGACAC	GUGUCUUGGAAAGUCAUCC		[542-560]
289	AGAAGAGAGAUUCCAUUGA	UCAAUGGAAUCUCUCUUCU		[1792-1810]
290	GGAAAUUUCUGUUCAAGAC	GUCUUGAACAGAAAUUUCC		[278-296]
291	UUCCUUACGAGGCGAAGAA	UUCUUCGCCUCGUAAGGAA		[3659-3677]
292	CCACUUCAAGUGACCACCA	UGGUGGUCACUUGAAGUGG		[4022-4040]
293	ACAACAUCCUGGAGGAAGU	ACUUCCUCCAGGAUGUUGU	Rat,Ms	[1430-1448]
294	UCGGCUGCAGAAUCCUUCA	UGAAGGAUUCUGCAGCCGA		[1576-1594]
295	CCGAAGUUCUCAAGGCACA	UGUGCCUUGAGAACUUCGG		[116-134]
296	UAAAGCUGCCGGCACAGAA	UUCUGUGCCGGCAGCUUUA		[3744-3762]
297	CAAUGGAGAGAAACUGAAG	CUUCAGUUUCUCUCCAUUG		[2064-2082]
298	AAUGGAGAGAAACUGAAGA	UCUUCAGUUUCUCUCCAUU		[2065-2083]
299	UGGUGGAACUCUCCUGUGA	UCACAGGAGAGUUCCACCA		[2525-2543]
300	CUUCAGUAUCACAACCUCA	UGAGGUUGUGAUACUGAAG		[394-412]
301	CCCUGUAUGAUUCCUUGAU	AUCAAGGAAUCAUACAGGG		[4150-4168]
302	AGGUCUAUGUUCAGGACAU	AUGUCCUGAACAUAGACCU		[3422-3440]
303	CAUCUGAGCUCAAAUCCAG	CUGGAUUUGAGCUCAGAUG		[207-225]
304	CUCUUUGCCUGUAUGCUGA	UCAGCAUACAGGCAAAGAG		[1831-1849]
305	GAAUCCUUCAUGAAGUACA	UGUACUUCAUGAAGGAUUC		[1585-1603]
306	CCUGGUUUGACUGUCCUUA	UAAGGACAGUCAAACCAGG		[143-161]
307	CUCAAGCUAUCGAAUUUGU	ACAAAUUCGAUAGCUUGAG		[686-704]
308	CUACAACAUCCUGGAGGAA	UUCCUCCAGGAUGUUGUAG	Rat,Ms	[1428-1446]
309	CUUCAAGUGACCACCAGGA	UCCUGGUGGUCACUUGAAG		[4025-4043]
310	CCCUUGGAGACAAAAUCUU	AAGAUUUUGUCUCCAAGGG		[3952-3970]
311	AAAGAAGUCUCCAGAAUCU	AGAUUCUGGAGACUUCUUU		[456-474]
312	GCAAACAGCACAUUCAGAU	AUCUGAAUGUGCUGUUUGC		[2327-2345]
313	GACUGGGCAGUUCUAGACA	UGUCUAGAACUGCCCAGUC		[94-112]
314	AAAAGACAUCAACAACAAU	AUUGUUGUUGAUGUCUUUU		[327-345]
315	CUGAGUGCACCACUUCAAG	CUUGAAGUGGUGCACUCAG		[4013-4031]
316	CAAAUCUCGGCAGAAUCUA	UAGAUUCUGCCGAGAUUUG		[2475-2493]
317	UCAUGCUGAAAGAGCUCAA	UUGAGCUCUUUCAGCAUGA		[2093-2111]
318	UGGUCCCUUGGAGACAAAA	UUUUGUCUCCAAGGGACCA		[3948-3966]
319	CCAAGCUGAAAUUGAAUGA	UCAUUCAAUUUCAGCUUGG		[3566-3584]
320	CCAAGGUCUAUGUUCAGGA	UCCUGAACAUAGACCUUGG		[3419-3437]
321	CAGAGAUCCACCUGACUGU	ACAGUCAGGUGGAUCUCUG		[3020-3038]
322	CUUCCUGGACAUCACCACA	UGUGGUGAUGUCCAGGAAG		[2754-2772]
323	GCGCUAUCACGAAGAUAUC	GAUAUCUUCGUGAUAGCGC		[3627-3645]
324	UGGAGACAAAAUCUUAAAU	AUUUAAGAUUUUGUCUCCA		[3956-3974]
325	CACAGAGAUCCACCUGACU	AGUCAGGUGGAUCUCUGUG		[3018-3036]
326	CGGGAUGACUUUCCAAGAC	GUCUUGGAAAGUCAUCCCG		[540-558]
327	GUCUCUUCCUGGUUUGACU	AGUCAAACCAGGAAGAGAC		[136-154]
328	CUAUCACGAAGAUAUCUUU	AAAGAUAUCUUCGUGAUAG		[3630-3648]
329	CUGUCGUUGAGAUCAACAU	AUGUUGAUCUCAACGACAG		[1505-1523]
330	AGGACUCACAGCCUUUGGA	UCCAAAGGCUGUGAGUCCU		[2402-2420]
331	UCCUUCAAAGAGGCAAAAA	UUUUUGCCUCUUUGAAGGA	Rat	[721-739]
332	AGUAUCACAACCUCAGCAA	UUGCUGAGGUUGUGAUACU		[398-416]
333	UGAGCUCUUCGAAAUCCCA	UGGGAUUUCGAAGAGCUCA		[1212-1230]
334	CAAGUGGGUGAAAGAUGGA	UCCAUCUUUCACCCACUUG		[3986-4004]
335	CAACCUGCAGGUCUUCGAU	AUCGAAGACCUGCAGGUUG	Rat	[885-903]
336	AGCGCUAUCACGAAGAUAU	AUAUCUUCGUGAUAGCGCU		[3626-3644]
337	GAAAGACCAGGCUGUCGUU	AACGACAGCCUGGUCUUUC		[1494-1512]
338	CUGGGCAGUUCUAGACAGU	ACUGUCUAGAACUGCCCAG		[96-114]
339	CAAAAAUAGAGGAACAUCU	AGAUGUUCCUCUAUUUUUG	Rat,Ms	[734-752]
340	CAGAGUCACCAUCCUCUUU	AAAGAGGAUGGUGACUCUG		[1875-1893]

341	ACUUGCAGGUCCAAAUCUU	AAGAUUUGGACCUGCAAGU		[589-607]
342	AAUUUGUCAACCAAUAUUA	UAAUAUUGGUUGACAAAUU		[698-716]
343	CAGGAACCUACCAACUGAC	GUCAGUUGGUAGGUUCCUG		[791-809]
344	GCACCACUUCAAGUGACCA	UGGUCACUUGAAGUGGUGC		[4019-4037]
345	UGAGACGUUUGAUGUCCGA	UCGGACAUCAAACGUCUCA		[2307-2325]
346	GCCCAAGGUCUAUGUUCAG	CUGAACAUAGACCUUGGGC		[3417-3435]
347	AGGACCACAUCUACCAGGA	UCCUGGUAGAUGUGGUCCU		[3326-3344]
348	UGGUACAUGGGCACAGAGA	UCUCUGUGCCCAUGUACCA		[1378-1396]
349	GUGCUGUAUUUCCUUACGA	UCGUAAGGAAAUACAGCAC		[3650-3668]
350	UAACAAAGGAGAUAGAAAC	GUUUCUAUCUCCUUUGUUA		[770-788]
351	CCUUUGCUCAUGACAUUGA	UCAAUGUCAUGAGCAAAGG		[2171-2189]
352	CUGUAUUUAAAAAACUAAC	GUUAGUUUUUUAAAUACAG		[4098-4116]
353	GGAAAAAGACAUCAACAAC	GUUGUUGAUGUCUUUUUCC		[324-342]
354	AGAAUGUGACCAUCAUGGA	UCCAUGAUGGUCACAUUCU	Rat,Ms	[1550-1568]
355	GUGGAGACGGGAAAGAAGU	ACUUCUUUCCCGUCUCCAC		[445-463]
356	UUAACUUGCAGGUCCAAAU	AUUUGGACCUGCAAGUUAA		[586-604]
357	UUACUUGACCUCCUAACAA	UUGUUAGGAGGUCAAGUAA		[3880-3898]
358	ACGUGUUCACCAUGAGGCU	AGCCUCAUGGUGAACACGU	Rat	[2456-2474]
359	CCCAGGUUCUACUCCAUCA	UGAUGGAGUAGAACCUGGG		[2977-2995]
360	CUGCCCGGGAAAUGUUUGA	UCAAACAUUUCCCGGGCAG		[920-938]
361	CCCUCAGAGUACAGCAAGU	ACUUGCUGUACUCUGAGGG		[2857-2875]
362	GUUCACCAUGAGGCUCAAA	UUUGAGCCUCAUGGUGAAC		[2460-2478]
363	GAAUUUGUCAACCAAUAUU	AAUAUUGGUUGACAAAUUC		[697-715]
364	AAGAGGCAAAAAUAGAGGA	UCCUCUAUUUUUGCCUCUU	Rat,Ms	[728-746]
365	UUGGGUCUUCCCUGUAUGA	UCAUACAGGGAAGACCCAA		[4141-4159]
366	CCAUUAUGACUCCCAAAAG	CUUUUGGGAGUCAUAAUGG		[617-635]
367	GGAACAUCCCAAAUACGAG	CUCGUAUUUGGGAUGUUCC		[1257-1275]
368	AGAGAGAUUCCAUUGAAAG	CUUUCAAUGGAAUCUCUCU		[1795-1813]
369	UCAUGACAUUGAUCAGAAG	CUUCUGAUCAAUGUCAUGA		[2178-2196]
370	AGAACGUGUUCACCAUGAG	CUCAUGGUGAACACGUUCU	Rat	[2453-2471]
371	UAUGCUGAUGCGCAAGACA	UGUCUUGCGCAUCAGCAUA		[1842-1860]
372	ACGUGCGUUACUCCACCAA	UUGGUGGAGUAACGCACGU		[953-971]
373	UGGUCAAGCUGGAUGCAAC	GUUGCAUCCAGCUUGACCA		[476-494]
374	GAGCUCAACAACAAAUUCA	UGAAUUUGUUGUUGAGCUC		[2104-2122]
375	AGCUGCUGCUCCAAAAGCU	AGCUUUUGGAGCAGCAGCU		[2783-2801]
376	CACCAUGAGGCUCAAAUCU	AGAUUUGAGCCUCAUGGUG		[2463-2481]
377	CCUGGAAAACCCAUGUCUG	CAGACAUGGGUUUUCCAGG		[1748-1766]
378	UGACGGGAGAUGAGCUCAU	AUGAGCUCAUCUCCCGUCA		[806-824]
379	GCUCAAAUCCAGAUAAGUG	CACUUAUCUGGAUUUGAGC		[214-232]
380	CGUUACUCCACCAACAAUG	CAUUGUUGGUGGAGUAACG		[958-976]
381	CUUGACCUCCUAACAAGUA	UACUUGUUAGGAGGUCAAG		[3883-3901]
382	GCAGGUCGAGGACUAUUUC	GAAAUAGUCCUCGACCUGC		[3588-3606]
383	CUGGUCAAGCUGGAUGCAA	UUGCAUCCAGCUUGACCAG		[475-493]
384	AUGACCUUCAGUAUCACAA	UUGUGAUACUGAAGGUCAU		[389-407]
385	UGACCUUCAGUAUCACAAC	GUUGUGAUACUGAAGGUCA		[390-408]
386	AGUGCACCACUUCAAGUGA	UCACUUGAAGUGGUGCACU		[4016-4034]
387	CAACAGGAACCUACCAACU	AGUUGGUAGGUUCCUGUUG		[788-806]
388	GACUAUUUCUUUCAGCUCA	UGAGCUGAAAGAAAUAGUC		[3598-3616]
389	UGAAGAACAUCUGAGCUCA	UGAGCUCAGAUGUUCUUCA		[200-218]
390	AUUACGGCUCCUUCAAAGA	UCUUUGAAGGAGCCGUAAU		[713-731]
391	GCAUGUGAGGAUCAAAAAC	GUUUUUGAUCCUCACAUGC		[513-531]
392	AUAAGUGACCUGCUUUGUA	UACAAAGCAGGUCACUUAU		[235-253]
393	CCAGCCUCAAGUCUUAUUU	AAAUAAGACUUGAGGCUGG		[3834-3852]
394	CAUCAACAACAAUGUGGAG	CUCCACAUUGUUGUUGAUG		[333-351]
395	AGCCCAGGUUCUACUCCAU	AUGGAGUAGAACCUGGGCU		[2975-2993]
396	CACCAUCCUCUUUGCGACA	UGUCGCAAAGAGGAUGGUG		[1881-1899]

397	UAGCGAGUCGAAAACUGAG	CUCAGUUUUCGACUCGCUA		[10-28]
398	CAUUGCUGUGCUCCAUAGU	ACUAUGGAGCACAGCAAUG		[1521-1539]
399	UCCAUGACUCCCAGCACAA	UUGUGCUGGGAGUCAUGGA	Ms	[3254-3272]
400	AUUUUAACUUGCAGGUCCA	UGGACCUGCAAGUUAAAAU		[583-601]
401	UCCACCAGUAUGCAAUGAA	UUCAUUGCAUACUGGUGGA		[302-320]
402	ACAUCUACCAGGAGGAGAU	AUCUCCUCCUGGUAGAUGU		[3332-3350]
403	AAGCGCUAUCACGAAGAUA	UAUCUUCGUGAUAGCGCUU		[3625-3643]
404	AGAUGGAACUUGCUGCUGA	UCAGCAGCAAGUUCCAUCU		[3998-4016]
405	GAGCCUCCUCUCUCAAACU	AGUUUGAGAGAGGAGGCUC		[3919-3937]
406	ACAACCUCAGCAAGCAGCA	UGCUGCUUGCUGAGGUUGU		[404-422]
407	CGAAAUCCCACCUGACCUU	AAGGUCAGGUGGGAUUUCG		[1221-1239]
408	AGAUGAGGACCACAUCUAC	GUAGAUGUGGUCCUCAUCU		[3321-3339]
409	CAUGAAGUACAUGCAGAAU	AUUCUGCAUGUACUUCAUG		[1593-1611]
410	UGCGCCUUUGCUCAUGACA	UGUCAUGAGCAAAGGCGCA	Ms	[2167-2185]
411	ACCCUGAGCUCUUCGAAAU	AUUUCGAAGAGCUCAGGGU		[1208-1226]
412	GACGGGAAAGAAGUCUCCA	UGGAGACUUCUUUCCCGUC		[450-468]
413	CUGUGCUCUUUGCCUGUAU	AUACAGGCAAAGAGCACAG		[1826-1844]
414	AUUUCUGUUCAAGACCAAA	UUUGGUCUUGAACAGAAAU		[282-300]
415	GAGAUUCCAUUGAAAGUCU	AGACUUUCAAUGGAAUCUC		[1798-1816]
416	CUACCAACUGACGGGAGAU	AUCUCCCGUCAGUUGGUAG		[798-816]
417	CCGGGAAAUGUUUGAACAC	GUGUUCAAACAUUUCCCGG		[924-942]
418	CCUCAGCAAGCAGCAGAAU	AUUCUGCUGCUUGCUGAGG		[408-426]
419	GCUCCAUAGUUUCCAGAAG	CUUCUGGAAACUAUGGAGC	Ms	[1530-1548]
420	UCUCGGCAGAAUCUACAAA	UUUGUAGAUUCUGCCGAGA		[2479-2497]
421	UUUAUGCCUCUGUAUUUAA	UUAAAUACAGAGGCAUAAA		[4089-4107]
422	GCAUGACCUUGGUGUUUGG	CCAAACACCAAGGUCAUGC	Rat	[3290-3308]
423	AGCUCUACACCUCCAAUGU	ACAUUGGAGGUGUAGAGCU		[2351-2369]
424	CUGUUGGUGGUGACCAGUA	UACUGGUCACCACCAACAG		[2020-2038]
425	CGGCAGAAUCUACAAAGUC	GACUUUGUAGAUUCUGCCG		[2482-2500]
426	CAAAUCCAGAUAAGUGACA	UGUCACUUAUCUGGAUUUG		[217-235]
427	ACUUGACCUCCUAACAAGU	ACUUGUUAGGAGGUCAAGU		[3882-3900]
428	CGAAGAUAUCUUUGGUGCU	AGCACCAAAGAUAUCUUCG		[3636-3654]
429	AGCUACUGGGUCAGUGACA	UGUCACUGACCCAGUAGCU		[2695-2713]
430	AGGCUCAAAUCUCGGCAGA	UCUGCCGAGAUUUGAGCCU		[2470-2488]
431	AGAAGAGCCUGAGAGACAG	CUGUCUCUCAGGCUCUUCU		[2817-2835]
432	CCAAGAGAAGAGAGAUUCC	GGAAUCUCUCUUCUCUUGG		[1787-1805]
433	AUUCCUUGAUGGAGAUAUU	AAUAUCUCCAUCAAGGAAU		[4159-4177]
434	UCCAGAUAAGUGACAUAAG	CUUAUGUCACUUAUCUGGA		[221-239]
435	UCCAUAGUUUCCAGAAGCA	UGCUUCUGGAAACUAUGGA	Ms	[1532-1550]
436	AGCCCUCAGAGUACAGCAA	UUGCUGUACUCUGAGGGCU		[2855-2873]
437	UGACAUAAGUGACCUGCUU	AAGCAGGUCACUUAUGUCA		[231-249]
438	CAGGUCGAGGACUAUUUCU	AGAAAUAGUCCUCGACCUG		[3589-3607]
439	UGUCGUUGAGAUCAACAUU	AAUGUUGAUCUCAACGACA		[1506-1524]
440	GAAACAACAGGAACCUACC	GGUAGGUUCCUGUUGUUUC	Rat,Ms	[784-802]
441	GCUGAAAUUGAAUGAGGAG	CUCCUCAUUCAAUUUCAGC		[3570-3588]
442	GUGUGGAAUGCUCAGCUCA	UGAGCUGAGCAUUCCACAC		[1039-1057]
443	AGGUCGAGGACUAUUUCUU	AAGAAAUAGUCCUCGACCU		[3590-3608]
444	AAGAACGUGUUCACCAUGA	UCAUGGUGAACACGUUCUU	Rat	[2452-2470]
445	CCCAGCCUCAAGUCUUAUU	AAUAAGACUUGAGGCUGGG		[3833-3851]
446	AGACACGUGCGUUACUCCA	UGGAGUAACGCACGUGUCU		[949-967]
447	GGUCAAAGCUGUGCUCUUU	AAAGAGCACAGCUUUGACC		[1818-1836]
448	AAGGAGAUAGAAACAACAG	CUGUUGUUUCUAUCUCCUU		[775-793]
449	UGCUCAGCUCAUCCGCUAU	AUAGCGGAUGAGCUGAGCA		[1047-1065]
450	GCUCAUGACAUUGAUCAGA	UCUGAUCAAUGUCAUGAGC		[2176-2194]
451	CAUUCCUGCUUUAAAAUCU	AGAUUUUAAAGCAGGAAUG		[54-72]
452	AGCAGGUCGAGGACUAUUU	AAAUAGUCCUCGACCUGCU		[3587-3605]

453	GUUAUUUAUGCCUCUGUAU	AUACAGAGGCAUAAAUAAC		[4085-4103]
454	GCUGAAAGAGCUCAACAAC	GUUGUUGAGCUCUUUCAGC		[2097-2115]
455	AUGUGACCAUCAUGGACCA	UGGUCCAUGAUGGUCACAU	Rat,Ms	[1553-1571]
456	UCACGAAGAUAUCUUUGGU	ACCAAAGAUAUCUUCGUGA		[3633-3651]
457	UCUGCAGACACGUGCGUUA	UAACGCACGUGUCUGCAGA		[944-962]
458	AGCUUCUACCUCAAGCUAU	AUAGCUUGAGGUAGAAGCU		[677-695]
459	GGCUGUCGUUGAGAUCAAC	GUUGAUCUCAACGACAGCC		[1503-1521]
460	AGCUCAACAACAAAUUCAG	CUGAAUUUGUUGUUGAGCU		[2105-2123]
461	GGAAGCGGUAACAAAGGAG	CUCCUUUGUUACCGCUUCC		[762-780]
462	CCAGAUGAGGACCACAUCU	AGAUGUGGUCCUCAUCUGG		[3319-3337]
463	AUACGAGUGGUUUCGGGAA	UUCCCGAAACCACUCGUAU		[1269-1287]
464	UCAGAGUCACCAUCCUCUU	AAGAGGAUGGUGACUCUGA		[1874-1892]
465	CAAGCCCAAGGUCUAUGUU	AACAUAGACCUUGGGCUUG		[3414-3432]
466	AUGCUCAGCUCAUCCGCUA	UAGCGGAUGAGCUGAGCAU		[1046-1064]
467	CCUUCAGUAUCACAACCUC	GAGGUUGUGAUACUGAAGG		[393-411]
468	CUGGUUUGACUGUCCUUAC	GUAAGGACAGUCAAACCAG		[144-162]
469	UAGAAACAACAGGAACCUA	UAGGUUCCUGUUGUUUCUA	Rat,Ms	[782-800]
470	CACUUGGGUCUUCCCUGUA	UACAGGGAAGACCCAAGUG		[4138-4156]
471	GAGUCACCAUCCUCUUUGC	GCAAAGAGGAUGGUGACUC		[1877-1895]
472	CUAUGUUCAGGACAUCCUG	CAGGAUGUCCUGAACAUAG		[3426-3444]
473	GUUCAAGACCAAAUUCCAC	GUGGAAUUUGGUCUUGAAC		[288-306]
474	AGCCUCAUUCCUGCUUUAA	UUAAAGCAGGAAUGAGGCU		[49-67]
475	AUGUGAGGAUCAAAAACUG	CAGUUUUUGAUCCUCACAU	Ms	[515-533]
476	AAGGUAUCCUGGAGCGAGU	ACUCGCUCCAGGAUACCUU		[2618-2636]
477	UCUUCGAAAUCCCACCUGA	UCAGGUGGGAUUUCGAAGA		[1217-1235]
478	AAGCAGAAUGUGACCAUCA	UGAUGGUCACAUUCUGCUU	Rat,Ms	[1546-1564]
479	GCGGUAACAAAGGAGAUAG	CUAUCUCCUUUGUUACCGC		[766-784]
480	GUAGCACCCUGGAUUGAUC	GAUCAAUCCAGGGUGCUAC		[3899-3917]
481	GAGCAGGUCGAGGACUAUU	AAUAGUCCUCGACCUGCUC		[3586-3604]
482	AACAACAGGAACCUACCAA	UUGGUAGGUUCCUGUUGUU		[786-804]
483	GCCUCAAGUCUUAUUUCCU	AGGAAAUAAGACUUGAGGC		[3837-3855]
484	UGGUCCAAGGUAUCCUGGA	UCCAGGAUACCUUGGACCA		[2612-2630]
485	AUCGAAUUUGUCAACCAAU	AUUGGUUGACAAAUUCGAU		[694-712]
486	UGAGCUUCUACCUCAAGCU	AGCUUGAGGUAGAAGCUCA		[675-693]
487	AAGGGAUUUUAACUUGCAG	CUGCAAGUUAAAAUCCCUU		[578-596]
488	ACGUCCAGCGCUACAACAU	AUGUUGUAGCGCUGGACGU		[1418-1436]
489	UUCUGUUCAAGACCAAAUU	AAUUUGGUCUUGAACAGAA		[284-302]
490	AAAUUUCUGUUCAAGACCA	UGGUCUUGAACAGAAAUUU		[280-298]
491	GGUGAAAGAUGGAACUUGC	GCAAGUUCCAUCUUUCACC		[3992-4010]
492	UUCAAAGAGGCAAAAAUAG	CUAUUUUUGCCUCUUUGAA	Rat	[724-742]
493	CAAAAGUUUGACCAGAGGA	UCCUCUGGUCAAACUUUUG		[630-648]
494	CUUUGGUGCUGUAUUUCCU	AGGAAAUACAGCACCAAAG		[3645-3663]
495	CGCUAUCACGAAGAUAUCU	AGAUAUCUUCGUGAUAGCG		[3628-3646]
496	GCAGAAUGUGACCAUCAUG	CAUGAUGGUCACAUUCUGC	Rat,Ms	[1548-1566]
497	CCAGGAGAUGCUGAACUAC	GUAGUUCAGCAUCUCCUGG		[1695-1713]
498	CCAACGUGGAAUUCACUCA	UGAGUGAAUUCCACGUUGG		[1109-1127]
499	ACAGAGACAGGAAAAUCAG	CUGAUUUUCCUGUCUCUGU		[1897-1915]
500	CCAGGUUCUACUCCAUCAG	CUGAUGGAGUAGAACCUGG		[2978-2996]

Table B 24 P53 - tumor protein p53

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-8400737 :252-1433
1	CAUUGUGAGGGUUAAUGAA	UUCAUUAACCCUCACAAUG		[1861-1879]
2	GGAGUAUUUGGAUGACAGA	UCUGUCAUCCAAAUACUCC	Rb	[860-878]
3	AGAGAAUCUCCGCAAGAAA	UUUCUUGCGGAGAUUCUCU		[1109-1127]

4	GGAUGUUUGGGAGAUGUAA	UUACAUCUCCCAAACAUCC		[1676-1694]
5	GGUCGACCUUAGUACCUAA	UUAGGUACUAAGGUCGACC		[2072-2090]
6	CCCGGACGAUAUUGAACAA	UUGUUCAAUAUCGUCCGGG		[389-407]
7	GUUAAGGGUUAGUUUACAA	UUGUAAACUAACCCUUAAC		[1709-1727]
8	GGGUUAAUGAAAUAAUGUA	UACAUUAUUUCAUUAACCC		[1869-1887]
9	AGCUGUCCCUCAUGUUGAA	UUCAACAUGAGGGACAGCU		[1779-1797]
10	GAAUUUUCUCUAACUUCAA	UUGAAGUUAGAGAAAAUUC		[1795-1813]
11	AUACCAGCUUAGAUUUUAA	UUAAAAUCUAAGCUGGUAU		[1642-1660]
12	GCAGUUAAGGGUUAGUUUA	UAAACUAACCCUUAACUGC		[1706-1724]
13	AGACCCAGGUCCAGAUGAA	UUCAUCUGGACCUGGGUCU	Mnk	[419-437]
14	GCAUCUUAUCCGAGUGGAA	UUCCACUCGGAUAAGAUGC	Hamster	[827-845]
15	AGAUGUUCCGAGAGCUGAA	UUCAGCUCUCGGAACAUCU	Rat,Rb,Pig,Mnk	[1267-1285]
16	GGGUCAACAUCUUUUACAU	AUGUAAAAGAUGUUGACCC		[2507-2525]
17	GAGGGUUAAUGAAAUAAUG	CAUUAUUUCAUUAACCCUC		[1867-1885]
18	UGGGUUUUGGGUCUUUGAA	UUCAAAGACCCAAAACCCA		[1498-1516]
19	CUGGAUGGAGAAUAUUUCA	UGAAAUAUUCUCCAUCCAG	Rb,Mnk	[1218-1236]
20	GUACCACCAUCCACUACAA	UUGUAGUGGAUGGUGGUAC	Pig,Mnk	[937-955]
21	GCUGAAUGAGGCCUUGGAA	UUCCAAGGCCUCAUUCAGC	Rat,Mnk	[1280-1298]
22	GGGAUGUUUGGGAGAUGUA	UACAUCUCCCAAACAUCCC		[1675-1693]
23	AUAAAAAACUCAUGUUCAA	UUGAACAUGAGUUUUUUAU		[1390-1408]
24	UGUGAGGGUUAAUGAAAUA	UAUUUCAUUAACCCUCACA		[1864-1882]
25	AAGAGAAUCUCCGCAAGAA	UUCUUGCGGAGAUUCUCUU		[1108-1126]
26	GAGUAUUUGGAUGACAGAA	UUCUGUCAUCCAAAUACUC	Rb	[861-879]
27	GAAAUGUUCUUGCAGUUAA	UUAACUGCAAGAACAUUUC		[1695-1713]
28	CAUGUUGAAUUUUCUCUAA	UUAGAGAAAAUUCAACAUG		[1789-1807]
29	GCAUUGUGAGGGUUAAUGA	UCAUUAACCCUCACAAUGC		[1860-1878]
30	GGAAACUACUUCCUGAAAA	UUUUCAGGAAGUAGUUUCC	GP,Mnk	[319-337]
31	CCAUCAUCACACUGGAAGA	UCUUCCAGUGUGAUGAUGG	Ms,Rb,Pig	[1009-1027]
32	AGUGCAUUGUGAGGGUUAA	UUAACCCUCACAAUGCACU		[1857-1875]
33	GCGUGUGGAGUAUUUGGAU	AUCCAAAUACUCCACACGC		[854-872]
34	GGUGGGUUGGUAGUUUCUA	UAGAAACUACCAACCCACC		[1978-1996]
35	CUUAGUACCUAAAAGGAAA	UUUCCUUUUAGGUACUAAG		[2079-2097]
36	CAAUAGGUGUGCGUCAGAA	UUCUGACGCACACCUAUUG		[1527-1545]
37	CAUGAGCGCUGCUCAGAUA	UAUCUGAGCAGCGCUCAUG		[786-804]
38	CCAUCUACAAGCAGUCACA	UGUGACUGCUUGUAGAUGG	Mnk	[733-751]
39	GUUUGGGAGAUGUAAGAAA	UUUCUUACAUCUCCCAAAC		[1680-1698]
40	GGGAGAUGUAAGAAAUGUU	AACAUUUCUUACAUCUCCC		[1684-1702]
41	CAGUGGUAAUCUACUGGGA	UCCCAGUAGAUUACCACUG	Mnk	[1031-1049]
42	UGAUCUGGAUCCACCAAGA	UCUUGGUGGAUCCAGAUCA		[2144-2162]
43	GAAACCACUGGAUGGAGAA	UUCUCCAUCCAGUGGUUUC	Mnk	[1211-1229]
44	GGACAUACCAGCUUAGAUU	AAUCUAAGCUGGUAUGUCC		[1638-1656]
45	CGAUCUCUUAUUUUACAAU	AUUGUAAAAUAAGAGAUCG		[2596-2614]
46	CCCUCUGAGUCAGGAAACA	UGUUUCCUGACUCAGAGGG	Mnk	[287-305]
47	GAUCUCUUAUUUUACAAUA	UAUUGUAAAAUAAGAGAUC		[2597-2615]
48	CCAGAUGAAGCUCCCAGAA	UUCUGGGAGCUUCAUCUGG		[429-447]
49	AGUUAAGGGUUAGUUUACA	UGUAAACUAACCCUUAACU		[1708-1726]
50	CAUCUUUUACAUUCUGCAA	UUGCAGAAUGUAAAAGAUG		[2514-2532]
51	AACUCAUGUUCAAGACAGA	UCUGUCUUGAACAUGAGUU		[1396-1414]
52	GAAGAGAAUCUCCGCAAGA	UCUUGCGGAGAUUCUCUUC		[1107-1125]
53	GAGUCAGGAAACAUUUUCA	UGAAAAUGUUUCCUGACUC	Mnk	[293-311]
54	GGAUUUCAUCUCUUGUAUA	UAUACAAGAGAUGAAAUCC		[2122-2140]
55	AGGACAUACCAGCUUAGAU	AUCUAAGCUGGUAUGUCCU		[1637-1655]
56	CCUUAGUACCUAAAAGGAA	UUCCUUUUAGGUACUAAGG		[2078-2096]
57	CCACCAUCCACUACAACUA	UAGUUGUAGUGGAUGGUGG	GP,Dog,Mnk	[940-958]
58	CAAAGAAGAAACCACUGGA	UCCAGUGGUUUCUUCUUUG	GP,Mnk	[1204-1222]
59	AAGGGUUAGUUUACAAUCA	UGAUUGUAAACUAACCCUU		[1712-1730]

60	GAGAAUAUUUCACCCUUCA	UGAAGGGUGAAAUAUUCUC	Dog,Mnk	[1225-1243]
61	AUAUCGAUCUCUUAUUUUA	UAAAAUAAGAGAUCGAUAU		[2592-2610]
62	CGACCUUAGUACCUAAAAG	CUUUUAGGUACUAAGGUCG		[2075-2093]
63	UGAGGGUUAAUGAAAUAAU	AUUAUUUCAUUAACCCUCA		[1866-1884]
64	GGAAGACUCCAGUGGUAAU	AUUACCACUGGAGUCUUCC	Mnk	[1022-1040]
65	GAGGAUUUCAUCUCUUGUA	UACAAGAGAUGAAAUCCUC		[2120-2138]
66	GAAGGGUCAACAUCUUUUA	UAAAAGAUGUUGACCCUUC		[2504-2522]
67	GGAUGACAGAAACACUUUU	AAAAGUGUUUCUGUCAUCC	Pig,Mnk	[869-887]
68	GCGCACAGAGGAAGAGAAU	AUUCUCUUCCUCUGUGCGC	Mnk	[1097-1115]
69	AAAUGUUCUUGCAGUUAAG	CUUAACUGCAAGAACAUUU		[1696-1714]
70	CAUAAAAAACUCAUGUUCA	UGAACAUGAGUUUUUUAUG		[1389-1407]
71	CACCAUCAUCACACUGGAA	UUCCAGUGUGAUGAUGGUG	Rb,Pig	[1007-1025]
72	AGGUAGAGGGAGUUGUCAA	UUGACAACUCCCUCUACCU		[2014-2032]
73	UCGAUCUCUUAUUUUACAA	UUGUAAAAUAAGAGAUCGA		[2595-2613]
74	CUGGAAGACUCCAGUGGUA	UACCACUGGAGUCUUCCAG	Mnk	[1020-1038]
75	UUGUGAGGGUUAAUGAAAU	AUUUCAUUAACCCUCACAA		[1863-1881]
76	GAAUAUUUCACCCUUCAGA	UCUGAAGGGUGAAAUAUUC	Dog,Mnk	[1227-1245]
77	GCUUCGAGAUGUUCCGAGA	UCUCGGAACAUCUCGAAGC	Rat,Pig,Mnk	[1261-1279]
78	CGUCCCAAGCAAUGGAUGA	UCAUCCAUUGCUUGGGACG		[358-376]
79	CAUUUUCAGACCUAUGGAA	UUCCAUAGGUCUGAAAAUG	Mnk	[304-322]
80	CCUUGAAACCACCUUUUAU	AUAAAAGGUGGUUUCAAGG		[1895-1913]
81	UGUAUAUGAUGAUCUGGAU	AUCCAGAUCAUCAUAUACA		[2135-2153]
82	GAAACAUUUUCAGACCUAU	AUAGGUCUGAAAAUGUUUC	Mnk	[300-318]
83	CAAGGCCCAUAUCUGUGAA	UUCACAGAUAUGGGCCUUG		[1811-1829]
84	UGAUGAUCUGGAUCCACCA	UGGUGGAUCCAGAUCAUCA		[2141-2159]
85	CCACCAAGACUUGUUUUAU	AUAAAACAAGUCUUGGUGG		[2154-2172]
86	GGAAGAGAAUCUCCGCAAG	CUUGCGGAGAUUCUCUUCC		[1106-1124]
87	GGAAACAUUUUCAGACCUA	UAGGUCUGAAAAUGUUUCC	Mnk	[299-317]
88	GAAAUUUGCGUGUGGAGUA	UACUCCACACGCAAAUUUC	Mnk	[847-865]
89	ACCACUGGAUGGAGAAUAU	AUAUUCUCCAUCCAGUGGU	Mnk	[1214-1232]
90	UGGGUUGGUAGUUUCUACA	UGUAGAAACUACCAACCCA		[1980-1998]
91	AUGAGGCCUUGGAACUCAA	UUGAGUUCCAAGGCCUCAU	Mnk	[1285-1303]
92	CAAGCAAUGGAUGAUUUGA	UCAAAUCAUCCAUUGCUUG		[363-381]
93	CCCUCAUGUUGAAUUUUCU	AGAAAAUUCAACAUGAGGG		[1785-1803]
94	CAGCUUAGAUUUUAAGGUU	AACCUUAAAAUCUAAGCUG		[1646-1664]
95	CUGGAAGGGUCAACAUCUU	AAGAUGUUGACCCUUCCAG		[2501-2519]
96	GGCAUUUGCACCUACCUCA	UGAGGUAGGUGCAAAUGCC		[1835-1853]
97	AGUAUUUGGAUGACAGAAA	UUUCUGUCAUCCAAAUACU	Rb	[862-880]
98	AGACUCCAGUGGUAAUCUA	UAGAUUACCACUGGAGUCU	Mnk	[1025-1043]
99	GGUUGGUAGUUUCUACAGU	ACUGUAGAAACUACCAACC		[1982-2000]
100	GAGGGAGUUGUCAAGUCUU	AAGACUUGACAACUCCCUC		[2019-2037]
101	AUCGAUCUCUUAUUUUACA	UGUAAAAUAAGAGAUCGAU		[2594-2612]
102	UCACCAUCAUCACACUGGA	UCCAGUGUGAUGAUGGUGA	Rb,Pig	[1006-1024]
103	CACCGUACUAACCAGGGAA	UUCCCUGGUUAGUACGGUG		[1761-1779]
104	GUGGGUUGGUAGUUUCUAC	GUAGAAACUACCAACCCAC		[1979-1997]
105	CAGACCUAUGGAAACUACU	AGUAGUUUCCAUAGGUCUG	Mnk	[310-328]
106	GCUGUGGGUUGAUUCCACA	UGUGGAAUCAACCCACAGC		[683-701]
107	GCAAUAGGUGUGCGUCAGA	UCUGACGCACACCUAUUGC		[1526-1544]
108	GGACGAUAUUGAACAAUGG	CCAUUGUUCAAUAUCGUCC		[392-410]
109	CUGACAUUCUCCACUUCUU	AAGAAGUGGAGAAUGUCAG		[1430-1448]
110	CAGAAAACCUACCAGGGCA	UGCCCUGGUAGGUUUUCUG		[549-567]
111	CAGAAACACUUUUCGACAU	AUGUCGAAAAGUGUUUCUG	Mnk	[875-893]
112	UGACAGAAACACUUUUCGA	UCGAAAAGUGUUUCUGUCA	Pig,Mnk	[872-890]
113	GUGCAUUGUGAGGGUUAAU	AUUAACCCUCACAAUGCAC		[1858-1876]
114	GAAACCACCUUUUAUUACA	UGUAAUAAAAGGUGGUUUC		[1899-1917]
115	CCUCCUUCUCCCUUUUUAU	AUAAAAAGGGAGAAGGAGG		[2562-2580]

116	AGUAGGACAUACCAGCUUA	UAAGCUGGUAUGUCCUACU		[1634-1652]
117	GUGAGGGUUAAUGAAAUAA	UUAUUUCAUUAACCCUCAC		[1865-1883]
118	AAGUUUUGAGCUUCUCAAA	UUUGAGAAGCUCAAAACUU		[97-115]
119	UUGGGUUUUGGGUCUUUGA	UCAAAGACCCAAAACCCAA		[1497-1515]
120	CAUACCAGCUUAGAUUUUA	UAAAAUCUAAGCUGGUAUG		[1641-1659]
121	AACUACUUCCUGAAAACAA	UUGUUUUCAGGAAGUAGUU	GP	[322-340]
122	CUGUGAGGGAUGUUUGGGA	UCCCAAACAUCCCUCACAG		[1669-1687]
123	UGAACAAUGGUUCACUGAA	UUCAGUGAACCAUUGUUCA		[401-419]
124	CCAGGACUUCCAUUUGCUU	AAGCAAAUGGAAGUCCUGG		[1550-1568]
125	GGAGGAUUUCAUCUCUUGU	ACAAGAGAUGAAAUCCUCC		[2119-2137]
126	GUUGGUAGUUUCUACAGUU	AACUGUAGAAACUACCAAC		[1983-2001]
127	AAGCAAUGGAUGAUUUGAU	AUCAAAUCAUCCAUUGCUU		[364-382]
128	AUGUUUGGGAGAUGUAAGA	UCUUACAUCUCCCAAACAU		[1678-1696]
129	AGACCUAUGGAAACUACUU	AAGUAGUUUCCAUAGGUCU	Mnk	[311-329]
130	GAUGAUCUGGAUCCACCAA	UUGGUGGAUCCAGAUCAUC		[2142-2160]
131	AGGAAGAGAAUCUCCGCAA	UUGCGGAGAUUCUCUUCCU		[1105-1123]
132	CUCACAGAGUGCAUUGUGA	UCACAAUGCACUCUGUGAG		[1850-1868]
133	CCACCUGAAGUCCAAAAAG	CUUUUUGGACUUCAGGUGG		[1352-1370]
134	GUGGAGUAUUUGGAUGACA	UGUCAUCCAAAUACUCCAC		[858-876]
135	GGAGUAGGACAUACCAGCU	AGCUGGUAUGUCCUACUCC		[1632-1650]
136	CUCUGAGUCAGGAAACAUU	AAUGUUUCCUGACUCAGAG	Mnk	[289-307]
137	UUAUCCGAGUGGAAGGAAA	UUUCCUUCCACUCGGAUAA	Hamster,Mnk	[832-850]
138	CACUGGAUGGAGAAUAUUU	AAAUAUUCUCCAUCCAGUG	Mnk	[1216-1234]
139	UGAGCUUCUCAAAAGUCUA	UAGACUUUUGAGAAGCUCA		[103-121]
140	CAGUUAAGGGUUAGUUUAC	GUAAACUAACCCUUAACUG		[1707-1725]
141	CCCACUUCACCGUACUAAC	GUUAGUACGGUGAAGUGGG		[1754-1772]
142	GCCCACUUCACCGUACUAA	UUAGUACGGUGAAGUGGGC		[1753-1771]
143	UGGAAACUACUUCCUGAAA	UUUCAGGAAGUAGUUUCCA	GP,Mnk	[318-336]
144	CAUCCUCACCAUCAUCACA	UGUGAUGAUGGUGAGGAUG	Rb,Pig	[1001-1019]
145	GAGAAUCUCCGCAAGAAAG	CUUUCUUGCGGAGAUUCUC		[1110-1128]
146	CCUGAAGUCCAAAAAGGGU	ACCCUUUUUGGACUUCAGG		[1355-1373]
147	AUGGAAACUACUUCCUGAA	UUCAGGAAGUAGUUUCCAU	GP,Mnk	[317-335]
148	CAUCUUCUGUCCCUUCCCA	UGGGAAGGGACAGAAGAUG		[532-550]
149	GUCAGGAAACAUUUUCAGA	UCUGAAAAUGUUUCCUGAC	Mnk	[295-313]
150	AUCCCAUUUUUAUAUCGAU	AUCGAUAUAAAAAUGGGAU		[2581-2599]
151	CACCAAGACUUGUUUUAUG	CAUAAAACAAGUCUUGGUG		[2155-2173]
152	CGUCUGGGCUUCUUGCAUU	AAUGCAAGAAGCCCAGACG		[579-597]
153	CUGAGUCAGGAAACAUUUU	AAAAUGUUUCCUGACUCAG	Mnk	[291-309]
154	GAACAAUGGUUCACUGAAG	CUUCAGUGAACCAUUGUUC		[402-420]
155	ACUCAUGUUCAAGACAGAA	UUCUGUCUUGAACAUGAGU		[1397-1415]
156	AUUGUGAGGGUUAAUGAAA	UUUCAUUAACCCUCACAAU		[1862-1880]
157	UACCUAAAAGGAAAUCUCA	UGAGAUUUCCUUUUAGGUA		[2084-2102]
158	CGCUAAAAGUUUUGAGCUU	AAGCUCAAAACUUUUAGCG		[91-109]
159	AGGAUUUCAUCUCUUGUAU	AUACAAGAGAUGAAAUCCU		[2121-2139]
160	CUGACUGUACCACCAUCCA	UGGAUGGUGGUACAGUCAG	Hamster,Rb,Pig,Mnk	[931-949]
161	GCCUUGAAACCACCUUUUA	UAAAAGGUGGUUUCAAGGC		[1894-1912]
162	AGCUGAAUGAGGCCUUGGA	UCCAAGGCCUCAUUCAGCU	Rat,Mnk	[1279-1297]
163	GAAACUACUUCCUGAAAAC	GUUUUCAGGAAGUAGUUUC	GP,Mnk	[320-338]
164	CCAUCCACUACAACUACAU	AUGUAGUUGUAGUGGAUGG	GP,Dog,Mnk	[943-961]
165	GAGCUGGAAGGGUCAACAU	AUGUUGACCCUUCCAGCUC		[2498-2516]
166	UGAAUUUUCUCUAACUUCA	UGAAGUUAGAGAAAAUUCA		[1794-1812]
167	UAUGGAAACUACUUCCUGA	UCAGGAAGUAGUUUCCAUA	GP,Mnk	[316-334]
168	GAUUUCAUCUCUUGUAUAU	AUAUACAAGAGAUGAAAUC		[2123-2141]
169	UGGAGUAUUUGGAUGACAG	CUGUCAUCCAAAUACUCCA		[859-877]
170	UUUGGGAGAUGUAAGAAAU	AUUUCUUACAUCUCCCAAA		[1681-1699]
171	AGGGUUAGUUUACAAUCAG	CUGAUUGUAAACUAACCCU		[1713-1731]

172	CUCAGACUGACAUUCUCCA	UGGAGAAUGUCAGUCUGAG		[1424-1442]
173	GCUUAGAUUUUAAGGUUUU	AAAACCUUAAAAUCUAAGC		[1648-1666]
174	CCUGCACUGGUGUUUUGUU	AACAAAACACCAGUGCAGG		[1597-1615]
175	CUUUGAGGUGCGUGUUUGU	ACAAACACGCACCUCAAAG	Pig	[1058-1076]
176	UCCUCAGCAUCUUAUCCGA	UCGGAUAAGAUGCUGAGGA	Hamster	[821-839]
177	UGCAGUUAAGGGUUAGUUU	AAACUAACCCUUAACUGCA		[1705-1723]
178	AGGCCUUGGAACUCAAGGA	UCCUUGAGUUCCAAGGCCU	Mnk	[1288-1306]
179	AAGCAGUCACAGCACAUGA	UCAUGUGCUGUGACUGCUU	Mnk	[741-759]
180	AGCUGGUUAGGUAGAGGGA	UCCCUCUACCUAACCAGCU		[2006-2024]
181	GGGUUUUGGGUCUUUGAAC	GUUCAAAGACCCAAAACCC		[1499-1517]
182	ACAGAAACACUUUUCGACA	UGUCGAAAAGUGUUUCUGU	Pig,Dog,Mnk	[874-892]
183	GUAAUCUACUGGGACGGAA	UUCCGUCCCAGUAGAUUAC	Mnk	[1036-1054]
184	GGUAGAGGGAGUUGUCAAG	CUUGACAACUCCCUCUACC		[2015-2033]
185	UUUUUAUAUCGAUCUCUUA	UAAGAGAUCGAUAUAAAAA		[2587-2605]
186	UGGUGGGUUGGUAGUUUCU	AGAAACUACCAACCCACCA		[1977-1995]
187	CUUUUUAUAUCCCAUUUUU	AAAAAUGGGAUAUAAAAAG		[2573-2591]
188	CUGCCCUCAACAAGAUGUU	AACAUCUUGUUGAGGGCAG		[634-652]
189	AAAGUUUUGAGCUUCUCAA	UUGAGAAGCUCAAAACUUU		[96-114]
190	GAGGAAGAGAAUCUCCGCA	UGCGGAGAUUCUCUUCCUC		[1104-1122]
191	GUGAGCGCUUCGAGAUGUU	AACAUCUCGAAGCGCUCAC	Rat,Mnk	[1255-1273]
192	AAGCACAUCUGCAUUUUCA	UGAAAAUGCAGAUGUGCUU		[2531-2549]
193	GGAUCCACCAAGACUUGUU	AACAAGUCUUGGUGGAUCC		[2150-2168]
194	CUGACAACCUCUUGGUCGA	UCGACCAAGAGGUUGUCAG		[2059-2077]
195	UUACAUUCUGCAAGCACAU	AUGUGCUUGCAGAAUGUAA		[2520-2538]
196	UUCUGUCCCUUCCCAGAAA	UUUCUGGGAAGGGACAGAA		[536-554]
197	CCUGGAGGAUUUCAUCUCU	AGAGAUGAAAUCCUCCAGG		[2116-2134]
198	AAGGAAAUUUGCGUGUGGA	UCCACACGCAAAUUUCCUU	Mnk	[844-862]
199	AAGAAAUGUUCUUGCAGUU	AACUGCAAGAACAUUUCUU		[1693-1711]
200	GCCUGACUCAGACUGACAU	AUGUCAGUCUGAGUCAGGC		[1418-1436]
201	CCCAGGACUUCCAUUUGCU	AGCAAAUGGAAGUCCUGGG		[1549-1567]
202	CCACUGGAUGGAGAAUAUU	AAUAUUCUCCAUCCAGUGG	Mnk	[1215-1233]
203	UCCAAAAAGGGUCAGUCUA	UAGACUGACCCUUUUUGGA		[1362-1380]
204	AACAAUGGUUCACUGAAGA	UCUUCAGUGAACCAUUGUU		[403-421]
205	AGAUUUUAAGGUUUUUACU	AGUAAAAACCUUAAAAUCU		[1652-1670]
206	UCGACCUUAGUACCUAAAA	UUUUAGGUACUAAGGUCGA		[2074-2092]
207	CCUCUUGGUCGACCUUAGU	ACUAAGGUCGACCAAGAGG		[2066-2084]
208	ACAUUUUCAGACCUAUGGA	UCCAUAGGUCUGAAAAUGU	Mnk	[303-321]
209	AGGGUUAAUGAAAUAAUGU	ACAUUAUUUCAUUAACCCU		[1868-1886]
210	UGAAGACCCAGGUCCAGAU	AUCUGGACCUGGGUCUUCA	Mnk	[416-434]
211	UGCGUGUGGAGUAUUUGGA	UCCAAAUACUCCACACGCA		[853-871]
212	CCCUGUCUGACAACCUCUU	AAGAGGUUGUCAGACAGGG		[2053-2071]
213	GAUGUUUGGGAGAUGUAAG	CUUACAUCUCCCAAACAUC		[1677-1695]
214	GGCCCAUAUCUGUGAAAUG	CAUUUCACAGAUAUGGGCC		[1814-1832]
215	GUGUGGAGUAUUUGGAUGA	UCAUCCAAAUACUCCACAC		[856-874]
216	AGGUUUUUACUGUGAGGGA	UCCCUCACAGUAAAAACCU		[1660-1678]
217	GCUGGUGGGUUGGUAGUUU	AAACUACCAACCCACCAGC		[1975-1993]
218	AAACCACCUUUUAUUACAU	AUGUAAUAAAAGGUGGUUU		[1900-1918]
219	GGAGUUGUCAAGUCUUGCU	AGCAAGACUUGACAACUCC		[2022-2040]
220	CCCUCAACAAGAUGUUUUG	CAAAACAUCUUGUUGAGGG		[637-655]
221	ACAUCUUUUACAUUCUGCA	UGCAGAAUGUAAAAGAUGU		[2513-2531]
222	CCCUCCUUCUCCCUUUUUA	UAAAAAGGGAGAAGGAGGG		[2561-2579]
223	CCCAUAUCUGUGAAAUGCU	AGCAUUUCACAGAUAUGGG		[1816-1834]
224	AAUAUUUCACCCUUCAGAU	AUCUGAAGGGUGAAAUAUU	Dog,Mnk	[1228-1246]
225	CCAUAUCUGUGAAAUGCUG	CAGCAUUUCACAGAUAUGG		[1817-1835]
226	AUGGUUCACUGAAGACCCA	UGGGUCUUCAGUGAACCAU		[407-425]
227	UUGGGCAGCUGGUUAGGUA	UACCUAACCAGCUGCCCAA		[2000-2018]

228	GAUAUUGAACAAUGGUUCA	UGAACCAUUGUUCAAUAUC		[396-414]
229	UCCCUUCCCAGAAAACCUA	UAGGUUUUCUGGGAAGGGA	Mnk	[541-559]
230	CUUCUGUCCCUUCCCAGAA	UUCUGGGAAGGGACAGAAG		[535-553]
231	CUUAGAUUUUAAGGUUUUU	AAAAACCUUAAAAUCUAAG		[1649-1667]
232	CUAACUUCAAGGCCCAUAU	AUAUGGGCCUUGAAGUUAG		[1804-1822]
233	GUCCCUUCCCAGAAAACCU	AGGUUUUCUGGGAAGGGAC	Mnk	[540-558]
234	AGUUUUGAGCUUCUCAAAA	UUUUGAGAAGCUCAAAACU		[98-116]
235	AGAUGUAAGAAAUGUUCUU	AAGAACAUUUCUUACAUCU		[1687-1705]
236	UCUGUCCCUUCCCAGAAAA	UUUUCUGGGAAGGGACAGA	Mnk	[537-555]
237	UUUACAUUCUGCAAGCACA	UGUGCUUGCAGAAUGUAAA		[2519-2537]
238	GAGUGCAUUGUGAGGGUUA	UAACCCUCACAAUGCACUC		[1856-1874]
239	GGGCUCCACUGAACAAGUU	AACUUGUUCAGUGGAGCCC		[1576-1594]
240	GGAAGCUGUCCCUCAUGUU	AACAUGAGGGACAGCUUCC		[1776-1794]
241	AGAAACACUUUUCGACAUA	UAUGUCGAAAAGUGUUUCU	Mnk	[876-894]
242	GGGUUGGUAGUUUCUACAG	CUGUAGAAACUACCAACCC		[1981-1999]
243	CCGAGUGGAAGGAAAUUUG	CAAAUUUCCUUCCACUCGG	Dog,Mnk	[836-854]
244	CCCAAGCAAUGGAUGAUUU	AAAUCAUCCAUUGCUUGGG		[361-379]
245	GCUGGAAGGGUCAACAUCU	AGAUGUUGACCCUUCCAGC		[2500-2518]
246	UGUUUGGGAGAUGUAAGAA	UUCUUACAUCUCCCAAACA		[1679-1697]
247	CAGAGUGCAUUGUGAGGGU	ACCCUCACAAUGCACUCUG		[1854-1872]
248	GAAGAAACCACUGGAUGGA	UCCAUCCAGUGGUUUCUUC	Mnk	[1208-1226]
249	GGCCUUGGAACUCAAGGAU	AUCCUUGAGUUCCAAGGCC	Mnk	[1289-1307]
250	GUCGACCUUAGUACCUAAA	UUUAGGUACUAAGGUCGAC		[2073-2091]
251	GGUUUUUACUGUGAGGGAU	AUCCCUCACAGUAAAAACC		[1661-1679]
252	GAUCCACCAAGACUUGUUU	AAACAAGUCUUGGUGGAUC		[2151-2169]
253	ACUACUUCCUGAAAACAAC	GUUGUUUUCAGGAAGUAGU	GP	[323-341]
254	UCAUGUUGAAUUUUCUCUA	UAGAGAAAAUUCAACAUGA		[1788-1806]
255	CCAAGACUUGUUUUAUGCU	AGCAUAAAACAAGUCUUGG		[2157-2175]
256	CAUUUGCACCUACCUCACA	UGUGAGGUAGGUGCAAAUG		[1837-1855]
257	GGUAGUUUCUACAGUUGGG	CCCAACUGUAGAAACUACC		[1986-2004]
258	GACUCAGACUGACAUUCUC	GAGAAUGUCAGUCUGAGUC		[1422-1440]
259	GUAUUUGGAUGACAGAAAC	GUUUCUGUCAUCCAAAUAC	Rb	[863-881]
260	AGAGGGAGUUGUCAAGUCU	AGACUUGACAACUCCCUCU		[2018-2036]
261	AGAAACCACUGGAUGGAGA	UCUCCAUCCAGUGGUUUCU	Mnk	[1210-1228]
262	AAAGAAGAAACCACUGGAU	AUCCAGUGGUUUCUUCUUU	GP,Mnk	[1205-1223]
263	GUAGGACAUACCAGCUUAG	CUAAGCUGGUAUGUCCUAC		[1635-1653]
264	AGUCACAGCACAUGACGGA	UCCGUCAUGUGCUGUGACU	Ms, GP,Mnk	[745-763]
265	CGAGUGGAAGGAAAUUUGC	GCAAAUUUCCUUCCACUCG	Dog,Mnk	[837-855]
266	UCUGGAUCCACCAAGACUU	AAGUCUUGGUGGAUCCAGA		[2147-2165]
267	GGCCUUGAAACCACCUUUU	AAAAGGUGGUUUCAAGGCC		[1893-1911]
268	GGGUUAGUUUACAAUCAGC	GCUGAUUGUAAACUAACCC		[1714-1732]
269	GACAUACCAGCUUAGAUUU	AAAUCUAAGCUGGUAUGUC		[1639-1657]
270	CACCUGAAGUCCAAAAAGG	CCUUUUUGGACUUCAGGUG		[1353-1371]
271	UGUUGAAUUUUCUCUAACU	AGUUAGAGAAAAUUCAACA		[1791-1809]
272	CUGGUUAGGUAGAGGGAGU	ACUCCCUCUACCUAACCAG		[2008-2026]
273	CCAGCUUAGAUUUUAAGGU	ACCUUAAAAUCUAAGCUGG		[1645-1663]
274	GGUCAACAUCUUUUACAUU	AAUGUAAAAGAUGUUGACC		[2508-2526]
275	AGCACAUGACGGAGGUUGU	ACAACCUCCGUCAUGUGCU		[751-769]
276	CCUCUGAGUCAGGAAACAU	AUGUUUCCUGACUCAGAGG	Mnk	[288-306]
277	CCAUCCUCACCAUCAUCAC	GUGAUGAUGGUGAGGAUGG	Rb,Pig,GP	[1000-1018]
278	CUCCCUUUUUAUAUCCCAU	AUGGGAUAUAAAAAGGGAG		[2569-2587]
279	CUUGAAACCACCUUUUAUU	AAUAAAAGGUGGUUUCAAG		[1896-1914]
280	UCUGCAAGCACAUCUGCAU	AUGCAGAUGUGCUUGCAGA		[2526-2544]
281	CUCCUUCUCCCUUUUUAUA	UAUAAAAAGGGAGAAGGAG		[2563-2581]
282	ACUGUACCACCAUCCACUA	UAGUGGAUGGUGGUACAGU	Hamster,Rb,Pig,Mnk	[934-952]
283	UAGGACAUACCAGCUUAGA	UCUAAGCUGGUAUGUCCUA		[1636-1654]

284	AUAUGAUGAUCUGGAUCCA	UGGAUCCAGAUCAUCAUAU		[2138-2156]
285	CCUGACUCAGACUGACAUU	AAUGUCAGUCUGAGUCAGG		[1419-1437]
286	CAGCUUUGAGGUGCGUGUU	AACACGCACCUCAAAGCUG	Pig	[1055-1073]
287	GUCCAAAAAGGGUCAGUCU	AGACUGACCCUUUUUGGAC		[1361-1379]
288	ACACCCUGGAGGAUUUCAU	AUGAAAUCCUCCAGGGUGU		[2112-2130]
289	GUGAGGGAUGUUUGGGAGA	UCUCCCAAACAUCCCUCAC		[1671-1689]
290	ACCUUAGUACCUAAAAGGA	UCCUUUUAGGUACUAAGGU		[2077-2095]
291	UGUGCAGCUGUGGGUUGAU	AUCAACCCACAGCUGCACA		[677-695]
292	CGGACGAUAUUGAACAAUG	CAUUGUUCAAUAUCGUCCG		[391-409]
293	CAUCUCUUGUAUAUGAUGA	UCAUCAUAUACAAGAGAUG		[2128-2146]
294	GUUGAAUUUUCUCUAACUU	AAGUUAGAGAAAAUUCAAC		[1792-1810]
295	UAUCCGAGUGGAAGGAAAU	AUUUCCUUCCACUCGGAUA	Hamster,Mnk	[833-851]
296	UGUAAGAAAUGUUCUUGCA	UGCAAGAACAUUUCUUACA		[1690-1708]
297	CUGCAAGCACAUCUGCAUU	AAUGCAGAUGUGCUUGCAG		[2527-2545]
298	CUGGAGGAUUUCAUCUCUU	AAGAGAUGAAAUCCUCCAG		[2117-2135]
299	UUUCAUCUCUUGUAUAUGA	UCAUAUACAAGAGAUGAAA		[2125-2143]
300	AAAUUUGCGUGUGGAGUAU	AUACUCCACACGCAAAUUU	Mnk	[848-866]
301	GCACAGAGGAAGAGAAUCU	AGAUUCUCUUCCUCUGUGC		[1099-1117]
302	CUUCCCAGAAAACCUACCA	UGGUAGGUUUUCUGGGAAG	Mnk	[544-562]
303	AAGACAGAAGGGCCUGACU	AGUCAGGCCCUUCUGUCUU		[1407-1425]
304	GACGAUAUUGAACAAUGGU	ACCAUUGUUCAAUAUCGUC		[393-411]
305	GGUAAUCUACUGGGACGGA	UCCGUCCCAGUAGAUUACC	Mnk	[1035-1053]
306	AAUCUACUGGGACGGAACA	UGUUCCGUCCCAGUAGAUU	Mnk	[1038-1056]
307	CUUUUACAUUCUGCAAGCA	UGCUUGCAGAAUGUAAAAG		[2517-2535]
308	GUUAAUGAAAUAAUGUACA	UGUACAUUAUUUCAUUAAC		[1871-1889]
309	UCUGAGUCAGGAAACAUUU	AAAUGUUUCCUGACUCAGA	Mnk	[290-308]
310	AUAGUGUGGUGGUGCCCUA	UAGGGCACCACCACACUAU	Mnk	[892-910]
311	UCUCUAACUUCAAGGCCCA	UGGGCCUUGAAGUUAGAGA		[1801-1819]
312	AAGGCCCAUAUCUGUGAAA	UUUCACAGAUAUGGGCCUU		[1812-1830]
313	UAUCGAUCUCUUAUUUUAC	GUAAAAUAAGAGAUCGAUA		[2593-2611]
314	CCCUUUUUAUAUCCCAUUU	AAAUGGGAUAUAAAAAGGG		[2571-2589]
315	GGAGAAUAUUUCACCCUUC	GAAGGGUGAAAUAUUCUCC	Dog,Mnk	[1224-1242]
316	CAGCUGUGGGUUGAUUCCA	UGGAAUCAACCCACAGCUG		[681-699]
317	CCAAAAAGGGUCAGUCUAC	GUAGACUGACCCUUUUUGG		[1363-1381]
318	GGAAGGGUCAACAUCUUUU	AAAAGAUGUUGACCCUUCC		[2503-2521]
319	CACCCUGGAGGAUUUCAUC	GAUGAAAUCCUCCAGGGUG		[2113-2131]
320	CCACAUUCUAGGUAGGUAG	CUACCUACCUAGAAUGUGG		[1732-1750]
321	UCCAGAUGAAGCUCCCAGA	UCUGGGAGCUUCAUCUGGA		[428-446]
322	UGGUCGACCUUAGUACCUA	UAGGUACUAAGGUCGACCA		[2071-2089]
323	AAAAAACUCAUGUUCAAGA	UCUUGAACAUGAGUUUUUU		[1392-1410]
324	CACUUCACCGUACUAACCA	UGGUUAGUACGGUGAAGUG		[1756-1774]
325	UGGAGAAUAUUUCACCCUU	AAGGGUGAAAUAUUCUCCA	Rat,Dog,Mnk	[1223-1241]
326	GAGUAGGACAUACCAGCUU	AAGCUGGUAUGUCCUACUC		[1633-1651]
327	CCUACCUCACAGAGUGCAU	AUGCACUCUGUGAGGUAGG		[1845-1863]
328	AGGGUCAACAUCUUUUACA	UGUAAAAGAUGUUGACCCU		[2506-2524]
329	CAUUCUGCAAGCACAUCUG	CAGAUGUGCUUGCAGAAUG		[2523-2541]
330	CUGUCAUCUUCUGUCCCUU	AAGGGACAGAAGAUGACAG		[528-546]
331	ACAGUUGGGCAGCUGGUUA	UAACCAGCUGCCCAACUGU		[1996-2014]
332	GGUUAAUGAAAUAAUGUAC	GUACAUUAUUUCAUUAACC		[1870-1888]
333	GGACUUCCAUUUGCUUUGU	ACAAAGCAAAUGGAAGUCC		[1553-1571]
334	AAACACUUUUCGACAUAGU	ACUAUGUCGAAAAGUGUUU	Mnk	[878-896]
335	ACCCUUGCUUGCAAUAGGU	ACCUAUUGCAAGCAAGGGU		[1516-1534]
336	UUUGGAUGACAGAAACACU	AGUGUUUCUGUCAUCCAAA		[866-884]
337	CAACAUCUUUUACAUUCUG	CAGAAUGUAAAAGAUGUUG		[2511-2529]
338	AGCUUAGAUUUUAAGGUUU	AAACCUUAAAAUCUAAGCU		[1647-1665]
339	CUCUUGGUCGACCUUAGUA	UACUAAGGUCGACCAAGAG		[2067-2085]

340	UAUUUGGAUGACAGAAACA	UGUUUCUGUCAUCCAAAUA	Rb	[864-882]
341	AAACCUACCAGGGCAGCUA	UAGCUGCCCUGGUAGGUUU		[553-571]
342	CAACAACACCAGCUCCUCU	AGAGGAGCUGGUGUUGUUG	Mnk	[1178-1196]
343	CCCUCCUCAGCAUCUUAUC	GAUAAGAUGCUGAGGAGGG		[818-836]
344	UCACCGUACUAACCAGGGA	UCCCUGGUUAGUACGGUGA		[1760-1778]
345	GACGGAACAGCUUUGAGGU	ACCUCAAAGCUGUUCCGUC	Hamster,Rb,Pig,Mnk	[1048-1066]
346	AGGGAGUUGUCAAGUCUUG	CAAGACUUGACAACUCCCU		[2020-2038]
347	GAGAUGUUCCGAGAGCUGA	UCAGCUCUCGGAACAUCUC	Rat,Rb,Pig,Mnk	[1266-1284]
348	CUGGAUCCACCAAGACUUG	CAAGUCUUGGUGGAUCCAG		[2148-2166]
349	CUGGUGGGUUGGUAGUUUC	GAAACUACCAACCCACCAG		[1976-1994]
350	GGGUCUUUGAACCCUUGCU	AGCAAGGGUUCAAAGACCC		[1506-1524]
351	UCUUCUGUCCCUUCCCAGA	UCUGGGAAGGGACAGAAGA		[534-552]
352	CCAAGUCUGUGACUUGCAC	GUGCAAGUCACAGACUUGG	Mnk	[607-625]
353	GUCCCAAGCAAUGGAUGAU	AUCAUCCAUUGCUUGGGAC		[359-377]
354	UCUACAAGCAGUCACAGCA	UGCUGUGACUGCUUGUAGA	Mnk	[736-754]
355	CUUCAAGGCCCAUAUCUGU	ACAGAUAUGGGCCUUGAAG		[1808-1826]
356	UUGAAACCACCUUUUAUUA	UAAUAAAAGGUGGUUUCAA		[1897-1915]
357	UCAGAAGCACCCAGGACUU	AAGUCCUGGGUGCUUCUGA		[1540-1558]
358	CCAAGCAAUGGAUGAUUUG	CAAAUCAUCCAUUGCUUGG		[362-380]
359	GCAUUUGCACCUACCUCAC	GUGAGGUAGGUGCAAAUGC		[1836-1854]
360	UAGGUGUGCGUCAGAAGCA	UGCUUCUGACGCACACCUA		[1530-1548]
361	ACCUGAAGUCCAAAAAGGG	CCCUUUUUGGACUUCAGGU		[1354-1372]
362	UGGAAGACUCCAGUGGUAA	UUACCACUGGAGUCUUCCA	Mnk	[1021-1039]
363	UGGGACGGAACAGCUUUGA	UCAAAGCUGUUCCGUCCCA	Hamster,Rb,Pig,Mnk	[1045-1063]
364	UUGUAUAUGAUGAUCUGGA	UCCAGAUCAUCAUAUACAA		[2134-2152]
365	GACUGUACCACCAUCCACU	AGUGGAUGGUGGUACAGUC	Hamster,Rb,Pig,Mnk	[933-951]
366	GGAGAUGUAAGAAAUGUUC	GAACAUUUCUUACAUCUCC		[1685-1703]
367	GAAGGAAAUUUGCGUGUGG	CCACACGCAAAUUUCCUUC	Mnk	[843-861]
368	UCAACAUCUUUUACAUUCU	AGAAUGUAAAAGAUGUUGA		[2510-2528]
369	AGACUGACAUUCUCCACUU	AAGUGGAGAAUGUCAGUCU		[1427-1445]
370	UGUUCCGAGAGCUGAAUGA	UCAUUCAGCUCUCGGAACA	Rat,Pig,Mnk	[1270-1288]
371	UUUGAACCCUUGCUUGCAA	UUGCAAGCAAGGGUUCAAA		[1511-1529]
372	GAGAUGUAAGAAAUGUUCU	AGAACAUUUCUUACAUCUC		[1686-1704]
373	UAAGAAAUGUUCUUGCAGU	ACUGCAAGAACAUUUCUUA		[1692-1710]
374	AGCACAUCUGCAUUUUCAC	GUGAAAAUGCAGAUGUGCU		[2532-2550]
375	UUGGAUGACAGAAACACUU	AAGUGUUUCUGUCAUCCAA	Pig	[867-885]
376	CCUUUUUAUAUCCCAUUUU	AAAAUGGGAUAUAAAAAGG		[2572-2590]
377	UGGAUGACAGAAACACUUU	AAAGUGUUUCUGUCAUCCA	Pig	[868-886]
378	GUGCAGCUGUGGGUUGAUU	AAUCAACCCACAGCUGCAC		[678-696]
379	AAGCUGUCCCUCAUGUUGA	UCAACAUGAGGGACAGCUU		[1778-1796]
380	CAGAUGAAGCUCCCAGAAU	AUUCUGGGAGCUUCAUCUG		[430-448]
381	UGAAGUCCAAAAAGGGUCA	UGACCCUUUUUGGACUUCA		[1357-1375]
382	AGGAAAUUUGCGUGUGGAG	CUCCACACGCAAAUUUCCU	Mnk	[845-863]
383	UGGGAGAUGUAAGAAAUGU	ACAUUUCUUACAUCUCCCA		[1683-1701]
384	UCUUGUAUAUGAUGAUCUG	CAGAUCAUCAUAUACAAGA		[2132-2150]
385	GACAGAAACACUUUUCGAC	GUCGAAAAGUGUUUCUGUC	Pig,Dog,Mnk	[873-891]
386	ACAAGCAGUCACAGCACAU	AUGUGCUGUGACUGCUUGU	Mnk	[739-757]
387	CUCCAGUGGUAAUCUACUG	CAGUAGAUUACCACUGGAG	Mnk	[1028-1046]
388	CGUGUGGAGUAUUUGGAUG	CAUCCAAAUACUCCACACG		[855-873]
389	GAGGGAUGUUUGGGAGAUG	CAUCUCCCAAACAUCCCUC		[1673-1691]
390	GGAAAUUUGCGUGUGGAGU	ACUCCACACGCAAAUUUCC	Mnk	[846-864]
391	AGGGAUGUUUGGGAGAUGU	ACAUCUCCCAAACAUCCCU		[1674-1692]
392	AAACUACUUCCUGAAAACA	UGUUUUCAGGAAGUAGUUU	GP	[321-339]
393	CUCAGAUAGCGAUGGUCUG	CAGACCAUCGCUAUCUGAG		[797-815]
394	AUCUCUUGUAUAUGAUGAU	AUCAUCAUAUACAAGAGAU		[2129-2147]
395	AGCAAUGGAUGAUUUGAUG	CAUCAAAUCAUCCAUUGCU		[365-383]

396	ACCAUCCACUACAACUACA	UGUAGUUGUAGUGGAUGGU	GP,Dog,Mnk	[942-960]
397	AGUGGAAGGAAAUUUGCGU	ACGCAAAUUUCCUUCCACU	Mnk	[839-857]
398	GGUCUUUGAACCCUUGCUU	AAGCAAGGGUUCAAAGACC		[1507-1525]
399	CCCAUCCUCACCAUCAUCA	UGAUGAUGGUGAGGAUGGG	Rb,Pig,GP	[999-1017]
400	GAGUGGAAGGAAAUUUGCG	CGCAAAUUUCCUUCCACUC	Dog,Mnk	[838-856]
401	CUUCUUGCAUUCUGGGACA	UGUCCCAGAAUGCAAGAAG		[587-605]
402	UUGCAAUAGGUGUGCGUCA	UGACGCACACCUAUUGCAA		[1524-1542]
403	AGGCCCAUAUCUGUGAAAU	AUUUCACAGAUAUGGGCCU		[1813-1831]
404	CUACAAGCAGUCACAGCAC	GUGCUGUGACUGCUUGUAG	Mnk	[737-755]
405	UCCACCAAGACUUGUUUUA	UAAAACAAGUCUUGGUGGA		[2153-2171]
406	GAUGUUCCGAGAGCUGAAU	AUUCAGCUCUCGGAACAUC	Rat,Pig,Mnk	[1268-1286]
407	AAGCACCCAGGACUUCCAU	AUGGAAGUCCUGGGUGCUU		[1544-1562]
408	AGCUUUGAGGUGCGUGUUU	AAACACGCACCUCAAAGCU	Pig	[1056-1074]
409	AUUUUUAUAUCGAUCUCUU	AAGAGAUCGAUAUAAAAAU		[2586-2604]
410	CCAUUUUUAUAUCGAUCUC	GAGAUCGAUAUAAAAAUGG		[2584-2602]
411	GCACUGGUGUUUUGUUGUG	CACAACAAAACACCAGUGC		[1600-1618]
412	CACAUGACGGAGGUUGUGA	UCACAACCUCCGUCAUGUG		[753-771]
413	CGUACUAACCAGGGAAGCU	AGCUUCCCUGGUUAGUACG		[1764-1782]
414	ACAGCUUUGAGGUGCGUGU	ACACGCACCUCAAAGCUGU	Pig	[1054-1072]
415	UCCUCACCAUCAUCACACU	AGUGUGAUGAUGGUGAGGA	Rb,Pig	[1003-1021]
416	ACUCCAGUGGUAAUCUACU	AGUAGAUUACCACUGGAGU	Mnk	[1027-1045]
417	GGGAGUUGUCAAGUCUUGC	GCAAGACUUGACAACUCCC		[2021-2039]
418	AUUUGCGUGUGGAGUAUUU	AAAUACUCCACACGCAAAU		[850-868]
419	AGAAAUGUUCUUGCAGUUA	UAACUGCAAGAACAUUUCU		[1694-1712]
420	CUGCUCAGAUAGCGAUGGU	ACCAUCGCUAUCUGAGCAG		[794-812]
421	CAUUUUGGGUUUUGGGUCU	AGACCCAAAACCCAAAAUG		[1493-1511]
422	ACCUCUUGGUCGACCUUAG	CUAAGGUCGACCAAGAGGU		[2065-2083]
423	UAUCCCAUUUUUAUAUCGA	UCGAUAUAAAAAUGGGAUA		[2580-2598]
424	UACUGGGACGGAACAGCUU	AAGCUGUUCCGUCCCAGUA	Mnk	[1042-1060]
425	UUAAGGGUUAGUUUACAAU	AUUGUAAACUAACCCUUAA		[1710-1728]
426	GCCCUCAACAAGAUGUUUU	AAAACAUCUUGUUGAGGGC		[636-654]
427	ACUGGAUGGAGAAUAUUUC	GAAAUAUUCUCCAUCCAGU	Mnk	[1217-1235]
428	AGCUGUGGGUUGAUUCCAC	GUGGAAUCAACCCACAGCU		[682-700]
429	UGUCCCUCAUGUUGAAUUU	AAAUUCAACAUGAGGGACA		[1782-1800]
430	AGUCAGGAAACAUUUUCAG	CUGAAAAUGUUUCCUGACU	Mnk	[294-312]
431	CACACCCUGGAGGAUUUCA	UGAAAUCCUCCAGGGUGUG		[2111-2129]
432	GAUGGAGAAUAUUUCACCC	GGGUGAAAUAUUCUCCAUC	Rat,Dog,Mnk	[1221-1239]
433	ACAUGACGGAGGUUGUGAG	CUCACAACCUCCGUCAUGU		[754-772]
434	AGAAUAUUUCACCCUUCAG	CUGAAGGGUGAAAUAUUCU	Dog,Mnk	[1226-1244]
435	UACAAGCAGUCACAGCACA	UGUGCUGUGACUGCUUGUA	Mnk	[738-756]
436	GCGCUAAAAGUUUUGAGCU	AGCUCAAAACUUUUAGCGC	GP	[90-108]
437	GCACCCAGGACUUCCAUUU	AAAUGGAAGUCCUGGGUGC		[1546-1564]
438	UGACACGCUUCCCUGGAUU	AAUCCAGGGAAGCGUGUCA		[203-221]
439	GUCUGUGACUUGCACGUAC	GUACGUGCAAGUCACAGAC	Mnk	[611-629]
440	UAGGUAGAGGGAGUUGUCA	UGACAACUCCCUCUACCUA		[2013-2031]
441	CACCAUCCACUACAACUAC	GUAGUUGUAGUGGAUGGUG	GP,Dog,Mnk	[941-959]
442	GACAUUCUCCACUUCUUGU	ACAAGAAGUGGAGAAUGUC		[1432-1450]
443	UUAUAUCGAUCUCUUAUUU	AAAUAAGAGAUCGAUAUAA		[2590-2608]
444	UGAGGGAUGUUUGGGAGAU	AUCUCCCAAACAUCCCUCA		[1672-1690]
445	CCUGCCCUCAACAAGAUGU	ACAUCUUGUUGAGGGCAGG		[633-651]
446	AAAAGUUUUGAGCUUCUCA	UGAGAAGCUCAAAACUUUU		[95-113]
447	UUUGCACCUACCUCACAGA	UCUGUGAGGUAGGUGCAAA		[1839-1857]
448	AAAACUCAUGUUCAAGACA	UGUCUUGAACAUGAGUUUU		[1394-1412]
449	UGCCCUCAACAAGAUGUUU	AAACAUCUUGUUGAGGGCA		[635-653]
450	CUUGCAGUUAAGGGUUAGU	ACUAACCCUUAACUGCAAG		[1703-1721]
451	AGAUGAAGCUCCCAGAAUG	CAUUCUGGGAGCUUCAUCU		[431-449]

452	AAUAGGUGUGCGUCAGAAG	CUUCUGACGCACACCUAUU		[1528-1546]
453	AUUUUCAGACCUAUGGAAA	UUUCCAUAGGUCUGAAAAU	Mnk	[305-323]
454	ACACUUUUCGACAUAGUGU	ACACUAUGUCGAAAAGUGU	Mnk	[880-898]
455	GCCUGCACUGGUGUUUUGU	ACAAAACACCAGUGCAGGC		[1596-1614]
456	UUCUGCAAGCACAUCUGCA	UGCAGAUGUGCUUGCAGAA		[2525-2543]
457	GCUCAGAUAGCGAUGGUCU	AGACCAUCGCUAUCUGAGC		[796-814]
458	GAAACACUUUUCGACAUAG	CUAUGUCGAAAAGUGUUUC	Mnk	[877-895]
459	CAUCCACUACAACUACAUG	CAUGUAGUUGUAGUGGAUG	GP,Dog,Mnk	[944-962]
460	ACUGGGACGGAACAGCUUU	AAAGCUGUUCCGUCCCAGU	Mnk	[1043-1061]
461	UUUUAUAUCGAUCUCUUAU	AUAAGAGAUCGAUAUAAAA		[2588-2606]
462	GUACCUAAAAGGAAAUCUC	GAGAUUUCCUUUUAGGUAC		[2083-2101]
463	UUCAUCUCUUGUAUAUGAU	AUCAUAUACAAGAGAUGAA		[2126-2144]
464	GGAUGGAGAAUAUUUCACC	GGUGAAAUAUUCUCCAUCC	Mnk	[1220-1238]
465	GGCUUCUUGCAUUCUGGGA	UCCCAGAAUGCAAGAAGCC		[585-603]
466	CAGAGGAAGAGAAUCUCCG	CGGAGAUUCUCUUCCUCUG		[1102-1120]
467	CUAAAAGUUUUGAGCUUCU	AGAAGCUCAAAACUUUUAG		[93-111]
468	GAUCUGGAUCCACCAAGAC	GUCUUGGUGGAUCCAGAUC		[2145-2163]
469	CAAUGGAUGAUUUGAUGCU	AGCAUCAAAUCAUCCAUUG		[367-385]
470	UGUGGAGUAUUUGGAUGAC	GUCAUCCAAAUACUCCACA		[857-875]
471	GCUCUGACUGUACCACCAU	AUGGUGGUACAGUCAGAGC	Hamster,Rb,Pig,Mnk	[928-946]
472	UGAACCCUUGCUUGCAAUA	UAUUGCAAGCAAGGGUUCA		[1513-1531]
473	GCAAGCACAUCUGCAUUUU	AAAAUGCAGAUGUGCUUGC		[2529-2547]
474	CAGGACUUCCAUUUGCUUU	AAAGCAAAUGGAAGUCCUG		[1551-1569]
475	CCUGUCAUCUUCUGUCCCU	AGGGACAGAAGAUGACAGG		[527-545]
476	UCAUGUUCAAGACAGAAGG	CCUUCUGUCUUGAACAUGA		[1399-1417]
477	GUUUCCGUCUGGGCUUCUU	AAGAAGCCCAGACGGAAAC		[574-592]
478	AAACAUUUUCAGACCUAUG	CAUAGGUCUGAAAAUGUUU	Mnk	[301-319]
479	UUAGUACCUAAAAGGAAAU	AUUUCCUUUUAGGUACUAA		[2080-2098]
480	CCCAUUUUUAUAUCGAUCU	AGAUCGAUAUAAAAAUGGG		[2583-2601]
481	CACACUGGAAGACUCCAGU	ACUGGAGUCUUCCAGUGUG	Ms,Rb,Mnk	[1016-1034]
482	CUCUAACUUCAAGGCCCAU	AUGGGCCUUGAAGUUAGAG		[1802-1820]
483	GUUCAAGACAGAAGGGCCU	AGGCCCUUCUGUCUUGAAC		[1403-1421]
484	CAACCUCUUGGUCGACCUU	AAGGUCGACCAAGAGGUUG		[2063-2081]
485	AGCAGUCACAGCACAUGAC	GUCAUGUGCUGUGACUGCU	Mnk	[742-760]
486	CUCAGCAUCUUAUCCGAGU	ACUCGGAUAAGAUGCUGAG	Hamster	[823-841]
487	ACUUCACCGUACUAACCAG	CUGGUUAGUACGGUGAAGU		[1757-1775]
488	UCUCCCUUUUUAUAUCCCA	UGGGAUAUAAAAAGGGAGA		[2568-2586]
489	GACUCCAGUGGUAAUCUAC	GUAGAUUACCACUGGAGUC	Mnk	[1026-1044]
490	ACAUACCAGCUUAGAUUUU	AAAAUCUAAGCUGGUAUGU		[1640-1658]
491	GUAAGAAAUGUUCUUGCAG	CUGCAAGAACAUUUCUUAC		[1691-1709]
492	UCAAGACAGAAGGGCCUGA	UCAGGCCCUUCUGUCUUGA		[1405-1423]
493	AAGACCCAGGUCCAGAUGA	UCAUCUGGACCUGGGUCUU	Mnk	[418-436]
494	CUUUGAACCCUUGCUUGCA	UGCAAGCAAGGGUUCAAAG		[1510-1528]
495	CAGGAAACAUUUUCAGACC	GGUCUGAAAAUGUUUCCUG	Mnk	[297-315]
496	CUGUCCCUUCCCAGAAAAC	GUUUUCUGGGAAGGGACAG	Mnk	[538-556]
497	CCAUAAAAAACUCAUGUUC	GAACAUGAGUUUUUUAUGG		[1388-1406]
498	AUGAAAUAAUGUACAUCUG	CAGAUGUACAUUAUUUCAU		[1875-1893]
499	UGGAAGGGUCAACAUCUUU	AAAGAUGUUGACCCUUCCA		[2502-2520]
500	CGCACAGAGGAAGAGAAUC	GAUUCUCUUCCUCUGUGCG		[1098-1116]

Table B 25 PARP1 - poly (ADP-ribose) polymerase 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-156523967 :172-3216
1	GGAGGAAGGUAUCAACAAA	UUUGUUGAUACCUUCCUCC	Chmp	[1707-1725]
2	GGCGAAGAAGAAAUCUAAA	UUUAGAUUUCUUCUUCGCC	Chmp	[828-846]
3	UGCUGAAACUGAAAUUCAA	UUGAAUUUCAGUUUCAGCA	Chmp	[3176-3194]

4	UGAAGAAGCUGACAGUAAA	UUUACUGUCAGCUUCUUCA	Chmp	[2126-2144]
5	GGUGAUCGGUAGCAACAAA	UUUGUUGCUACCGAUCACC	Chmp	[1953-1971]
6	UGGAAAAGAUGAAUAAGAA	UUCUUAUUCAUCUUUUCCA	Chmp	[1478-1496]
7	GAAUGAAAUUAACUCUUAA	UUAAGAGUUAAUUUCAUUC	Chmp	[1736-1754]
8	GGAUAGUAAGCUUGAAAAA	UUUUUCAAGCUUACUAUCC	Chmp	[861-879]
9	ACCUGAUCUGGAACAUCAA	UUGAUGUUCCAGAUCAGGU	Chmp	[899-917]
10	CGGUGAUCGGUAGCAACAA	UUGUUGCUACCGAUCACCG	Chmp	[1952-1970]
11	CGCCCAUGUUUGAUGGAAA	UUUCCAUCAAACAUGGGCG	Chmp	[293-311]
12	CAAGGAUAGUAAGCUUGAA	UUCAAGCUUACUAUCCUUG	Chmp	[858-876]
13	CAACAAAUCUGAAAAGAGA	UCUCUUUUCAGAUUUGUUG	Chmp	[1719-1737]
14	GGGUAGUACCUGUACUAAA	UUUAGUACAGGUACUACCC	Chmp	[3310-3328]
15	GGGCAAGCACAGUGUCAAA	UUUGACACUGUGCUUGCCC	Rat,Ms,Chmp	[3000-3018]
16	GCCCAUGUUUGAUGGAAAA	UUUUCCAUCAAACAUGGGC	Chmp	[294-312]
17	CAAGGACGAGCUAAAGAAA	UUUCUUUAGCUCGUCCUUG	Chmp	[915-933]
18	GAAGAAAUCUAAAAAAGAA	UUCUUUUUUAGAUUUCUUC	Chmp	[834-852]
19	UAGUAAUACUCGAUUAAAA	UUUUAAUCGAGUAUUACUA	Chmp	[3949-3967]
20	CAGAAAGGAUUUUACAGAA	UUCUGUAAAAUCCUUUCUG	Chmp	[3335-3353]
21	CGAAGAAGAAAUCUAAAAA	UUUUUAGAUUUCUUCUUCG	Chmp	[830-848]
22	GGUGUAUGGAGAAGAUAGA	UCUAUCUUCUCCAUACACC	Chmp	[551-569]
23	GGUUGACAGAGAUUCUGAA	UUCAGAAUCUCUGUCAACC	Rat,Ms,Chmp	[2580-2598]
24	GAACCAACUCCUACUACAA	UUGUAGUAGGAGUUGGUUC		[1865-1883]
25	CCUGGUGGACAUCGUUAAA	UUUAACGAUGUCCACCAGG	Chmp	[1845-1863]
26	GAUAGAGCGUGAAGGCGAA	UUCGCCUUCACGCUCUAUC	Chmp	[2685-2703]
27	GGAACAAGGAUGAAGUGAA	UUCACUUCAUCCUUGUUCC	Chmp	[1379-1397]
28	UGUGGAUCCUGAUUCUGGA	UCCAGAAUCAGGAUCCACA	Chmp	[1767-1785]
29	CAGGCUGCUUUGUCAAGAA	UUCUUGACAAAGCAGCCUG	Chmp	[650-668]
30	CAGGCUACAUGUUUGGUAA	UUACCAAACAUGUAGCCUG	Chmp	[2831-2849]
31	AGCACUUCAUGAAAUUAUA	UAUAAUUUCAUGAAGUGCU	Chmp	[2006-2024]
32	GGUGGAUGGAGUGGAUGAA	UUCAUCCACUCCAUCCACC	Chmp	[807-825]
33	GGUAGAUAAAACUGACAUA	UAUGUCAGUUUUAUCUACC	Chmp	[3451-3469]
34	GAAAUUGAAGGUUAAAAAA	UUUUUUAACCUUCAAUUUC		[1209-1227]
35	CAGCAAGGAUCCCAUCGAU	AUCGAUGGGAUCCUUGCUG		[2526-2544]
36	AGUAAUACUCGAUUAAAAA	UUUUUAAUCGAGUAUUACU	Chmp	[3950-3968]
37	AGGUGGAAAUGCUUGACAA	UUGUCAAGCAUUUCCACCU	Chmp	[2453-2471]
38	GUGGGAUGACCAGCAGAAA	UUUCUGCUGGUCAUCCCAC	Chmp	[405-423]
39	GCUGCGCUCUCCAAAAAAA	UUUUUUUGGAGAGCGCAGC	Chmp	[1672-1690]
40	AGGUGGAAAAGAUGAAUAA	UUAUUCAUCUUUUCCACCU	Chmp	[1475-1493]
41	ACAUCAAGGACGAGCUAAA	UUUAGCUCGUCCUUGAUGU	Chmp	[911-929]
42	GGACCAAGUGUAUGGUCAA	UUGACCAUACACUUGGUCC	Chmp	[1124-1142]
43	CGGUAGCAACAAACUGGAA	UUCCAGUUUGUUGCUACCG	Chmp	[1959-1977]
44	AGGAGGAAGGUAUCAACAA	UUGUUGAUACCUUCCUCCU	Chmp	[1706-1724]
45	GUAUGGAGAAGAUAGAAAA	UUUUCUAUCUUCUCCAUAC	Chmp	[554-572]
46	CGAGUACAUUGUCUAUGAU	AUCAUAGACAAUGUACUCG	Chmp	[3132-3150]
47	GAGUCAAGAGUGAAGGAAA	UUUCCUUCACUCUUGACUC	Chmp	[773-791]
48	GAAGAAGAAAUCUAAAAAA	UUUUUUAGAUUUCUUCUUC	Chmp	[831-849]
49	CGCUCUCCAAAAAAAGCAA	UUGCUUUUUUUUGGAGAGCG	Chmp	[1676-1694]
50	AGGUAUCAACAAAUCUGAA	UUCAGAUUUGUUGAUACCU	Chmp	[1713-1731]
51	CCAAAGGAAUUCCGAGAAA	UUUCUCGGAAUUCCUUUGG	Rat,Ms,Chmp	[1177-1195]
52	GGCUAAUAGUAAUACUCGA	UCGAGUAUUACUAUUAGCC	Chmp	[3943-3961]
53	GAACAUGGGAGCUCUUGAA	UUCAAGAGCUCCCAUGUUC	Chmp	[3827-3845]
54	UCAAGAAAUUGAAGGUUAA	UUAACCUUCAAUUUCUUGA	Chmp	[1205-1223]
55	UCUGGAGGACGACAAGGAA	UUCCUUGUCGUCCUCCAGA	Chmp	[1893-1911]
56	GGUGGACAUCGUUAAAGGA	UCCUUUAACGAUGUCCACC	Chmp	[1848-1866]
57	CCAGGGAAGGAAAAAUACA	UGUAUUUUUCCUUCCCUGG		[3558-3576]
58	AGAAAUUGAAGGUUAAAAA	UUUUUAACCUUCAAUUUCU	Chmp	[1208-1226]
59	GGAGAGAGAUUCUGUUGCA	UGCAACAGAAUCUCUCUCC	Chmp	[3481-3499]

60	CAAUGCGUAUGACUUGGAA	UUCCAAGUCAUACGCAUUG	Chmp	[2649-2667]
61	AGAAGAUGGAGGAAGUAAA	UUUACUUCCUCCAUCUUCU	Chmp	[1493-1511]
62	GAAACAUGUAUGAACUGAA	UUCAGUUCAUACAUGUUUC	Chmp	[2951-2969]
63	GAAGAAGCUGACAGUAAAU	AUUUACUGUCAGCUUCUUC	Chmp	[2127-2145]
64	GAUGAUCUUUGAUGUGGAA	UUCCACAUCAAAGAUCAUC	Chmp	[2193-2211]
65	CUAUGAUAUUGCUCAGGUA	UACCUGAGCAAUAUCAUAG	Chmp	[3144-3162]
66	CUUUUGUCUUCCAAAUUAA	UUAAUUUGGAAGACAAAAG	Chmp	[3896-3914]
67	GCAACAAACUGGAACAGAU	AUCUGUUCCAGUUUGUUGC	Chmp	[1964-1982]
68	GAAGGCAGAGCCUGUUGAA	UUCAACAGGCUCUGCCUUC	Chmp	[1626-1644]
69	GAAAAGAGAAUGAAAUUAA	UUAAUUUCAUUCUCUUUUC	Chmp	[1729-1747]
70	CAAGAAAUUGAAGGUUAAA	UUUAACCUUCAAUUUCUUG	Chmp	[1206-1224]
71	CAUUGAGCACUUCAUGAAA	UUUCAUGAAGUGCUCAAUG	Chmp	[2001-2019]
72	CCAAAAAUUUCACGAAGUA	UACUUCGUGAAAUUUUUGG		[2054-2072]
73	GCGAAGAAGAAAUCUAAAA	UUUUAGAUUUCUUCUUCGC	Chmp	[829-847]
74	UGGAGGACGACAAGGAAAA	UUUUCCUUGUCGUCCUCCA	Chmp	[1895-1913]
75	GGCUGCGCUCUCCAAAAAA	UUUUUUGGAGAGCGCAGCC	Chmp	[1671-1689]
76	CGCGCCUCUUGCAAGAAAU	AUUUCUUGCAAGAGGCGCG	Rat,Ms,Chmp	[223-241]
77	CUGGAGGACGACAAGGAAA	UUUCCUUGUCGUCCUCCAG	Chmp	[1894-1912]
78	AGCUCAAAACUGACAUUAA	UUAAUGUCAGUUUUGAGCU	Rat,Chmp	[2558-2576]
79	CGACAAGGAAAACAGGUAU	AUACCUGUUUUCCUUGUCG	Chmp	[1902-1920]
80	ACGACUUUGGGAUGAAGAA	UUCUUCAUCCCAAAGUCGU	Chmp	[2396-2414]
81	CCUCUGCUUCAGCAGAUAA	UUAUCUGCUGAAGCAGAGG	Chmp	[1316-1334]
82	CCAGGUAGAUAAAACUGAC	GUCAGUUUUAUCUACCUGG	Chmp	[3448-3466]
83	UGACAGAGAUUCUGAAGAA	UUCUUCAGAAUCUCUGUCA	Chmp	[2583-2601]
84	GGGCACUUUUGUCUUCCAA	UUGGAAGACAAAAGUGCCC	Chmp	[3891-3909]
85	AAUUAAAACUCUACCACAA	UUGUGGUAGAGUUUUAAUU		[3909-3927]
86	GAGUGAAGGAAAGAGAAAA	UUUUCUCUUUCCUUCACUC	Rat,Chmp	[780-798]
87	AAGAGUGAAGGAAAGAGAA	UUCUCUUUCCUUCACUCUU	Rat,Chmp	[778-796]
88	GAGGAAGGUAUCAACAAAU	AUUUGUUGAUACCUUCCUC	Chmp	[1708-1726]
89	UGUGCAUCAGCACCAAAAA	UUUUUGGUGCUGAUGCACA	Chmp	[1454-1472]
90	CCACAAAUAUACUUACCCA	UGGGUAAGUAUAUUUGUGG		[3922-3940]
91	GACCUGAUCUGGAACAUCA	UGAUGUUCCAGAUCAGGUC	Chmp	[898-916]
92	GUACUAAACCACCUCAGAA	UUCUGAGGUGGUUUAGUAC		[3321-3339]
93	AGGAUAGUAAGCUUGAAAA	UUUUCAAGCUUACUAUCCU	Chmp	[860-878]
94	CAACUAUGAGAAGCUCAAA	UUUGAGCUUCUCAUAGUUG	Rat,Chmp	[2547-2565]
95	AAGCCGAGAUCAUCAGGAA	UUCCUGAUGAUCUCGGCUU	Chmp	[2600-2618]
96	GUAUGUUAAGAACACUCAU	AUGAGUGUUCUUAACAUAC	Chmp	[2619-2637]
97	UCCUGAUUCUGGACUGGAA	UUCCAGUCCAGAAUCAGGA	Chmp	[1773-1791]
98	CCGAGAUCAUCAGGAAGUA	UACUUCCUGAUGAUCUCGG	Chmp	[2603-2621]
99	GAACAUCAAGGACGAGCUA	UAGCUCGUCCUUGAUGUUC	Chmp	[909-927]
100	GUAUCUGCUGAAACUGAAA	UUUCAGUUUCAGCAGAUAC	Chmp	[3171-3189]
101	GGAUCUAUUUCGCUGACAU	AUGUCAGCGAAAUAGAUCC	Chmp	[2852-2870]
102	GCCUGGUGGACAUCGUUAA	UUAACGAUGUCCACCAGGC	Chmp	[1844-1862]
103	GCUGAAACUGAAAUUCAAU	AUUGAAUUUCAGUUUCAGC	Chmp	[3177-3195]
104	UGUGGAAAGUAUGAAGAAA	UUUCUUCAUACUUUCCACA	Chmp	[2205-2223]
105	GUACGGUGAUCGGUAGCAA	UUGCUACCGAUCACCGUAC	Chmp	[1949-1967]
106	GACUCUGGGUGACUUUGCA	UGCAAAGUCACCCAGAGUC	Chmp	[495-513]
107	AGUAUCUGCUGAAACUGAA	UUCAGUUUCAGCAGAUACU	Chmp	[3170-3188]
108	CAGGUAGAUAAAACUGACA	UGUCAGUUUUAUCUACCUG	Chmp	[3449-3467]
109	GUGUAUGGAGAAGAUAGAA	UUCUAUCUUCUCCAUACAC	Chmp	[552-570]
110	GCAUCAGCACCAAAAAGGA	UCCUUUUUGGUGCUGAUGC	Chmp	[1457-1475]
111	CGAAGUAUCCCAAAAAGUU	AACUUUUUGGGAUACUUCG		[2066-2084]
112	GCAGCUUCAUAACCGAAGA	UCUUCGGUUAUGAAGCUGC		[2727-2745]
113	GAUCCUUCAGCUAACAUUA	UAAUGUUAGCUGAAGGAUC	Chmp	[3040-3058]
114	GAUGGAGGAAGUAAAGGAA	UUCCUUUACUUCCUCCAUC	Chmp	[1497-1515]
115	GGAACCAACUCCUACUACA	UGUAGUAGGAGUUGGUUCC		[1864-1882]

116	CAGCAGAAAGUCAAGAAGA	UCUUCUUGACUUUCUGCUG	Chmp	[415-433]
117	CCUCAGAAAGGAUUUUACA	UGUAAAAUCCUUUCUGAGG	Chmp	[3332-3350]
118	UGCUACAGAGGAUAAAGAA	UUCUUUAUCCUCUGUAGCA	Chmp	[732-750]
119	AGACUAGUCCUAUGGAAAA	UUUUCCAUAGGACUAGUCU		[3501-3519]
120	CCAACAGAAGUACGUGCAA	UUGCACGUACUUCUGUUGG	Chmp	[530-548]
121	GUAUCAACAAAUCUGAAAA	UUUUCAGAUUUGUUGAUAC	Chmp	[1715-1733]
122	CCUUCUCCAGGAAUACUGA	UCAGUAUUCCUGGAGAAGG	Chmp	[3810-3828]
123	GUGGAAAAGAUGAAUAAGA	UCUUAUUCAUCUUUUCCAC	Chmp	[1477-1495]
124	CAUCGAUAUCUUUAAGAUA	UAUCUUAAAGAUAUCGAUG		[2670-2688]
125	CGAGAAAUCUCUUACCUCA	UGAGGUAAGAGAUUUCUCG	Chmp	[1189-1207]
126	CUUCAAGAGCGAUGCCUAU	AUAGGCAUCGCUCUUGAAG		[1080-1098]
127	AGGAGGUGGAAAAGAUGAA	UUCAUCUUUUCCACCUCCU	Chmp	[1472-1490]
128	GGAUGAAGAGGCAGUGAAG	CUUCACUGCCUCUUCAUCC	Chmp	[2112-2130]
129	AAAGGUUUGGGCAAAACUA	UAGUUUUGCCCAAACCUUU	Chmp	[3016-3034]
130	AAGUCAUCGAUAUCUUUAA	UUAAAGAUAUCGAUGACUU		[2666-2684]
131	GAAAGAUGUUAAGCAUUUA	UAAAUGCUUAACAUCUUUC	Chmp	[3621-3639]
132	GGAGCUCUUGAAAUAUGUA	UACAUAUUUCAAGAGCUCC	Chmp	[3834-3852]
133	UGAGGUGGAUGGAGUGGAU	AUCCACUCCAUCCACCUCA	Chmp	[804-822]
134	UGGUAUGAAUUCACCCGAA	UUCGGGUGAAUUCAUACCA	Chmp	[3251-3269]
135	GCAAGUUACCCAAGGGCAA	UUGCCCUUGGGUAACUUGC	Rat,Ms,Chmp	[2987-3005]
136	CCAAAAAGGAGGUGGAAAA	UUUUCCACCUCCUUUUUGG	Chmp	[1466-1484]
137	GGCACUUUUGUCUUCCAAA	UUUGGAAGACAAAAGUGCC	Chmp	[3892-3910]
138	GGAGAAGUUGCCCUUGGAA	UUCCAAGGGCAACUUCUCC	Rat,Chmp	[2935-2953]
139	CUUCCAAAUUAAAACUCUA	UAGAGUUUUAAUUUGGAAG	Chmp	[3903-3921]
140	GAACACUCAUGCAACCACA	UGUGGUUGCAUGAGUGUUC	Chmp	[2628-2646]
141	UCUCAUACUUAGAAACAAA	UUUGUUUCUAAGUAUGAGA	Chmp	[3782-3800]
142	AGAUGAAUAAGAAGAUGGA	UCCAUCUUCUUAUUCAUCU	Chmp	[1484-1502]
143	AGAACGACCUGAUCUGGAA	UUCCAGAUCAGGUCGUUCU	Chmp	[893-911]
144	AGAAAAGGCUGGAGAGAGA	UCUCUCUCCAGCCUUUUCU	Chmp	[3471-3489]
145	GAACAAGGAUGAAGUGAAG	CUUCACUUCAUCCUUGUUC	Chmp	[1380-1398]
146	CCUUUAAGCAGCUUCAUAA	UUAUGAAGCUGCUUAAAGG		[2720-2738]
147	UCAGGAAGUAUGUUAAGAA	UUCUUAACAUACUUCCUGA	Chmp	[2612-2630]
148	ACACCUCUCUACUAUAUAA	UUAUAUAGUAGAGAGGUGU	Chmp	[3113-3131]
149	UGAUCUGGAACAUCAAGGA	UCCUUGAUGUUCCAGAUCA	Chmp	[902-920]
150	AAUUGAAGGUUAAAAAACA	UGUUUUUUAACCUUCAAUU		[1211-1229]
151	AACAAAUCUGAAAAGAGAA	UUCUCUUUUCAGAUUUGUU	Chmp	[1720-1738]
152	GAUUUUGGAAAGAUGUUAA	UUAACAUCUUUCCAAAAUC	Chmp	[3614-3632]
153	CCAAAGGAAGGAACGCUAA	UUAGCGUUCCUUCCUUUGG	Chmp	[3758-3776]
154	AUCUGAAAAGAGAAUGAAA	UUUCAUUCUCUUUUCAGAU	Chmp	[1725-1743]
155	CUCUCAAAUCGCUUUUACA	UGUAAAAGCGAUUUGAGAG	Chmp	[2365-2383]
156	AGAGUGAAGGAAAGAGAAA	UUUCUCUUUCCUUCACUCU	Rat,Chmp	[779-797]
157	GAAGAAGCCGAGAUCAUCA	UGAUGAUCUCGGCUUCUUC	Chmp	[2596-2614]
158	CAUGAAAUUAUAUGAAGAA	UUCUUCAUAUAAUUUCAUG	Chmp	[2013-2031]
159	GCUCAAAACUGACAUUAAG	CUUAAUGUCAGUUUUGAGC	Rat,Chmp	[2559-2577]
160	CAAGAGUGAAGGAAAGAGA	UCUCUUUCCUUCACUCUUG	Rat,Chmp	[777-795]
161	ACGAGUACAUUGUCUAUGA	UCAUAGACAAUGUACUCGU	Chmp	[3131-3149]
162	CAUGGGAGCUCUUGAAAUA	UAUUUCAAGAGCUCCCAUG	Chmp	[3830-3848]
163	CCAAGGUGGAAAUGCUUGA	UCAAGCAUUUCCACCUUGG	Chmp	[2450-2468]
164	UCUGGAACAUCAAGGACGA	UCGUCCUUGAUGUUCCAGA	Chmp	[905-923]
165	UGUUAAAGGUUUUCUCUAA	UUAGAGAAAACCUUUAACA	Chmp	[3357-3375]
166	GGUAUCAACAAAUCUGAAA	UUUCAGAUUUGUUGAUACC	Chmp	[1714-1732]
167	AGAAAGGAUUUUACAGAAA	UUUCUGUAAAAUCCUUUCU	Chmp	[3336-3354]
168	GAUCCUGGAUCUCUCAAAU	AUUUGAGAGAUCCAGGAUC		[2355-2373]
169	GACUAGUCCUAUGGAAAAA	UUUUUCCAUAGGACUAGUC		[3502-3520]
170	AAGGAAAAAUACACUUCCA	UGGAAGUGUAUUUUUCCUU		[3564-3582]
171	GGUGGUUGACAGAGAUUCU	AGAAUCUCUGUCAACCACC	Rat,Ms,Chmp	[2577-2595]

172	GGGUCUGAUGAUAGCAGCA	UGCUGCUAUCAUCAGACCC	Chmp	[2512-2530]
173	CUGCCUGGACCAAGUGUAU	AUACACUUGGUCCAGGCAG	Chmp	[1118-1136]
174	AGCGAUGCCUAUUACUGCA	UGCAGUAAUAGGCAUCGCU		[1087-1105]
175	CCAUCGAUGUCAACUAUGA	UCAUAGUUGACAUCGAUGG	Rat,Chmp	[2537-2555]
176	AGCUGUGGAUCCUGAUUCU	AGAAUCAGGAUCCACAGCU	Chmp	[1764-1782]
177	AGGAGCUACUCAUCUUCAA	UUGAAGAUGAGUAGCUCCU	Chmp	[956-974]
178	CCCAAGGGCUAAUAGUAAU	AUUACUAUUAGCCCUUGGG	Chmp	[3937-3955]
179	GAGAAAUCUCUUACCUCAA	UUGAGGUAAGAGAUUUCUC	Chmp	[1190-1208]
180	CCAUUAUCCAACAUGAAGA	UCUUCAUGUUGGAUAAUGG	Chmp	[1336-1354]
181	ACCCAAGGGCUAAUAGUAA	UUACUAUUAGCCCUUGGGU	Chmp	[3936-3954]
182	AGAAGAAAUCUAAAAAAGA	UCUUUUUUAGAUUUCUUCU	Chmp	[833-851]
183	UCAUCAGGAAGUAUGUUAA	UUAACAUACUUCCUGAUGA	Chmp	[2609-2627]
184	GCAGAAAGUCAAGAAGACA	UGUCUUCUUGACUUUCUGC	Chmp	[417-435]
185	CCUUGCUACAGAGGAUAAA	UUUAUCCUCUGUAGCAAGG	Chmp	[729-747]
186	GAUUCUGUUGCAUAGACUA	UAGUCUAUGCAACAGAAUC	Chmp	[3488-3506]
187	UCGCUGACAUGGUCUCCAA	UUGGAGACCAUGUCAGCGA	Chmp	[2861-2879]
188	CUCAUACUUAGAAACAAAA	UUUUGUUUCUAAGUAUGAG	Chmp	[3783-3801]
189	CCAUUGAGCACUUCAUGAA	UUCAUGAAGUGCUCAAUGG	Chmp	[2000-2018]
190	GUCCUAUGGAAAAAACCAA	UUGGUUUUUUCCAUAGGAC		[3507-3525]
191	AAGGAUAGUAAGCUUGAAA	UUUCAAGCUUACUAUCCUU	Chmp	[859-877]
192	AGGCUACAUGUUUGGUAAA	UUUACCAAACAUGUAGCCU	Chmp	[2832-2850]
193	CUUGAAAUAUGUAGUAUUA	UAAUACUACAUAUUUCAAG	Chmp	[3840-3858]
194	AGAUGAUCUUUGAUGUGGA	UCCACAUCAAAGAUCAUCU	Chmp	[2192-2210]
195	UCAUCAAGAUGAUCUUUGA	UCAAAGAUCAUCUUGAUGA	Chmp	[2186-2204]
196	AGCGUUACAAGCCCUUUAA	UUAAAGGGCUUGUAACGCU		[2708-2726]
197	GGAAAACAGGUAUUGGAUA	UAUCCAAUACCUGUUUUCC	Chmp	[1908-1926]
198	GAUAAAACUGACAUAGAGA	UCUCUAUGUCAGUUUUAUC	Chmp	[3455-3473]
199	GUACAUUGUCUAUGAUAUU	AAUAUCAUAGACAAUGUAC	Chmp	[3135-3153]
200	AGUCAAGAAGACAGCGGAA	UUCCGCUGUCUUCUUGACU	Chmp	[423-441]
201	AAGGAAAACAGGUAUUGGA	UCCAAUACCUGUUUUCCUU	Chmp	[1906-1924]
202	AAGGAAGGAACGCUAACAA	UUGUUAGCGUUCCUUCCUU	Chmp	[3761-3779]
203	UGAGCAAAAGGCAGAUCCA	UGGAUCUGCCUUUUGCUCA	Chmp	[2273-2291]
204	AUUAAAAGUUGCAUUUGAA	UUCAAAUGCAACUUUUAAU	Chmp	[3855-3873]
205	CAGCGUUACAAGCCCUUUA	UAAAGGGCUUGUAACGCUG		[2707-2725]
206	CAACUAAUGACCUGAAGGA	UCCUUCAGGUCAUUAGUUG	Chmp	[941-959]
207	UCGAUAUCUUUAAGAUAGA	UCUAUCUUAAAGAUAUCGA		[2672-2690]
208	GGAAGUCAUCGAUAUCUUU	AAAGAUAUCGAUGACUUCC		[2664-2682]
209	AUGUGGAAAGUAUGAAGAA	UUCUUCAUACUUUCCACAU	Chmp	[2204-2222]
210	AGAUAAAACUGACAUAGAG	CUCUAUGUCAGUUUUAUCU	Chmp	[3454-3472]
211	UCAAGGACGAGCUAAAGAA	UUCUUUAGCUCGUCCUUGA	Chmp	[914-932]
212	CCUUGGAAACAUGUAUGAA	UUCAUACAUGUUUCCAAGG	Ms,Chmp	[2946-2964]
213	GGAAAAGAUGAAUAAGAAG	CUUCUUAUUCAUCUUUUCC	Chmp	[1479-1497]
214	AAACUCUACCACAAAUAUA	UAUAUUUGUGGUAGAGUUU		[3914-3932]
215	CCGUGACAGGCUACAUGUU	AACAUGUAGCCUGUCACGG	Chmp	[2825-2843]
216	AGCAGCUGUGGAUCCUGAU	AUCAGGAUCCACAGCUGCU	Chmp	[1761-1779]
217	GUGAAGAAGCUGACAGUAA	UUACUGUCAGCUUCUUCAC	Chmp	[2125-2143]
218	GGGUGUAUGGAGAAGAUAG	CUAUCUUCUCCAUACACCC	Chmp	[550-568]
219	GGUCAGCUGGUCUUCAAGA	UCUUGAAGACCAGCUGACC	Chmp	[1069-1087]
220	CAUUAAGGUGGUUGACAGA	UCUGUCAACCACCUUAAUG	Rat,Ms,Chmp	[2571-2589]
221	CAGUUCAGGACCUCAUCAA	UUGAUGAGGUCCUGAACUG	Chmp	[2174-2192]
222	AGCUGGUCUUCAAGAGCGA	UCGCUCUUGAAGACCAGCU	Chmp	[1073-1091]
223	AAGGAGGAAGGUAUCAACA	UGUUGAUACCUUCCUCCUU	Chmp	[1705-1723]
224	GAAUGACACCUCUCUACUA	UAGUAGAGAGGUGUCAUUC	Chmp	[3108-3126]
225	GCUGGAGAGAGAUUCUGUU	AACAGAAUCUCUCUCCAGC	Chmp	[3478-3496]
226	CAUACUCCAUCCUCAGUGA	UCACUGAGGAUGGAGUAUG	Chmp	[2297-2315]
227	UCACGAAGUAUCCCAAAAA	UUUUUGGGAUACUUCGUGA		[2063-2081]

228	CACAGCUAGGCAUGAUUGA	UCAAUCAUGCCUAGCUGUG	Chmp	[617-635]
229	GGCAGAGCCUGUUGAAGUU	AACUUCAACAGGCUCUGCC	Chmp	[1629-1647]
230	AAACCAAGCUUCGUUAGAA	UUCUAACGAAGCUUGGUUU	Chmp	[3519-3537]
231	GCUUAAUCCUGUUGGGAGA	UCUCCCAACAGGAUUAAGC	Chmp	[2921-2939]
232	CUUCCACCCUUUUUUCUAA	UUAGAAAAAAGGGUGGAAG	Chmp	[3577-3595]
233	GGUUGUUUUUGUUUUUUCU	AGAAAAAACAAAAACAACC	Chmp	[3427-3445]
234	CUUACCUCAAGAAAUUGAA	UUCAAUUUCUUGAGGUAAG	Chmp	[1199-1217]
235	UGAUGAUAGCAGCAAGGAU	AUCCUUGCUGCUAUCAUCA		[2517-2535]
236	UGUUAAGAACACUCAUGCA	UGCAUGAGUGUUCUUAACA	Chmp	[2622-2640]
237	CUUUAGUUUUGAUUUUGGA	UCCAAAAUCAAAACUAAAG	Chmp	[3604-3622]
238	CUCCAGGAAUACUGAACAU	AUGUUCAGUAUUCCUGGAG	Chmp	[3814-3832]
239	GUGUCAAAGGUUUGGGCAA	UUGCCCAAACCUUUGACAC	Rat,Chmp	[3011-3029]
240	CUAAAAAAGAAAAAGACAA	UUGUCUUUUUCUUUUUUAG	Chmp	[842-860]
241	GAAAUUAACUCUUAAAGGA	UCCUUUAAGAGUUAAUUUC	Chmp	[1740-1758]
242	CCCAAAGGAAUUCCGAGAA	UUCUCGGAAUUCCUUUGGG	Chmp	[1176-1194]
243	CACAAAUAUACUUACCCAA	UUGGGUAAGUAUAUUUGUG		[3923-3941]
244	GCACUUUUGUCUUCCAAAU	AUUUGGAAGACAAAAGUGC	Chmp	[3893-3911]
245	AACAGGUAUUGGAUAUUCA	UGAAUAUCCAAUACCUGUU	Chmp	[1912-1930]
246	UUUUGUCUUCCAAAUUAAA	UUUAAUUUGGAAGACAAAA	Chmp	[3897-3915]
247	CAUUGUCUAUGAUAUUGCU	AGCAAUAUCAUAGACAAUG	Chmp	[3138-3156]
248	AAAAGAUGAAUAAGAAGAU	AUCUUCUUAUUCAUCUUUU	Chmp	[1481-1499]
249	GAGCUUUCCUUCUCCAGGA	UCCUGGAGAAGGAAAGCUC	Chmp	[3803-3821]
250	CCAAGAGCCUUCAGGAGUU	AACUCCUGAAGGCUCUUGG	Chmp	[1568-1586]
251	GGAAGUAUGUUAAGAACAC	GUGUUCUUAACAUACUUCC	Chmp	[2615-2633]
252	AAGGUAUCAACAAAUCUGA	UCAGAUUUGUUGAUACCUU	Chmp	[1712-1730]
253	CUGAAGAAGCCGAGAUCAU	AUGAUCUCGGCUUCUUCAG	Chmp	[2594-2612]
254	CAAAGGAAUUCCGAGAAAU	AUUUCUCGGAAUUCCUUUG	Rat,Ms,Chmp	[1178-1196]
255	CCUCCUUGCUACAGAGGAU	AUCCUCUGUAGCAAGGAGG	Chmp	[726-744]
256	UCAUACUUAGAAACAAAAA	UUUUUGUUUCUAAGUAUGA	Chmp	[3784-3802]
257	GGGAGCUCUUGAAAUAUGU	ACAUAUUUCAAGAGCUCCC	Chmp	[3833-3851]
258	CAGUGAAGAAGCUGACAGU	ACUGUCAGCUUCUUCACUG	Chmp	[2123-2141]
259	CCAUGGUGGAGUAUGAGAU	AUCUCAUACUCCACCAUGG	Chmp	[2225-2243]
260	CACUUCUCCUGCUUCUGGA	UCCAGAAGCAGGAGAAGUG	Rat,Ms,Chmp	[328-346]
261	AGGACCUCAUCAAGAUGAU	AUCAUCUUGAUGAGGUCCU	Chmp	[2180-2198]
262	GGAGGUGGAAAAGAUGAAU	AUUCAUCUUUUCCACCUCC	Chmp	[1473-1491]
263	CCCAGGAGUCAAGAGUGAA	UUCACUCUUGACUCCUGGG	Chmp	[768-786]
264	CCAAAUUAAAACUCUACCA	UGGUAGAGUUUUAAUUUGG		[3906-3924]
265	CUUCUCCAGGAAUACUGAA	UUCAGUAUUCCUGGAGAAG	Chmp	[3811-3829]
266	CGUCUUUAGUUUUGAUUUU	AAAAUCAAAACUAAAGACG	Chmp	[3601-3619]
267	CACGCUUCACAUAUCAGCA	UGCUGAUAUGUGAAGCGUG	Chmp	[2971-2989]
268	CAAGAGCGAUGCCUAUUAC	GUAAUAGGCAUCGCUCUUG		[1083-1101]
269	AAAAAGACAAGGAUAGUAA	UUACUAUCCUUGUCUUUUU	Chmp	[851-869]
270	CCCUGAUCCUUCAGCUAAC	GUUAGCUGAAGGAUCAGGG	Chmp	[3036-3054]
271	CCCGGAACAAGGAUGAAGU	ACUUCAUCCUUGUUCCGGG	Chmp	[1376-1394]
272	GAGAGAGAUUCUGUUGCAU	AUGCAACAGAAUCUCUCUC	Chmp	[3482-3500]
273	CUGAAAAGAGAAUGAAAUU	AAUUUCAUUCUCUUUUCAG	Chmp	[1727-1745]
274	CGUAUGACUUGGAAGUCAU	AUGACUUCCAAGUCAUACG	Chmp	[2654-2672]
275	UAAGGUGGUUGACAGAGAU	AUCUCUGUCAACCACCUUA	Rat,Ms,Chmp	[2574-2592]
276	GAGUACAUUGUCUAUGAUA	UAUCAUAGACAAUGUACUC	Chmp	[3133-3151]
277	UCAGCAAUCUAUCAGGGAA	UUCCCUGAUAGAUUGCUGA		[6-24]
278	GUUGCAUAGACUAGUCCUA	UAGGACUAGUCUAUGCAAC		[3494-3512]
279	CGCUCCUGAACAAUGCAGA	UCUGCAUUGUUCAGGAGCG		[2420-2438]
280	GGACGACAAGGAAAACAGG	CCUGUUUUCCUUGUCGUCC	Chmp	[1899-1917]
281	GCACUUCAUGAAAUUAUAU	AUAUAAUUUCAUGAAGUGC	Chmp	[2007-2025]
282	AUGAGAAGCUCAAAACUGA	UCAGUUUUGAGCUUCUCAU	Rat,Chmp	[2552-2570]
283	UAGAUAAAACUGACAUAGA	UCUAUGUCAGUUUUAUCUA	Chmp	[3453-3471]

284	CGAUGUCAACUAUGAGAAG	CUUCUCAUAGUUGACAUCG	Rat,Chmp	[2541-2559]
285	AUGAAGAGGCAGUGAAGAA	UUCUUCACUGCCUCUUCAU	Chmp	[2114-2132]
286	UGCGCAUGUCCUGGAGAAA	UUUCUCCAGGACAUGCGCA	Chmp	[1797-1815]
287	GGGAAGGAAAAAUACACUU	AAGUGUAUUUUUCCUUCCC		[3561-3579]
288	GAACUCCUCUGCUUCAGCA	UGCUGAAGCAGAGGAGUUC	Chmp	[1311-1329]
289	CAGGAAGUAUGUUAAGAAC	GUUCUUAACAUACUUCCUG	Chmp	[2613-2631]
290	CCUGAACAAUGCAGACAGU	ACUGUCUGCAUUGUUCAGG	Chmp	[2424-2442]
291	AUGAGAUCGACCUUCAGAA	UUCUGAAGGUCGAUCUCAU	Chmp	[2237-2255]
292	CAUCCAGGCUGCUUUGUCA	UGACAAAGCAGCCUGGAUG		[646-664]
293	GAUGAAGAGGCAGUGAAGA	UCUUCACUGCCUCUUCAUC	Chmp	[2113-2131]
294	AGGUCAAGGAGGAAGGUAU	AUACCUUCCUCCUUGACCU	Chmp	[1700-1718]
295	GGAAGGUAUCAACAAAUCU	AGAUUUGUUGAUACCUUCC	Chmp	[1710-1728]
296	CAUAGACUAGUCCUAUGGA	UCCAUAGGACUAGUCUAUG		[3498-3516]
297	UGGAACAGAUGCCGUCCAA	UUGGACGGCAUCUGUUCCA	Chmp	[1973-1991]
298	UGGAGGAGUGACAGGCAAA	UUUGCCUGUCACUCCUCCA	Chmp	[444-462]
299	AGCUACUCAUCUUCAACAA	UUGUUGAAGAUGAGUAGCU	Chmp	[959-977]
300	AAUAGUAAUACUCGAUUAA	UUAAUCGAGUAUUACUAUU	Chmp	[3947-3965]
301	AGAUCGACCUUCAGAAGAU	AUCUUCUGAAGGUCGAUCU	Chmp	[2240-2258]
302	AAAAGAGAAUGAAAUUAAC	GUUAAUUUCAUUCUCUUUU	Chmp	[1730-1748]
303	GAACGCUAACAAUUUCUCA	UGAGAAAUUGUUAGCGUUC	Chmp	[3768-3786]
304	CCAAGGGCUAAUAGUAAUA	UAUUACUAUUAGCCCUUGG	Chmp	[3938-3956]
305	CUGUGCAUCAGCACCAAAA	UUUUGGUGCUGAUGCACAG	Chmp	[1453-1471]
306	AGGAUCCCAUCGAUGUCAA	UUGACAUCGAUGGGAUCCU		[2531-2549]
307	AAAUCUGAAAAGAGAAUGA	UCAUUCUCUUUUCAGAUUU	Chmp	[1723-1741]
308	CCUGAUCCUUCAGCUAACA	UGUUAGCUGAAGGAUCAGG	Chmp	[3037-3055]
309	UUUACAGAAACGUGUUAAA	UUUAACACGUUUCUGUAAA	Chmp	[3345-3363]
310	CAGCUAACAUUAGUCUGGA	UCCAGACUAAUGUUAGCUG	Chmp	[3047-3065]
311	GAGGCAGUGAAGAAGCUGA	UCAGCUUCUUCACUGCCUC	Chmp	[2119-2137]
312	CACGAAGUAUCCCAAAAAG	CUUUUUGGGAUACUUCGUG		[2064-2082]
313	AGAGAGAUUCUGUUGCAUA	UAUGCAACAGAAUCUCUCU	Chmp	[3483-3501]
314	CCCACGACUUUGGGAUGAA	UUCAUCCCAAAGUCGUGGG	Chmp	[2393-2411]
315	GGUUUUCUCUAACUUCUCA	UGAGAAGUUAGAGAAAACC	Chmp	[3364-3382]
316	CUCCCUGUGGUAAUUGGGA	UCCCAAUUACCACAGGGAG	Chmp	[3204-3222]
317	GAAACGUGUUAAAGGUUUU	AAAACCUUUAACACGUUUC	Chmp	[3351-3369]
318	GGCUGCUUUGUCAAGAACA	UGUUCUUGACAAAGCAGCC	Chmp	[652-670]
319	GUGACUUUGCAGCAGAGUA	UACUCUGCUGCAAAGUCAC	Chmp	[503-521]
320	GGAUGGUGUAGACGUUCCU	AGGAACGUCUACACCAUCC		[3063-3081]
321	AUUAAAACUCUACCACAAA	UUUGUGGUAGAGUUUUAAU		[3910-3928]
322	GUCAAAGGUUUGGGCAAAA	UUUUGCCCAAACCUUUGAC	Rat,Chmp	[3013-3031]
323	GUUCGUCUUUAGUUUUGAU	AUCAAAACUAAAGACGAAC	Chmp	[3598-3616]
324	GGAGGACGACAAGGAAAAC	GUUUUCCUUGUCGUCCUCC	Chmp	[1896-1914]
325	CAGGAAUACUGAACAUGGG	CCCAUGUUCAGUAUUCCUG	Chmp	[3817-3835]
326	UGAUAUUGCUCAGGUAAAU	AUUUACCUGAGCAAUAUCA	Chmp	[3147-3165]
327	AACCAAGCUUCGUUAGAAU	AUUCUAACGAAGCUUGGUU	Chmp	[3520-3538]
328	AGGAUGAAGAGGCAGUGAA	UUCACUGCCUCUUCAUCCU	Chmp	[2111-2129]
329	GAGGUGGAAAAGAUGAAUA	UAUUCAUCUUUUCCACCUC	Chmp	[1474-1492]
330	CGUUAGAAUGUCUGCCUUA	UAAGGCAGACAUUCUAACG	Chmp	[3530-3548]
331	GAGAGAUUCUGUUGCAUAG	CUAUGCAACAGAAUCUCUC	Chmp	[3484-3502]
332	UGUACUAAACCACCUCAGA	UCUGAGGUGGUUUAGUACA		[3320-3338]
333	GAUUCUGAAGAAGCCGAGA	UCUCGGCUUCUUCAGAAUC	Chmp	[2590-2608]
334	AGUACAUUGUCUAUGAUAU	AUAUCAUAGACAAUGUACU	Chmp	[3134-3152]
335	AGAUGUUAAGCAUUUAUUU	AAAUAAAUGCUUAACAUCU	Chmp	[3624-3642]
336	GUUCAACUAAUGACCUGAA	UUCAGGUCAUUAGUUGAAC	Chmp	[938-956]
337	CAUUAUCCAACAUGAAGAU	AUCUUCAUGUUGGAUAAUG	Chmp	[1337-1355]
338	CAGAGAAGACUCUGGGUGA	UCACCCAGAGUCUUCUCUG	Chmp	[488-506]
339	AAAACUCUACCACAAAUAU	AUAUUUGUGGUAGAGUUUU		[3913-3931]

340	GAAUAAGAAGAUGGAGGAA	UUCCUCCAUCUUCUUAUUC	Chmp	[1488-1506]
341	CACGACUUUGGGAUGAAGA	UCUUCAUCCCAAAGUCGUG	Chmp	[2395-2413]
342	UCAAGAGCGAUGCCUAUUA	UAAUAGGCAUCGCUCUUGA		[1082-1100]
343	CAAUUUCUCAUACUUAGAA	UUCUAAGUAUGAGAAAUUG	Chmp	[3777-3795]
344	CGGAGUCUUCGGAUAAGCU	AGCUUAUCCGAAGACUCCG	Chmp	[176-194]
345	CAAGGAGGAAGGUAUCAAC	GUUGAUACCUUCCUCCUUG	Chmp	[1704-1722]
346	CUGACAUUAAGGUGGUUGA	UCAACCACCUUAAUGUCAG	Rat,Ms,Chmp	[2567-2585]
347	AGGAGUUGUUCUUAGCGCA	UGCGCUAAGAACAACUCCU	Chmp	[1580-1598]
348	AACUAUGAGAAGCUCAAAA	UUUUGAGCUUCUCAUAGUU	Rat,Chmp	[2548-2566]
349	UCCUCUGCUUCAGCAGAUA	UAUCUGCUGAAGCAGAGGA	Chmp	[1315-1333]
350	CAUCAAGGACGAGCUAAAG	CUUUAGCUCGUCCUUGAUG	Chmp	[912-930]
351	AGGAAGGAACGCUAACAAU	AUUGUUAGCGUUCCUUCCU	Chmp	[3762-3780]
352	GAGAAGUUGCCCUUGGAAA	UUUCCAAGGGCAACUUCUC	Rat,Chmp	[2936-2954]
353	CUGCUGAAACUGAAAUUCA	UGAAUUUCAGUUUCAGCAG	Chmp	[3175-3193]
354	AGUUGUUCUUAGCGCACAU	AUGUGCGCUAAGAACAACU	Chmp	[1583-1601]
355	GGCAGUGAAGAAGCUGACA	UGUCAGCUUCUUCACUGCC	Chmp	[2121-2139]
356	GGAAGCUGAGCAAAAGGCA	UGCCUUUUGCUCAGCUUCC		[2267-2285]
357	CGGAUAAGCUCUAUCGAGU	ACUCGAUAGAGCUUAUCCG	Chmp	[185-203]
358	UGCAGUCGCCCAUGUUUGA	UCAAACAUGGGCGACUGCA	Chmp	[287-305]
359	UCAACUAUGAGAAGCUCAA	UUGAGCUUCUCAUAGUUGA	Rat,Chmp	[2546-2564]
360	GAAGGAACGCUAACAAUUU	AAAUUGUUAGCGUUCCUUC	Chmp	[3764-3782]
361	GGUGGAAAUGCUUGACAAC	GUUGUCAAGCAUUUCCACC	Chmp	[2454-2472]
362	GCAGCUGUGGAUCCUGAUU	AAUCAGGAUCCACAGCUGC	Chmp	[1762-1780]
363	CAUUAGUCUGGAUGGUGUA	UACACCAUCCAGACUAAUG	Chmp	[3054-3072]
364	AGGUGGAUGGAGUGGAUGA	UCAUCCACUCCAUCCACCU	Chmp	[806-824]
365	AUAGUAAUACUCGAUUAAA	UUUAAUCGAGUAUUACUAU	Chmp	[3948-3966]
366	CACCAAAAAGGAGGUGGAA	UUCCACCUCCUUUUUGGUG	Chmp	[1464-1482]
367	AGGAAAACAGGUAUUGGAU	AUCCAAUACCUGUUUUCCU	Chmp	[1907-1925]
368	AAAUUAAAACUCUACCACA	UGUGGUAGAGUUUUAAUUU		[3908-3926]
369	CCCUAAAGGCUCAGAACGA	UCGUUCUGAGCCUUUAGGG	Chmp	[881-899]
370	GUGGUAAUUGGGAGAGGUA	UACCUCUCCCAAUUACCAC	Chmp	[3210-3228]
371	AGGGCAAGCACAGUGUCAA	UUGACACUGUGCUUGCCCU	Rat,Ms,Chmp	[2999-3017]
372	GUGUUAAAGGUUUUCUCUA	UAGAGAAAACCUUUAACAC	Chmp	[3356-3374]
373	GGUAGUACCUGUACUAAAC	GUUUAGUACAGGUACUACC	Chmp	[3311-3329]
374	GUGGACAUCGUUAAAGGAA	UUCCUUUAACGAUGUCCAC	Chmp	[1849-1867]
375	GAAAAGAUGAAUAAGAAGA	UCUUCUUAUUCAUCUUUUC	Chmp	[1480-1498]
376	CUGAAAUUCAAUUUUAAGA	UCUUAAAAUUGAAUUUCAG	Chmp	[3184-3202]
377	AUAGACUAGUCCUAUGGAA	UUCCAUAGGACUAGUCUAU		[3499-3517]
378	GCUCUUGAAAUAUGUAGUA	UACUACAUAUUUCAAGAGC	Chmp	[3837-3855]
379	ACGACAAGGAAAACAGGUA	UACCUGUUUUCCUUGUCGU	Chmp	[1901-1919]
380	AUAUCAGCAAGUUACCCAA	UUGGGUAACUUGCUGAUAU	Ms,Chmp	[2981-2999]
381	GGAAGGAACGCUAACAAUU	AAUUGUUAGCGUUCCUUCC	Chmp	[3763-3781]
382	UAACGAGUACAUUGUCUAU	AUAGACAAUGUACUCGUUA	Chmp	[3129-3147]
383	CCCUUUAAGCAGCUUCAUA	UAUGAAGCUGCUUAAAGGG		[2719-2737]
384	GCUUUGUCAAGAACAGGGA	UCCCUGUUCUUGACAAAGC	Chmp	[656-674]
385	UCUUCAAGAGCGAUGCCUA	UAGGCAUCGCUCUUGAAGA		[1079-1097]
386	CGAGAUCAUCAGGAAGUAU	AUACUUCCUGAUGAUCUCG	Chmp	[2604-2622]
387	GGAUUUUACAGAAACGUGU	ACACGUUUCUGUAAAAUCC	Chmp	[3341-3359]
388	CUAAUUUCAUACUAUUUAG	CUAAAUAGUAUGAAAUUAG	Chmp	[3660-3678]
389	AGUUGCAUUUGAAAUUCUU	AAGAAUUUCAAAUGCAACU	Chmp	[3861-3879]
390	ACAGUGCGAGUCAGCUCAA	UUGAGCUGACUCGCACUGU	Chmp	[698-716]
391	CUCCUCUGCUUCAGCAGAU	AUCUGCUGAAGCAGAGGAG	Chmp	[1314-1332]
392	UGAAAUUCUUGACUUUCUU	AAGAAAGUCAAGAAUUUCA	Chmp	[3870-3888]
393	GGAACAUCAAGGACGAGCU	AGCUCGUCCUUGAUGUUCC	Chmp	[908-926]
394	GGUGGAAAAGAUGAAUAAG	CUUAUUCAUCUUUUCCACC	Chmp	[1476-1494]
395	AACCGGAAGGAGUGGGUAA	UUACCCACUCCUUCCGGUU	Chmp	[1156-1174]

396	CUUGGACCGAGUAGCUGAU	AUCAGCUACUCGGUCCAAG		[1008-1026]
397	GGAAGACCAAAGGAAGGAA	UUCCUUCCUUUGGUCUUCC	Chmp	[3752-3770]
398	GCUGCUUUGUCAAGAACAG	CUGUUCUUGACAAAGCAGC	Chmp	[653-671]
399	AGGAAUACUGAACAUGGGA	UCCCAUGUUCAGUAUUCCU	Chmp	[3818-3836]
400	GGCUGGAGAGAGAUUCUGU	ACAGAAUCUCUCUCCAGCC	Chmp	[3477-3495]
401	GAAUUGGUAGCAAGGCAGA	UCUGCCUUGCUACCAAUUC	Chmp	[473-491]
402	GUAGCAACAAACUGGAACA	UGUUCCAGUUUGUUGCUAC	Chmp	[1961-1979]
403	CAAGCACAGUGUCAAAGGU	ACCUUUGACACUGUGCUUG	Rat,Ms,Chmp	[3003-3021]
404	GGAUGGAGUGGAUGAAGUG	CACUUCAUCCACUCCAUCC	Chmp	[810-828]
405	GAAGUAUGUUAAGAACACU	AGUGUUCUUAACAUACUUC	Chmp	[2616-2634]
406	CCUGAUCUGGAACAUCAAG	CUUGAUGUUCCAGAUCAGG	Chmp	[900-918]
407	GUUAAGAACACUCAUGCAA	UUGCAUGAGUGUUCUUAAC	Chmp	[2623-2641]
408	CCCUGUGGUAAUUGGGAGA	UCUCCCAAUUACCACAGGG	Chmp	[3206-3224]
409	UACCCAAGGGCUAAUAGUA	UACUAUUAGCCCUUGGGUA	Chmp	[3935-3953]
410	GAGCACUUCAUGAAAUUAU	AUAAUUUCAUGAAGUGCUC	Chmp	[2005-2023]
411	GAAAAAGACAAGGAUAGUA	UACUAUCCUUGUCUUUUUC	Chmp	[850-868]
412	GGUAGCAAGGCAGAGAAGA	UCUUCUCUGCCUUGCUACC	Chmp	[478-496]
413	GAAGAUGGAGGAAGUAAAG	CUUUACUUCCUCCAUCUUC	Chmp	[1494-1512]
414	AGUCCUAUGGAAAAAACCA	UGGUUUUUUCCAUAGGACU		[3506-3524]
415	CGUGUUAAAGGUUUUCUCU	AGAGAAAACCUUUAACACG	Chmp	[3355-3373]
416	GGAUGGAAUUGGUAGCAAG	CUUGCUACCAAUUCCAUCC	Chmp	[468-486]
417	UACUAAACCACCUCAGAAA	UUUCUGAGGUGGUUUAGUA		[3322-3340]
418	AUGAUAUUGCUCAGGUAAA	UUUACCUGAGCAAUAUCAU	Chmp	[3146-3164]
419	GACACCUCUCUACUAUAUA	UAUAUAGUAGAGAGGUGUC	Chmp	[3112-3130]
420	AGAUCAUCAGGAAGUAUGU	ACAUACUUCCUGAUGAUCU	Chmp	[2606-2624]
421	GGUCAAGGAGGAAGGUAUC	GAUACCUUCCUCCUUGACC	Chmp	[1701-1719]
422	AGGAGUCAAGAGUGAAGGA	UCCUUCACUCUUGACUCCU	Chmp	[771-789]
423	UUGCUCAGGUAAAUCUGAA	UUCAGAUUUACCUGAGCAA	Chmp	[3152-3170]
424	GAAAUUCUUGACUUUCUUA	UAAGAAAGUCAAGAAUUUC	Chmp	[3871-3889]
425	AGACAAGGAUAGUAAGCUU	AAGCUUACUAUCCUUGUCU	Chmp	[855-873]
426	AGCAGAAAGUCAAGAAGAC	GUCUUCUUGACUUUCUGCU	Chmp	[416-434]
427	UUAAAAGUUGCAUUUGAAA	UUUCAAAUGCAACUUUUAA	Chmp	[3856-3874]
428	ACUUCUCCUGCUUCUGGAA	UUCCAGAAGCAGGAGAAGU	Rat,Ms,Chmp	[329-347]
429	AGCUUGAAAAAGCCCUAAA	UUUAGGGCUUUUUCAAGCU	Chmp	[869-887]
430	ACAGAAACGUGUUAAAGGU	ACCUUUAACACGUUUCUGU	Chmp	[3348-3366]
431	UAGACUAGUCCUAUGGAAA	UUUCCAUAGGACUAGUCUA		[3500-3518]
432	AGGUAAAUCUGAAGUAUCU	AGAUACUUCAGAUUUACCU	Chmp	[3158-3176]
433	CCCUUGGAAACAUGUAUGA	UCAUACAUGUUUCCAAGGG	Ms,Chmp	[2945-2963]
434	GGAGUAUGAGAUCGACCUU	AAGGUCGAUCUCAUACUCC	Chmp	[2232-2250]
435	UGGGUAGUACCUGUACUAA	UUAGUACAGGUACUACCCA	Chmp	[3309-3327]
436	UAAGCAGCUUCAUAACCGA	UCGGUUAUGAAGCUGCUUA		[2724-2742]
437	GGUGGAGUAUGAGAUCGAC	GUCGAUCUCAUACUCCACC	Chmp	[2229-2247]
438	GCCUCUUGCAAGAAAUGCA	UGCAUUUCUUGCAAGAGGC	Rat,Ms,Chmp	[226-244]
439	AAAAGGAGGUGGAAAAGAU	AUCUUUUCCACCUCCUUUU	Chmp	[1469-1487]
440	GUAUGAGAUCGACCUUCAG	CUGAAGGUCGAUCUCAUAC	Chmp	[2235-2253]
441	UGGGCACUUUUGUCUUCCA	UGGAAGACAAAAGUGCCCA	Chmp	[3890-3908]
442	CAGGGAAGGAAAAAUACAC	GUGUAUUUUUCCUUCCCUG		[3559-3577]
443	UUGGUAGCAAGGCAGAGAA	UUCUCUGCCUUGCUACCAA	Chmp	[476-494]
444	AGUAUGAGAUCGACCUUCA	UGAAGGUCGAUCUCAUACU	Chmp	[2234-2252]
445	ACUCCAAAAAUUUCACGAA	UUCGUGAAAUUUUUGGAGU	Chmp	[2051-2069]
446	GCCUGUCCAAGAAGAUGGU	ACCAUCUUCUUGGACAGGC	Ms	[584-602]
447	AGGCAUCAGCAAUCUAUCA	UGAUAGAUUGCUGAUGCCU		[1-19]
448	GUCCCGGAACAAGGAUGAA	UUCAUCCUUGUUCCGGGAC	Chmp	[1374-1392]
449	CUUCAUGAAAUUAUAUGAA	UUCAUAUAAUUUCAUGAAG	Chmp	[2010-2028]
450	UUGGAAAGAUGUUAAGCAU	AUGCUUAACAUCUUUCCAA	Chmp	[3618-3636]
451	AGCUCUAUCGAGUCGAGUA	UACUCGACUCGAUAGAGCU	Chmp	[191-209]

452	ACCAGCAGAAAGUCAAGAA	UUCUUGACUUUCUGCUGGU	Chmp	[413-431]
453	UGAACAUGGGAGCUCUUGA	UCAAGAGCUCCCAUGUUCA	Chmp	[3826-3844]
454	GGAAAGAUGUUAAGCAUUU	AAAUGCUUAACAUCUUUCC	Chmp	[3620-3638]
455	GUUUGAUGGAAAAGUCCCA	UGGGACUUUUCCAUCAAAC	Chmp	[300-318]
456	AAGAAAUUGAAGGUUAAAA	UUUUAACCUUCAAUUUCUU	Chmp	[1207-1225]
457	CCUGUGCAUCAGCACCAAA	UUUGGUGCUGAUGCACAGG	Chmp	[1452-1470]
458	GAUAAAGAAGCCCUGAAGA	UCUUCAGGGCUUCUUUAUC	Chmp	[742-760]
459	AGAAUGAAAUUAACUCUUA	UAAGAGUUAAUUUCAUUCU	Chmp	[1735-1753]
460	GCAUGAUUGACCGCUGGUA	UACCAGCGGUCAAUCAUGC	Chmp	[626-644]
461	GGAUUUCAUCUGGUGUGAA	UUCACACCAGAUGAAAUCC	Chmp	[3092-3110]
462	UGGAAUUGGUAGCAAGGCA	UGCCUUGCUACCAAUUCCA	Chmp	[471-489]
463	UAACAAUUUCUCAUACUUA	UAAGUAUGAGAAAUUGUUA	Chmp	[3774-3792]
464	GCACCAAAAAGGAGGUGGA	UCCACCUCCUUUUUGGUGC	Chmp	[1463-1481]
465	AGAUCCUGGAUCUCUCAAA	UUUGAGAGAUCCAGGAUCU		[2354-2372]
466	CAAGUGUAUGGUCAAGACA	UGUCUUGACCAUACACUUG	Chmp	[1128-1146]
467	AUAAAACUGACAUAGAGAA	UUCUCUAUGUCAGUUUUAU	Chmp	[3456-3474]
468	UGCGCCUGUCCAAGAAGAU	AUCUUCUUGGACAGGCGCA	Rat,Ms,Chmp	[581-599]
469	GGGAUGACCAGCAGAAAGU	ACUUUCUGCUGGUCAUCCC	Chmp	[407-425]
470	AACAGAUGCCGUCCAAGGA	UCCUUGGACGGCAUCUGUU	Chmp	[1976-1994]
471	CUAUGAGAAGCUCAAAACU	AGUUUUGAGCUUCUCAUAG	Rat,Chmp	[2550-2568]
472	AAAGAAAAAGACAAGGAUA	UAUCCUUGUCUUUUUCUUU	Chmp	[847-865]
473	AGCUUUCCUUCUCCAGGAA	UUCCUGGAGAAGGAAAGCU	Chmp	[3804-3822]
474	UGGUGUAGACGUUCCUCUU	AAGAGGAACGUCUACACCA		[3066-3084]
475	AAGCACGCUUCACAUAUCA	UGAUAUGUGAAGCGUGCUU	Chmp	[2968-2986]
476	AAUUUCUCAUACUUAGAAA	UUUCUAAGUAUGAGAAAUU	Chmp	[3778-3796]
477	UGGGUGACUUUGCAGCAGA	UCUGCUGCAAAGUCACCCA	Chmp	[500-518]
478	AGUCAAGAGUGAAGGAAAG	CUUUCCUUCACUCUUGACU	Rat,Chmp	[774-792]
479	UGACUUUGCAGCAGAGUAU	AUACUCUGCUGCAAAGUCA	Chmp	[504-522]
480	UAAAAAACAGGACCGUAUA	UAUACGGUCCUGUUUUUUA		[1221-1239]
481	AUGACCAGCAGAAAGUCAA	UUGACUUUCUGCUGGUCAU	Chmp	[410-428]
482	ACGCUUCACAUAUCAGCAA	UUGCUGAUAUGUGAAGCGU	Chmp	[2972-2990]
483	UGGUGGAGUAUGAGAUCGA	UCGAUCUCAUACUCCACCA	Chmp	[2228-2246]
484	UGUCCAAGAAGAUGGUGGA	UCCACCAUCUUCUUGGACA	Ms	[587-605]
485	CUUGGGACCGGGAUUUCAU	AUGAAAUCCCGGUCCCAAG	Chmp	[3082-3100]
486	UGUGAAUGACACCUCUCUA	UAGAGAGGUGUCAUUCACA	Chmp	[3105-3123]
487	ACAUGAAGAUCCUGACUCU	AGAGUCAGGAUCUUCAUGU	Rat,Ms,Chmp	[1346-1364]
488	CUUUAAGAUAGAGCGUGAA	UUCACGCUCUAUCUUAAAG	Chmp	[2679-2697]
489	AUACUUAGAAACAAAAAGA	UCUUUUUGUUUCUAAGUAU	Chmp	[3786-3804]
490	UGUAUGGAGAAGAUAGAAA	UUUCUAUCUUCUCCAUACA	Chmp	[553-571]
491	CAUCGAUGUCAACUAUGAG	CUCAUAGUUGACAUCGAUG	Rat,Chmp	[2538-2556]
492	CGAUAUCUUUAAGAUAGAG	CUCUAUCUUAAAGAUAUCG		[2673-2691]
493	AGGUGGAUGGGUUCUCUGA	UCAGAGAACCCAUCCACCU	Chmp	[380-398]
494	AUAAAGAAGCCCUGAAGAA	UUCUUCAGGGCUUCUUUAU	Chmp	[743-761]
495	CCAGCAGAAAGUCAAGAAG	CUUCUUGACUUUCUGCUGG	Chmp	[414-432]
496	CAUCAAGAUGAUCUUUGAU	AUCAAAGAUCAUCUUGAUG	Chmp	[2187-2205]
497	AAAUCUCUUACCUCAAGAA	UUCUUGAGGUAAGAGAUUU	Chmp	[1193-1211]
498	ACUGAAGCACGCUUCACAU	AUGUGAAGCGUGCUUCAGU	Chmp	[2964-2982]
499	GAGGACGACAAGGAAAACA	UGUUUUCCUUGUCGUCCUC	Chmp	[1897-1915]
500	UCAUGAAAUUAUAUGAAGA	UCUUCAUAUAAUUUCAUGA	Chmp	[2012-2030]

Table B 26 RAC1 - ras-related C3 botulinum toxin substrate 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-38505164 :432-878
1	GGAGAUUGGUGCUGUAAAA	UUUUACAGCACCAAUCUCC	Chmp	[740-758]
2	GCAGCUUUAUAGUUUUUAA	UUAAAAACUAUAAAGCUGC	Mnk	[2017-2035]

3	CAGUGUAACCCGAGCAAAA	UUUUGCUCGGGUUACACUG		[289-307]
4	CAGUCUUUGUGAUUUCAUA	UAUGAAAUCACAAAGACUG		[1456-1474]
5	CAUCCUAGUGGGAACUAAA	UUUAGUUCCCACUAGGAUG	Chmp,Mnk	[629-647]
6	CAUUGUACAAGGAAUGAAA	UUUCAUUCCUUGUACAAUG		[1631-1649]
7	GGAUACAGCUGGACAAGAA	UUCUUGUCCAGCUGUAUCC	GP,Chn,Dog,Chmp,Mnk	[467-485]
8	GCAUUUAAUUCAUCUUUAA	UUAAAGAUGAAUUAAAUGC	Mnk	[1784-1802]
9	GCAUGUAUGACUUAAUAAA	UUUAUUAAGUCAUACAUGC	Mnk	[2368-2386]
10	AGUCCUGCAUCAUUUGAAA	UUUCAAAUGAUGCAGGACU	Rat,Ms,GP,Chn,Dog, Chmp,Mnk	[555-573]
11	AGAAGAUUAUGACAGAUUA	UAAUCUGUCAUAAUCUUCU	GP,Chn,Dog,Mnk	[482-500]
12	GACUCACAUUCUAUUAAAA	UUUUAAUAGAAUGUGAGUC	Mnk	[1090-1108]
13	CAGCUUUAUAGUUUUUAAA	UUUAAAAACUAUAAAGCUG	Mnk	[2018-2036]
14	CGAGCACUGAACUUUGCAA	UUGCAAAGUUCAGUGCUCG		[1234-1252]
15	AGGAGAUUGGUGCUGUAAA	UUUACAGCACCAAUCUCCU	Chmp	[739-757]
16	GCGGAGAUUUUGAACAGAA	UUCUGUUCAAAAUCUCCGC	Mnk	[1497-1515]
17	AGGUUUUGUUUGUUCUAAA	UUUAGAACAAACAAAACCU		[1059-1077]
18	UGAAGAAGAGGAAGAGAAA	UUUCUCUUCCUCUUCUUCA	Chmp,Mnk	[844-862]
19	CGAUGUUCUGUACAACUUA	UAAGUUGUACAGAACAUCG		[2223-2241]
20	UGAUCUUAGGGAUGAUAAA	UUUAUCAUCCCUAAGAUCA	GP,Chn,Chmp,Mnk	[650-668]
21	CCAUUCUUGUUCAGAUUAA	UUAAUCUGAACAAGAAUGG		[1164-1182]
22	ACACGAUCGAGAAACUGAA	UUCAGUUUCUCGAUCGUGU	GP,Chmp,Mnk	[670-688]
23	GGACAAGAAGAUUAUGACA	UGUCAUAAUCUUCUUGUCC	Ms,Rb,GP,Chn, Dog,Mnk	[477-495]
24	CCUUGUGAGUCCUGCAUCA	UGAUGCAGGACUCACAAGG	Rat,Ms, GP,Chn,Chmp,Mnk	[548-566]
25	CAAUGCAUUUCCUGGAGAA	UUCUCCAGGAAAUGCAUUG	Dog,Chmp,Mnk	[374-392]
26	GAAAAUGCCUGCUGUUGUA	UACAACAGCAGGCAUUUUC	Rat,Ms,Dog, Chmp,Mnk	[859-877]
27	UGCAGUAGAUGAUGAAAGA	UCUUUCAUCAUCUACUGCA	Mnk	[1691-1709]
28	CUAGUAACUAGGUGUAAAA	UUUUACACCUAGUUACUAG	Mnk	[1988-2006]
29	AAAUGACAAGCCUUCUUAA	UUAAGAAGGCUUGUCAUUU	Rb	[1119-1137]
30	CCAUGUUACUUUAUUCAGA	UCUGAAUAAAGUAACAUGG		[1944-1962]
31	GCCUCAAGACAGUGUUUGA	UCAAACACUGUCUUGAGGC	GP,Chn,Dog, Chmp,Mnk	[790-808]
32	CCCAAAUUGGGCAUUUAAU	AUUAAAUGCCCAAUUUGGG	Mnk	[1774-1792]
33	CAUGUAUGACUUAAUAAAU	AUUUAUUAAGUCAUACAUG	Mnk	[2369-2387]
34	GAUGUUCUGUACAACUUAA	UUAAGUUGUACAGAACAUC		[2224-2242]
35	UCGAGAAACUGAAGGAGAA	UUCUCCUUCAGUUUCUCGA	GP,Chmp,Mnk	[676-694]
36	CACGGGUAAAAACUCUAAA	UUUAGAGUUUUUACCCGUG	Mnk	[1654-1672]
37	CCUGGAGAAUAUAUCCCUA	UAGGGAUAUAUUCUCCAGG	Chmp,Mnk	[384-402]
38	GUGGGAGACGGAAACAAGA	UCUUGUUUCCGUCUCCCAC		[266-284]
39	GGUUGGUAUUAUCAGGAAA	UUUCCUGAUAAUACCAACC	Mnk	[1712-1730]
40	ACUUUUUGUUACAGAUUAA	UUAAUCUGUAACAAAAAGU		[999-1017]
41	ACGGGUAAAAACUCUAAAA	UUUUAGAGUUUUUACCCGU	Mnk	[1655-1673]
42	AGACUCACAUUCUAUUAAA	UUUAAUAGAAUGUGAGUCU	Mnk	[1089-1107]
43	GAAGAAGAGGAAGAGAAAA	UUUUCUCUUCCUCUUCUUC	Chmp,Mnk	[845-863]
44	UAAGGAGAUUGGUGCUGUA	UACAGCACCAAUCUCCUUA	Chmp	[737-755]
45	CGGAGAUUUUGAACAGAAC	GUUCUGUUCAAAAUCUCCG	Mnk	[1498-1516]
46	AAGGUUAAUUUCUGUCAAA	UUUGACAGAAAUUAACCUU	Mnk	[1672-1690]
47	GAGAACACCGAGCACUGAA	UUCAGUGCUCGGUGUUCUC		[1226-1244]
48	AACCAAUCAGUAAUUUUAA	UUAAAAUUACUGAUUGGUU	Rb	[1041-1059]
49	AAGUGCUUUUCUUAUAGAA	UUCUAUAAGAAAAGCACUU		[1833-1851]
50	CAGUAGAUGAUGAAAGAAA	UUUCUUUCAUCAUCUACUG	Mnk	[1693-1711]
51	GCCUCCUUGUAUUAUAAAA	UUUUAUAAUACAAGGAGGC	Mnk	[1873-1891]
52	CACUGUCACUUGACCAAUA	UAUUGGUCAAGUGACAGUG	Mnk	[2099-2117]
53	AAAUGCAGUAGAUGAUGAA	UUCAUCAUCUACUGCAUUU	Mnk	[1688-1706]
54	GCACGUGUUCCCGACAUAA	UUAUGUCGGGAACACGUGC		[1392-1410]

55	UCAGAUGCGUAAAGCAGAA	UUCUGCUUUACGCAUCUGA		[1325-1343]
56	CUUUAUUCAGAGCUAAUAA	UUAUUAGCUCUGAAUAAAG		[1952-1970]
57	GAACCAAUCAGUAAUUUUA	UAAAAUUACUGAUUGGUUC	Rb	[1040-1058]
58	UUCUGAUAAUGCAUUAGAA	UUCUAAUGCAUUAUCAGAA	Mnk	[1895-1913]
59	GUAUAGAGCUGUAGGUAAA	UUUACCUACAGCUCUAUAC		[329-347]
60	ACAAGAAGAUUAUGACAGA	UCUGUCAUAAUCUUCUUGU	Ms, GP,Chn,Dog,Mnk	[479-497]
61	CAAUGUUAUGGUAGAUGGA	UCCAUCUACCAUAACAUUG	Rat,Rb,Chn,Dog, Mnk,Ms, GP,Chmp	[425-443]
62	GCAUUUCCUGGAGAAUAUA	UAUAUUCUCCAGGAAAUGC	Mnk,Chmp	[378-396]
63	GGUUUUGUUUGUUCUAAAU	AUUUAGAACAAACAAAACC		[1060-1078]
64	AAGCCUUCUUAAAGCCUUA	UAAGGCUUUAAGAAGGCUU	Rb,Ms	[1126-1144]
65	GAGUCCUGCAUCAUUUGAA	UUCAAAUGAUGCAGGACUC	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[554-572]
66	CAGAUUAAUUUUUCCAUAA	UUAUGGAAAAAUUAAUCUG	Rat,Rb,Ms	[1010-1028]
67	CUGACGAUGUUCUGUACAA	UUGUACAGAACAUCGUCAG		[2219-2237]
68	ACAGUAUUUUGACAAAAUA	UAUUUUGUCAAAAUACUGU	Mnk	[1592-1610]
69	GCAGUAGAUGAUGAAAGAA	UUCUUUCAUCAUCUACUGC	Mnk	[1692-1710]
70	AGUGGGAACUAAACUUGAU	AUCAAGUUUAGUUCCCACU	Mnk,Chmp	[635-653]
71	AAAGGUUAAUUUCUGUCAA	UUGACAGAAAUUAACCUUU	Mnk	[1671-1689]
72	CAAAAUACCUUCUGAACUA	UAGUUCAGAAGGUAUUUUG	Mnk,Ms	[1190-1208]
73	AGUGGAGAUUUACACUACA	UGUAGUGUAAAUCUCCACU	Mnk	[1614-1632]
74	AAACUAUGAACCUUCUUAA	UUAAGAAGGUUCAUAGUUU	Mnk	[2055-2073]
75	GUAUUUUGACAAAAUACGA	UCGUAUUUUGUCAAAAUAC	Mnk	[1595-1613]
76	AGUUCAGACUCACAUUCUA	UAGAAUGUGAGUCUGAACU	Mnk	[1084-1102]
77	GACUUAAUAAAUCCUUGAA	UUCAAGGAUUUAUUAAGUC	Mnk	[2376-2394]
78	GAAAGUGUCACGGGUAAAA	UUUUACCCGUGACACUUUC		[1646-1664]
79	AGAUUGGUGCUGUAAAAUA	UAUUUUACAGCACCAAUCU	Chmp	[742-760]
80	GCAGAAUUGUGGAGUGUUU	AAACACUCCACAAUUCUGC	Mnk,Ms	[2309-2327]
81	CCGAGCACUGAACUUUGCA	UGCAAAGUUCAGUGCUCGG		[1233-1251]
82	AGAAGAAGCUGACUCCCAU	AUGGGAGUCAGCUUCUUCU	Rat,Dog,Mnk,Ms, GP,Chmp	[691-709]
83	CAAGACAGUGUUUGACGAA	UUCGUCAAACACUGUCUUG	Mnk,Ms,Chmp	[794-812]
84	AGACCUUCGUCUUUGAGAA	UUCUCAAAGACGAAGGUCU		[1253-1271]
85	AGCUGGACAAGAAGAUUAU	AUAAUCUUCUUGUCCAGCU	Chn,Dog,Mnk,Ms, GP,Chmp	[473-491]
86	GGCAUUUAAUUCAUCUUUA	UAAAGAUGAAUUAAAUGCC	Mnk	[1783-1801]
87	ACGUGUUCCCGACAUAACA	UGUUAUGUCGGGAACACGU		[1394-1412]
88	CCAAAUUGGGCAUUUAAUU	AAUUAAAUGCCCAAUUUGG	Mnk	[1775-1793]
89	CGUGAAGAAGAGGAAGAGA	UCUCUUCCUCUUCUUCACG	Mnk,Chmp	[842-860]
90	UGACAAAAUACGAAGUGGA	UCCACUUCGUAUUUUGUCA	Mnk	[1601-1619]
91	GGUCUGUGAGGUUCUGUAA	UUACAGAACCUCACAGACC	Mnk	[2188-2206]
92	GGGUCUGUGAGGUUCUGUA	UACAGAACCUCACAGACCC	Mnk	[2187-2205]
93	UGCAUUUCCUGGAGAAUAU	AUAUUCUCCAGGAAAUGCA	Mnk,Chmp	[377-395]
94	UGGGAGACGGAAACAAGAA	UUCUUGUUUCCGUCUCCCA		[267-285]
95	GAGCACUGAACUUUGCAAA	UUUGCAAAGUUCAGUGCUC		[1235-1253]
96	GCUUUUGCGGAGAUUUUGA	UCAAAAUCUCCGCAAAAGC		[1491-1509]
97	UGUUAUGGUAGAUGGAAAA	UUUUCCAUCUACCAUAACA	Rat,Rb,Chn,Dog, Mnk,Ms, GP,Chmp	[428-446]
98	GACCAAUACUGACCCUCUU	AAGAGGGUCAGUAUUGGUC	Mnk	[2110-2128]
99	GAACAGCCUCCCGAAUGAA	UUCAUUCGGGAGGCUGUUC		[1341-1359]
100	AAUACGAAGUGGAGAUUUA	UAAAUCUCCACUUCGUAUU	Mnk	[1607-1625]
101	CAGACUCACAUUCUAUUAA	UUAAUAGAAUGUGAGUCUG	Mnk	[1088-1106]
102	CUCCCGUGAAGAAGAGGAA	UUCCUCUUCUUCACGGGAG	Mnk,Chmp	[838-856]
103	CCAACUUUUUGUUACAGAU	AUCUGUAACAAAAAGUUGG	Mnk	[996-1014]
104	CAGCUUUUGCGGAGAUUUU	AAAAUCUCCGCAAAAGCUG		[1489-1507]
105	GACGGAAACAAGAAUCUCA	UGAGAUUCUUGUUUCCGUC		[272-290]
106	CACUACAUUGUACAAGGAA	UUCCUUGUACAAUGUAGUG	Mnk	[1626-1644]

107	GUUAGUCGCUAACUUAGUA	UACUAAGUUAGCGACUAAC		[1815-1833]
108	AAAUCUUUCUGAUAAUGCA	UGCAUUAUCAGAAAGAUUU	Mnk	[1889-1907]
109	CAAAGACCUUCGUCUUUGA	UCAAAGACGAAGGUCUUUG		[1250-1268]
110	CUGUGCUAGUGCUGACGAU	AUCGUCAGCACUAGCACAG		[2208-2226]
111	AGAAACUGAAGGAGAAGAA	UUCUUCUCCUUCAGUUUCU	Rb,Dog,Mnk,GP,Chmp	[679-697]
112	AAUGACAAGCCUUCUUAAA	UUUAAGAAGGCUUGUCAUU	Rb	[1120-1138]
113	CGAAGUGGAGAUUUACACU	AGUGUAAAUCUCCACUUCG	Mnk	[1611-1629]
114	UUGCAUGUAUGACUUAAUA	UAUUAAGUCAUACAUGCAA	Mnk	[2366-2384]
115	AGAACAGCCUCCCGAAUGA	UCAUUCGGGAGGCUGUUCU		[1340-1358]
116	CAGUGUUUGACGAAGCGAU	AUCGCUUCGUCAAACACUG	Mnk,Chmp	[799-817]
117	GAUUGGUGCUGUAAAAUAC	GUAUUUUACAGCACCAAUC		[743-761]
118	GGUAAAACUUGCCUACUGA	UCAGUAGGCAAGUUUUACC	Chn,Mnk,GP,Chmp	[342-360]
119	GGGAGACGGAAACAAGAAU	AUUCUUGUUUCCGUCUCCC		[268-286]
120	CAUAAAACCAUUUUUUGAA	UUCAAAAAAUGGUUUUAUG		[1024-1042]
121	GUUUUUUUGUCGAUUAGUA	UACUAAUCGACAAAAAAAC		[1915-1933]
122	CAAAGACAGUAUUUUGACA	UGUCAAAAUACUGUCUUUG	Mnk	[1587-1605]
123	CCAUAAAACCAUUUUUUGA	UCAAAAAAUGGUUUUAUGG		[1023-1041]
124	CGAUCGAGAAACUGAAGGA	UCCUUCAGUUUCUCGAUCG	Mnk,GP,Chmp	[673-691]
125	CAAGAAGAUUAUGACAGAU	AUCUGUCAUAAUCUUCUUG	Chn,Dog,Mnk,Ms, GP	[480-498]
126	GAUAAUUCUUAAACUAUGA	UCAUAGUUUAAGAAUUAUC	Mnk	[2045-2063]
127	GCUUUUCCUUUCUCUUACA	UGUAAGAGAAAGGAAAAGC	Mnk	[1742-1760]
128	GGAGUGUUUUUACAUUGAU	AUCAAUGUAAAAACACUCC	Mnk,Ms	[2319-2337]
129	CGAGUUUUCUGACCAGCUU	AAGCUGGUCAGAAAACUCG		[1476-1494]
130	CCUUCUGACUGAGCAAUAU	AUAUUGCUCAGUCAGAAGG		[1854-1872]
131	GUUUGUUCUAAAUGUAAGA	UCUUACAUUUAGAACAAAC	Mnk	[1066-1084]
132	AUGCCUCCUUGUAUUAUAA	UUAUAAUACAAGGAGGCAU	Mnk	[1871-1889]
133	CAGCUGGACAAGAAGAUUA	UAAUCUUCUUGUCCAGCUG	Chn,Dog,Mnk,Ms, GP,Chmp	[472-490]
134	GUGAAGAAGAGGAAGAGAA	UUCUCUUCCUCUUCUUCAC	Mnk,Chmp	[843-861]
135	GACAGUAUUUUGACAAAAU	AUUUUGUCAAAAUACUGUC	Mnk	[1591-1609]
136	CUCAGAUGCGUAAAGCAGA	UCUGCUUUACGCAUCUGAG		[1324-1342]
137	CUAUGAACCUUCUUAACAU	AUGUUAAGAAGGUUCAUAG	Mnk	[2058-2076]
138	GUAGUUCUCAGAUGCGUAA	UUACGCAUCUGAGAACUAC		[1318-1336]
139	CUUAAAGCCUUAUUUUUCA	UGAAAAAUAAGGCUUUAAG	Rb,Mnk	[1133-1151]
140	AUGUUAUGGUAGAUGGAAA	UUUCCAUCUACCAUAACAU	Rat,Rb,Chn,Dog, Mnk,Ms, GP,Chmp	[427-445]
141	UCAGGAAAUGUUUUCUUAA	UUAAGAAAACAUUUCCUGA		[1723-1741]
142	AGCUGACUCCCAUCACCUA	UAGGUGAUGGGAGUCAGCU	Chn,Dog,Mnk,Ms, GP,Chmp	[697-715]
143	UGAUCUUUUGCUAAUGCAA	UUGCAUUAGCAAAAGAUCA		[2334-2352]
144	UGCUAUUUCCUCUAAUGAA	UUCAUUAGAGGAAAUAGCA		[1517-1535]
145	GCAGCUCAGCUCUUUGGAU	AUCCAAAGAGCUGAGCUGC		[1437-1455]
146	AGUAGAUGAUGAAAGAAAG	CUUUCUUUCAUCAUCUACU	Mnk	[1694-1712]
147	GAAUGAAAGUGUCACGGGU	ACCCGUGACACUUUCAUUC		[1642-1660]
148	CUUUUGCGGAGAUUUUGAA	UUCAAAAUCUCCGCAAAAG		[1492-1510]
149	CAGCGUUGCUUGUAUAGAG	CUCUAUACAAGCAACGCUG		[318-336]
150	AGGUUGGUAUUAUCAGGAA	UUCCUGAUAAUACCAACCU	Mnk	[1711-1729]
151	AUGGGAUACAGCUGGACAA	UUGUCCAGCUGUAUCCCAU	Chn,Dog,Mnk, GP,Chmp	[464-482]
152	CUACAACAGAAUUUUUUAA	UUAAAAAAUUCUGUUGUAG		[2280-2298]
153	AAAGCCUUAUUUUUCAAAA	UUUUGAAAAAUAAGGCUUU	Rb,Mnk	[1136-1154]
154	GAAAGAAAGGUUGGUAUUA	UAAUACCAACCUUUCUUUC	Mnk	[1704-1722]
155	AAUGCAGUAGAUGAUGAAA	UUUCAUCAUCUACUGCAUU	Mnk	[1689-1707]
156	ACACUACAUUGUACAAGGA	UCCUUGUACAAUGUAGUGU	Mnk	[1625-1643]
157	UAGUGGGAACUAAACUUGA	UCAAGUUUAGUUCCCACUA	Mnk,Chmp	[634-652]
158	CCUUCUGAACUACACUGCA	UGCAGUGUAGUUCAGAAGG	Mnk	[1197-1215]

159	AAGACAGUAUUUUGACAAA	UUUGUCAAAAUACUGUCUU	Mnk	[1589-1607]
160	CCAUUUUUUGAACCAAUCA	UGAUUGGUUCAAAAAAUGG		[1031-1049]
161	CGUGUUCCCGACAUAACAU	AUGUUAUGUCGGGAACACG		[1395-1413]
162	AAAGUGUCACGGGUAAAAA	UUUUUACCCGUGACACUUU	Mnk	[1647-1665]
163	GUUACUUUAUUCAGAGCUA	UAGCUCUGAAUAAAGUAAC		[1948-1966]
164	UGAUCAAAGGACAAAGACA	UGUCUUUGUCCUUUGAUCA	Mnk	[1576-1594]
165	ACAUAACAUUGUACUGUAA	UUACAGUACAAUGUUAUGU	Mnk	[1405-1423]
166	CCAUUGAACUCACCAGUGA	UCACUGGUGAGUUCAAUGG	Mnk	[1366-1384]
167	CAAUAUGCCUCCUUGUAUU	AAUACAAGGAGGCAUAUUG	Mnk	[1867-1885]
168	AGAUUUACACUACAUUGUA	UACAAUGUAGUGUAAAUCU	Mnk	[1619-1637]
169	GAAGAUUAUGACAGAUUAC	GUAAUCUGUCAUAAUCUUC	Chn,Dog,Mnk,GP	[483-501]
170	UGUGAUCAAAGGACAAAGA	UCUUUGUCCUUUGAUCACA	Mnk	[1574-1592]
171	AAAGAAAGGUUGGUAUUAU	AUAAUACCAACCUUUCUUU	Mnk	[1705-1723]
172	AGUAAGUGCUUUUCUUAUA	UAUAAGAAAAGCACUUACU	Mnk	[1830-1848]
173	CGUGCAAAGUGGUAUCCUG	CAGGAUACCACUUUGCACG	Rat,Mnk,Ms,Chmp	[579-597]
174	CUACUGUCUUUGACAAUUA	UAAUUGUCAAAGACAGUAG	Mnk,Chmp	[400-418]
175	GACAUAACAUUGUACUGUA	UACAGUACAAUGUUAUGUC	Mnk	[1404-1422]
176	UACGAAGUGGAGAUUUACA	UGUAAAUCUCCACUUCGUA	Mnk	[1609-1627]
177	CCCUUCUGACUGAGCAAUA	UAUUGCUCAGUCAGAAGGG		[1853-1871]
178	GUCACUUGACCAAUACUGA	UCAGUAUUGGUCAAGUGAC	Mnk	[2103-2121]
179	CCUUCUUAAAGCCUUAUUU	AAAUAAGGCUUUAAGAAGG	Rb,Mnk,Ms	[1129-1147]
180	CAAAAUACGAAGUGGAGAU	AUCUCCACUUCGUAUUUUG	Mnk	[1604-1622]
181	CGGAAACAAGAAUCUCAGU	ACUGAGAUUCUUGUUUCCG		[274-292]
182	CUUAGUAAGUGCUUUUCUU	AAGAAAAGCACUUACUAAG	Mnk	[1827-1845]
183	UUUUUUUGUCGAUUAGUAA	UUACUAAUCGACAAAAAAA		[1916-1934]
184	GUGGAGAUUUACACUACAU	AUGUAGUGUAAAUCUCCAC	Mnk	[1615-1633]
185	GUCCCUUGGAACCUUUGUA	UACAAAGGUUCCAAGGGAC	Mnk,Chmp	[906-924]
186	GAACCUUCUUAACAUCACU	AGUGAUGUUAAGAAGGUUC	Mnk	[2062-2080]
187	GUGCAAAGUGGUAUCCUGA	UCAGGAUACCACUUUGCAC	Rat,Mnk,Ms,Chmp	[580-598]
188	GACACUGUCACUUGACCAA	UUGGUCAAGUGACAGUGUC	Mnk	[2097-2115]
189	GUCUGUGAGGUUCUGUAAA	UUUACAGAACCUCACAGAC	Mnk	[2189-2207]
190	CUCAGUGUAACCCGAGCAA	UUGCUCGGGUUACACUGAG		[287-305]
191	ACAGAUUAAUUUUUCCAUA	UAUGGAAAAAUUAAUCUGU	Rat,Rb,Ms	[1009-1027]
192	CGGUGAAUCUGGGCUUAUG	CAUAAGCCCAGAUUCACCG	Mnk,Chmp	[448-466]
193	UGCAUGUAUGACUUAAUAA	UUAUUAAGUCAUACAUGCA	Mnk	[2367-2385]
194	ACUACAUUGUACAAGGAAU	AUUCCUUGUACAAUGUAGU		[1627-1645]
195	CUAUUAAAAUUUAGCCCUA	UAGGGCUAAAUUUUAAUAG	Rb,Mnk	[1100-1118]
196	AAAUGCCUGCUGUUGUAAA	UUUACAACAGCAGGCAUUU	Rat,Dog,Mnk, Ms,Chmp	[861-879]
197	GGAGAUUUUGAACAGAACU	AGUUCUGUUCAAAAUCUCC	Mnk	[1499-1517]
198	UUGUUUGUUCUAAAUGUAA	UUACAUUUAGAACAAACAA	Mnk	[1064-1082]
199	CGACACUGUCACUUGACCA	UGGUCAAGUGACAGUGUCG		[2096-2114]
200	UAUUUUGACAAAAUACGAA	UUCGUAUUUUGUCAAAAUA	Mnk	[1596-1614]
201	GAGAUUGGUGCUGUAAAAU	AUUUUACAGCACCAAUCUC	Chmp	[741-759]
202	AAUGCCUGCUGUUGUAAAU	AUUUACAACAGCAGGCAUU	Rat,Dog,Ms,Chmp	[862-880]
203	GACAAAAUACGAAGUGGAG	CUCCACUUCGUAUUUUGUC	Mnk	[1602-1620]
204	AGCACGUGUUCCCGACAUA	UAUGUCGGGAACACGUGCU		[1391-1409]
205	UCUAGUAACUAGGUGUAAA	UUUACACCUAGUUACUAGA	Mnk	[1987-2005]
206	AUUAAAAUUUAGCCCUAAA	UUUAGGGCUAAAUUUUAAU	Rb,Mnk	[1102-1120]
207	UGCUUUCCAUGUUACUUUA	UAAAGUAACAUGGAAAGCA	Mnk	[1938-1956]
208	UACUGUCUUUGACAAUUAU	AUAAUUGUCAAAGACAGUA	Mnk,Chmp	[401-419]
209	GACAAAGACAGUAUUUUGA	UCAAAAUACUGUCUUUGUC	Mnk	[1585-1603]
210	CAGAUUACCGACACUGUCA	UGACAGUGUCGGUAAUCUG		[2088-2106]
211	CCAAUACUGACCCUCUUUA	UAAAGAGGGUCAGUAUUGG	Mnk	[2112-2130]
212	GGGCUUAUGGGAUACAGCU	AGCUGUAUCCCAUAAGCCC	Chn,Dog,Mnk, GP,Chmp	[458-476]

213	GAACUAAACUUGAUCUUAG	CUAAGAUCAAGUUUAGUUC	Mnk,Chmp	[640-658]
214	CUUGCCUACUGAUCAGUUA	UAACUGAUCAGUAGGCAAG	Chn,Mnk,GP,Chmp	[349-367]
215	CAUUAUGUUUUGCAUGUAU	AUACAUGCAAAACAUAAUG	Mnk	[2357-2375]
216	CUUUGUGAUUUCAUAGCGA	UCGCUAUGAAAUCACAAAG		[1460-1478]
217	CGCUUUGCCUAUUGAUGUU	AACAUCAAUAGGCAAAGCG		[2163-2181]
218	GACGGUAGCUUCUGCAGUU	AACUGCAGAAGCUACCGUC		[1272-1290]
219	UUUGUUUGUUCUAAAUGUA	UACAUUUAGAACAAACAAA	Mnk	[1063-1081]
220	GAAUCUCAGUGUAACCCGA	UCGGGUUACACUGAGAUUC		[283-301]
221	GGGAUACAGCUGGACAAGA	UCUUGUCCAGCUGUAUCCC	Chn,Dog,Mnk, GP,Chmp	[466-484]
222	CAACACUCCCAUCAUCCUA	UAGGAUGAUGGGAGUGUUG	Mnk,Chmp	[617-635]
223	CGUCUUUGAGAAGACGGUA	UACCGUCUUCUCAAAGACG		[1260-1278]
224	AGCUCAGCUCUUUGGAUCA	UGAUCCAAAGAGCUGAGCU	Mnk	[1439-1457]
225	GAUACAGCUGGACAAGAAG	CUUCUUGUCCAGCUGUAUC	Chn,Dog,Mnk, GP,Chmp	[468-486]
226	UUACUUUAUUCAGAGCUAA	UUAGCUCUGAAUAAAGUAA		[1949-1967]
227	GGAACUAAACUUGAUCUUA	UAAGAUCAAGUUUAGUUCC	Mnk,Chmp	[639-657]
228	GAAGUGGAGAUUUACACUA	UAGUGUAAAUCUCCACUUC	Mnk	[1612-1630]
229	GCAGACACUUGCUCUCCUA	UAGGAGAGCAAGUGUCUGC		[1298-1316]
230	UAUCCUAUCCGCAAACAGA	UCUGUUUGCGGAUAGGAUA	Dog,Chmp	[508-526]
231	ACUACAACAGAAUUUUUUA	UAAAAAAUUCUGUUGUAGU		[2279-2297]
232	GCAUUAUGUUUUGCAUGUA	UACAUGCAAAACAUAAUGC	Mnk	[2356-2374]
233	GUAAGAGUUCAGACUCACA	UGUGAGUCUGAACUCUUAC	Mnk	[1079-1097]
234	AGACAGUAUUUUGACAAAA	UUUUGUCAAAAUACUGUCU	Mnk	[1590-1608]
235	CACCGAGCACUGAACUUUG	CAAAGUUCAGUGCUCGGUG		[1231-1249]
236	UGACUUAAUAAAUCCUUGA	UCAAGGAUUUAUUAAGUCA	Mnk	[2375-2393]
237	AAACCAUUUUUUGAACCAA	UUGGUUCAAAAAAUGGUUU		[1028-1046]
238	GUCCCAACACUCCCAUCAU	AUGAUGGGAGUGUUGGGAC	Mnk,Chmp	[613-631]
239	AAGGUUUUGUUUGUUCUAA	UUAGAACAAACAAAACCUU		[1058-1076]
240	GUCCUGCAUCAUUUGAAAA	UUUUCAAAUGAUGCAGGAC	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[556-574]
241	AUGAAAGUGUCACGGGUAA	UUACCCGUGACACUUUCAU		[1644-1662]
242	GGUAAAAACUCUAAAAGGU	ACCUUUUAGAGUUUUUACC	Mnk	[1658-1676]
243	AAAAGUGCUUUCCAUGUUA	UAACAUGGAAAGCACUUUU	Mnk	[1933-1951]
244	UAGUAACUAGGUGUAAAAA	UUUUUACACCUAGUUACUA	Mnk	[1989-2007]
245	AAACAAGAAUCUCAGUGUA	UACACUGAGAUUCUUGUUU		[277-295]
246	CCCGUGAAGAAGAGGAAGA	UCUUCCUCUUCUUCACGGG	Mnk,Chmp	[840-858]
247	UAAGGUUUUGUUUGUUCUA	UAGAACAAACAAAACCUUA		[1057-1075]
248	AACCAUUUUUUGAACCAAU	AUUGGUUCAAAAAAUGGUU		[1029-1047]
249	UGCGGAGAUUUUGAACAGA	UCUGUUCAAAAUCUCCGCA	Mnk	[1496-1514]
250	GAGCAAUAUGCCUCCUUGU	ACAAGGAGGCAUAUUGCUC	Mnk	[1864-1882]
251	UGGAGUGUUUUUACAUUGA	UCAAUGUAAAAACACUCCA	Mnk,Ms	[2318-2336]
252	CGGGUAAAAACUCUAAAAG	CUUUUAGAGUUUUUACCCG	Mnk	[1656-1674]
253	CCUCCUUGUAUUAUAAAAU	AUUUUAUAAUACAAGGAGG	Mnk	[1874-1892]
254	UGUCAAAUGCAGUAGAUGA	UCAUCUACUGCAUUUGACA	Mnk	[1684-1702]
255	UCACGGGUAAAAACUCUAA	UUAGAGUUUUUACCCGUGA	Mnk	[1653-1671]
256	CUGCAUCAUUUGAAAAUGU	ACAUUUUCAAAUGAUGCAG	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[559-577]
257	CAAAUGCAGUAGAUGAUGA	UCAUCAUCUACUGCAUUUG	Mnk	[1687-1705]
258	GCAAUAUGCCUCCUUGUAU	AUACAAGGAGGCAUAUUGC	Mnk	[1866-1884]
259	UCUGUUAGUCGCUAACUUA	UAAGUUAGCGACUAACAGA		[1812-1830]
260	AAGGAGAUUGGUGCUGUAA	UUACAGCACCAAUCUCCUU	Chmp	[738-756]
261	GUCAAAUGCAGUAGAUGAU	AUCAUCUACUGCAUUUGAC	Mnk	[1685-1703]
262	AACUAGGUGUAAAAAUCAU	AUGAUUUUUACACCUAGUU	Mnk	[1993-2011]
263	GCCCUAAAAUGACAAGCCU	AGGCUUGUCAUUUUAGGGC	Rb	[1113-1131]
264	CACUGAACUUUGCAAAGAC	GUCUUUGCAAAGUUCAGUG		[1238-1256]

265	UGCUAGUGCUGACGAUGUU	AACAUCGUCAGCACUAGCA		[2211-2229]
266	AAGGUUUUUUUGUCGAUUA	UAAUCGACAAAAAAACCUU		[1912-1930]
267	GUAUUAUCAGGAAAUGUUU	AAACAUUUCCUGAUAAUAC		[1717-1735]
268	AAAUUUAGCCCUAAAAUGA	UCAUUUUAGGGCUAAAUUU	Rb,Mnk	[1106-1124]
269	GAACUGCUAUUUCCUCUAA	UUAGAGGAAAUAGCAGUUC		[1513-1531]
270	UACCGACACUGUCACUUGA	UCAAGUGACAGUGUCGGUA		[2093-2111]
271	CCUAGUGGGAACUAAACUU	AAGUUUAGUUCCCACUAGG	Mnk,Chmp	[632-650]
272	CAGGAAAUGUUUUCUUAAG	CUUAAGAAAACAUUUCCUG		[1724-1742]
273	AGUGUAACCCGAGCAAAAU	AUUUUGCUCGGGUUACACU		[290-308]
274	UUAAAAUUUAGCCCUAAAA	UUUUAGGGCUAAAUUUUAA	Rb,Mnk	[1103-1121]
275	CCACUACAACAGAAUUUUU	AAAAAUUCUGUUGUAGUGG		[2277-2295]
276	GUGCUGUAAAAUACCUGGA	UCCAGGUAUUUUACAGCAC	Chn,Dog,Mnk	[748-766]
277	CAGUUAGGAGGUGCAGACA	UGUCUGCACCUCCUAACUG		[1286-1304]
278	CUCUAAUGAAGAAUUCUGU	ACAGAAUUCUUCAUUAGAG	Mnk	[1526-1544]
279	GUUGCAGCUUUAUAGUUUU	AAAACUAUAAAGCUGCAAC	Mnk	[2014-2032]
280	UGUAGUUCUCAGAUGCGUA	UACGCAUCUGAGAACUACA		[1317-1335]
281	UAAAUUGACAGUUGCAGAA	UUCUGCAACUGUCAAUUUA	Mnk	[2296-2314]
282	AGGUUAAUUUCUGUCAAAU	AUUUGACAGAAAUUAACCU	Mnk	[1673-1691]
283	GCUGUAAAAUACCUGGAGU	ACUCCAGGUAUUUUACAGC	Chn,Dog,Mnk	[750-768]
284	GUCUCAGCGUUGCUUGUAU	AUACAAGCAACGCUGAGAC		[314-332]
285	GUGCUGACGAUGUUCUGUA	UACAGAACAUCGUCAGCAC		[2216-2234]
286	ACAUUGUACAAGGAAUGAA	UUCAUUCCUUGUACAAUGU		[1630-1648]
287	CAUUUCCUGGAGAAUAUAU	AUAUAUUCUCCAGGAAAUG	Mnk,Chmp	[379-397]
288	UGUGAGUCCUGCAUCAUUU	AAAUGAUGCAGGACUCACA	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[551-569]
289	UGGUGGGAGACGGAAACAA	UUGUUUCCGUCUCCCACCA		[264-282]
290	CUCACAUUCUAUUAAAAUU	AAUUUUAAUAGAAUGUGAG	Mnk	[1092-1110]
291	UAUGCCUCCUUGUAUUAUA	UAUAAUACAAGGAGGCAUA	Mnk	[1870-1888]
292	UACUUUAUUCAGAGCUAAU	AUUAGCUCUGAAUAAAGUA		[1950-1968]
293	GGACAAAGACAGUAUUUUG	CAAAAUACUGUCUUUGUCC	Mnk	[1584-1602]
294	CUGCUAUUUCCUCUAAUGA	UCAUUAGAGGAAAUAGCAG		[1516-1534]
295	UCAAGACAGUGUUUGACGA	UCGUCAAACACUGUCUUGA	Mnk,Ms,Chmp	[793-811]
296	CAAAGGACAAAGACAGUAU	AUACUGUCUUUGUCCUUUG	Mnk	[1580-1598]
297	AAGAAAGGUUGGUAUUAUC	GAUAAUACCAACCUUUCUU	Mnk	[1706-1724]
298	GACACGAUCGAGAAACUGA	UCAGUUUCUCGAUCGUGUC	Mnk,GP,Chmp	[669-687]
299	AGAUGAUGAAAGAAAGGUU	AACCUUUCUUUCAUCAUCU	Mnk	[1697-1715]
300	UCAUCCUAGUGGGAACUAA	UUAGUUCCCACUAGGAUGA	Mnk,Chmp	[628-646]
301	CGAGAAACUGAAGGAGAAG	CUUCUCCUUCAGUUUCUCG	Mnk,GP,Chmp	[677-695]
302	GGUUCUGUAAACUGUGCUA	UAGCACAGUUUACAGAACC	Mnk	[2197-2215]
303	AACUUUUUGUUACAGAUUA	UAAUCUGUAACAAAAAGUU		[998-1016]
304	AGUCGCUUUGCCUAUUGAU	AUCAAUAGGCAAAGCGACU		[2160-2178]
305	AGAGAAAAUGCCUGCUGUU	AACAGCAGGCAUUUUCUCU	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[856-874]
306	UAAAGACACGAUCGAGAAA	UUUCUCGAUCGUGUCUUUA	Mnk,GP,Chmp	[665-683]
307	UUAUGUUUUGCAUGUAUGA	UCAUACAUGCAAAACAUAA	Mnk	[2359-2377]
308	CAUUCUUGUUCAGAUUAAG	CUUAAUCUGAACAAGAAUG		[1165-1183]
309	AAUGAAAGUGUCACGGGUA	UACCCGUGACACUUUCAUU		[1643-1661]
310	UCUCAGCGUUGCUUGUAUA	UAUACAAGCAACGCUGAGA		[315-333]
311	UAGUAAAAGUGCUUUCCAU	AUGGAAAGCACUUUUACUA		[1929-1947]
312	UAUAGAGCUGUAGGUAAAA	UUUUACCUACAGCUCUAUA		[330-348]
313	AAUGAAGAAUUCUGUUUAG	CUAAACAGAAUUCUUCAUU	Mnk	[1530-1548]
314	AGCAGCUCAGCUCUUUGGA	UCCAAAGAGCUGAGCUGCU		[1436-1454]
315	UUGAAAAUGUCCGUGCAAA	UUUGCACGGACAUUUUCAA	Rat,Mnk,Ms, GP,Chmp	[568-586]
316	UGCUGUUGUAAAUGUCUCA	UGAGACAUUUACAACAGCA	Chmp	[868-886]
317	CUGGACAAGAAGAUUAUGA	UCAUAAUCUUCUUGUCCAG	Chn,Dog,Mnk,Ms,	[475-493]

			GP,Chmp	
318	GCACUGAACUUUGCAAAGA	UCUUUGCAAAGUUCAGUGC		[1237-1255]
319	AGAAAGGUUGGUAUUAUCA	UGAUAAUACCAACCUUUCU	Mnk	[1707-1725]
320	CAAGCCUUCUUAAAGCCUU	AAGGCUUUAAGAAGGCUUG	Rb	[1125-1143]
321	GGUAUUAUCAGGAAAUGUU	AACAUUUCCUGAUAAUACC	Mnk	[1716-1734]
322	CCAAUGCAUUUCCUGGAGA	UCUCCAGGAAAUGCAUUGG	Chn,Dog,Mnk, Ms,Chmp	[373-391]
323	UGAAAGUGUCACGGGUAAA	UUUACCCGUGACACUUUCA		[1645-1663]
324	UGCCUCCUUGUAUUAUAAA	UUUAUAAUACAAGGAGGCA	Mnk	[1872-1890]
325	GGCUAAGGAGAUUGGUGCU	AGCACCAAUCUCCUUAGCC	Mnk,Chmp	[734-752]
326	UUUUUUGUCGAUUAGUAAA	UUUACUAAUCGACAAAAAA		[1917-1935]
327	AGAGGAAGAGAAAAUGCCU	AGGCAUUUUCUCUUCCUCU	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[850-868]
328	UGUAUAGAGCUGUAGGUAA	UUACCUACAGCUCUAUACA		[328-346]
329	GAUGAAAGAAAGGUUGGUA	UACCAACCUUUCUUUCAUC	Mnk	[1701-1719]
330	UAACUAGGUGUAAAAAUCA	UGAUUUUUACACCUAGUUA	Mnk	[1992-2010]
331	GCUAAUGCAAUUAGCAUUA	UAAUGCUAAUUGCAUUAGC		[2343-2361]
332	CCGUGAAGAAGAGGAAGAG	CUCUUCCUCUUCUUCACGG	Mnk,Chmp	[841-859]
333	AAUUGGGCAUUUAAUUCAU	AUGAAUUAAAUGCCCAAUU	Mnk	[1778-1796]
334	UCAGUGUAACCCGAGCAAA	UUUGCUCGGGUUACACUGA		[288-306]
335	CUUCUGAACUACACUGCAU	AUGCAGUGUAGUUCAGAAG	Mnk	[1198-1216]
336	UGAAAAUGUCCGUGCAAAG	CUUUGCACGGACAUUUUCA	Rat,Mnk,Ms, GP,Chmp	[569-587]
337	AGCAAUAUGCCUCCUUGUA	UACAAGGAGGCAUAUUGCU	Mnk	[1865-1883]
338	GAGAAGAAGCUGACUCCCA	UGGGAGUCAGCUUCUUCUC	Rat,Dog,Mnk,Ms, GP,Chmp	[690-708]
339	UGCUUUCCUUAGUUUUCUA	UAGAAAACUAAGGAAAGCA	Mnk	[1972-1990]
340	GAAGAAUUCUGUUUAGCUG	CAGCUAAACAGAAUUCUUC	Mnk	[1533-1551]
341	GGGUAAAAACUCUAAAAGG	CCUUUUAGAGUUUUUACCC	Mnk	[1657-1675]
342	GCUAAUAAGUGCUUUCCUU	AAGGAAAGCACUUAUUAGC	Mnk	[1963-1981]
343	GUCGAUUAGUAAAAGUGCU	AGCACUUUUACUAAUCGAC		[1923-1941]
344	AGAGCUGUAGGUAAAACUU	AAGUUUUACCUACAGCUCU		[333-351]
345	UUUGGAUCAGUCUUUGUGA	UCACAAAGACUGAUCCAAA		[1449-1467]
346	CUUCUUAAAGCCUUAUUUU	AAAAUAAGGCUUUAAGAAG	Rb,Mnk,Ms	[1130-1148]
347	GGAUCAGUCUUUGUGAUUU	AAAUCACAAAGACUGAUCC		[1452-1470]
348	GGAGAUUUACACUACAUUG	CAAUGUAGUGUAAAUCUCC	Mnk	[1617-1635]
349	UUCUCAGAUGCGUAAAGCA	UGCUUUACGCAUCUGAGAA		[1322-1340]
350	AACUGAAGGAGAAGAAGCU	AGCUUCUUCUCCUUCAGUU	Rb,Dog,Mnk, GP,Chmp	[682-700]
351	CAUUGUUGUGCCGAGAACA	UGUUCUCGGCACAACAAUG		[1214-1232]
352	CAGUGAGUUAGCAGCACGU	ACGUGCUGCUAACUCACUG		[1379-1397]
353	GCGUAAAGCAGAACAGCCU	AGGCUGUUCUGCUUUACGC		[1331-1349]
354	UAAUGAAGAAUUCUGUUUA	UAAACAGAAUUCUUCAUUA	Mnk	[1529-1547]
355	UCCCUACUGUCUUUGACAA	UUGUCAAAGACAGUAGGGA	Chn,Mnk,GP,Chmp	[397-415]
356	GAUCUUUUGCUAAUGCAAU	AUUGCAUUAGCAAAAGAUC		[2335-2353]
357	CUCCUAUGUAGUUCUCAGA	UCUGAGAACUACAUAGGAG		[1311-1329]
358	GAGGCCUCAAGACAGUGUU	AACACUGUCUUGAGGCCUC	Rb,Chn,Dog,Mnk, GP,Chmp	[787-805]
359	CAGAAUUUUUUAAAUUGAC	GUCAAUUUAAAAAAUUCUG		[2286-2304]
360	ACAAGGAAUGAAAGUGUCA	UGACACUUUCAUUCCUUGU		[1637-1655]
361	CCGGUGAAUCUGGGCUUAU	AUAAGCCCAGAUUCACCGG	Mnk,Chmp	[447-465]
362	GAAGACGGUAGCUUCUGCA	UGCAGAAGCUACCGUCUUC		[1269-1287]
363	CCUUGUAUUAUAAAAUCUU	AAGAUUUUAUAAUACAAGG	Mnk	[1877-1895]
364	UAUUAAAAUUUAGCCCUAA	UUAGGGCUAAAUUUUAAUA	Rb,Mnk	[1101-1119]
365	CAAUUAGCAUUAUGUUUUG	CAAAACAUAAUGCUAAUUG		[2350-2368]
366	GGUUAAUUUCUGUCAAAUG	CAUUUGACAGAAAUUAACC	Mnk	[1674-1692]
367	AGCAAAAUCGCGCGUCUCA	UGAGACGCGCGAUUUUGCU		[301-319]

368	AGUAACUAGGUGUAAAAAU	AUUUUUACACCUAGUUACU	Mnk	[1990-2008]
369	CCAACACUCCCAUCAUCCU	AGGAUGAUGGGAGUGUUGG	Mnk,Chmp	[616-634]
370	UGUUCUAAAUGUAAGAGUU	AACUCUUACAUUUAGAACA	Mnk	[1069-1087]
371	CAGUAUUUUGACAAAAUAC	GUAUUUUGUCAAAAUACUG	Mnk	[1593-1611]
372	UGUGGAGUGUUUUUACAUU	AAUGUAAAAACACUCCACA	Mnk,Ms	[2316-2334]
373	CGCUAACUUAGUAAGUGCU	AGCACUUACUAAGUUAGCG	Mnk	[1821-1839]
374	CCUGUUUCUCUGCAGUUUU	AAAACUGCAGAGAAACAGG	Chmp	[32-50]
375	UUUGAAAAUGUCCGUGCAA	UUGCACGGACAUUUUCAAA	Rat,Mnk,Ms, GP,Chmp	[567-585]
376	GUUGGUAUUAUCAGGAAAU	AUUUCCUGAUAAUACCAAC	Mnk	[1713-1731]
377	CCCUAAAAUGACAAGCCUU	AAGGCUUGUCAUUUUAGGG	Rb	[1114-1132]
378	CUUAUGGGAUACAGCUGGA	UCCAGCUGUAUCCCAUAAG	Chn,Dog,Mnk, GP,Chmp	[461-479]
379	GUAAAACUUGCCUACUGAU	AUCAGUAGGCAAGUUUUAC	Chn,Mnk,GP,Chmp	[343-361]
380	AAGAAGAGGAAGAGAAAAU	AUUUUCUCUUCCUCUUCUU	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[846-864]
381	UUAAAGCCUUAUUUUUCAA	UUGAAAAAUAAGGCUUUAA	Rb,Mnk	[1134-1152]
382	CUGCAUUGUUGUGCCGAGA	UCUCGGCACAACAAUGCAG		[1211-1229]
383	AGGUUUUUUUGUCGAUUAG	CUAAUCGACAAAAAAACCU		[1913-1931]
384	UCUGUCAAAUGCAGUAGAU	AUCUACUGCAUUUGACAGA	Mnk	[1682-1700]
385	GAAUUGUGGAGUGUUUUUA	UAAAAACACUCCACAAUUC	Mnk,Ms	[2312-2330]
386	AAAAACUCUAAAAGGUUAA	UUAACCUUUUAGAGUUUUU	Mnk	[1661-1679]
387	CAUGUUACUUUAUUCAGAG	CUCUGAAUAAAGUAACAUG		[1945-1963]
388	CCUGUAGUCGCUUUGCCUA	UAGGCAAAGCGACUACAGG	Mnk	[2155-2173]
389	ACAGUUGCAGAAUUGUGGA	UCCACAAUUCUGCAACUGU	Mnk,Ms	[2303-2321]
390	AUAAAGACACGAUCGAGAA	UUCUCGAUCGUGUCUUUAU	Mnk,GP,Chmp	[664-682]
391	CAGAAUUGUGGAGUGUUUU	AAAACACUCCACAAUUCUG	Mnk,Ms	[2310-2328]
392	ACUUAAUAAAUCCUUGAAU	AUUCAAGGAUUUAUUAAGU	Mnk	[2377-2395]
393	AGAUGGAAAACCGGUGAAU	AUUCACCGGUUUUCCAUCU	Mnk,Chmp	[437-455]
394	GAAUCUGGGCUUAUGGGAU	AUCCCAUAAGCCCAGAUUC	Rb,Chn,Dog,Mnk, GP,Chmp	[452-470]
395	AAUUGACAGUUGCAGAAUU	AAUUCUGCAACUGUCAAUU	Mnk,Ms	[2298-2316]
396	GACGAUGUUCUGUACAACU	AGUUGUACAGAACAUCGUC		[2221-2239]
397	UCUUUCUGAUAAUGCAUUA	UAAUGCAUUAUCAGAAAGA	Mnk	[1892-1910]
398	UUGGAUCAGUCUUUGUGAU	AUCACAAAGACUGAUCCAA		[1450-1468]
399	UGGAGAUUUACACUACAUU	AAUGUAGUGUAAAUCUCCA	Mnk	[1616-1634]
400	GCUGACUCCCAUCACCUAU	AUAGGUGAUGGGAGUCAGC	Mnk,GP,Chmp	[698-716]
401	GUAGCUUCUGCAGUUAGGA	UCCUAACUGCAGAAGCUAC		[1276-1294]
402	UUUUUGAACCAAUCAGUAA	UUACUGAUUGGUUCAAAAA		[1035-1053]
403	GUGAUUUCAUAGCGAGUUU	AAACUCGCUAUGAAAUCAC		[1464-1482]
404	AGAUGCGUAAAGCAGAACA	UGUUCUGCUUUACGCAUCU		[1327-1345]
405	AAAGGACAAAGACAGUAUU	AAUACUGUCUUUGUCCUUU	Mnk	[1581-1599]
406	UAAGUGCUUUUCUUAUAGA	UCUAUAAGAAAAGCACUUA		[1832-1850]
407	GAAGGAGAAGAAGCUGACU	AGUCAGCUUCUUCUCCUUC	Rat,Dog,Mnk,Ms, GP,Chmp	[686-704]
408	ACUUUAUUCAGAGCUAAUA	UAUUAGCUCUGAAUAAAGU		[1951-1969]
409	AUCCUAUCCGCAAACAGAU	AUCUGUUUGCGGAUAGGAU	Dog,Chmp	[509-527]
410	AGAAGGUUUUUUUGUCGAU	AUCGACAAAAAAACCUUCU		[1910-1928]
411	CUUUUUGUUACAGAUUAAU	AUUAAUCUGUAACAAAAAG		[1000-1018]
412	CUGCAGUUUUCCUCAGCUU	AAGCUGAGGAAAACUGCAG	Chmp	[41-59]
413	CUAAUAAGUGCUUUCCUUA	UAAGGAAAGCACUUAUUAG	Mnk	[1964-1982]
414	CUAUUUCCUCUAAUGAAGA	UCUUCAUUAGAGGAAAUAG		[1519-1537]
415	UUUUUUGAACCAAUCAGUA	UACUGAUUGGUUCAAAAAA		[1034-1052]
416	ACAAAAUACGAAGUGGAGA	UCUCCACUUCGUAUUUUGU	Mnk	[1603-1621]
417	GGGAACUAAACUUGAUCUU	AAGAUCAAGUUUAGUUCCC	Mnk,Chmp	[638-656]
418	AUGGAAAACCGGUGAAUCU	AGAUUCACCGGUUUUCCAU	Mnk,Chmp	[439-457]
419	UUGCUUGUAUAGAGCUGUA	UACAGCUCUAUACAAGCAA		[323-341]

420	ACUUGAUCUUAGGGAUGAU	AUCAUCCCUAAGAUCAAGU	Chn,Mnk,GP,Chmp	[647-665]
421	ACCGGUGAAUCUGGGCUUA	UAAGCCCAGAUUCACCGGU	Mnk,Chmp	[446-464]
422	AACCAAUGCAUUUCCUGGA	UCCAGGAAAUGCAUUGGUU	Chn,Dog,Mnk,Chmp	[371-389]
423	CGUAGCAGCUCAGCUCUUU	AAAGAGCUGAGCUGCUACG		[1433-1451]
424	CCCAUUCUUGUUCAGAUUA	UAAUCUGAACAAGAAUGGG		[1163-1181]
425	GAAACUGAAGGAGAAGAAG	CUUCUUCUCCUUCAGUUUC	Rb,Dog,Mnk, GP,Chmp	[680-698]
426	AUGUAAGAGUUCAGACUCA	UGAGUCUGAACUCUUACAU	Mnk	[1077-1095]
427	CUGUACAACUUAACUCACU	AGUGAGUUAAGUUGUACAG		[2230-2248]
428	GUGUGAUCAAAGGACAAAG	CUUUGUCCUUUGAUCACAC	Mnk	[1573-1591]
429	UAAAAUUUAGCCCUAAAAU	AUUUUAGGGCUAAAUUUUA	Rb,Mnk	[1104-1122]
430	GAGAAACUGAAGGAGAAGA	UCUUCUCCUUCAGUUUCUC	Rb,Dog,Mnk, GP,Chmp	[678-696]
431	AAUUCAUCUUUAAACUGGU	ACCAGUUUAAAGAUGAAUU	Mnk	[1790-1808]
432	UAAACUGGUUGUUCUGUUA	UAACAGAACAACCAGUUUA		[1800-1818]
433	AAGUGUCACGGGUAAAAAC	GUUUUUACCCGUGACACUU	Mnk	[1648-1666]
434	GAUGCGUAAAGCAGAACAG	CUGUUCUGCUUUACGCAUC		[1328-1346]
435	UGAAGAAUUCUGUUUAGCU	AGCUAAACAGAAUUCUUCA	Mnk	[1532-1550]
436	AUUUGAAAAUGUCCGUGCA	UGCACGGACAUUUUCAAAU	Rat,Mnk,Ms, GP,Chmp	[566-584]
437	CACCAGUGAGUUAGCAGCA	UGCUGCUAACUCACUGGUG		[1376-1394]
438	CUGACUGAGCAAUAUGCCU	AGGCAUAUUGCUCAGUCAG		[1858-1876]
439	GGUUGUUCUGUUAGUCGCU	AGCGACUAACAGAACAACC		[1806-1824]
440	UAGUAAGUGCUUUUCUUAU	AUAAGAAAAGCACUUACUA	Mnk	[1829-1847]
441	GUUCAGACUCACAUUCUAU	AUAGAAUGUGAGUCUGAAC	Mnk	[1085-1103]
442	AAUCUGGGCUUAUGGGAUA	UAUCCCAUAAGCCCAGAUU	Rb,Chn,Dog,Mnk, GP,Chmp	[453-471]
443	UUACAUUGAUCUUUUGCUA	UAGCAAAAGAUCAAUGUAA	Mnk,Ms	[2328-2346]
444	UUCCCUUGUGAGUCCUGCA	UGCAGGACUCACAAGGGAA	Rat,Chn,Mnk,Ms, GP,Chmp	[545-563]
445	CAAUACUGACCCUCUUUAC	GUAAAGAGGGUCAGUAUUG	Mnk	[2113-2131]
446	UAUUUCCUCUAAUGAAGAA	UUCUUCAUUAGAGGAAAUA		[1520-1538]
447	AUACAGCUGGACAAGAAGA	UCUUCUUGUCCAGCUGUAU	Chn,Dog,Mnk, GP,Chmp	[469-487]
448	CCAGCUUUUGCGGAGAUUU	AAAUCUCCGCAAAAGCUGG		[1488-1506]
449	CCAUCAUCCUAGUGGGAAC	GUUCCCACUAGGAUGAUGG	Mnk,Chmp	[625-643]
450	AUGCAUUUCCUGGAGAAUA	UAUUCUCCAGGAAAUGCAU	Dog,Mnk,Chmp	[376-394]
451	CCCUACUGUCUUUGACAAU	AUUGUCAAAGACAGUAGGG	Mnk,Chmp	[398-416]
452	GGAAAUGUUUUCUUAAGCU	AGCUUAAGAAAACAUUUCC		[1726-1744]
453	AAGACACGAUCGAGAAACU	AGUUUCUCGAUCGUGUCUU	Mnk,GP,Chmp	[667-685]
454	CUAAAAGGUUAAUUUCUGU	ACAGAAAUUAACCUUUUAG	Mnk	[1668-1686]
455	GUCACGGGUAAAAACUCUA	UAGAGUUUUUACCCGUGAC	Mnk	[1652-1670]
456	CUGUCACUUGACCAAUACU	AGUAUUGGUCAAGUGACAG	Mnk	[2101-2119]
457	GAGAUUUACACUACAUUGU	ACAAUGUAGUGUAAAUCUC	Mnk	[1618-1636]
458	CACGAUCGAGAAACUGAAG	CUUCAGUUUCUCGAUCGUG	Mnk,GP,Chmp	[671-689]
459	AGGCCUCAAGACAGUGUUU	AAACACUGUCUUGAGGCCU	Chn,Dog,Mnk, GP,Chmp	[788-806]
460	UGAAAGAAAGGUUGGUAUU	AAUACCAACCUUUCUUUCA	Mnk	[1703-1721]
461	GAAAGGUUGGUAUUAUCAG	CUGAUAAUACCAACCUUUC	Mnk	[1708-1726]
462	UUAAAUUGACAGUUGCAGA	UCUGCAACUGUCAAUUUAA	Mnk	[2295-2313]
463	CCUGCAUCAUUUGAAAAUG	CAUUUUCAAAUGAUGCAGG	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[558-576]
464	GCCUAUUGAUGUUCCUUUG	CAAAGGAACAUCAAUAGGC		[2169-2187]
465	CACAACCAAUGCAUUUCCU	AGGAAAUGCAUUGGUUGUG	Chn,Dog,Mnk,Chmp	[368-386]
466	GCCUUCUUAAAGCCUUAUU	AAUAAGGCUUUAAGAAGGC	Rb,Ms	[1128-1146]
467	AACAAGAAUCUCAGUGUAA	UUACACUGAGAUUCUUGUU		[278-296]
468	UUGUUCUGUUAGUCGCUAA	UUAGCGACUAACAGAACAA		[1808-1826]

469	GAGUUUUCUGACCAGCUUU	AAAGCUGGUCAGAAAACUC		[1477-1495]
470	ACAGCUGGACAAGAAGAUU	AAUCUUCUUGUCCAGCUGU	Chn,Dog,Mnk,Ms, GP,Chmp	[471-489]
471	GUUUGACGAAGCGAUCCGA	UCGGAUCGCUUCGUCAAAC	Mnk,Chmp	[803-821]
472	CUGAAGGAGAAGAAGCUGA	UCAGCUUCUUCUCCUUCAG	Rat,Rb,Dog, Mnk,Ms, GP,Chmp	[684-702]
473	GGGCAUUUAAUUCAUCUUU	AAAGAUGAAUUAAAUGCCC	Mnk	[1782-1800]
474	CGUCUCAGCGUUGCUUGUA	UACAAGCAACGCUGAGACG		[313-331]
475	CCUUAGUUUUCUAGUAACU	AGUUACUAGAAAACUAAGG	Mnk	[1978-1996]
476	GGUUUUUUUGUCGAUUAGU	ACUAAUCGACAAAAAAACC		[1914-1932]
477	GCUGGACAAGAAGAUUAUG	CAUAAUCUUCUUGUCCAGC	Chn,Dog,Mnk,Ms, GP,Chmp	[474-492]
478	UUUGCAUGUAUGACUUAAU	AUUAAGUCAUACAUGCAAA	Mnk	[2365-2383]
479	UUAGCAUUAUGUUUUGCAU	AUGCAAAACAUAAUGCUAA	Mnk	[2353-2371]
480	UUUACACUACAUUGUACAA	UUGUACAAUGUAGUGUAAA	Mnk	[1622-1640]
481	UGUUCCUUUGGGUCUGUGA	UCACAGACCCAAAGGAACA	Mnk	[2178-2196]
482	UAGAUGGAAAACCGGUGAA	UUCACCGGUUUUCCAUCUA	Mnk,Chmp	[436-454]
483	AAUGUUAUGGUAGAUGGAA	UUCCAUCUACCAUAACAUU	Rat,Rb,Chn,Dog, Mnk,Ms, GP,Chmp	[426-444]
484	GUAUGACUUAAUAAAUCCU	AGGAUUUAUUAAGUCAUAC	Mnk	[2372-2390]
485	CUAAAUGUAAGAGUUCAGA	UCUGAACUCUUACAUUUAG	Mnk	[1073-1091]
486	CUGUUAGUCGCUAACUUAG	CUAAGUUAGCGACUAACAG		[1813-1831]
487	UUUUUGUCGAUUAGUAAAA	UUUUACUAAUCGACAAAAA		[1918-1936]
488	UUAGUAAGUGCUUUUCUUA	UAAGAAAAGCACUUACUAA	Mnk	[1828-1846]
489	AUCAGGAAAUGUUUUCUUA	UAAGAAAACAUUUCCUGAU		[1722-1740]
490	UAGUCGCUUUGCCUAUUGA	UCAAUAGGCAAAGCGACUA		[2159-2177]
491	CCAGAUUACCGACACUGUC	GACAGUGUCGGUAAUCUGG		[2087-2105]
492	AACUAAACUUGAUCUUAGG	CCUAAGAUCAAGUUUAGUU	Mnk,Chmp	[641-659]
493	CUGUAAUGGAGUGAGCGUA	UACGCUCACUCCAUUACAG		[1418-1436]
494	UACAGCUGGACAAGAAGAU	AUCUUCUUGUCCAGCUGUA	Chn,Dog,Mnk, GP,Chmp	[470-488]
495	UAAAAACUCUAAAAGGUUA	UAACCUUUUAGAGUUUUUA	Mnk	[1660-1678]
496	GUUUUUACAUUGAUCUUUU	AAAAGAUCAAUGUAAAAAC	Mnk,Ms	[2324-2342]
497	GGUGCUGUAAAAUACCUGG	CCAGGUAUUUUACAGCACC	Chn,Dog,Mnk	[747-765]
498	UUGUGAGUCCUGCAUCAUU	AAUGAUGCAGGACUCACAA	Rat,Chn,Dog, Mnk,Ms, GP,Chmp	[550-568]
499	AAGCCUUAUUUUUCAAAAG	CUUUUGAAAAAUAAGGCUU	Rb,Mnk	[1137-1155]
500	CCUGUCCCUUGGAACCUUU	AAAGGUUCCAAGGGACAGG	Mnk,Chmp	[903-921]

Table B 27 SHC1 - SHC transforming protein 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-52693920 :1-1752
1	ACGGGAGCUUUGUCAAUAA	UUAUUGACAAAGCUCCCGU	Rat,Chn,Ms,GP	[410-428]
2	CGAGUUGCGCUUCAAACAA	UUGUUUGAAGCGCAACUCG		[924-942]
3	GCUGCAUCCCAACGACAAA	UUUGUCGUUGGGAUGCAGC	Rat,Ms	[444-462]
4	CCAGAAGUCCGCAAACAGA	UCUGUUUGCGGACUUCUGG		[1210-1228]
5	CGAGUAUGUCGCCUAUGUU	AACAUAGGCGACAUACUCG	Chn	[813-831]
6	UAAGGAUCACCGCUUUGAA	UUCAAAGCGGUGAUCCUUA		[1632-1650]
7	GGGACCUGUUUGACAUGAA	UUCAUGUCAAACAGGUCCC		[1367-1385]
8	GGAGGAGUAACCUGAAAUU	AAUUUCAGGUUACUCCUCC	Chn,GP	[662-680]
9	CAGGCAGAGAGCUUUUUGA	UCAAAAAGCUCUCUGCCUG		[1250-1268]
10	AGUUGCGCUUCAAACAAUA	UAUUGUUUGAAGCGCAACU		[926-944]
11	CUUCGAGUUGCGCUUCAAA	UUUGAAGCGCAACUCGAAG		[921-939]
12	CAGAGAGCUUUUUGAUGAU	AUCAUCAAAAAGCUCUCUG		[1254-1272]
13	AAGGAUCACCGCUUUGAAA	UUUCAAAGCGGUGAUCCUU		[1633-1651]
14	CCUUCGAGUUGCGCUUCAA	UUGAAGCGCAACUCGAAGG		[920-938]

15	CCGAGUAUGUCGCCUAUGU	ACAUAGGCGACAUACUCGG	Chn	[812-830]
16	AGCCGAGUAUGUCGCCUAU	AUAGGCGACAUACUCGGCU	Chn	[810-828]
17	GAUGAUCCCUCCUAUGUCA	UGACAUAGGAGGGAUCAUC		[1267-1285]
18	GUGUGGUUCGGACUAAGGA	UCCUUAGUCCGAACCACAC		[1619-1637]
19	UGGAGGUCCUCCAGUCAAU	AUUGACUGGAGGACCUCCA		[509-527]
20	CAGAAGUCCGCAAACAGAU	AUCUGUUUGCGGACUUCUG		[1211-1229]
21	CCUCCUAUGUCAACGUCCA	UGGACGUUGACAUAGGAGG	GP	[1274-1292]
22	AGGGUGUGGUUCGGACUAA	UUAGUCCGAACCACACCCU		[1616-1634]
23	UGACCAUCAGUACUAUAAU	AUUAUAGUACUGAUGGUCA	Chn,GP	[1035-1053]
24	CCGCAGACUGCAAACAGAU	AUCUGUUUGCAGUCUGCGG	Chn,GP	[734-752]
25	CGGAAUGAGUCUCUGUCAU	AUGACAGAGACUCAUUCCG	Ms	[40-58]
26	CAUUCUGGAGUGUCCCGAA	UUCGGGACACUCCAGAAUG		[864-882]
27	GAGUUGCGCUUCAAACAAU	AUUGUUUGAAGCGCAACUC		[925-943]
28	CAAUCUAUCUCAUUUGCAU	AUGCAAAUGAGAUAGAUUG		[772-790]
29	CCUGACCAUCAGUACUAUA	UAUAGUACUGAUGGUCAGG	Chn,GP	[1033-1051]
30	UGACAUGAAGCCCUUCGAA	UUCGAAGGGCUUCAUGUCA	Rat	[1377-1395]
31	CGUCCAGAACCUAGACAAG	CUUGUCUAGGUUCUGGACG	GP	[1287-1305]
32	GCUACCACAUGGACAAUCA	UGAUUGUCCAUGUGGUAGC	Rat,Ms	[1670-1688]
33	CGGGAGCUUUGUCAAUAAG	CUUAUUGACAAAGCUCCCG	Rat,Chn,Ms,GP	[411-429]
34	GGAGUAACCUGAAAUUUGC	GCAAAUUUCAGGUUACUCC	GP	[665-683]
35	CCUAUGUCAACGUCCAGAA	UUCUGGACGUUGACAUAGG	GP	[1277-1295]
36	GGGAGGAGUAACCUGAAAU	AUUUCAGGUUACUCCUCCC	Chn,GP	[661-679]
37	UGUGGUUCGGACUAAGGAU	AUCCUUAGUCCGAACCACA		[1620-1638]
38	AUGGGAUGAGGAGGAGGAA	UUCCUCCUCCUCAUCCCAU		[1008-1026]
39	CCUACUUGGUUCGGUACAU	AUGUACCGAACCAAGUAGG	Rat,Chn,Ms,GP	[482-500]
40	AGACAUGAGGCUUCGGGAA	UUCCCGAAGCCUCAUGUCU	Chn	[1092-1110]
41	UCAGCUACCACAUGGACAA	UUGUCCAUGUGGUAGCUGA	Rat,Ms	[1667-1685]
42	CAGACUGCAAACAGAUCAU	AUGAUCUGUUUGCAGUCUG	Rat,Chn,GP	[737-755]
43	UGUGGAGCGGAAACUGUGA	UCACAGUUUCCGCUCCACA		[1734-1752]
44	CCGGAAUGAGUCUCUGUCA	UGACAGAGACUCAUUCCGG		[39-57]
45	CUGACCAUCAGUACUAUAA	UUAUAGUACUGAUGGUCAG	Chn,GP	[1034-1052]
46	AGGCAGAGAGCUUUUUGAU	AUCAAAAAGCUCUCUGCCU		[1251-1269]
47	CACGGGAGCUUUGUCAAUA	UAUUGACAAAGCUCCCGUG	Rat,Chn,Ms,GP	[409-427]
48	GCAGCCUAAGCAUUUGCUA	UAGCAAAUGCUUAGGCUGC		[1584-1602]
49	GCAGAGAGCUUUUUGAUGA	UCAUCAAAAAGCUCUCUGC		[1253-1271]
50	GGACCUGUUUGACAUGAAG	CUUCAUGUCAAACAGGUCC		[1368-1386]
51	CCAAAGACCCUGUGAAUCA	UGAUUCACAGGGUCUUUGG	Rat,Chn,Ms,GP	[833-851]
52	GAAAGUGUCAGUCACCUUA	UAAGGUGACUGACACUUUC		[1648-1666]
53	CGCUUCAAACAAUACCUCA	UGAGGUAUUGUUUGAAGCG		[931-949]
54	GAGUAACCUGAAAUUUGCU	AGCAAAUUUCAGGUUACUC		[666-684]
55	UUUUGAUGAUCCCUCCUAU	AUAGGAGGGAUCAUCAAAA		[1263-1281]
56	ACAUGAAGCCCUUCGAAGA	UCUUCGAAGGGCUUCAUGU	Rat	[1379-1397]
57	CCACGGGAGCUUUGUCAAU	AUUGACAAAGCUCCCGUGG		[408-426]
58	AGGAGGAGAAAGCCCUGUA	UACAGGGCUUUCUCCUCCU	Chn	[619-637]
59	CAACGACAAAGUCAUGGGA	UCCCAUGACUUUGUCGUUG	Rat,Chn,Ms, GP	[453-471]
60	GGACAUGAACAAGCUGAGU	ACUCAGCUUGUUCAUGUCC	Rat,Chn,Ms,GP	[327-345]
61	ACGUCCAGAACCUAGACAA	UUGUCUAGGUUCUGGACGU	GP	[1286-1304]
62	ACCUGAAAUUUGCUGGAAU	AUUCCAGCAAAUUUCAGGU		[671-689]
63	CAUGAACAAGCUGAGUGGA	UCCACUCAGCUUGUUCAUG	Rat,Chn,Ms,GP	[330-348]
64	AGACCCUGUGAAUCAGAGA	UCUCUGAUUCACAGGGUCU	Rat,Chn,Ms,GP	[837-855]
65	CCACAUGCAAUCUAUCUCA	UGAGAUAGAUUGCAUGUGG		[765-783]
66	UCCUCCAGGACAUGAACAA	UUGUUCAUGUCCUGGAGGA	Chn,Ms, GP	[320-338]
67	CCAUCAGUACUAUAAUGAC	GUCAUUAUAGUACUGAUGG	Chn,GP	[1038-1056]
68	CACCUUAUCAGCUACCACA	UGUGGUAGCUGAUAAGGUG		[1660-1678]
69	UCGAGUUGCGCUUCAAACA	UGUUUGAAGCGCAACUCGA		[923-941]

70	GGAUCACCGCUUUGAAAGU	ACUUUCAAAGCGGUGAUCC		[1635-1653]
71	CACCGCUUUGAAAGUGUCA	UGACACUUUCAAAGCGGUG		[1639-1657]
72	AGGACAUGAACAAGCUGAG	CUCAGCUUGUUCAUGUCCU	Chn,Ms, GP	[326-344]
73	CCUGAAAUUUGCUGGAAUG	CAUUCCAGCAAAUUUCAGG		[672-690]
74	CCGCUUUGAAAGUGUCAGU	ACUGACACUUUCAAAGCGG		[1641-1659]
75	CACCUGACCAUCAGUACUA	UAGUACUGAUGGUCAGGUG	Chn,GP	[1031-1049]
76	CAUGAAGCCCUUCGAAGAU	AUCUUCGAAGGGCUUCAUG	Rat	[1380-1398]
77	GACUAAGGAUCACCGCUUU	AAAGCGGUGAUCCUUAGUC		[1629-1647]
78	GGAUGUCAUCAGCACCAUU	AAUGGUGCUGAUGACAUCC	Chn,GP	[894-912]
79	UUUCCUACUUGGUUCGGUA	UACCGAACCAAGUAGGAAA	Rat,Chn,Ms,GP	[479-497]
80	ACCUGACCAUCAGUACUAU	AUAGUACUGAUGGUCAGGU	Chn,GP	[1032-1050]
81	AGGAAGGGCAGCUGAUGAU	AUCAUCAGCUGCCCUUCCU		[252-270]
82	AGUACAAUCCACUCCGGAA	UUCCGGAGUGGAUUGUACU		[26-44]
83	GAGGAGUAACCUGAAAUUU	AAAUUUCAGGUUACUCCUC	GP	[663-681]
84	GCUUUGAAAGUGUCAGUCA	UGACUGACACUUUCAAAGC		[1643-1661]
85	AGAUCCAGAAGUCCGCAAA	UUUGCGGACUUCUGGAUCU		[1206-1224]
86	UAGACAUGAGGCUUCGGGA	UCCCGAAGCCUCAUGUCUA	Chn	[1091-1109]
87	CAUCAGUACUAUAAUGACU	AGUCAUUAUAGUACUGAUG	Chn,GP	[1039-1057]
88	CAGGAUGUCAUCAGCACCA	UGGUGCUGAUGACAUCCUG	Chn,Ms, GP	[892-910]
89	CAAGCCCAAGUACAAUCCA	UGGAUUGUACUUGGGCUUG		[18-36]
90	GAGUAUGUCGCCUAUGUUG	CAACAUAGGCGACAUACUC	Chn	[814-832]
91	CUCUGUCAUCGAUGGAGGA	UCCUCCAUCGAUGACAGAG		[50-68]
92	CUACAUUGCCUGUAGGACA	UGUCCUACAGGCAAUGUAG		[1175-1193]
93	AAAGUGUCAGUCACCUUAU	AUAAGGUGACUGACACUUU		[1649-1667]
94	CAUGCAAUCUAUCUCAUUU	AAAUGAGAUAGAUUGCAUG		[768-786]
95	CUUGGUUCGGUACAUGGGU	ACCCAUGUACCGAACCAAG	Rat	[486-504]
96	AGCAUUUGCUACUGGUGGA	UCCACCAGUAGCAAAUGCU		[1592-1610]
97	CCACCUGACCAUCAGUACU	AGUACUGAUGGUCAGGUGG	Chn,GP	[1030-1048]
98	GGAGCUACAUUGCCUGUAG	CUACAGGCAAUGUAGCUCC		[1171-1189]
99	CAGCUACCACAUGGACAAU	AUUGUCCAUGUGGUAGCUG	Rat,Ms	[1668-1686]
100	GAGAUCCAGAAGUCCGCAA	UUGCGGACUUCUGGAUCUC		[1205-1223]
101	CUACCACAUGGACAAUCAC	GUGAUUGUCCAUGUGGUAG	Rat,Ms	[1671-1689]
102	CACAUGCAAUCUAUCUCAU	AUGAGAUAGAUUGCAUGUG	Rat	[766-784]
103	CAGGACAUGAACAAGCUGA	UCAGCUUGUUCAUGUCCUG	Chn,Ms, GP	[325-343]
104	GCAGACUGCAAACAGAUCA	UGAUCUGUUUGCAGUCUGC	Rat,Chn,GP	[736-754]
105	UCAACGUCCAGAACCUAGA	UCUAGGUUCUGGACGUUGA	GP	[1283-1301]
106	GACAAUCACUUGCCCAUCA	UGAUGGGCAAGUGAUUGUC	Ms	[1681-1699]
107	CUUUGAAAGUGUCAGUCAC	GUGACUGACACUUUCAAAG		[1644-1662]
108	UGUCAACGUCCAGAACCUA	UAGGUUCUGGACGUUGACA	GP	[1281-1299]
109	GGACUAAGGAUCACCGCUU	AAGCGGUGAUCCUUAGUCC		[1628-1646]
110	AGGAGUAACCUGAAAUUUG	CAAAUUUCAGGUUACUCCU	GP	[664-682]
111	CAUCCCAACGACAAAGUCA	UGACUUUGUCGUUGGGAUG	Rat,Chn,Ms,GP	[448-466]
112	UCAGGAACCCACCCAAACU	AGUUUGGGUGGGUUCCUGA		[947-965]
113	ACCACCACAUGCAAUCUAU	AUAGAUUGCAUGUGGUGGU		[761-779]
114	CAAAGACCCUGUGAAUCAG	CUGAUUCACAGGGUCUUUG	Rat,Chn,Ms,GP	[834-852]
115	UCAGUCACCUUAUCAGCUA	UAGCUGAUAAGGUGACUGA		[1655-1673]
116	GACCAUCAGUACUAUAAUG	CAUUAUAGUACUGAUGGUC	Chn,GP	[1036-1054]
117	GGAGCUUUGUCAAUAAGCC	GGCUUAUUGACAAAGCUCC	Rat,Chn,Ms,GP	[413-431]
118	AACCUGAAAUUUGCUGGAA	UUCCAGCAAAUUUCAGGUU		[670-688]
119	GCAAUCUAUCUCAUUUGCA	UGCAAAUGAGAUAGAUUGC		[771-789]
120	CCUCCAGGACAUGAACAAG	CUUGUUCAUGUCCUGGAGG	Chn,Ms, GP	[321-339]
121	CAACGUCCAGAACCUAGAC	GUCUAGGUUCUGGACGUUG	GP	[1284-1302]
122	CGGGACCUGUUUGACAUGA	UCAUGUCAAACAGGUCCCG		[1366-1384]
123	GUGGGCAGCCUAAGCAUUU	AAAUGCUUAGGCUGCCCAC		[1580-1598]
124	UGUUUGACAUGAAGCCCUU	AAGGGCUUCAUGUCAAACA		[1373-1391]
125	UAACCUGAAAUUUGCUGGA	UCCAGCAAAUUUCAGGUUA		[669-687]

126	AGAGCUUUUUGAUGAUCCC	GGGAUCAUCAAAAAGCUCU		[1257-1275]
127	UCCAGGACAUGAACAAGCU	AGCUUGUUCAUGUCCUGGA	Chn,Ms, GP	[323-341]
128	UGGUUCGGACUAAGGAUCA	UGAUCCUUAGUCCGAACCA		[1622-1640]
129	CCACAUGGACAAUCACUUG	CAAGUGAUUGUCCAUGUGG	Ms	[1674-1692]
130	UUAUCAGCUACCACAUGGA	UCCAUGUGGUAGCUGAUAA		[1664-1682]
131	AUGAGUCUCUGUCAUCGAU	AUCGAUGACAGAGACUCAU		[44-62]
132	UCAAACAAUACCUCAGGAA	UUCCUGAGGUAUUGUUUGA		[935-953]
133	UUGACAUGAAGCCCUUCGA	UCGAAGGGCUUCAUGUCAA	Rat	[1376-1394]
134	GGUUCGGACUAAGGAUCAC	GUGAUCCUUAGUCCGAACC		[1623-1641]
135	UGCGCUUCAAACAAUACCU	AGGUAUUGUUUGAAGCGCA		[929-947]
136	AAUGAGUCUCUGUCAUCGA	UCGAUGACAGAGACUCAUU		[43-61]
137	CGCAGACUGCAAACAGAUC	GAUCUGUUUGCAGUCUGCG	Chn,GP	[735-753]
138	GUGUCAGUCACCUUAUCAG	CUGAUAAGGUGACUGACAC		[1652-1670]
139	AUCCCAACGACAAAGUCAU	AUGACUUUGUCGUUGGGAU	Rat,Chn,Ms,GP	[449-467]
140	CCAGGACAUGAACAAGCUG	CAGCUUGUUCAUGUCCUGG	Chn,Ms, GP	[324-342]
141	CUAAGGAUCACCGCUUUGA	UCAAAGCGGUGAUCCUUAG		[1631-1649]
142	GAUCCAGAAGUCCGCAAAC	GUUUGCGGACUUCUGGAUC		[1207-1225]
143	AGUGUCAGUCACCUUAUCA	UGAUAAGGUGACUGACACU		[1651-1669]
144	CAGUCACCUUAUCAGCUAC	GUAGCUGAUAAGGUGACUG		[1656-1674]
145	AUGUCAACGUCCAGAACCU	AGGUUCUGGACGUUGACAU	GP	[1280-1298]
146	AGCUACAUUGCCUGUAGGA	UCCUACAGGCAAUGUAGCU		[1173-1191]
147	CCACCACAUGCAAUCUAUC	GAUAGAUUGCAUGUGGUGG		[762-780]
148	AUGAUCCCUCCUAUGUCAA	UUGACAUAGGAGGGAUCAU		[1268-1286]
149	ACCACAUGGACAAUCACUU	AAGUGAUUGUCCAUGUGGU	Rat,Ms	[1673-1691]
150	UGGUUCCAUGGGAAGCUGA	UCAGCUUCCCAUGGAACCA		[1462-1480]
151	GGGAGCUACAUUGCCUGUA	UACAGGCAAUGUAGCUCCC		[1170-1188]
152	UCCAGAAGUCCGCAAACAG	CUGUUUGCGGACUUCUGGA		[1209-1227]
153	CAAACAAUACCUCAGGAAC	GUUCCUGAGGUAUUGUUUG		[936-954]
154	GGCAGAGAGCUUUUUGAUG	CAUCAAAAAGCUCUCUGCC		[1252-1270]
155	ACCUUAUCAGCUACCACAU	AUGUGGUAGCUGAUAAGGU		[1661-1679]
156	AAGUGUCAGUCACCUUAUC	GAUAAGGUGACUGACACUU		[1650-1668]
157	ACAAUCACUUGCCCAUCAU	AUGAUGGGCAAGUGAUUGU	Ms	[1682-1700]
158	UGGACAAUCACUUGCCCAU	AUGGGCAAGUGAUUGUCCA	Ms	[1679-1697]
159	AAAGACCCUGUGAAUCAGA	UCUGAUUCACAGGGUCUUU	Rat,Chn,Ms,GP	[835-853]
160	CUACUUGGUUCGGUACAUG	CAUGUACCGAACCAAGUAG	Rat,Chn,Ms,GP	[483-501]
161	AGCCCAAGUACAAUCCACU	AGUGGAUUGUACUUGGGCU		[20-38]
162	ACAUGCAAUCUAUCUCAUU	AAUGAGAUAGAUUGCAUGU	Rat	[767-785]
163	CUCCUAUGUCAACGUCCAG	CUGGACGUUGACAUAGGAG	GP	[1275-1293]
164	AUCCAGAAGUCCGCAAACA	UGUUUGCGGACUUCUGGAU		[1208-1226]
165	ACUUCAACACCCGGACUCA	UGAGUCCGGGUGUUGAAGU		[539-557]
166	GACUUCUUGGUACGGGAGA	UCUCCCGUACCAAGAAGUC		[1519-1537]
167	GUAUGUCGCCUAUGUUGCC	GGCAACAUAGGCGACAUAC	Chn	[816-834]
168	AGGAUGUCAUCAGCACCAU	AUGGUGCUGAUGACAUCCU	Chn,Ms, GP	[893-911]
169	CAAUCACUCUCACCGUCUC	GAGACGGUGAGAGUGAUUG		[692-710]
170	CUAAGCAUUUGCUACUGGU	ACCAGUAGCAAAUGCUUAG		[1589-1607]
171	AGUGGGCAGCCUAAGCAUU	AAUGCUUAGGCUGCCCACU		[1579-1597]
172	CUAUGUCAACGUCCAGAAC	GUUCUGGACGUUGACAUAG	GP	[1278-1296]
173	CAGCCUAAGCAUUUGCUAC	GUAGCAAAUGCUUAGGCUG		[1585-1603]
174	CACCACAUGCAAUCUAUCU	AGAUAGAUUGCAUGUGGUG		[763-781]
175	GCUUUUUGAUGAUCCCUCC	GGAGGGAUCAUCAAAAAGC		[1260-1278]
176	AAUCCACUCCGGAAUGAGU	ACUCAUUCCGGAGUGGAUU		[31-49]
177	CUUCGAAGAUGCUCUUCGG	CCGAAGAGCAUCUUCGAAG		[1389-1407]
178	UUCAAACAAUACCUCAGGA	UCCUGAGGUAUUGUUUGAA		[934-952]
179	GUACAAUCCACUCCGGAAU	AUUCCGGAGUGGAUUGUAC		[27-45]
180	GUCCAGGCAGAGAGCUUUU	AAAAGCUCUCUGCCUGGAC		[1247-1265]
181	GGUUCGGUACAUGGGUUGU	ACAACCCAUGUACCGAACC		[489-507]

182	GCCCUUCGAAGAUGCUCUU	AAGAGCAUCUUCGAAGGGC		[1386-1404]
183	UGAAAGUGUCAGUCACCUU	AAGGUGACUGACACUUUCA		[1647-1665]
184	GGUGGUAGACAUGAGGCUU	AAGCCUCAUGUCUACCACC	GP	[1086-1104]
185	UGAUGAUCCCUCCUAUGUC	GACAUAGGAGGGAUCAUCA		[1266-1284]
186	GUCACCUUAUCAGCUACCA	UGGUAGCUGAUAAGGUGAC		[1658-1676]
187	GAGUCUCUGUCAUCGAUGG	CCAUCGAUGACAGAGACUC		[46-64]
188	CUUGGGAGCUACAUUGCCU	AGGCAAUGUAGCUCCCAAG		[1167-1185]
189	CCAGGCAGAGAGCUUUUUG	CAAAAAGCUCUCUGCCUGG		[1249-1267]
190	GAGCUUUUUGAUGAUCCCU	AGGGAUCAUCAAAAAGCUC		[1258-1276]
191	CUCCUCCAGGACAUGAACA	UGUUCAUGUCCUGGAGGAG	Chn,Ms, GP	[319-337]
192	CAAUCACUUGCCCAUCAUC	GAUGAUGGGCAAGUGAUUG	Ms	[1683-1701]
193	AACCCACCCAAACUGGUCA	UGACCAGUUUGGGUGGGUU		[952-970]
194	GGGAGCUUUGUCAAUAAGC	GCUUAUUGACAAAGCUCCC	Rat,Chn,Ms,GP	[412-430]
195	GUUGCGCUUCAAACAAUAC	GUAUUGUUUGAAGCGCAAC		[927-945]
196	GCUUCAAACAAUACCUCAG	CUGAGGUAUUGUUUGAAGC		[932-950]
197	UCCUACUUGGUUCGGUACA	UGUACCGAACCAAGUAGGA	Rat,Chn,Ms, GP	[481-499]
198	GAGCUACAUUGCCUGUAGG	CCUACAGGCAAUGUAGCUC		[1172-1190]
199	ACAAGGAGGAGAAAGCCCU	AGGGCUUUCUCCUCCUUGU		[616-634]
200	GUGUCUACAGCAACCUGUG	CACAGGUUGCUGUAGACAC	Rat	[1719-1737]
201	CCACUUGGGAGCUACAUUG	CAAUGUAGCUCCCAAGUGG		[1164-1182]
202	AGUCUCUGUCAUCGAUGGA	UCCAUCGAUGACAGAGACU		[47-65]
203	AAGUACAAUCCACUCCGGA	UCCGGAGUGGAUUGUACUU		[25-43]
204	AGAAGUCCGCAAACAGAUG	CAUCUGUUUGCGGACUUCU		[1212-1230]
205	ACAAUACCUCAGGAACCCA	UGGGUUCCUGAGGUAUUGU	GP	[939-957]
206	GGCAGCCUAAGCAUUUGCU	AGCAAAUGCUUAGGCUGCC		[1583-1601]
207	CAAGUACAAUCCACUCCGG	CCGGAGUGGAUUGUACUUG		[24-42]
208	AGCUUUGUCAAUAAGCCCA	UGGGCUUAUUGACAAAGCU	Rat,Chn,Ms,GP	[415-433]
209	GUCAGUCACCUUAUCAGCU	AGCUGAUAAGGUGACUGAC		[1654-1672]
210	ACAUGAACAAGCUGAGUGG	CCACUCAGCUUGUUCAUGU	Rat,Chn,Ms, GP	[329-347]
211	GACCCUGUGAAUCAGAGAG	CUCUCUGAUUCACAGGGUC	Rat,Chn,Ms,GP	[838-856]
212	CCUGUGAAUCAGAGAGCCU	AGGCUCUCUGAUUCACAGG	Rat,Chn,Ms,GP	[841-859]
213	AGCCUAAGCAUUUGCUACU	AGUAGCAAAUGCUUAGGCU		[1586-1604]
214	UUGGUUCGGUACAUGGGUU	AACCCAUGUACCGAACCAA	Rat	[487-505]
215	CAUGGACAAUCACUUGCCC	GGGCAAGUGAUUGUCCAUG	Ms	[1677-1695]
216	CAAUCCACUCCGGAAUGAG	CUCAUUCCGGAGUGGAUUG		[30-48]
217	GACAUGAAGCCCUUCGAAG	CUUCGAAGGGCUUCAUGUC	Rat	[1378-1396]
218	CCAAUCACUCUCACCGUCU	AGACGGUGAGAGUGAUUGG		[691-709]
219	AUCAGCUACCACAUGGACA	UGUCCAUGUGGUAGCUGAU	Rat,Ms	[1666-1684]
220	CUUUUUGAUGAUCCCUCCU	AGGAGGGAUCAUCAAAAAG		[1261-1279]
221	GUACUAUAAUGACUUCCCG	CGGGAAGUCAUUAUAGUAC		[1044-1062]
222	CUCCGGAAUGAGUCUCUGU	ACAGAGACUCAUUCCGGAG		[37-55]
223	CAACCACCACAUGCAAUCU	AGAUUGCAUGUGGUGGUUG		[759-777]
224	ACCAUCAGUACUAUAAUGA	UCAUUAUAGUACUGAUGGU	Chn,GP	[1037-1055]
225	GCGCUUCAAACAAUACCUC	GAGGUAUUGUUUGAAGCGC		[930-948]
226	GAAGCCCUUCGAAGAUGCU	AGCAUCUUCGAAGGGCUUC		[1383-1401]
227	GGGUUUCCUACUUGGUUCG	CGAACCAAGUAGGAAACCC	Rat,Chn,Ms,GP	[476-494]
228	CUACCCUGUGCUCCUUCUU	AAGAAGGAGCACAGGGUAG		[167-185]
229	GCAUCCCAACGACAAAGUC	GACUUUGUCGUUGGGAUGC	Rat,Ms	[447-465]
230	GCCCAAGUACAAUCCACUC	GAGUGGAUUGUACUUGGGC		[21-39]
231	GAGCUUUGUCAAUAAGCCC	GGGCUUAUUGACAAAGCUC	Rat,Chn,Ms,GP	[414-432]
232	AAGCCCAAGUACAAUCCAC	GUGGAUUGUACUUGGGCUU		[19-37]
233	CUGCAUCCCAACGACAAAG	CUUUGUCGUUGGGAUGCAG	Rat,Ms	[445-463]
234	GACUGCAAACAGAUCAUCG	CGAUGAUCUGUUUGCAGUC		[739-757]
235	UUUGAUGAUCCCUCCUAUG	CAUAGGAGGGAUCAUCAAA		[1264-1282]

236	AACCACCACAUGCAAUCUA	UAGAUUGCAUGUGGUGGUU		[760-778]
237	ACUUGGUUCGGUACAUGGG	CCCAUGUACCGAACCAAGU	Rat,Chn,Ms, GP	[485-503]
238	CCCAAUCCUGCUAUCAAUG	CAUUGAUAGCAGGAUUGGG		[1336-1354]
239	AAGACCCUGUGAAUCAGAG	CUCUGAUUCACAGGGUCUU	Rat,Chn,Ms,GP	[836-854]
240	UGUCAUCGAUGGAGGAAGG	CCUUCCUCCAUCGAUGACA		[53-71]
241	CAAUACCUCAGGAACCCAC	GUGGGUUCCUGAGGUAUUG	GP	[940-958]
242	UGGGCAGCCUAAGCAUUUG	CAAAUGCUUAGGCUGCCCA		[1581-1599]
243	UCCUAUGUCAACGUCCAGA	UCUGGACGUUGACAUAGGA	GP	[1276-1294]
244	GGAAUGAGUCUCUGUCAUC	GAUGACAGAGACUCAUUCC	Ms	[41-59]
245	UGAUCCCUCCUAUGUCAAC	GUUGACAUAGGAGGGAUCA		[1269-1287]
246	GAUAGUCCCACUACCCUGU	ACAGGGUAGUGGGACUAUC		[157-175]
247	CUGUUUGACAUGAAGCCCU	AGGGCUUCAUGUCAAACAG		[1372-1390]
248	UUUUUGAUGAUCCCUCCUA	UAGGAGGGAUCAUCAAAAA		[1262-1280]
249	GUUUCCUACUUGGUUCGGU	ACCGAACCAAGUAGGAAAC	Rat,Chn,Ms,GP	[478-496]
250	CCUUAUCAGCUACCACAUG	CAUGUGGUAGCUGAUAAGG		[1662-1680]
251	ACAAUCCACUCCGGAAUGA	UCAUUCCGGAGUGGAUUGU		[29-47]
252	GAGAGCUUUUUGAUGAUCC	GGAUCAUCAAAAAGCUCUC		[1256-1274]
253	AGGAUCACCGCUUUGAAAG	CUUUCAAAGCGGUGAUCCU		[1634-1652]
254	UGAACAAGCUGAGUGGAGG	CCUCCACUCAGCUUGUUCA	Rat,Chn,Ms,GP	[332-350]
255	AUCAGUACUAUAAUGACUU	AAGUCAUUAUAGUACUGAU	Chn,GP	[1040-1058]
256	GAAUGAGUCUCUGUCAUCG	CGAUGACAGAGACUCAUUC	Ms	[42-60]
257	CCAAGUACAAUCCACUCCG	CGGAGUGGAUUGUACUUGG		[23-41]
258	GUCUACAGCAACCUGUGGA	UCCACAGGUUGCUGUAGAC	Rat	[1721-1739]
259	GGACAAUCACUUGCCCAUC	GAUGGGCAAGUGAUUGUCC	Ms	[1680-1698]
260	CGCUUUGAAAGUGUCAGUC	GACUGACACUUUCAAAGCG		[1642-1660]
261	AAACAAUACCUCAGGAACC	GGUUCCUGAGGUAUUGUUU	GP	[937-955]
262	GCUUUGUCAAUAAGCCCAC	GUGGGCUUAUUGACAAAGC	Rat,Chn,Ms,GP	[416-434]
263	AUGGACAAUCACUUGCCCA	UGGGCAAGUGAUUGUCCAU	Ms	[1678-1696]
264	UGUCAGUCACCUUAUCAGC	GCUGAUAAGGUGACUGACA		[1653-1671]
265	AACGUCCAGAACCUAGACA	UGUCUAGGUUCUGGACGUU	GP	[1285-1303]
266	GUCAACGUCCAGAACCUAG	CUAGGUUCUGGACGUUGAC	GP	[1282-1300]
267	CUAUCUCAUUUGCAUCCGG	CCGGAUGCAAAUGAGAUAG		[776-794]
268	UCCCAACGACAAAGUCAUG	CAUGACUUUGUCGUUGGGA	Rat,Chn,Ms,GP	[450-468]
269	AAUCACUUGCCCAUCAUCU	AGAUGAUGGGCAAGUGAUU	Ms	[1684-1702]
270	CCCAAGCCCAAGUACAAUC	GAUUGUACUUGGGCUUGGG		[16-34]
271	UCAGUACUAUAAUGACUUC	GAAGUCAUUAUAGUACUGA	Chn,GP	[1041-1059]
272	UCACCUUAUCAGCUACCAC	GUGGUAGCUGAUAAGGUGA		[1659-1677]
273	UACCACAUGGACAAUCACU	AGUGAUUGUCCAUGUGGUA	Rat,Ms	[1672-1690]
274	ACGAUAGUCCCACUACCCU	AGGGUAGUGGGACUAUCGU		[155-173]
275	ACUUCUUGGUACGGGAGAG	CUCUCCCGUACCAAGAAGU		[1520-1538]
276	UGUCCAGGCAGAGAGCUUU	AAAGCUCUCUGCCUGGACA		[1246-1264]
277	CUGUCAUCGAUGGAGGAAG	CUUCCUCCAUCGAUGACAG		[52-70]
278	CCAACGACAAAGUCAUGGG	CCCAUGACUUUGUCGUUGG	Rat,Chn,Ms,GP	[452-470]
279	GCCUAAGCAUUUGCUACUG	CAGUAGCAAAUGCUUAGGC		[1587-1605]
280	UACAUUGCCUGUAGGACAG	CUGUCCUACAGGCAAUGUA		[1176-1194]
281	CUGCAAACAGAUCAUCGCC	GGCGAUGAUCUGUUUGCAG		[741-759]
282	UCCAGAACCUAGACAAGGC	GCCUUGUCUAGGUUCUGGA	Chn,GP	[1289-1307]
283	UGGGAGCUACAUUGCCUGU	ACAGGCAAUGUAGCUCCCA		[1169-1187]
284	UGCAUCCCAACGACAAAGU	ACUUUGUCGUUGGGAUGCA	Rat,Ms	[446-464]
285	UGGUAGACAUGAGGCUUCG	CGAAGCCUCAUGUCUACCA	GP	[1088-1106]
286	GUGGUUCGGACUAAGGAUC	GAUCCUUAGUCCGAACCAC		[1621-1639]
287	UUGAUGAUCCCUCCUAUGU	ACAUAGGAGGGAUCAUCAA		[1265-1283]
288	UUCGAGUUGCGCUUCAAAC	GUUUGAAGCGCAACUCGAA		[922-940]
289	UCACUUGCCCAUCAUCUCU	AGAGAUGAUGGGCAAGUGA	Ms	[1686-1704]
290	CUUCAAACAAUACCUCAGG	CCUGAGGUAUUGUUUGAAG		[933-951]

291	UUGAAAGUGUCAGUCACCU	AGGUGACUGACACUUUCAA		[1646-1664]
292	AGUAUGUCGCCUAUGUUGC	GCAACAUAGGCGACAUACU	Chn	[815-833]
293	AUCACUCUCACCGUCUCCA	UGGAGACGGUGAGAGUGAU		[694-712]
294	AACCUGUGGAGCGGAAACU	AGUUUCCGCUCCACAGGUU		[1730-1748]
295	UACUUGGUUCGGUACAUGG	CCAUGUACCGAACCAAGUA	Rat,Chn,Ms,GP	[484-502]
296	UCUGUCAUCGAUGGAGGAA	UUCCUCCAUCGAUGACAGA		[51-69]
297	AAGGAGGAGAAAGCCCUGU	ACAGGGCUUUCUCCUCCUU		[618-636]
298	CUUGCCCAGGAUGUCAUCA	UGAUGACAUCCUGGGCAAG	Chn,GP	[886-904]
299	CACUCCGGAAUGAGUCUCU	AGAGACUCAUUCCGGAGUG		[35-53]
300	UCACCGCUUUGAAAGUGUC	GACACUUUCAAAGCGGUGA		[1638-1656]
301	CCAACCACCACAUGCAAUC	GAUUGCAUGUGGUGGUUGG		[758-776]
302	AGCCCUUCGAAGAUGCUCU	AGAGCAUCUUCGAAGGGCU		[1385-1403]
303	GUUCGGUACAUGGGUUGUG	CACAACCCAUGUACCGAAC		[490-508]
304	UGUGAAUCAGAGAGCCUGC	GCAGGCUCUCUGAUUCACA	Rat,Chn,Ms	[843-861]
305	ACUGCAAACAGAUCAUCGC	GCGAUGAUCUGUUUGCAGU		[740-758]
306	CUCCAGGACAUGAACAAGC	GCUUGUUCAUGUCCUGGAG	Chn,Ms, GP	[322-340]
307	CUGAAAUUUGCUGGAAUGC	GCAUUCCAGCAAAUUUCAG		[673-691]
308	AUGUCAUCAGCACCAUUGG	CCAAUGGUGCUGAUGACAU	Chn,GP	[896-914]
309	ACCGCUUUGAAAGUGUCAG	CUGACACUUUCAAAGCGGU		[1640-1658]
310	GAUCCCUCCUAUGUCAACG	CGUUGACAUAGGAGGGAUC	GP	[1270-1288]
311	AUGAACAAGCUGAGUGGAG	CUCCACUCAGCUUGUUCAU	Rat,Chn,Ms,GP	[331-349]
312	UCUACAGCAACCUGUGGAG	CUCCACAGGUUGCUGUAGA		[1722-1740]
313	CUGUGAAUCAGAGAGCCUG	CAGGCUCUCUGAUUCACAG	Rat,Chn,Ms,GP	[842-860]
314	GACAUGAACAAGCUGAGUG	CACUCAGCUUGUUCAUGUC	Rat,Chn,Ms,GP	[328-346]
315	ACGACAAAGUCAUGGGACC	GGUCCCAUGACUUUGUCGU	Rat,Chn,Ms,GP	[455-473]
316	CUUUGUCAAUAAGCCCACG	CGUGGGCUUAUUGACAAAG	Chn,GP	[417-435]
317	GCUACAUUGCCUGUAGGAC	GUCCUACAGGCAAUGUAGC		[1174-1192]
318	UAUCAGCUACCACAUGGAC	GUCCAUGUGGUAGCUGAUA		[1665-1683]
319	CACUUGGGAGCUACAUUGC	GCAAUGUAGCUCCCAAGUG		[1165-1183]
320	AUGCAAUCUAUCUCAUUUG	CAAAUGAGAUAGAUUGCAU		[769-787]
321	UUCUUGGUACGGGAGAGCA	UGCUCUCCCGUACCAAGAA		[1522-1540]
322	UCCAGGCAGAGAGCUUUUU	AAAAAGCUCUCUGCCUGGA		[1248-1266]
323	GUCCAGAACCUAGACAAGG	CCUUGUCUAGGUUCUGGAC	Chn,GP	[1288-1306]
324	AUCCCUCCUAUGUCAACGU	ACGUUGACAUAGGAGGGAU	GP	[1271-1289]
325	AUCACCGCUUUGAAAGUGU	ACACUUUCAAAGCGGUGAU		[1637-1655]
326	CCAAGCCCAAGUACAAUCC	GGAUUGUACUUGGGCUUGG		[17-35]
327	AAUCUAUCUCAUUUGCAUC	GAUGCAAAUGAGAUAGAUU		[773-791]
328	UCCACUCCGGAAUGAGUCU	AGACUCAUUCCGGAGUGGA		[33-51]
329	AUCACUUGCCCAUCAUCUC	GAGAUGAUGGGCAAGUGAU	Ms	[1685-1703]
330	GCAUUUGCUACUGGUGGAC	GUCCACCAGUAGCAAAUGC		[1593-1611]
331	ACUACCCUGUGCUCCUUCU	AGAAGGAGCACAGGGUAGU		[166-184]
332	AGCUUUUUGAUGAUCCCUC	GAGGGAUCAUCAAAAAGCU		[1259-1277]
333	AUUCUGGAGUGUCCCGAAG	CUUCGGGACACUCCAGAAU		[865-883]
334	CCAAUCCUGCUAUCAAUGG	CCAUUGAUAGCAGGAUUGG		[1337-1355]
335	UGAGUCUCUGUCAUCGAUG	CAUCGAUGACAGAGACUCA		[45-63]
336	ACAUUCUGGAGUGUCCCGA	UCGGGACACUCCAGAAUGU		[863-881]
337	UGCAAUCUAUCUCAUUUGC	GCAAAUGAGAUAGAUUGCA		[770-788]
338	ACCUGUUUGACAUGAAGCC	GGCUUCAUGUCAAACAGGU		[1370-1388]
339	UGGUUCGGUACAUGGGUUG	CAACCCAUGUACCGAACCA	Rat	[488-506]
340	AGAGAGCUUUUUGAUGAUC	GAUCAUCAAAAAGCUCUCU		[1255-1273]
341	CCUAAGCAUUUGCUACUGG	CCAGUAGCAAAUGCUUAGG		[1588-1606]
342	AAUACCUCAGGAACCCACC	GGUGGGUUCCUGAGGUAUU	GP	[941-959]
343	GACCUGUUUGACAUGAAGC	GCUUCAUGUCAAACAGGUC		[1369-1387]
344	AGACUGCAAACAGAUCAUC	GAUGAUCUGUUUGCAGUCU		[738-756]
345	ACUAAGGAUCACCGCUUUG	CAAAGCGGUGAUCCUUAGU		[1630-1648]
346	GUGGUAGACAUGAGGCUUC	GAAGCCUCAUGUCUACCAC	GP	[1087-1105]

347	ACCACAUGCAAUCUAUCUC	GAGAUAGAUUGCAUGUGGU		[764-782]
348	CCUUCGAAGAUGCUCUUCG	CGAAGAGCAUCUUCGAAGG		[1388-1406]
349	GUUUGACAUGAAGCCCUUC	GAAGGGCUUCAUGUCAAAC		[1374-1392]
350	AACAAUACCUCAGGAACCC	GGGUUCCUGAGGUAUUGUU	GP	[938-956]
351	ACAUGGACAAUCACUUGCC	GGCAAGUGAUUGUCCAUGU	Ms	[1676-1694]
352	UUCCUACUUGGUUCGGUAC	GUACCGAACCAAGUAGGAA	Rat,Chn,Ms,GP	[480-498]
353	CUUAUCAGCUACCACAUGG	CCAUGUGGUAGCUGAUAAG		[1663-1681]
354	ACUCCGGAAUGAGUCUCUG	CAGAGACUCAUUCCGGAGU		[36-54]
355	CACUUGCCCAUCAUCUCUG	CAGAGAUGAUGGGCAAGUG	Ms	[1687-1705]
356	UUGGGAGCUACAUUGCCUG	CAGGCAAUGUAGCUCCCAA		[1168-1186]
357	UGUCUACAGCAACCUGUGG	CCACAGGUUGCUGUAGACA	Rat	[1720-1738]
358	UUGCCCAGGAUGUCAUCAG	CUGAUGACAUCCUGGGCAA	Chn,GP	[887-905]
359	AUCUCAUUUGCAUCCGGCG	CGCCGGAUGCAAAUGAGAU		[778-796]
360	UUGCGCUUCAAACAAUACC	GGUAUUGUUUGAAGCGCAA		[928-946]
361	UUUGAAAGUGUCAGUCACC	GGUGACUGACACUUUCAAA		[1645-1663]
362	GAUGUCAUCAGCACCAUUG	CAAUGGUGCUGAUGACAUC	Chn,GP	[895-913]
363	UAAGCAUUUGCUACUGGUG	CACCAGUAGCAAAUGCUUA		[1590-1608]
364	UGAAAUUUGCUGGAAUGCC	GGCAUUCCAGCAAAUUUCA		[674-692]
365	GUAACCUGAAAUUUGCUGG	CCAGCAAAUUUCAGGUUAC		[668-686]
366	UUCGGACUAAGGAUCACCG	CGGUGAUCCUUAGUCCGAA		[1625-1643]
367	CCUGUUUGACAUGAAGCCC	GGGCUUCAUGUCAAACAGG		[1371-1389]
368	GAUCACCGCUUUGAAAGUG	CACUUUCAAAGCGGUGAUC		[1636-1654]
369	AGUACUAUAAUGACUUCCC	GGGAAGUCAUUAUAGUACU	Chn,GP	[1043-1061]
370	AAGCAUUUGCUACUGGUGG	CCACCAGUAGCAAAUGCUU		[1591-1609]
371	UUGUCAAUAAGCCCACGCG	CGCGUGGGCUUAUUGACAA		[419-437]
372	CACAUGGACAAUCACUUGC	GCAAGUGAUUGUCCAUGUG	Ms	[1675-1693]
373	AACGACAAAGUCAUGGGAC	GUCCCAUGACUUUGUCGUU	Rat,Chn,Ms,GP	[454-472]
374	UGAAGCCCUUCGAAGAUGC	GCAUCUUCGAAGGGCUUCA	Rat	[1382-1400]
375	UCGAAGAUGCUCUUCGGGU	ACCCGAAGAGCAUCUUCGA		[1391-1409]
376	GUCUCUGUCAUCGAUGGAG	CUCCAUCGAUGACAGAGAC		[48-66]
377	AUUGCCUGUAGGACAGCCU	AGGCUGUCCUACAGGCAAU		[1179-1197]
378	AGUAACCUGAAAUUUGCUG	CAGCAAAUUUCAGGUUACU		[667-685]
379	GUUCGGACUAAGGAUCACC	GGUGAUCCUUAGUCCGAAC		[1624-1642]
380	UCCGGAAUGAGUCUCUGUC	GACAGAGACUCAUUCCGGA		[38-56]
381	UUUGCUACUGGUGGACCCU	AGGGUCCACCAGUAGCAAA		[1596-1614]
382	GGUUUCCUACUUGGUUCGG	CCGAACCAAGUAGGAAACC	Rat,Chn,Ms,GP	[477-495]
383	UCUCUGUCAUCGAUGGAGG	CCUCCAUCGAUGACAGAGA		[49-67]
384	ACUUGGGAGCUACAUUGCC	GGCAAUGUAGCUCCCAAGU		[1166-1184]
385	ACUUGCCCAUCAUCUCUGC	GCAGAGAUGAUGGGCAAGU	Ms	[1688-1706]
386	ACCCUGUGAAUCAGAGAGC	GCUCUCUGAUUCACAGGGU	Rat,Chn,Ms, GP	[839-857]
387	GAAGUCCGCAAACAGAUGC	GCAUCUGUUUGCGGACUUC		[1213-1231]
388	AUUUGCUACUGGUGGACCC	GGGUCCACCAGUAGCAAAU		[1595-1613]
389	UCCCUCCUAUGUCAACGUC	GACGUUGACAUAGGAGGGA	GP	[1272-1290]
390	CAGUACUAUAAUGACUUCC	GGAAGUCAUUAUAGUACUG	Chn,GP	[1042-1060]
391	AAUCACUCUCACCGUCUCC	GGAGACGGUGAGAGUGAUU		[693-711]
392	UACAAUCCACUCCGGAAUG	CAUUCCGGAGUGGAUUGUA		[28-46]
393	AAGUCCGCAAACAGAUGCC	GGCAUCUGUUUGCGGACUU		[1214-1232]
394	CCCAAGUACAAUCCACUCC	GGAGUGGAUUGUACUUGGG		[22-40]
395	UAUCUCAUUUGCAUCCGGC	GCCGGAUGCAAAUGAGAUA		[777-795]
396	UACCCUGUGCUCCUUCUUC	GAAGAAGGAGCACAGGGUA		[168-186]
397	CCCAACGACAAAGUCAUGG	CCAUGACUUUGUCGUUGGG	Rat,Chn,Ms,GP	[451-469]
398	UACUAUAAUGACUUCCCGG	CCGGGAAGUCAUUAUAGUA		[1045-1063]
399	AUCCACUCCGGAAUGAGUC	GACUCAUUCCGGAGUGGAU		[32-50]
400	AGUCACCUUAUCAGCUACC	GGUAGCUGAUAAGGUGACU		[1657-1675]
401	AGCUACCACAUGGACAAUC	GAUUGUCCAUGUGGUAGCU	Rat,Ms	[1669-1687]

402	UUCGAAGAUGCUCUUCGGG	CCCGAAGAGCAUCUUCGAA		[1390-1408]
403	AUGAAGCCCUUCGAAGAUG	CAUCUUCGAAGGGCUUCAU	Rat	[1381-1399]
404	UAUGUCAACGUCCAGAACC	GGUUCUGGACGUUGACAUA	GP	[1279-1297]
405	ACAUUGCCUGUAGGACAGC	GCUGUCCUACAGGCAAUGU		[1177-1195]
406	CAUUUGCUACUGGUGGACC	GGUCCACCAGUAGCAAAUG		[1594-1612]
407	CCCUUCGAAGAUGCUCUUC	GAAGAGCAUCUUCGAAGGG		[1387-1405]
408	UCUAUCUCAUUUGCAUCCG	CGGAUGCAAAUGAGAUAGA		[775-793]
409	ACUAUAAUGACUUCCCGGG	CCCGGGAAGUCAUUAUAGU		[1046-1064]
410	AUAGUCCCACUACCCUGUG	CACAGGGUAGUGGGACUAU		[158-176]
411	AAGCCCUUCGAAGAUGCUC	GAGCAUCUUCGAAGGGCUU		[1384-1402]
412	UUUGACAUGAAGCCCUUCG	CGAAGGGCUUCAUGUCAAA	Rat	[1375-1393]
413	AUCUAUCUCAUUUGCAUCC	GGAUGCAAAUGAGAUAGAU		[774-792]
414	UUUGUCAAUAAGCCCACGC	GCGUGGGCUUAUUGACAAA		[418-436]

Table B 28 SLC2A1 - solute carrier family 2, member 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-5730050 :180-1658
1	CCAAGAGUGUGCUAAAGAA	UUCUUUAGCACACUCUUGG		[850-868]
2	AGAUGAUGCGGGAGAAGAA	UUCUUCUCCCGCAUCAUCU	Rat,Ms	[928-946]
3	CCACGAGCAUCUUCGAGAA	UUCUCGAAGAUGCUCGUGG		[1060-1078]
4	GAUAGUUGGUGUUCAAAAA	UUUUUGAACACCAACUAUC		[2772-2790]
5	GCUGGAUGAGACUUCCAAA	UUUGGAAGUCUCAUCCAGC		[1724-1742]
6	CAAGCAACAGGUUUUAUAA	UUAUAAAACCUGUUGCUUG		[1874-1892]
7	GGAUGGGAGUGAGACAGAA	UUCUGUCUCACUCCCAUCC		[2584-2602]
8	CAAAGUUCCUGAGACUAAA	UUUAGUCUCAGGAACUUUG		[1529-1547]
9	GGCUGAUUCCCAAGUGUGA	UCACACUUGGGAAUCAGCC		[1640-1658]
10	GCUCCAGGAUUUUAACAAA	UUUGUUAAAAUCCUGGAGC		[1826-1844]
11	GAUGCAAGAUAUUUAUAUA	UAUAUAAAUAUCUUGCAUC		[2399-2417]
12	CAAACUCACUGCUCAAGAA	UUCUUGAGCAGUGAGUUUG		[2350-2368]
13	UCUUUAUCUUGACAUUCAA	UUGAAUGUCAAGAUAAAGA		[2733-2751]
14	GCAUUAUUUUGAAUGUGAA	UUCACAUUCAAAAUAAUGC		[2833-2851]
15	AAGCAAGACUGUUGCUCAA	UUGAGCAACAGUCUUGCUU		[1844-1862]
16	GGGAGAAGAAGGUCACCAU	AUGGUGACCUUCUUCUCCC	Rat,Ms	[937-955]
17	CGUGAUGCUCAGGCUUGAA	UUCAAGCCUGAGCAUCACG		[2811-2829]
18	AGGUGAUCGAGGAGUUCUA	UAGAACUCCUCGAUCACCU		[292-310]
19	UUAGAAACAUGGUUUUGAA	UUCAAAACCAUGUUUCUAA		[2537-2555]
20	CCAUCAUGGGCAACAAGGA	UCCUUGUUGCCCAUGAUGG		[712-730]
21	GGGAGUGAGACAGAAGUAA	UUACUUCUGUCUCACUCCC		[2588-2606]
22	GUGUCCUCUUGCUCAAAAA	UUUUUGAGCAAGAGGACAC		[2678-2696]
23	GACUGUUGCUCAAAUCUAU	AUAGAUUUGAGCAACAGUC		[1850-1868]
24	CGGCGGAAUUCAAUGCUGA	UCAGCAUUGAAUUCCGCCG		[453-471]
25	CUACAAAGCUUCUAUCCCA	UGGGAUAGAAGCUUUGUAG		[2081-2099]
26	GUGUAUAGAUGCAAGAUAU	AUAUCUUGCAUCUAUACAC		[2392-2410]
27	UUUGGUUGUCAAUAUUAAA	UUUAAUAUUGACAACCAAA		[2422-2440]
28	AAGAGAGUCGGCAGAUGAU	AUCAUCUGCCGACUCUCUU		[916-934]
29	UUACCUAAACAGAUAUAAA	UUUAUAUCUGUUUAGGUAA		[2508-2526]
30	GACACUAAGUUAUAGUAUA	UAUACUAUAACUUAGUGUC	Rat,Ms	[2445-2463]
31	UGCUGAGCAUCAUCUUCAU	AUGAAGAUGAUGCUCAGCA		[745-763]
32	CCCUGGAUGUCCUAUCUGA	UCAGAUAGGACAUCCAGGG	Rat	[1263-1281]
33	GAGGAGUUCUACAACCAGA	UCUGGUUGUAGAACUCCUC		[300-318]
34	CUCCAGGAUUUUAACAAAA	UUUUGUUAAAAUCCUGGAG		[1827-1845]
35	GAGUGAGACAGAAGUAAGU	ACUUACUUCUGUCUCACUC		[2590-2608]
36	CCCUGUUACCCAGAGAAUA	UAUUCUCUGGGUAACAGGG		[2707-2725]
37	ACUCCAUCAUGGGCAACAA	UUGUUGCCCAUGAUGGAGU		[709-727]
38	GGCGGAAUUCAAUGCUGAU	AUCAGCAUUGAAUUCCGCC		[454-472]

39	GAAGAGAGUCGGCAGAUGA	UCAUCUGCCGACUCUCUUC		[915-933]
40	GGAGAUGAAGGAAGAGAGU	ACUCUCUUCCUUCAUCUCC		[905-923]
41	CUGCAAACUCACUGCUCAA	UUGAGCAGUGAGUUUGCAG		[2347-2365]
42	AGGAUUUUAACAAAAGCAA	UUGCUUUUGUUAAAAUCCU		[1831-1849]
43	AACUGGACCUCAAAUUUCA	UGAAAUUUGAGGUCCAGUU		[1410-1428]
44	AUUCAAUGCUGAUGAUGAA	UUCAUCAUCAGCAUUGAAU		[460-478]
45	GUCCCUACGUCUUCAUCAU	AUGAUGAAGACGUAGGGAC		[1468-1486]
46	CACACUAAUCGAACUAUGA	UCAUAGUUCGAUUAGUGUG		[2061-2079]
47	AUCGAACUAUGAACUACAA	UUGUAGUUCAUAGUUCGAU		[2068-2086]
48	CCCUAAGGAUCUCUCAGGA	UCCUGAGAGAUCCUUAGGG		[1696-1714]
49	GCAAUGAUGUCCAGAAGAA	UUCUUCUGGACAUCAUUGC		[1791-1809]
50	UCUCCAACUGGACCUCAAA	UUUGAGGUCCAGUUGGAGA	Ms	[1405-1423]
51	ACACUAAUCGAACUAUGAA	UUCAUAGUUCGAUUAGUGU		[2062-2080]
52	CUGUGGGCCUUUUCGUUAA	UUAACGAAAAGGCCCACAG		[424-442]
53	CAUCUUCACCUACUUCAAA	UUUGAAGUAGGUGAAGAUG	Rat,Ms	[1514-1532]
54	GCAUCAACGCUGUCUUCUA	UAGAAGACAGCGUUGAUGC		[1036-1054]
55	UCAUCUUCACCUACUUCAA	UUGAAGUAGGUGAAGAUGA	Rat,Ms	[1513-1531]
56	ACCCAACCACUCAAAUUAA	UUAAUUUGAGUGGUUGGGU		[2192-2210]
57	GGCUGGACCUAUGUCCUAA	UUAGGACAUAGGUCCAGCC		[2039-2057]
58	GGUUUGGAUGGGAGUGAGA	UCUCACUCCCAUCCAAACC		[2579-2597]
59	UGUCAAUAUUAAAUACAGA	UCUGUAUUUAAUAUUGACA	Ms	[2428-2446]
60	GAAAUCGCAUUAUUUUGAA	UUCAAAAUAAUGCGAUUUC		[2827-2845]
61	GCAAGACUGUUGCUCAAAU	AUUUGAGCAACAGUCUUGC		[1846-1864]
62	CCUUCUUCACCCAGCUAAU	AUUAGCUGGGUGAAGAAGG		[2014-2032]
63	CCACACUAUUACCAUGAGA	UCUCAUGGUAAUAGUGUGG		[2311-2329]
64	UUUGAUAGUUGGUGUUCAA	UUGAACACCAACUAUCAAA		[2769-2787]
65	UUUUGGUUGUCAAUAUUAA	UUAAUAUUGACAACCAAAA		[2421-2439]
66	GAUUUUAACAAAAGCAAGA	UCUUGCUUUUGUUAAAAUC		[1833-1851]
67	CACACUAUUACCAUGAGAA	UUCUCAUGGUAAUAGUGUG		[2312-2330]
68	GUAUGUGGGUGAAGUGUCA	UGACACUUCACCCACAUAC		[605-623]
69	UGGACUCCAUCAUGGGCAA	UUGCCCAUGAUGGAGUCCA		[706-724]
70	AACGGCUCCAGGAUUUUAA	UUAAAAUCCUGGAGCCGUU		[1822-1840]
71	CAGGAUUUUAACAAAAGCA	UGCUUUUGUUAAAAUCCUG		[1830-1848]
72	GCAUGUGCUUCCAGUAUGU	ACAUACUGGAAGCACAUGC	Ms	[1435-1453]
73	CCUGUUACCCAGAGAAUAU	AUAUUCUCUGGGUAACAGG		[2708-2726]
74	CCACCUCACUCCUGUUACU	AGUAACAGGAGUGAGGUGG		[2490-2508]
75	UGCAGGAGAUGAAGGAAGA	UCUUCCUUCAUCUCCUGCA		[901-919]
76	UGAUCGAGGAGUUCUACAA	UUGUAGAACUCCUCGAUCA		[295-313]
77	UGUUCUUCAUCUUCACCUA	UAGGUGAAGAUGAAGAACA		[1507-1525]
78	CCUGCAGGAGAUGAAGGAA	UUCCUUCAUCUCCUGCAGG		[899-917]
79	GCUCAAGAAGACAUGGAGA	UCUCCAUGUCUUCUUGAGC		[2360-2378]
80	UGAUAGUUGGUGUUCAAAA	UUUUGAACACCAACUAUCA		[2771-2789]
81	CAGACACUAAGUUAUAGUA	UACUAUAACUUAGUGUCUG	Rat,Ms	[2443-2461]
82	CGGCUUAGACUUCGACUCA	UGAGUCGAAGUCUAAGCCG		[2628-2646]
83	UAGUUGGUGUUCAAAAAAA	UUUUUUUGAACACCAACUA		[2774-2792]
84	AAGGCAUUUCUAUCACAUA	UAUGUGAUAGAAAUGCCUU		[2750-2768]
85	GAAGAAUAUUCAGGACUUA	UAAGUCCUGAAUAUUCUUC		[1804-1822]
86	ACUGGACCUCAAAUUUCAU	AUGAAAUUUGAGGUCCAGU		[1411-1429]
87	UGGGAGUGAGACAGAAGUA	UACUUCUGUCUCACUCCCA		[2587-2605]
88	GGAUGAGACUUCCAAACCU	AGGUUUGGAAGUCUCAUCC		[1727-1745]
89	GGCUUGAAAUCGCAUUAUU	AAUAAUGCGAUUUCAAGCC		[2822-2840]
90	GGAAUUCAAUGCUGAUGAU	AUCAUCAGCAUUGAAUUCC		[457-475]
91	CCCAACCACUCAAAUUAAU	AUUAAUUUGAGUGGUUGGG		[2193-2211]
92	GGUCCCUACGUCUUCAUCA	UGAUGAAGACGUAGGGACC		[1467-1485]
93	GUUCUGUUCUUCAUCUUCA	UGAAGAUGAAGAACAGAAC		[1503-1521]
94	CCAACUUGUAAAUACACCA	UGGUGUAUUUACAAGUUGG		[2474-2492]

95	GACAUUCAAGGCAUUUCUA	UAGAAAUGCCUUGAAUGUC		[2743-2761]
96	GGAGUUCUACAACCAGACA	UGUCUGGUUGUAGAACUCC		[302-320]
97	AUAUAUUUUUGGUUGUCAA	UUGACAACCAAAAAUAUAU		[2415-2433]
98	CCUACGUCUUCAUCAUCUU	AAGAUGAUGAAGACGUAGG	Rat,Ms	[1471-1489]
99	CAAAUUUCAUUGUGGGCAU	AUGCCCACAAUGAAAUUUG		[1420-1438]
100	GUUUGAUCCCUGUUACCCA	UGGGUAACAGGGAUCAAAC		[2700-2718]
101	GCUCAAAUCUAUUCAGACA	UGUCUGAAUAGAUUUGAGC		[1857-1875]
102	CAGCCCUAAGGAUCUCUCA	UGAGAGAUCCUUAGGGCUG		[1693-1711]
103	UAGAAACAUGGUUUUGAAA	UUUCAAAACCAUGUUUCUA		[2538-2556]
104	GGAUUUUAACAAAAGCAAG	CUUGCUUUUGUUAAAAUCC		[1832-1850]
105	CAAUGAUGUCCAGAAGAAU	AUUCUUCUGGACAUCAUUG		[1792-1810]
106	UGCUCAUGGGCUUCUCGAA	UUCGAGAAGCCCAUGAGCA		[502-520]
107	GGUUCUAGUCUCCUUUGCA	UGCAAAGGAGACUAGAACC		[2285-2303]
108	GUUGGUGUUCAAAAAAACA	UGUUUUUUUGAACACCAAC		[2776-2794]
109	AGGCAUUUCUAUCACAUAU	AUAUGUGAUAGAAAUGCCU		[2751-2769]
110	CCUGUUACUUACCUAAACA	UGUUUAGGUAAGUAACAGG		[2500-2518]
111	GCUUGAAAUCGCAUUAUUU	AAAUAAUGCGAUUUCAAGC		[2823-2841]
112	ACAACACUGGAGUCAUCAA	UUGAUGACUCCAGUGUUGU		[262-280]
113	CCCAGAGAAUAUAUACAUU	AAUGUAUAUAUUCUCUGGG		[2715-2733]
114	CUCCUGUUACUUACCUAAA	UUUAGGUAAGUAACAGGAG		[2498-2516]
115	GAGGGUAGGAGGUUUGGAU	AUCCAAACCUCCUACCCUC		[2569-2587]
116	CACUCAAAUUAAUCUUUCU	AGAAAGAUUAAUUUGAGUG		[2199-2217]
117	GGCUGGUUUUUAGAAACAU	AUGUUUCUAAAAACCAGCC		[2528-2546]
118	GCUCAUGGGCUUCUCGAAA	UUUCGAGAAGCCCAUGAGC		[503-521]
119	GAGACACUUGCCUUCUUCA	UGAAGAAGGCAAGUGUCUC		[2004-2022]
120	CAGAUGAUGCGGGAGAAGA	UCUUCUCCCGCAUCAUCUG	Rat,Ms	[927-945]
121	CAGGAUCCAGUCCCUUACA	UGUAAGGGACUGGAUCCUG		[2645-2663]
122	CUGGGCAAGUCCUUUGAGA	UCUCAAAGGACUUGCCCAG	Rat,Ms	[522-540]
123	AGCUGGAUGAGACUUCCAA	UUGGAAGUCUCAUCCAGCU		[1723-1741]
124	CACUCCUGUUACUUACCUA	UAGGUAAGUAACAGGAGUG		[2496-2514]
125	CAUCAACGCUGUCUUCUAU	AUAGAAGACAGCGUUGAUG		[1037-1055]
126	AUAGAUGCAAGAUAUUUAU	AUAAAUAUCUUGCAUCUAU		[2396-2414]
127	UGGGCAUGUGCUUCCAGUA	UACUGGAAGCACAUGCCCA	Ms	[1432-1450]
128	CAAGGCAUUUCUAUCACAU	AUGUGAUAGAAAUGCCUUG		[2749-2767]
129	CGCAUUAUUUUGAAUGUGA	UCACAUUCAAAAUAAUGCG		[2832-2850]
130	GGCUCCAGGAUUUUAACAA	UUGUUAAAAUCCUGGAGCC		[1825-1843]
131	UGAUGCUCAGGCUUGAAAU	AUUUCAAGCCUGAGCAUCA		[2813-2831]
132	CUGUUACCCAGAGAAUAUA	UAUAUUCUCUGGGUAACAG		[2709-2727]
133	ACUCCACGAGCAUCUUCGA	UCGAAGAUGCUCGUGGAGU		[1057-1075]
134	UAUUAAAUACAGACACUAA	UUAGUGUCUGUAUUUAAUA	Rat,Ms	[2434-2452]
135	CCAGCAAUGAUGUCCAGAA	UUCUGGACAUCAUUGCUGG		[1788-1806]
136	CAAAGCUUCUAUCCCAGGA	UCCUGGGAUAGAAGCUUUG		[2084-2102]
137	UAUAGAUGCAAGAUAUUUA	UAAAUAUCUUGCAUCUAUA		[2395-2413]
138	CGGCUCCAGGAUUUUAACA	UGUUAAAAUCCUGGAGCCG		[1824-1842]
139	CAGGCUUGAAAUCGCAUUA	UAAUGCGAUUUCAAGCCUG		[2820-2838]
140	GCUCAGGCUUGAAAUCGCA	UGCGAUUUCAAGCCUGAGC		[2817-2835]
141	CAGUGUCCUCUUGCUCAAA	UUUGAGCAAGAGGACACUG		[2676-2694]
142	GCUCAAAAAUCUGUUUGAU	AUCAAACAGAUUUUUGAGC		[2688-2706]
143	GCAACGGCUUAGACUUCGA	UCGAAGUCUAAGCCGUUGC		[2624-2642]
144	GUGAUGCUCAGGCUUGAAA	UUUCAAGCCUGAGCAUCAC		[2812-2830]
145	CGAGGAGUUCUACAACCAG	CUGGUUGUAGAACUCCUCG		[299-317]
146	CUCAAAUCUAUUCAGACAA	UUGUCUGAAUAGAUUUGAG		[1858-1876]
147	GAUCCCUGUUACCCAGAGA	UCUCUGGGUAACAGGGAUC		[2704-2722]
148	CCUGGAUGUCCUAUCUGAG	CUCAGAUAGGACAUCCAGG	Rat	[1264-1282]
149	GCUUCUCGAAACUGGGCAA	UUGCCCAGUUUCGAGAAGC		[511-529]
150	UGGUUGUCAAUAUUAAAUA	UAUUUAAUAUUGACAACCA	Ms	[2424-2442]

151	GGUUGUCAAUAUUAAAUAC	GUAUUUAAUAUUGACAACC	Ms	[2425-2443]
152	ACAUGGUUUUGAAAUGCUU	AAGCAUUUCAAAACCAUGU		[2543-2561]
153	UACCUAAACAGAUAUAAAU	AUUUAUAUCUGUUUAGGUA		[2509-2527]
154	UCGAACUAUGAACUACAAA	UUUGUAGUUCAUAGUUCGA		[2069-2087]
155	CAUUCUUUAUCUUGACAUU	AAUGUCAAGAUAAAGAAUG		[2730-2748]
156	GGGCAUGUGCUUCCAGUAU	AUACUGGAAGCACAUGCCC	Ms	[1433-1451]
157	CCUUACACGUACCUCUCAU	AUGAGAGGUACGUGUAAGG		[2657-2675]
158	AAUCGAACUAUGAACUACA	UGUAGUUCAUAGUUCGAUU		[2067-2085]
159	AGAAGGUCACCAUCCUGGA	UCCAGGAUGGUGACCUUCU		[943-961]
160	GGAGUGAGACAGAAGUAAG	CUUACUUCUGUCUCACUCC		[2589-2607]
161	CAACCACUGCAACGGCUUA	UAAGCCGUUGCAGUGGUUG		[2616-2634]
162	CCUGCAAACUCACUGCUCA	UGAGCAGUGAGUUUGCAGG		[2346-2364]
163	CUUACCUAAACAGAUAUAA	UUAUAUCUGUUUAGGUAAG		[2507-2525]
164	GGAUGUCCUAUCUGAGCAU	AUGCUCAGAUAGGACAUCC	Ms	[1267-1285]
165	GGUGUUCAAAAAAACACUA	UAGUGUUUUUUUGAACACC		[2779-2797]
166	CACUAUUACCAUGAGAAGA	UCUUCUCAUGGUAAUAGUG		[2314-2332]
167	AAUCUAUUCAGACAAGCAA	UUGCUUGUCUGAAUAGAUU		[1862-1880]
168	UCAGUGUCCUCUUGCUCAA	UUGAGCAAGAGGACACUGA		[2675-2693]
169	CGAACUAUGAACUACAAAG	CUUUGUAGUUCAUAGUUCG		[2070-2088]
170	GUUACUUACCUAAACAGAU	AUCUGUUUAGGUAAGUAAC		[2503-2521]
171	AGACUGUUGCUCAAAUCUA	UAGAUUUGAGCAACAGUCU		[1849-1867]
172	GCCCAUGUAUGUGGGUGAA	UUCACCCACAUACAUGGGC		[599-617]
173	UUACUUACCUAAACAGAUA	UAUCUGUUUAGGUAAGUAA		[2504-2522]
174	AUAGUUGGUGUUCAAAAAA	UUUUUUGAACACCAACUAU		[2773-2791]
175	AAGGAAGAGAGUCGGCAGA	UCUGCCGACUCUCUUCCUU		[912-930]
176	AGAAGAAGGUCACCAUCCU	AGGAUGGUGACCUUCUUCU		[940-958]
177	GAGACUUCCAAACCUGACA	UGUCAGGUUUGGAAGUCUC		[1731-1749]
178	UUCUCCAACUGGACCUCAA	UUGAGGUCCAGUUGGAGAA	Ms	[1404-1422]
179	CCAACUGGACCUCAAAUUU	AAAUUUGAGGUCCAGUUGG		[1408-1426]
180	AAGUUAUAGUAUAUCUGGA	UCCAGAUAUACUAUAACUU	Ms	[2451-2469]
181	GUUUUGAAAUGCUUGUGGA	UCCACAAGCAUUUCAAAAC		[2548-2566]
182	ACACUAAGUUAUAGUAUAU	AUAUACUAUAACUUAGUGU	Rat,Ms	[2446-2464]
183	CAGCUGGAUGAGACUUCCA	UGGAAGUCUCAUCCAGCUG		[1722-1740]
184	GCUAAUCUGUAGGGCUGGA	UCCAGCCCUACAGAUUAGC	Rat,Ms	[2027-2045]
185	ACUCCUGUUACUUACCUAA	UUAGGUAAGUAACAGGAGU		[2497-2515]
186	GGACCUCAAAUUUCAUUGU	ACAAUGAAAUUUGAGGUCC		[1414-1432]
187	UCCUGGUUCUGUUCUUCAU	AUGAAGAACAGAACCAGGA		[1498-1516]
188	CAAUGCUGAUGAUGAACCU	AGGUUCAUCAUCAGCAUUG		[463-481]
189	CUUCCAGUAUGUGGAGCAA	UUGCUCCACAUACUGGAAG	Ms	[1442-1460]
190	ACACGUACCUCUCAUCAGU	ACUGAUGAGAGGUACGUGU		[2661-2679]
191	AAUGAUGUCCAGAAGAAUA	UAUUCUUCUGGACAUCAUU		[1793-1811]
192	GACCUAUGUCCUAAGGACA	UGUCCUUAGGACAUAGGUC		[2044-2062]
193	UCAUCAACCGCAACGAGGA	UCCUCGUUGCGGUUGAUGA		[823-841]
194	CAGAGAAUAUAUACAUUCU	AGAAUGUAUAUAUUCUCUG		[2717-2735]
195	AUACAGACACUAAGUUAUA	UAUAACUUAGUGUCUGUAU	Rat,Ms	[2440-2458]
196	AGACAAGCAACAGGUUUUA	UAAAACCUGUUGCUUGUCU		[1871-1889]
197	UGUGGUCCCUACGUCUUCA	UGAAGACGUAGGGACCACA		[1464-1482]
198	GGAGAAGAAGGUCACCAUC	GAUGGUGACCUUCUUCUCC	Rat,Ms	[938-956]
199	CCCUUACACGUACCUCUCA	UGAGAGGUACGUGUAAGGG		[2656-2674]
200	AAGAAUAUUCAGGACUUAA	UUAAGUCCUGAAUAUUCUU		[1805-1823]
201	GGCCUUCUUUGAAGUGGGU	ACCCACUUCAAAGAAGGCC		[1307-1325]
202	AGAAGGUGAUCGAGGAGUU	AACUCCUCGAUCACCUUCU		[289-307]
203	GUUACCCAGAGAAUAUAUA	UAUAUAUUCUCUGGGUAAC		[2711-2729]
204	AUGACCUGCAGGAGAUGAA	UUCAUCUCCUGCAGGUCAU		[895-913]
205	CUGUCGUGUCGCUGUUUGU	ACAAACAGCGACACGACAG		[1141-1159]
206	GGUCAGGCUCCAUUAGGAU	AUCCUAAUGGAGCCUGACC		[2151-2169]

207	CGAAACUGGGCAAGUCCUU	AAGGACUUGCCCAGUUUCG		[517-535]
208	GGUUUUUAGAAACAUGGUU	AACCAUGUUUCUAAAAACC		[2532-2550]
209	GUGAUAAGACACCCGAGGA	UCCUCGGGUGUCUUAUCAC		[1603-1621]
210	GGACCUAUGUCCUAAGGAC	GUCCUUAGGACAUAGGUCC		[2043-2061]
211	GUAAAUACACCACCUCACU	AGUGAGGUGGUGUAUUUAC		[2481-2499]
212	AAUCUUUCUUUACCUGAGA	UCUCAGGUAAAGAAAGAUU		[2209-2227]
213	CGGAAUUCAAUGCUGAUGA	UCAUCAGCAUUGAAUUCCG		[456-474]
214	ACGUCUUCAUCAUCUUCAC	GUGAAGAUGAUGAAGACGU	Rat,Ms	[1474-1492]
215	CAAGAGUGUGCUAAAGAAG	CUUCUUUAGCACACUCUUG		[851-869]
216	UCCUGCUCAUCAACCGCAA	UUGCGGUUGAUGAGCAGGA		[817-835]
217	AGUGUCCUCUUGCUCAAAA	UUUUGAGCAAGAGGACACU		[2677-2695]
218	CAACAGGUUUUAUAAUUUU	AAAAUUAUAAAACCUGUUG		[1878-1896]
219	UGUAUAGAUGCAAGAUAUU	AAUAUCUUGCAUCUAUACA		[2393-2411]
220	ACAAGCAACAGGUUUUAUA	UAUAAAACCUGUUGCUUGU		[1873-1891]
221	UGCUCAAAAAUCUGUUUGA	UCAAACAGAUUUUUGAGCA		[2687-2705]
222	UUUGGAUGGGAGUGAGACA	UGUCUCACUCCCAUCCAAA		[2581-2599]
223	CAACACUGGAGUCAUCAAU	AUUGAUGACUCCAGUGUUG		[263-281]
224	GCUGGUUUUUAGAAACAUG	CAUGUUUCUAAAAACCAGC		[2529-2547]
225	CUCCAACUGGACCUCAAAU	AUUUGAGGUCCAGUUGGAG		[1406-1424]
226	UGCUGAUGAUGAACCUGCU	AGCAGGUUCAUCAUCAGCA		[466-484]
227	GUGAUCGAGGAGUUCUACA	UGUAGAACUCCUCGAUCAC		[294-312]
228	CUAAUCGAACUAUGAACUA	UAGUUCAUAGUUCGAUUAG		[2065-2083]
229	GCAAACUCACUGCUCAAGA	UCUUGAGCAGUGAGUUUGC		[2349-2367]
230	CUGUGCUCCUGGUUCUGUU	AACAGAACCAGGAGCACAG		[1492-1510]
231	UCACCAUCCUGGAGCUGUU	AACAGCUCCAGGAUGGUGA		[949-967]
232	GUUGCAGGCUUCUCCAACU	AGUUGGAGAAGCCUGCAAC		[1395-1413]
233	AAAGCAAGACUGUUGCUCA	UGAGCAACAGUCUUGCUUU	Rat	[1843-1861]
234	GCUGUCUUCUAUUACUCCA	UGGAGUAAUAGAAGACAGC		[1044-1062]
235	AGUUGGUGUUCAAAAAAAC	GUUUUUUUGAACACCAACU		[2775-2793]
236	CCAGGAUUUUAACAAAAGC	GCUUUUGUUAAAAUCCUGG		[1829-1847]
237	AAGCAACAGGUUUUAUAAU	AUUAUAAAACCUGUUGCUU		[1875-1893]
238	UGAAAUGCUUGUGGAUUGA	UCAAUCCACAAGCAUUUCA		[2552-2570]
239	GCCUUCUUCACCCAGCUAA	UUAGCUGGGUGAAGAAGGC		[2013-2031]
240	ACCUCACUCCUGUUACUUA	UAAGUAACAGGAGUGAGGU		[2492-2510]
241	AGUCCUUUGAGAUGCUGAU	AUCAGCAUCUCAAAGGACU	Rat,Ms	[529-547]
242	GCAUUUCUAUCACAUAUUU	AAAUAUGUGAUAGAAAUGC		[2753-2771]
243	UGGGCAAGUCCUUUGAGAU	AUCUCAAAGGACUUGCCCA	Rat,Ms	[523-541]
244	UAGAUGCAAGAUAUUUAUA	UAUAAAUAUCUUGCAUCUA		[2397-2415]
245	UCUUGACAUUCAAGGCAUU	AAUGCCUUGAAUGUCAAGA		[2739-2757]
246	UGGAUGGGAGUGAGACAGA	UCUGUCUCACUCCCAUCCA		[2583-2601]
247	UCUUCAUCUUCACCUACUU	AAGUAGGUGAAGAUGAAGA	Rat,Ms	[1510-1528]
248	CCUUUGAGAUGCUGAUCCU	AGGAUCAGCAUCUCAAAGG	Rat,Ms	[532-550]
249	UACCCAGAGAAUAUAUACA	UGUAUAUAUUCUCUGGGUA		[2713-2731]
250	AGACUAAGCCCUGUCGAGA	UCUCGACAGGGCUUAGUCU		[1989-2007]
251	CAGGAGAUGAAGGAAGAGA	UCUCUUCCUUCAUCUCCUG		[903-921]
252	UCGAGGAGUUCUACAACCA	UGGUUGUAGAACUCCUCGA		[298-316]
253	AGGAGAUGAAGGAAGAGAG	CUCUCUUCCUUCAUCUCCU		[904-922]
254	CCUCACUCCUGUUACUUAC	GUAAGUAACAGGAGUGAGG		[2493-2511]
255	GCUUCGUGCCCAUGUAUGU	ACAUACAUGGGCACGAAGC		[592-610]
256	UCAAAGUUCCUGAGACUAA	UUAGUCUCAGGAACUUUGA		[1528-1546]
257	GUGGUCCCUACGUCUUCAU	AUGAAGACGUAGGGACCAC		[1465-1483]
258	AGAUGCAAGAUAUUUAUAU	AUAUAAAUAUCUUGCAUCU		[2398-2416]
259	AGAGUGUGCUAAAGAAGCU	AGCUUCUUUAGCACACUCU		[853-871]
260	GCCUUUUCGUUAACCGCUU	AAGCGGUUAACGAAAAGGC		[430-448]
261	GCAGGAGAUGAAGGAAGAG	CUCUUCCUUCAUCUCCUGC		[902-920]
262	ACCCAGAGAAUAUAUACAU	AUGUAUAUAUUCUCUGGGU		[2714-2732]

263	GCUUGUGGAUUGAGGGUAG	CUACCCUCAAUCCACAAGC		[2558-2576]
264	AGGCUUCGUGCCCAUGUAU	AUACAUGGGCACGAAGCCU		[590-608]
265	GAGAAUAUAUACAUUCUUU	AAAGAAUGUAUAUAUUCUC		[2719-2737]
266	AGCAAGACUGUUGCUCAAA	UUUGAGCAACAGUCUUGCU		[1845-1863]
267	CCCAUCUCUUCCUACCCAA	UUGGGUAGGAAGAGAUGGG		[2179-2197]
268	CAGCAAUGAUGUCCAGAAG	CUUCUGGACAUCAUUGCUG		[1789-1807]
269	UGGUUUUUAGAAACAUGGU	ACCAUGUUUCUAAAAACCA		[2531-2549]
270	UCAAGGCAUUUCUAUCACA	UGUGAUAGAAAUGCCUUGA		[2748-2766]
271	GCAACAGGUUUUAUAAUUU	AAAUUAUAAAACCUGUUGC		[1877-1895]
272	CCUACCCAACCACUCAAAU	AUUUGAGUGGUUGGGUAGG		[2189-2207]
273	UGUCGCUGUUUGUGGUGGA	UCCACCACAAACAGCGACA		[1147-1165]
274	GACUUAACGGCUCCAGGAU	AUCCUGGAGCCGUUAAGUC		[1817-1835]
275	UAUUUUUGGUUGUCAAUAU	AUAUUGACAACCAAAAAUA		[2418-2436]
276	ACCUGCAGGAGAUGAAGGA	UCCUUCAUCUCCUGCAGGU		[898-916]
277	AACUCACUGCUCAAGAAGA	UCUUCUUGAGCAGUGAGUU		[2352-2370]
278	GAUGAUGCGGGAGAAGAAG	CUUCUUCUCCCGCAUCAUC	Rat,Ms	[929-947]
279	UUCUGUUCUUCAUCUUCAC	GUGAAGAUGAAGAACAGAA		[1504-1522]
280	UGACAUUCAAGGCAUUUCU	AGAAAUGCCUUGAAUGUCA		[2742-2760]
281	UAAGGAUCUCUCAGGAGCA	UGCUCCUGAGAGAUCCUUA		[1699-1717]
282	AAAUACAGACACUAAGUUA	UAACUUAGUGUCUGUAUUU	Rat,Ms	[2438-2456]
283	CACUAAUCGAACUAUGAAC	GUUCAUAGUUCGAUUAGUG		[2063-2081]
284	CUUGAAAUCGCAUUAUUUU	AAAAUAAUGCGAUUUCAAG		[2824-2842]
285	CUUAGACUUCGACUCAGGA	UCCUGAGUCGAAGUCUAAG		[2631-2649]
286	UGUUACUUACCUAAACAGA	UCUGUUUAGGUAAGUAACA		[2502-2520]
287	UACCCAACCACUCAAAUUA	UAAUUUGAGUGGUUGGGUA		[2191-2209]
288	AUCCCUGUUACCCAGAGAA	UUCUCUGGGUAACAGGGAU		[2705-2723]
289	CAGACAAGCAACAGGUUUU	AAAACCUGUUGCUUGUCUG		[1870-1888]
290	UGAACUACAAAGCUUCUAU	AUAGAAGCUUUGUAGUUCA		[2077-2095]
291	CAACCACUCAAAUUAAUCU	AGAUUAAUUUGAGUGGUUG		[2195-2213]
292	AAAUCUAUUCAGACAAGCA	UGCUUGUCUGAAUAGAUUU		[1861-1879]
293	UAUACAUUCUUUAUCUUGA	UCAAGAUAAAGAAUGUAUA		[2726-2744]
294	ACGGCUCCAGGAUUUUAAC	GUUAAAAUCCUGGAGCCGU		[1823-1841]
295	GCAAGUCCUUUGAGAUGCU	AGCAUCUCAAAGGACUUGC	Rat,Ms	[526-544]
296	UCGAGACACUUGCCUUCUU	AAGAAGGCAAGUGUCUCGA		[2002-2020]
297	UGAGGGUAGGAGGUUUGGA	UCCAAACCUCCUACCCUCA		[2568-2586]
298	CGUCUUCAUCAUCUUCACU	AGUGAAGAUGAUGAAGACG		[1475-1493]
299	CCUCAAAUUUCAUUGUGGG	CCCACAAUGAAAUUUGAGG		[1417-1435]
300	UGGUUCUGUUCUUCAUCUU	AAGAUGAAGAACAGAACCA		[1501-1519]
301	CCUGAAUGGUUCCAUGCCU	AGGCAUGGAACCAUUCAGG		[1962-1980]
302	CCAUGUAUGUGGGUGAAGU	ACUUCACCCACAUACAUGG		[601-619]
303	CCGGGUUCUAGUCUCCUUU	AAAGGAGACUAGAACCCGG		[2282-2300]
304	ACUUACCUAAACAGAUAUA	UAUAUCUGUUUAGGUAAGU		[2506-2524]
305	GCUACAACACUGGAGUCAU	AUGACUCCAGUGUUGUAGC		[259-277]
306	CAUUAUUUUGAAUGUGAAG	CUUCACAUUCAAAAUAAUG		[2834-2852]
307	CUCAGGAUCCAGUCCCUUA	UAAGGGACUGGAUCCUGAG		[2643-2661]
308	AUCUGUAGGGCUGGACCUA	UAGGUCCAGCCCUACAGAU	Ms	[2031-2049]
309	CUUCCUACCCAACCACUCA	UGAGUGGUUGGGUAGGAAG	Ms	[2186-2204]
310	ACACUAUUACCAUGAGAAG	CUUCUCAUGGUAAUAGUGU		[2313-2331]
311	CCAGCUAAUCUGUAGGGCU	AGCCCUACAGAUUAGCUGG		[2024-2042]
312	UCAACCGCAACGAGGAGAA	UUCUCCUCGUUGCGGUUGA		[826-844]
313	GUAGGAGGUUUGGAUGGGA	UCCCAUCCAAACCUCCUAC		[2573-2591]
314	AGAAGAAUAUUCAGGACUU	AAGUCCUGAAUAUUCUUCU	Rat	[1803-1821]
315	GGCAUUUCUAUCACAUAUU	AAUAUGUGAUAGAAAUGCC		[2752-2770]
316	GAUCCAGUCCCUUACACGU	ACGUGUAAGGGACUGGAUC		[2648-2666]
317	UGUGCUUCCAGUAUGUGGA	UCCACAUACUGGAAGCACA	Ms	[1438-1456]
318	UCAACGCUGUCUUCUAUUA	UAAUAGAAGACAGCGUUGA		[1039-1057]

319	UGUCCAGAAGAAUAUUCAG	CUGAAUAUUCUUCUGGACA		[1798-1816]
320	UGUCCUCUUGCUCAAAAAU	AUUUUUGAGCAAGAGGACA		[2679-2697]
321	GAUCGAGGAGUUCUACAAC	GUUGUAGAACUCCUCGAUC		[296-314]
322	UUCUAUUACUCCACGAGCA	UGCUCGUGGAGUAAUAGAA		[1050-1068]
323	UGUUACCCAGAGAAUAUAU	AUAUAUUCUCUGGGUAACA		[2710-2728]
324	GGUGAUCGAGGAGUUCUAC	GUAGAACUCCUCGAUCACC		[293-311]
325	ACUAAGCCCUGUCGAGACA	UGUCUCGACAGGGCUUAGU		[1991-2009]
326	AAGUGAUAAGACACCCGAG	CUCGGGUGUCUUAUCACUU		[1601-1619]
327	GACUUCCAAACCUGACAGA	UCUGUCAGGUUUGGAAGUC		[1733-1751]
328	CUGUCGAGACACUUGCCUU	AAGGCAAGUGUCUCGACAG		[1999-2017]
329	UCCCUGUUACCCAGAGAAU	AUUCUCUGGGUAACAGGGA		[2706-2724]
330	GCUGGACCUAUGUCCUAAG	CUUAGGACAUAGGUCCAGC		[2040-2058]
331	CUCCAUCAUGGGCAACAAG	CUUGUUGCCCAUGAUGGAG		[710-728]
332	GAAACAUGGUUUUGAAAUG	CAUUUCAAAACCAUGUUUC		[2540-2558]
333	CCUUUUCGUUAACCGCUUU	AAAGCGGUUAACGAAAAGG		[431-449]
334	ACUUGUAAAUACACCACCU	AGGUGGUGUAUUUACAAGU		[2477-2495]
335	AACGCUGUCUUCUAUUACU	AGUAAUAGAAGACAGCGUU		[1041-1059]
336	CCCUACGUCUUCAUCAUCU	AGAUGAUGAAGACGUAGGG	Rat,Ms	[1470-1488]
337	CACUGCAACGGCUUAGACU	AGUCUAAGCCGUUGCAGUG		[2620-2638]
338	CUACCCAACCACUCAAAUU	AAUUUGAGUGGUUGGGUAG		[2190-2208]
339	UUGUCAAUAUUAAAUACAG	CUGUAUUUAAUAUUGACAA	Ms	[2427-2445]
340	GACUUCGACUCAGGAUCCA	UGGAUCCUGAGUCGAAGUC		[2635-2653]
341	GUCUUCUAUUACUCCACGA	UCGUGGAGUAAUAGAAGAC		[1047-1065]
342	CUGCUCAAGAAGACAUGGA	UCCAUGUCUUCUUGAGCAG		[2358-2376]
343	UGUAGGGCUGGACCUAUGU	ACAUAGGUCCAGCCCUACA		[2034-2052]
344	AAUUAAUCUUUCUUUACCU	AGGUAAAGAAAGAUUAAUU		[2205-2223]
345	CUCACUGCUCAAGAAGACA	UGUCUUCUUGAGCAGUGAG		[2354-2372]
346	UAACGGCUCCAGGAUUUUA	UAAAAUCCUGGAGCCGUUA		[1821-1839]
347	CUUCAAAGUUCCUGAGACU	AGUCUCAGGAACUUUGAAG		[1526-1544]
348	GGCUUAGACUUCGACUCAG	CUGAGUCGAAGUCUAAGCC		[2629-2647]
349	AUUUCUAUCACAUAUUUGA	UCAAAUAUGUGAUAGAAAU		[2755-2773]
350	CUGCUGAGCAUCAUCUUCA	UGAAGAUGAUGCUCAGCAG		[744-762]
351	CCUACUUCAAAGUUCCUGA	UCAGGAACUUUGAAGUAGG	Rat	[1522-1540]
352	CUCUCAUCAGUGUCCUCUU	AAGAGGACACUGAUGAGAG		[2669-2687]
353	UUGUAAAUACACCACCUCA	UGAGGUGGUGUAUUUACAA		[2479-2497]
354	CAUGGUUUUGAAAUGCUUG	CAAGCAUUUCAAAACCAUG		[2544-2562]
355	CAGUAUGUGGAGCAACUGU	ACAGUUGCUCCACAUACUG	Ms	[1446-1464]
356	CACCCUGAAUGGUUCCAUG	CAUGGAACCAUUCAGGGUG		[1959-1977]
357	ACCACUGCAACGGCUUAGA	UCUAAGCCGUUGCAGUGGU		[2618-2636]
358	CCAUCCCAUGGUUCAUCGU	ACGAUGAACCAUGGGAUGG		[1333-1351]
359	AUGAGACUUCCAAACCUGA	UCAGGUUUGGAAGUCUCAU		[1729-1747]
360	UCUUCAUCAUCUUCACUGU	ACAGUGAAGAUGAUGAAGA		[1477-1495]
361	GAUGGGAGUGAGACAGAAG	CUUCUGUCUCACUCCCAUC		[2585-2603]
362	GUUCAAAAAAACACUAGUU	AACUAGUGUUUUUUUGAAC		[2782-2800]
363	AGGAAGAGAGUCGGCAGAU	AUCUGCCGACUCUCUUCCU		[913-931]
364	UGUUCAAAAAAACACUAGU	ACUAGUGUUUUUUUGAACA		[2781-2799]
365	CAAGACUGUUGCUCAAAUC	GAUUUGAGCAACAGUCUUG		[1847-1865]
366	CGAGACACUUGCCUUCUUC	GAAGAAGGCAAGUGUCUCG		[2003-2021]
367	CUGGUUCUGUUCUUCAUCU	AGAUGAAGAACAGAACCAG		[1500-1518]
368	AGCUACCCUGGAUGUCCUA	UAGGACAUCCAGGGUAGCU		[1258-1276]
369	ACAUUCAAGGCAUUUCUAU	AUAGAAAUGCCUUGAAUGU		[2744-2762]
370	CUUUCUUUACCUGAGACCA	UGGUCUCAGGUAAAGAAAG		[2212-2230]
371	CACCUACUUCAAAGUUCCU	AGGAACUUUGAAGUAGGUG	Rat	[1520-1538]
372	AGAGAAUAUAUACAUUCUU	AAGAAUGUAUAUAUUCUCU		[2718-2736]
373	UUGAUAGUUGGUGUUCAAA	UUUGAACACCAACUAUCAA		[2770-2788]
374	AAUACAGACACUAAGUUAU	AUAACUUAGUGUCUGUAUU	Rat,Ms	[2439-2457]

375	GAGGUUUGGAUGGGAGUGA	UCACUCCCAUCCAAACCUC		[2577-2595]
376	AGACACUAAGUUAUAGUAU	AUACUAUAACUUAGUGUCU	Rat,Ms	[2444-2462]
377	UCUGUAGGGCUGGACCUAU	AUAGGUCCAGCCCUACAGA	Ms	[2032-2050]
378	AGGAGGUUUGGAUGGGAGU	ACUCCCAUCCAAACCUCCU		[2575-2593]
379	AAAUCUGUUUGAUCCCUGU	ACAGGGAUCAAACAGAUUU		[2694-2712]
380	UCCUACCCAACCACUCAAA	UUUGAGUGGUUGGGUAGGA		[2188-2206]
381	CAUCAUGGGCAACAAGGAC	GUCCUUGUUGCCCAUGAUG		[713-731]
382	GAGUUCUACAACCAGACAU	AUGUCUGGUUGUAGAACUC		[303-321]
383	GUUGUCAAUAUUAAAUACA	UGUAUUUAAUAUUGACAAC	Ms	[2426-2444]
384	CUCUGUGGGCCUUUUCGUU	AACGAAAAGGCCCACAGAG		[422-440]
385	CCAGAAGAAUAUUCAGGAC	GUCCUGAAUAUUCUUCUGG	Rat	[1801-1819]
386	AACUGGGCAAGUCCUUUGA	UCAAAGGACUUGCCCAGUU	Rat,Ms	[520-538]
387	UCCAGUAUGUGGAGCAACU	AGUUGCUCCACAUACUGGA	Ms	[1444-1462]
388	AUGGGAGUGAGACAGAAGU	ACUUCUGUCUCACUCCCAU		[2586-2604]
389	UGGUGUUCAAAAAAACACU	AGUGUUUUUUUGAACACCA		[2778-2796]
390	UGCUCAAGAAGACAUGGAG	CUCCAUGUCUUCUUGAGCA		[2359-2377]
391	CUUUAUCUUGACAUUCAAG	CUUGAAUGUCAAGAUAAAG		[2734-2752]
392	AAAUCGCAUUAUUUUGAAU	AUUCAAAAUAAUGCGAUUU		[2828-2846]
393	UGAUGUCCAGAAGAAUAUU	AAUAUUCUUCUGGACAUCA		[1795-1813]
394	AGCAAUGAUGUCCAGAAGA	UCUUCUGGACAUCAUUGCU		[1790-1808]
395	CACUUGCCUUCUUCACCCA	UGGGUGAAGAAGGCAAGUG		[2008-2026]
396	CUCCUGGUUCUGUUCUUCA	UGAAGAACAGAACCAGGAG		[1497-1515]
397	GUCCCUUACACGUACCUCU	AGAGGUACGUGUAAGGGAC		[2654-2672]
398	CUACAACACUGGAGUCAUC	GAUGACUCCAGUGUUGUAG		[260-278]
399	CUGGACCUCAAAUUUCAUU	AAUGAAAUUUGAGGUCCAG		[1412-1430]
400	GCUGAUUCCCAAGUGUGAG	CUCACACUUGGGAAUCAGC		[1641-1659]
401	UGAUGCGGGAGAAGAAGGU	ACCUUCUUCUCCCGCAUCA	Rat,Ms	[931-949]
402	UCACUGUCGUGUCGCUGUU	AACAGCGACACGACAGUGA		[1138-1156]
403	CACAUAUUUGAUAGUUGGU	ACCAACUAUCAAAUAUGUG		[2763-2781]
404	UCUAUUACUCCACGAGCAU	AUGCUCGUGGAGUAAUAGA		[1051-1069]
405	ACACCACCUCACUCCUGUU	AACAGGAGUGAGGUGGUGU		[2487-2505]
406	AGGUUUGGAUGGGAGUGAG	CUCACUCCCAUCCAAACCU		[2578-2596]
407	UCAAAAAAACACUAGUUUU	AAAACUAGUGUUUUUUUGA		[2784-2802]
408	UGCUGCUGAGCAUCAUCUU	AAGAUGAUGCUCAGCAGCA		[742-760]
409	CUAUCACAUAUUUGAUAGU	ACUAUCAAAUAUGUGAUAG		[2759-2777]
410	GGGCAAGUCCUUUGAGAUG	CAUCUCAAAGGACUUGCCC	Rat,Ms	[524-542]
411	ACUGUUGCUCAAAUCUAUU	AAUAGAUUUGAGCAACAGU		[1851-1869]
412	CAUAUUUGAUAGUUGGUGU	ACACCAACUAUCAAAUAUG		[2765-2783]
413	GGCUUCACCCUGAAUGGUU	AACCAUUCAGGGUGAAGCC		[1954-1972]
414	UUUCUAUCACAUAUUUGAU	AUCAAAUAUGUGAUAGAAA		[2756-2774]
415	AUUUUUGGUUGUCAAUAUU	AAUAUUGACAACCAAAAAU		[2419-2437]
416	CAGCUAAUCUGUAGGGCUG	CAGCCCUACAGAUUAGCUG		[2025-2043]
417	GAAUAUUCAGGACUUAACG	CGUUAAGUCCUGAAUAUUC		[1807-1825]
418	UCCUCUUGCUCAAAAAUCU	AGAUUUUUGAGCAAGAGGA		[2681-2699]
419	AGGAGUUCUACAACCAGAC	GUCUGGUUGUAGAACUCCU		[301-319]
420	UCCAGAAGAAUAUUCAGGA	UCCUGAAUAUUCUUCUGGA	Rat	[1800-1818]
421	GAUUGAGGGUAGGAGGUUU	AAACCUCCUACCCUCAAUC		[2565-2583]
422	AAAGUGAUAAGACACCCGA	UCGGGUGUCUUAUCACUUU		[1600-1618]
423	UCAUUGUGGGCAUGUGCUU	AAGCACAUGCCCACAAUGA	Ms	[1426-1444]
424	AGGCUUGAAAUCGCAUUAU	AUAAUGCGAUUUCAAGCCU		[2821-2839]
425	GUAUAGAUGCAAGAUAUUU	AAAUAUCUUGCAUCUAUAC		[2394-2412]
426	CAAAUUAAUCUUUCUUUAC	GUAAAGAAAGAUUAAUUUG		[2203-2221]
427	CAAAAGCAAGACUGUUGCU	AGCAACAGUCUUGCUUUUG		[1841-1859]
428	UGUAAAUACACCACCUCAC	GUGAGGUGGUGUAUUUACA		[2480-2498]
429	UGAAAUCGCAUUAUUUUGA	UCAAAAUAAUGCGAUUUCA		[2826-2844]
430	GGCCUUUUCGUUAACCGCU	AGCGGUUAACGAAAAGGCC		[429-447]

431	UUCUUUAUCUUGACAUUCA	UGAAUGUCAAGAUAAAGAA		[2732-2750]
432	ACUCAUGACCAUCGCGCUA	UAGCGCGAUGGUCAUGAGU		[1226-1244]
433	UACCCUGGAUGUCCUAUCU	AGAUAGGACAUCCAGGGUA		[1261-1279]
434	GACAAGCAACAGGUUUUAU	AUAAAACCUGUUGCUUGUC		[1872-1890]
435	UAUAUUUUUGGUUGUCAAU	AUUGACAACCAAAAAUAUA		[2416-2434]
436	AGAAUAUUCAGGACUUAAC	GUUAAGUCCUGAAUAUUCU		[1806-1824]
437	UGGAUGUCCUAUCUGAGCA	UGCUCAGAUAGGACAUCCA	Ms	[1266-1284]
438	AACUAUGAACUACAAAGCU	AGCUUUGUAGUUCAUAGUU		[2072-2090]
439	UUUUGAAAUGCUUGUGGAU	AUCCACAAGCAUUUCAAAA		[2549-2567]
440	AUGAUGUCCAGAAGAAUAU	AUAUUCUUCUGGACAUCAU		[1794-1812]
441	GAACUACAAAGCUUCUAUC	GAUAGAAGCUUUGUAGUUC		[2078-2096]
442	UUCCUACCCAACCACUCAA	UUGAGUGGUUGGGUAGGAA	Ms	[2187-2205]
443	CAUGUAUGUGGGUGAAGUG	CACUUCACCCACAUACAUG		[602-620]
444	UGACCUGCAGGAGAUGAAG	CUUCAUCUCCUGCAGGUCA		[896-914]
445	UUGCUCAAAUCUAUUCAGA	UCUGAAUAGAUUUGAGCAA		[1855-1873]
446	AGCAACAGGUUUUAUAAUU	AAUUAUAAAACCUGUUGCU		[1876-1894]
447	UGCUCCUGGUUCUGUUCUU	AAGAACAGAACCAGGAGCA		[1495-1513]
448	CAGUCCCUUACACGUACCU	AGGUACGUGUAAGGGACUG		[2652-2670]
449	CACCACCUCACUCCUGUUA	UAACAGGAGUGAGGUGGUG		[2488-2506]
450	CAAUAUUAAAUACAGACAC	GUGUCUGUAUUUAAUAUUG	Ms	[2431-2449]
451	AGAAACAUGGUUUUGAAAU	AUUUCAAAACCAUGUUUCU		[2539-2557]
452	UGGACCUAUGUCCUAAGGA	UCCUUAGGACAUAGGUCCA		[2042-2060]
453	UCAUCAUCUUCACUGUGCU	AGCACAGUGAAGAUGAUGA		[1480-1498]
454	CUUAACGGCUCCAGGAUUU	AAAUCCUGGAGCCGUUAAG		[1819-1837]
455	CCCUUCCCAUCUCUUCCUA	UAGGAAGAGAUGGGAAGGG		[2174-2192]
456	AGAAGACAUGGAGACUCCU	AGGAGUCUCCAUGUCUUCU		[2365-2383]
457	AUGUCCAGAAGAAUAUUCA	UGAAUAUUCUUCUGGACAU		[1797-1815]
458	CCUUCUCUGUGGGCCUUUU	AAAAGGCCCACAGAGAAGG		[418-436]
459	UGCCUUCUUCACCCAGCUA	UAGCUGGGUGAAGAAGGCA		[2012-2030]
460	UCAAUAUUAAAUACAGACA	UGUCUGUAUUUAAUAUUGA	Ms	[2430-2448]
461	AUCCAGUCCCUUACACGUA	UACGUGUAAGGGACUGGAU		[2649-2667]
462	UUGGUUGUCAAUAUUAAAU	AUUUAAUAUUGACAACCAA		[2423-2441]
463	GGCAUGUGCUUCCAGUAUG	CAUACUGGAAGCACAUGCC	Ms	[1434-1452]
464	ACUGCAACGGCUUAGACUU	AAGUCUAAGCCGUUGCAGU		[2621-2639]
465	CGGGUUCUAGUCUCCUUUG	CAAAGGAGACUAGAACCCG		[2283-2301]
466	GACCUUCGAUGAGAUCGCU	AGCGAUCUCAUCGAAGGUC	Rat	[1553-1571]
467	AUUUGAUAGUUGGUGUUCA	UGAACACCAACUAUCAAAU		[2768-2786]
468	GUUAUAGUAUAUCUGGACA	UGUCCAGAUAUACUAUAAC	Ms	[2453-2471]
469	GAUGCUCAGGCUUGAAAUC	GAUUUCAAGCCUGAGCAUC		[2814-2832]
470	CCACUCAAAUUAAUCUUUC	GAAAGAUUAAUUUGAGUGG		[2198-2216]
471	CAACGCUGUCUUCUAUUAC	GUAAUAGAAGACAGCGUUG		[1040-1058]
472	UAGUCUCCUUUGCACUGAG	CUCAGUGCAAAGGAGACUA		[2290-2308]
473	AUCUUGACAUUCAAGGCAU	AUGCCUUGAAUGUCAAGAU		[2738-2756]
474	AUGCGGGAGAAGAAGGUCA	UGACCUUCUUCUCCCGCAU	Rat,Ms	[933-951]
475	UCAAAUCUAUUCAGACAAG	CUUGUCUGAAUAGAUUUGA		[1859-1877]
476	CACUGUCGUGUCGCUGUUU	AAACAGCGACACGACAGUG		[1139-1157]
477	CUGGAUGAGACUUCCAAAC	GUUUGGAAGUCUCAUCCAG		[1725-1743]
478	ACUAUGAACUACAAAGCUU	AAGCUUUGUAGUUCAUAGU		[2073-2091]
479	UACUUACCUAAACAGAUAU	AUAUCUGUUUAGGUAAGUA		[2505-2523]
480	UCGUGUCGCUGUUUGUGGU	ACCACAAACAGCGACACGA		[1144-1162]
481	CUAGUCUCCUUUGCACUGA	UCAGUGCAAAGGAGACUAG		[2289-2307]
482	GAAACUGGGCAAGUCCUUU	AAAGGACUUGCCCAGUUUC		[518-536]
483	AAUCUGUAGGGCUGGACCU	AGGUCCAGCCCUACAGAUU	Rat,Ms	[2030-2048]
484	GAAGAAGGUCACCAUCCUG	CAGGAUGGUGACCUUCUUC		[941-959]
485	UGAAUGGUUCCAUGCCUGA	UCAGGCAUGGAACCAUUCA		[1964-1982]
486	CUUCGACUCAGGAUCCAGU	ACUGGAUCCUGAGUCGAAG		[2637-2655]

487	AGCCCUAAGGAUCUCUCAG	CUGAGAGAUCCUUAGGGCU		[1694-1712]
488	CUCAAAUUAAUCUUUCUUU	AAAGAAAGAUUAAUUUGAG		[2201-2219]
489	AUCUGUUUGAUCCCUGUUA	UAACAGGGAUCAAACAGAU		[2696-2714]
490	CAUUCAAGGCAUUUCUAUC	GAUAGAAAUGCCUUGAAUG		[2745-2763]
491	UGUUGCUCAAAUCUAUUCA	UGAAUAGAUUUGAGCAACA		[1853-1871]
492	GAUGAGACUUCCAAACCUG	CAGGUUUGGAAGUCUCAUC		[1728-1746]
493	AGCUUCUAUCCCAGGAGGU	ACCUCCUGGGAUAGAAGCU		[2087-2105]
494	AAUUCAAUGCUGAUGAUGA	UCAUCAUCAGCAUUGAAUU		[459-477]
495	AAUAUUAAAUACAGACACU	AGUGUCUGUAUUUAAUAUU	Ms	[2432-2450]
496	CAAAAAAACACUAGUUUUG	CAAAACUAGUGUUUUUUUG		[2785-2803]
497	UGCUCAUCAACCGCAACGA	UCGUUGCGGUUGAUGAGCA		[820-838]
498	CACGAGCAUCUUCGAGAAG	CUUCUCGAAGAUGCUCGUG		[1061-1079]
499	UUCCAAACCUGACAGAUGU	ACAUCUGUCAGGUUUGGAA		[1736-1754]
500	UUCUAUCACAUAUUUGAUA	UAUCAAAUAUGUGAUAGAA		[2757-2775]

Table B 29 SLC2A2 - solute carrier family 2, member 2

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-4557850 :310-1884
1	UGAGGAAAUUGCUGCAGAA	UUCUGCAGCAAUUUCCUCA	Chmp	[1785-1803]
2	CCCUGUUCACAUUUUUUAA	UUAAAAAAUGUGAACAGGG	Rat	[1739-1757]
3	CACCAAAGAUAUUAAUGAA	UUCAUUAAUAUCUUUGGUG	Chmp	[1116-1134]
4	CAAGAUUUAACACUAAAAA	UUUUUAGUGUUAAAUCUUG	Chmp	[2569-2587]
5	GGAAGUCAAAGCAAAACAA	UUGUUUUGCUUUGACUUCC	Chmp	[1065-1083]
6	CUGCAGAAUUCCAAAAGAA	UUCUUUUGGAAUUCUGCAG	Chmp	[1796-1814]
7	GCAAGAUUUAACACUAAAA	UUUUAGUGUUAAAUCUUGC	Chmp	[2568-2586]
8	CGACGUUCUCUCUUUCUAA	UUAGAAAGAGAGAACGUCG	Chmp	[1402-1420]
9	CAAUAAGUUCCAUGUUAAA	UUUAACAUGGAACUUAUUG	Chmp	[2320-2338]
10	GGUUAUCAGUUAACAUUAA	UUAAUGUUAACUGAUAACC	Chmp	[2612-2630]
11	GAAGAAAAGCACUUUUUAA	UUAAAAAGUGCUUUUCUUC	Chmp	[3306-3324]
12	CCAUAUAUCUUAUGUUAAA	UUUAACAUAAGAUAUAUGG	Chmp	[2284-2302]
13	GUUAGAUGAGGAAGUCAAA	UUUGACUUCCUCAUCUAAC	Chmp	[1056-1074]
14	CGUGGGUUAUCAGUUAACA	UGUUAACUGAUAACCCACG		[2608-2626]
15	CAGCAAACCUGUUUAUGCA	UGCAUAAACAGGUUUGCUG	Chmp	[1314-1332]
16	GAAUUAUUAUGUCUCAAAA	UUUUGAGACAUAAUAAUUC	Chmp	[2848-2866]
17	GCUUCAGACUUUUAUCAAA	UUUGAUAAAAGUCUGAAGC		[2931-2949]
18	CCAGAUACCUUUACAUCAA	UUGAUGUAAAGGUAUCUGG	Chmp	[1037-1055]
19	GGACUUCUGUGGACCUUAU	AUAAGGUCCACAGAAGUCC	Chmp	[1683-1701]
20	CGGGCAUUCUUAUUAGUCA	UGACUAAUAAGAAUGCCCG	Chmp	[902-920]
21	AAAUGUCUAUAGAGAAAAA	UUUUUCUCUAUAGACAUUU	Chmp	[2460-2478]
22	GAUUGAUCACUUUGUUAAA	UUUAACAAAGUGAUCAAUC		[2819-2837]
23	UGAGGAAGUCAAAGCAAAA	UUUUGCUUUGACUUCCUCA	Chmp	[1062-1080]
24	CAUCAGAAAUGUCAUCAAA	UUUGAUGACAUUUCUGAUG	Chmp	[2006-2024]
25	CCAUCUCAUAUACUUAUAA	UUAUAAGUAUAUGAGAUGG	Chmp	[754-772]
26	CCCACAAUCUCAUACUCAA	UUGAGUAUGAGAUUGUGGG	Chmp	[511-529]
27	GACUUGUGCUGCUGAAUAA	UUAUUCAGCAGCACAAGUC	Chmp	[1466-1484]
28	GCAGAAUUCCAAAAGAAGA	UCUUCUUUUGGAAUUCUGC	Chmp	[1798-1816]
29	GGACCAUCUCAUAUACUUA	UAAGUAUAUGAGAUGGUCC	Chmp	[751-769]
30	GAUUAUAGAGUAUACUAAA	UUUAGUAUACUCUAUAAUC		[2441-2459]
31	GGAACCGUCUGUUUUUAAA	UUUAAAAACAGACGGUUCC	Chmp	[1925-1943]
32	GCUGCAGAAUUCCAAAAGA	UCUUUUGGAAUUCUGCAGC	Chmp	[1795-1813]
33	CUGAGUGUGGGCUUCUGAA	UUCAGAAGCCCACACUCAG		[2896-2914]
34	GCAAUAAGUUCCAUGUUAA	UUAACAUGGAACUUAUUGC	Chmp	[2319-2337]
35	CAGUUAACAUUAACAUCUA	UAGAUGUUAAUGUUAACUG	Chmp	[2618-2636]
36	GAGCAGAAAGUCUCUAUAA	UUAUAGAGACUUUCUGCUC	Chmp	[1165-1183]
37	CAUACUCAAUGAACCCAAA	UUUGGGUUCAUUGAGUAUG	Chmp	[521-539]

38	ACAUGAACAGAAACAAUAA	UUAUUGUUUCUGUUCAUGU	Chmp	[1905-1923]
39	GGCAUUUUUUACUACUCAA	UUGAGUAGUAAAAAAUGCC	Chmp	[1270-1288]
40	CCAUGUUAGUAGCAAACAU	AUGUUUGCUACUAACAUGG	Chmp	[689-707]
41	GAAGUCAAAGCAAAACAAA	UUUGUUUUGCUUUGACUUC	Chmp	[1066-1084]
42	GUACAAUGACAGAAGAUAA	UUAUCUUCUGUCAUUGUAC	Chmp	[305-323]
43	GAAUAUCAUUAAAUUGGAA	UUCCAAUUUAAUGAUAUUC	Chmp	[2256-2274]
44	GGAUUAUAGAGUAUACUAA	UUAGUAUACUCUAUAAUCC		[2440-2458]
45	CAGUCAAUUUUACAAUUAU	AUAAUUGUAAAAUUGACUG	Chmp	[3169-3187]
46	CCCUGCUUUUUGACAUGAA	UUCAUGUCAAAAAGCAGGG	Chmp	[1893-1911]
47	GUGGAACAAAGGUAUUGAA	UUCAAUACCUUUGUUCCAC		[50-68]
48	CUGGAUGACCGAAAAGCUA	UAGCUUUUCGGUCAUCCAG	Chmp	[457-475]
49	AGAUAUUAAUGAAAUGAGA	UCUCAUUUCAUUAAUAUCU	Chmp	[1122-1140]
50	AGCUGCUGUAGAAAUGAAA	UUUCAUUUCUACAGCAGCU	Chmp	[1839-1857]
51	GAGGCAAAGCACUUAUUGA	UCAAUAAGUGCUUUGCCUC	Chmp	[82-100]
52	CAACUGGAGCACUGAUCAA	UUGAUCAGUGCUCCAGUUG	Chmp	[3258-3276]
53	UAAGUUUGAUCAAAUCUAA	UUAGAUUUGAUCAAACUUA	Chmp	[2778-2796]
54	CUGUAUUCCUUGUGGAGAA	UUCUCCACAAGGAAUACAG	Chmp	[1376-1394]
55	GAGAAAAGAAAGAGAAGAA	UUCUUCUCUUUCUUUUCUC	Chmp	[1137-1155]
56	CACACUUGGAAGAAUCAAA	UUUGAUUCUUCCAAGUGUG	Chmp	[669-687]
57	AGGCAGAGCUGCGAAUAAA	UUUAUUCGCAGCUCUGCCU	Chmp	[217-235]
58	GCAGCUGCUCAACUAAUCA	UGAUUAGUUGAGCAGCUGC	Chmp	[571-589]
59	CGUCCUGCUGCUUUAGCAA	UUGCUAAAGCAGCAGGACG	Chmp	[1603-1621]
60	UGUGAUCAAUGCACCUCAA	UUGAGGUGCAUUGAUCACA	Rat,Ms,Chmp	[396-414]
61	GAAUUUGUAUUUUGCUUAA	UUAAGCAAAAUACAAAUUC	Chmp	[2387-2405]
62	UGCAAGAUUUAACACUAAA	UUUAGUGUUAAAUCUUGCA	Chmp	[2567-2585]
63	GGGUUAUCAGUUAACAUUA	UAAUGUUAACUGAUAACCC	Chmp	[2611-2629]
64	GCUUCUGAAACUUCAUAAA	UUUAUGAAGUUUCAGAAGC	Chmp	[2906-2924]
65	GGCUUAUCAAAAUCUUUCA	UGAAAGAUUUUGAUAAGCC	Chmp	[2494-2512]
66	CAAUUUUACAAUUAUGGAA	UUCCAUAAUUGUAAAAUUG	Chmp	[3173-3191]
67	CAUCUCAUAUACUUAUAAU	AUUAUAAGUAUAUGAGAUG	Chmp	[755-773]
68	GAUCAAAUCUAAUGUAAGA	UCUUACAUUAGAUUUGAUC	Chmp	[2785-2803]
69	CCUACAUAGGCAAAUUGGA	UCCAAUUUGCCUAUGUAGG	Chmp	[3118-3136]
70	GGUUUCACCUGAUCAUAUA	UAUAUGAUCAGGUGAAACC	Chmp	[2588-2606]
71	CAUCAAAUAUUACCAAAAA	UUUUUGGUAAUAUUUGAUG	Chmp	[2018-2036]
72	GAGUUAUGUGAGCAUGAUA	UAUCAUGCUCACAUAACUC	Chmp	[1497-1515]
73	UCCACUGGAUGACCGAAAA	UUUUCGGUCAUCCAGUGGA	Chmp	[453-471]
74	GACUUUAGCUUACAGUCAA	UUGACUGUAAGCUAAAGUC	Chmp	[3157-3175]
75	UCUGUAUUUUCAUGUGGAA	UUCCACAUGAAAAUACAGA	Chmp	[2420-2438]
76	CAGCACUCAGAAAAGAAAA	UUUUCUUUUCUGAGUGCUG	Chmp	[2511-2529]
77	CGGACUUCUGUGGACCUUA	UAAGGUCCACAGAAGUCCG	Chmp	[1682-1700]
78	AAGCUGCUGUAGAAAUGAA	UUCAUUUCUACAGCAGCUU	Chmp	[1838-1856]
79	UAAUGAAAUGAGAAAAGAA	UUCUUUUCUCAUUUCAUUA	Chmp	[1128-1146]
80	GUGAAAUAAUUAAAAACCA	UGGUUUUUAAUUAUUUCAC	Chmp	[3341-3359]
81	GCAAAACAAAGCUUGAAAA	UUUUCAAGCUUUGUUUUGC	Chmp	[1075-1093]
82	UUGCAAGAUUUAACACUAA	UUAGUGUUAAAUCUUGCAA	Chmp	[2566-2584]
83	GCAAUUUUCCGGAAUCAAU	AUUGAUUCCGGAAAAUUGC		[1251-1269]
84	CAAAUCUAAUGUAAGAAAA	UUUUCUUACAUUAGAUUUG	Chmp	[2788-2806]
85	UCAGAAAUGUCAUCAAAUA	UAUUUGAUGACAUUUCUGA	Chmp	[2008-2026]
86	GACCGAAAAGCUAUCAACA	UGUUGAUAGCUUUUCGGUC	Chmp	[463-481]
87	UGGGACUUGUGCUGCUGAA	UUCAGCAGCACAAGUCCCA	Chmp	[1463-1481]
88	UCAGAUUAUUGGUCUUGAA	UUCAAGACCAAUAAUCUGA	Chmp	[918-936]
89	GCAGAAAGUCUCUAUAAUU	AAUUAUAGAGACUUUCUGC	Chmp	[1167-1185]
90	GACGGCUGGUAUCAGCAAA	UUUGCUGAUACCAGCCGUC	Chmp	[1302-1320]
91	AGAAAAGCACUUUUUAAAA	UUUUAAAAAGUGCUUUUCU	Chmp	[3308-3326]
92	GUUUGUAACUUAUGCCUAA	UUAGGCAUAAGUUACAAAC	Chmp	[5-23]
93	UAUCAAAAUCCCUAUUUAA	UUAAAUAGGGAUUUUGAUA	Chmp	[2943-2961]

94	CCUGUUCACAUUUUUUAAA	UUUAAAAAAUGUGAACAGG	Rat	[1740-1758]
95	AGCAGAAAGUCUCUAUAAU	AUUAUAGAGACUUUCUGCU	Chmp	[1166-1184]
96	GGGUGCUAACGUAUCUCUA	UAGAGAUACGUUAGCACCC		[3224-3242]
97	CUACAUAGGCAAAUUGGAA	UUCCAAUUUGCCUAUGUAG	Chmp	[3119-3137]
98	GCUCUGUUCUUUAUAACAA	UUGUUAUAAAGAACAGAGC	Chmp	[2149-2167]
99	GGGAACCGUCUGUUUUUAA	UUAAAAACAGACGGUUCCC	Chmp	[1924-1942]
100	UAACAAGGUUCUUCUAAAA	UUUUAGAAGAACCUUGUUA	Chmp	[2162-2180]
101	UGGUUUUUGCAAGAUUUAA	UUAAAUCUUGCAAAAACCA	Chmp	[2560-2578]
102	GUAAUUAAGUAAACCAAAA	UUUUGGUUUACUUAAUUAC	Chmp	[2080-2098]
103	GGCUGAGUUUUUCAGUCAA	UUGACUGAAAAACUCAGCC	Chmp	[1578-1596]
104	UAGGCAAAUUGGAAAUACA	UGUAUUUCCAAUUUGCCUA	Chmp	[3124-3142]
105	ACCUGAGGAUGCAACAAAU	AUUUGUUGCAUCCUCAGGU		[2225-2243]
106	ACCGAAAAGCUAUCAACAA	UUGUUGAUAGCUUUUCGGU	Chmp	[464-482]
107	CAUCAAGUUAGAUGAGGAA	UUCCUCAUCUAACUUGAUG	Chmp	[1050-1068]
108	AGGAAAGUCUUUUGAGGAA	UUCCUCAAAAGACUUUCCU	Ms,Chmp	[1773-1791]
109	AAAAAAUGUCUAUAGAGAA	UUCUCUAUAGACAUUUUUU	Chmp	[2457-2475]
110	CUUUAAGAGUGAAAUAAUU	AAUUAUUUCACUCUUAAAG	Chmp	[3333-3351]
111	UCGUCACGGGCAUUCUUAU	AUAAGAAUGCCCGUGACGA	Chmp	[896-914]
112	AGUUUGCUUUGCUUUUUAA	UUAAAAAGCAAAGCAAACU	Chmp	[2683-2701]
113	GAAAAGCACUUUUUAAAAA	UUUUUAAAAAGUGCUUUUC	Chmp	[3309-3327]
114	CAUCGUCACGGGCAUUCUU	AAGAAUGCCCGUGACGAUG	Chmp	[894-912]
115	CGCAUUGUACACUAUCUAU	AUAGAUAGUGUACAAUGCG		[3090-3108]
116	CAAUCUCAUACUCAAUGAA	UUCAUUGAGUAUGAGAUUG	Chmp	[515-533]
117	AUAUGAUGAUGUCACCAAA	UUUGGUGACAUCAUCAUAU	Chmp	[1104-1122]
118	GUGGGUUAUCAGUUAACAU	AUGUUAACUGAUAACCCAC		[2609-2627]
119	AGGUUCUUCUAAAAUUGAA	UUCAAUUUUAGAAGAACCU	Chmp	[2167-2185]
120	AGGGCAGGUGGUUCUAAUA	UAUUAGAACCACCUGCCCU	Chmp	[2124-2142]
121	AAUGAAAUGAGAAAAGAAA	UUUCUUUUCUCAUUUCAUU	Chmp	[1129-1147]
122	CCUCCUCCUGCAAUGCAUA	UAUGCAUUGCAGGAGGAGG	Chmp	[189-207]
123	UAUCAACAGUACAGAUGAA	UUCAUCUGUACUGUUGAUA		[489-507]
124	CACUGAUCAAUCCUUCUUA	UAAGAAGGAUUGAUCAGUG	Chmp	[3267-3285]
125	GCUGCAUUCAGCAAUUGGA	UCCAAUUGCUGAAUGCAGC	Chmp	[1624-1642]
126	GAAUUGACAGGACUCCCAA	UUGGGAGUCCUGUCAAUUC	Chmp	[283-301]
127	CCUGAGGAUGCAACAAAUA	UAUUUGUUGCAUCCUCAGG		[2226-2244]
128	UGUCUUAGCUGUAUACAGA	UCUGUAUACAGCUAAGACA	Chmp	[3037-3055]
129	GGACUAUAUUGUGGGCUAA	UUAGCCCACAAUAUAGUCC	Chmp	[793-811]
130	GAAAUGUCAUCAAAUAUUA	UAAUAUUUGAUGACAUUUC	Chmp	[2011-2029]
131	AUGUGGAAUGGAUUAUAGA	UCUAUAAUCCAUUCCACAU	Chmp	[2431-2449]
132	GGUGGUUCUAAUAUUUUUA	UAAAAAUAUUAGAACCACC	Chmp	[2130-2148]
133	CUUCAGACUUUUAUCAAAA	UUUUGAUAAAAGUCUGAAG		[2932-2950]
134	AAAAAUGUCUAUAGAGAAA	UUUCUCUAUAGACAUUUUU	Chmp	[2458-2476]
135	CAACUAGUACAAUGACAGA	UCUGUCAUUGUACUAGUUG	Chmp	[299-317]
136	ACCUCAACAGGUAAUAAUA	UAUUAUUACCUGUUGAGGU	Chmp	[408-426]
137	GUCUCAAAAUAAGUUGAAA	UUUCAACUUAUUUUGAGAC	Chmp	[2858-2876]
138	AAGAAAAGCACUUUUUAAA	UUUAAAAAGUGCUUUUCUU	Chmp	[3307-3325]
139	UGAUCACUUUGUUAAAAAU	AUUUUUAACAAAGUGAUCA		[2822-2840]
140	GCUGCUGUAGAAAUGAAAU	AUUUCAUUUCUACAGCAGC	Chmp	[1840-1858]
141	ACCUUUACAUCAAGUUAGA	UCUAACUUGAUGUAAAGGU	Chmp	[1043-1061]
142	GGCAAUAAGUUCCAUGUUA	UAACAUGGAACUUAUUGCC	Chmp	[2318-2336]
143	GUGGGCUUCUGAAACUUCA	UGAAGUUUCAGAAGCCCAC	Chmp	[2902-2920]
144	GGUUUUCACAUACACUCAA	UUGAGUGUAUGUGAAAACC	Chmp	[2715-2733]
145	CCGUCUGUUUUUAAAUGAU	AUCAUUUAAAAACAGACGG		[1929-1947]
146	UGAAUAUCAUUAAAUUGGA	UCCAAUUUAAUGAUAUUCA	Chmp	[2255-2273]
147	GAUGAGGAAGUCAAAGCAA	UUGCUUUGACUUCCUCAUC	Chmp	[1060-1078]
148	CUGUAAUUAAGUAAACCAA	UUGGUUUACUUAAUUACAG	Chmp	[2078-2096]
149	UGGAAUGGAUUAUAGAGUA	UACUCUAUAAUCCAUUCCA	Chmp	[2434-2452]

150	CUAGAAACCUGAGGAUGCA	UGCAUCCUCAGGUUUCUAG	Chmp	[2219-2237]
151	GGAUGAGUUAUGUGAGCAU	AUGCUCACAUAACUCAUCC	Rat,Chmp	[1493-1511]
152	CUCCUGCAAUGCAUAACUA	UAGUUAUGCAUUGCAGGAG	Chmp	[193-211]
153	CAGAAAUGUCAUCAAAUAU	AUAUUUGAUGACAUUUCUG	Chmp	[2009-2027]
154	GAAUUUUCUUACCCAUAUA	UAUAUGGGUAAGAAAAUUC	Chmp	[2272-2290]
155	GAAACUUCAUAAAUGUUCA	UGAACAUUUAUGAAGUUUC	Chmp	[2912-2930]
156	CCAAAAGCUGCUGUAGAAA	UUUCUACAGCAGCUUUUGG	Chmp	[1834-1852]
157	GGACUUGUGCUGCUGAAUA	UAUUCAGCAGCACAAGUCC	Chmp	[1465-1483]
158	UGAGCAGAAAGUCUCUAUA	UAUAGAGACUUUCUGCUCA	Chmp	[1164-1182]
159	AUUCCUUGAGCAUUUUAUA	UAUAAAAUGCUCAAGGAAU	Chmp	[1949-1967]
160	AAGGGCAGGUGGUUCUAAU	AUUAGAACCACCUGCCCUU	Chmp	[2123-2141]
161	UAAAGUUCCAGAAACCAAA	UUUGGUUUCUGGAACUUUA	Rat,Ms,Chmp	[1755-1773]
162	UGAAGAAAAGCACUUUUUA	UAAAAAGUGCUUUUCUUCA	Chmp	[3305-3323]
163	AGCAAUUUUCCGGAAUCAA	UUGAUUCCGGAAAAUUGCU		[1250-1268]
164	GGGACCAUCUCAUAUACUU	AAGUAUAUGAGAUGGUCCC	Chmp	[750-768]
165	GCACCUCAACAGGUAAUAA	UUAUUACCUGUUGAGGUGC	Chmp	[406-424]
166	CUAGUACAAUGACAGAAGA	UCUUCUGUCAUUGUACUAG	Chmp	[302-320]
167	AUGAGGAAGUCAAAGCAAA	UUUGCUUUGACUUCCUCAU	Chmp	[1061-1079]
168	GAAAAGCUAUCAACAACUA	UAGUUGUUGAUAGCUUUUC	Chmp	[467-485]
169	CAGUCCAAAGAACAAGAAA	UUUCUUGUUCUUUGGACUG	Chmp	[3409-3427]
170	GAGAUUUCAACAUAUCAUU	AAUGAUAUGUUGAAAUCUC	Chmp	[2186-2204]
171	CUGAAUUAUUAUGUCUCAA	UUGAGACAUAAUAAUUCAG	Chmp	[2846-2864]
172	UAGGCAGAGCUGCGAAUAA	UUAUUCGCAGCUCUGCCUA	Chmp	[216-234]
173	CUCUUUUUCUGUCCAGAAA	UUUCUGGACAGAAAAAGAG	Chmp	[1015-1033]
174	UGAGUGUGGGCUUCUGAAA	UUUCAGAAGCCCACACUCA		[2897-2915]
175	AGAGAUUUCAACAUAUCAU	AUGAUAUGUUGAAAUCUCU	Chmp	[2185-2203]
176	CCCAGAUACCUUUACAUCA	UGAUGUAAAGGUAUCUGGG	Chmp	[1036-1054]
177	CACGGGCAUUCUUAUUAGU	ACUAAUAAGAAUGCCCGUG	Chmp	[900-918]
178	GAUGCAACAAAUAUUUAUA	UAUAAAUAUUUGUUGCAUC		[2232-2250]
179	CUACCGACAGCCUAUUCUA	UAGAAUAGGCUGUCGGUAG	Chmp	[1206-1224]
180	GAUAUUAAUGAAAUGAGAA	UUCUCAUUUCAUUAAUAUC	Chmp	[1123-1141]
181	GCAGUCCAAAGAACAAGAA	UUCUUGUUCUUUGGACUGC		[3408-3426]
182	GAGUCAGACAUUUGGUAUA	UAUACCAAAUGUCUGACUC	Chmp	[2742-2760]
183	CACAUUUUUUAAAGUUCCA	UGGAACUUUAAAAAAUGUG	Rat	[1746-1764]
184	CCUAAUAAGUUUGAUCAAA	UUUGAUCAAACUUAUUAGG	Chmp	[2773-2791]
185	CCUCAACAGGUAAUAAUAU	AUAUUAUUACCUGUUGAGG	Chmp	[409-427]
186	CAAAGAACAAGAAAUUGUU	AACAAUUUCUUGUUCUUUG	Chmp	[3414-3432]
187	AGCGUGGGUUAUCAGUUAA	UUAACUGAUAACCCACGCU		[2606-2624]
188	AGAAAGUCUCUAUAAUUCA	UGAAUUAUAGAGACUUUCU	Chmp	[1169-1187]
189	CAAUGCACCUCAACAGGUA	UACCUGUUGAGGUGCAUUG	Chmp	[402-420]
190	GUAAGAAAAUUUGAAGUAA	UUACUUCAAAUUUUCUUAC	Chmp	[2798-2816]
191	CCAAAGAUAUUAAUGAAAU	AUUUCAUUAAUAUCUUUGG	Chmp	[1118-1136]
192	AUGACAUUGGUGUGAUCAA	UUGAUCACACCAAUGUCAU	Chmp	[386-404]
193	GCUUUUUUCUUGAGUACUA	UAGUACUCAAGAAAAAAGC	Chmp	[2368-2386]
194	ACAUAUAUGUAAUUUAGCA	UGCUAAAUUACAUAUAUGU		[3392-3410]
195	UUUGGUAUAUUACCUCAAA	UUUGAGGUAAUAUACCAAA	Chmp	[2752-2770]
196	ACUGAUCAAUCCUUCUUAU	AUAAGAAGGAUUGAUCAGU	Chmp	[3268-3286]
197	CCCAUAUAUCUUAUGUUAA	UUAACAUAAGAUAUAUGGG	Chmp	[2283-2301]
198	CACAGGUUGCUGAGGCAAA	UUUGCCUCAGCAACCUGUG	Chmp	[71-89]
199	CAAACAUUCUGUCAUUAGU	ACUAAUGACAGAAUGUUUG	Chmp	[701-719]
200	AUGGUAAGACUGUAAUUAA	UUAAUUACAGUCUUACCAU	Chmp	[2069-2087]
201	AUAACAAGGUUCUUCUAAA	UUUAGAAGAACCUUGUUAU	Chmp	[2161-2179]
202	AGUUGUUCACAUAUAUGUA	UACAUAUAUGUGAACAACU	Chmp	[3384-3402]
203	GGAUGCAACAAAUAUUUAU	AUAAAUAUUUGUUGCAUCC		[2231-2249]
204	GUUUUUGCAAGAUUUAACA	UGUUAAAUCUUGCAAAAAC	Chmp	[2562-2580]
205	AGAGUAUACUAAAAAAUGU	ACAUUUUUUAGUAUACUCU		[2447-2465]

206	UAGCGUGGGUUAUCAGUUA	UAACUGAUAACCCACGCUA		[2605-2623]
207	GAGUGAGCAGAAAGUCUCU	AGAGACUUUCUGCUCACUC	Chmp	[1161-1179]
208	GGAUUGAUCACUUUGUUAA	UUAACAAAGUGAUCAAUCC		[2818-2836]
209	UGAAGAGAUUUCAACAUAU	AUAUGUUGAAAUCUCUUCA	Chmp	[2182-2200]
210	CAUUCUUAUUAGUCAGAUU	AAUCUGACUAAUAAGAAUG	Rat,Ms,Chmp	[906-924]
211	ACAUGUUUUGGGUGUUCCA	UGGAACACCCAAAACAUGU	Ms	[438-456]
212	CUAUGUUAUCAACAGUACA	UGUACUGUUGAUAACAUAG		[483-501]
213	GGCAGGUGGUUCUAAUAUU	AAUAUUAGAACCACCUGCC	Chmp	[2126-2144]
214	GCUAGUUUAUUUUGUUACA	UGUAACAAAAUAAACUAGC	Chmp	[2101-2119]
215	UCAUCAGAAAUGUCAUCAA	UUGAUGACAUUUCUGAUGA	Chmp	[2005-2023]
216	CAUGUGGAAUGGAUUAUAG	CUAUAAUCCAUUCCACAUG	Chmp	[2430-2448]
217	GGAAAGUCUUUUGAGGAAA	UUUCCUCAAAAGACUUUCC	Ms,Chmp	[1774-1792]
218	AGGGUUUGAGGAUUCCUGA	UCAGGAAUCCUCAAACCCU	Chmp	[2881-2899]
219	CCAACUGGAGCACUGAUCA	UGAUCAGUGCUCCAGUUGG	Chmp	[3257-3275]
220	GAUGAUUAAACAGACUUUA	UAAAGUCUGUUUAAUCAUC	Chmp	[3145-3163]
221	CAGGCCUGGUUCCUAUGUA	UACAUAGGAACCAGGCCUG	Chmp	[815-833]
222	AAAAUUGAAGAGAUUUCAA	UUGAAAUCUCUUCAAUUUU	Chmp	[2177-2195]
223	ACUAAAAAAUGUCUAUAGA	UCUAUAGACAUUUUUUAGU		[2454-2472]
224	GAUCAAUCCUUCUUAUGUU	AACAUAAGAAGGAUUGAUC	Chmp	[3271-3289]
225	AGACAACUCUUCCAUUUAU	AUAAAUGGAAGAGUUGUCU	Chmp	[2341-2359]
226	CGUCACGGGCAUUCUUAUU	AAUAAGAAUGCCCGUGACG	Chmp	[897-915]
227	GGCUUCUGAAACUUCAUAA	UUAUGAAGUUUCAGAAGCC	Chmp	[2905-2923]
228	CAUUUGCUUUGUUUUCUAA	UUAGAAAACAAAGCAAAUG	Chmp	[3365-3383]
229	GACCAUCUCAUAUACUUAU	AUAAGUAUAUGAGAUGGUC	Chmp	[752-770]
230	AGUUAGAUGAGGAAGUCAA	UUGACUUCCUCAUCUAACU	Chmp	[1055-1073]
231	AACCAAAAAGGCUAGUUUA	UAAACUAGCCUUUUUGGUU	Chmp	[2091-2109]
232	ACGCAUUGUACACUAUCUA	UAGAUAGUGUACAAUGCGU		[3089-3107]
233	AGUUCUGAUGGGUCCCAAA	UUUGGGACCCAUCAGAACU	Chmp	[3196-3214]
234	GAUUAGAUUCCCAUCAAUA	UAUUGAUGGGAAUCUAAUC	Chmp	[99-117]
235	GGACUCCCAACUAGUACAA	UUGUACUAGUUGGGAGUCC	Chmp	[292-310]
236	CAUCCUUCAGUCUCUGCUA	UAGCAGAGACUGAAGGAUG	Chmp	[996-1014]
237	GCCUUUACCCUGUUCACAU	AUGUGAACAGGGUAAAGGC		[1732-1750]
238	ACAGGACUCCCAACUAGUA	UACUAGUUGGGAGUCCUGU	Chmp	[289-307]
239	GAAAUUCCUAGGAGCUACA	UGUAGCUCCUAGGAAUUUC	Chmp	[1854-1872]
240	GACAUGAACAGAAACAAUA	UAUUGUUUCUGUUCAUGUC	Chmp	[1904-1922]
241	GUUUUCACAUACACUCAAA	UUUGAGUGUAUGUGAAAAC	Chmp	[2716-2734]
242	GUAUCAGCAAACCUGUUUA	UAAACAGGUUUGCUGAUAC	Chmp	[1310-1328]
243	UAAGUUCCAUGUUAAAAUA	UAUUUUAACAUGGAACUUA	Chmp	[2323-2341]
244	AAUUGCUGCAGAAUUCCAA	UUGGAAUUCUGCAGCAAUU	Chmp	[1791-1809]
245	CAAAAUUGGGACCAUCUCA	UGAGAUGGUCCCAAUUUUG	Chmp	[743-761]
246	GCCUGGUUCCUAUGUAUAU	AUAUACAUAGGAACCAGGC	Chmp	[818-836]
247	CCUUCUUAUGUUUGCUUUA	UAAAGCAAACAUAAGAAGG	Chmp	[3278-3296]
248	AAAGCAAAACAAAGCUUGA	UCAAGCUUUGUUUUGCUUU	Chmp	[1072-1090]
249	GUUCCAGAAACCAAAGGAA	UUCCUUUGGUUUCUGGAAC	Rat,Ms,Chmp	[1759-1777]
250	UCAGCACUCAGAAAAGAAA	UUUCUUUUCUGAGUGCUGA	Chmp	[2510-2528]
251	AGGCUGUUUUCUCCACCAA	UUGGUGGAGAAAACAGCCU		[3242-3260]
252	CCACAAUCUCAUACUCAAU	AUUGAGUAUGAGAUUGUGG	Chmp	[512-530]
253	AGACGGCUGGUAUCAGCAA	UUGCUGAUACCAGCCGUCU	Chmp	[1301-1319]
254	GUAAUAAUAUCUCACUAUA	UAUAGUGAGAUAUUAUUAC		[418-436]
255	CCAAAUGGUUUUUGCAAGA	UCUUGCAAAAACCAUUUGG	Chmp	[2555-2573]
256	GGAAUGGAUUAUAGAGUAU	AUACUCUAUAAUCCAUUCC	Chmp	[2435-2453]
257	ACCUGUUUAUGCAACCAUU	AAUGGUUGCAUAAACAGGU	Chmp	[1320-1338]
258	CAGCAAUUUUCCGGAAUCA	UGAUUCCGGAAAAUUGCUG		[1249-1267]
259	GGACAGCCUGGUUUUCACA	UGUGAAAACCAGGCUGUCC		[2706-2724]
260	GCAGGUGGUUCUAAUAUUU	AAAUAUUAGAACCACCUGC	Chmp	[2127-2145]
261	UGAGAAGAUUAGACUUGGA	UCCAAGUCUAAUCUUCUCA	Chmp	[130-148]

262	GGGCUUCUGAAACUUCAUA	UAUGAAGUUUCAGAAGCCC	Chmp	[2904-2922]
263	CAAUCAUGAGUCAGACAUU	AAUGUCUGACUCAUGAUUG	Chmp	[2735-2753]
264	CUAAAGUUGUUCACAUAUA	UAUAUGUGAACAACUUUAG	Chmp	[3380-3398]
265	UCAUGUGGAAUGGAUUAUA	UAUAAUCCAUUCCACAUGA	Chmp	[2429-2447]
266	GCGACGUUCUCUCUUUCUA	UAGAAAGAGAGAACGUCGC	Chmp	[1401-1419]
267	AGGCAAAGCACUUAUUGAU	AUCAAUAAGUGCUUUGCCU	Chmp	[83-101]
268	AGGUAAUAAUAUCUCACUA	UAGUGAGAUAUUAUUACCU		[416-434]
269	UGUAAUUAAGUAAACCAAA	UUUGGUUUACUUAAUUACA	Chmp	[2079-2097]
270	CAAAAAGGCUAGUUUAUUU	AAAUAAACUAGCCUUUUUG	Chmp	[2094-2112]
271	GCUCCCAUUUUCUUUCCUA	UAGGAAAGAAAAUGGGAGC	Chmp	[31-49]
272	GGGCAUUCUUAUUAGUCAG	CUGACUAAUAAGAAUGCCC	Chmp	[903-921]
273	GAAAGUCUUUUGAGGAAAU	AUUUCCUCAAAAGACUUUC	Ms,Chmp	[1775-1793]
274	UUAGCAGGGUGCUAACGUA	UACGUUAGCACCCUGCUAA		[3218-3236]
275	AGUUAACAUUAACAUCUAU	AUAGAUGUUAAUGUUAACU	Chmp	[2619-2637]
276	UGACAUUGGUGUGAUCAAU	AUUGAUCACACCAAUGUCA	Chmp	[387-405]
277	UGAUUAGAUUCCCAUCAAU	AUUGAUGGGAAUCUAAUCA	Chmp	[98-116]
278	CACGCAUUGUACACUAUCU	AGAUAGUGUACAAUGCGUG		[3088-3106]
279	UAAAGUUGUUCACAUAUAU	AUAUAUGUGAACAACUUUA	Chmp	[3381-3399]
280	GGACCUGCUCCCAUUUUCU	AGAAAAUGGGAGCAGGUCC	Chmp	[25-43]
281	UCCUAAUAAGUUUGAUCAA	UUGAUCAAACUUAUUAGGA	Chmp	[2772-2790]
282	AAAAUAAGUUGAAAAGGUA	UACCUUUUCAACUUAUUUU	Chmp	[2863-2881]
283	CUAAUGUAAGAAAAUUUGA	UCAAAUUUUCUUACAUUAG	Chmp	[2793-2811]
284	CUAUUUAAUUUUCCUGGAA	UUCCAGGAAAAUUAAAUAG	Chmp	[2954-2972]
285	UUAGCAGUCCAAAGAACAA	UUGUUCUUUGGACUGCUAA		[3405-3423]
286	GUAGGCUUAUCAAAAUCUU	AAGAUUUUGAUAAGCCUAC	Chmp	[2491-2509]
287	CCUCAAAUUCCUAAUAAGU	ACUUAUUAGGAAUUUGAGG		[2764-2782]
288	AGCAAAACAAAGCUUGAAA	UUUCAAGCUUUGUUUUGCU	Chmp	[1074-1092]
289	GUCUUAGCUGUAUACAGAU	AUCUGUAUACAGCUAAGAC	Chmp	[3038-3056]
290	AUGUAAUUUAGCAGUCCAA	UUGGACUGCUAAAUUACAU		[3398-3416]
291	ACAAGACCUGGAAUUGACA	UGUCAAUUCCAGGUCUUGU	Chmp	[273-291]
292	GCAGAGCUGCGAAUAAACA	UGUUUAUUCGCAGCUCUGC	Chmp	[219-237]
293	GAAUGAGUGGGAUGUUUGU	ACAAACAUCCCACUCAUUC	Chmp	[1424-1442]
294	GAAACCUGAGGAUGCAACA	UGUUGCAUCCUCAGGUUUC		[2222-2240]
295	AAUUUAGCAGUCCAAAGAA	UUCUUUGGACUGCUAAAUU		[3402-3420]
296	CGCUGAGAAGAUUAGACUU	AAGUCUAAUCUUCUCAGCG	Chmp	[127-145]
297	AUUGCUGCAGAAUUCCAAA	UUUGGAAUUCUGCAGCAAU	Chmp	[1792-1810]
298	CACUCAGCUUUUUUCUUGA	UCAAGAAAAAAGCUGAGUG	Chmp	[2362-2380]
299	ACUUAUAAUUGCUGGAAGA	UCUUCCAGCAAUUAUAAGU	Chmp	[765-783]
300	CCAUUUUAGUUCCUUUAUU	AAUAAAGGAACUAAAAUGG		[2530-2548]
301	CUUUGUCAGCUUCUUUGAA	UUCAAAGAAGCUGACAAAG	Chmp	[1527-1545]
302	UGGGCUUCUGAAACUUCAU	AUGAAGUUUCAGAAGCCCA	Chmp	[2903-2921]
303	GAUCAUAUAGCGUGGGUUA	UAACCCACGCUAUAUGAUC		[2598-2616]
304	GAUCACUUUGUUAAAAAUA	UAUUUUUAACAAAGUGAUC		[2823-2841]
305	UGACAUGAACAGAAACAAU	AUUGUUUCUGUUCAUGUCA	Chmp	[1903-1921]
306	CAUUGGUGUGAUCAAUGCA	UGCAUUGAUCACACCAAUG	Chmp	[390-408]
307	AUGUCACCAAAGAUAUUAA	UUAAUAUCUUUGGUGACAU	Ms,Chmp	[1112-1130]
308	CACAUAACUAGAAACCUGA	UCAGGUUUCUAGUUAUGUG	Chmp	[2212-2230]
309	AUGGUUUUUGCAAGAUUUA	UAAAUCUUGCAAAAACCAU	Chmp	[2559-2577]
310	UGUUCCUAACAUAAAAUAA	UUAUUUUAUGUUAGGAACA	Chmp	[2993-3011]
311	CUGAAUAAGUUCUCUUGGA	UCCAAGAGAACUUAUUCAG	Chmp	[1477-1495]
312	UUUGCAAGAUUUAACACUA	UAGUGUUAAAUCUUGCAAA	Chmp	[2565-2583]
313	CUGUAGAAAUGAAAUUCCU	AGGAAUUUCAUUUCUACAG	Chmp	[1844-1862]
314	GGAAAGACUGAUUGUUUUA	UAAAACAAUCAGUCUUUCC	Chmp	[2969-2987]
315	UUUGGUAGGCUUAUCAAAA	UUUUGAUAAGCCUACCAAA	Chmp	[2487-2505]
316	ACCAUCUCAUAUACUUAUA	UAUAAGUAUAUGAGAUGGU	Chmp	[753-771]
317	GGCCUUUACCCUGUUCACA	UGUGAACAGGGUAAAGGCC		[1731-1749]

318	AAUAAUAUCUCACUAUAGA	UCUAUAGUGAGAUAUUAUU		[420-438]
319	ACCCUGUUCACAUUUUUUA	UAAAAAAUGUGAACAGGGU	Rat	[1738-1756]
320	UGUAGAAAUGAAAUUCCUA	UAGGAAUUUCAUUUCUACA	Chmp	[1845-1863]
321	UGAUGAUGUCACCAAAGAU	AUCUUUGGUGACAUCAUCA	Chmp	[1107-1125]
322	AGGCCUGGUUCCUAUGUAU	AUACAUAGGAACCAGGCCU	Chmp	[816-834]
323	UUUUGGUAGGCUUAUCAAA	UUUGAUAAGCCUACCAAAA	Chmp	[2486-2504]
324	CACCAAUUCCAGCUACCGA	UCGGUAGCUGGAAUUGGUG	Chmp	[1194-1212]
325	GAGAAAAACUUUCAUUUUU	AAAAAUGAAAGUUUUUCUC	Chmp	[2471-2489]
326	CCUUUACCCUGUUCACAUU	AAUGUGAACAGGGUAAAGG		[1733-1751]
327	GUCUGUUUUUAAAUGAUGA	UCAUCAUUUAAAAACAGAC		[1931-1949]
328	CCCUGGUUUUCACUGUCAU	AUGACAGUGAAAACCAGGG	Chmp	[335-353]
329	GAGGAUGCAACAAAUAUUU	AAAUAUUUGUUGCAUCCUC		[2229-2247]
330	CGGUGAAAUUGCUCCAACC	GGUUGGAGCAAUUUCACCG	Chmp	[837-855]
331	UUAUGUGCUCUCAUCAGAA	UUCUGAUGAGAGCACAUAA	Chmp	[1995-2013]
332	GGCCUGGUUCCUAUGUAUA	UAUACAUAGGAACCAGGCC	Chmp	[817-835]
333	GCUGCUCAACUAAUCACCA	UGGUGAUUAGUUGAGCAGC	Chmp	[574-592]
334	AAUUGGACCUGCAAUUUCA	UGAAAUUGCAGGUCCAAUU	Chmp	[1636-1654]
335	ACCUCAAAUUCCUAAUAAG	CUUAUUAGGAAUUUGAGGU		[2763-2781]
336	CAUUCUGUCAUUAGUUGGA	UCCAACUAAUGACAGAAUG	Chmp	[705-723]
337	AGAUGAGGAAGUCAAAGCA	UGCUUUGACUUCCUCAUCU	Chmp	[1059-1077]
338	CAUUUUAUAUCCACAUCUU	AAGAUGUGGAUAUAAAAUG	Chmp	[1959-1977]
339	GAUGAUGUCACCAAAGAUA	UAUCUUUGGUGACAUCAUC	Chmp	[1108-1126]
340	GUUUAUUUUGUUACACUAA	UUAGUGUAACAAAAUAAAC	Chmp	[2105-2123]
341	CUUUUUGACAUGAACAGAA	UUCUGUUCAUGUCAAAAAG	Chmp	[1898-1916]
342	AAUGAGAAAAGAAAGAGAA	UUCUCUUUCUUUUCUCAUU	Chmp	[1134-1152]
343	UUAGCUCUGUUCUUUAUAA	UUAUAAAGAACAGAGCUAA	Chmp	[2146-2164]
344	CUAUCUGCCUUUACCUACA	UGUAGGUAAAGGCAGAUAG		[3105-3123]
345	CUAAUAAGUUUGAUCAAAU	AUUUGAUCAAACUUAUUAG	Chmp	[2774-2792]
346	UUAUCAAAAUCCCUAUUUA	UAAAUAGGGAUUUUGAUAA	Chmp	[2942-2960]
347	CUCUCAUCAGAAAUGUCAU	AUGACAUUUCUGAUGAGAG	Chmp	[2002-2020]
348	AAUCUUUCAGCACUCAGAA	UUCUGAGUGCUGAAAGAUU	Chmp	[2504-2522]
349	GUAAGACUGUAAUUAAGUA	UACUUAAUUACAGUCUUAC	Chmp	[2072-2090]
350	AAGAGAUUUCAACAUAUCA	UGAUAUGUUGAAAUCUCUU	Chmp	[2184-2202]
351	UUUUUGACAUGAACAGAAA	UUUCUGUUCAUGUCAAAAA	Chmp	[1899-1917]
352	AAGCAUCGAGUGAGCAGAA	UUCUGCUCACUCGAUGCUU	Chmp	[1154-1172]
353	CAAACAAUCAUGAGUCAGA	UCUGACUCAUGAUUGUUUG	Chmp	[2731-2749]
354	CUCAAACAAUCAUGAGUCA	UGACUCAUGAUUGUUUGAG	Chmp	[2729-2747]
355	AAGCAAAACAAAGCUUGAA	UUCAAGCUUUGUUUUGCUU	Chmp	[1073-1091]
356	AAAUUGGGACCAUCUCAUA	UAUGAGAUGGUCCCAAUUU	Chmp	[745-763]
357	CAGAUGAACUGCCCACAAU	AUUGUGGGCAGUUCAUCUG	Chmp	[500-518]
358	CAAUGAACCCAAAACCAAC	GUUGGUUUUGGGUUCAUUG	Chmp	[527-545]
359	GCAGGGUGCUAACGUAUCU	AGAUACGUUAGCACCCUGC		[3221-3239]
360	ACAGAUGAACUGCCCACAA	UUGUGGGCAGUUCAUCUGU	Chmp	[499-517]
361	GAUUUAACACUAAAAAGGU	ACCUUUUUAGUGUUAAAUC	Chmp	[2572-2590]
362	AGAAAAGAAAACCAUUUUA	UAAAAUGGUUUUCUUUUCU	Chmp	[2519-2537]
363	CUCCUCCUGCAAUGCAUAA	UUAUGCAUUGCAGGAGGAG	Chmp	[190-208]
364	UAUGUGCUCUCAUCAGAAA	UUUCUGAUGAGAGCACAUA	Chmp	[1996-2014]
365	AGGCUAGUUUAUUUUGUUA	UAACAAAAUAAACUAGCCU	Chmp	[2099-2117]
366	UCUCAAAAUAAGUUGAAAA	UUUUCAACUUAUUUUGAGA	Chmp	[2859-2877]
367	GUAUAUCGGUGAAAUUGCU	AGCAAUUUCACCGAUAUAC	Chmp	[831-849]
368	UCUGAAUUAUUAUGUCUCA	UGAGACAUAAUAAUUCAGA	Chmp	[2845-2863]
369	CUAUGUAUAUCGGUGAAAU	AUUUCACCGAUAUACAUAG	Chmp	[827-845]
370	GACGUUCUCUCUUUCUAAU	AUUAGAAAGAGAGAACGUC	Chmp	[1403-1421]
371	AGUUCCAUGUUAAAAUAGA	UCUAUUUUAACAUGGAACU	Chmp	[2325-2343]
372	AGGGAACCGUCUGUUUUUA	UAAAAACAGACGGUUCCCU	Chmp	[1923-1941]
373	UGAUCAAUGCACCUCAACA	UGUUGAGGUGCAUUGAUCA	Chmp	[398-416]

374	UCCUAUGUAUAUCGGUGAA	UUCACCGAUAUACAUAGGA	Chmp	[825-843]
375	CAAUAGCUGCAUUCAGCAA	UUGCUGAAUGCAGCUAUUG	Chmp	[1619-1637]
376	UCAAUGAACCCAAAACCAA	UUGGUUUUGGGUUCAUUGA	Chmp	[526-544]
377	CAUACACUCAAACAAUCAU	AUGAUUGUUUGAGUGUAUG	Chmp	[2723-2741]
378	UGAGGAUGCAACAAAUAUU	AAUAUUUGUUGCAUCCUCA		[2228-2246]
379	CAAAGAUAUUAAUGAAAUG	CAUUUCAUUAAUAUCUUUG	Chmp	[1119-1137]
380	CUGUAAACAUGGUUUUCAC	GUGAAAACCAUGUUUACAG	Chmp	[1349-1367]
381	GAACAGAAACAAUAAGGGA	UCCCUUAUUGUUUCUGUUC	Chmp	[1909-1927]
382	UAAAAAAUGUCUAUAGAGA	UCUCUAUAGACAUUUUUUA	Chmp	[2456-2474]
383	CCUAGUGGAACAAAGGUAU	AUACCUUUGUUCCACUAGG		[46-64]
384	GAACCGUCUGUUUUUAAAU	AUUUAAAAACAGACGGUUC	Chmp	[1926-1944]
385	GAAAGUCUCUAUAAUUCAG	CUGAAUUAUAGAGACUUUC	Chmp	[1170-1188]
386	AGUUUAUUUUGUUACACUA	UAGUGUAACAAAAUAAACU	Chmp	[2104-2122]
387	UCACAUAUAUGUAAUUUAG	CUAAAUUACAUAUAUGUGA		[3390-3408]
388	CAUUUUCUUUCCUAGUGGA	UCCACUAGGAAAGAAAAUG	Chmp	[36-54]
389	GCAAAGCACUUAUUGAUUA	UAAUCAAUAAGUGCUUUGC	Chmp	[85-103]
390	GGCAGCUGCUCAACUAAUC	GAUUAGUUGAGCAGCUGCC	Chmp	[570-588]
391	GUUCCUAACAUAAAAUAAU	AUUAUUUUAUGUUAGGAAC	Chmp	[2994-3012]
392	GGCAGAGCUGCGAAUAAAC	GUUUAUUCGCAGCUCUGCC	Chmp	[218-236]
393	GGUACAAUCCUUUGAGUUA	UAACUCAAAGGAUUGUACC		[2663-2681]
394	CCUUUACCUACAUAGGCAA	UUGCCUAUGUAGGUAAAGG	Chmp	[3112-3130]
395	AAGUUUGAUCAAAUCUAAU	AUUAGAUUUGAUCAAACUU	Chmp	[2779-2797]
396	ACCAAAGAUAUUAAUGAAA	UUUCAUUAAUAUCUUUGGU	Chmp	[1117-1135]
397	GUUGUUCACAUAUAUGUAA	UUACAUAUAUGUGAACAAC	Chmp	[3385-3403]
398	UCACAUACACUCAAACAAU	AUUGUUUGAGUGUAUGUGA	Chmp	[2720-2738]
399	GGAAUUGACAGGACUCCCA	UGGGAGUCCUGUCAAUUCC	Chmp	[282-300]
400	GACUCAGAGGAUAUGAUGA	UCAUCAUAUCCUCUGAGUC	Chmp	[1094-1112]
401	CCUAUUUAAUUUUCCUGGA	UCCAGGAAAAUUAAAUAGG	Chmp	[2953-2971]
402	AGGUGGUUCUAAUAUUUUU	AAAAAUAUUAGAACCACCU	Chmp	[2129-2147]
403	GACAACUCUUCCAUUUAUU	AAUAAAUGGAAGAGUUGUC		[2342-2360]
404	GCUUACAGUCAAUUUUACA	UGUAAAAUUGACUGUAAGC	Chmp	[3164-3182]
405	UCAUAAAUGUUCAGCUUCA	UGAAGCUGAACAUUUAUGA	Chmp	[2918-2936]
406	AAUUAAAAACCACUGAACA	UGUUCAGUGGUUUUUAAUU	Chmp	[3348-3366]
407	UCUUUAAGAGUGAAAUAAU	AUUAUUUCACUCUUAAAGA	Chmp	[3332-3350]
408	GAAAAUUUGAAGUAAAGGA	UCCUUUACUUCAAAUUUUC	Chmp	[2802-2820]
409	UUUAUAUCCACAUCUUUAA	UUAAAGAUGUGGAUAUAAA	Chmp	[1962-1980]
410	GAAGCAUAUCAGGACUAUA	UAUAGUCCUGAUAUGCUUC	Chmp	[782-800]
411	GCAAUAGCUGCAUUCAGCA	UGCUGAAUGCAGCUAUUGC	Chmp	[1618-1636]
412	AACAGGUAAUAAUAUCUCA	UGAGAUAUUAUUACCUGUU		[413-431]
413	AAAUGAGAAAAGAAAGAGA	UCUCUUUCUUUUCUCAUUU	Chmp	[1133-1151]
414	UCAGACAUUUGGUAUAUUA	UAAUAUACCAAAUGUCUGA	Chmp	[2745-2763]
415	CAUUUUAGUUCCUUUAUUU	AAAUAAAGGAACUAAAAUG		[2531-2549]
416	GGGACUUGUGCUGCUGAAU	AUUCAGCAGCACAAGUCCC	Chmp	[1464-1482]
417	CACCAACUGGAGCACUGAU	AUCAGUGCUCCAGUUGGUG	Chmp	[3255-3273]
418	AGCAAACCUGUUUAUGCAA	UUGCAUAAACAGGUUUGCU	Chmp	[1315-1333]
419	CCCAACUAGUACAAUGACA	UGUCAUUGUACUAGUUGGG	Chmp	[297-315]
420	CUCAAUGAACCCAAAACCA	UGGUUUUGGGUUCAUUGAG	Chmp	[525-543]
421	CAGCUCUUCACCAAUUCCA	UGGAAUUGGUGAAGAGCUG	Chmp	[1186-1204]
422	ACUCUUUAAGAGUGAAAUA	UAUUUCACUCUUAAAGAGU	Chmp	[3330-3348]
423	CUGCUCAACUAAUCACCAU	AUGGUGAUUAGUUGAGCAG	Chmp	[575-593]
424	CAUUUGGUAUAUUACCUCA	UGAGGUAAUAUACCAAAUG	Chmp	[2750-2768]
425	GCUGAGGCAAAGCACUUAU	AUAAGUGCUUUGCCUCAGC	Chmp	[79-97]
426	GGAAUUUUCUUACCCAUAU	AUAUGGGUAAGAAAAUUCC	Chmp	[2271-2289]
427	CUGCUUUUUGACAUGAACA	UGUUCAUGUCAAAAAGCAG	Chmp	[1895-1913]
428	CAAUUAUGGAAAUAUAGUU	AACUAUAUUUCCAUAAUUG	Chmp	[3181-3199]
429	GAAGAUAAGGUCACUGGGA	UCCCAGUGACCUUAUCUUC	Chmp	[316-334]

430	CGAAAAGCUAUCAACAACU	AGUUGUUGAUAGCUUUUCG	Chmp	[466-484]
431	UGUAAUUUAGCAGUCCAAA	UUUGGACUGCUAAAUUACA		[3399-3417]
432	UGAGCAUUUUAUAUCCACA	UGUGGAUAUAAAAUGCUCA	Chmp	[1955-1973]
433	UCAACAACUAUGUUAUCAA	UUGAUAACAUAGUUGUUGA	Chmp	[476-494]
434	GUGUGAUCAAUGCACCUCA	UGAGGUGCAUUGAUCACAC	Rat,Ms,Chmp	[395-413]
435	AGCACUUAUUGAUUAGAUU	AAUCUAAUCAAUAAGUGCU	Chmp	[89-107]
436	CCAAAGGAAAGUCUUUUGA	UCAAAAGACUUUCCUUUGG	Rat,Ms,Chmp	[1769-1787]
437	GAUGGGUCCCAAAAGCUUA	UAAGCUUUUGGGACCCAUC	Chmp	[3202-3220]
438	AAAAGAAAACCAUUUUAGU	ACUAAAAUGGUUUUCUUUU	Chmp	[2521-2539]
439	CUAUCAACAACUAUGUUAU	AUAACAUAGUUGUUGAUAG	Chmp	[473-491]
440	AGGAAGUCAAAGCAAAACA	UGUUUUGCUUUGACUUCCU	Chmp	[1064-1082]
441	CACAAGACCUGGAAUUGAC	GUCAAUUCCAGGUCUUGUG	Chmp	[272-290]
442	ACUGGAUGACCGAAAAGCU	AGCUUUUCGGUCAUCCAGU	Chmp	[456-474]
443	CCUAGGAGCUACAGAGACU	AGUCUCUGUAGCUCCUAGG	Chmp	[1860-1878]
444	GAAUGGAUUAUAGAGUAUA	UAUACUCUAUAAUCCAUUC	Chmp	[2436-2454]
445	UGCUUUGCUUUUUAAUUGA	UCAAUUAAAAAGCAAAGCA	Chmp	[2687-2705]
446	AGCUUCAGACUUUUAUCAA	UUGAUAAAAGUCUGAAGCU		[2930-2948]
447	CUUCUUAUGUUUGCUUUAA	UUAAAGCAAACAUAAGAAG	Chmp	[3279-3297]
448	UUGGUAGGCUUAUCAAAAU	AUUUUGAUAAGCCUACCAA	Chmp	[2488-2506]
449	ACAUCAAGUUAGAUGAGGA	UCCUCAUCUAACUUGAUGU	Chmp	[1049-1067]
450	CACUCAGAAAAGAAAACCA	UGGUUUUCUUUUCUGAGUG	Chmp	[2514-2532]
451	CUUUUGUUCUGUAUUUUCA	UGAAAAUACAGAACAAAAG	Chmp	[2413-2431]
452	UAGUUUGCUUUGCUUUUUA	UAAAAAGCAAAGCAAACUA	Chmp	[2682-2700]
453	AGCUGUAUACAGAUUCUAG	CUAGAAUCUGUAUACAGCU	Chmp	[3043-3061]
454	CUCUGUUCUUUAUAACAAG	CUUGUUAUAAAGAACAGAG	Chmp	[2150-2168]
455	UCAGCAAUUGGACCUGCAA	UUGCAGGUCCAAUUGCUGA	Chmp	[1631-1649]
456	UGGAUUAUAGAGUAUACUA	UAGUAUACUCUAUAAUCCA		[2439-2457]
457	AAUGGUUUUUGCAAGAUUU	AAAUCUUGCAAAAACCAUU	Chmp	[2558-2576]
458	UGUUGAUUCCCUUCUGGUA	UACCAGAAGGGAAUCAACA		[2648-2666]
459	AGAUUCCCAUCAAUAUUCA	UGAAUAUUGAUGGGAAUCU	Chmp	[103-121]
460	AGCUCUGUUCUUUAUAACA	UGUUAUAAAGAACAGAGCU	Chmp	[2148-2166]
461	CUUACAGUCAAUUUUACAA	UUGUAAAAUUGACUGUAAG	Chmp	[3165-3183]
462	UGAAAUGAGAAAAGAAAGA	UCUUUCUUUUCUCAUUUCA	Chmp	[1131-1149]
463	GCAUAACUAGGCCUAGGCA	UGCCUAGGCCUAGUUAUGC	Chmp	[203-221]
464	CCUGCUUUUUGACAUGAAC	GUUCAUGUCAAAAAGCAGG	Chmp	[1894-1912]
465	CACCUCAACAGGUAAUAAU	AUUAUUACCUGUUGAGGUG	Chmp	[407-425]
466	GGUUUUUGCAAGAUUUAAC	GUUAAAUCUUGCAAAAACC	Chmp	[2561-2579]
467	ACAUUUGCUUUGUUUUCUA	UAGAAAACAAAGCAAAUGU	Chmp	[3364-3382]
468	AGCCUGGUUUUCACAUACA	UGUAUGUGAAAACCAGGCU	Chmp	[2710-2728]
469	CAUUUUUUAAAGUUCCAGA	UCUGGAACUUUAAAAAAUG	Rat,Chmp	[1748-1766]
470	UGAAUUAUUAUGUCUCAAA	UUUGAGACAUAAUAAUUCA	Chmp	[2847-2865]
471	UACCUCAAAUUCCUAAUAA	UUAUUAGGAAUUUGAGGUA		[2762-2780]
472	GAUUAUUGGUCUUGAAUUU	AAAUUCAAGACCAAUAAUC	Chmp	[921-939]
473	AGCAGUCCAAAGAACAAGA	UCUUGUUCUUUGGACUGCU		[3407-3425]
474	CUUCUUUGUCUUAGCUGUA	UACAGCUAAGACAAAGAAG	Chmp	[3031-3049]
475	AGGAUGCAACAAAUAUUUA	UAAAUAUUUGUUGCAUCCU		[2230-2248]
476	AAUUGAAGAGAUUUCAACA	UGUUGAAAUCUCUUCAAUU	Chmp	[2179-2197]
477	GAUUCCUUGAGCAUUUUAU	AUAAAAUGCUCAAGGAAUC	Chmp	[1948-1966]
478	AUAAUUAAAAACCACUGAA	UUCAGUGGUUUUUAAUUAU	Chmp	[3346-3364]
479	GCUGCCGCUGAGAAGAUUA	UAAUCUUCUCAGCGGCAGC	Chmp	[122-140]
480	CAGCUUUGCAGUUGGUGGA	UCCACCAACUGCAAAGCUG	Chmp	[615-633]
481	GAUUAGACUUGGACUCUCA	UGAGAGUCCAAGUCUAAUC	Chmp	[136-154]
482	UGGUAAGACUGUAAUUAAG	CUUAAUUACAGUCUUACCA	Chmp	[2070-2088]
483	UGAGUUAUGUGAGCAUGAU	AUCAUGCUCACAUAACUCA	Chmp	[1496-1514]
484	CUGAGGAUGCAACAAAUAU	AUAUUUGUUGCAUCCUCAG		[2227-2245]
485	CCUGGUUUUCACAUACACU	AGUGUAUGUGAAAACCAGG	Chmp	[2712-2730]

486	GGGCAGGUGGUUCUAAUAU	AUAUUAGAACCACCUGCCC	Chmp	[2125-2143]
487	UGAUGUCACCAAAGAUAUU	AAUAUCUUUGGUGACAUCA	Chmp	[1110-1128]
488	CAAAAGCUGCUGUAGAAAU	AUUUCUACAGCAGCUUUUG	Chmp	[1835-1853]
489	GGUUUUCACUGUCAUCACU	AGUGAUGACAGUGAAAACC		[339-357]
490	CACAGAUGAUUAAACAGAC	GUCUGUUUAAUCAUCUGUG	Chmp	[3141-3159]
491	GUUUGCUUUGCUUUUUAAU	AUUAAAAAGCAAAGCAAAC	Chmp	[2684-2702]
492	UGCAGAAUUCCAAAAGAAG	CUUCUUUUGGAAUUCUGCA	Chmp	[1797-1815]
493	UGGGUGUUCCACUGGAUGA	UCAUCCAGUGGAACACCCA	Ms,Chmp	[446-464]
494	UGAAGUAAAGGAUUGAUCA	UGAUCAAUCCUUUACUUCA	Chmp	[2809-2827]
495	CAUAUAGCGUGGGUUAUCA	UGAUAACCCACGCUAUAUG		[2601-2619]
496	AAGGAUUGAUCACUUUGUU	AACAAAGUGAUCAAUCCUU		[2816-2834]
497	AAUUUAUCUUGGGCAAUUA	UAAUUGCCCAAGAUAAAUU	Chmp	[935-953]
498	GAAAAGACUCAGAGGAUAU	AUAUCCUCUGAGUCUUUUC	Chmp	[1089-1107]
499	GCUGUUUUCUCCACCAACU	AGUUGGUGGAGAAAACAGC		[3244-3262]
500	CAAAAUAAGUUGAAAAGGU	ACCUUUUCAACUUAUUUUG	Chmp	[2862-2880]

Table B 30 SLC2A3 - solute carrier family 2

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-221136810 :263-1753
1	CCAGAUUUUUGCUCAUUAA	UUAAUGAGCAAAAAUCUGG		[888-906]
2	CAAGGAUGCAGGUGUUCAA	UUGAACACCUGCAUCCUUG		[1150-1168]
3	CGGUUUGUUGGAUCUUCAA	UUGAAGAUCCAACAAACCG		[1905-1923]
4	CAAGGAUGUCACAAGAAAA	UUUUCUUGUGACAUCCUUG		[1002-1020]
5	GCUCAUUAACAGAAAAGAA	UUCUUUUCUGUUAAUGAGC		[898-916]
6	CUUGAAUCUUUCCAAUAAA	UUUAUUGGAAAGAUUCAAG		[3148-3166]
7	GCAAGGAUGUCACAAGAAA	UUUCUUGUGACAUCCUUGC		[1001-1019]
8	ACGGCGUCAUGGAGAUGAA	UUCAUCUCCAUGACGCCGU		[1695-1713]
9	CGGAGAUUAUAAAUAGUCA	UGACUAUUUAUAAUCUCCG		[74-92]
10	GGUUAAGGUGCAAUAAGAA	UUCUUAUUGCACCUUAACC		[2449-2467]
11	CCAGGAAGCAGAUACAUAU	AUAUGUAUCUGCUUCCUGG		[2121-2139]
12	CCUGGAGCCUUUGAAUAAA	UUUAUUCAAAGGCUCCAGG		[3422-3440]
13	CUGAGAAGGACAUUUUGAA	UUCAAAAUGUCCUUCUCAG		[169-187]
14	CACCCAGGAUGUAUCCCAA	UUGGGAUACAUCCUGGGUG		[955-973]
15	AACCCAGGACGCUUCUGAA	UUCAGAAGCGUCCUGGGUU		[1831-1849]
16	GAAGGAAAUUGAGAUUAGA	UCUAAUCUCAAUUUCCUUC		[2381-2399]
17	GAGAGGUUAUAGAGUAGAA	UUCUACUCUAUAACCUCUC		[2414-2432]
18	CUGGAGCCUUUGAAUAAAA	UUUUAUUCAAAGGCUCCAG		[3423-3441]
19	CUAGGAUUAUUAACUAAUA	UAUUAGUUAAUAAUCCUAG		[2670-2688]
20	GCCGGAGGGUGUUUAUGUA	UACAUAAACACCCUCCGGC		[2150-2168]
21	GGUUCUUUGUUUUAAAAUA	UAUUUUAAAACAAAGAACC		[3898-3916]
22	GGGAUAUAGGAGAGGAAAA	UUUUCCUCUCCUAUAUCCC		[2071-2089]
23	CUGUUUCUUUGUUAUUAAA	UUUAAUAACAAAGAAACAG		[1311-1329]
24	GCGGUUUGUUGGAUCUUCA	UGAAGAUCCAACAAACCGC		[1904-1922]
25	UCUGGUUCUUUGUUUUAAA	UUUAAAACAAAGAACCAGA		[3895-3913]
26	CUGGUUCUUUGUUUUAAAA	UUUUAAAACAAAGAACCAG		[3896-3914]
27	GUACGUUAUUGUUGACUUA	UAAGUCAACAAUAACGUAC		[3256-3274]
28	GAAGGACUCUGCAUAUGAU	AUCAUAUGCAGAGUCCUUC		[1254-1272]
29	GGGACUUGAAUCUUUCCAA	UUGGAAAGAUUCAAGUCCC		[3144-3162]
30	GGAAGUACGUUAUUGUUGA	UCAACAAUAACGUACUUCC		[3252-3270]
31	GGAGUCCAGGGAAGAGAAA	UUUCUCUUCCCUGGACUCC		[2733-2751]
32	CAGAGAUGCUGUAAUGGUA	UACCAUUACAGCAUCUCUG		[109-127]
33	GGAGGGUGUUUAUGUAAGA	UCUUACAUAAACACCCUCC		[2153-2171]
34	CUGAGAAGAUCAUAAAGGA	UCCUUUAUGAUCUUCUCAG		[363-381]
35	GGAGAAAUGUUGUUCAUUA	UAAUGAACAACAUUUCUCC		[2473-2491]
36	GUACGUUACCUCUUAACAA	UUGUUAAGAGGUAACGUAC		[2524-2542]

37	UGGAGCCUUUGAAUAAAAA	UUUUUAUUCAAAGGCUCCA		[3424-3442]
38	GCUCCUGAGAAGAUCAUAA	UUAUGAUCUUCUCAGGAGC		[359-377]
39	CGUGCUAGAGCUCUUUAGA	UCUAAAGAGCUCUAGCACG		[1030-1048]
40	CUUUGUUAUUAAAGGAUAA	UUAUCCUUUAAUAACAAAG		[1317-1335]
41	GAUGGUUGAUGGGUUCUAA	UUAGAACCCAUCAACCAUC		[2706-2724]
42	CGUUAUUGUUGACUUAUUU	AAAUAAGUCAACAAUAACG		[3259-3277]
43	GGAGAUUUUAGGUGUUGAU	AUCAACACCUAAAAUCUCC		[2924-2942]
44	CUCUUUAACUUCUCGUAAA	UUUACGAGAAGUUAAAGAG		[2564-2582]
45	GGAUGAGCUUUGUCUGUAU	AUACAGACAAAGCUCAUCC		[1344-1362]
46	CGGGUGUGGUUAAUACUAU	AUAGUAUUAACCACACCCG		[1194-1212]
47	GGUAGAGAUUCAUUAUUUU	AAAAUAAUGAAUCUCUACC		[2889-2907]
48	CCAAAUAAUAAAAACAGAA	UUCUGUUUUUAUUAUUUGG		[2365-2383]
49	CCAGGUUUAGACAGUAUGA	UCAUACUGUCUAAACCUGG		[3167-3185]
50	GGAGCCUUUGAAUAAAAAU	AUUUUUAUUCAAAGGCUCC		[3425-3443]
51	CCAAAUAAGAAACCUAAAA	UUUUAGGUUUCUUAUUUGG		[2858-2876]
52	CUUCCAUUUUGCCCUGAAA	UUUCAGGGCAAAAUGGAAG		[866-884]
53	AGGUUAAGGUGCAAUAAGA	UCUUAUUGCACCUUAACCU		[2448-2466]
54	GAAUGUAUGUGCACUGUCA	UGACAGUGCACAUACAUUC		[3220-3238]
55	GAGAAAUGUUGUUCAUUAU	AUAAUGAACAACAUUUCUC		[2474-2492]
56	GGCGCAAUUCAAUGCUGAU	AUCAGCAUUGAAUUGCGCC		[531-549]
57	GGUGCAGAUAGAUCUGGAA	UUCCAGAUCUAUCUGCACC		[1673-1691]
58	GGAGCUUUUUUCUUUAAGA	UCUUAAAGAAAAAAGCUCC		[2621-2639]
59	GGUUCUUGGUAGAGAUUCA	UGAAUCUCUACCAAGAACC		[2882-2900]
60	CGGUGCAGAUAGAUCUGGA	UCCAGAUCUAUCUGCACCG		[1672-1690]
61	CUCCUGAGAAGAUCAUAAA	UUUAUGAUCUUCUCAGGAG		[360-378]
62	CUUGAAGACUUGAAUUAGA	UCUAAUUCAAGUCUUCAAG		[236-254]
63	CUUUGUAGCCUUCUUUGAA	UUCAAAGAAGGCUACAAAG		[1378-1396]
64	UGGAGUCCAGGGAAGAGAA	UUCUCUUCCCUGGACUCCA		[2732-2750]
65	GAUGGGUUCUAAUUUUGGA	UCCAAAAUUAGAACCCAUC		[2713-2731]
66	GCCUGAGGUCUGUACGUUA	UAACGUACAGACCUCAGGC		[2513-2531]
67	CAUGUAGUAGUACUUGAAA	UUUCAAGUACUACUACAUG		[2650-2668]
68	GUGCAAGGAUGUCACAAGA	UCUUGUGACAUCCUUGCAC		[999-1017]
69	CUAAGGAGACCACCACCAA	UUGGUGGUGGUCUCCUUAG		[1728-1746]
70	GGGUGUUUAUGUAAGAGCA	UGCUCUUACAUAAACACCC		[2156-2174]
71	UCUGAAUGCUGCUACUUAA	UUAAGUAGCAGCAUUCAGA		[1844-1862]
72	GAGGAUGAAUGUAUGUGCA	UGCACAUACAUUCAUCCUC		[3214-3232]
73	GAAUCUUUCCAAUAAACCA	UGGUUUAUUGGAAAGAUUC		[3151-3169]
74	GGACUUGAAUCUUUCCAAU	AUUGGAAAGAUUCAAGUCC		[3145-3163]
75	GUUCAUUAUUGGAGGGUAA	UUACCCUCCAAUAAUGAAC		[2484-2502]
76	CAGGGAAGAGAAAGUGAUU	AAUCACUUUCUCUUCCCUG		[2739-2757]
77	UGAAAUCUAGGAUUAUUAA	UUAAUAAUCCUAGAUUUCA		[2664-2682]
78	AGAGGUUAAGGUGCAAUAA	UUAUUGCACCUUAACCUCU		[2446-2464]
79	GCGGGUGUGGUUAAUACUA	UAGUAUUAACCACACCCGC		[1193-1211]
80	CAGUAUGAGUCAAUGUGCA	UGCACAUUGACUCAUACUG		[3178-3196]
81	GGAUGUCACAAGAAAAGCA	UGCUUUUCUUGUGACAUCC		[1005-1023]
82	ACUUGAAUCUUUCCAAUAA	UUAUUGGAAAGAUUCAAGU		[3147-3165]
83	GGGCAUCGUUGUUGGAAUU	AAUUCCAACAACGAUGCCC		[742-760]
84	AGAUAAUAGUUUACAUGUA	UACAUGUAAACUAUUAUCU		[2637-2655]
85	GUCUGUACGUUACCUCUUA	UAAGAGGUAACGUACAGAC		[2520-2538]
86	CAUCCUUCCUGCUAUCCUA	UAGGAUAGCAGGAAGGAUG		[835-853]
87	CAAAGAAUGUUUAUAGCAA	UUGCUAUAAACAUUCUUUG		[2983-3001]
88	GACUUUGGAUCCUUCCUGA	UCAGGAAGGAUCCAAAGUC		[129-147]
89	CCAGAUCUUUGGUCUGGAA	UUCCAGACCAAAGAUCUGG		[769-787]
90	GAUUGUGAAUAUUUCCAUA	UAUGGAAAUAUUCACAAUC		[3858-3876]
91	CCCAGAUUUUUGCUCAUUA	UAAUGAGCAAAAAUCUGGG		[887-905]
92	GAGAGGUUAAGGUGCAAUA	UAUUGCACCUUAACCUCUC		[2445-2463]

93	UCUUUAACUUCUCGUAAAA	UUUUACGAGAAGUUAAAGA		[2565-2583]
94	AGACCACCACCAAUGUCUA	UAGACAUUGGUGGUGGUCU		[1734-1752]
95	CAAAUUAACUUGAGUUUUA	UAAAACUCAAGUUAAUUUG		[2205-2223]
96	AAAGAAUGUUUAUAGCAAA	UUUGCUAUAAACAUUCUUU		[2984-3002]
97	UCAGAUGGAAACUCUUUAA	UUAAAGAGUUUCCAUCUGA		[2553-2571]
98	GCCUUUGAAUAAAAAUGCA	UGCAUUUUUAUUCAAAGGC		[3428-3446]
99	CUGAGAAGAUUGUGAAUAU	AUAUUCACAAUCUUCUCAG		[3851-3869]
100	AAGUCAUAUACCUAUAUAA	UUAUAUAGGUAUAUGACUU		[2582-2600]
101	GCUUUUUUCUUUAAGAUAA	UUAUCUUAAAGAAAAAAGC		[2624-2642]
102	AGGUGACCUUGCAACUUCA	UGAAGUUGCAAGGUCACCU		[3774-3792]
103	AUUCAAUGCUGAUUGUCAA	UUGACAAUCAGCAUUGAAU		[537-555]
104	CAUCGUUGUUGGAAUUCUG	CAGAAUUCCAACAACGAUG		[745-763]
105	ACAUGUAGUAGUACUUGAA	UUCAAGUACUACUACAUGU		[2649-2667]
106	GACCACCACCAAUGUCUAA	UUAGACAUUGGUGGUGGUC		[1735-1753]
107	AGAGGGAGGUGUUUAAAGA	UCUUUAAACACCUCCCUCU		[2397-2415]
108	CAGGUUUUGUGCCCAUGUA	UACAUGGGCACAAAACCUG		[666-684]
109	ACUGUUUCUUUGUUAUUAA	UUAAUAACAAAGAAACAGU		[1310-1328]
110	GAUUUUCUGUUGUAUUUUA	UAAAAUACAACAGAAAAUC		[2940-2958]
111	AGCCCAUCAUCAUUUCCAU	AUGGAAAUGAUGAUGGGCU		[1065-1083]
112	CCCUUUGCGGAGAUUAUAA	UUAUAAUCUCCGCAAAGGG		[67-85]
113	UCUGUACGUUACCUCUUAA	UUAAGAGGUAACGUACAGA		[2521-2539]
114	CGCUGCUCACUAUUUAGGA	UCCUAAAUAGUGAGCAGCG		[1528-1546]
115	CAGGAUGUAUCCCAAGACA	UGUCUUGGGAUACAUCCUG		[959-977]
116	GGAGAAAACUUGCUGCUGA	UCAGCAGCAAGUUUUCUCC		[154-172]
117	AGCCUUCUUUGAAAUUGGA	UCCAAUUUCAAAGAAGGCU		[1384-1402]
118	CUCCGCUGCUCACUAUUUA	UAAAUAGUGAGCAGCGGAG		[1525-1543]
119	UCCAAAUAAGAAACCUAAA	UUUAGGUUUCUUAUUUGGA		[2857-2875]
120	CCCUCACUGGAUGAAAUAA	UUAUUUCAUCCAGUGAGGG		[2774-2792]
121	CUCACUGGAUGAAAUAACU	AGUUAUUUCAUCCAGUGAG		[2776-2794]
122	CCAUGUCACUGUGGUCCUA	UAGGACCACAGUGACAUGG		[3109-3127]
123	GACUUUUGAGGAUAUCACA	UGUGAUAUCCUCAAAAGUC		[1630-1648]
124	GGCUUUUACCUUCUUCAAA	UUUGAAGAAGGUAAAAGCC		[1591-1609]
125	CCGAGUGAACCUACCUUCA	UGAAGGUAGGUUCACUCGG		[1973-1991]
126	UGUUGUAUUUUAACUCAUA	UAUGAGUUAAAAUACAACA		[2947-2965]
127	CGAUUAUUAUCUAAAGUGU	ACACUUUAGAUAAUAAUCG		[3048-3066]
128	GAUACAUAUGAGUGUGGAA	UUCCACACUCAUAUGUAUC		[2131-2149]
129	CAGUGUAGCCCACACUUGA	UCAAGUGUGGGCUACACUG		[3195-3213]
130	ACUCAACAGGAAUCUUCAA	UUGAAGAUUCCUGUUGAGU	Ms	[1134-1152]
131	GGAGAUUAUAAAUAGUCAU	AUGACUAUUUAUAAUCUCC		[75-93]
132	CCUUGGGUCUGAAGAGCUA	UAGCUCUUCAGACCCAAGG		[793-811]
133	CCUAGAUCUUUCUUGAAGA	UCUUCAAGAAAGAUCUAGG		[225-243]
134	GAUGUCACAAGAAAAGCAA	UUGCUUUUCUUGUGACAUC		[1006-1024]
135	CCUUUGCGGAGAUUAUAAA	UUUAUAAUCUCCGCAAAGG		[68-86]
136	GGGUCAUCAAUGCUCCUGA	UCAGGAGCAUUGAUGACCC		[348-366]
137	GAGCCUACGUUUUUAUUAU	AUAAUAAAAACGUAGGCUC		[1545-1563]
138	AGAUCAUAAAGGAAUUUAU	AUAAAUUCCUUUAUGAUCU		[369-387]
139	GGGCAUUGUAGUUAAUGAU	AUCAUUAACUACAAUGCCC		[2690-2708]
140	CCGGAGGGUGUUUAUGUAA	UUACAUAAACACCCUCCGG		[2151-2169]
141	CAUCAAUGCUCCUGAGAAG	CUUCUCAGGAGCAUUGAUG		[352-370]
142	GAGUGAACCUACCUUCAUU	AAUGAAGGUAGGUUCACUC		[1975-1993]
143	CCUUCCUGCUAUCCUACAA	UUGUAGGAUAGCAGGAAGG		[838-856]
144	GGGCUAUCUUGGUCUUUGU	ACAAAGACCAAGAUAGCCC		[1365-1383]
145	CAACAGGAAUCUUCAAGGA	UCCUUGAAGAUUCCUGUUG	Ms	[1137-1155]
146	CCAUCACAGUUGCUACAAU	AUUGUAGCAACUGUGAUGG		[300-318]
147	GAUGAAAGAUGAGAGUGCA	UGCACUCUCAUCUUUCAUC		[985-1003]
148	CCAGGGAAGAGAAAGUGAU	AUCACUUUCUCUUCCCUGG		[2738-2756]

149	GAUUAUAAAUAGUCAUGAU	AUCAUGACUAUUUAUAAUC		[78-96]
150	GUGGAAAGGGCAGGAAGAA	UUCUUCCUGCCCUUUCCAC		[1238-1256]
151	ACUCAUACCUUUAAAGGAA	UUCCUUUAAAGGUAUGAGU		[2959-2977]
152	CCGGCUUCCUCAUUACCUU	AAGGUAAUGAGGAAGCCGG		[1569-1587]
153	UGAGAAGAUCAUAAAGGAA	UUCCUUUAUGAUCUUCUCA		[364-382]
154	CGAGUGAACCUACCUUCAU	AUGAAGGUAGGUUCACUCG		[1974-1992]
155	CCUUGUCAGUGACAGUAUU	AAUACUGUCACUGACAAGG		[3372-3390]
156	GAGGUUAUAGAGUAGAAGA	UCUUCUACUCUAUAACCUC		[2416-2434]
157	GCUCCUGGAGCCUUUGAAU	AUUCAAAGGCUCCAGGAGC		[3419-3437]
158	UGGGCAUCGUUGUUGGAAU	AUUCCAACAACGAUGCCCA		[741-759]
159	GCUGAGAAGGACAUUUUGA	UCAAAAUGUCCUUCUCAGC		[168-186]
160	CAGGAAGAAGGACUCUGCA	UGCAGAGUCCUUCUUCCUG		[1248-1266]
161	UAGUCUCAUUACUUUUGAA	UUCAAAAGUAAUGAGACUA		[2806-2824]
162	GAGCGAUUAUUAUCUAAAG	CUUUAGAUAAUAAUCGCUC		[3045-3063]
163	GAGACCUCAUCAGGAUGAA	UUCAUCCUGAUGAGGUCUC	Ms	[1814-1832]
164	GGUUCUAAUUUUGGAUGGA	UCCAUCCAAAAUUAGAACC		[2717-2735]
165	UGGAGAGGUUAAGGUGCAA	UUGCACCUUAACCUCUCCA		[2443-2461]
166	CACUGAGAAGAUUGUGAAU	AUUCACAAUCUUCUCAGUG		[3849-3867]
167	CGCGGGUGUGGUUAAUACU	AGUAUUAACCACACCCGCG		[1192-1210]
168	UUUGUAGCCUUCUUUGAAA	UUUCAAAGAAGGCUACAAA		[1379-1397]
169	GCAGCUCUCUGGGAUCAAU	AUUGAUCCCAGAGAGCUGC	Ms	[1102-1120]
170	GAAAGGGCAGGAAGAAGGA	UCCUUCUUCCUGCCCUUUC		[1241-1259]
171	AGGGAGAAAUGUUGUUCAU	AUGAACAACAUUUCUCCCU		[2471-2489]
172	GAUGGAAACUCUUUAACUU	AAGUUAAAGAGUUUCCAUC		[2556-2574]
173	AAGACAUCCAGGAGAUGAA	UUCAUCUCCUGGAUGUCUU		[972-990]
174	GUAGCUAAGUCGGUUGAAA	UUUCAACCGACUUAGCUAC		[599-617]
175	UAAUAAAAACAGAAGGAAA	UUUCCUUCUGUUUUUAUUA		[2370-2388]
176	GAAGAAGGACUCUGCAUAU	AUAUGCAGAGUCCUUCUUC		[1251-1269]
177	GGUCAUCAAUGCUCCUGAG	CUCAGGAGCAUUGAUGACC		[349-367]
178	UGUAGUUAAUGAUGGUUGA	UCAACCAUCAUUAACUACA		[2696-2714]
179	ACAGCAUCGAGCCUGCUAA	UUAGCAGGCUCGAUGCUGU		[1713-1731]
180	CAUCCAAAUAAGAAACCUA	UAGGUUUCUUAUUUGGAUG		[2855-2873]
181	CUUGGUAGAGAUUCAUUAU	AUAAUGAAUCUCUACCAAG		[2886-2904]
182	GGAGAGACCUCAUCAGGAU	AUCCUGAUGAGGUCUCUCC		[1811-1829]
183	GCAGGACUUUUGAGGAUAU	AUAUCCUCAAAAGUCCUGC		[1626-1644]
184	AGCAAGUCACCGUGCUAGA	UCUAGCACGGUGACUUGCU		[1020-1038]
185	UAGUUUACAUGUAGUAGUA	UACUACUACAUGUAAACUA		[2643-2661]
186	CUGAGCGAUUAUUAUCUAA	UUAGAUAAUAAUCGCUCAG		[3043-3061]
187	GUGUUGAUUUUCUGUUGUA	UACAACAGAAAAUCAACAC		[2935-2953]
188	CGUAAAAGUCAUAUACCUA	UAGGUAUAUGACUUUUACG		[2577-2595]
189	GGAAGCAGAUACAUAUGAG	CUCAUAUGUAUCUGCUUCC		[2124-2142]
190	CCUUGCAACUUCAUGUCAA	UUGACAUGAAGUUGCAAGG		[3780-3798]
191	CGCUCAUGACUGUUUCUUU	AAAGAAACAGUCAUGAGCG		[1302-1320]
192	GGAAGAAGGACUCUGCAUA	UAUGCAGAGUCCUUCUUCC		[1250-1268]
193	GCAAACUUGGAAUUUGUAA	UUACAAAUUCCAAGUUUGC		[2998-3016]
194	CUUUGACGGACAAGGGAAA	UUUCCCUUGUCCGUCAAAG		[396-414]
195	AGGACAUUUUGAAGGUUUU	AAAACCUUCAAAAUGUCCU		[175-193]
196	GAAGAGAAAGUGAUUUCUA	UAGAAAUCACUUUCUCUUC		[2743-2761]
197	UCAUCAAUGCUCCUGAGAA	UUCUCAGGAGCAUUGAUGA		[351-369]
198	CCUUCAGAUGGAAACUCUU	AAGAGUUUCCAUCUGAAGG		[2550-2568]
199	CCCAGGAUGUAUCCCAAGA	UCUUGGGAUACAUCCUGGG		[957-975]
200	GAAAUAACUCCUUCUUGUA	UACAAGAAGGAGUUAUUUC		[2786-2804]
201	GAUUUUAGGUGUUGAUUUU	AAAAUCAACACCUAAAAUC		[2927-2945]
202	CAGUAUUUUGGUUCUUAGU	ACUAAGAACCAAAAUACUG		[3384-3402]
203	CUUGGAAUUUGUAACCUCA	UGAGGUUACAAAUUCCAAG		[3003-3021]
204	AUUAGAGGGAGGUGUUUAA	UUAAACACCUCCCUCUAAU		[2394-2412]

205	AAGUGUGCUUUAGCUUGAA	UUCAAGCUAAAGCACACUU		[3754-3772]
206	UUUGCUCAUUAACAGAAAA	UUUUCUGUUAAUGAGCAAA		[895-913]
207	UGGGCAUUGUAGUUAAUGA	UCAUUAACUACAAUGCCCA		[2689-2707]
208	GUGUGCUUUAGCUUGAAAA	UUUUCAAGCUAAAGCACAC		[3756-3774]
209	AGAGAUGCUGUAAUGGUAA	UUACCAUUACAGCAUCUCU		[110-128]
210	GACUUACCAGGAAGCAGAU	AUCUGCUUCCUGGUAAGUC		[2115-2133]
211	AGAAGAUCAUAAAGGAAUU	AAUUCCUUUAUGAUCUUCU		[366-384]
212	CCUGAAAGUCCCAGAUUUU	AAAAUCUGGGACUUUCAGG		[878-896]
213	CAGUGACAGUAUUUUGGUU	AACCAAAAUACUGUCACUG		[3378-3396]
214	CCUGAGGACGUGGAGAAAA	UUUUCUCCACGUCCUCAGG		[143-161]
215	GAAGCAGAUACAUAUGAGU	ACUCAUAUGUAUCUGCUUC		[2125-2143]
216	GGUGGAAGUACGUUAUUGU	ACAAUAACGUACUUCCACC		[3249-3267]
217	CCUCCCUUGGGUUCUGAUA	UAUCAGAACCCAAGGGAGG		[2040-2058]
218	GGAGCCUACGUUUUUAUUA	UAAUAAAAACGUAGGCUCC		[1544-1562]
219	CACCCUUUGCGGAGAUUAU	AUAAUCUCCGCAAAGGGUG		[65-83]
220	ACCAGGAAGCAGAUACAUA	UAUGUAUCUGCUUCCUGGU		[2120-2138]
221	CUUCCUGCUAUCCUACAAA	UUUGUAGGAUAGCAGGAAG		[839-857]
222	AGGCGCAAUUCAAUGCUGA	UCAGCAUUGAAUUGCGCCU		[530-548]
223	CCCUGAAAGUCCCAGAUUU	AAAUCUGGGACUUUCAGGG		[877-895]
224	CGGUUGAAAUGCUGAUCCU	AGGAUCAGCAUUUCAACCG	Rat	[609-627]
225	CCAGGAGAUGAAAGAUGAG	CUCAUCUUUCAUCUCCUGG		[979-997]
226	GGGUGUGGUUAAUACUAUC	GAUAGUAUUAACCACACCC		[1195-1213]
227	GAGCUUUUUUCUUUAAGAU	AUCUUAAAGAAAAAAGCUC		[2622-2640]
228	GAGAAAGUGAUUUCUAGAA	UUCUAGAAAUCACUUUCUC		[2746-2764]
229	GGAGAUGAAAGAUGAGAGU	ACUCUCAUCUUUCAUCUCC		[982-1000]
230	GGGUUCUGAUAUUGCCGCA	UGCGGCAAUAUCAGAACCC		[2048-2066]
231	ACAGAAAAGAAGAGGAGAA	UUCUCCUCUUCUUUUCUGU		[906-924]
232	GUCAUAUACCUAUAUAAUA	UAUUAUAUAGGUAUAUGAC		[2584-2602]
233	CCGACAGCCCAUCAUCAUU	AAUGAUGAUGGGCUGUCGG		[1060-1078]
234	AAUCUAGGAUUAUUAACUA	UAGUUAAUAAUCCUAGAUU		[2667-2685]
235	GGCUAUCUUGGUCUUUGUA	UACAAAGACCAAGAUAGCC		[1366-1384]
236	CUCUGGUUCUUUGUUUUAA	UUAAAACAAAGAACCAGAG		[3894-3912]
237	ACCUCAGACUUACCAGGAA	UUCCUGGUAAGUCUGAGGU		[2109-2127]
238	CUGGGUGGAAGUACGUUAU	AUAACGUACUUCCACCCAG		[3246-3264]
239	GAGUCAAUGUGCAGUGUAG	CUACACUGCACAUUGACUC		[3184-3202]
240	GAAUGUUUAUAGCAAACUU	AAGUUUGCUAUAAACAUUC		[2987-3005]
241	GUUUAUAGCAAACUUGGAA	UUCCAAGUUUGCUAUAAAC		[2991-3009]
242	GCUACUGAUUUCCUUUGGA	UCCAAAGGAAAUCAGUAGC		[2605-2623]
243	AAAGAAGAGGAGAAUGCUA	UAGCAUUCUCCUCUUCUUU		[911-929]
244	GCUGUAAUGGUAAGACUUU	AAAGUCUUACCAUUACAGC		[116-134]
245	CCAAUAAACCAGGUUUAGA	UCUAAACCUGGUUUAUUGG		[3159-3177]
246	CCACCAAUGUCUAAGUCGU	ACGACUUAGACAUUGGUGG		[1740-1758]
247	UUCUAUUACUCAACAGGAA	UUCCUGUUGAGUAAUAGAA	Ms	[1127-1145]
248	CAAAGUGCAGCCCUUCCAU	AUGGAAGGGCUGCACUUUG		[854-872]
249	UAGUAGUACUUGAAAUCUA	UAGAUUUCAAGUACUACUA		[2654-2672]
250	UCAUAAAGGAAUUUAUCAA	UUGAUAAAUUCCUUUAUGA		[372-390]
251	AGACAUCCAGGAGAUGAAA	UUUCAUCUCCUGGAUGUCU		[973-991]
252	AGAAAGUGAUUUCUAGAAA	UUUCUAGAAAUCACUUUCU		[2747-2765]
253	CUACAAUCGGCUCUUUCCA	UGGAAAGAGCCGAUUGUAG		[312-330]
254	UUUCCAUAUGGAUUUUCUA	UAGAAAAUCCAUAUGGAAA		[3869-3887]
255	GGAGAGGAUUUUUUUCUGA	UCAGAAAAAAAUCCUCUCC		[3028-3046]
256	UGUUUAUAGCAAACUUGGA	UCCAAGUUUGCUAUAAACA		[2990-3008]
257	GGUUUGUUGGAUCUUCAAU	AUUGAAGAUCCAACAAACC		[1906-1924]
258	GGAUGCAGGUGUUCAAGAG	CUCUUGAACACCUGCAUCC		[1153-1171]
259	GAAAAAGCUGUUUCUGGAA	UUCCAGAAACAGCUUUUUC		[201-219]
260	GCAUAUGAUAGGCCUUGGA	UCCAAGGCCUAUCAUAUGC		[1264-1282]

261	UAAAAAUUCUGAAUGUACA	UGUACAUUCAGAAUUUUUA		[3915-3933]
262	CCUUCCAUUUUGCCCUGAA	UUCAGGGCAAAAUGGAAGG		[865-883]
263	UUUUGCUCAUUAACAGAAA	UUUCUGUUAAUGAGCAAAA		[894-912]
264	UAAGGAGACCACCACCAAU	AUUGGUGGUGGUCUCCUUA		[1729-1747]
265	CACUGUAGUUUCUCUAUUU	AAAUAGAGAAACUACAGUG		[1216-1234]
266	AUCCAAAUAAGAAACCUAA	UUAGGUUUCUUAUUUGGAU		[2856-2874]
267	CCAUGUACAUUGGAGAGAU	AUCUCUCCAAUGUACAUGG		[678-696]
268	AAAGAGAGGUUAUAGAGUA	UACUCUAUAACCUCUCUUU		[2411-2429]
269	AGGAGAUUUUAGGUGUUGA	UCAACACCUAAAAUCUCCU		[2923-2941]
270	AGCAAACUUGGAAUUUGUA	UACAAAUUCCAAGUUUGCU		[2997-3015]
271	UCCUGAGGACGUGGAGAAA	UUUCUCCACGUCCUCAGGA		[142-160]
272	GAAGCCGGAGGGUGUUUAU	AUAAACACCCUCCGGCUUC		[2147-2165]
273	ACGUUAUUGUUGACUUAUU	AAUAAGUCAACAAUAACGU		[3258-3276]
274	AUGAAAGAUGAGAGUGCAA	UUGCACUCUCAUCUUUCAU		[986-1004]
275	UUCUGAUAUUGCCGCACUA	UAGUGCGGCAAUAUCAGAA		[2051-2069]
276	CAAGUGUGCUUUAGCUUGA	UCAAGCUAAAGCACACUUG		[3753-3771]
277	UCCUGGAGCCUUUGAAUAA	UUAUUCAAAGGCUCCAGGA		[3421-3439]
278	GUGAAUAUUUCCAUAUGGA	UCCAUAUGGAAAUAUUCAC		[3862-3880]
279	AGAGAAAGUGAUUUCUAGA	UCUAGAAAUCACUUUCUCU		[2745-2763]
280	AAGGAUAACUAUAAUGGGA	UCCCAUUAUAGUUAUCCUU		[1328-1346]
281	UGCUCAUUAACAGAAAAGA	UCUUUUCUGUUAAUGAGCA		[897-915]
282	GAGAAAACUUGCUGCUGAG	CUCAGCAGCAAGUUUUCUC		[155-173]
283	GCUUCUGAAUGCUGCUACU	AGUAGCAGCAUUCAGAAGC		[1841-1859]
284	CCAUCAUCAUUUCCAUUGU	ACAAUGGAAAUGAUGAUGG		[1068-1086]
285	AGUCAUGAUCCCAGCGAGA	UCUCGCUGGGAUCAUGACU		[88-106]
286	CAAAUAAGAAACCUAAAAU	AUUUUAGGUUUCUUAUUUG		[2859-2877]
287	GACUGUUUCUUUGUUAUUA	UAAUAACAAAGAAACAGUC		[1309-1327]
288	UGUUCAAGAGCCCAUCUAU	AUAGAUGGGCUCUUGAACA		[1162-1180]
289	CAUGACUGUUUCUUUGUUA	UAACAAAGAAACAGUCAUG		[1306-1324]
290	UAUAGGAGAGGAAAAGUAA	UUACUUUUCCUCUCCUAUA		[2075-2093]
291	AGAUUUUUGCUCAUUAACA	UGUUAAUGAGCAAAAAUCU		[890-908]
292	CCACACUUGAGAGGAUGAA	UUCAUCCUCUCAAGUGUGG		[3204-3222]
293	GGAAUUUAUCAAUAAAACU	AGUUUUAUUGAUAAAUUCC		[379-397]
294	GCACCUUCCUCACUUCCAU	AUGGAAGUGAGGAAGGUGC		[2172-2190]
295	UACCGACAGCCCAUCAUCA	UGAUGAUGGGCUGUCGGUA		[1058-1076]
296	ACUGUGGUCCUAUGCCGAA	UUCGGCAUAGGACCACAGU		[3116-3134]
297	GGUUUUGUGCCCAUGUACA	UGUACAUGGGCACAAAACC		[668-686]
298	GGUUAUAGAGUAGAAGAUU	AAUCUUCUACUCUAUAACC		[2418-2436]
299	UAAUGGUAAGACUUUGGAU	AUCCAAAGUCUUACCAUUA		[120-138]
300	UGCAAGGAUGUCACAAGAA	UUCUUGUGACAUCCUUGCA		[1000-1018]
301	GCGUCAUGGAGAUGAACAG	CUGUUCAUCUCCAUGACGC		[1698-1716]
302	CUGUUGUAUUUUAACUCAU	AUGAGUUAAAAUACAACAG		[2946-2964]
303	AGAGGAAAAGUAAGGUGCA	UGCACCUUACUUUUCCUCU		[2081-2099]
304	UAUGGAUUUUCUAUUGUUA	UAACAAUAGAAAAUCCAUA		[3875-3893]
305	UGCGGAGAUUAUAAAUAGU	ACUAUUUAUAAUCUCCGCA		[72-90]
306	GACUCUUCGUCAACCGCUU	AAGCGGUUGACGAAGAGUC		[507-525]
307	CAGGAAGCAGAUACAUAUG	CAUAUGUAUCUGCUUCCUG		[2122-2140]
308	GAGGAGAAUGCUAAGCAGA	UCUGCUUAGCAUUCUCCUC		[917-935]
309	GGGUAUGAUCGGCUCCUUU	AAAGGAGCCGAUCAUACCC		[481-499]
310	UUACCAGGAAGCAGAUACA	UGUAUCUGCUUCCUGGUAA		[2118-2136]
311	GUAAUGGUAAGACUUUGGA	UCCAAAGUCUUACCAUUAC		[119-137]
312	CUUCAAGGAUGCAGGUGUU	AACACCUGCAUCCUUGAAG		[1147-1165]
313	UACUCAACAGGAAUCUUCA	UGAAGAUUCCUGUUGAGUA	Ms	[1133-1151]
314	AAGAAGAGGAGAAUGCUAA	UUAGCAUUCUCCUCUUCUU		[912-930]
315	AGUCGGUUGAAAUGCUGAU	AUCAGCAUUUCAACCGACU	Rat	[606-624]
316	GACUUGAAUCUUUCCAAUA	UAUUGGAAAGAUUCAAGUC		[3146-3164]

317	UCACUGAGAAGAUUGUGAA	UUCACAAUCUUCUCAGUGA		[3848-3866]
318	AGGAGAAUGCUAAGCAGAU	AUCUGCUUAGCAUUCUCCU		[918-936]
319	GAGUGCAAGGAUGUCACAA	UUGUGACAUCCUUGCACUC		[997-1015]
320	AAAGCAAGUCACCGUGCUA	UAGCACGGUGACUUGCUUU		[1018-1036]
321	CAUCAGGAUGAACCCAGGA	UCCUGGGUUCAUCCUGAUG		[1821-1839]
322	UAUCACACGGGCCUUUGAA	UUCAAAGGCCCGUGUGAUA		[1642-1660]
323	GACAGUAUUUUGGUUCUUA	UAAGAACCAAAAUACUGUC		[3382-3400]
324	GAAAGUGAUUUCUAGAAAG	CUUUCUAGAAAUCACUUUC		[2748-2766]
325	AGACUUGAAUUAGAUUACA	UGUAAUCUAAUUCAAGUCU		[241-259]
326	AGUCAUAUACCUAUAUAAU	AUUAUAUAGGUAUAUGACU		[2583-2601]
327	UGUUCUUUAGGAGAUUUUA	UAAAAUCUCCUAAAGAACA		[2915-2933]
328	UAGCUAAGUCGGUUGAAAU	AUUUCAACCGACUUAGCUA		[600-618]
329	CAAUAAGAAUUUAGGGAGA	UCUCCCUAAAUUCUUAUUG		[2459-2477]
330	GUGGAAGUACGUUAUUGUU	AACAAUAACGUACUUCCAC		[3250-3268]
331	AGAGUGCAAGGAUGUCACA	UGUGACAUCCUUGCACUCU		[996-1014]
332	AAUGCUCCUGAGAAGAUCA	UGAUCUUCUCAGGAGCAUU		[356-374]
333	AGAGGAGAAUGCUAAGCAG	CUGCUUAGCAUUCUCCUCU		[916-934]
334	UGCUCCUGGAGCCUUUGAA	UUCAAAGGCUCCAGGAGCA		[3418-3436]
335	CAUUAUUUUUCCACUUUGU	ACAAAGUGGAAAAAUAAUG		[2899-2917]
336	AGACUUACCAGGAAGCAGA	UCUGCUUCCUGGUAAGUCU		[2114-2132]
337	GAUUUUUGCUCAUUAACAG	CUGUUAAUGAGCAAAAAUC		[891-909]
338	UGCUGAUUGUCAACCUGUU	AACAGGUUGACAAUCAGCA		[543-561]
339	AACUCAUACCUUUAAAGGA	UCCUUUAAAGGUAUGAGUU		[2958-2976]
340	CCAACUUCCUAGUCGGAUU	AAUCCGACUAGGAAGUUGG		[1497-1515]
341	CUGGAGAGGUUAAGGUGCA	UGCACCUUAACCUCUCCAG		[2442-2460]
342	AAGGCUGCGGUUUGUUGGA	UCCAACAAACCGCAGCCUU		[1898-1916]
343	GUCCCAGAUUUUUGCUCAU	AUGAGCAAAAAUCUGGGAC		[885-903]
344	UCAUUAACAGAAAAGAAGA	UCUUCUUUUCUGUUAAUGA		[900-918]
345	UCCCAUUUCUCACUGAGAA	UUCUCAGUGAGAAAUGGGA		[3839-3857]
346	GAAAACUUGCUGCUGAGAA	UUCUCAGCAGCAAGUUUUC		[157-175]
347	CAGAAAAGAAGAGGAGAAU	AUUCUCCUCUUCUUUUCUG		[907-925]
348	GGCGUCAUGGAGAUGAACA	UGUUCAUCUCCAUGACGCC		[1697-1715]
349	GGUUGAUGGGUUCUAAUUU	AAAUUAGAACCCAUCAACC		[2709-2727]
350	AACUAAUAUGGGCAUUGUA	UACAAUGCCCAUAUUAGUU		[2681-2699]
351	GAAUUUAGGGAGAAAUGUU	AACAUUUCUCCCUAAAUUC		[2465-2483]
352	AGUAGUACUUGAAAUCUAG	CUAGAUUUCAAGUACUACU		[2655-2673]
353	UCCAGGAGAUGAAAGAUGA	UCAUCUUUCAUCUCCUGGA		[978-996]
354	ACCGACAGCCCAUCAUCAU	AUGAUGAUGGGCUGUCGGU		[1059-1077]
355	AGUGUGCUUUAGCUUGAAA	UUUCAAGCUAAAGCACACU		[3755-3773]
356	GCUUUUUGUUCCACGCUCA	UGAGCGUGGAACAAAAAGC		[1289-1307]
357	AUAUAAUAAAGCUACUGAU	AUCAGUAGCUUUAUUAUAU		[2595-2613]
358	UGUUAUUAAAGGAUAACUA	UAGUUAUCCUUUAAUAACA		[1320-1338]
359	GGAGAUGAACAGCAUCGAG	CUCGAUGCUGUUCAUCUCC		[1705-1723]
360	ACUCUUUAACUUCUCGUAA	UUACGAGAAGUUAAAGAGU		[2563-2581]
361	CUGCUACUGGGUUUUACCA	UGGUAAAACCCAGUAGCAG		[818-836]
362	AGGAAGCAGAUACAUAUGA	UCAUAUGUAUCUGCUUCCU		[2123-2141]
363	GUUCUAUUACUCAACAGGA	UCCUGUUGAGUAAUAGAAC	Ms	[1126-1144]
364	CAAUUUCUGUCCUUCAGAU	AUCUGAAGGACAGAAAUUG		[2540-2558]
365	CUGUGGUCCUAUGCCGAAU	AUUCGGCAUAGGACCACAG		[3117-3135]
366	CUACUUAAUUCCUUUCUCA	UGAGAAAGGAAUUAAGUAG		[1855-1873]
367	AAGGACUCUGCAUAUGAUA	UAUCAUAUGCAGAGUCCUU		[1255-1273]
368	UGCUGUAAUGGUAAGACUU	AAGUCUUACCAUUACAGCA		[115-133]
369	CAAUGUGCAGUGUAGCCCA	UGGGCUACACUGCACAUUG		[3188-3206]
370	AGGUUAUAGAGUAGAAGAU	AUCUUCUACUCUAUAACCU		[2417-2435]
371	CCUAUAUAAUAAAGCUACU	AGUAGCUUUAUUAUAUAGG		[2592-2610]
372	CCACCACCAAUGUCUAAGU	ACUUAGACAUUGGUGGUGG		[1737-1755]

373	AUAUGGGCAUUGUAGUUAA	UUAACUACAAUGCCCAUAU		[2686-2704]
374	AGCUAUCAAGUGUGCUUUA	UAAAGCACACUUGAUAGCU		[3747-3765]
375	AUCUAGGAUUAUUAACUAA	UUAGUUAAUAAUCCUAGAU		[2668-2686]
376	AAACCAGGUUUAGACAGUA	UACUGUCUAAACCUGGUUU		[3164-3182]
377	GAACCUACCUUCAUUUCAG	CUGAAAUGAAGGUAGGUUC		[1979-1997]
378	GGACAUCCUCUUCUGCUUA	UAAGCAGAAGAGGAUGUCC		[1947-1965]
379	CGCUUGCGUAUGUCUGUUA	UAACAGACAUACGCAAGCG		[3090-3108]
380	GGCUGAAAAAGCUGUUUCU	AGAAACAGCUUUUUCAGCC		[197-215]
381	CGGACUCUGCACAGGUUUU	AAAACCUGUGCAGAGUCCG		[655-673]
382	GAGGUUAAGGUGCAAUAAG	CUUAUUGCACCUUAACCUC		[2447-2465]
383	AGAAGGACUCUGCAUAUGA	UCAUAUGCAGAGUCCUUCU		[1253-1271]
384	UGAAAAGGUGACCUUGCAA	UUGCAAGGUCACCUUUUCA		[3769-3787]
385	ACAUUUUGAAGGUUUUGUU	AACAAAACCUUCAAAAUGU		[178-196]
386	CUCCUGGAGCCUUUGAAUA	UAUUCAAAGGCUCCAGGAG		[3420-3438]
387	UGAAAAAGCUGUUUCUGGA	UCCAGAAACAGCUUUUUCA		[200-218]
388	GGGAUGAGCUUUGUCUGUA	UACAGACAAAGCUCAUCCC		[1343-1361]
389	UCUCAUUACUUUUGAAGUA	UACUUCAAAAGUAAUGAGA		[2809-2827]
390	UAGCAAACUUGGAAUUUGU	ACAAAUUCCAAGUUUGCUA		[2996-3014]
391	GGAUGAAAUAACUCCUUCU	AGAAGGAGUUAUUUCAUCC		[2782-2800]
392	CAAGGGAGAGACCUCAUCA	UGAUGAGGUCUCUCCCUUG		[1807-1825]
393	CUCUAUUUCUGGUGGAAAG	CUUUCCACCAGAAAUAGAG		[1227-1245]
394	UGGAGAUGAACAGCAUCGA	UCGAUGCUGUUCAUCUCCA		[1704-1722]
395	CUGAGGACGUGGAGAAAAC	GUUUUCUCCACGUCCUCAG		[144-162]
396	CAUUGUAGUUAAUGAUGGU	ACCAUCAUUAACUACAAUG		[2693-2711]
397	GAGGGAGGUGUUUAAAGAG	CUCUUUAAACACCUCCCUC	Ms	[2398-2416]
398	CUCAUUACUUUUGAAGUAA	UUACUUCAAAAGUAAUGAG		[2810-2828]
399	UAGAAGAUUUGAUGCUGGA	UCCAGCAUCAAAUCUUCUA		[2428-2446]
400	AGGAGACCACCACCAAUGU	ACAUUGGUGGUGGUCUCCU		[1731-1749]
401	CAGAUAGAUCUGGAAAGGA	UCCUUUCCAGAUCUAUCUG		[1677-1695]
402	CUGAAUGCUGCUACUUAAU	AUUAAGUAGCAGCAUUCAG		[1845-1863]
403	GAGAUUCAUUAUUUUUCCA	UGGAAAAAUAAUGAAUCUC		[2893-2911]
404	GCAAUUCAAUGCUGAUUGU	ACAAUCAGCAUUGAAUUGC		[534-552]
405	CUAAGUCGGUUGAAAUGCU	AGCAUUUCAACCGACUUAG		[603-621]
406	CUUUCUUGAAGACUUGAAU	AUUCAAGUCUUCAAGAAAG		[232-250]
407	ACCCAGGACGCUUCUGAAU	AUUCAGAAGCGUCCUGGGU		[1832-1850]
408	GAAGAUUUGAUGCUGGAGA	UCUCCAGCAUCAAAUCUUC		[2430-2448]
409	UGGUAGAGAUUCAUUAUUU	AAAUAAUGAAUCUCUACCA		[2888-2906]
410	UAUAGAGUAGAAGAUUUGA	UCAAAUCUUCUACUCUAUA		[2421-2439]
411	GUGUUUAAAGAGAGGUUAU	AUAACCUCUCUUUAAACAC		[2405-2423]
412	GUUAUUAAAGGAUAACUAU	AUAGUUAUCCUUUAAUAAC		[1321-1339]
413	UGUUGAUUUUCUGUUGUAU	AUACAACAGAAAAUCAACA		[2936-2954]
414	CCCUUGUCAGUGACAGUAU	AUACUGUCACUGACAAGGG		[3371-3389]
415	CACUUGAGAGGAUGAAUGU	ACAUUCAUCCUCUCAAGUG		[3207-3225]
416	GGUCUGUACGUUACCUCUU	AAGAGGUAACGUACAGACC		[2519-2537]
417	GGACCUCCAACUUCCUAGU	ACUAGGAAGUUGGAGGUCC		[1491-1509]
418	GGUUAAUACUAUCUUCACU	AGUGAAGAUAGUAUUAACC		[1201-1219]
419	GAGAGACCGAGUGAACCUA	UAGGUUCACUCGGUCUCUC		[1967-1985]
420	CUCAUACCUUUAAAGGAAU	AUUCCUUUAAAGGUAUGAG		[2960-2978]
421	ACUUCUCGUAAAAGUCAUA	UAUGACUUUUACGAGAAGU		[2571-2589]
422	GGGUCCCAUUUCUCACUGA	UCAGUGAGAAAUGGGACCC		[3836-3854]
423	UGAGCGAUUAUUAUCUAAA	UUUAGAUAAUAAUCGCUCA		[3044-3062]
424	GAAGACUUGAAUUAGAUUA	UAAUCUAAUUCAAGUCUUC		[239-257]
425	GUUGAUGGGUUCUAAUUUU	AAAAUUAGAACCCAUCAAC		[2710-2728]
426	CGACAGCCCAUCAUCAUUU	AAAUGAUGAUGGGCUGUCG		[1061-1079]
427	AGAUGAGAGUGCAAGGAUG	CAUCCUUGCACUCUCAUCU		[991-1009]
428	GCAUCGUUGUUGGAAUUCU	AGAAUUCCAACAACGAUGC		[744-762]

429	CCGUGCUAGAGCUCUUUAG	CUAAAGAGCUCUAGCACGG		[1029-1047]
430	CACGCUUGCGUAUGUCUGU	ACAGACAUACGCAAGCGUG		[3088-3106]
431	AGGAUGCAGGUGUUCAAGA	UCUUGAACACCUGCAUCCU		[1152-1170]
432	GGUAAGACUUUGGAUCCUU	AAGGAUCCAAAGUCUUACC		[124-142]
433	CACUUUGCUCUGGGUGGAA	UUCCACCCAGAGCAAAGUG		[3237-3255]
434	AUAAAACUUUGACGGACAA	UUGUCCGUCAAAGUUUUAU		[390-408]
435	GGUUCUUAGUUCUCACUGU	ACAGUGAGAACUAAGAACC		[3393-3411]
436	GGUGACCUUGCAACUUCAU	AUGAAGUUGCAAGGUCACC		[3775-3793]
437	GUUAUAGAGUAGAAGAUUU	AAAUCUUCUACUCUAUAAC		[2419-2437]
438	GGACGUGGAGAAAACUUGC	GCAAGUUUUCUCCACGUCC		[148-166]
439	UUGGAUGGAGUCCAGGGAA	UUCCCUGGACUCCAUCCAA		[2727-2745]
440	CAAUCGGCUCUUUCCAAUU	AAUUGGAAAGAGCCGAUUG		[315-333]
441	CCGCUGCUACUGGGUUUUA	UAAAACCCAGUAGCAGCGG		[815-833]
442	CGCUGCUACUGGGUUUUAC	GUAAAACCCAGUAGCAGCG		[816-834]
443	GACCCAGAGAUGCUGUAAU	AUUACAGCAUCUCUGGGUC		[105-123]
444	GAGGGUAAAUGAUGUGGUG	CACCACAUCAUUUACCCUC		[2495-2513]
445	GUAGUCUCAUUACUUUUGA	UCAAAAGUAAUGAGACUAC		[2805-2823]
446	CCAACUGGACCUCCAACUU	AAGUUGGAGGUCCAGUUGG		[1485-1503]
447	CCUUCUUCAAAGUCCCUGA	UCAGGGACUUUGAAGAAGG		[1599-1617]
448	UCCCUUGGGUUCUGAUAUU	AAUAUCAGAACCCAAGGGA		[2042-2060]
449	UCAUUACUUUUGAAGUAAU	AUUACUUCAAAAGUAAUGA		[2811-2829]
450	CCCAAGACAUCCAGGAGAU	AUCUCCUGGAUGUCUUGGG		[969-987]
451	GUUGAUUUUCUGUUGUAUU	AAUACAACAGAAAAUCAAC		[2937-2955]
452	AAGGUGCAAUAAGAAUUUA	UAAAUUCUUAUUGCACCUU		[2453-2471]
453	UGAAUUAGAUUACAGCGAU	AUCGCUGUAAUCUAAUUCA		[246-264]
454	GGAUGAAUGUAUGUGCACU	AGUGCACAUACAUUCAUCC		[3216-3234]
455	AUAAGAAUUUAGGGAGAAA	UUUCUCCCUAAAUUCUUAU		[2461-2479]
456	UGCUCCUGAGAAGAUCAUA	UAUGAUCUUCUCAGGAGCA		[358-376]
457	GAAAGAUGAGAGUGCAAGG	CCUUGCACUCUCAUCUUUC		[988-1006]
458	ACUUGAGAGGAUGAAUGUA	UACAUUCAUCCUCUCAAGU		[3208-3226]
459	UUUAACUCAUACCUUUAAA	UUUAAAGGUAUGAGUUAAA		[2955-2973]
460	AGAAGAGGAGAAUGCUAAG	CUUAGCAUUCUCCUCUUCU		[913-931]
461	UGUUUAAAGAGAGGUUAUA	UAUAACCUCUCUUUAAACA		[2406-2424]
462	UUGAAGACUUGAAUUAGAU	AUCUAAUUCAAGUCUUCAA		[237-255]
463	GUGCAGAUAGAUCUGGAAA	UUUCCAGAUCUAUCUGCAC		[1674-1692]
464	UACAAUCGGCUCUUUCCAA	UUGGAAAGAGCCGAUUGUA		[313-331]
465	CAUAAAGGAAUUUAUCAAU	AUUGAUAAAUUCCUUUAUG		[373-391]
466	CAGGAGAUGAAAGAUGAGA	UCUCAUCUUUCAUCUCCUG		[980-998]
467	UCUUUGGUCUGGAAUUCAU	AUGAAUUCCAGACCAAAGA		[774-792]
468	UACGUUACCUCUUAACAAU	AUUGUUAAGAGGUAACGUA		[2525-2543]
469	AUUGGUUCUUGGUAGAGAU	AUCUCUACCAAGAACCAAU		[2879-2897]
470	AGGUCUGUACGUUACCUCU	AGAGGUAACGUACAGACCU		[2518-2536]
471	GAGAGUGCAAGGAUGUCAC	GUGACAUCCUUGCACUCUC		[995-1013]
472	AAAGUCAUAUACCUAUAUA	UAUAUAGGUAUAUGACUUU		[2581-2599]
473	UGAGAAGAUUGUGAAUAUU	AAUAUUCACAAUCUUCUCA		[3852-3870]
474	ACAGUAUUUUGGUUCUUAG	CUAAGAACCAAAAUACUGU		[3383-3401]
475	GGAGGGUAAAUGAUGUGGU	ACCACAUCAUUUACCCUCC		[2494-2512]
476	CACACUUGAGAGGAUGAAU	AUUCAUCCUCUCAAGUGUG		[3205-3223]
477	GAGGACGUGGAGAAAACUU	AAGUUUUCUCCACGUCCUC		[146-164]
478	CUCCAACUUCCUAGUCGGA	UCCGACUAGGAAGUUGGAG		[1495-1513]
479	GCGUAUGUCUGUUACCAUG	CAUGGUAACAGACAUACGC		[3095-3113]
480	UCAUGGAGAUGAACAGCAU	AUGCUGUUCAUCUCCAUGA		[1701-1719]
481	GGCAGGACUUUUGAGGAUA	UAUCCUCAAAAGUCCUGCC		[1625-1643]
482	CUCCCUUGGGUUCUGAUAU	AUAUCAGAACCCAAGGGAG		[2041-2059]
483	AUAUCACACGGGCCUUUGA	UCAAAGGCCCGUGUGAUAU		[1641-1659]
484	GGGAGGUGUUUAAAGAGAG	CUCUCUUUAAACACCUCCC	Ms	[2400-2418]

485	GGUCUUUGUAGCCUUCUUU	AAAGAAGGCUACAAAGACC		[1375-1393]
486	UUAGGAGCCUACGUUUUUA	UAAAAACGUAGGCUCCUAA	Ms	[1541-1559]
487	AAUGUUGUUCAUUAUUGGA	UCCAAUAAUGAACAACAUU		[2478-2496]
488	GGUGUUUAAAGAGAGGUUA	UAACCUCUCUUUAAACACC		[2404-2422]
489	AGGAAUUUAUCAAUAAAAC	GUUUUAUUGAUAAAUUCCU		[378-396]
490	AGGGAGGUGUUUAAAGAGA	UCUCUUUAAACACCUCCCU	Ms	[2399-2417]
491	UGGUCUUUGUAGCCUUCUU	AAGAAGGCUACAAAGACCA		[1374-1392]
492	AGCUUUUUUCUUUAAGAUA	UAUCUUAAAGAAAAAAGCU		[2623-2641]
493	UUGAAAUCUAGGAUUAUUA	UAAUAAUCCUAGAUUUCAA		[2663-2681]
494	UAGGGAGAAAUGUUGUUCA	UGAACAACAUUUCUCCCUA		[2470-2488]
495	GUAGUAGUCUCAUUACUUU	AAAGUAAUGAGACUACUAC		[2802-2820]
496	CCUACAAAGUGCAGCCCUU	AAGGGCUGCACUUUGUAGG		[850-868]
497	AGAAGGAAAUUGAGAUUAG	CUAAUCUCAAUUUCCUUCU		[2380-2398]
498	CUUGAAAUCUAGGAUUAUU	AAUAAUCCUAGAUUUCAAG		[2662-2680]
499	CGGAGGGUGUUUAUGUAAG	CUUACAUAAACACCCUCCG		[2152-2170]
500	CAGCCCAUCAUCAUUUCCA	UGGAAAUGAUGAUGGGCUG		[1064-1082]

Table B 31 SLC5A1 - solute carrier family 5, member 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-4507030 :11-2005
1	GGACAGUGUUGAACGUCAA	UUGACGUUCAACACUGUCC		[1935-1953]
2	GGGCUAUGUUUUCCACCAA	UUGGUGGAAAACAUAGCCC	Chmp	[144-162]
3	CCAGAAAAAGGCAGACUAA	UUAGUCUGCCUUUUUCUGG		[2253-2271]
4	UAGGCUAGCUGGAAGAAAA	UUUUCUUCCAGCUAGCCUA	Chmp	[2140-2158]
5	UGUGGAGGACAGUGUUGAA	UUCAACACUGUCCUCCACA		[1929-1947]
6	GGAGACCAUUGAAAUAGAA	UUCUAUUUCAAUGGUCUCC		[1765-1783]
7	GUGUCAGUGUGGUUUAUAA	UUAUAAACCACACUGACAC		[2328-2346]
8	GGAAGAGGAGAACAUCCAA	UUGGAUGUUCUCCUCUUCC	Chmp	[1735-1753]
9	GGUUUAUAAUCCUUGAAUA	UAUUCAAGGAUUAUAAACC		[2338-2356]
10	CUGUGGUGUUGAAGGGAAA	UUUCCCUUCAACACCACAG	Chmp	[2069-2087]
11	CGAGCUCAUUCGCAAUGCA	UGCAUUGCGAAUGAGCUCG	Chmp	[70-88]
12	CAUGGAAAAGUACAUGAAA	UUUCAUGUACUUUUCCAUG	Chmp	[706-724]
13	CUUGAAUAUUGUUUUAGAA	UUCUAAAACAAUAUUCAAG	Chmp	[2349-2367]
14	CCAUGUGAUUGAUGUCUGA	UCAGACAUCAAUCACAUGG	Chmp	[2282-2300]
15	CCCUAAGGAGACCAUUGAA	UUCAAUGGUCUCCUUAGGG		[1759-1777]
16	CCAUUAGUUUGCUGUUAAU	AUUAACAGCAAACUAAUGG	Chmp	[2159-2177]
17	CCUUGAAUAUUGUUUUAGA	UCUAAAACAAUAUUCAAGG	Chmp	[2348-2366]
18	GAAAAAUGCUACACUCCAA	UUGGAGUGUAGCAUUUUUC	Chmp	[767-785]
19	CCCUGACCUCCAUCUUCAA	UUGAAGAUGGAGGUCAGGG	Chmp	[1188-1206]
20	ACAAGUUCCUGAGAAGAAA	UUUCUUCUCAGGAACUUGU	Chmp	[1786-1804]
21	GUUAAUUUAUGCAUUUGAA	UUCAAAUGCAUAAAUUAAC	Chmp	[2172-2190]
22	ACGCCUUCAUGGAAAAGUA	UACUUUUCCAUGAAGGCGU	Chmp	[699-717]
23	GGCUAUGUUUUCCACCAAU	AUUGGUGGAAAACAUAGCC	Chmp	[145-163]
24	GACUGAGGAAGAGGAGAAA	UUUCUCCUCUUCCUCAGUC	Chmp	[1870-1888]
25	CAAGUUCCUGAGAAGAAAA	UUUUCUUCUCAGGAACUUG	Chmp	[1787-1805]
26	GGCAGACUAAGAAUCAGAA	UUCUGAUUCUUAGUCUGCC		[2262-2280]
27	GAAAAAGGCAGACUAAGAA	UUCUUAGUCUGCCUUUUUC		[2256-2274]
28	CACUCAGUCACAUCCAGAA	UUCUGGAUGUGACUGAGUG		[2240-2258]
29	GCAAGAGAGCAUCUGAGAA	UUCUCAGAUGCUCUCUUGC	Chmp	[1251-1269]
30	CCAAGAUCUCGGCAGACAU	AUGUCUGCCGAGAUCUUGG	Chmp	[477-495]
31	CGCAAGAGAGCAUCUGAGA	UCUCAGAUGCUCUCUUGCG	Chmp	[1250-1268]
32	AGGAGACCAUUGAAAUAGA	UCUAUUUCAAUGGUCUCCU		[1764-1782]
33	CACAAGUUCCUGAGAAGAA	UUCUUCUCAGGAACUUGUG	Chmp	[1785-1803]
34	CCAAGAUGACUGAGGAAGA	UCUUCCUCAGUCAUCUUGG	Chmp	[1863-1881]
35	CCAUGUUCAUCAUGGUGAU	AUCACCAUGAUGAACAUGG		[981-999]

36	GCCUGAUGCUAUCAGUCAU	AUGACUGAUAGCAUCAGGC	Chmp	[1149-1167]
37	CAUUGUGCAGUCAGCACAA	UUGUGCUGACUGCACAAUG		[1336-1354]
38	GGAUGUCCAUCCUUACCUU	AAGGUAAGGAUGGACAUCC	Chmp	[855-873]
39	CUCGUCCUGUGGUGUUGAA	UUCAACACCACAGGACGAG	Chmp	[2063-2081]
40	CAAGAGAGCAUCUGAGAAA	UUUCUCAGAUGCUCUCUUG	Chmp	[1252-1270]
41	CCUUAGGCCUGAAUCUGUA	UACAGAUUCAGGCCUAAGG	Chmp	[525-543]
42	AGAGGAGAACAUCCAAGAA	UUCUUGGAUGUUCUCCUCU	Chmp	[1738-1756]
43	UGGGUUUGCUUUUCACGAA	UUCGUGAAAAGCAAACCCA	Chmp	[667-685]
44	UCAUCUCCCUCCUCACCAA	UUGGUGAGGAGGGAGAUGA	Rat, Chmp	[1638-1656]
45	ACACCACCUUUCAGGAAAA	UUUUCCUGAAAGGUGGUGU	Chmp	[753-771]
46	CCUGAGAAGAAAAAAGGAA	UUCCUUUUUUCUUCUCAGG	Chmp	[1793-1811]
47	GGAGGACAGUGUUGAACGU	ACGUUCAACACUGUCCUCC		[1932-1950]
48	GGGCAACUCUUCGAUUACA	UGUAAUCGAAGAGUUGCCC	Chmp	[1358-1376]
49	CGGGUGUCAGUGUGGUUUA	UAAACCACACUGACACCCG		[2325-2343]
50	GGAGCGUAUUGACCUGGAU	AUCCAGGUCAAUACGCUCC	Chmp	[1714-1732]
51	CCACGAGCUCAUUCGCAAU	AUUGCGAAUGAGCUCGUGG	Chmp	[67-85]
52	CCAUGCAUAUUUUGCCUGA	UCAGGCAAAAUAUGCAUGG		[1987-2005]
53	CAGGAGAGCCUAUGACCUA	UAGGUCAUAGGCUCUCCUG	Chmp	[1816-1834]
54	CGGAAGAGGAGAACAUCCA	UGGAUGUUCUCCUCUUCCG	Chmp	[1734-1752]
55	CUAUGACGCCUUCAUGGAA	UUCCAUGAAGGCGUCAUAG	Chmp	[694-712]
56	CAUCGCCUAUCCAACCUUA	UAAGGUUGGAUAGGCGAUG	Chmp	[1099-1117]
57	GGGAUUUCACGUAUGAUUA	UAAUCAUACGUGAAAUCCC	Chmp	[1496-1514]
58	GGGUGUCAGUGUGGUUUAU	AUAAACCACACUGACACCC		[2326-2344]
59	CAGUGUGGUUUAUAAUCCU	AGGAUUAUAAACCACACUG		[2332-2350]
60	CAGCAAAGAGGAGCGUAUU	AAUACGCUCCUCUUUGCUG	Chmp	[1705-1723]
61	CCUCCCUCUUUGCUAGUAA	UUACUAGCAAAGAGGGAGG	Chmp	[225-243]
62	GGAAGAAAACCAUUAGUUU	AAACUAAUGGUUUUCUUCC	Chmp	[2150-2168]
63	CUAGCUGGAAGAAAACCAU	AUGGUUUUCUUCCAGCUAG	Chmp	[2144-2162]
64	CCUGUGGUGUUGAAGGGAA	UUCCCUUCAACACCACAGG	Chmp	[2068-2086]
65	CCUUCAUGGAAAAGUACAU	AUGUACUUUUCCAUGAAGG	Chmp	[702-720]
66	GCCCUAAGGAGACCAUUGA	UCAAUGGUCUCCUUAGGGC		[1758-1776]
67	CACCCAAGAUGACUGAGGA	UCCUCAGUCAUCUUGGGUG	Chmp	[1860-1878]
68	UGACGGACACCUCUGAGAA	UUCUCAGAGGUGUCCGUCA	Chmp	[1905-1923]
69	CUGUCUUCCUGCUUGCUAU	AUAGCAAGCAGGAAGACAG	Chmp	[1416-1434]
70	UUAGUUUGCUGUUAAUUUA	UAAAUUAACAGCAAACUAA	Chmp	[2162-2180]
71	GUGGGUAUCUAAAGCUGAU	AUCAGCUUUAGAUACCCAC		[960-978]
72	UGUGGUUUAUAAUCCUUGA	UCAAGGAUUAUAAACCACA		[2335-2353]
73	AGAAAAAGGCAGACUAAGA	UCUUAGUCUGCCUUUUUCU		[2255-2273]
74	CGUGAGUCUGUCUCAGGUA	UACCUGAGACAGACUCACG		[2301-2319]
75	UGAUCAGCCGCAUUCUGUA	UACAGAAUGCGGCUGAUCA	Chmp	[1008-1026]
76	GAGACCAUUGAAAUAGAAA	UUUCUAUUUCAAUGGUCUC		[1766-1784]
77	CCCUCUUCACCAUGGACAU	AUGUCCAUGGUGAAGAGGG		[1218-1236]
78	UCUCCAUCAUCGUUAUCUA	UAGAUAACGAUGAUGGAGA	Chmp	[96-114]
79	UGCGCAACAGCAAAGAGGA	UCCUCUUUGCUGUUGCGCA	Chmp	[1698-1716]
80	AGCUGAUGCCCAUGUUCAU	AUGAACAUGGGCAUCAGCU		[972-990]
81	CCUAAGGAGACCAUUGAAA	UUUCAAUGGUCUCCUUAGG		[1760-1778]
82	GACCAUUGAAAUAGAAACA	UGUUUCUAUUUCAAUGGUC		[1768-1786]
83	CGGACUGUGGGCUAUGUUU	AAACAUAGCCCACAGUCCG	Chmp	[136-154]
84	CCAUGAAGAUGAAGAUGAC	GUCAUCUUCAUCUUCAUGG	Ms, Chmp	[1890-1908]
85	GGAAAAAUGCUACACUCCA	UGGAGUGUAGCAUUUUUCC	Chmp	[766-784]
86	CUGAGAAAGAGCUCAUGAU	AUCAUGAGCUCUUUCUCAG	Chmp	[1263-1281]
87	CAAUCGUGGGACUGUUGGA	UCCAACAGUCCCACGAUUG		[160-178]
88	CACCAAACCCAUUCCGGAU	AUCCGGAAUGGGUUUGGUG	Chmp	[1651-1669]
89	CACCACCUUUCAGGAAAAA	UUUUUCCUGAAAGGUGGUG	Chmp	[754-772]
90	CUGGGUUCAUCUUUGGGAU	AUCCCAAAGAUGAACCCAG	Chmp	[840-858]
91	GAGUCUGUCUCAGGUAGAU	AUCUACCUGAGACAGACUC	Chmp	[2304-2322]

92	CCUCUUUGCUAGUAACAUU	AAUGUUACUAGCAAAGAGG	Chmp	[229-247]
93	UCAGUCACAUCCAGAAAAA	UUUUUCUGGAUGUGACUGA	Chmp	[2243-2261]
94	AGUUCCUGAGAAGAAAAAA	UUUUUUCUUCUCAGGAACU	Chmp	[1789-1807]
95	CAUCUCCCUCCUCACCAAA	UUUGGUGAGGAGGGAGAUG	Chmp	[1639-1657]
96	GGCAACUCUUCGAUUACAU	AUGUAAUCGAAGAGUUGCC	Chmp	[1359-1377]
97	CCAUCAUCGUUAUCUACUU	AAGUAGAUAACGAUGAUGG	Chmp	[99-117]
98	UCACCAAACCCAUUCCGGA	UCCGGAAUGGGUUUGGUGA	Chmp	[1650-1668]
99	GAGGCUAUGACGCCUUCAU	AUGAAGGCGUCAUAGCCUC	Chmp	[690-708]
100	CCGGAAGGUUGUUUAUCCU	AGGAUAAACAACCUUCCGG	Chmp	[1284-1302]
101	UAAGGAGACCAUUGAAAUA	UAUUUCAAUGGUCUCCUUA		[1762-1780]
102	CUUUGCUAGUAACAUUGGA	UCCAAUGUUACUAGCAAAG	Chmp	[232-250]
103	CGUUAUCUACUUCGUGGUA	UACCACGAAGUAGAUAACG	Chmp	[106-124]
104	UACUGAGUUUGCUUAUGGA	UCCAUAAGCAAACUCAGUA	Chmp	[1513-1531]
105	UCUUCACCAUGGACAUCUA	UAGAUGUCCAUGGUGAAGA	Rat,Ms	[1221-1239]
106	GAGGCCUGAUGCUAUCAGU	ACUGAUAGCAUCAGGCCUC	Chmp	[1146-1164]
107	GUGGUUUAUAAUCCUUGAA	UUCAAGGAUUAUAAACCAC		[2336-2354]
108	CAGGAAUGAUCAGCCGCAU	AUGCGGCUGAUCAUUCCUG	Chmp	[1002-1020]
109	GCAACUGUCCCACGAUUAU	AUAAUCGUGGGACAGUUGC	Chmp	[1554-1572]
110	GUCCCUUCAGAAUGUGAGA	UCUCACAUUCUGAAGGGAC	Chmp	[1049-1067]
111	CCUUGCAGACGGUGAUCAU	AUGAUCACCGUCUGCAAGG	Chmp	[624-642]
112	UGUUUAUCCUGGUGCUGAU	AUCAGCACCAGGAUAAACA	Chmp	[1293-1311]
113	CCAUCCUUACCUUGUGGUA	UACCACAAGGUAAGGAUGG	Chmp	[861-879]
114	CAAAGAGGAGCGUAUUGAC	GUCAAUACGCUCCUCUUUG	Chmp	[1708-1726]
115	AGGCCUGAAUCUGUAUUUA	UAAAUACAGAUUCAGGCCU	Chmp	[529-547]
116	GACAGUGUUGAACGUCAAU	AUUGACGUUCAACACUGUC		[1936-1954]
117	ACCUUUUGCUGUAGAUUUA	UAAAUCUACAGCAAAAGGU		[2011-2029]
118	CCUUCAGAAUGUGAGAAAU	AUUUCUCACAUUCUGAAGG	Chmp	[1052-1070]
119	CCGACUCCUUCCACAUCUU	AAGAUGUGGAAGGAGUCGG	Chmp	[789-807]
120	GAGAAAUAUUGCGGUACCA	UGGUACCGCAAUAUUUCUC	Chmp	[1064-1082]
121	ACAGCAAAGAGGAGCGUAU	AUACGCUCCUCUUUGCUGU	Chmp	[1704-1722]
122	GGUACUGGUGCACAGAUCA	UGAUCUGUGCACCAGUACC	Chmp	[876-894]
123	AGAUGACUGAGGAAGAGGA	UCCUCUUCCUCAGUCAUCU	Chmp	[1866-1884]
124	GAAUAUUGUUUUAGAAACU	AGUUUCUAAAACAAUAUUC	Chmp	[2352-2370]
125	AGUCCUACCUUUUGCUGUA	UACAGCAAAAGGUAGGACU	Chmp	[2005-2023]
126	AGAUGACGGACACCUCUGA	UCAGAGGUGUCCGUCAUCU	Chmp	[1902-1920]
127	AUGACGCCUUCAUGGAAAA	UUUUCCAUGAAGGCGUCAU	Chmp	[696-714]
128	UGAAGAUGAAGAUGACGGA	UCCGUCAUCUUCAUCUUCA	Chmp	[1893-1911]
129	CCUACCUUUUGCUGUAGAU	AUCUACAGCAAAAGGUAGG	Chmp	[2008-2026]
130	ACCAUUAGUUUGCUGUUAA	UUAACAGCAAACUAAUGGU	Chmp	[2158-2176]
131	AGCUGGAAGAAAACCAUUA	UAAUGGUUUUCUUCCAGCU	Chmp	[2146-2164]
132	CUGAGAAGAAAAAAGGAAU	AUUCCUUUUUUCUUCUCAG	Chmp	[1794-1812]
133	CUCAGUCACAUCCAGAAAA	UUUUCUGGAUGUGACUGAG		[2242-2260]
134	UGUCCCUGCUGCUCUACAU	AUGUAGAGCAGCAGGGACA	Chmp	[453-471]
135	GGUGUUGAAGGGAAAUCAG	CUGAUUUCCCUUCAACACC	Chmp	[2073-2091]
136	CAUUCGCAAUGCAGCCGAU	AUCGGCUGCAUUGCGAAUG	Chmp	[76-94]
137	CACCAAUCGUGGGACUGUU	AACAGUCCCACGAUUGGUG		[157-175]
138	UGGGCUAUGUUUUCCACCA	UGGUGGAAAACAUAGCCCA	Chmp	[143-161]
139	CAAGAAGGCCCUAAGGAGA	UCUCCUUAGGGCCUUCUUG	Chmp	[1751-1769]
140	CCCUGCUGCUCUACAUUUU	AAAAUGUAGAGCAGCAGGG	Chmp	[456-474]
141	AAGAAAAAAGGAAUCUUCA	UGAAGAUUCCUUUUUUCUU	Chmp	[1799-1817]
142	CUUGCUAUUUUCUGGAAGA	UCUUCCAGAAAAUAGCAAG	Chmp	[1427-1445]
143	UCACGAAGUGGGAGGCUAU	AUAGCCUCCCACUUCGUGA	Chmp	[679-697]
144	UCCUGAGAAGAAAAAAGGA	UCCUUUUUUCUUCUCAGGA	Chmp	[1792-1810]
145	UGUCAGUGUGGUUUAUAAU	AUUAUAAACCACACUGACA		[2329-2347]
146	CCCUUCAGAAUGUGAGAAA	UUUCUCACAUUCUGAAGGG	Chmp	[1051-1069]
147	UCAUGGAAAAGUACAUGAA	UUCAUGUACUUUUCCAUGA	Chmp	[705-723]

148	UAUUGACCUGGAUGCGGAA	UUCCGCAUCCAGGUCAAUA	Chmp	[1720-1738]
149	AAGUUCCUGAGAAGAAAAA	UUUUUCUUCUCAGGAACUU	Chmp	[1788-1806]
150	GGGACUGAUCCUAGGACUU	AAGUCCUAGGAUCAGUCCC		[1471-1489]
151	AGGCUAGCUGGAAGAAAAC	GUUUUCUUCCAGCUAGCCU	Chmp	[2141-2159]
152	CUAAGGAGACCAUUGAAAU	AUUUCAAUGGUCUCCUUAG		[1761-1779]
153	AGAAUAUGUCUCACGUGAA	UUCACGUGAGACAUAUUCU	Chmp	[924-942]
154	CAGCCGAUAUCUCCAUCAU	AUGAUGGAGAUAUCGGCUG	Chmp	[87-105]
155	UUGGAGGCUUUGAAUGGAA	UUCCAUUCAAAGCCUCCAA	Chmp	[303-321]
156	GGUUGUUUAUCCUGGUGCU	AGCACCAGGAUAAACAACC	Chmp	[1290-1308]
157	UCUACUUCGUGGUAGUGAU	AUCACUACCACGAAGUAGA	Chmp	[111-129]
158	CCUUAGUGGUGGAGCUCAU	AUGAGCUCCACCACUAAGG	Chmp	[1113-1131]
159	UGACUGAGGAAGAGGAGAA	UUCUCCUCUUCCUCAGUCA	Chmp	[1869-1887]
160	ACCCAAGAUGACUGAGGAA	UUCCUCAGUCAUCUUGGGU	Chmp	[1861-1879]
161	CUGGGUUUGCUUUUCACGA	UCGUGAAAAGCAAACCCAG	Chmp	[666-684]
162	GCUGGAAGAAAACCAUUAG	CUAAUGGUUUUCUUCCAGC	Chmp	[2147-2165]
163	CUUUGUGGAGGACAGUGUU	AACACUGUCCUCCACAAAG		[1926-1944]
164	ACUGAGUUUGCUUAUGGAA	UUCCAUAAGCAAACUCAGU	Chmp	[1514-1532]
165	UGGAGGCUUUGAAUGGAAU	AUUCCAUUCAAAGCCUCCA	Chmp	[304-322]
166	AGAGAGCAUCUGAGAAAGA	UCUUUCUCAGAUGCUCUCU	Chmp	[1254-1272]
167	AGAAAUAUUGCGGUACCAA	UUGGUACCGCAAUAUUUCU	Chmp	[1065-1083]
168	UGCUCUACAUUUUCACCAA	UUGGUGAAAAUGUAGAGCA	Chmp	[462-480]
169	GACUGAUCCUAGGACUUCU	AGAAGUCCUAGGAUCAGUC		[1473-1491]
170	GCUGUUAAUUUAUGCAUUU	AAAUGCAUAAAUUAACAGC	Chmp	[2169-2187]
171	GUUUAUAAUCCUUGAAUAU	AUAUUCAAGGAUUAUAAAC		[2339-2357]
172	UCUGGAAGAGAGUCAAUGA	UCAUUGACUCUCUUCCAGA	Chmp	[1437-1455]
173	UGCCCAGGUGGAUAAAUGU	ACAUUUAUCCACCUGGGCA		[2106-2124]
174	UCACCAAGAUCUCGGCAGA	UCUGCCGAGAUCUUGGUGA	Chmp	[474-492]
175	AGACGGUGAUCAUGCUGGU	ACCAGCAUGAUCACCGUCU	Chmp	[630-648]
176	CUGUGGGCUAUGUUUUCCA	UGGAAAACAUAGCCCACAG	Chmp	[140-158]
177	ACCAACAUCGCCUAUCCAA	UUGGAUAGGCGAUGUUGGU	Chmp	[1094-1112]
178	GGCCUGAUGCUAUCAGUCA	UGACUGAUAGCAUCAGGCC	Chmp	[1148-1166]
179	UGCUUUUCACGAAGUGGGA	UCCCACUUCGUGAAAAGCA	Chmp	[673-691]
180	ACUCAGUCACAUCCAGAAA	UUUCUGGAUGUGACUGAGU		[2241-2259]
181	GAAGGUUGUUUAUCCUGGU	ACCAGGAUAAACAACCUUC	Chmp	[1287-1305]
182	CUAGGACUUCUGAUUGGGA	UCCCAAUCAGAAGUCCUAG		[1481-1499]
183	GCUAUGACGCCUUCAUGGA	UCCAUGAAGGCGUCAUAGC	Chmp	[693-711]
184	CCUCCUCACCAAACCCAUU	AAUGGGUUUGGUGAGGAGG	Chmp	[1645-1663]
185	CCUUCCACAUCUUCCGAGA	UCUCGGAAGAUGUGGAAGG	Chmp	[795-813]
186	GAGAAGCCUUUGUGGAGGA	UCCUCCACAAAGGCUUCUC	Ms,Chmp	[1919-1937]
187	GACUCUUACUCACCUUCCU	AGGAAGGUGAGUAAGAGUC	Chmp	[2039-2057]
188	CCUGGGUUCAUCUUUGGGA	UCCCAAAGAUGAACCCAGG	Chmp	[839-857]
189	GUGGGCAACUCUUCGAUUA	UAAUCGAAGAGUUGCCCAC	Chmp	[1356-1374]
190	CUGCUGCUCUACAUUUUCA	UGAAAAUGUAGAGCAGCAG	Chmp	[458-476]
191	UGGUGUUGAAGGGAAAUCA	UGAUUUCCCUUCAACACCA	Chmp	[2072-2090]
192	GCAAAGAGGAGCGUAUUGA	UCAAUACGCUCCUCUUUGC	Chmp	[1707-1725]
193	AGAUCUCGGCAGACAUCUU	AAGAUGUCUGCCGAGAUCU	Chmp	[480-498]
194	AGGACAGUGUUGAACGUCA	UGACGUUCAACACUGUCCU		[1934-1952]
195	CCACUCAGUCACAUCCAGA	UCUGGAUGUGACUGAGUGG		[2239-2257]
196	GUAGAUUCCGGGUGUCAGU	ACUGACACCCGGAAUCUAC	Chmp	[2317-2335]
197	GAAAUAUUGCGGUACCAAG	CUUGGUACCGCAAUAUUUC	Chmp	[1066-1084]
198	AGGAGAGCCUAUGACCUAU	AUAGGUCAUAGGCUCUCCU	Chmp	[1817-1835]
199	UCGAUUACAUCCAGUCCAU	AUGGACUGGAUGUAAUCGA	Chmp	[1368-1386]
200	UUCUGUCCCUGCUGCUCUA	UAGAGCAGCAGGGACAGAA	Chmp	[450-468]
201	UCAUCUUUGGGAUGUCCAU	AUGGACAUCCCAAAGAUGA	Chmp	[846-864]
202	GCUGUACCAACAUCGCCUA	UAGGCGAUGUUGGUACAGC	Rat,Ms,Chmp	[1089-1107]
203	GAGAGCCUAUGACCUAUUU	AAAUAGGUCAUAGGCUCUC	Chmp	[1819-1837]

204	AUCCUUGAAUAUUGUUUUA	UAAAACAAUAUUCAAGGAU	Chmp	[2346-2364]
205	ACCCAUUCCGGAUGUGCAU	AUGCACAUCCGGAAUGGGU	Chmp	[1657-1675]
206	CCCUCUUUGCUAGUAACAU	AUGUUACUAGCAAAGAGGG	Chmp	[228-246]
207	UCAUCACCAUCGUGGUCAU	AUGACCACGAUGGUGAUGA	Chmp	[1623-1641]
208	CGCCUUCAUGGAAAAGUAC	GUACUUUUCCAUGAAGGCG	Chmp	[700-718]
209	GGUGCACAGAUCAGGUCAU	AUGACCUGAUCUGUGCACC	Chmp	[882-900]
210	GGACUGUGGGCUAUGUUUU	AAAACAUAGCCCACAGUCC	Chmp	[137-155]
211	GUAUUGACCUGGAUGCGGA	UCCGCAUCCAGGUCAAUAC	Chmp	[1719-1737]
212	GCCUUCAUGGAAAAGUACA	UGUACUUUUCCAUGAAGGC	Chmp	[701-719]
213	GCAACACCACCUUUCAGGA	UCCUGAAAGGUGGUGUUGC	Chmp	[750-768]
214	AACCCAUUCCGGAUGUGCA	UGCACAUCCGGAAUGGGUU	Chmp	[1656-1674]
215	GAUUGAUGUCUGACGUGAG	CUCACGUCAGACAUCAAUC		[2288-2306]
216	GCUAGCUGGAAGAAAACCA	UGGUUUUCUUCCAGCUAGC	Chmp	[2143-2161]
217	UGCUUGCUAUUUUCUGGAA	UUCCAGAAAAUAGCAAGCA	Chmp	[1425-1443]
218	UGACCUAUUUUGUGGGCUA	UAGCCCACAAAAUAGGUCA		[1828-1846]
219	CCAUUUCUUUCAUCACCAU	AUGGUGAUGAAAGAAAUGG	Chmp	[1614-1632]
220	CUUCAGAAUGUGAGAAAUA	UAUUUCUCACAUUCUGAAG	Chmp	[1053-1071]
221	GGAUGUGCAUCUCUACCGU	ACGGUAGAGAUGCACAUCC	Chmp	[1666-1684]
222	GAAGAUGACGGACACCUCU	AGAGGUGUCCGUCAUCUUC	Chmp	[1900-1918]
223	UGAUCCUAGGACUUCUGAU	AUCAGAAGUCCUAGGAUCA		[1476-1494]
224	AGGCAGACUAAGAAUCAGA	UCUGAUUCUUAGUCUGCCU		[2261-2279]
225	GCGGUGAUUUACACGGACA	UGUCCGUGUAAAUCACCGC	Chmp	[605-623]
226	CUGGAAGAAAACCAUUAGU	ACUAAUGGUUUUCUUCCAG	Chmp	[2148-2166]
227	UCCGCAAGAGAGCAUCUGA	UCAGAUGCUCUCUUGCGGA	Chmp	[1248-1266]
228	AAUUAUAGGCUAGCUGGAA	UUCCAGCUAGCCUAUAAUU	Chmp	[2135-2153]
229	CCAAGAAUAUGUCUCACGU	ACGUGAGACAUAUUCUUGG	Chmp	[921-939]
230	UAAUUAUAGGCUAGCUGGA	UCCAGCUAGCCUAUAAUUA	Chmp	[2134-2152]
231	GAAUCUUCAGGAGAGCCUA	UAGGCUCUCCUGAAGAUUC	Chmp	[1809-1827]
232	CACGUAUGAUUACUGAGUU	AACUCAGUAAUCAUACGUG	Chmp	[1503-1521]
233	CUUUAAUCCUGACUGGGUU	AACCCAGUCAGGAUUAAAG	Chmp	[654-672]
234	UACCAACAUCGCCUAUCCA	UGGAUAGGCGAUGUUGGUA	Chmp	[1093-1111]
235	CAUCUGAGAAAGAGCUCAU	AUGAGCUCUUUCUCAGAUG	Chmp	[1260-1278]
236	GAUCCUAGGACUUCUGAUU	AAUCAGAAGUCCUAGGAUC		[1477-1495]
237	CAAGAUGACUGAGGAAGAG	CUCUUCCUCAGUCAUCUUG	Chmp	[1864-1882]
238	UCAGAAUGUGAGAAAUAUU	AAUAUUUCUCACAUUCUGA	Chmp	[1055-1073]
239	CUGCUUGCUAUUUUCUGGA	UCCAGAAAAUAGCAAGCAG	Chmp	[1424-1442]
240	AUAGGCUAGCUGGAAGAAA	UUUCUUCCAGCUAGCCUAU	Chmp	[2139-2157]
241	CCGAUAUCUCCAUCAUCGU	ACGAUGAUGGAGAUAUCGG	Chmp	[90-108]
242	GACUGGGUUUGCUUUUCAC	GUGAAAAGCAAACCCAGUC	Chmp	[664-682]
243	CCUUUAGUCUCGUCCUGUG	CACAGGACGAGACUAAAGG	Chmp	[2055-2073]
244	UGAGAAAGAGCUCAUGAUU	AAUCAUGAGCUCUUUCUCA	Chmp	[1264-1282]
245	CAGCAACUGUCCCACGAUU	AAUCGUGGGACAGUUGCUG	Chmp	[1552-1570]
246	AGAUGAAGAUGACGGACAC	GUGUCCGUCAUCUUCAUCU	Chmp	[1896-1914]
247	CAUCCAAGAAGGCCCUAAG	CUUAGGGCCUUCUUGGAUG	Chmp	[1747-1765]
248	UAGUUUGCUGUUAAUUUAU	AUAAAUUAACAGCAAACUA	Chmp	[2163-2181]
249	UCCAGAAAAAGGCAGACUA	UAGUCUGCCUUUUUCUGGA		[2252-2270]
250	GGAGAGCCUAUGACCUAUU	AAUAGGUCAUAGGCUCUCC	Chmp	[1818-1836]
251	UGCUGUUAAUUUAUGCAUU	AAUGCAUAAAUUAACAGCA	Chmp	[2168-2186]
252	CAACACCACCUUUCAGGAA	UUCCUGAAAGGUGGUGUUG	Chmp	[751-769]
253	UAUGACGCCUUCAUGGAAA	UUUCCAUGAAGGCGUCAUA	Chmp	[695-713]
254	CGGUGAUUUACACGGACAC	GUGUCCGUGUAAAUCACCG	Chmp	[606-624]
255	CCAACAUCGCCUAUCCAAC	GUUGGAUAGGCGAUGUUGG	Chmp	[1095-1113]
256	UCGCCUAUCCAACCUUAGU	ACUAAGGUUGGAUAGGCGA	Chmp	[1101-1119]
257	UGACUGGGUUUGCUUUUCA	UGAAAAGCAAACCCAGUCA	Chmp	[663-681]
258	UGUUAAUUUAUGCAUUUGA	UCAAAUGCAUAAAUUAACA	Chmp	[2171-2189]
259	AAGAGGAGAACAUCCAAGA	UCUUGGAUGUUCUCCUCUU	Chmp	[1737-1755]

260	GUGGUACUGGUGCACAGAU	AUCUGUGCACCAGUACCAC	Chmp	[874-892]
261	CGCAAUGCAGCCGAUAUCU	AGAUAUCGGCUGCAUUGCG	Chmp	[80-98]
262	AAGGGAGUCCACUCAGUCA	UGACUGAGUGGACUCCCUU		[2231-2249]
263	GGGUUUGCUUUUCACGAAG	CUUCGUGAAAAGCAAACCC	Chmp	[668-686]
264	CAGAAAAAGGCAGACUAAG	CUUAGUCUGCCUUUUUCUG		[2254-2272]
265	UGCCCAUGUUCAUCAUGGU	ACCAUGAUGAACAUGGGCA		[978-996]
266	UUGCCUGAGUCCUACCUUU	AAAGGUAGGACUCAGGCAA		[1998-2016]
267	UUCCGGAUGUGCAUCUCUA	UAGAGAUGCACAUCCGGAA	Chmp	[1662-1680]
268	CCCUGGUUUUGGUGGUUGU	ACAACCACCAAAACCAGGG	Chmp	[324-342]
269	AUAUCUCCAUCAUCGUUAU	AUAACGAUGAUGGAGAUAU	Chmp	[93-111]
270	ACGAAGUGGGAGGCUAUGA	UCAUAGCCUCCCACUUCGU	Chmp	[681-699]
271	UUGCCGGAAGGUUGUUUAU	AUAAACAACCUUCCGGCAA	Chmp	[1281-1299]
272	UUUGCUAGUAACAUUGGAA	UUCCAAUGUUACUAGCAAA	Chmp	[233-251]
273	AUAUUUUGCCUGAGUCCUA	UAGGACUCAGGCAAAAUAU		[1993-2011]
274	GGUGUCAGUGUGGUUUAUA	UAUAAACCACACUGACACC		[2327-2345]
275	GAUUACAUCCAGUCCAUCA	UGAUGGACUGGAUGUAAUC	Chmp	[1370-1388]
276	CGAUAUCUCCAUCAUCGUU	AACGAUGAUGGAGAUAUCG	Chmp	[91-109]
277	GAUUACUGAGUUUGCUUAU	AUAAGCAAACUCAGUAAUC	Chmp	[1510-1528]
278	AGCCUAUGACCUAUUUUGU	ACAAAAUAGGUCAUAGGCU	Chmp	[1822-1840]
279	GUCCCUGCUGCUCUACAUU	AAUGUAGAGCAGCAGGGAC	Chmp	[454-472]
280	CAGAUCAGGUCAUUGUGCA	UGCACAAUGACCUGAUCUG	Chmp	[888-906]
281	GCUAUUUUCUGGAAGAGAG	CUCUCUUCCAGAAAAUAGC	Chmp	[1430-1448]
282	UCCAGUCCAUCACCAGUUA	UAACUGGUGAUGGACUGGA	Rat,Chmp	[1377-1395]
283	GUUACUUGGGACCACCCAU	AUGGGUGGUCCCAAGUAAC	Chmp	[1392-1410]
284	CCAGGUCUACCUUUCCCUU	AAGGGAAAGGUAGACCUGG	Chmp	[433-451]
285	UUCCAACCAUAGUGUCUGA	UCAGACACUAUGGUUGGAA	Chmp	[729-747]
286	AGGAGCGUAUUGACCUGGA	UCCAGGUCAAUACGCUCCU	Chmp	[1713-1731]
287	GCAAUCACUGCCCUUUACA	UGUAAAGGGCAGUGAUUGC	Chmp	[566-584]
288	AUUGGGAUUUCACGUAUGA	UCAUACGUGAAAUCCCAAU	Chmp	[1493-1511]
289	CUAUUUUCUGGAAGAGAGU	ACUCUCUUCCAGAAAAUAG	Chmp	[1431-1449]
290	GAGAGCAUCUGAGAAAGAG	CUCUUUCUCAGAUGCUCUC	Chmp	[1255-1273]
291	UGUCGUCCCUUCAGAAUGU	ACAUUCUGAAGGGACGACA	Chmp	[1045-1063]
292	UGUGGUGUUGAAGGGAAAU	AUUUCCCUUCAACACCACA	Chmp	[2070-2088]
293	ACUUCUGAUUGGGAUUUCA	UGAAAUCCCAAUCAGAAGU		[1486-1504]
294	GAAUGAUCAGCCGCAUUCU	AGAAUGCGGCUGAUCAUUC	Chmp	[1005-1023]
295	UGCAGACGGUGAUCAUGCU	AGCAUGAUCACCGUCUGCA	Chmp	[627-645]
296	UGAGUCUGUCUCAGGUAGA	UCUACCUGAGACAGACUCA	Chmp	[2303-2321]
297	CACAAAGUGGGCAACUCUU	AAGAGUUGCCCACUUUGUG	Chmp	[1350-1368]
298	GCACAAAGUGGGCAACUCU	AGAGUUGCCCACUUUGUGC	Chmp	[1349-1367]
299	GGAGUCCACUCAGUCACAU	AUGUGACUGAGUGGACUCC		[2234-2252]
300	UGAUUUACACGGACACCUU	AAGGUGUCCGUGUAAAUCA	Chmp	[609-627]
301	CAGGAAAAAUGCUACACUC	GAGUGUAGCAUUUUUCCUG	Chmp	[764-782]
302	CGUCCCUUCAGAAUGUGAG	CUCACAUUCUGAAGGGACG	Chmp	[1048-1066]
303	UCUUCAGGAGAGCCUAUGA	UCAUAGGCUCUCCUGAAGA	Chmp	[1812-1830]
304	CAGUGUUGAACGUCAAUGG	CCAUUGACGUUCAACACUG		[1938-1956]
305	CUGAUCCUAGGACUUCUGA	UCAGAAGUCCUAGGAUCAG		[1475-1493]
306	GGCCUGAAUCUGUAUUUAG	CUAAAUACAGAUUCAGGCC	Chmp	[530-548]
307	UGUGAGAAAUAUUGCGGUA	UACCGCAAUAUUUCUCACA	Chmp	[1061-1079]
308	ACACCUUGCAGACGGUGAU	AUCACCGUCUGCAAGGUGU	Chmp	[621-639]
309	UUUGGGAUGUCCAUCCUUA	UAAGGAUGGACAUCCCAAA	Chmp	[851-869]
310	UUGAGACCCACGAGCUCAU	AUGAGCUCGUGGGUCUCAA	Chmp	[60-78]
311	AUGCGGAAGAGGAGAACAU	AUGUUCUCCUCUUCCGCAU	Chmp	[1731-1749]
312	CCACCUUUCAGGAAAAAUG	CAUUUUUCCUGAAAGGUGG	Chmp	[756-774]
313	UGUGGGUAUCUAAAGCUGA	UCAGCUUUAGAUACCCACA		[959-977]
314	CAGUCACAUCCAGAAAAAG	CUUUUUCUGGAUGUGACUG	Chmp	[2244-2262]
315	CAACCUUAGUGGUGGAGCU	AGCUCCACCACUAAGGUUG	Chmp	[1110-1128]

316	UGGAUGCGGAAGAGGAGAA	UUCUCCUCUUCCGCAUCCA	Chmp	[1728-1746]
317	AGAAGGGAGUCCACUCAGU	ACUGAGUGGACUCCCUUCU		[2229-2247]
318	UGAUGCCCAUGUUCAUCAU	AUGAUGAACAUGGGCAUCA		[975-993]
319	GCACAGAUCAGGUCAUUGU	ACAAUGACCUGAUCUGUGC	Chmp	[885-903]
320	AAAGGCAGACUAAGAAUCA	UGAUUCUUAGUCUGCCUUU		[2259-2277]
321	CAUCACCAGUUACUUGGGA	UCCCAAGUAACUGGUGAUG	Chmp	[1384-1402]
322	GAUGCGGAAGAGGAGAACA	UGUUCUCCUCUUCCGCAUC	Chmp	[1730-1748]
323	AAGCCUUUGUGGAGGACAG	CUGUCCUCCACAAAGGCUU	Ms,Chmp	[1922-1940]
324	UGGGAUUUCACGUAUGAUU	AAUCAUACGUGAAAUCCCA	Chmp	[1495-1513]
325	ACCUUGUGGUACUGGUGCA	UGCACCAGUACCACAAGGU	Chmp	[869-887]
326	UUUUCUGGAAGAGAGUCAA	UUGACUCUCUUCCAGAAAA	Chmp	[1434-1452]
327	UGUGGUACUGGUGCACAGA	UCUGUGCACCAGUACCACA	Chmp	[873-891]
328	GGAAUGCCCUGGUUUUGGU	ACCAAAACCAGGGCAUUCC	Chmp	[318-336]
329	CAUCCAGUCCAUCACCAGU	ACUGGUGAUGGACUGGAUG	Rat,Chmp	[1375-1393]
330	CGCCUAUCCAACCUUAGUG	CACUAAGGUUGGAUAGGCG	Chmp	[1102-1120]
331	GAUGACUGAGGAAGAGGAG	CUCCUCUUCCUCAGUCAUC	Chmp	[1867-1885]
332	UGAUGCUAUCAGUCAUGCU	AGCAUGACUGAUAGCAUCA	Chmp	[1152-1170]
333	GGCAAUCACUGCCCUUUAC	GUAAAGGGCAGUGAUUGCC	Chmp	[565-583]
334	ACGUGAGUCUGUCUCAGGU	ACCUGAGACAGACUCACGU		[2300-2318]
335	GAGCUCAUUCGCAAUGCAG	CUGCAUUGCGAAUGAGCUC	Chmp	[71-89]
336	AUCUAAAGCUGAUGCCCAU	AUGGGCAUCAGCUUUAGAU		[966-984]
337	GGGUGCACUACUUGUACUU	AAGUACAAGUAGUGCACCC	Chmp	[1578-1596]
338	UCUACAUUUUCACCAAGAU	AUCUUGGUGAAAAUGUAGA	Chmp	[465-483]
339	ACGUAUGAUUACUGAGUUU	AAACUCAGUAAUCAUACGU	Chmp	[1504-1522]
340	AGAGCCUAUGACCUAUUUU	AAAAUAGGUCAUAGGCUCU	Chmp	[1820-1838]
341	CUGACGUGAGUCUGUCUCA	UGAGACAGACUCACGUCAG		[2297-2315]
342	UGACCUCCAUCUUCAACAG	CUGUUGAAGAUGGAGGUCA	Rat,Ms,Chmp	[1191-1209]
343	CUUAGGCCUGAAUCUGUAU	AUACAGAUUCAGGCCUAAG	Chmp	[526-544]
344	GCUGUCUUCCUGCUUGCUA	UAGCAAGCAGGAAGACAGC	Chmp	[1415-1433]
345	AAAAAGGCAGACUAAGAAU	AUUCUUAGUCUGCCUUUUU		[2257-2275]
346	CACAGAUCAGGUCAUUGUG	CACAAUGACCUGAUCUGUG	Chmp	[886-904]
347	GAAUAUGUCUCACGUGAAG	CUUCACGUGAGACAUAUUC	Chmp	[925-943]
348	GGAGGCUUUGAAUGGAAUG	CAUUCCAUUCAAAGCCUCC	Chmp	[305-323]
349	UAUAAUCCUUGAAUAUUGU	ACAAUAUUCAAGGAUUAUA		[2342-2360]
350	AUUGGAGGCUUUGAAUGGA	UCCAUUCAAAGCCUCCAAU	Chmp	[302-320]
351	AGAGCUCAUGAUUGCCGGA	UCCGGCAAUCAUGAGCUCU	Chmp	[1270-1288]
352	AAUGCAGCCGAUAUCUCCA	UGGAGAUAUCGGCUGCAUU	Chmp	[83-101]
353	CGGAUCCAGGUCUACCUUU	AAAGGUAGACCUGGAUCCG	Chmp	[428-446]
354	GUUCCUGAGAAGAAAAAAG	CUUUUUUCUUCUCAGGAAC	Chmp	[1790-1808]
355	CAAGAUCUCGGCAGACAUC	GAUGUCUGCCGAGAUCUUG	Chmp	[478-496]
356	CUUCCUGCUUGCUAUUUUC	GAAAAUAGCAAGCAGGAAG	Chmp	[1420-1438]
357	UGCUAUUUUCUGGAAGAGA	UCUCUUCCAGAAAAUAGCA	Chmp	[1429-1447]
358	GCCUUAGGCCUGAAUCUGU	ACAGAUUCAGGCCUAAGGC	Chmp	[524-542]
359	AGCUCAUGCCCAAUGGACU	AGUCCAUUGGGCAUGAGCU	Chmp	[1125-1143]
360	UCUGAGAAGCCUUUGUGGA	UCCACAAAGGCUUCUCAGA	Ms,Chmp	[1916-1934]
361	CUCCCUCUUUGCUAGUAAC	GUUACUAGCAAAGAGGGAG	Chmp	[226-244]
362	AGGCUAUGACGCCUUCAUG	CAUGAAGGCGUCAUAGCCU	Chmp	[691-709]
363	GUCAGCACAAAGUGGGCAA	UUGCCCACUUUGUGCUGAC	Chmp	[1345-1363]
364	AGUCCAUCACCAGUUACUU	AAGUAACUGGUGAUGGACU	Chmp	[1380-1398]
365	UGGUUUAUAAUCCUUGAAU	AUUCAAGGAUUAUAAACCA		[2337-2355]
366	UUAUCUACUUCGUGGUAGU	ACUACCACGAAGUAGAUAA	Chmp	[108-126]
367	UUUUGCCCAGGUGGAUAAA	UUUAUCCACCUGGGCAAAA		[2103-2121]
368	CUGGAAGAGAGUCAAUGAG	CUCAUUGACUCUCUUCCAG	Chmp	[1438-1456]
369	UAGCUGGAAGAAAACCAUU	AAUGGUUUUCUUCCAGCUA	Chmp	[2145-2163]
370	AACUCUUCGAUUACAUCCA	UGGAUGUAAUCGAAGAGUU	Chmp	[1362-1380]
371	AGGAGAACAUCCAAGAAGG	CCUUCUUGGAUGUUCUCCU	Chmp	[1740-1758]

372	UAGGACUUCUGAUUGGGAU	AUCCCAAUCAGAAGUCCUA		[1482-1500]
373	CUUCCUUUAGUCUCGUCCU	AGGACGAGACUAAAGGAAG	Chmp	[2052-2070]
374	AUUUUGCCCAGGUGGAUAA	UUAUCCACCUGGGCAAAAU		[2102-2120]
375	GAGCCUAUGACCUAUUUUG	CAAAAUAGGUCAUAGGCUC	Chmp	[1821-1839]
376	CUUUCAUCACCAUCGUGGU	ACCACGAUGGUGAUGAAAG	Chmp	[1620-1638]
377	GUCCACUCAGUCACAUCCA	UGGAUGUGACUGAGUGGAC		[2237-2255]
378	CCUGCUUGCUAUUUUCUGG	CCAGAAAAUAGCAAGCAGG	Chmp	[1423-1441]
379	CUGAUUGGGAUUUCACGUA	UACGUGAAAUCCCAAUCAG	Chmp	[1490-1508]
380	UCACAUCCAGAAAAAGGCA	UGCCUUUUUCUGGAUGUGA	Chmp	[2247-2265]
381	GGUCUUUAAUCCUGACUGG	CCAGUCAGGAUUAAAGACC	Chmp	[651-669]
382	AAGAAUAUGUCUCACGUGA	UCACGUGAGACAUAUUCUU	Chmp	[923-941]
383	GACUGUGGGCUAUGUUUUC	GAAAACAUAGCCCACAGUC	Chmp	[138-156]
384	CCAUUGUGCAGUCAGCACA	UGUGCUGACUGCACAAUGG		[1335-1353]
385	GCUGGACUCUUACUCACCU	AGGUGAGUAAGAGUCCAGC	Chmp	[2035-2053]
386	AACACCACCUUUCAGGAAA	UUUCCUGAAAGGUGGUGUU	Chmp	[752-770]
387	GCAUCUGAGAAAGAGCUCA	UGAGCUCUUUCUCAGAUGC	Chmp	[1259-1277]
388	CCAUCUGUACCUACUGGAG	CUCCAGUAGGUACAGAUGG	Chmp	[2206-2224]
389	CUGAGAAGCCUUUGUGGAG	CUCCACAAAGGCUUCUCAG	Ms,Chmp	[1917-1935]
390	GUGUAAUUAUAGGCUAGCU	AGCUAGCCUAUAAUUACAC	Chmp	[2131-2149]
391	CAACCAUAGUGUCUGAUGG	CCAUCAGACACUAUGGUUG	Chmp	[732-750]
392	GCCUGAAUCUGUAUUUAGC	GCUAAAUACAGAUUCAGGC	Chmp	[531-549]
393	GCCUGAGUCCUACCUUUUG	CAAAAGGUAGGACUCAGGC		[2000-2018]
394	CAGUCCAUCACCAGUUACU	AGUAACUGGUGAUGGACUG	Chmp	[1379-1397]
395	CAAUCACUGCCCUUUACAC	GUGUAAAGGGCAGUGAUUG	Chmp	[567-585]
396	UGUGCAGUCAGCACAAAGU	ACUUUGUGCUGACUGCACA	Chmp	[1339-1357]
397	GCAGACUAAGAAUCAGAAG	CUUCUGAUUCUUAGUCUGC		[2263-2281]
398	GCCGGAAGGUUGUUUAUCC	GGAUAAACAACCUUCCGGC	Chmp	[1283-1301]
399	UAUAGGCUAGCUGGAAGAA	UUCUUCCAGCUAGCCUAUA	Chmp	[2138-2156]
400	AGUUACUUGGGACCACCCA	UGGGUGGUCCCAAGUAACU	Chmp	[1391-1409]
401	CUGACCUCCAUCUUCAACA	UGUUGAAGAUGGAGGUCAG	Chmp	[1190-1208]
402	AAACCAUUAGUUUGCUGUU	AACAGCAAACUAAUGGUUU	Chmp	[2156-2174]
403	CUCUACAUUUUCACCAAGA	UCUUGGUGAAAAUGUAGAG	Chmp	[464-482]
404	AACCAUUAGUUUGCUGUUA	UAACAGCAAACUAAUGGUU	Chmp	[2157-2175]
405	GGUUUGCUUUUCACGAAGU	ACUUCGUGAAAAGCAAACC	Chmp	[669-687]
406	CAUGCAUAUUUUGCCUGAG	CUCAGGCAAAAUAUGCAUG		[1988-2006]
407	UUCAGAAUGUGAGAAAUAU	AUAUUUCUCACAUUCUGAA	Chmp	[1054-1072]
408	UGGUUUUGGUGGUUGUGCU	AGCACAACCACCAAAACCA	Ms,Chmp	[327-345]
409	CAUUAGUUUGCUGUUAAUU	AAUUAACAGCAAACUAAUG	Chmp	[2160-2178]
410	UCUUACUCACCUUCCUUUA	UAAAGGAAGGUGAGUAAGA	Chmp	[2042-2060]
411	AUGGAAAAGUACAUGAAAG	CUUUCAUGUACUUUUCCAU	Chmp	[707-725]
412	UGAUUGGGAUUUCACGUAU	AUACGUGAAAUCCCAAUCA	Chmp	[1491-1509]
413	GAAGAAAACCAUUAGUUUG	CAAACUAAUGGUUUUCUUC	Chmp	[2151-2169]
414	AGAAAAAAGGAAUCUUCAG	CUGAAGAUUCCUUUUUUCU	Chmp	[1800-1818]
415	CCUUUCAGGAAAAAUGCUA	UAGCAUUUUUCCUGAAAGG	Chmp	[759-777]
416	UGUGAUUGAUGUCUGACGU	ACGUCAGACAUCAAUCACA		[2285-2303]
417	UGAUUGAUGUCUGACGUGA	UCACGUCAGACAUCAAUCA		[2287-2305]
418	AGAGGAGCGUAUUGACCUG	CAGGUCAAUACGCUCCUCU	Chmp	[1711-1729]
419	UUGGGAUGUCCAUCCUUAC	GUAAGGAUGGACAUCCCAA	Chmp	[852-870]
420	UCCCUGACCUCCAUCUUCA	UGAAGAUGGAGGUCAGGGA	Chmp	[1187-1205]
421	AGUGUGGUUUAUAAUCCUU	AAGGAUUAUAAACCACACU		[2333-2351]
422	AAAAAAGGAAUCUUCAGGA	UCCUGAAGAUUCCUUUUUU	Chmp	[1802-1820]
423	UUAUAGGCUAGCUGGAAGA	UCUUCCAGCUAGCCUAUAA	Chmp	[2137-2155]
424	UGAAUAUUGUUUUAGAAAC	GUUUCUAAAACAAUAUUCA	Chmp	[2351-2369]
425	CUGGACUCUUACUCACCUU	AAGGUGAGUAAGAGUCCAG	Chmp	[2036-2054]
426	GGAGAACAUCCAAGAAGGC	GCCUUCUUGGAUGUUCUCC	Chmp	[1741-1759]
427	AAUGGAAUGCCCUGGUUUU	AAAACCAGGGCAUUCCAUU	Chmp	[315-333]

428	CCUUUGUGGAGGACAGUGU	ACACUGUCCUCCACAAAGG		[1925-1943]
429	GUGCAUCUCUACCGUCUGU	ACAGACGGUAGAGAUGCAC	Chmp	[1670-1688]
430	UGAUUACUGAGUUUGCUUA	UAAGCAAACUCAGUAAUCA	Chmp	[1509-1527]
431	GUGCACAGAUCAGGUCAUU	AAUGACCUGAUCUGUGCAC	Chmp	[883-901]
432	AGGUAGAUUCCGGGUGUCA	UGACACCCGGAAUCUACCU	Chmp	[2315-2333]
433	AUGACGGACACCUCUGAGA	UCUCAGAGGUGUCCGUCAU	Chmp	[1904-1922]
434	GAAUGUGAGAAAUAUUGCG	CGCAAUAUUUCUCACAUUC	Chmp	[1058-1076]
435	GCCUAUGACCUAUUUUGUG	CACAAAAUAGGUCAUAGGC	Chmp	[1823-1841]
436	GGACUGUUGGAGGCUUCUU	AAGAAGCCUCCAACAGUCC	Rat	[168-186]
437	AUUGUGCAGUCAGCACAAA	UUUGUGCUGACUGCACAAU	Chmp	[1337-1355]
438	CUGAGUCCUACCUUUUGCU	AGCAAAAGGUAGGACUCAG		[2002-2020]
439	GAGCAUCUGAGAAAGAGCU	AGCUCUUUCUCAGAUGCUC	Chmp	[1257-1275]
440	AGCAACUGUCCCACGAUUA	UAAUCGUGGGACAGUUGCU	Chmp	[1553-1571]
441	CAGUUGUAAAUUUUGCCCA	UGGGCAAAAUUUACAACUG	Chmp	[2093-2111]
442	UUCGCAAUGCAGCCGAUAU	AUAUCGGCUGCAUUGCGAA	Chmp	[78-96]
443	UGUCUUCCUGCUUGCUAUU	AAUAGCAAGCAGGAAGACA	Chmp	[1417-1435]
444	AGUUGUAAAUUUUGCCCAG	CUGGGCAAAAUUUACAACU	Chmp	[2094-2112]
445	UUGGGAUUUCACGUAUGAU	AUCAUACGUGAAAUCCCAA	Chmp	[1494-1512]
446	UUUUGCUGUAGAUUUACCA	UGGUAAAUCUACAGCAAAA		[2014-2032]
447	ACCUAUUUUGUGGGCUAGA	UCUAGCCCACAAAAUAGGU		[1830-1848]
448	CCUGCUGCUCUACAUUUUC	GAAAAUGUAGAGCAGCAGG	Chmp	[457-475]
449	GGGAUGUCCAUCCUUACCU	AGGUAAGGAUGGACAUCCC	Chmp	[854-872]
450	GCUAUGUUUUCCACCAAUC	GAUUGGUGGAAAACAUAGC	Chmp	[146-164]
451	UCGUCCCUUCAGAAUGUGA	UCACAUUCUGAAGGGACGA	Chmp	[1047-1065]
452	ACACCUCUGAGAAGCCUUU	AAAGGCUUCUCAGAGGUGU	Chmp	[1911-1929]
453	CUUACCUUGUGGUACUGGU	ACCAGUACCACAAGGUAAG	Chmp	[866-884]
454	AUUGAUGUCUGACGUGAGU	ACUCACGUCAGACAUCAAU		[2289-2307]
455	GGAUCCAGGUCUACCUUUC	GAAAGGUAGACCUGGAUCC	Chmp	[429-447]
456	AGGACUUCUGAUUGGGAUU	AAUCCCAAUCAGAAGUCCU		[1483-1501]
457	AUCCAACCUUAGUGGUGGA	UCCACCACUAAGGUUGGAU	Chmp	[1107-1125]
458	CAUCGUUAUCUACUUCGUG	CACGAAGUAGAUAACGAUG	Chmp	[103-121]
459	GCCUCCCUCUUUGCUAGUA	UACUAGCAAAGAGGGAGGC	Chmp	[224-242]
460	GGAUUUCACGUAUGAUUAC	GUAAUCAUACGUGAAAUCC	Chmp	[1497-1515]
461	AGCCUUUGUGGAGGACAGU	ACUGUCCUCCACAAAGGCU	Ms,Chmp	[1923-1941]
462	AGCUCAUGAUUGCCGGAAG	CUUCCGGCAAUCAUGAGCU	Chmp	[1272-1290]
463	AAGAGAGCAUCUGAGAAAG	CUUUCUCAGAUGCUCUCUU	Chmp	[1253-1271]
464	AAUCCUUGAAUAUUGUUUU	AAAACAAUAUUCAAGGAUU	Chmp	[2345-2363]
465	AGAAGAAAAAAGGAAUCUU	AAGAUUCCUUUUUUCUUCU	Chmp	[1797-1815]
466	GACACCUCUGAGAAGCCUU	AAGGCUUCUCAGAGGUGUC	Chmp	[1910-1928]
467	GAAGCCUUUGUGGAGGACA	UGUCCUCCACAAAGGCUUC	Ms,Chmp	[1921-1939]
468	CUCUGAGAAGCCUUUGUGG	CCACAAAGGCUUCUCAGAG	Chmp	[1915-1933]
469	CCUGAUGCUAUCAGUCAUG	CAUGACUGAUAGCAUCAGG	Chmp	[1150-1168]
470	GAUUGGAGCCUCCCUCUUU	AAAGAGGGAGGCUCCAAUC	Chmp	[217-235]
471	UGUUCAUCAUGGUGAUGCC	GGCAUCACCAUGAUGAACA		[984-1002]
472	CAUGAUUGCCGGAAGGUUG	CAACCUUCCGGCAAUCAUG	Chmp	[1276-1294]
473	GCAGCCGAUAUCUCCAUCA	UGAUGGAGAUAUCGGCUGC	Chmp	[86-104]
474	AGUACCUGAGGAAGCGGUU	AACCGCUUCCUCAGGUACU	Chmp	[399-417]
475	AAGCUGAUGCCCAUGUUCA	UGAACAUGGGCAUCAGCUU		[971-989]
476	CUUUGGGAUGUCCAUCCUU	AAGGAUGGACAUCCCAAAG	Chmp	[850-868]
477	AGACCAUUGAAAUAGAAAC	GUUUCUAUUUCAAUGGUCU		[1767-1785]
478	UGCCUGAGUCCUACCUUUU	AAAAGGUAGGACUCAGGCA		[1999-2017]
479	AAGUGGGCAACUCUUCGAU	AUCGAAGAGUUGCCCACUU	Chmp	[1354-1372]
480	UCUGAGAAAGAGCUCAUGA	UCAUGAGCUCUUUCUCAGA	Chmp	[1262-1280]
481	ACAUCCAAGAAGGCCCUAA	UUAGGGCCUUCUUGGAUGU	Chmp	[1746-1764]
482	AUUAGUUUGCUGUUAAUUU	AAAUUAACAGCAAACUAAU	Chmp	[2161-2179]
483	CUUCCACAUCUUCCGAGAU	AUCUCGGAAGAUGUGGAAG	Chmp	[796-814]

484	CAGAAUGUGAGAAAUAUUG	CAAUAUUUCUCACAUUCUG	Chmp	[1056-1074]
485	UCUCGUCCUGUGGUGUUGA	UCAACACCACAGGACGAGA	Chmp	[2062-2080]
486	ACCUCUGAGAAGCCUUUGU	ACAAAGGCUUCUCAGAGGU	Chmp	[1913-1931]
487	UAUUUUGUGGGCUAGAGCA	UGCUCUAGCCCACAAAAUA		[1833-1851]
488	GAACAUCCAAGAAGGCCCU	AGGGCCUUCUUGGAUGUUC	Chmp	[1744-1762]
489	GCAACUCUUCGAUUACAUC	GAUGUAAUCGAAGAGUUGC	Chmp	[1360-1378]
490	CUAUGUUUUCCACCAAUCG	CGAUUGGUGGAAAACAUAG	Chmp	[147-165]
491	GAUUGGGAUUUCACGUAUG	CAUACGUGAAAUCCCAAUC	Chmp	[1492-1510]
492	UCACCAUCGUGGUCAUCUC	GAGAUGACCACGAUGGUGA	Chmp	[1626-1644]
493	CAUUCCAACCAUAGUGUCU	AGACACUAUGGUUGGAAUG	Chmp	[727-745]
494	CACAGAAAAAAUUGCCUGU	ACAGGCAAUUUUUUCUGUG		[1027-1045]
495	CUACCUUUUGCUGUAGAUU	AAUCUACAGCAAAAGGUAG	Chmp	[2009-2027]
496	AGAAAACCAUUAGUUUGCU	AGCAAACUAAUGGUUUUCU	Chmp	[2153-2171]
497	ACCAAGAUCUCGGCAGACA	UGUCUGCCGAGAUCUUGGU	Chmp	[476-494]
498	GGAAGAGAGUCAAUGAGCC	GGCUCAUUGACUCUCUUCC	Chmp	[1440-1458]
499	UAAAUUUUGCCCAGGUGGA	UCCACCUGGGCAAAAUUUA		[2099-2117]
500	AUUGCCGGAAGGUUGUUUA	UAAACAACCUUCCGGCAAU	Chmp	[1280-1298]

Table B 32 SORD - sorbitol dehydrogenase

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-34147623 :131-1204
1	GGUUGAAAAUCAUGCUCAA	UUGAGCAUGAUUUUCAACC		[1158-1176]
2	GGAAUUUUAUUGUGAAAAA	UUUUUCACAAUAAAAUUCC	Chmp	[303-321]
3	CAACUAGGCUCAUACUCAA	UUGAGUAUGAGCCUAGUUG	Chmp	[2112-2130]
4	GGUCGAAUUGGGAAUUUUA	UAAAAUUCCCAAUUCGACC	Chmp	[293-311]
5	GAUCCAGGAUAAUUUUUAA	UUAAAAAUUAUCCUGGAUC	Chmp	[1756-1774]
6	CUUUGAGACUAUUCAUCAA	UUGAUGAAUAGUCUCAAAG	Chmp	[2318-2336]
7	CAAGAAUGAGGAUAUAGUA	UACUAUAUCCUCAUUCUUG	Chmp	[2334-2352]
8	CCAAGUCUGUGAAUGUAAA	UUUACAUUCACAGACUUGG		[1068-1086]
9	GAUGAUAAAAGGAGAAUAA	UUAUUCUCCUUUUAUCAUC	Chmp	[1717-1735]
10	GGUGGAGGGUGAGUUUGAA	UUCAAACUCACCCUCCACC	Chmp	[2402-2420]
11	CAUCGGUAAAGCACCUAAA	UUUAGGUGCUUUACCGAUG	Chmp	[372-390]
12	GAUAAAAGGAGAAUAAGAA	UUCUUAUUCUCCUUUUAUC	Chmp	[1720-1738]
13	GAAUGUUAAGAAUAACUAA	UUAGUUAUUCUUAACAUUC	Chmp	[1298-1316]
14	CCCUGUUCAUGCUGAGCAA	UUGCUCAGCAUGAACAGGG	Chmp	[1412-1430]
15	GACUAUUCAUCAAGAAUGA	UCAUUCUUGAUGAAUAGUC	Chmp	[2324-2342]
16	GCGUGUUUCGAUACUGCAA	UUGCAGUAUCGAAACACGC	Rat,Ms	[1017-1035]
17	GCUGAGUUAUGAAAAGAUA	UAUCUUUUCAUAACUCAGC	Chmp	[1566-1584]
18	GAAGCUGAUUUUCAUGAAA	UUUCAUGAAAAUCAGCUUC		[1610-1628]
19	CAAUGUUUCUAGAGACAUA	UAUGUCUCUAGAAACAUUG		[1683-1701]
20	CUGAGUUAUGAAAAGAUAA	UUAUCUUUUCAUAACUCAG	Chmp	[1567-1585]
21	CAUCAAGAAUGAGGAUAUA	UAUAUCCUCAUUCUUGAUG	Chmp	[2331-2349]
22	CAUGGUGCUGGGACAUGAA	UUCAUGUCCCAGCACCAUG	Chmp	[325-343]
23	GGAUAAUUUUUAAACCAAU	AUUGGUUUAAAAAUUAUCC	Chmp	[1762-1780]
24	CCAGAAUCCCUGAUGUUAA	UUAACAUCAGGGAUUCUGG	Chmp	[1192-1210]
25	GAUUGCUUUGGGUAAUAAA	UUUAUUACCCAAAGCAAUC	Chmp	[2478-2496]
26	AGCUGAUUUUCAUGAAAAU	AUUUUCAUGAAAAUCAGCU		[1612-1630]
27	UGGGAAUUUUAUUGUGAAA	UUUCACAAUAAAAUUCCCA	Chmp	[301-319]
28	GGAAUUGGUGUGCCUUAAA	UUUAAGGCACACCAAUUCC	Chmp	[1351-1369]
29	GAGGGCUGAGUUAUGAAAA	UUUUCAUAACUCAGCCCUC		[1562-1580]
30	GAACUAUCCUAUCCCUGAA	UUCAGGGAUAGGAUAGUUC	Chmp	[199-217]
31	GGUAAGAUUUAGACCUAAA	UUUAGGUCUAAAUCUUACC		[2278-2296]
32	CGGGAACAGUCGAAAAAGU	ACUUUUUCGACUGUUCCCG	Chmp	[348-366]
33	UGAGACUAUUCAUCAAGAA	UUCUUGAUGAAUAGUCUCA	Chmp	[2321-2339]
34	CCCAGAAGCUGAUUUUCAU	AUGAAAAUCAGCUUCUGGG		[1606-1624]

35	GGUUCUGAUUUUCUUGUAA	UUACAAGAAAAUCAGAACC	Chmp	[2423-2441]
36	GGAGAAUAAGAAAAGGCAU	AUGCCUUUUCUUAUUCUCC	Chmp	[1727-1745]
37	GCAAGAUGGGCCGAUACAA	UUGUAUCGGCCCAUCUUGC	Chmp	[447-465]
38	GGUUAUUAUAAACAGAAAA	UUUUCUGUUUAUAAUAACC	Chmp	[2163-2181]
39	CCCUAAUGUGGAAAAAGUA	UACUUUUUCCACAUUAGGG	Chmp	[1844-1862]
40	CCAGGAAACUGCUACUUGU	ACAAGUAGCAGUUUCCUGG		[2001-2019]
41	GCCGGUUCUAUAAGCACAA	UUGUGCUUAUAGAACCGGC	Chmp	[519-537]
42	GGCCUUUGAAACAUUUAAA	UUUAAAUGUUUCAAAGGCC	Chmp	[1129-1147]
43	UGGUUAUUAUAAACAGAAA	UUUCUGUUUAUAAUAACCA	Chmp	[2162-2180]
44	AGAUUAGCAUCCCAUACUA	UAGUAUGGGAUGCUAAUCU	Chmp	[2078-2096]
45	GGACAUGAAGCUUCGGGAA	UUCCCGAAGCUUCAUGUCC	Chmp	[335-353]
46	CAGAAUCCCUGAUGUUAAU	AUUAACAUCAGGGAUUCUG	Chmp	[1193-1211]
47	CAAGUCUGUGAAUGUAAAA	UUUUACAUUCACAGACUUG		[1069-1087]
48	UGAUAAAAGGAGAAUAAGA	UCUUAUUCUCCUUUUAUCA	Chmp	[1719-1737]
49	GCAGAACUUUCUCUUUUGA	UCAAAAGAGAAAGUUCUGC	Chmp	[1281-1299]
50	GUCGAAUUGGGAAUUUUAU	AUAAAAUUCCCAAUUCGAC	Chmp	[294-312]
51	UCCGGGAGGUGGAUAUCAA	UUGAUAUCCACCUCCCGGA	Chmp	[996-1014]
52	GGCUGUUUGUUUUGAUGAU	AUCAUCAAAACAAACAGCC	Chmp	[1704-1722]
53	UGUUUGUUUUGAUGAUAAA	UUUAUCAUCAAAACAAACA	Chmp	[1707-1725]
54	GAGUAUGGUCGAAUUGGGA	UCCCAAUUCGACCAUACUC	Chmp	[287-305]
55	AGAAGAUUAGCAUCCCAUA	UAUGGGAUGCUAAUCUUCU	Chmp	[2075-2093]
56	CAGAACUUUCUCUUUUGAA	UUCAAAAGAGAAAGUUCUG	Chmp	[1282-1300]
57	AUCGGUAAAGCACCUAAAA	UUUUAGGUGCUUUACCGAU	Chmp	[373-391]
58	AUAAAAGGAGAAUAAGAAA	UUUCUUAUUCUCCUUUUAU	Chmp	[1721-1739]
59	GCCUUUGAAACAUUUAAAA	UUUUAAAUGUUUCAAAGGC	Chmp	[1130-1148]
60	GGGUGAGUUUGAAGAGGUU	AACCUCUUCAAACUCACCC	Chmp	[2408-2426]
61	CAAUGUCACCUUUGAGGAA	UUCCUCAAAGGUGACAUUG	Chmp	[565-583]
62	GGCUGAGUUAUGAAAAGAU	AUCUUUUCAUAACUCAGCC		[1565-1583]
63	AGCUCUGGAGGCCUUUGAA	UUCAAAGGCCUCCAGAGCU	Chmp	[1120-1138]
64	GGCGUGUUUCGAUACUGCA	UGCAGUAUCGAAACACGCC	Rat,Ms	[1016-1034]
65	CCUAAUGUGGAAAAAGUAA	UUACUUUUUCCACAUUAGG	Chmp	[1845-1863]
66	GGGAAUGAGGGCUGAGUUA	UAACUCAGCCCUCAUUCCC		[1556-1574]
67	CUUCCAGUUUAGAACGCAA	UUGCGUUCUAAACUGGAAG		[1667-1685]
68	GGUGUGCCUUAAAGAUACA	UGUAUCUUUAAGGCACACC	Chmp	[1357-1375]
69	GGGCUGAGUUAUGAAAAGA	UCUUUUCAUAACUCAGCCC		[1564-1582]
70	CCUGGAGUGCCUUCAUUGA	UCAAUGAAGGCACUCCAGG	Chmp	[1485-1503]
71	AGAAGCUGAUUUUCAUGAA	UUCAUGAAAAUCAGCUUCU		[1609-1627]
72	GAACUUGUCUUAUUUUAAU	AUUAAAAUAAGACAAGUUC	Chmp	[2243-2261]
73	CCUUCAUUGAGGAAGGAAA	UUUCCUUCCUCAAUGAAGG	Chmp	[1494-1512]
74	UCUUCUCAUUACCAGUAAA	UUUACUGGUAAUGAGAAGA		[2189-2207]
75	GGUAAAGCACCUAAAACCA	UGGUUUUAGGUGCUUUACC	Chmp	[376-394]
76	CAAGAUGGGCCGAUACAAU	AUUGUAUCGGCCCAUCUUG	Chmp	[448-466]
77	UUGGGAAUUUUAUUGUGAA	UUCACAAUAAAAUUCCCAA	Chmp	[300-318]
78	AGGAUAAUUUUUAAACCAA	UUGGUUUAAAAAUUAUCCU	Chmp	[1761-1779]
79	CGCAAUGUUUCUAGAGACA	UGUCUCUAGAAACAUUGCG		[1681-1699]
80	CAGCACUUCCAGUUUAGAA	UUCUAAACUGGAAGUGCUG	Chmp	[1662-1680]
81	UGACAUAGCUUGAGCUAUA	UAUAGCUCAAGCUAUGUCA	Chmp	[2357-2375]
82	AGGAAUUGGUGUGCCUUAA	UUAAGGCACACCAAUUCCU	Chmp	[1350-1368]
83	CCAGAAGAUUAGCAUCCCA	UGGGAUGCUAAUCUUCUGG	Chmp	[2073-2091]
84	CUGUUGGAAUGAUUUCUAU	AUAGAAAUCAUUCCAACAG	Chmp	[2224-2242]
85	CCUUUGAAACAUUUAAAAA	UUUUUAAAUGUUUCAAAGG	Chmp	[1131-1149]
86	UGAGGGCUGAGUUAUGAAA	UUUCAUAACUCAGCCCUCA		[1561-1579]
87	AAGCUGAUUUUCAUGAAAA	UUUUCAUGAAAAUCAGCUU		[1611-1629]
88	CUGGGAGUAUGGUCGAAUU	AAUUCGACCAUACUCCCAG	Chmp	[283-301]
89	GAGGAAUUGGUGUGCCUUA	UAAGGCACACCAAUUCCUC	Chmp	[1349-1367]
90	CUGUUUGUUUUGAUGAUAA	UUAUCAUCAAAACAAACAG	Chmp	[1706-1724]

91	CAGGAUAAUUUUUAAACCA	UGGUUUAAAAAUUAUCCUG	Chmp	[1760-1778]
92	AGGAGAAUAAGAAAAGGCA	UGCCUUUUCUUAUUCUCCU	Chmp	[1726-1744]
93	CUCAAGUAGUGGUGACUGA	UCAGUCACCACUACUUGAG	Chmp	[723-741]
94	UGAACUUGUCUUAUUUUAA	UUAAAAUAAGACAAGUUCA	Chmp	[2242-2260]
95	CUUCGGGAACAGUCGAAAA	UUUUCGACUGUUCCCGAAG	Chmp	[345-363]
96	GUGUUUCGAUACUGCAACA	UGUUGCAGUAUCGAAACAC	Rat,Ms,Chmp	[1019-1037]
97	GGGCUCUGAUGCAGAACUU	AAGUUCUGCAUCAGAGCCC	Chmp	[1271-1289]
98	GCUCUGGAGGCCUUUGAAA	UUUCAAAGGCCUCCAGAGC	Chmp	[1121-1139]
99	GGGCCGAUACAAUCUGUCA	UGACAGAUUGUAUCGGCCC	Chmp	[454-472]
100	AGGCCUUUGAAACAUUUAA	UUAAAUGUUUCAAAGGCCU	Chmp	[1128-1146]
101	GUUACAAGCUUCCUGACAA	UUGUCAGGAAGCUUGUAAC	Chmp	[549-567]
102	UUGGAAUGAUUUCUAUGAA	UUCAUAGAAAUCAUUCCAA	Chmp	[2227-2245]
103	GAGGAUGCAUUCUGUUGGA	UCCAACAGAAUGCAUCCUC	Chmp	[241-259]
104	CUGACAAUGUCACCUUUGA	UCAAAGGUGACAUUGUCAG	Chmp	[561-579]
105	AAGUGGGAUCAUCGGUAAA	UUUACCGAUGAUCCCACUU	Chmp	[363-381]
106	GGAUCCAGGAUAAUUUUUA	UAAAAAUUAUCCUGGAUCC	Chmp	[1755-1773]
107	UGAUGAUAAAAGGAGAAUA	UAUUCUCCUUUUAUCAUCA	Chmp	[1716-1734]
108	ACCUCUGCCGGUUCUAUAA	UUAUAGAACCGGCAGAGGU	Chmp	[513-531]
109	AAAGUGGGAUCAUCGGUAA	UUACCGAUGAUCCCACUUU	Chmp	[362-380]
110	GGAGGGUUUGGUUAGCUCA	UGAGCUAACCAAACCCUCC	Chmp	[2038-2056]
111	UGGUAAGAUUUAGACCUAA	UUAGGUCUAAAUCUUACCA		[2277-2295]
112	CCAGGAAAGUAGAAGGUCA	UGACCUUCUACUUUCCUGG		[828-846]
113	AGGAGAGCCCUCAGGAAAU	AUUUCCUGAGGGCUCUCCU	Chmp	[807-825]
114	GGAGUGCCUUCAUUGAGGA	UCCUCAAUGAAGGCACUCC	Chmp	[1488-1506]
115	CUGGUAAGAUUUAGACCUA	UAGGUCUAAAUCUUACCAG		[2276-2294]
116	UGGGAUCAUCGGUAAAGCA	UGCUUUACCGAUGAUCCCA	Chmp	[366-384]
117	GAAUGAUUUCUAUGAACUU	AAGUUCAUAGAAAUCAUUC	Chmp	[2230-2248]
118	CCAACUUGUGACUUUGAGA	UCUCAAAGUCACAAGUUGG	Chmp	[2307-2325]
119	CUCUUCUCAUUACCAGUAA	UUACUGGUAAUGAGAAGAG		[2188-2206]
120	CCACAGUCUUGGGAUCUCA	UGAGAUCCCAAGACUGUGG		[1229-1247]
121	UGACUUUGAGACUAUUCAU	AUGAAUAGUCUCAAAGUCA	Chmp	[2315-2333]
122	AGAACUUUCUCUUUUGAAU	AUUCAAAAGAGAAAGUUCU	Chmp	[1283-1301]
123	CAGUGACCAGAAUCCCUGA	UCAGGGAUUCUGGUCACUG	Chmp	[1186-1204]
124	GAGACUAUUCAUCAAGAAU	AUUCUUGAUGAAUAGUCUC	Chmp	[2322-2340]
125	GGGAAUUUUAUUGUGAAAA	UUUUCACAAUAAAAUUCCC	Chmp	[302-320]
126	AAGGAGAGCCCUCAGGAAA	UUUCCUGAGGGCUCUCCUU	Chmp	[806-824]
127	AGGGCUGAGUUAUGAAAAG	CUUUUCAUAACUCAGCCCU		[1563-1581]
128	AUGAGGGCUGAGUUAUGAA	UUCAUAACUCAGCCCUCAU		[1560-1578]
129	GGUUAUUAGACAAUUCCAU	AUGGAAUUGUCUAAUAACC	Chmp	[2136-2154]
130	GUGGGUUUUUUUUCUGGUA	UACCAGAAAAAAAACCCAC		[2263-2281]
131	GUUUGUUUUGAUGAUAAAA	UUUUAUCAUCAAAACAAAC	Chmp	[1708-1726]
132	UAAUGUGGAAAAAGUAAGA	UCUUACUUUUUCCACAUUA	Chmp	[1847-1865]
133	AAAUGUCAUGUGAGGUUAA	UUAACCUCACAUGACAUUU	Chmp	[1811-1829]
134	CUGGUUAUUAUAAACAGAA	UUCUGUUUAUAAUAACCAG	Chmp	[2161-2179]
135	AUACUAGACUCAUACUCAA	UUGAGUAUGAGUCUAGUAU		[2091-2109]
136	GAAAAGAUAACUUCAUGAA	UUCAUGAAGUUAUCUUUUC	Chmp	[1576-1594]
137	CCAGUAAAGGCUCUUGGUA	UACCAAGAGCCUUUACUGG		[2200-2218]
138	GAUUUAGACCUAAAUCGCA	UGCGAUUUAGGUCUAAAUC		[2283-2301]
139	AAUUGGUGUGCCUUAAAGA	UCUUUAAGGCACACCAAUU	Chmp	[1353-1371]
140	GUUCUAUAAGCACAAUGCA	UGCAUUGUGCUUAUAGAAC	Chmp	[523-541]
141	GAGCAAAGUUCAGCAAGUA	UACUUGCUGAACUUUGCUC	Chmp	[1425-1443]
142	GGAAACUGCUACUUGUGGA	UCCACAAGUAGCAGUUUCC		[2004-2022]
143	UCUUUCUGGUUAUUAUAAA	UUUAUAAUAACCAGAAAGA	Chmp	[2156-2174]
144	CGCCUGGAGAACUAUCCUA	UAGGAUAGUUCUCCAGGCG	Chmp	[191-209]
145	CCUGGAUCCAGGAUAAUUU	AAAUUAUCCUGGAUCCAGG	Chmp	[1752-1770]
146	GUGACUUUGAGACUAUUCA	UGAAUAGUCUCAAAGUCAC	Chmp	[2314-2332]

147	CAGUAAAGGCUCUUGGUAU	AUACCAAGAGCCUUUACUG		[2201-2219]
148	AGGUCUUGCUGAGGAUGCA	UGCAUCCUCAGCAAGACCU	Chmp	[231-249]
149	CCGGUUCUAUAAGCACAAU	AUUGUGCUUAUAGAACCGG	Chmp	[520-538]
150	GGAGUAUGGUCGAAUUGGG	CCCAAUUCGACCAUACUCC	Chmp	[286-304]
151	AGCAAUGGGAGCAGCUCAA	UUGAGCUGCUCCCAUUGCU	Chmp	[709-727]
152	GAAAAUGAUGAAUUCUGCA	UGCAGAAUUCAUCAUUUUC	Chmp	[431-449]
153	GAAGAUUGCCUCUUCUACA	UGUAGAAGAGGCAAUCUUC		[1885-1903]
154	UUUCGAUGCUUGCGUCCAA	UUGGACGCAAGCAUCGAAA	GP,Chmp	[1053-1071]
155	GGUUUUUUUUCUGGUAAGA	UCUUACCAGAAAAAAAACC		[2266-2284]
156	CAAUUCAUUGUGAACAGAA	UUCUGUUCACAAUGAAUUG	Chmp	[1319-1337]
157	AGUGGUGACUGAUCUGUCU	AGACAGAUCAGUCACCACU	Chmp	[730-748]
158	GGAAAAAGUAAGAGGACUA	UAGUCCUCUUACUUUUUCC		[1853-1871]
159	CUCUGAGAUGACCACCGUA	UACGGUGGUCAUCUCAGAG	Chmp	[958-976]
160	UUGAGACUAUUCAUCAAGA	UCUUGAUGAAUAGUCUCAA	Chmp	[2320-2338]
161	CUGGAUCCAGGAUAAUUUU	AAAAUUAUCCUGGAUCCAG	Chmp	[1753-1771]
162	CAGUUUAGAACGCAAUGUU	AACAUUGCGUUCUAAACUG		[1671-1689]
163	GUAAGAUUUAGACCUAAAU	AUUUAGGUCUAAAUCUUAC		[2279-2297]
164	CUCUGAUGCAGAACUUUCU	AGAAAGUUCUGCAUCAGAG	Chmp	[1274-1292]
165	AAAUCAUGCUCAAGUGUGA	UCACACUUGAGCAUGAUUU		[1164-1182]
166	CCGAGAAAAUGAUGAAUUC	GAAUUCAUCAUUUUCUCGG	Chmp	[427-445]
167	CAGAUUGCUUUGGGUAAUA	UAUUACCCAAAGCAAUCUG	Chmp	[2476-2494]
168	UUUUGAUGAUAAAAGGAGA	UCUCCUUUUAUCAUCAAAA	Chmp	[1713-1731]
169	CUGCUACCCGAUUGUCCAA	UUGGACAAUCGGGUAGCAG	Chmp	[747-765]
170	CUGGGAUGAAGGCUUGUCA	UGACAAGCCUUCAUCCCAG	Chmp	[1645-1663]
171	GGCUCUGAUGCAGAACUUU	AAAGUUCUGCAUCAGAGCC	Chmp	[1272-1290]
172	GCUUCGGGAACAGUCGAAA	UUUCGACUGUUCCCGAAGC	Chmp	[344-362]
173	AGGUUCUGAUUUUCUUGUA	UACAAGAAAAUCAGAACCU	Chmp	[2422-2440]
174	CCAAAUGAGGUCUUGCUGA	UCAGCAAGACCUCAUUUGG	Chmp	[224-242]
175	UGGGUUUUUUUUCUGGUAA	UUACCAGAAAAAAAACCCA		[2264-2282]
176	AAUUGAUGGUUAUUAGACA	UGUCUAAUAACCAUCAAUU	Chmp	[2129-2147]
177	GCACCUAAAACCAGGUGAU	AUCACCUGGUUUUAGGUGC	Chmp	[382-400]
178	UCACCAGGCAACCAGGAAA	UUUCCUGGUUGCCUGGUGA	Chmp	[1990-2008]
179	GAGUGCCUUCAUUGAGGAA	UUCCUCAAUGAAGGCACUC	Chmp	[1489-1507]
180	AAUGUCAUGUGAGGUUAAA	UUUAACCUCACAUGACAUU	Chmp	[1812-1830]
181	CGUCCAAGUCUGUGAAUGU	ACAUUCACAGACUUGGACG		[1065-1083]
182	CUAUGAACUUGUCUUAUUU	AAAUAAGACAAGUUCAUAG	Chmp	[2239-2257]
183	GCCCAGAAGCUGAUUUUCA	UGAAAAUCAGCUUCUGGGC		[1605-1623]
184	AUCCCAUACUAGACUCAUA	UAUGAGUCUAGUAUGGGAU		[2086-2104]
185	UGAUCUGUCUGCUACCCGA	UCGGGUAGCAGACAGAUCA	Chmp	[739-757]
186	CUUGAGCUAUAGCCUUUAA	UUAAAGGCUAUAGCUCAAG	Chmp	[2365-2383]
187	UGUGAACAGAAGUCCUUAA	UUAAGGACUUCUGUUCACA		[1327-1345]
188	UGUGGAAAAAGUAAGAGGA	UCCUCUUACUUUUUCCACA	Chmp	[1850-1868]
189	AAGAGGUUCUGAUUUUCUU	AAGAAAAUCAGAACCUCUU	Chmp	[2419-2437]
190	GAACAGAAGUCCUUAAGCA	UGCUUAAGGACUUCUGUUC		[1330-1348]
191	UGGUUAUUAGACAAUUCCA	UGGAAUUGUCUAAUAACCA	Chmp	[2135-2153]
192	ACUUGCGCCUGGAGAACUA	UAGUUCUCCAGGCGCAAGU	Chmp	[186-204]
193	CUUCAUUGAGGAAGGAAAU	AUUUCCUUCCUCAAUGAAG	Chmp	[1495-1513]
194	GAGGCCUUUGAAACAUUUA	UAAAUGUUUCAAAGGCCUC	Chmp	[1127-1145]
195	UUUCCUGGAUCCAGGAUAA	UUAUCCUGGAUCCAGGAAA	Chmp	[1749-1767]
196	CUUCCUGGAGUGCCUUCAU	AUGAAGGCACUCCAGGAAG	Chmp	[1482-1500]
197	GGGUUUUUUUUCUGGUAAG	CUUACCAGAAAAAAAACCC		[2265-2283]
198	UCUGGUUAUUAUAAACAGA	UCUGUUUAUAAUAACCAGA	Chmp	[2160-2178]
199	AGGCUUGUCAGCACUUCCA	UGGAAGUGCUGACAAGCCU	Chmp	[1654-1672]
200	GCAAAGUUCAGCAAGUAGA	UCUACUUGCUGAACUUUGC	Chmp	[1427-1445]
201	GAAUUUUAUUGUGAAAAAG	CUUUUUCACAAUAAAAUUC	Chmp	[304-322]
202	CUCUUUUGAAUGUUAAGAA	UUCUUAACAUUCAAAAGAG	Chmp	[1291-1309]

203	CAAUCGGGAUGGUCACUUU	AAAGUGACCAUCCCGAUUG	Chmp	[678-696]
204	CUGAUUUAGUCCUCCAGAU	AUCUGGAGGACUAAAUCAG		[783-801]
205	GGGCUGAUUUAGUCCUCCA	UGGAGGACUAAAUCAGCCC		[780-798]
206	CUUUCUCUUUUGAAUGUUA	UAACAUUCAAAAGAGAAAG	Chmp	[1287-1305]
207	UCGAAUUGGGAAUUUUAUU	AAUAAAAUUCCCAAUUCGA	Chmp	[295-313]
208	GGCAACCAGGAAACUGCUA	UAGCAGUUUCCUGGUUGCC	Chmp	[1996-2014]
209	GUUUGAAGAGGUUCUGAUU	AAUCAGAACCUCUUCAAAC	Chmp	[2414-2432]
210	GGAGAACUAUCCUAUCCCU	AGGGAUAGGAUAGUUCUCC	Chmp	[196-214]
211	GGAGGCCUUUGAAACAUUU	AAAUGUUUCAAAGGCCUCC	Chmp	[1126-1144]
212	UUACAAGCUUCCUGACAAU	AUUGUCAGGAAGCUUGUAA	Chmp	[550-568]
213	UAAAAGGAGAAUAAGAAAA	UUUUCUUAUUCUCCUUUUA	Chmp	[1722-1740]
214	AUAGGUUUCCUCUGGAGAA	UUCUCCAGAGGAAACCUAU	Chmp	[1101-1119]
215	AGAACGCAAUGUUUCUAGA	UCUAGAAACAUUGCGUUCU		[1677-1695]
216	GCUGUUUGUUUUGAUGAUA	UAUCAUCAAAACAAACAGC	Chmp	[1705-1723]
217	AUAACUUCAUGAAGACUUA	UAAGUCUUCAUGAAGUUAU	Chmp	[1582-1600]
218	AGAUUGCUUUGGGUAAUAA	UUAUUACCCAAAGCAAUCU	Chmp	[2477-2495]
219	GAUGCAGAACUUUCUCUUU	AAAGAGAAAGUUCUGCAUC	Chmp	[1278-1296]
220	AAUGAUGAAUUCUGCAAGA	UCUUGCAGAAUUCAUCAUU	Chmp	[434-452]
221	UCAUCGGUAAAGCACCUAA	UUAGGUGCUUUACCGAUGA	Chmp	[371-389]
222	GGCUCAUACUCAAUUGAUG	CAUCAAUUGAGUAUGAGCC	Chmp	[2118-2136]
223	AUUUCUUUCUGGUUAUUAU	AUAAUAACCAGAAAGAAAU	Chmp	[2153-2171]
224	GUCCAAGUCUGUGAAUGUA	UACAUUCACAGACUUGGAC		[1066-1084]
225	CAUACUCAAUUGAUGGUUA	UAACCAUCAAUUGAGUAUG	Chmp	[2122-2140]
226	GCUGAUUUAGUCCUCCAGA	UCUGGAGGACUAAAUCAGC		[782-800]
227	CAAAGUUCAGCAAGUAGAG	CUCUACUUGCUGAACUUUG	Chmp	[1428-1446]
228	GCCUUUAAUUCCUUACUUU	AAAGUAAGGAAUUAAAGGC	Chmp	[2376-2394]
229	GUUUGGUUAGCUCACAGGA	UCCUGUGAGCUAACCAAAC		[2043-2061]
230	CAGGAAAGUAGAAGGUCAG	CUGACCUUCUACUUUCCUG		[829-847]
231	UCAAUUGAUGGUUAUUAGA	UCUAAUAACCAUCAAUUGA	Chmp	[2127-2145]
232	GGAUGAAGGCUUGUCAGCA	UGCUGACAAGCCUUCAUCC	Chmp	[1648-1666]
233	CUCCAGAUCUCCAAGGAGA	UCUCCUUGGAGAUCUGGAG	Chmp	[794-812]
234	GGAGGGUGAGUUUGAAGAG	CUCUUCAAACUCACCCUCC	Chmp	[2405-2423]
235	AGUAUGGUCGAAUUGGGAA	UUCCCAAUUCGACCAUACU	Chmp	[288-306]
236	GUGACUGAUCUGUCUGCUA	UAGCAGACAGAUCAGUCAC	Chmp	[734-752]
237	UGCUGAGGAUGCAUUCUGU	ACAGAAUGCAUCCUCAGCA	Chmp	[237-255]
238	UUGGUAUCUUUCUGUUGGA	UCCAACAGAAAGAUACCAA	Chmp	[2213-2231]
239	CCCAUAGGUUUCCUCUGGA	UCCAGAGGAAACCUAUGGG	Chmp	[1098-1116]
240	GUUGGAAUGAUUUCUAUGA	UCAUAGAAAUCAUUCCAAC	Chmp	[2226-2244]
241	GAAUGAGGGCUGAGUUAUG	CAUAACUCAGCCCUCAUUC		[1558-1576]
242	UAGGUUUCCUCUGGAGAAA	UUUCUCCAGAGGAAACCUA	Chmp	[1102-1120]
243	GAAUAACUAAUACAAUUCA	UGAAUUGUAUUAGUUAUUC	Chmp	[1307-1325]
244	AAAGAUAACUUCAUGAAGA	UCUUCAUGAAGUUAUCUUU	Chmp	[1578-1596]
245	CCUCGUCACCCAUAGGUUU	AAACCUAUGGGUGACGAGG	Chmp	[1090-1108]
246	UCAAGGGCGUGUUUCGAUA	UAUCGAAACACGCCCUUGA		[1011-1029]
247	AGGCAACCAGGAAACUGCU	AGCAGUUUCCUGGUUGCCU	Chmp	[1995-2013]
248	CAUACUAGACUCAUACUCA	UGAGUAUGAGUCUAGUAUG		[2090-2108]
249	GGUGGGUUUUUUUUCUGGU	ACCAGAAAAAAAACCCACC		[2262-2280]
250	CGAGAAAAUGAUGAAUUCU	AGAAUUCAUCAUUUUCUCG	Chmp	[428-446]
251	AGACCAGGAGGGUUUGGUU	AACCAAACCCUCCUGGUCU	Chmp	[2032-2050]
252	AGGGUUUGGUUAGCUCACA	UGUGAGCUAACCAAACCCU	Chmp	[2040-2058]
253	CUCAAUUGAUGGUUAUUAG	CUAAUAACCAUCAAUUGAG	Chmp	[2126-2144]
254	AGACUCAUACUCAACUCAA	UUGAGUUGAGUAUGAGUCU		[2096-2114]
255	CAACCAGGAAACUGCUACU	AGUAGCAGUUUCCUGGUUG		[1998-2016]
256	AAUGCAGCCUUUUGUUACA	UGUAACAAAAGGCUGCAUU	Chmp	[536-554]
257	CUUGUGACUUUGAGACUAU	AUAGUCUCAAAGUCACAAG	Chmp	[2311-2329]
258	GAGGUUAAACCAGUUUGCA	UGCAAACUGGUUUAACCUC	Chmp	[1822-1840]

259	GGGUUUGGUUAGCUCACAG	CUGUGAGCUAACCAAACCC		[2041-2059]
260	UAAUACAAUUCAUUGUGAA	UUCACAAUGAAUUGUAUUA	Chmp	[1314-1332]
261	CUAUCCUAUCCCUGAACCA	UGGUUCAGGGAUAGGAUAG	Chmp	[202-220]
262	UGGUAUCUUUCUGUUGGAA	UUCCAACAGAAAGAUACCA	Chmp	[2214-2232]
263	GAGUUUGAAGAGGUUCUGA	UCAGAACCUCUUCAAACUC	Chmp	[2412-2430]
264	UGGUGUGCCUUAAAGAUAC	GUAUCUUUAAGGCACACCA	Chmp	[1356-1374]
265	UGCCGGUUCUAUAAGCACA	UGUGCUUAUAGAACCGGCA	Chmp	[518-536]
266	AUUGAUGGUUAUUAGACAA	UUGUCUAAUAACCAUCAAU	Chmp	[2130-2148]
267	UUUCUUUCUGGUUAUUAUA	UAUAAUAACCAGAAAGAAA	Chmp	[2154-2172]
268	AUUGGUGUGCCUUAAAGAU	AUCUUUAAGGCACACCAAU	Chmp	[1354-1372]
269	UGAUUUUCAUGAAAAUCUG	CAGAUUUUCAUGAAAAUCA		[1615-1633]
270	GACCAGGAGGGUUUGGUUA	UAACCAAACCCUCCUGGUC	Chmp	[2033-2051]
271	AAUGGGAGCAGCUCAAGUA	UACUUGAGCUGCUCCCAUU	Chmp	[712-730]
272	UUUCGAUACUGCAACACGU	ACGUGUUGCAGUAUCGAAA	Rat,Ms,Chmp	[1022-1040]
273	UAUUCAUCAAGAAUGAGGA	UCCUCAUUCUUGAUGAAUA	Chmp	[2327-2345]
274	CCUGUUCAUGCUGAGCAAA	UUUGCUCAGCAUGAACAGG	Chmp	[1413-1431]
275	AAUGAGGGCUGAGUUAUGA	UCAUAACUCAGCCCUCAUU		[1559-1577]
276	AACCUCUGCCGGUUCUAUA	UAUAGAACCGGCAGAGGUU	Chmp	[512-530]
277	UUUCUCUUUUGAAUGUUAA	UUAACAUUCAAAAGAGAAA	Chmp	[1288-1306]
278	UGGUCGAAUUGGGAAUUUU	AAAAUUCCCAAUUCGACCA	Chmp	[292-310]
279	CAGAGGAAUUGGUGUGCCU	AGGCACACCAAUUCCUCUG	Chmp	[1347-1365]
280	CAAGCUUCCUGACAAUGUC	GACAUUGUCAGGAAGCUUG	Chmp	[553-571]
281	UAAGCAUGGUCCCUUGUCA	UGACAAGGGACCAUGCUUA		[1974-1992]
282	GAUACAAUCUGGGAUAGUU	AACUAUCCCAGAUUGUAUC	Chmp	[1370-1388]
283	CGGUAAAGCACCUAAAACC	GGUUUUAGGUGCUUUACCG	Chmp	[375-393]
284	GAUCAUCGGUAAAGCACCU	AGGUGCUUUACCGAUGAUC	Chmp	[369-387]
285	GCACAAUGCAGCCUUUUGU	ACAAAAGGCUGCAUUGUGC	Chmp	[532-550]
286	GCCUGGAGAACUAUCCUAU	AUAGGAUAGUUCUCCAGGC	Chmp	[192-210]
287	AAAGGCUCUUGGUAUCUUU	AAAGAUACCAAGAGCCUUU	Chmp	[2205-2223]
288	AAAUCUUUCCUCUUCUCAU	AUGAGAAGAGGAAAGAUUU	Chmp	[2179-2197]
289	CACAAUGCAGCCUUUUGUU	AACAAAAGGCUGCAUUGUG	Chmp	[533-551]
290	CAGAAGAUUAGCAUCCCAU	AUGGGAUGCUAAUCUUCUG	Chmp	[2074-2092]
291	GACUCAUACUCAACUCAAC	GUUGAGUUGAGUAUGAGUC		[2097-2115]
292	GGGUUGAAAAUCAUGCUCA	UGAGCAUGAUUUUCAACCC		[1157-1175]
293	GAAACAUUUAAAAAGGGAU	AUCCCUUUUUAAAUGUUUC	Chmp	[1136-1154]
294	GAAUUGGUGUGCCUUAAAG	CUUUAAGGCACACCAAUUC	Chmp	[1352-1370]
295	AGAACUAUCCUAUCCCUGA	UCAGGGAUAGGAUAGUUCU	Chmp	[198-216]
296	AGGUUAAACCAGUUUGCAU	AUGCAAACUGGUUUAACCU	Chmp	[1823-1841]
297	CUGAACCAGGCCCAAAUGA	UCAUUUGGGCCUGGUUCAG	Chmp	[213-231]
298	GUAAGAGGACUACUCAGCA	UGCUGAGUAGUCCUCUUAC		[1860-1878]
299	CGAUACAAUCUGUCACCUU	AAGGUGACAGAUUGUAUCG	Chmp	[458-476]
300	AAGGCAUCACUUUCCUGGA	UCCAGGAAAGUGAUGCCUU	Chmp	[1739-1757]
301	UCGGGAUGGUCACUUUGCU	AGCAAAGUGACCAUCCCGA	Chmp	[681-699]
302	UGUUUUGAUGAUAAAAGGA	UCCUUUUAUCAUCAAAACA	Chmp	[1711-1729]
303	AAGUAGUGGUGACUGAUCU	AGAUCAGUCACCACUACUU	Chmp	[726-744]
304	CUUUCUGUUGGAAUGAUUU	AAAUCAUUCCAACAGAAAG	Chmp	[2220-2238]
305	AGACCUAAAAUCGCAUCAUG	CAUGAUGCGAUUUAGGUCU		[2288-2306]
306	ACAUGAAGCUUCGGGAACA	UGUUCCCGAAGCUUCAUGU	Chmp	[337-355]
307	UUCGGGAACAGUCGAAAAA	UUUUUCGACUGUUCCCGAA	Chmp	[346-364]
308	GGAUAUCAAGGGCGUGUUU	AAACACGCCCUUGAUAUCC		[1006-1024]
309	UCUGUUGGAAUGAUUUCUA	UAGAAAUCAUUCCAACAGA	Chmp	[2223-2241]
310	AGGCUCAUACUCAAUUGAU	AUCAAUUGAGUAUGAGCCU	Chmp	[2117-2135]
311	CUGUCACCUUCCAUCUUCU	AGAAGAUGGAAGGUGACAG	Chmp	[467-485]
312	UUUGAUGAUAAAAGGAGAA	UUCUCCUUUUAUCAUCAAA	Chmp	[1714-1732]
313	CUACUGGGAGUAUGGUCGA	UCGACCAUACUCCCAGUAG	Chmp	[280-298]
314	CAACUCAACUAGGCUCAUA	UAUGAGCCUAGUUGAGUUG	Chmp	[2107-2125]

315	AACGCAAUGUUUCUAGAGA	UCUCUAGAAACAUUGCGUU		[1679-1697]
316	GAACCUCUGCCGGUUCUAU	AUAGAACCGGCAGAGGUUC	Chmp	[511-529]
317	AUGAGGUCUUGCUGAGGAU	AUCCUCAGCAAGACCUCAU	Chmp	[228-246]
318	GUGUGCCUUAAAGAUACAA	UUGUAUCUUUAAGGCACAC	Chmp	[1358-1376]
319	GUAUGGUCGAAUUGGGAAU	AUUCCCAAUUCGACCAUAC	Chmp	[289-307]
320	GCUUGUCAGCACUUCCAGU	ACUGGAAGUGCUGACAAGC	Chmp	[1656-1674]
321	ACUUGUGGACCUCACCAGA	UCUGGUGAGGUCCACAAGU		[2014-2032]
322	AGCUUCGGGAACAGUCGAA	UUCGACUGUUCCCGAAGCU	Chmp	[343-361]
323	GGAUGGUCACUUUGCUCGU	ACGAGCAAAGUGACCAUCC	Chmp	[684-702]
324	UCAAGUAGUGGUGACUGAU	AUCAGUCACCACUACUUGA	Chmp	[724-742]
325	UUGGUGUGCCUUAAAGAUA	UAUCUUUAAGGCACACCAA	Chmp	[1355-1373]
326	UCCAAGUCUGUGAAUGUAA	UUACAUUCACAGACUUGGA		[1067-1085]
327	UCAUCAAGAAUGAGGAUAU	AUAUCCUCAUUCUUGAUGA	Chmp	[2330-2348]
328	CAUGUGAGGUUAAACCAGU	ACUGGUUUAACCUCACAUG	Chmp	[1817-1835]
329	UGCAAGAUGGGCCGAUACA	UGUAUCGGCCCAUCUUGCA	Chmp	[446-464]
330	AAAGUAAGAGGACUACUCA	UGAGUAGUCCUCUUACUUU		[1857-1875]
331	CACUUUCCUGGAUCCAGGA	UCCUGGAUCCAGGAAAGUG	Chmp	[1746-1764]
332	GACCAGAAUCCCUGAUGUU	AACAUCAGGGAUUCUGGUC	Chmp	[1190-1208]
333	UCUGCAAGAUGGGCCGAUA	UAUCGGCCCAUCUUGCAGA	Chmp	[444-462]
334	GCCCAAAUGAGGUCUUGCU	AGCAAGACCUCAUUUGGGC	Chmp	[222-240]
335	CCUCUUCUCAUUACCAGUA	UACUGGUAAUGAGAAGAGG		[2187-2205]
336	AUCCAGGAUAAUUUUUAAA	UUUAAAAAUUAUCCUGGAU	Chmp	[1757-1775]
337	GAGUUAUGAAAAGAUAACU	AGUUAUCUUUUCAUAACUC	Chmp	[1569-1587]
338	GCUGAGGAUGCAUUCUGUU	AACAGAAUGCAUCCUCAGC	Chmp	[238-256]
339	AGUUUAGAACGCAAUGUUU	AAACAUUGCGUUCUAAACU		[1672-1690]
340	CCCGAGAAAAUGAUGAAUU	AAUUCAUCAUUUUCUCGGG	Chmp	[426-444]
341	UUAUGAAAAGAUAACUUCA	UGAAGUUAUCUUUUCAUAA	Chmp	[1572-1590]
342	UAAGAAAAGGCAUCACUUU	AAAGUGAUGCCUUUUCUUA	Chmp	[1733-1751]
343	CAAUGGGAGCAGCUCAAGU	ACUUGAGCUGCUCCCAUUG	Chmp	[711-729]
344	UAUGAAAAGAUAACUUCAU	AUGAAGUUAUCUUUUCAUA	Chmp	[1573-1591]
345	UCAAGAAUGAGGAUAUAGU	ACUAUAUCCUCAUUCUUGA	Chmp	[2333-2351]
346	GGAAUGAUUUCUAUGAACU	AGUUCAUAGAAAUCAUUCC	Chmp	[2229-2247]
347	GUCAUGUGAGGUUAAACCA	UGGUUUAACCUCACAUGAC	Chmp	[1815-1833]
348	AUAAGAAAAGGCAUCACUU	AAGUGAUGCCUUUUCUUAU	Chmp	[1732-1750]
349	ACUCAGGGUCUGGGAUGAA	UUCAUCCCAGACCCUGAGU	Chmp	[1636-1654]
350	AGUUUGAAGAGGUUCUGAU	AUCAGAACCUCUUCAAACU	Chmp	[2413-2431]
351	GGUUAAACCAGUUUGCAUU	AAUGCAAACUGGUUUAACC	Chmp	[1824-1842]
352	UUGUGGACCUCACCAGAGA	UCUCUGGUGAGGUCCACAA		[2016-2034]
353	CAGCAAGUAGAGCAGAGUU	AACUCUGCUCUACUUGCUG	Chmp	[1435-1453]
354	CUAAUACAAUUCAUUGUGA	UCACAAUGAAUUGUAUUAG	Chmp	[1313-1331]
355	UCUUUUGAAUGUUAAGAAU	AUUCUUAACAUUCAAAAGA	Chmp	[1292-1310]
356	GUGCCCGAUUCUUUCAGAU	AUCUGAAAGAAUCGGGCAC	Chmp	[2462-2480]
357	UUGGGAUCUCAGGGCACAA	UUGUGCCCUGAGAUCCCAA		[1237-1255]
358	GCAGCUCAAGUAGUGGUGA	UCACCACUACUUGAGCUGC	Chmp	[719-737]
359	CACAGUCUUGGGAUCUCAG	CUGAGAUCCCAAGACUGUG		[1230-1248]
360	CAUGAAGCUUCGGGAACAG	CUGUUCCCGAAGCUUCAUG	Chmp	[338-356]
361	GGAAUGAGGGCUGAGUUAU	AUAACUCAGCCCUCAUUCC		[1557-1575]
362	UGAAUGUUAAGAAUAACUA	UAGUUAUUCUUAACAUUCA	Chmp	[1297-1315]
363	UGAAAAGAUAACUUCAUGA	UCAUGAAGUUAUCUUUUCA	Chmp	[1575-1593]
364	GAAGAGGUUCUGAUUUUCU	AGAAAAUCAGAACCUCUUC	Chmp	[2418-2436]
365	GGUCUUGCUGAGGAUGCAU	AUGCAUCCUCAGCAAGACC	Chmp	[232-250]
366	CAUGACAUAGCUUGAGCUA	UAGCUCAAGCUAUGUCAUG	Chmp	[2355-2373]
367	UGGGUUUCCUGGUUCCACU	AGUGGAACCAGGAAACCCA	Chmp	[1522-1540]
368	CCAACAACCUUUCCCUGGU	ACCAGGGAAAGGUUGUUGG	Chmp	[150-168]
369	AUUAGCAUCCCAUACUAGA	UCUAGUAUGGGAUGCUAAU		[2080-2098]
370	AAAGAUACAAUCUGGGAUA	UAUCCCAGAUUGUAUCUUU	Chmp	[1367-1385]

371	CCUCUUCUACAGCUUCUGA	UCAGAAGCUGUAGAAGAGG		[1893-1911]
372	UUGCGUCCAAGUCUGUGAA	UUCACAGACUUGGACGCAA	Chmp	[1062-1080]
373	UACUGGGAGUAUGGUCGAA	UUCGACCAUACUCCCAGUA	Chmp	[281-299]
374	CAUUGUGAACAGAAGUCCU	AGGACUUCUGUUCACAAUG	Chmp	[1324-1342]
375	AUGAACUUGUCUUAUUUUA	UAAAAUAAGACAAGUUCAU	Chmp	[2241-2259]
376	GGCUCUUGGUAUCUUUCUG	CAGAAAGAUACCAAGAGCC	Chmp	[2208-2226]
377	GGGAACAGUCGAAAAAGUG	CACUUUUUCGACUGUUCCC	Chmp	[349-367]
378	UGAAACAUUUAAAAAGGGA	UCCCUUUUUAAAUGUUUCA	Chmp	[1135-1153]
379	AACUAGGCUCAUACUCAAU	AUUGAGUAUGAGCCUAGUU	Chmp	[2113-2131]
380	AAUCUUUCCUCUUCUCAUU	AAUGAGAAGAGGAAAGAUU	Chmp	[2180-2198]
381	UCUGGAGGCCUUUGAAACA	UGUUUCAAAGGCCUCCAGA	Chmp	[1123-1141]
382	AUGUGAGGUUAAACCAGUU	AACUGGUUUAACCUCACAU	Chmp	[1818-1836]
383	CUUCUACAGCUUCUGAGAA	UUCUCAGAAGCUGUAGAAG		[1896-1914]
384	UGUCAGCACUUCCAGUUUA	UAAACUGGAAGUGCUGACA	Chmp	[1659-1677]
385	UCAACUAGGCUCAUACUCA	UGAGUAUGAGCCUAGUUGA	Chmp	[2111-2129]
386	GGCUCAGAUGUCCACUACU	AGUAGUGGACAUCUGAGCC	Chmp	[266-284]
387	UUUCUAUGAACUUGUCUUA	UAAGACAAGUUCAUAGAAA	Chmp	[2236-2254]
388	CAGGAAACUGCUACUUGUG	CACAAGUAGCAGUUUCCUG		[2002-2020]
389	GCAUUCUGUUGGAAUCUGU	ACAGAUUCCAACAGAAUGC	Chmp	[247-265]
390	CGUGUUUCGAUACUGCAAC	GUUGCAGUAUCGAAACACG	Rat,Ms	[1018-1036]
391	CCAGGAUAAUUUUUAAACC	GGUUUAAAAAUUAUCCUGG	Chmp	[1759-1777]
392	UUGUGACUUUGAGACUAUU	AAUAGUCUCAAAGUCACAA	Chmp	[2312-2330]
393	AAAAGUGGGAUCAUCGGUA	UACCGAUGAUCCCACUUUU	Chmp	[361-379]
394	UCUGCUACCCGAUUGUCCA	UGGACAAUCGGGUAGCAGA	Chmp	[746-764]
395	UAACUUCAUGAAGACUUAA	UUAAGUCUUCAUGAAGUUA	Chmp	[1583-1601]
396	GCUGAGCAAAGUUCAGCAA	UUGCUGAACUUUGCUCAGC	Chmp	[1422-1440]
397	UAGUCCUCCAGAUCUCCAA	UUGGAGAUCUGGAGGACUA		[789-807]
398	ACCAGUAAAGGCUCUUGGU	ACCAAGAGCCUUUACUGGU		[2199-2217]
399	GAAGAUUAGCAUCCCAUAC	GUAUGGGAUGCUAAUCUUC	Chmp	[2076-2094]
400	CAUGCUGAGCAAAGUUCAG	CUGAACUUUGCUCAGCAUG	Chmp	[1419-1437]
401	AGCCUUUAAUUCCUUACUU	AAGUAAGGAAUUAAAGGCU	Chmp	[2375-2393]
402	AGAAUAAGAAAAGGCAUCA	UGAUGCCUUUUCUUAUUCU	Chmp	[1729-1747]
403	CUCUGGAGAAAGCUCUGGA	UCCAGAGCUUUCUCCAGAG	Chmp	[1110-1128]
404	UGAGCUAUAGCCUUUAAUU	AAUUAAAGGCUAUAGCUCA	Chmp	[2367-2385]
405	UAGGCUCAUACUCAAUUGA	UCAAUUGAGUAUGAGCCUA	Chmp	[2116-2134]
406	AAUUCAUUGUGAACAGAAG	CUUCUGUUCACAAUGAAUU	Chmp	[1320-1338]
407	CCAUUUCUUUCUGGUUAUU	AAUAACCAGAAAGAAAUGG	Chmp	[2151-2169]
408	GAGGGUUUGGUUAGCUCAC	GUGAGCUAACCAAACCCUC	Chmp	[2039-2057]
409	CUUUUGAAUGUUAAGAAUA	UAUUCUUAACAUUCAAAAG	Chmp	[1293-1311]
410	AAGCAAUGGGAGCAGCUCA	UGAGCUGCUCCCAUUGCUU	Chmp	[708-726]
411	CUGGUUCCACUGCUACUGA	UCAGUAGCAGUGGAACCAG	Chmp	[1530-1548]
412	CAUAGGUUUCCUCUGGAGA	UCUCCAGAGGAAACCUAUG	Chmp	[1100-1118]
413	CAAAUGAGGUCUUGCUGAG	CUCAGCAAGACCUCAUUUG	Chmp	[225-243]
414	UGUGCCCGAUUCUUUCAGA	UCUGAAAGAAUCGGGCACA	Chmp	[2461-2479]
415	AAGCUUCCUGACAAUGUCA	UGACAUUGUCAGGAAGCUU	Chmp	[554-572]
416	UUUUCUGGUAAGAUUUAGA	UCUAAAUCUUACCAGAAAA		[2272-2290]
417	GAUCUGUCUGCUACCCGAU	AUCGGGUAGCAGACAGAUC	Chmp	[740-758]
418	AGGCAUCACUUUCCUGGAU	AUCCAGGAAAGUGAUGCCU	Chmp	[1740-1758]
419	AAGCUUCGGGAACAGUCGA	UCGACUGUUCCCGAAGCUU	Chmp	[342-360]
420	ACUUGUGACUUUGAGACUA	UAGUCUCAAAGUCACAAGU	Chmp	[2310-2328]
421	GGCCGAUACAAUCUGUCAC	GUGACAGAUUGUAUCGGCC	Chmp	[455-473]
422	UGGAGGGUGAGUUUGAAGA	UCUUCAAACUCACCCUCCA	Chmp	[2404-2422]
423	CUUUCUGGUUAUUAUAAAC	GUUUAUAAUAACCAGAAAG	Chmp	[2157-2175]
424	AGCCCAACAACCUUUCCCU	AGGGAAAGGUUGUUGGGCU	Chmp	[147-165]
425	GUCGAAAAAGUGGGAUCAU	AUGAUCCCACUUUUUCGAC	Chmp	[356-374]
426	UGCAGAACUUUCUCUUUUG	CAAAAGAGAAAGUUCUGCA	Chmp	[1280-1298]

427	CAGCUCAAGUAGUGGUGAC	GUCACCACUACUUGAGCUG	Chmp	[720-738]
428	AGCCUUUUGUUACAAGCUU	AAGCUUGUAACAAAAGGCU	Chmp	[541-559]
429	GGAUGCAUUCUGUUGGAAU	AUUCCAACAGAAUGCAUCC	Chmp	[243-261]
430	GAAAAGGCAUCACUUUCCU	AGGAAAGUGAUGCCUUUUC	Chmp	[1736-1754]
431	CGAAAAAGUGGGAUCAUCG	CGAUGAUCCCACUUUUUCG	Chmp	[358-376]
432	GCUUGAGCUAUAGCCUUUA	UAAAGGCUAUAGCUCAAGC	Chmp	[2364-2382]
433	ACUUUGAGACUAUUCAUCA	UGAUGAAUAGUCUCAAAGU	Chmp	[2317-2335]
434	AUACUCAAUUGAUGGUUAU	AUAACCAUCAAUUGAGUAU	Chmp	[2123-2141]
435	UGAGCAAAGUUCAGCAAGU	ACUUGCUGAACUUUGCUCA	Chmp	[1424-1442]
436	UGACAAUGUCACCUUUGAG	CUCAAAGGUGACAUUGUCA	Chmp	[562-580]
437	ACUCAGCACUGUUUGAAGA	UCUUCAAACAGUGCUGAGU		[1871-1889]
438	UGACCUUGUGCCCGAUUCU	AGAAUCGGGCACAAGGUCA	Chmp	[2455-2473]
439	AUACAAUCUGGGAUAGUUU	AAACUAUCCCAGAUUGUAU	Chmp	[1371-1389]
440	GUGAGUUUGAAGAGGUUCU	AGAACCUCUUCAAACUCAC	Chmp	[2410-2428]
441	CAGAAGCUGAUUUUCAUGA	UCAUGAAAAUCAGCUUCUG		[1608-1626]
442	AAUGGUGGGUUUUUUUUCU	AGAAAAAAAACCCACCAUU		[2259-2277]
443	CAGCCUUUUGUUACAAGCU	AGCUUGUAACAAAAGGCUG	Chmp	[540-558]
444	GUGGGAUCAUCGGUAAAGC	GCUUUACCGAUGAUCCCAC	Chmp	[365-383]
445	CCUGGAGAACUAUCCUAUC	GAUAGGAUAGUUCUCCAGG	Chmp	[193-211]
446	UCCAUUUCUUUCUGGUUAU	AUAACCAGAAAGAAAUGGA	Chmp	[2150-2168]
447	CAAGUAGAGCAGAGUUUGG	CCAAACUCUGCUCUACUUG	Chmp	[1438-1456]
448	AAGUCCUUAAGCAGAGGAA	UUCCUCUGCUUAAGGACUU		[1336-1354]
449	CUUUCAGAUUGCUUUGGGU	ACCCAAAGCAAUCUGAAAG	Chmp	[2472-2490]
450	GGAUCAUCGGUAAAGCACC	GGUGCUUUACCGAUGAUCC	Chmp	[368-386]
451	CGAAUUGGGAAUUUUAUUG	CAAUAAAAUUCCCAAUUCG	Chmp	[296-314]
452	GGCUGAUUUAGUCCUCCAG	CUGGAGGACUAAAUCAGCC		[781-799]
453	GAUGAAGGCUUGUCAGCAC	GUGCUGACAAGCCUUCAUC	Chmp	[1649-1667]
454	UCAGCACUUCCAGUUUAGA	UCUAAACUGGAAGUGCUGA	Chmp	[1661-1679]
455	GGAACAGUCGAAAAAGUGG	CCACUUUUUCGACUGUUCC	Chmp	[350-368]
456	UCAUGCUGAGCAAAGUUCA	UGAACUUUGCUCAGCAUGA	Chmp	[1418-1436]
457	GGAAAUGUCAUGUGAGGUU	AACCUCACAUGACAUUUCC	Chmp	[1809-1827]
458	UACAAUCUGUCACCUUCCA	UGGAAGGUGACAGAUUGUA	Chmp	[461-479]
459	GAUUAGCAUCCCAUACUAG	CUAGUAUGGGAUGCUAAUC	Chmp	[2079-2097]
460	CCUAAAACCAGGUGAUCGU	ACGAUCACCUGGUUUUAGG	Chmp	[385-403]
461	UCUUCUACAGCUUCUGAGA	UCUCAGAAGCUGUAGAAGA		[1895-1913]
462	UCUUUCUGUUGGAAUGAUU	AAUCAUUCCAACAGAAAGA	Chmp	[2219-2237]
463	CUUGCGUCCAAGUCUGUGA	UCACAGACUUGGACGCAAG	Chmp	[1061-1079]
464	UGCCUUCAUUGAGGAAGGA	UCCUUCCUCAAUGAAGGCA	Chmp	[1492-1510]
465	UGACCAGAAUCCCUGAUGU	ACAUCAGGGAUUCUGGUCA	Chmp	[1189-1207]
466	GGUAUCUUUCUGUUGGAAU	AUUCCAACAGAAAGAUACC	Chmp	[2215-2233]
467	GUUAAGAAUAACUAAUACA	UGUAUUAGUUAUUCUUAAC	Chmp	[1302-1320]
468	AAGCUCUGGAGGCCUUUGA	UCAAAGGCCUCCAGAGCUU	Chmp	[1119-1137]
469	AUUUAGACCUAAAUCGCAU	AUGCGAUUUAGGUCUAAAU		[2284-2302]
470	GUUAUUAGACAAUUCCAUU	AAUGGAAUUGUCUAAUAAC	Chmp	[2137-2155]
471	UUCUUUCUGGUUAUUAUAA	UUAUAAUAACCAGAAAGAA	Chmp	[2155-2173]
472	AAAGGAGAAUAAGAAAAGG	CCUUUUCUUAUUCUCCUUU	Chmp	[1724-1742]
473	UGGAGGCCUUUGAAACAUU	AAUGUUUCAAAGGCCUCCA	Chmp	[1125-1143]
474	UGAACCAGGCCCAAAUGAG	CUCAUUUGGGCCUGGUUCA	Chmp	[214-232]
475	AUUGGGAAUUUUAUUGUGA	UCACAAUAAAAUUCCCAAU	Chmp	[299-317]
476	UUCAGAUUGCUUUGGGUAA	UUACCCAAAGCAAUCUGAA	Chmp	[2474-2492]
477	CCUUGUGCCCGAUUCUUUC	GAAAGAAUCGGGCACAAGG	Chmp	[2458-2476]
478	CUGAUUUUCAUGAAAAUCU	AGAUUUUCAUGAAAAUCAG		[1614-1632]
479	CGGUUCUAUAAGCACAAUG	CAUUGUGCUUAUAGAACCG	Chmp	[521-539]
480	UGAUGCAGAACUUUCUCUU	AAGAGAAAGUUCUGCAUCA	Chmp	[1277-1295]
481	AGUUAUGAAAAGAUAACUU	AAGUUAUCUUUUCAUAACU	Chmp	[1570-1588]
482	GGACUACUCAGCACUGUUU	AAACAGUGCUGAGUAGUCC		[1866-1884]

483	ACAGAAGUCCUUAAGCAGA	UCUGCUUAAGGACUUCUGU		[1332-1350]
484	ACUUCAUGAAGACUUAACU	AGUUAAGUCUUCAUGAAGU	Chmp	[1585-1603]
485	UGAUGGUUAUUAGACAAUU	AAUUGUCUAAUAACCAUCA	Chmp	[2132-2150]
486	AUUCAUCAAGAAUGAGGAU	AUCCUCAUUCUUGAUGAAU	Chmp	[2328-2346]
487	CCAUAGGUUUCCUCUGGAG	CUCCAGAGGAAACCUAUGG	Chmp	[1099-1117]
488	GCCUUCAUUGAGGAAGGAA	UUCCUUCCUCAAUGAAGGC	Chmp	[1493-1511]
489	AUGGGUGGAGGGUGAGUUU	AAACUCACCCUCCACCCAU	Chmp	[2399-2417]
490	UAGACAAUUCCAUUUCUUU	AAAGAAAUGGAAUUGUCUA	Chmp	[2142-2160]
491	UGGUUAGCUCACAGGACUU	AAGUCCUGUGAGCUAACCA		[2046-2064]
492	ACGCAAUGUUUCUAGAGAC	GUCUCUAGAAACAUUGCGU		[1680-1698]
493	AACAGUCGAAAAAGUGGGA	UCCCACUUUUUCGACUGUU	Chmp	[352-370]
494	CCAGAAGCUGAUUUUCAUG	CAUGAAAAUCAGCUUCUGG		[1607-1625]
495	ACUCAACUAGGCUCAUACU	AGUAUGAGCCUAGUUGAGU	Chmp	[2109-2127]
496	CCAUGACAUAGCUUGAGCU	AGCUCAAGCUAUGUCAUGG	Chmp	[2354-2372]
497	ACAAUGUCACCUUUGAGGA	UCCUCAAAGGUGACAUUGU	Chmp	[564-582]
498	UGGAAUGAUUUCUAUGAAC	GUUCAUAGAAAUCAUUCCA	Chmp	[2228-2246]
499	ACUACUCAGCACUGUUUGA	UCAAACAGUGCUGAGUAGU		[1868-1886]
500	CAAGUAGUGGUGACUGAUC	GAUCAGUCACCACUACUUG	Chmp	[725-743]

Table B 33 SOX9 - SRY (sex determining region Y)-box 9

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-37704387 :373-1902
1	GGAGGAAGUCGGUGAAGAA	UUCUUCACCGACUUCCUCC	Ms	[905-923]
2	GGAGGAGCUGCCUUAAAAA	UUUUUAAGGCAGCUCCUCC		[2624-2642]
3	GGAGCUGCCUUAAAAAAAA	UUUUUUUUAAGGCAGCUCC		[2627-2645]
4	CGUGGAGGAUGAUGGAGAA	UUCUCCAUCAUCCUCCACG		[2216-2234]
5	CGAGAAACUGGACUUUUUA	UAAAAAGUCCAGUUUCUCG		[2179-2197]
6	GGAGAGGUUUUAAUUAAAA	UUUUAAUUAAAACCUCUCC		[3038-3056]
7	GCUCGAAACUGACUGGAAA	UUUCCAGUCAGUUUCGAGC		[18-36]
8	CCGAGAUGAUCCUAAAAAU	AUUUUUAGGAUCAUCUCGG		[1931-1949]
9	AGGAGAGGUUUUAAUUAAA	UUUAAUUAAAACCUCUCCU		[3037-3055]
10	GGCCGAGAUGAUCCUAAAA	UUUUAGGAUCAUCUCGGCC		[1929-1947]
11	AGGAGGAGCUGCCUUAAAA	UUUUAAGGCAGCUCCUCCU		[2623-2641]
12	CGAGAUGAUCCUAAAAAUA	UAUUUUUAGGAUCAUCUCG		[1932-1950]
13	GAGAAACUGGACUUUUUAA	UUAAAAAGUCCAGUUUCUC		[2180-2198]
14	GGAAUAUUCUCUAUUUUAA	UUAAAAUAGAGAAUAUUCC	Ms	[2323-2341]
15	AGCAGUAAUUAAAGAAAAA	UUUUUCUUUAAUUACUGCU		[2292-2310]
16	GUGUGAUCAGUGUGCUAAA	UUUAGCACACUGAUCACAC		[2237-2255]
17	AGAAGUCAGUAGAAUAAAA	UUUUAUUCUACUGACUUCU	Ms	[3640-3658]
18	CCACCUUCACCUACAUGAA	UUCAUGUAGGUGAAGGUGG		[1763-1781]
19	GAGCUGCCUUAAAAAAAAA	UUUUUUUUUAAGGCAGCUC		[2628-2646]
20	CAGCGAAAUCAACGAGAAA	UUUCUCGUUGAUUUCGCUG		[2167-2185]
21	CAGCGAACGCACAUCAAGA	UCUUGAUGUGCGUUCGCUG	Ms	[1549-1567]
22	CAAUUAUGGGAGUAAACAA	UUGUUUACUCCCAUAAUUG		[2663-2681]
23	GGGAGUAAACAAUAGUCUA	UAGACUAUUGUUUACUCCC		[2670-2688]
24	GAGGUAAAAGGCAAGCAAA	UUUGCUUGCCUUUUACCUC		[2836-2854]
25	CUUCAAUUUCUGUAUAAAA	UUUUAUACAGAAAUUGAAG		[3685-3703]
26	CACCCUAGAUUUGUAUAAA	UUUAUACAAAUCUAGGGUG		[3238-3256]
27	CCUUCAACCUCCCACACUA	UAGUGUGGGAGGUUGAAGG		[1637-1655]
28	CUGCCUUAAAAAAAAAUAA	UUAUUUUUUUUUUAAGGCAG		[2631-2649]
29	CCUUCAAUUUCUGUAUAAA	UUUAUACAGAAAUUGAAGG		[3684-3702]
30	GAGGAGCUGCCUUAAAAAA	UUUUUUAAGGCAGCUCCUC		[2625-2643]
31	CUUCCUUAAAGACAUUUAA	UUAAAUGUCUUUAAGGAAG		[2041-2059]
32	UGGUAAGCUUUAUCAUAUA	UAUAUGAUAAAGCUUACCA		[2699-2717]
33	AAGGCAACUCGUACCCAAA	UUUGGGUACGAGUUGCCUU		[2064-2082]
34	GCCUGUUUGGACUUUGUAA	UUACAAAGUCCAAACAGGC	Ms	[2263-2281]

35	GCCCACUGACAGACCUUAA	UUAAGGUCUGUCAGUGGGC		[3524-3542]
36	AAGGAGAGGUUUUAAUUAA	UUAAUUAAAACCUCUCCUU		[3036-3054]
37	GACAGACCUUAAUCUUAAU	AUUAAGAUUAAGGUCUGUC		[3531-3549]
38	GCAGCGAAAUCAACGAGAA	UUCUCGUUGAUUUCGCUGC		[2166-2184]
39	AAUGGAGCAGCGAAAUCAA	UUGAUUUCGCUGCUCCAUU		[2160-2178]
40	UGUUUUUGUUGAAAACAAA	UUUGUUUUCAACAAAAACA		[3287-3305]
41	GAGCUUUCCUCAAAGGGUA	UACCCUUUGAGGAAAGCUC		[3117-3135]
42	GAGGUUUUAAUUAAAACAA	UUGUUUUAAUUAAAACCUC		[3041-3059]
43	ACGGCUCCAGCAAGAACAA	UUGUUCUUGCUGGAGCCGU	Rat,Ms	[659-677]
44	CGAAGAAAGAGAGGACCAA	UUGGUCCUCUCUUUCUUCG		[1953-1971]
45	UGACAGACCUUAAUCUUAA	UUAAGAUUAAGGUCUGUCA		[3530-3548]
46	AGAACAAGCCGCACGUCAA	UUGACGUGCGGCUUGUUCU		[671-689]
47	GAGAUGAUCCUAAAAAUAA	UUAUUUUUAGGAUCAUCUC		[1933-1951]
48	AAGAGAGGACCAACCAGAA	UUCUGGUUGGUCCUCUCUU		[1959-1977]
49	CAGUAGAAUAAAAUCUUAA	UUAAGAUUUUAUUCUACUG		[3646-3664]
50	UAGCAGUAAUUAAAGAAAA	UUUUCUUUAAUUACUGCUA		[2291-2309]
51	AGCUCUGGAGACUUCUGAA	UUCAGAAGUCUCCAGAGCU		[794-812]
52	CAAUUUUACCUUCUUUAAA	UUUAAAGAAGGUAAAAUUG		[3087-3105]
53	AGAAACUGGACUUUUUAAA	UUUAAAAAGUCCAGUUUCU		[2181-2199]
54	GAUGAAAUCUGUUCUGGGA	UCCCAGAACAGAUUUCAUC		[2858-2876]
55	CCAAUUUUACCUUCUUUAA	UUAAAGAAGGUAAAAUUGG		[3086-3104]
56	CUGUUGUAUUAACAUUUAA	UUAAAUGUUAAUACAACAG		[2535-2553]
57	AAAGGCAACUCGUACCCAA	UUGGGUACGAGUUGCCUUU		[2063-2081]
58	GCAGUAAUUAAAGAAAAAA	UUUUUUCUUUAAUUACUGC		[2293-2311]
59	AAGCGGAGCUCGAAACUGA	UCAGUUUCGAGCUCCGCUU		[11-29]
60	CAGUCUUAAGAAAGAGGUA	UACCUCUUUCUUAAGACUG		[2823-2841]
61	AGGAGCUGCCUUAAAAAAA	UUUUUUUAAGGCAGCUCCU		[2626-2644]
62	AAUCUUAAAGCACUCAUAA	UUAUGAGUGCUUUAAGAUU		[3657-3675]
63	AAGCGUGGAGGAUGAUGGA	UCCAUCAUCCUCCACGCUU		[2213-2231]
64	AGAUACUUCUGUAACUUAA	UUAAGUUACAGAAGUAUCU		[3720-3738]
65	AGGACCACCCGGAUUACAA	UUGUAAUCCGGGUGGUCCU		[872-890]
66	AAACGGUGCUGCUGGGAAA	UUUCCCAGCAGCACCGUUU		[2756-2774]
67	AAGGAGGAGCUGCCUUAAA	UUUAAGGCAGCUCCUCCUU		[2622-2640]
68	CUUUGUUGUUUUUGUUGAA	UUCAACAAAAACAACAAAG		[3281-3299]
69	CCUUUGGGCUGCCUUAUAU	AUAUAAGGCAGCCCAAAGG		[3392-3410]
70	ACGAGAAACUGGACUUUUU	AAAAAGUCCAGUUUCUCGU		[2178-2196]
71	CCGGAAACUUUUCUUUGCA	UGCAAAGAAAAGUUUCCGG		[70-88]
72	GCCCUAGCUUUUCUUGCAA	UUGCAAGAAAAGCUAGGGC		[2463-2481]
73	AAAAGCAGAUCUUUUUAAA	UUUAAAAAGAUCUGCUUUU		[3700-3718]
74	GCCGAGAUGAUCCUAAAAA	UUUUUAGGAUCAUCUCGGC		[1930-1948]
75	AGAGGUAAAAGGCAAGCAA	UUGCUUGCCUUUUACCUCU		[2835-2853]
76	UCCUCACCCUAGAUUUGUA	UACAAAUCUAGGGUGAGGA		[3234-3252]
77	AGCUCGAAACUGACUGGAA	UUCCAGUCAGUUUCGAGCU		[17-35]
78	AAAUCUUAAAGCACUCAUA	UAUGAGUGCUUUAAGAUUU		[3656-3674]
79	AAAGCAGAUCUUUUUAAAA	UUUUAAAAAGAUCUGCUUU		[3701-3719]
80	AGACAUUCCACUUGCUAAA	UUUAGCAAGUGGAAUGUCU		[3003-3021]
81	GAACGCACAUCAAGACGGA	UCCGUCUUGAUGUGCGUUC	Ms	[1553-1571]
82	CCCACUGACAGACCUUAAU	AUUAAGGUCUGUCAGUGGG		[3525-3543]
83	GCUAAAUGGAGCAGCGAAA	UUUCGCUGCUCCAUUUAGC		[2156-2174]
84	GAUCCUAAAAAUAACCGAA	UUCGGUUAUUUUUAGGAUC		[1938-1956]
85	AGACCUUUGGGCUGCCUUA	UAAGGCAGCCCAAAGGUCU		[3389-3407]
86	UUGUAUUCCUCACCCUAGA	UCUAGGGUGAGGAAUACAA		[3228-3246]
87	GGCAAGCAAAGGAGAUGAA	UUCAUCUCCUUUGCUUGCC		[2845-2863]
88	UGUUGGAGCUUUCCUCAAA	UUUGAGGAAAGCUCCAACA		[3112-3130]
89	CCUUGAGCCUUAAAACGGU	ACCGUUUUAAGGCUCAAGG		[2744-2762]
90	UAAAGACAUUUAAGCUAAA	UUUAGCUUAAAUGUCUUUA		[2047-2065]

91	CAACCAGAGUAUUUUUGUA	UACAAAAAUACUCUGGUUG	Ms	[2479-2497]
92	AGAUGAUCCUAAAAAUAAC	GUUAUUUUUAGGAUCAUCU		[1934-1952]
93	CCUAAAAAUAACCGAAGAA	UUCUUCGGUUAUUUUUAGG		[1941-1959]
94	GGAGCAGCGAAAUCAACGA	UCGUUGAUUUCGCUGCUCC		[2163-2181]
95	GGCCUUAUUUUGCAAUUAU	AUAAUUGCAAAAUAAGGCC		[2651-2669]
96	CGCGUAUGAAUCUCCUGGA	UCCAGGAGAUUCAUACGCG	Rat,Ms	[368-386]
97	AGAAAGAGGUAAAAGGCAA	UUGCCUUUUACCUCUUUCU		[2831-2849]
98	CCUGUUGUAUUAACAUUUA	UAAAUGUUAAUACAACAGG		[2534-2552]
99	GCAGAUCUUUUUAAAAAGA	UCUUUUUAAAAAGAUCUGC		[3704-3722]
100	AAAACACCUUGAGCCUUAA	UUAAGGCUCAAGGUGUUUU	Ms	[2738-2756]
101	CGCUCACAGUACGACUACA	UGUAGUCGUACUGUGAGCG		[1681-1699]
102	GGCUAAAUGGAGCAGCGAA	UUCGCUGCUCCAUUUAGCC		[2155-2173]
103	CCUCAAAGGGUAUGGUCAU	AUGACCAUACCCUUUGAGG	Ms	[3124-3142]
104	UCAGAACACCAGCAGUUAA	UUAACUGCUGGUGUUCUGA		[2978-2996]
105	GGGUUAACUUUGCUUAAUU	AAUUAAGCAAAGUUAACCC		[2585-2603]
106	CAUCCAUAUUUCUCUACAU	AUGUAGAGAAAUAUGGAUG		[3467-3485]
107	UGUUGAAAACAAACUGGAA	UUCCAGUUUGUUUUCAACA		[3293-3311]
108	GAAGAGAAAAACACCUUGA	UCAAGGUGUUUUUCUCUUC		[2731-2749]
109	AGAGGUUUUAAUUAAAACA	UGUUUUAAUUAAAACCUCU		[3040-3058]
110	ACCCUAGAUUUGUAUAAAU	AUUUAUACAAAUCUAGGGU		[3239-3257]
111	UCAGUAGAAUAAAAUCUUA	UAAGAUUUUAUUCUACUGA		[3645-3663]
112	UGAAGAUGACCGACGAGCA	UGCUCGUCGGUCAUCUUCA	Rat,Ms	[395-413]
113	GUCUUAAGAAAGAGGUAAA	UUUACCUCUUUCUUAAGAC		[2825-2843]
114	GGAGAAUCGUGUGAUCAGU	ACUGAUCACACGAUUCUCC		[2229-2247]
115	AAAUCAACGAGAAACUGGA	UCCAGUUUCUCGUUGAUUU		[2172-2190]
116	AGCUUUUCUUGCAACCAGA	UCUGGUUGCAAGAAAAGCU		[2468-2486]
117	CUUUGUAUUCCUCACCCUA	UAGGGUGAGGAAUACAAAG		[3226-3244]
118	CCUUCAUGAAGAUGACCGA	UCGGUCAUCUUCAUGAAGG	Rat,Ms	[389-407]
119	AUGAGAGAUUGCAAAUGUA	UACAUUUGCAAUCUCUCAU		[3334-3352]
120	UCACUGCAGUCUUAAGAAA	UUUCUUAAGACUGCAGUGA		[2817-2835]
121	AAGCAGAUCUUUUUAAAAA	UUUUUAAAAAGAUCUGCUU		[3702-3720]
122	CCUCAGGCUUUGCGAUUUA	UAAAUCGCAAAGCCUGAGG		[2604-2622]
123	GUGUAUGAUUCAUUACCAU	AUGGUAAUGAAUCAUACAC		[2360-2378]
124	CUCAGGCUUUGCGAUUUAA	UUAAAUCGCAAAGCCUGAG		[2605-2623]
125	GCUGCCUUAAAAAAAAAUA	UAUUUUUUUUUUAAGGCAGC		[2630-2648]
126	CAAUAAAUAUACAUUGCAU	AUGCAAUGUAUAUUUAUUG	Ms	[3907-3925]
127	CUCGUACCCAAAUUUCCAA	UUGGAAAUUUGGGUACGAG		[2071-2089]
128	ACUUCUGUAACUUAAGAAA	UUUCUUAAGUUACAGAAGU		[3724-3742]
129	AGGCUUUGCGAUUUAAGGA	UCCUUAAAUCGCAAAGCCU		[2608-2626]
130	GGACCAACCAGAAUUCCCU	AGGGAAUUCUGGUUGGUCC		[1965-1983]
131	ACAUUGCAUUAAAAAGAAA	UUUCUUUUUAAUGCAAUGU		[3917-3935]
132	CUGUGAGGAAUAUUCUCUA	UAGAGAAUAUUCCUCACAG	Ms	[2317-2335]
133	ACUGCAGUCUUAAGAAAGA	UCUUUCUUAAGACUGCAGU		[2819-2837]
134	CAUAUUUUGUCUUUAGGUA	UACCUAAAGACAAAAUAUG		[3757-3775]
135	CUGACAGACCUUAAUCUUA	UAAGAUUAAGGUCUGUCAG		[3529-3547]
136	GGUGCUGCUGGGAAACAUU	AAUGUUUCCCAGCAGCACC		[2760-2778]
137	ACUCGUACCCAAAUUUCCA	UGGAAAUUUGGGUACGAGU		[2070-2088]
138	GCGACGUCAUCUCCAACAU	AUGUUGGAGAUGACGUCGC	Ms	[1211-1229]
139	CUUGUUCACUGCAGUCUUA	UAAGACUGCAGUGAACAAG		[2812-2830]
140	UCUUCUUCUUCUUCCUUAA	UUAAGGAAGAAGAAGAAGA		[2031-2049]
141	AGUUGAACAGUGUGCCCUA	UAGGGCACACUGUUCAACU		[2450-2468]
142	UAAGGAGGAGCUGCCUUAA	UUAAGGCAGCUCCUCCUUA		[2621-2639]
143	AAAAAUAACCGAAGAAAGA	UCUUUCUUCGGUUAUUUUU		[1944-1962]
144	UCGAGACCUUCGAUGUCAA	UUGACAUCGAAGGUCUCGA		[1229-1247]
145	CAAUUUCUGUAUAAAAGCA	UGCUUUUAUACAGAAAUUG		[3688-3706]
146	CUGUUCUGGGAAUGUUUCA	UGAAACAUUCCCAGAACAG		[2866-2884]

147	UUGCAAUUAUGGGAGUAAA	UUUACUCCCAUAAUUGCAA		[2660-2678]
148	AGGCAACUCGUACCCAAAU	AUUUGGGUACGAGUUGCCU		[2065-2083]
149	GGCAACUCGUACCCAAAUU	AAUUUGGGUACGAGUUGCC		[2066-2084]
150	GUUUUAGAAGUCAGUAGAA	UUCUACUGACUUCUAAAAC	Ms	[3635-3653]
151	UGUGGAUGUCCAAGCAGCA	UGCUGCUUGGACAUCCACA		[1373-1391]
152	AAGCUAAAGGCAACUCGUA	UACGAGUUGCCUUUAGCUU		[2058-2076]
153	ACCUUUGGGCUGCCUUAUA	UAUAAGGCAGCCCAAAGGU		[3391-3409]
154	GAGAGGUUUUAAUUAAAAC	GUUUUAAUUAAAACCUCUC		[3039-3057]
155	CAGCUAAACUACUCUUAGU	ACUAAGAGUAGUUUAGCUG		[2434-2452]
156	CAGCAGUUAACCUUCAAGA	UCUUGAAGGUUAACUGCUG		[2987-3005]
157	AAACUGACUGGAAACUUCA	UGAAGUUUCCAGUCAGUUU		[23-41]
158	UUGUAAGGAGAGGUUUUAA	UUAAAACCUCUCCUUACAA		[3032-3050]
159	CCAACAUCGAGACCUUCGA	UCGAAGGUCUCGAUGUUGG		[1223-1241]
160	UACAUUGCAUUAAAAAGAA	UUCUUUUUAAUGCAAUGUA		[3916-3934]
161	AGCCCGAUCUGAAGAAGGA	UCCUUCUUCAGAUCGGGCU		[542-560]
162	AGGAAUAUUCUCUAUUUUA	UAAAAUAGAGAAUAUUCCU	Ms	[2322-2340]
163	AUGGUCAUCUGUUGUUAAA	UUUAACAACAGAUGACCAU	Ms	[3135-3153]
164	CUGCCUGUUUGGACUUUGU	ACAAAGUCCAAACAGGCAG	Ms	[2261-2279]
165	ACCAGCAGUUAACCUUCAA	UUGAAGGUUAACUGCUGGU		[2985-3003]
166	ACUACACCGACCACCAGAA	UUCUGGUGGUCGGUGUAGU		[1694-1712]
167	AGACCUUAAUCUUAAUUAC	GUAAUUAAGAUUAAGGUCU		[3534-3552]
168	CAACGAGUUUGACCAGUAC	GUACUGGUCAAACUCGUUG		[1245-1263]
169	GGCUAGAGAGUUUGAGGAU	AUCCUCAAACUCUCUAGCC		[3559-3577]
170	CAGACCUUAAUCUUAAUUA	UAAUUAAGAUUAAGGUCUG		[3533-3551]
171	GAAGUCAGUAGAAUAAAAU	AUUUUAUUCUACUGACUUC		[3641-3659]
172	UAAGGAGAGGUUUUAAUUA	UAAUUAAAACCUCUCCUUA		[3035-3053]
173	AGAAAAAAGUCCUCUGUGA	UCACAGAGGACUUUUUUCU		[2304-2322]
174	GGAUGAUGGAGAAUCGUGU	ACACGAUUCUCCAUCAUCC		[2222-2240]
175	UCAUGAAGAUGACCGACGA	UCGUCGGUCAUCUUCAUGA	Rat,Ms	[392-410]
176	GAGGAAUAUUCUCUAUUUU	AAAAUAGAGAAUAUUCCUC	Ms	[2321-2339]
177	AAGCAUUUGGUAAGCUUUA	UAAAGCUUACCAAAUGCUU		[2692-2710]
178	GUAAGGAGAGGUUUUAAUU	AAUUAAAACCUCUCCUUAC		[3034-3052]
179	GGUAAGCUUUAUCAUAUAU	AUAUAUGAUAAAGCUUACC		[2700-2718]
180	UCUGGAGACUUCUGAACGA	UCGUUCAGAAGUCUCCAGA		[797-815]
181	AAACACCUUGAGCCUUAAA	UUUAAGGCUCAAGGUGUUU	Ms	[2739-2757]
182	CUUAAAGCACUCAUAAUAU	AUAUUAUGAGUGCUUUAAG		[3660-3678]
183	CAAGCAAAGGAGAUGAAAU	AUUUCAUCUCCUUUGCUUG		[2847-2865]
184	GCAAGCAAAGGAGAUGAAA	UUUCAUCUCCUUUGCUUGC		[2846-2864]
185	ACGUGUGGAUGUCCAAGCA	UGCUUGGACAUCCACACGU		[1370-1388]
186	AGAAUAAAAUCUUAAAGCA	UGCUUUAAGAUUUUAUUCU		[3650-3668]
187	GUUUGGACUUUGUAAUUAU	AUAAUUACAAAGUCCAAAC	Ms	[2267-2285]
188	CACCAGCAGUUAACCUUCA	UGAAGGUUAACUGCUGGUG		[2984-3002]
189	GGAGCUUUCCUCAAAGGGU	ACCCUUUGAGGAAAGCUCC		[3116-3134]
190	UCUUCUUCUUCCUUAAAGA	UCUUUAAGGAAGAAGAAGA		[2034-2052]
191	GGGAUUUAUACAUAUUUUU	AAAAAUAUGUAUAAAUCCC		[2385-2403]
192	AACACCUUGAGCCUUAAAA	UUUUAAGGCUCAAGGUGUU		[2740-2758]
193	CUAAAAAUAACCGAAGAAA	UUUCUUCGGUUAUUUUUAG		[1942-1960]
194	UAUUUUGUCUUUAGGUAAA	UUUACCUAAAGACAAAAUA		[3759-3777]
195	ACUUGUUUCUUUUUUUGUA	UACAAAAAAAGAAACAAGU		[3312-3330]
196	CAGUAAUUAAAGAAAAAAG	CUUUUUUCUUUAAUUACUG		[2294-2312]
197	UCCUUCAAUUUCUGUAUAA	UUAUACAGAAAUUGAAGGA		[3683-3701]
198	AAGACAUUCCACUUGCUAA	UUAGCAAGUGGAAUGUCUU		[3002-3020]
199	CAAAGGAGAUGAAAUCUGU	ACAGAUUUCAUCUCCUUUG		[2851-2869]
200	CAUUCCACUUGCUAAAAUU	AAUUUUAGCAAGUGGAAUG		[3006-3024]
201	ACGUCAUCUCCAACAUCGA	UCGAUGUUGGAGAUGACGU		[1214-1232]
202	UCGUGUUUUGUUUGUUUCA	UGAAACAAACAAAACACGA		[3793-3811]

203	UCUUAAAGCACUCAUAAUA	UAUUAUGAGUGCUUUAAGA		[3659-3677]
204	CUAGAGAAGCAUUUGGUAA	UUACCAAAUGCUUCUCUAG		[2686-2704]
205	GGAGGAUGAUGGAGAAUCG	CGAUUCUCCAUCAUCCUCC		[2219-2237]
206	GACCUAUCCAAGCGCAUUA	UAAUGCGCUUGGAUAGGUC		[2101-2119]
207	GGUCAUCUGUUGUUAAAUU	AAUUUAACAACAGAUGACC	Ms	[3137-3155]
208	UGCCCUAGCUUUUCUUGCA	UGCAAGAAAAGCUAGGGCA		[2462-2480]
209	ACAUUUAAGCUAAAGGCAA	UUGCCUUUAGCUUAAAUGU		[2052-2070]
210	GUAAGCUUUAUCAUAUAUA	UAUAUAUGAUAAAGCUUAC		[2701-2719]
211	ACUCCACCUUCACCUACAU	AUGUAGGUGAAGGUGGAGU		[1760-1778]
212	CAGGCUUUGCGAUUUAAGG	CCUUAAAUCGCAAAGCCUG		[2607-2625]
213	AAACAUUUGCACUCUUUUA	UAAAAGAGUGCAAAUGUUU		[2772-2790]
214	CCUCACCCUAGAUUUGUAU	AUACAAAUCUAGGGUGAGG		[3235-3253]
215	GAAACUUGUUUCUUUUUUU	AAAAAAAGAAACAAGUUUC		[3309-3327]
216	UUCACUGCAGUCUUAAGAA	UUCUUAAGACUGCAGUGAA		[2816-2834]
217	GAUACUUCUGUAACUUAAG	CUUAAGUUACAGAAGUAUC		[3721-3739]
218	GAUUGCAAAUGUAGUGUAU	AUACACUACAUUUGCAAUC		[3340-3358]
219	GCCUUUUUGUCCAUCCCUU	AAGGGAUGGACAAAAAGGC		[3258-3276]
220	CUGGAAACUUGUUUCUUUU	AAAAGAAACAAGUUUCCAG		[3306-3324]
221	UGUAAGGAGAGGUUUUAAU	AUUAAAACCUCUCCUUACA		[3033-3051]
222	UCUUAAGAAAGAGGUAAAA	UUUUACCUCUUUCUUAAGA		[2826-2844]
223	UAAACAAUAGUCUAGAGAA	UUCUCUAGACUAUUGUUUA		[2675-2693]
224	CCAUAUUUCUCUACAUCUU	AAGAUGUAGAGAAAUAUGG		[3470-3488]
225	UAGAAGUCAGUAGAAUAAA	UUUAUUCUACUGACUUCUA	Ms	[3639-3657]
226	UAUGGUCAUCUGUUGUUAA	UUAACAACAGAUGACCAUA	Ms	[3134-3152]
227	UAUUUUUCCAACAGCUAAA	UUUAGCUGUUGGAAAAAUA		[2423-2441]
228	CAUCCUUCAAUUUCUGUAU	AUACAGAAAUUGAAGGAUG		[3681-3699]
229	UCACCCUAGAUUUGUAUAA	UUAUACAAAUCUAGGGUGA		[3237-3255]
230	GCAUCCUUCAAUUUCUGUA	UACAGAAAUUGAAGGAUGC		[3680-3698]
231	GGGAAACAUUUGCACUCUU	AAGAGUGCAAAUGUUUCCC		[2769-2787]
232	AGAGAGGACCAACCAGAAU	AUUCUGGUUGGUCCUCUCU		[1960-1978]
233	CACUUGCUAAAAUUAUUUA	UAAAUAAUUUUAGCAAGUG		[3011-3029]
234	CUCAGAACACCAGCAGUUA	UAACUGCUGGUGUUCUGAG		[2977-2995]
235	UGGAGACUUCUGAACGAGA	UCUCGUUCAGAAGUCUCCA		[799-817]
236	ACAGCUCACUCGACCUUGA	UCAAGGUCGAGUGAGCUGU		[1884-1902]
237	CCUGUUUGGACUUUGUAAU	AUUACAAAGUCCAAACAGG	Ms	[2264-2282]
238	CUUUUGUUCUCUCCGUGAA	UUCACGGAGAGAACAAAAG		[3836-3854]
239	CAGUUAACCUUCAAGACAU	AUGUCUUGAAGGUUAACUG		[2990-3008]
240	AAAGCAAGUUUCUUUGUAU	AUACAAAGAAACUUGCUUU		[3215-3233]
241	UCCUAAAAAUAACCGAAGA	UCUUCGGUUAUUUUUAGGA		[1940-1958]
242	GUUGAAAACAAACUGGAAA	UUUCCAGUUUGUUUUCAAC		[3294-3312]
243	CAGAUCUUUUUAAAAAGAU	AUCUUUUUAAAAAGAUCUG		[3705-3723]
244	UCACCUGUGCCUCUCAGAA	UUCUGAGAGGCACAGGUGA		[2965-2983]
245	UGCCUGUUUGGACUUUGUA	UACAAAGUCCAAACAGGCA	Ms	[2262-2280]
246	CCUUUUUGUCCAUCCCUUU	AAAGGGAUGGACAAAAAGG		[3259-3277]
247	AGAGUAUUUUUGUACAGAU	AUCUGUACAAAAAUACUCU	Ms	[2484-2502]
248	UAAACUACUCUUAGUUGAA	UUCAACUAAGAGUAGUUUA		[2438-2456]
249	GAAACUUUUCUUUGCAGGA	UCCUGCAAAGAAAAGUUUC		[73-91]
250	UCGUGUGAUCAGUGUGCUA	UAGCACACUGAUCACACGA		[2235-2253]
251	GACCUUUGGGCUGCCUUAU	AUAAGGCAGCCCAAAGGUC		[3390-3408]
252	GACCAACCAGAAUUCCCUU	AAGGGAAUUCUGGUUGGUC		[1966-1984]
253	ACCUGUGCCUCUCAGAACA	UGUUCUGAGAGGCACAGGU		[2967-2985]
254	UCCACUUGCUAAAAUUAUU	AAUAAUUUUAGCAAGUGGA		[3009-3027]
255	UUUCUUUGCAGGAGGAGAA	UUCUCCUCCUGCAAAGAAA		[79-97]
256	UGUCCAUCCCUUUUUUCUU	AAGAAAAAAGGGAUGGACA		[3265-3283]
257	GACCUUAAUCUUAAUUACU	AGUAAUUAAGAUUAAGGUC		[3535-3553]
258	CUUCUUCUUCUUCCUUAAA	UUUAAGGAAGAAGAAGAAG		[2032-2050]

259	GCGAAAUCAACGAGAAACU	AGUUUCUCGUUGAUUUCGC		[2169-2187]
260	GGACUUUUUAAACCCUCUU	AAGAGGGUUUAAAAAGUCC		[2188-2206]
261	CGGAAACUUUUCUUUGCAG	CUGCAAAGAAAAGUUUCCG		[71-89]
262	GAGUAAACAAUAGUCUAGA	UCUAGACUAUUGUUUACUC		[2672-2690]
263	UUUGGUAAGCUUUAUCAUA	UAUGAUAAAGCUUACCAAA		[2697-2715]
264	CGUGUGAUCAGUGUGCUAA	UUAGCACACUGAUCACACG		[2236-2254]
265	AUCUUAAAGCACUCAUAAU	AUUAUGAGUGCUUUAAGAU		[3658-3676]
266	GUUGGAGCUUUCCUCAAAG	CUUUGAGGAAAGCUCCAAC		[3113-3131]
267	GAGAGAUUGCAAAUGUAGU	ACUACAUUUGCAAUCUCUC		[3336-3354]
268	UUGUUUUUGUUGAAAACAA	UUGUUUUCAACAAAAACAA		[3286-3304]
269	CUCAAAGGCUACGACUGGA	UCCAGUCGUAGCCUUUGAG		[613-631]
270	CAAGUUUCUUUGUAUUCCU	AGGAAUACAAAGAAACUUG		[3219-3237]
271	CAUUUGGUAAGCUUUAUCA	UGAUAAAGCUUACCAAAUG		[2695-2713]
272	UGAUCAGUGUGCUAAAUCU	AGAUUUAGCACACUGAUCA		[2240-2258]
273	CUUUGCGAUUUAAGGAGGA	UCCUCCUUAAAUCGCAAAG		[2611-2629]
274	GAGUAUUUUUGUACAGAUU	AAUCUGUACAAAAAUACUC	Ms	[2485-2503]
275	CAAUAAGUGCCCGAGCACA	UGUGCUCGGGCACUUAUUG		[2890-2908]
276	AACUCCAGCUCCUACUACA	UGUAGUAGGAGCUGGAGUU		[1711-1729]
277	AAAAGUCCUCUGUGAGGAA	UUCCUCACAGAGGACUUUU	Ms	[2308-2326]
278	UUAGCAGUAAUUAAAGAAA	UUUCUUUAAUUACUGCUAA		[2290-2308]
279	GCAAUUAUGGGAGUAAACA	UGUUUACUCCCAUAAUUGC		[2662-2680]
280	GAAACUGGACUUUUUAAAC	GUUUAAAAAGUCCAGUUUC		[2182-2200]
281	UUGCAGGAGGAGAAGAGAA	UUCUCUUCUCCUCCUGCAA		[84-102]
282	CACAGUACGACUACACCGA	UCGGUGUAGUCGUACUGUG		[1685-1703]
283	GCAACUCGUACCCAAAUUU	AAAUUUGGGUACGAGUUGC		[2067-2085]
284	GAUUCAUUACCAUUUUGAG	CUCAAAAUGGUAAUGAAUC		[2366-2384]
285	GUCUUUAGGUAAAAGCUUU	AAAGCUUUUACCUAAAGAC		[3765-3783]
286	GAGAGUUUGAGGAUUGCUU	AAGCAAUCCUCAAACUCUC		[3564-3582]
287	UUAGAAGUCAGUAGAAUAA	UUAUUCUACUGACUUCUAA	Ms	[3638-3656]
288	UGAAAUCUGUUCUGGGAAU	AUUCCCAGAACAGAUUUCA		[2860-2878]
289	GGAGACUUCUGAACGAGAG	CUCUCGUUCAGAAGUCUCC		[800-818]
290	GCCUUAUUUUGCAAUUAUG	CAUAAUUGCAAAAUAAGGC		[2652-2670]
291	AAGAAAGAGGUAAAAGGCA	UGCCUUUUACCUCUUUCUU		[2830-2848]
292	UGAGGAAUAUUCUCUAUUU	AAAUAGAGAAUAUUCCUCA	Ms	[2320-2338]
293	GUUGUUAAAUUAUGUUCUU	AAGAACAUAAUUUAACAAC	Ms	[3145-3163]
294	GUUCGUGUUUUGUUUGUUU	AAACAAACAAAACACGAAC		[3791-3809]
295	UAUAAAUGAGAGAUUGCAA	UUGCAAUCUCUCAUUUAUA		[3329-3347]
296	AUACUUCUGUAACUUAAGA	UCUUAAGUUACAGAAGUAU		[3722-3740]
297	CCGAAGAAAGAGAGGACCA	UGGUCCUCUCUUUCUUCGG		[1952-1970]
298	UUUAAAGAAGAGAAAAACA	UGUUUUUCUCUUCUUUAAA		[2725-2743]
299	AGCUUUCCUCAAAGGGUAU	AUACCCUUUGAGGAAAGCU		[3118-3136]
300	CUUCUGAACGAGAGCGAGA	UCUCGCUCUCGUUCAGAAG		[805-823]
301	AAUUAUGUUCUUAACUGUA	UACAGUUAAGAACAUAAUU	Ms	[3152-3170]
302	UCUAGAGAAGCAUUUGGUA	UACCAAAUGCUUCUCUAGA		[2685-2703]
303	AGAAGGACCACCCGGAUUA	UAAUCCGGGUGGUCCUUCU		[869-887]
304	CACUUUUGCUCUUUUUCCU	AGGAAAAAGAGCAAAAGUG		[119-137]
305	AUAUUUUGUCUUUAGGUAA	UUACCUAAAGACAAAAUAU		[3758-3776]
306	UUAAAAAGAUACUUCUGUA	UACAGAAGUAUCUUUUUAA		[3714-3732]
307	UGCUCUUAUUUUUCCAACA	UGUUGGAAAAAUAAGAGCA	Ms	[2417-2435]
308	GAGUUUGAGGAUUGCUUUU	AAAAGCAAUCCUCAAACUC		[3566-3584]
309	GCCUUAAAACGGUGCUGCU	AGCAGCACCGUUUUAAGGC		[2750-2768]
310	CCACUUGCUAAAAUUAUUU	AAAUAAUUUUAGCAAGUGG		[3010-3028]
311	AGACCUUCGAUGUCAACGA	UCGUUGACAUCGAAGGUCU		[1232-1250]
312	UGGGAACAACCCGUCUACA	UGUAGACGGGUUGUUCCCA		[1864-1882]
313	GCAUUUAAAUCAUAUUUUG	CAAAAUAUGAUUUAAAUGC		[3747-3765]
314	AUUAUGUUCUUAACUGUAA	UUACAGUUAAGAACAUAAU	Ms	[3153-3171]

315	GUCAUCUGUUGUUAAAUUA	UAAUUUAACAACAGAUGAC	Ms	[3138-3156]
316	AGAAAGAGAGGACCAACCA	UGGUUGGUCCUCUCUUUCU		[1956-1974]
317	UAUCCAAGCGCAUUACCCA	UGGGUAAUGCGCUUGGAUA		[2105-2123]
318	AACUUUGCUUAAUUCCUCA	UGAGGAAUUAAGCAAAGUU		[2590-2608]
319	GCUUGUUCACUGCAGUCUU	AAGACUGCAGUGAACAAGC		[2811-2829]
320	CACUGACAGACCUUAAUCU	AGAUUAAGGUCUGUCAGUG		[3527-3545]
321	GAAGCAUUUGGUAAGCUUU	AAAGCUUACCAAAUGCUUC		[2691-2709]
322	AAACAAACUGGAAACUUGU	ACAAGUUUCCAGUUUGUUU		[3299-3317]
323	UGUGCCUCUCAGAACACCA	UGGUGUUCUGAGAGGCACA		[2970-2988]
324	UCAACGGCUCCAGCAAGAA	UUCUUGCUGGAGCCGUUGA	Rat,Ms	[656-674]
325	GGACUUUGUAAUUAUUUUU	AAAAAUAAUUACAAAGUCC	Ms	[2271-2289]
326	ACACCUUGAGCCUUAAAAC	GUUUUAAGGCUCAAGGUGU		[2741-2759]
327	CGAAACUGACUGGAAACUU	AAGUUUCCAGUCAGUUUCG		[21-39]
328	GUUCACUGCAGUCUUAAGA	UCUUAAGACUGCAGUGAAC		[2815-2833]
329	GACAUUUAAGCUAAAGGCA	UGCCUUUAGCUUAAAUGUC		[2051-2069]
330	UCAACGAGUUUGACCAGUA	UACUGGUCAAACUCGUUGA		[1244-1262]
331	CAAGACAUUCCACUUGCUA	UAGCAAGUGGAAUGUCUUG		[3001-3019]
332	CAAAAACAAUGCAAGCAUG	CAUGCUUGCAUUGUUUUUG		[3445-3463]
333	GGGUAUGGUCAUCUGUUGU	ACAACAGAUGACCAUACCC	Ms	[3131-3149]
334	GUCAGUAGAAUAAAAUCUU	AAGAUUUUAUUCUACUGAC		[3644-3662]
335	AAAUGUAGUGUAUCACUGA	UCAGUGAUACACUACAUUU		[3346-3364]
336	AGCAGAUCUUUUUAAAAAG	CUUUUUAAAAAGAUCUGCU		[3703-3721]
337	CAGAGUAUUUUUGUACAGA	UCUGUACAAAAAUACUCUG	Ms	[2483-2501]
338	UGUCAUCCAUAUUUCUCUA	UAGAGAAAUAUGGAUGACA		[3464-3482]
339	CCAUGAACGCCUUCAUGGU	ACCAUGAAGGCGUUCAUGG	Rat,Ms	[695-713]
340	AGGUAAAAGGCAAGCAAAG	CUUUGCUUGCCUUUUACCU		[2837-2855]
341	CCACCCGGAUUACAAGUAC	GUACUUGUAAUCCGGGUGG		[876-894]
342	AACGGCUCCAGCAAGAACA	UGUUCUUGCUGGAGCCGUU	Rat,Ms	[658-676]
343	GACAUUCCACUUGCUAAAA	UUUUAGCAAGUGGAAUGUC		[3004-3022]
344	ACAGAUUUGCUUUCUCUUA	UAAGAGAAAGCAAAUCUGU		[2497-2515]
345	GUGUUUUGUUUGUUUCACU	AGUGAAACAAACAAAACAC		[3795-3813]
346	GUAUGGUCAUCUGUUGUUA	UAACAACAGAUGACCAUAC	Ms	[3133-3151]
347	CCCUUUUUUCUUUGUUGUU	AACAACAAAGAAAAAAGGG		[3272-3290]
348	AGGCCUUAUUUUGCAAUUA	UAAUUGCAAAAUAAGGCCU		[2650-2668]
349	GUAUAAAAGCAGAUCUUUU	AAAAGAUCUGCUUUUAUAC		[3696-3714]
350	GAACAGUGUGCCCUAGCUU	AAGCUAGGGCACACUGUUC		[2454-2472]
351	UGGACUUUGUAAUUAUUUU	AAAAUAAUUACAAAGUCCA	Ms	[2270-2288]
352	AGCAUUUGGUAAGCUUUAU	AUAAAGCUUACCAAAUGCU		[2693-2711]
353	AAUUAUGGGAGUAAACAAU	AUUGUUUACUCCCAUAAUU		[2664-2682]
354	UUUUGUUCUCUCCGUGAAA	UUUCACGGAGAGAACAAAA		[3837-3855]
355	GUAGUGUAUCACUGAGUCA	UGACUCAGUGAUACACUAC		[3350-3368]
356	AUUUUGUCUUUAGGUAAAA	UUUUACCUAAAGACAAAAU		[3760-3778]
357	GAAACUGACUGGAAACUUC	GAAGUUUCCAGUCAGUUUC		[22-40]
358	GAGAGGACCAACCAGAAUU	AAUUCUGGUUGGUCCUCUC		[1961-1979]
359	CUUAUUUUUCCAACAGCUA	UAGCUGUUGGAAAAAUAAG		[2421-2439]
360	CGUACCCAAAUUUCCAAGA	UCUUGGAAAUUUGGGUACG		[2073-2091]
361	AUAAAUGAGAGAUUGCAAA	UUUGCAAUCUCUCAUUUAU		[3330-3348]
362	UAAAAAGAUACUUCUGUAA	UUACAGAAGUAUCUUUUUA		[3715-3733]
363	AAAGAGAGGACCAACCAGA	UCUGGUUGGUCCUCUCUUU		[1958-1976]
364	AGAGUUUGAGGAUUGCUUU	AAAGCAAUCCUCAAACUCU		[3565-3583]
365	CUCGAAACUGACUGGAAAC	GUUUCCAGUCAGUUUCGAG		[19-37]
366	ACCCGGAUUACAAGUACCA	UGGUACUUGUAAUCCGGGU		[878-896]
367	CCUUCGAUGUCAACGAGUU	AACUCGUUGACAUCGAAGG		[1235-1253]
368	UGUGAUCAGUGUGCUAAAU	AUUUAGCACACUGAUCACA		[2238-2256]
369	UUCUGAACGAGAGCGAGAA	UUCUCGCUCUCGUUCAGAA		[806-824]
370	GCCUUAAAAAAAAAUAAAG	CUUUAUUUUUUUUUAAGGC		[2633-2651]

371	CUUGUUUCUUUUUUUGUAU	AUACAAAAAAAGAAACAAG		[3313-3331]
372	CAACGAGAAACUGGACUUU	AAAGUCCAGUUUCUCGUUG		[2176-2194]
373	AUGAAAUCUGUUCUGGGAA	UUCCCAGAACAGAUUUCAU		[2859-2877]
374	UGUAUUCCUCACCCUAGAU	AUCUAGGGUGAGGAAUACA		[3229-3247]
375	CUCACCCUAGAUUUGUAUA	UAUACAAAUCUAGGGUGAG		[3236-3254]
376	GAAACAUUUGCACUCUUUU	AAAAGAGUGCAAAUGUUUC		[2771-2789]
377	UUGGUAAGCUUUAUCAUAU	AUAUGAUAAAGCUUACCAA		[2698-2716]
378	AAAAGAUACUUCUGUAACU	AGUUACAGAAGUAUCUUUU		[3717-3735]
379	ACCAGAACUCCAGCUCCUA	UAGGAGCUGGAGUUCUGGU		[1706-1724]
380	GAUGGAGAAUCGUGUGAUC	GAUCACACGAUUCUCCAUC		[2226-2244]
381	GCUUAAUUCCUCAGGCUUU	AAAGCCUGAGGAAUUAAGC		[2596-2614]
382	ACUGGAAACUUGUUUCUUU	AAAGAAACAAGUUUCCAGU		[3305-3323]
383	AAAUUAUGUUCUUAACUGU	ACAGUUAAGAACAUAAUUU	Ms	[3151-3169]
384	UACCCAAAUUUCCAAGACA	UGUCUUGGAAAUUUGGGUA		[2075-2093]
385	GAGGAAGUCGGUGAAGAAC	GUUCUUCACCGACUUCCUC	Ms	[906-924]
386	CUAAACUACUCUUAGUUGA	UCAACUAAGAGUAGUUUAG		[2437-2455]
387	UUAUUUUUCCAACAGCUAA	UUAGCUGUUGGAAAAAUAA		[2422-2440]
388	GACUUCUGAACGAGAGCGA	UCGCUCUCGUUCAGAAGUC		[803-821]
389	GGAAACAUUUGCACUCUUU	AAAGAGUGCAAAUGUUUCC		[2770-2788]
390	CUGUAUAAAAGCAGAUCUU	AAGAUCUGCUUUUAUACAG		[3694-3712]
391	CCCGAUCUGAAGAAGGAGA	UCUCCUUCUUCAGAUCGGG		[544-562]
392	CCCUAGAUUUGUAUAAAUG	CAUUUAUACAAAUCUAGGG		[3240-3258]
393	CCUCUGUGAGGAAUAUUCU	AGAAUAUUCCUCACAGAGG	Ms	[2314-2332]
394	CUUCGAUGUCAACGAGUUU	AAACUCGUUGACAUCGAAG		[1236-1254]
395	AGAACUCCAGCUCCUACUA	UAGUAGGAGCUGGAGUUCU		[1709-1727]
396	CCGUGAAACUUACCUUUCC	GGAAAGGUAAGUUUCACGG		[3848-3866]
397	ACCAGAGUAUUUUUGUACA	UGUACAAAAAUACUCUGGU	Ms	[2481-2499]
398	AGUCCUCUGUGAGGAAUAU	AUAUUCCUCACAGAGGACU	Ms	[2311-2329]
399	CCAAGCGCAUUACCCACUU	AAGUGGGUAAUGCGCUUGG		[2108-2126]
400	CAACAUCGAGACCUUCGAU	AUCGAAGGUCUCGAUGUUG		[1224-1242]
401	AAGGGUAUGGUCAUCUGUU	AACAGAUGACCAUACCCUU	Ms	[3129-3147]
402	AAAGGAGAUGAAAUCUGUU	AACAGAUUUCAUCUCCUUU		[2852-2870]
403	AGCUGCCUUAAAAAAAAAU	AUUUUUUUUUAAGGCAGCU		[2629-2647]
404	ACAAUAGUCUAGAGAAGCA	UGCUUCUCUAGACUAUUGU		[2678-2696]
405	GUCCAUCCCUUUUUUCUUU	AAAGAAAAAAGGGAUGGAC		[3266-3284]
406	AAGAGAAAAACACCUUGAG	CUCAAGGUGUUUUUCUCUU		[2732-2750]
407	AAAAACACCUUGAGCCUUA	UAAGGCUCAAGGUGUUUUU		[2737-2755]
408	UGAACAGUGUGCCCUAGCU	AGCUAGGGCACACUGUUCA		[2453-2471]
409	CGUGAAACUUACCUUUCCC	GGGAAAGGUAAGUUUCACG		[3849-3867]
410	AUCUGUUCUGGGAAUGUUU	AAACAUUCCCAGAACAGAU		[2864-2882]
411	AGAUAAAAUUAAAUGCUCU	AGAGCAUUUAAUUUUAUCU		[2404-2422]
412	CAUUUAAGCUAAAGGCAAC	GUUGCCUUUAGCUUAAAUG		[2053-2071]
413	CACAAACAUGACCUAUCCA	UGGAUAGGUCAUGUUUGUG		[2092-2110]
414	UCUUCUUCCUUAAAGACAU	AUGUCUUUAAGGAAGAAGA		[2037-2055]
415	UGCAGCACAAGAAGGACCA	UGGUCCUUCUUGUGCUGCA		[860-878]
416	AGUGUAUCACUGAGUCAUU	AAUGACUCAGUGAUACACU		[3352-3370]
417	CGAUGUCAACGAGUUUGAC	GUCAAACUCGUUGACAUCG		[1239-1257]
418	GUAAAAGGCAAGCAAAGGA	UCCUUUGCUUGCCUUUUAC		[2839-2857]
419	CUCUCAGAACACCAGCAGU	ACUGCUGGUGUUCUGAGAG		[2975-2993]
420	UGAUCCUAAAAAUAACCGA	UCGGUUAUUUUUAGGAUCA		[1937-1955]
421	UUGUUGUUUUUGUUGAAAA	UUUUCAACAAAAACAACAA		[3283-3301]
422	CCUUUUGUUCUCUCCGUGA	UCACGGAGAGAACAAAAGG		[3835-3853]
423	CUUCAACCUCCCACACUAC	GUAGUGUGGGAGGUUGAAG		[1638-1656]
424	CAGUGUGCUAAAUCUCUCU	AGAGAGAUUUAGCACACUG		[2244-2262]
425	GAUAAAAUUAAAUGCUCUU	AAGAGCAUUUAAUUUUAUC		[2405-2423]
426	UGGUCAUCUGUUGUUAAAU	AUUUAACAACAGAUGACCA	Ms	[3136-3154]

427	GUUCUCUCCGUGAAACUUA	UAAGUUUCACGGAGAGAAC		[3841-3859]
428	CUUUUUUCUUUGUUGUUUU	AAAACAACAAAGAAAAAAG		[3274-3292]
429	UAAAAGCAGAUCUUUUUAA	UUAAAAAGAUCUGCUUUUA		[3699-3717]
430	UACUUCUGUAACUUAAGAA	UUCUUAAGUUACAGAAGUA		[3723-3741]
431	AACUGACUGGAAACUUCAG	CUGAAGUUUCCAGUCAGUU		[24-42]
432	GGCAUUUAAAUCAUAUUUU	AAAAUAUGAUUUAAAUGCC		[3746-3764]
433	GAGUCAUUUGCAGUGUUUU	AAAACACUGCAAAUGACUC		[3363-3381]
434	GGUAAAAGCUUUGGUUUGU	ACAAACCAAAGCUUUUACC		[3772-3790]
435	AAAUAACCGAAGAAAGAGA	UCUCUUUCUUCGGUUAUUU		[1946-1964]
436	AAAAAAUAAAGGCCUUAUU	AAUAAGGCCUUUAUUUUUU		[2641-2659]
437	UUUAGAAGUCAGUAGAAUA	UAUUCUACUGACUUCUAAA	Ms	[3637-3655]
438	AUCUGAAGAAGGAGAGCGA	UCGCUCUCCUUCUUCAGAU	Rat	[548-566]
439	AUCCUUCAAUUUCUGUAUA	UAUACAGAAAUUGAAGGAU		[3682-3700]
440	AUUUGGUAAGCUUUAUCAU	AUGAUAAAGCUUACCAAAU		[2696-2714]
441	CCUUAAAGACAUUUAAGCU	AGCUUAAAUGUCUUUAAGG		[2044-2062]
442	UUUUGUCCAUCCCUUUUUU	AAAAAAGGGAUGGACAAAA		[3262-3280]
443	GAAAGAGAGGACCAACCAG	CUGGUUGGUCCUCUCUUUC		[1957-1975]
444	GUGUGCCCUAGCUUUUCUU	AAGAAAAGCUAGGGCACAC		[2459-2477]
445	CAAAGGGUAUGGUCAUCUG	CAGAUGACCAUACCCUUUG	Ms	[3127-3145]
446	UCCUCAAAGGGUAUGGUCA	UGACCAUACCCUUUGAGGA	Ms	[3123-3141]
447	GGAGUAAACAAUAGUCUAG	CUAGACUAUUGUUUACUCC		[2671-2689]
448	UUUUAGCAGUAAUUAAAGA	UCUUUAAUUACUGCUAAAA		[2288-2306]
449	CAAACAUGACCUAUCCAAG	CUUGGAUAGGUCAUGUUUG		[2094-2112]
450	UUGCAAAUGUAGUGUAUCA	UGAUACACUACAUUUGCAA		[3342-3360]
451	CUGUUUGGACUUUGUAAUU	AAUUACAAAGUCCAAACAG	Ms	[2265-2283]
452	AGAAAAACACCUUGAGCCU	AGGCUCAAGGUGUUUUUCU		[2735-2753]
453	UGUGAGGAAUAUUCUCUAU	AUAGAGAAUAUUCCUCACA	Ms	[2318-2336]
454	ACUUUUCUUUGCAGGAGGA	UCCUCCUGCAAAGAAAAGU		[76-94]
455	GUUGUUGGAGCUUUCCUCA	UGAGGAAAGCUCCAACAAC		[3110-3128]
456	AAAAGCAAGUUUCUUUGUA	UACAAAGAAACUUGCUUUU		[3214-3232]
457	AAAUGCUCUUAUUUUUCCA	UGGAAAAAUAAGAGCAUUU	Ms	[2414-2432]
458	UUGUUGGAGCUUUCCUCAA	UUGAGGAAAGCUCCAACAA		[3111-3129]
459	UGGACUUUUUAAACCCUCU	AGAGGGUUUAAAAAGUCCA		[2187-2205]
460	AGCCCACUGACAGACCUUA	UAAGGUCUGUCAGUGGGCU		[3523-3541]
461	CGUCAUCUCCAACAUCGAG	CUCGAUGUUGGAGAUGACG		[1215-1233]
462	UCAUCUGUUGUUAAAUUAU	AUAAUUUAACAACAGAUGA	Ms	[3139-3157]
463	GAAAGAGGUAAAAGGCAAG	CUUGCCUUUUACCUCUUUC		[2832-2850]
464	UAAAGGCCUUAUUUUGCAA	UUGCAAAAUAAGGCCUUUA		[2647-2665]
465	GCUAGAGAGUUUGAGGAUU	AAUCCUCAAACUCUCUAGC		[3560-3578]
466	AAGAUACUUCUGUAACUUA	UAAGUUACAGAAGUAUCUU		[3719-3737]
467	AGUCUUAAGAAAGAGGUAA	UUACCUCUUUCUUAAGACU		[2824-2842]
468	CUUCUUCCUUAAAGACAUU	AAUGUCUUUAAGGAAGAAG		[2038-2056]
469	CAUGAAGAUGACCGACGAG	CUCGUCGGUCAUCUUCAUG	Rat,Ms	[393-411]
470	UGUCUUUAGGUAAAAGCUU	AAGCUUUUACCUAAAGACA		[3764-3782]
471	GUAUAAAUGAGAGAUUGCA	UGCAAUCUCUCAUUUAUAC		[3328-3346]
472	AUAAAAGCAGAUCUUUUUA	UAAAAAGAUCUGCUUUUAU		[3698-3716]
473	AUUCCACUUGCUAAAAUUA	UAAUUUUAGCAAGUGGAAU		[3007-3025]
474	AAGCAAGUUUCUUUGUAUU	AAUACAAAGAAACUUGCUU		[3216-3234]
475	AAAACGGUGCUGCUGGGAA	UUCCCAGCAGCACCGUUUU		[2755-2773]
476	UAUUUAUUUUGUAAGGAGA	UCUCCUUACAAAAUAAAUA	Ms	[3024-3042]
477	AGUUAACCUUCAAGACAUU	AAUGUCUUGAAGGUUAACU		[2991-3009]
478	AACUACUCUUAGUUGAACA	UGUUCAACUAAGAGUAGUU		[2440-2458]
479	AAGCUCUGGAGACUUCUGA	UCAGAAGUCUCCAGAGCUU		[793-811]
480	CUGCUGGGAAACAUUUGCA	UGCAAAUGUUUCCCAGCAG		[2764-2782]
481	GGAAACUUGUUUCUUUUUU	AAAAAAGAAACAAGUUUCC		[3308-3326]
482	AUUAUGGGAGUAAACAAUA	UAUUGUUUACUCCCAUAAU		[2665-2683]

483	UUCUGGGAAUGUUUCAGCA	UGCUGAAACAUUCCCAGAA		[2869-2887]
484	UUAAAGACAUUUAAGCUAA	UUAGCUUAAAUGUCUUUAA		[2046-2064]
485	ACAGUGUGCCCUAGCUUUU	AAAAGCUAGGGCACACUGU		[2456-2474]
486	GCAGUUAACCUUCAAGACA	UGUCUUGAAGGUUAACUGC		[2989-3007]
487	AGUUUUAGAAGUCAGUAGA	UCUACUGACUUCUAAAACU	Ms	[3634-3652]
488	CUGAGUCAUUUGCAGUGUU	AACACUGCAAAUGACUCAG		[3361-3379]
489	GCUAAAUCUCUCUGCCUGU	ACAGGCAGAGAGAUUUAGC		[2250-2268]
490	CAGAACACCAGCAGUUAAC	GUUAACUGCUGGUGUUCUG		[2979-2997]
491	ACUCCAGCUCCUACUACAG	CUGUAGUAGGAGCUGGAGU		[1712-1730]
492	GCGUAUGAAUCUCCUGGAC	GUCCAGGAGAUUCAUACGC	Rat,Ms	[369-387]
493	CAAUAGUCUAGAGAAGCAU	AUGCUUCUCUAGACUAUUG		[2679-2697]
494	AUCUGUUGUUAAAUUAUGU	ACAUAAUUUAACAACAGAU	Ms	[3141-3159]
495	UCUCCAACAUCGAGACCUU	AAGGUCUCGAUGUUGGAGA		[1220-1238]
496	CCCGGAUUACAAGUACCAG	CUGGUACUUGUAAUCCGGG		[879-897]
497	GUGCUGCUGGGAAACAUUU	AAAUGUUUCCCAGCAGCAC		[2761-2779]
498	ACAAACAUGACCUAUCCAA	UUGGAUAGGUCAUGUUUGU		[2093-2111]
499	AAGGACCACCCGGAUUACA	UGUAAUCCGGGUGGUCCUU		[871-889]
500	CAGAACUCCAGCUCCUACU	AGUAGGAGCUGGAGUUCUG		[1708-1726]

Table B 34 SPP1 - secreted phosphoprotein 1

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-91206461 :166-1110
1	GGAUGAUAUGGAUGAUGAA	UUCAUCAUCCAUAUCAUCC		[420-438]
2	CCAAGUAAGUCCAACGAAA	UUUCGUUGGACUUACUUGG		[388-406]
3	GGAUGACCAGAGUGCUGAA	UUCAGCACUCUGGUCAUCC		[855-873]
4	GACUGAGGUCAAAAUCUAA	UUAGAUUUUGACCUCAGUC	Mnk	[662-680]
5	GGAUGAUGAAGAUGAUGAU	AUCAUCAUCUUCAUCAUCC	Mnk	[429-447]
6	GCUUUAUAGCAAAAUGAAA	UUUCAUUUUGCUAUAAAGC	Mnk	[1161-1179]
7	GAACGACUCUGAUGAUGUA	UACAUCAUCAGAGUCGUUC		[480-498]
8	CAUGGAAACUCCCUGUAAA	UUUACAGGGAGUUUCCAUG	Mnk	[1281-1299]
9	AUAGCAAAAUGAAAGAGAA	UUCUCUUUCAUUUUGCUAU	Mnk	[1166-1184]
10	AAAUGAAAGAGAACAUGAA	UUCAUGUUCUCUUUCAUUU	Mnk	[1172-1190]
11	GGACUGAGGUCAAAAUCUA	UAGAUUUUGACCUCAGUCC	Mnk	[661-679]
12	AAGUAAGGAAGAAGAUAAA	UUUAUCUUCUUCCUUACUU	Mnk	[1035-1053]
13	CGACUCUGAUGAUGUAGAU	AUCUACAUCAUCAGAGUCG		[483-501]
14	GCAUUUAGUCAAAAGAAAA	UUUUCUUUUGACUAAAUGC		[1139-1157]
15	GGUUGUCCAGCAAUUAAUA	UAUUAAUUGCUGGACAACC		[1583-1601]
16	UGAUGUAGAUGACACUGAU	AUCAGUGUCAUCUACAUCA		[492-510]
17	GAAACUCCCUGUAAACUAA	UUAGUUUACAGGGAGUUUC	Mnk	[1285-1303]
18	UGAAGAUGAUGAUGACCAU	AUGGUCAUCAUCAUCUUCA		[435-453]
19	AGAAGAUAAACACCUGAAA	UUUCAGGUGUUUAUCUUCU	Mnk	[1044-1062]
20	GUCUCACCAUUCUGAUGAA	UUCAUCAGAAUGGUGAGAC	Mnk	[531-549]
21	CCAGUACCCUGAUGCUACA	UGUAGCAUCAGGGUACUGG	Mnk	[702-720]
22	AAUGAAAGAGAACAUGAAA	UUUCAUGUUCUCUUUCAUU	Mnk	[1173-1191]
23	CUAUGUUCAUUCUAUAGAA	UUCUAUAGAAUGAACAUAG		[1321-1339]
24	CAGAGUGCUGAAACCCACA	UGUGGGUUUCAGCACUCUG		[862-880]
25	CUUCUGAGGUCAAUUAAAA	UUUUAAUUGACCUCAGAAG	Mnk	[1094-1112]
26	CAUUUAGUCAAAAGAAAAA	UUUUUCUUUUGACUAAAUG		[1140-1158]
27	CCACAUGGAUGAUAUGGAU	AUCCAUAUCAUCCAUGUGG		[414-432]
28	CAAUUAAAAGGAGAAAAAA	UUUUUUCUCCUUUUAAUUG	Mnk	[1104-1122]
29	UAUGGAUGAUGAAGAUGAU	AUCAUCUUCAUCAUCCAUA		[426-444]
30	CUGGAAGUUCUGAGGAAAA	UUUUCCUCAGAACUUCCAG	Mnk	[236-254]
31	CAAGGAAAACUCACUACCA	UGGUAGUGAGUUUUCCUUG	Mnk	[148-166]
32	CCAUGAGAAUUGCAGUGAU	AUCACUGCAAUUCUCAUGG	Mnk	[164-182]
33	AACUAUCACUGUAUUUUAA	UUAAAAUACAGUGAUAGUU	Mnk	[1348-1366]

34	GCAAAAUGAAAGAGAACAU	AUGUUCUCUUUCAUUUUGC	Mnk	[1169-1187]
35	UGCUUUAUAGCAAAAUGAA	UUCAUUUUGCUAUAAAGCA	Mnk	[1160-1178]
36	UGGAAAGCGAGGAGUUGAA	UUCAACUCCUCGCUUUCCA	Mnk	[743-761]
37	AGCAGUCCAGAUUAUAUAA	UUAUAUAAUCUGGACUGCU		[887-905]
38	UGAUAUGGAUGAUGAAGAU	AUCUUCAUCAUCCAUAUCA		[423-441]
39	UGGGAAGGACAGUUAUGAA	UUCAUAACUGUCCUUCCCA		[825-843]
40	CGGUUGUCCAGCAAUUAAU	AUUAAUUGCUGGACAACCG		[1582-1600]
41	GUCUGCAGCAGCAUUUAAA	UUUAAAUGCUGCUGCAGAC		[22-40]
42	GAGCAAUGAGCAUUCCGAU	AUCGGAAUGCUCAUUGCUC		[924-942]
43	CGAUGUGAUUGAUAGUCAG	CUGACUAUCAAUCACAUCG		[939-957]
44	CCAUUCUGAUGAAUCUGAU	AUCAGAUUCAUCAGAAUGG		[537-555]
45	GGGAAGGACAGUUAUGAAA	UUUCAUAACUGUCCUUCCC		[826-844]
46	UGCAUUUAGUCAAAAGAAA	UUUCUUUUGACUAAAUGCA		[1138-1156]
47	CAGCAAUUAAUAAAACAUA	UAUGUUUUAUUAAUUGCUG		[1590-1608]
48	AAAGCAGCUUUACAACAAA	UUUGUUGUAAAGCUGCUUU	Mnk	[252-270]
49	CACUUUGCAUUUAGUCAAA	UUUGACUAAAUGCAAAGUG		[1133-1151]
50	GAGGAAAAGCAGCUUUACA	UGUAAAGCUGCUUUUCCUC	Mnk	[247-265]
51	UGUGAUUGAUAGUCAGGAA	UUCCUGACUAUCAAUCACA		[942-960]
52	CUAUCACUGUAUUUUAAUA	UAUUAAAAUACAGUGAUAG	Mnk	[1350-1368]
53	GACCCAUCUCAGAAGCAGA	UCUGCUUCUGAGAUGGGUC	Rat,Mnk,Ms	[304-322]
54	GAAGAAAUGCAAACUAUCA	UGAUAGUUUGCAUUUCUUC	Mnk	[1337-1355]
55	CCAGCAACCGAAGUUUUCA	UGAAAACUUCGGUUGCUGG		[586-604]
56	CAUUUUAUGUCACUAUAAU	AUUAUAGUGACAUAAAAUG	Mnk	[1445-1463]
57	GGACAGUUAUGAAACGAGU	ACUCGUUUCAUAACUGUCC		[831-849]
58	CGAGGAGUUGAAUGGUGCA	UGCACCAUUCAACUCCUCG	Mnk	[750-768]
59	AGGACUCCAUUGACUCGAA	UUCGAGUCAAUGGAGUCCU		[464-482]
60	UAUGUAGAAGCAAACAAAA	UUUUGUUUGCUUCUACAUA	Mnk	[1396-1414]
61	AGAAACCAAUGACUUUAAA	UUUAAAGUCAUUGGUUUCU	Mnk	[357-375]
62	GGCUGAUUCUGGAAGUUCU	AGAACUUCCAGAAUCAGCC	Mnk	[228-246]
63	CCAAAAGUAAGGAAGAAGA	UCUUCUUCCUUACUUUUGG		[1031-1049]
64	UCGUAUUUCUCAUGAAUUA	UAAUUCAUGAGAAAUACGA		[1065-1083]
65	GGGUUAUGUCUAUGUUCAU	AUGAACAUAGACAUAACCC		[1312-1330]
66	AAGCAGUCCAGAUUAUAUA	UAUAUAAUCUGGACUGCUU		[886-904]
67	CCAGAUUAUAUAAGCGGAA	UUCCGCUUAUAUAAUCUGG	Mnk	[893-911]
68	GAAGAUAAACACCUGAAAU	AUUUCAGGUGUUUAUCUUC	Mnk	[1045-1063]
69	UCUUCUGAGGUCAAUUAAA	UUUAAUUGACCUCAGAAGA	Rat,Mnk	[1093-1111]
70	CAAAAGUAAGGAAGAAGAU	AUCUUCUUCCUUACUUUUG		[1032-1050]
71	UGUCUAUGUUCAUUCUAUA	UAUAGAAUGAACAUAGACA		[1318-1336]
72	AAACGCCGACCAAGGAAAA	UUUUCCUUGGUCGGCGUUU		[138-156]
73	AAACUAUCACUGUAUUUUA	UAAAAUACAGUGAUAGUUU	Mnk	[1347-1365]
74	AAGAGAACAUGAAAUGCUU	AAGCAUUUCAUGUUCUCUU	Mnk	[1178-1196]
75	GUUUAUGGACUGAGGUCAA	UUGACCUCAGUCCAUAAAC		[655-673]
76	AAGGAAAACUCACUACCAU	AUGGUAGUGAGUUUUCCUU	Mnk	[149-167]
77	AGAAUUUGGUGGUGUCAAU	AUUGACACCACCAAAUUCU		[1545-1563]
78	AGGAAAAGCAGCUUUACAA	UUGUAAAGCUGCUUUUCCU	Mnk	[248-266]
79	AGUUGAAUGGUGCAUACAA	UUGUAUGCACCAUUCAACU	Mnk	[755-773]
80	AAAAAUGCUUUAUAGCAAA	UUUGCUAUAAAGCAUUUUU	Mnk	[1155-1173]
81	CAAGCAGUCCAGAUUAUAU	AUAUAAUCUGGACUGCUUG		[885-903]
82	GCUUCAGGGUUAUGUCUAU	AUAGACAUAACCCUGAAGC		[1306-1324]
83	GCAGCAGCAUUUAAAUUCU	AGAAUUUAAAUGCUGCUGC		[26-44]
84	CAAACGCCGACCAAGGAAA	UUUCCUUGGUCGGCGUUUG		[137-155]
85	UUAUGUAGAAGCAAACAAA	UUUGUUUGCUUCUACAUAA	Mnk	[1395-1413]
86	AGGUGAUAGUGUGGUUUAU	AUAAACCACACUAUCACCU		[642-660]
87	CAUGAAUUAGAUAGUGCAU	AUGCACUAUCUAAUUCAUG	Mnk	[1075-1093]
88	AAGAGACCCUUCCAAGUAA	UUACUUGGAAGGGUCUCUU	Mnk	[377-395]
89	GGUCAAUUAAAAGGAGAAA	UUUCUCCUUUUAAUUGACC	Mnk	[1101-1119]

90	UGUUCAUUCUAUAGAAGAA	UUCUUCUAUAGAAUGAACA		[1324-1342]
91	GUGCAUCUUCUGAGGUCAA	UUGACCUCAGAAGAUGCAC	Mnk	[1088-1106]
92	UGAUGAACUGGUCACUGAU	AUCAGUGACCAGUUCAUCA		[552-570]
93	GCUUCUUUCUCAGUUUAUU	AAUAAACUGAGAAAGAAGC	Mnk	[1193-1211]
94	UGAUGAAGAUGAUGAUGAC	GUCAUCAUCAUCUUCAUCA		[432-450]
95	AAAGUAAGGAAGAAGAUAA	UUAUCUUCUUCCUUACUUU	Mnk	[1034-1052]
96	AACCAAUGACUUUAAACAA	UUGUUUAAAGUCAUUGGUU	Mnk	[360-378]
97	CACUUAAAAAGAGAAUAUA	UAUAUUCUCUUUUUAAGUG	Mnk	[1425-1443]
98	UGUCCAGCAAUUAAUAAAA	UUUUAUUAAUUGCUGGACA	Mnk	[1586-1604]
99	CAGGAACUUUCCAAAGUCA	UGACUUUGGAAAGUUCCUG		[955-973]
100	CCGUGGGAAGGACAGUUAU	AUAACUGUCCUUCCCACGG		[822-840]
101	GGUGGUGUCAAUUGCUUAU	AUAAGCAAUUGACACCACC		[1552-1570]
102	ACCCAUCUCAGAAGCAGAA	UUCUGCUUCUGAGAUGGGU	Rat,Mnk,Ms	[305-323]
103	UUCUGAUGAAUCUGAUGAA	UUCAUCAGAUUCAUCAGAA		[540-558]
104	UGUAGAUGACACUGAUGAU	AUCAUCAGUGUCAUCUACA		[495-513]
105	CGACCAAGGAAAACUCACU	AGUGAGUUUUCCUUGGUCG		[144-162]
106	UCUCAUGAAUAGAAAUUUA	UAAAUUUCUAUUCAUGAGA		[1379-1397]
107	ACGGUUGUCCAGCAAUUAA	UUAAUUGCUGGACAACCGU		[1581-1599]
108	ACAUUUUAUGUCACUAUAA	UUAUAGUGACAUAAAAUGU	Mnk	[1444-1462]
109	UCUGCAGCAGCAUUUAAAU	AUUUAAAUGCUGCUGCAGA		[23-41]
110	CAAUGAUGAGAGCAAUGAG	CUCAUUGCUCUCAUCAUUG		[915-933]
111	CCACGGUUGUCCAGCAAUU	AAUUGCUGGACAACCGUGG		[1579-1597]
112	AAGAUAUGCUGGUUGUAGA	UCUACAACCAGCAUAUCUU	Mnk	[1010-1028]
113	GAAGAAGAUAAACACCUGA	UCAGGUGUUUAUCUUCUUC	Mnk	[1042-1060]
114	GACCAAGGAAAACUCACUA	UAGUGAGUUUUCCUUGGUC		[145-163]
115	GAAAUUUCGUAUUUCUCAU	AUGAGAAAUACGAAAUUUC		[1059-1077]
116	CACGGUUGUCCAGCAAUUA	UAAUUGCUGGACAACCGUG		[1580-1598]
117	GGAAACUCCCUGUAAACUA	UAGUUUACAGGGAGUUUCC	Mnk	[1284-1302]
118	UGUAGAAGCAAACAAAAUA	UAUUUUGUUUGCUUCUACA	Mnk	[1398-1416]
119	CCAAUGACUUUAAACAAGA	UCUUGUUUAAAGUCAUUGG	Mnk	[362-380]
120	AAAUUUAUGUAGAAGCAAA	UUUGCUUCUACAUAAAUUU	Mnk	[1391-1409]
121	UCUGGAAGUUCUGAGGAAA	UUUCCUCAGAACUUCCAGA	Mnk	[235-253]
122	CAGAUUAUAUAAGCGGAAA	UUUCCGCUUAUAUAAUCUG	Mnk	[894-912]
123	AAAAGGAGAAAAAAUACAA	UUGUAUUUUUUCUCCUUUU		[1109-1127]
124	CUCUGAUGAUGUAGAUGAC	GUCAUCUACAUCAUCAGAG		[486-504]
125	AGGUCAAUUAAAAGGAGAA	UUCUCCUUUUAAUUGACCU	Mnk	[1100-1118]
126	CAUGGAUGAUAUGGAUGAU	AUCAUCCAUAUCAUCCAUG		[417-435]
127	CUGAGGAAAAGCAGCUUUA	UAAAGCUGCUUUUCCUCAG	Mnk	[245-263]
128	GGUCAAAAUCUAAGAAGUU	AACUUCUUAGAUUUUGACC	Mnk	[668-686]
129	AAGUCAGCCGUGAAUUCCA	UGGAAUUCACGGCUGACUU		[968-986]
130	UGAGGUCAAAAUCUAAGAA	UUCUUAGAUUUUGACCUCA	Mnk	[665-683]
131	AAUGCAAACUAUCACUGUA	UACAGUGAUAGUUUGCAUU	Mnk	[1342-1360]
132	AGAUGACACUGAUGAUUCU	AGAAUCAUCAGUGUCAUCU		[498-516]
133	GCUUUACAACAAAUACCCA	UGGGUAUUUGUUGUAAAGC	Mnk	[258-276]
134	CUGAUGAACUGGUCACUGA	UCAGUGACCAGUUCAUCAG		[551-569]
135	CUGAGGUCAAAAUCUAAGA	UCUUAGAUUUUGACCUCAG	Mnk	[664-682]
136	AAAAAAUGCUUUAUAGCAA	UUGCUAUAAAGCAUUUUUU	Mnk	[1154-1172]
137	CUUUUAUCUUGAAUGUAAU	AUUACAUUCAAGAUAAAAG	Mnk	[1525-1543]
138	UGUCUGCAGCAGCAUUUAA	UUAAAUGCUGCUGCAGACA		[21-39]
139	CUGUAAACUAAAAGCUUCA	UGAAGCUUUUAGUUUACAG	Mnk	[1293-1311]
140	GAUUGAUAGUCAGGAACUU	AAGUUCCUGACUAUCAAUC		[945-963]
141	AACUCCCUGUAAACUAAAA	UUUUAGUUUACAGGGAGUU	Mnk	[1287-1305]
142	UGAUGAGAGCAAUGAGCAU	AUGCUCAUUGCUCUCAUCA		[918-936]
143	ACGAGGACAUCACCUCACA	UGUGAGGUGAUGUCCUCGU	Mnk	[722-740]
144	CUCGAACGACUCUGAUGAU	AUCAUCAGAGUCGUUCGAG		[477-495]
145	UGAGCAUUCCGAUGUGAUU	AAUCACAUCGGAAUGCUCA	Mnk	[930-948]

146	GGAUGUCUGCAGCAGCAUU	AAUGCUGCUGCAGACAUCC		[18-36]
147	UCUUGAAUGUAAUAAGAAU	AUUCUUAUUACAUUCAAGA	Mnk	[1531-1549]
148	UAGUCAGGAACUUUCCAAA	UUUGGAAAGUUCCUGACUA		[951-969]
149	CCACUUAAAAAGAGAAUAU	AUAUUCUCUUUUUAAGUGG	Mnk	[1424-1442]
150	CCGAUGUGAUUGAUAGUCA	UGACUAUCAAUCACAUCGG		[938-956]
151	AACCGAAGUUUUCACUCCA	UGGAGUGAAAACUUCGGUU		[591-609]
152	CUUUUUGUGGUGUGAAUAA	UUAUUCACACCACAAAAAG		[1504-1522]
153	CCACAAGCAGUCCAGAUUA	UAAUCUGGACUGCUUGUGG		[882-900]
154	AUUUCGUAUUUCUCAUGAA	UUCAUGAGAAAUACGAAAU		[1062-1080]
155	AUACUUUUACCCACUUAAA	UUUAAGUGGGUAAAAGUAU	Mnk	[1414-1432]
156	CGAAGUUUUCACUCCAGUU	AACUGGAGUGAAAACUUCG		[594-612]
157	CCUGAAAUUUCGUAUUUCU	AGAAAUACGAAAUUUCAGG		[1056-1074]
158	UCAUGAAUUAGAUAGUGCA	UGCACUAUCUAAUUCAUGA	Mnk	[1074-1092]
159	AGACGAGGACAUCACCUCA	UGAGGUGAUGUCCUCGUCU	Mnk	[720-738]
160	UCAAUUAAAAGGAGAAAAA	UUUUUCUCCUUUUAAUUGA	Mnk	[1103-1121]
161	CUAUUUGAGUCUGGAAAUA	UAUUUCCAGACUCAAAUAG		[1226-1244]
162	AGAGCAAUGAGCAUUCCGA	UCGGAAUGCUCAUUGCUCU		[923-941]
163	ACUUUUACCCACUUAAAAA	UUUUUAAGUGGGUAAAAGU	Mnk	[1416-1434]
164	GAAUAGAAAUUUAUGUAGA	UCUACAUAAAUUUCUAUUC	Mnk	[1385-1403]
165	CAUCUUCUGAGGUCAAUUA	UAAUUGACCUCAGAAGAUG	Rat,Mnk	[1091-1109]
166	AGAAAUUUAUGUAGAAGCA	UGCUUCUACAUAAAUUUCU	Mnk	[1389-1407]
167	AGGUCAAAAUCUAAGAAGU	ACUUCUUAGAUUUUGACCU	Mnk	[667-685]
168	UACUUUUACCCACUUAAAA	UUUUAAGUGGGUAAAAGUA	Mnk	[1415-1433]
169	GUAUUUCUCAUGAAUUAGA	UCUAAUUCAUGAGAAAUAC		[1067-1085]
170	GCCGACCAAGGAAAACUCA	UGAGUUUUCCUUGGUCGGC		[142-160]
171	CAAAAGAAAAAAUGCUUUA	UAAAGCAUUUUUUCUUUUG	Mnk	[1148-1166]
172	UGGUGGUGUCAAUUGCUUA	UAAGCAAUUGACACCACCA	Mnk	[1551-1569]
173	GUAUCUAUUUGAGUCUGGA	UCCAGACUCAAAUAGAUAC		[1222-1240]
174	GUCUGAUGAGUCUCACCAU	AUGGUGAGACUCAUCAGAC	Mnk	[522-540]
175	AAGAAGAUAAACACCUGAA	UUCAGGUGUUUAUCUUCUU	Mnk	[1043-1061]
176	GGAAGAAGAUAAACACCUG	CAGGUGUUUAUCUUCUUCC	Mnk	[1041-1059]
177	CCAGCAAUUAAUAAAACAU	AUGUUUUAUUAAUUGCUGG	Mnk	[1589-1607]
178	UUCUGGAAGUUCUGAGGAA	UUCCUCAGAACUUCCAGAA	Mnk	[234-252]
179	UUGCAUUUAGUCAAAAGAA	UUCUUUUGACUAAAAUGCAA		[1137-1155]
180	GCAGCUUUACAACAAAUAC	GUAUUUGUUGUAAAGCUGC	Mnk	[255-273]
181	AUUCUCUCAUGAAUAGAAA	UUUCUAUUCAUGAGAGAAU		[1375-1393]
182	AGAUGAUGAUGACCAUGUG	CACAUGGUCAUCAUCAUCU		[438-456]
183	AAACAAGAGACCCUUCCAA	UUGGAAGGGUCUCUUGUUU	Mnk	[373-391]
184	UGAUAGUGUGGUUUAUGGA	UCCAUAAACCACACUAUCA		[645-663]
185	AAAGGAGAAAAAAUACAAU	AUUGUAUUUUUUCUCCUUU		[1110-1128]
186	CCGAGGUGAUAGUGUGGUU	AACCACACUAUCACCUCGG		[639-657]
187	CACAAGCAGUCCAGAUUAU	AUAAUCUGGACUGCUUGUG		[883-901]
188	GGUGUGAAUAAAUCUUUUA	UAAAAGAUUUAUUCACACC	Mnk	[1512-1530]
189	GAGUCUGGAAAUAACUAAU	AUUAGUUAUUUCCAGACUC		[1232-1250]
190	GAAUCUGAUGAACUGGUCA	UGACCAGUUCAUCAGAUUC		[547-565]
191	CCCUGUAAACUAAAAGCUU	AAGCUUUUAGUUUACAGGG	Mnk	[1291-1309]
192	AAACUCCCUGUAAACUAAA	UUUAGUUUACAGGGAGUUU	Mnk	[1286-1304]
193	GGAAAACUCACUACCAUGA	UCAUGGUAGUGAGUUUUCC	Mnk	[151-169]
194	GAUGCUACAGACGAGGACA	UGUCCUCGUCUGUAGCAUC	Mnk	[712-730]
195	GCUACAGACGAGGACAUCA	UGAUGUCCUCGUCUGUAGC	Mnk	[715-733]
196	AACCCUGACCCAUCUCAGA	UCUGAGAUGGGUCAGGGUU		[298-316]
197	AAGAAACCAAUGACUUUAA	UUAAAGUCAUUGGUUUCUU	Mnk	[356-374]
198	GAAAAAAUACAAUUUCUCA	UGAGAAAUUGUAUUUUUUC		[1116-1134]
199	AACAUUUUAUGUCACUAUA	UAUAGUGACAUAAAAUGUU	Mnk	[1443-1461]
200	GAGGUGAUAGUGUGGUUUA	UAAACCACACUAUCACCUC		[641-659]
201	UAUCUUGAAUGUAAUAAGA	UCUUAUUACAUUCAAGAUA	Mnk	[1529-1547]

202	GAAAAAAUGCUUUAUAGCA	UGCUAUAAAGCAUUUUUUC	Mnk	[1153-1171]
203	ACCAGAGUGCUGAAACCCA	UGGGUUUCAGCACUCUGGU		[860-878]
204	GAAGUUCUGAGGAAAAGCA	UGCUUUUCCUCAGAACUUC	Mnk	[239-257]
205	GAGAAAAAAUACAAUUUCU	AGAAAUUGUAUUUUUUCUC		[1114-1132]
206	CAUGAGAAUUGCAGUGAUU	AAUCACUGCAAUUCUCAUG	Mnk	[165-183]
207	GGAGUUGAAUGGUGCAUAC	GUAUGCACCAUUCAACUCC	Mnk	[753-771]
208	UAAACAGGCUGAUUCUGGA	UCCAGAAUCAGCCUGUUUA	Mnk	[222-240]
209	GGAAAGCGAGGAGUUGAAU	AUUCAACUCCUCGCUUUCC	Mnk	[744-762]
210	GUAAGGAAGAAGAUAAACA	UGUUUAUCUUCUUCCUUAC	Mnk	[1037-1055]
211	GAGGUCAAUUAAAAGGAGA	UCUCCUUUUAAUUGACCUC	Mnk	[1099-1117]
212	CCCUUCCAAGUAAGUCCAA	UUGGACUUACUUGGAAGGG		[383-401]
213	UAGAAGAAAUGCAAACUAU	AUAGUUUGCAUUUCUUCUA	Mnk	[1335-1353]
214	UCUAUAGAAGAAAUGCAAA	UUUGCAUUUCUUCUAUAGA	Mnk	[1331-1349]
215	CAGUUUAUUGGUUGAAUGU	ACAUUCAACCAAUAAACUG	Mnk	[1203-1221]
216	CAUUCCGAUGUGAUUGAUA	UAUCAAUCACAUCGGAAUG		[934-952]
217	AAAAGCAGCUUUACAACAA	UUGUUGUAAAGCUGCUUUU	Mnk	[251-269]
218	UGGAUGAUAUGGAUGAUGA	UCAUCAUCCAUAUCAUCCA		[419-437]
219	GAAAUUUAUGUAGAAGCAA	UUGCUUCUACAUAAAUUUC	Mnk	[1390-1408]
220	CAAGUAAGUCCAACGAAAG	CUUUCGUUGGACUUACUUG		[389-407]
221	CAAGAGACCCUUCCAAGUA	UACUUGGAAGGGUCUCUUG	Mnk	[376-394]
222	UAUCUAUUUGAGUCUGGAA	UUCCAGACUCAAAUAGAUA		[1223-1241]
223	GAUAGUCAGGAACUUUCCA	UGGAAAGUUCCUGACUAUC		[949-967]
224	UGAUGAUGUAGAUGACACU	AGUGUCAUCUACAUCAUCA		[489-507]
225	CACUGAUGAUUCUCACCAG	CUGGUGAGAAUCAUCAGUG		[504-522]
226	CACUACCAUGAGAAUUGCA	UGCAAUUCUCAUGGUAGUG	Mnk	[159-177]
227	GCUUUUGCCUCCUAGGCAU	AUGCCUAGGAGGCAAAAGC		[185-203]
228	CCCACUUAAAAAGAGAAUA	UAUUCUCUUUUUAAGUGGG	Mnk	[1423-1441]
229	UCACCAUUCUGAUGAAUCU	AGAUUCAUCAGAAUGGUGA		[534-552]
230	CAACAAAUACCCAGAUGCU	AGCAUCUGGGUAUUUGUUG	Mnk	[264-282]
231	UCAGAAGCAGAAUCUCCUA	UAGGAGAUUCUGCUUCUGA	Mnk	[312-330]
232	UGUCCUCUGAAGAAACCAA	UUGGUUUCUUCAGAGGACA		[347-365]
233	CAGCAUUUAAAUUCUGGGA	UCCCAGAAUUUAAAUGCUG		[30-48]
234	UUCUAUAGAAGAAAUGCAA	UUGCAUUUCUUCUAUAGAA	Mnk	[1330-1348]
235	GUGUCAAUUGCUUAUUUGU	ACAAAUAAGCAAUUGACAC		[1556-1574]
236	AAAAUGCUUUAUAGCAAAA	UUUUGCUAUAAAGCAUUUU	Mnk	[1156-1174]
237	UGUUAUUCUCUCAUGAAUA	UAUUCAUGAGAGAAUAACA		[1371-1389]
238	UCUUUUAUCUUGAAUGUAA	UUACAUUCAAGAUAAAAGA	Mnk	[1524-1542]
239	AAAAUGAAAGAGAACAUGA	UCAUGUUCUCUUUCAUUUU	Mnk	[1171-1189]
240	UGAAAUUUCGUAUUUCUCA	UGAGAAAUACGAAAUUUCA		[1058-1076]
241	CUGACAUCCAGUACCCUGA	UCAGGGUACUGGAUGUCAG	Mnk	[695-713]
242	UAUUUCUCAUGAAUUAGAU	AUCUAAUUCAUGAGAAAUA		[1068-1086]
243	CAUCCAGUACCCUGAUGCU	AGCAUCAGGGUACUGGAUG	Mnk	[699-717]
244	GCUGAUUCUGGAAGUUCUG	CAGAACUUCCAGAAUCAGC	Mnk	[229-247]
245	AAAAGUAAGGAAGAAGAUA	UAUCUUCUUCCUUACUUUU	Mnk	[1033-1051]
246	UGGUGUGAAUAAAUCUUUU	AAAAGAUUUAUUCACACCA	Mnk	[1511-1529]
247	GUGUAUAUUUUGUUGUGAU	AUCACAACAAAAUAUACAC	Rat	[1482-1500]
248	CAAUGACUUUAAACAAGAG	CUCUUGUUUAAAGUCAUUG	Mnk	[363-381]
249	UGAGUCUCACCAUUCUGAU	AUCAGAAUGGUGAGACUCA	Mnk	[528-546]
250	UUUAUAGCAAAAUGAAAGA	UCUUUCAUUUUGCUAUAAA	Mnk	[1163-1181]
251	UGAUGAGUCUCACCAUUCU	AGAAUGGUGAGACUCAUCA	Mnk	[525-543]
252	CCAUGACCACAUGGAUGAU	AUCAUCCAUGUGGUCAUGG	Mnk	[408-426]
253	AAAACUCACUACCAUGAGA	UCUCAUGGUAGUGAGUUUU	Mnk	[153-171]
254	GUUUGAUAAUUAGUUUAGU	ACUAAACUAAUUAUCAAAC	Mnk	[1253-1271]
255	AGCAGCUUUACAACAAAUA	UAUUUGUUGUAAAGCUGCU	Mnk	[254-272]
256	AACUCACUACCAUGAGAAU	AUUCUCAUGGUAGUGAGUU	Mnk	[155-173]
257	CCUCUGAAGAAACCAAUGA	UCAUUGGUUUCUUCAGAGG		[350-368]

258	AGAAGUUUCGCAGACCUGA	UCAGGUCUGCGAAACUUCU		[680-698]
259	CUAAAAGCUUCAGGGUUAU	AUAACCCUGAAGCUUUUAG	Mnk	[1300-1318]
260	CGAACGACUCUGAUGAUGU	ACAUCAUCAGAGUCGUUCG		[479-497]
261	UGAUGAAUCUGAUGAACUG	CAGUUCAUCAGAUUCAUCA		[543-561]
262	CAGCAACCGAAGUUUUCAC	GUGAAAACUUCGGUUGCUG		[587-605]
263	GAAGGACAGUUAUGAAACG	CGUUUCAUAACUGUCCUUC		[828-846]
264	AGCAAAAUGAAAGAGAACA	UGUUCUCUUUCAUUUUGCU	Mnk	[1168-1186]
265	GCAGACCUGACAUCCAGUA	UACUGGAUGUCAGGUCUGC	Mnk	[689-707]
266	UCAUGGAAACUCCCUGUAA	UUACAGGGAGUUUCCAUGA	Mnk	[1280-1298]
267	AUCUUCUGAGGUCAAUUAA	UUAAUUGACCUCAGAAGAU	Rat,Mnk	[1092-1110]
268	AUGCUUUAUAGCAAAAUGA	UCAUUUUGCUAUAAAGCAU	Mnk	[1159-1177]
269	GUUGUCCAGCAAUUAAUAA	UUAUUAAUUGCUGGACAAC	Mnk	[1584-1602]
270	CUCAGUUUAUUGGUUGAAU	AUUCAACCAAUAAACUGAG	Mnk	[1201-1219]
271	CUACCAUGAGAAUUGCAGU	ACUGCAAUUCUCAUGGUAG	Mnk	[161-179]
272	GUGGGAAGGACAGUUAUGA	UCAUAACUGUCCUUCCCAC		[824-842]
273	UGGUGUCAAUUGCUUAUUU	AAAUAAGCAAUUGACACCA		[1554-1572]
274	GUGUUUGAUAAUUAGUUUA	UAAACUAAUUAUCAAACAC	Mnk	[1251-1269]
275	GUUGAAUGGUGCAUACAAG	CUUGUAUGCACCAUUCAAC	Mnk	[756-774]
276	AAGCAGCUUUACAACAAAU	AUUUGUUGUAAAGCUGCUU	Mnk	[253-271]
277	UGAGUCUGGAAAUAACUAA	UUAGUUAUUUCCAGACUCA		[1231-1249]
278	GUGUGAAUAAAAUCUUUUAU	AUAAAAGAUUUAUUCACAC	Mnk	[1513-1531]
279	CUGAUGCUACAGACGAGGA	UCCUCGUCUGUAGCAUCAG	Mnk	[710-728]
280	UGAAGAUAUGCUGGUUGUA	UACAACCAGCAUAUCUUCA	Mnk	[1008-1026]
281	AGGGUUAUGUCUAUGUUCA	UGAACAUAGACAUAACCCU		[1311-1329]
282	GAUGAACUGGUCACUGAUU	AAUCAGUGACCAGUUCAUC		[553-571]
283	UAUGGACUGAGGUCAAAAU	AUUUUGACCUCAGUCCAUA	Mnk	[658-676]
284	AAGAAAAAAUGCUUUAUAG	CUAUAAAGCAUUUUUUCUU	Mnk	[1151-1169]
285	UGACUCGAACGACUCUGAU	AUCAGAGUCGUUCGAGUCA		[474-492]
286	AAUACUUUUACCCACUUAA	UUAAGUGGGUAAAAGUAUU	Mnk	[1413-1431]
287	AUGUAGAAGCAAACAAAAU	AUUUUGUUUGCUUCUACAU	Mnk	[1397-1415]
288	UACCCACUUAAAAAGAGAA	UUCUCUUUUUAAGUGGGUA	Mnk	[1421-1439]
289	GUUCAUUCUAUAGAAGAAA	UUUCUUCUAUAGAAUGAAC	Mnk	[1325-1343]
290	GAAGCAAACAAAAUACUUU	AAAGUAUUUUGUUUGCUUC	Mnk	[1402-1420]
291	AAGAUAAACACCUGAAAUU	AAUUUCAGGUGUUUAUCUU	Mnk	[1046-1064]
292	GCAUCUUCUGAGGUCAAUU	AAUUGACCUCAGAAGAUGC	Mnk	[1090-1108]
293	CUCAUGAAUAGAAAUUUAU	AUAAAUUUCUAUUCAUGAG		[1380-1398]
294	CCAUGAAGAUAUGCUGGUU	AACCAGCAUAUCUUCAUGG	Mnk	[1005-1023]
295	UCCAAGUAAGUCCAACGAA	UUCGUUGGACUUACUUGGA		[387-405]
296	AAACGAGUCAGCUGGAUGA	UCAUCCAGCUGACUCGUUU	Mnk	[842-860]
297	CCGAAGUUUUCACUCCAGU	ACUGGAGUGAAAACUUCGG		[593-611]
298	UGUUUUUUAAGUUAGUGUA	UACACUAACUUAAAAAACA	Mnk	[1468-1486]
299	CCAAUGAUGAGAGCAAUGA	UCAUUGCUCUCAUCAUUGG		[914-932]
300	GUCAAUUAAAAGGAGAAAA	UUUUCUCCUUUUAAUUGAC	Mnk	[1102-1120]
301	UAUUCUCUCAUGAAUAGAA	UUCUAUUCAUGAGAGAAUA		[1374-1392]
302	CUUUAUAGCAAAAUGAAAG	CUUUCAUUUUGCUAUAAAG	Mnk	[1162-1180]
303	UGACAUCCAGUACCCUGAU	AUCAGGGUACUGGAUGUCA	Mnk	[696-714]
304	AAACCAAUGACUUUAAACA	UGUUUAAAGUCAUUGGUUU	Mnk	[359-377]
305	UCCAGCAAUUAAUAAAACA	UGUUUUAUUAAUUGCUGGA	Mnk	[1588-1606]
306	GGUGUCAAUUGCUUAUUUG	CAAAUAAGCAAUUGACACC		[1555-1573]
307	UGAUGAUGACCAUGUGGAC	GUCCACAUGGUCAUCAUCA		[441-459]
308	UUUUUGUGGUGUGAAUAAA	UUUAUUCACACCACAAAAA		[1505-1523]
309	ACCCUGACCCAUCUCAGAA	UUCUGAGAUGGGUCAGGGU		[299-317]
310	GAAGAAACCAAUGACUUUA	UAAAGUCAUUGGUUUCUUC	Mnk	[355-373]
311	AAACAGGCUGAUUCUGGAA	UUCCAGAAUCAGCCUGUUU	Mnk	[223-241]
312	GUCCUCUGAAGAAACCAAU	AUUGGUUUCUUCAGAGGAC		[348-366]
313	AGUUAAACAGGCUGAUUCU	AGAAUCAGCCUGUUUAACU	Mnk	[219-237]

314	UUUAUGGACUGAGGUCAAA	UUUGACCUCAGUCCAUAAA		[656-674]
315	ACUAAAAGCUUCAGGGUUA	UAACCCUGAAGCUUUUAGU	Mnk	[1299-1317]
316	UUUCGUAUUUCUCAUGAAU	AUUCAUGAGAAAUACGAAA		[1063-1081]
317	GCAUUCCGAUGUGAUUGAU	AUCAAUCACAUCGGAAUGC		[933-951]
318	UUUUGUGGUGUGAAUAAAU	AUUUAUUCACACCACAAAA	Mnk	[1506-1524]
319	CAAUGAGCAUUCCGAUGUG	CACAUCGGAAUGCUCAUUG	Mnk	[927-945]
320	AGAUAAACACCUGAAAUUU	AAAUUUCAGGUGUUUAUCU	Mnk	[1047-1065]
321	CUGCAGCAGCAUUUAAAUU	AAUUUAAAUGCUGCUGCAG		[24-42]
322	AUGUCUGCAGCAGCAUUUA	UAAAUGCUGCUGCAGACAU		[20-38]
323	GGAAAAGCAGCUUUACAAC	GUUGUAAAGCUGCUUUUCC	Mnk	[249-267]
324	UGAUGAUUCUCACCAGUCU	AGACUGGUGAGAAUCAUCA	Mnk	[507-525]
325	ACUCGAACGACUCUGAUGA	UCAUCAGAGUCGUUCGAGU		[476-494]
326	UGCAAACUAUCACUGUAUU	AAUACAGUGAUAGUUUGCA	Mnk	[1344-1362]
327	ACCACAUGGAUGAUAUGGA	UCCAUAUCAUCCAUGUGGU		[413-431]
328	UUAUGGACUGAGGUCAAAA	UUUUGACCUCAGUCCAUAA	Mnk	[657-675]
329	CAUGAAUAGAAAUUUAUGU	ACAUAAAUUUCUAUUCAUG	Mnk	[1382-1400]
330	AAGAAUUUGGUGGUGUCAA	UUGACACCACCAAAUUCUU		[1544-1562]
331	UGACCAGAGUGCUGAAACC	GGUUUCAGCACUCUGGUCA		[858-876]
332	UGAACUGGUCACUGAUUUU	AAAAUCAGUGACCAGUUCA		[555-573]
333	CUGAGGUCAAUUAAAAGGA	UCCUUUUAAUUGACCUCAG	Mnk	[1097-1115]
334	AUGCUUCUUUCUCAGUUUA	UAAACUGAGAAAGAAGCAU	Mnk	[1191-1209]
335	ACAAGCAGUCCAGAUUAUA	UAUAAUCUGGACUGCUUGU		[884-902]
336	AUCUUGAAUGUAAUAAGAA	UUCUUAUUACAUUCAAGAU	Mnk	[1530-1548]
337	CAGUCCAGAUUAUAUAAGC	GCUUAUAUAAUCUGGACUG		[889-907]
338	CAGGCUGAUUCUGGAAGUU	AACUUCCAGAAUCAGCCUG	Mnk	[226-244]
339	AAACUCACUACCAUGAGAA	UUCUCAUGGUAGUGAGUUU	Mnk	[154-172]
340	ACGACUCUGAUGAUGUAGA	UCUACAUCAUCAGAGUCGU		[482-500]
341	UGCUUCUUUCUCAGUUUAU	AUAAACUGAGAAAGAAGCA	Mnk	[1192-1210]
342	AUGAAAGAGAACAUGAAAU	AUUUCAUGUUCUCUUUCAU	Mnk	[1174-1192]
343	AGCAAACAAAAUACUUUUA	UAAAAGUAUUUUGUUUGCU	Mnk	[1404-1422]
344	GUCAAUUGCUUAUUUGUUU	AAACAAAUAAGCAAUUGAC		[1558-1576]
345	GAAAAGCAGCUUUACAACA	UGUUGUAAAGCUGCUUUUC	Mnk	[250-268]
346	ACAUGGAAAGCGAGGAGUU	AACUCCUCGCUUUCCAUGU		[740-758]
347	AUUUCUCAUGAAUUAGAUA	UAUCUAAUUCAUGAGAAAU	Mnk	[1069-1087]
348	CAGCAGCAUUUAAAUUCUG	CAGAAUUUAAAUGCUGCUG		[27-45]
349	GCUAAACCCUGACCCAUCU	AGAUGGGUCAGGGUUUAGC		[294-312]
350	GAUAAUUAGUUUAGUUUGU	ACAAACUAAACUAAUUAUC		[1257-1275]
351	AAGUUUCGCAGACCUGACA	UGUCAGGUCUGCGAAACUU		[682-700]
352	CACUGUAUUUUAAUAUUUG	CAAAUAUUAAAAUACAGUG	Mnk	[1354-1372]
353	UUGUCCAGCAAUUAAUAAA	UUUAUUAAUUGCUGGACAA	Mnk	[1585-1603]
354	GCAAACUAUCACUGUAUUU	AAAUACAGUGAUAGUUUGC	Mnk	[1345-1363]
355	AUAGAAGAAAUGCAAACUA	UAGUUUGCAUUUCUUCUAU	Mnk	[1334-1352]
356	AUCUUUUUGUGGUGUGAAU	AUUCACACCACAAAAAGAU		[1502-1520]
357	AGAAGCAAACAAAAUACUU	AAGUAUUUUGUUUGCUUCU	Mnk	[1401-1419]
358	CCCAUCUCAGAAGCAGAAU	AUUCUGCUUCUGAGAUGGG	Rat,Mnk,Ms	[306-324]
359	AUGAAAUGCUUCUUUCUCA	UGAGAAAGAAGCAUUUCAU	Mnk	[1186-1204]
360	UUGCUUAUUUGUUUUCCCA	UGGGAAAACAAAUAAGCAA		[1563-1581]
361	UCACUUUGCAUUUAGUCAA	UUGACUAAAUGCAAAGUGA		[1132-1150]
362	GAUGACCAGAGUGCUGAAA	UUUCAGCACUCUGGUCAUC		[856-874]
363	AUGACCACAUGGAUGAUAU	AUAUCAUCCAUGUGGUCAU		[410-428]
364	UCCAGAUUAUAUAAGCGGA	UCCGCUUAUAUAAUCUGGA	Mnk	[892-910]
365	GUUUUUUAAGUUAGUGUAU	AUACACUAACUUAAAAAAC	Mnk	[1469-1487]
366	AGAAGAAAUGCAAACUAUC	GAUAGUUUGCAUUUCUUCU	Mnk	[1336-1354]
367	CACCUGAAAUUUCGUAUUU	AAAUACGAAAUUUCAGGUG		[1054-1072]
368	UUUGUUAUUCUCUCAUGAA	UUCAUGAGAGAAUAACAAA		[1369-1387]
369	AUCUAUUUGAGUCUGGAAA	UUUCCAGACUCAAAUAGAU		[1224-1242]

370	UAGCAAAAUGAAAGAGAAC	GUUCUCUUUCAUUUUGCUA	Mnk	[1167-1185]
371	UCUGAUGAUGUAGAUGACA	UGUCAUCUACAUCAUCAGA		[487-505]
372	UUCGCAGACCUGACAUCCA	UGGAUGUCAGGUCUGCGAA		[686-704]
373	CCAGUUAAACAGGCUGAUU	AAUCAGCCUGUUUAACUGG	Mnk	[217-235]
374	UGACCACAUGGAUGAUAUG	CAUAUCAUCCAUGUGGUCA		[411-429]
375	GAGUUGAAUGGUGCAUACA	UGUAUGCACCAUUCAACUC	Mnk	[754-772]
376	AAAUCUAAGAAGUUUCGCA	UGCGAAACUUCUUAGAUUU		[673-691]
377	AGUGCAUCUUCUGAGGUCA	UGACCUCAGAAGAUGCACU	Mnk	[1087-1105]
378	AUGUCUAUGUUCAUUCUAU	AUAGAAUGAACAUAGACAU		[1317-1335]
379	UAUAGCAAAAUGAAAGAGA	UCUCUUUCAUUUUGCUAUA	Mnk	[1165-1183]
380	AUGAUAUGGAUGAUGAAGA	UCUUCAUCAUCCAUAUCAU		[422-440]
381	AGGAGAAAAAAUACAAUUU	AAAUUGUAUUUUUUCUCCU		[1112-1130]
382	UCACCAGUCUGAUGAGUCU	AGACUCAUCAGACUGGUGA	Mnk	[516-534]
383	CGUGGGAAGGACAGUUAUG	CAUAACUGUCCUUCCCACG		[823-841]
384	GAAGUUUCGCAGACCUGAC	GUCAGGUCUGCGAAACUUC		[681-699]
385	AUGCUACAGACGAGGACAU	AUGUCCUCGUCUGUAGCAU	Mnk	[713-731]
386	AAGCAAACAAAAUACUUUU	AAAAGUAUUUUGUUUGCUU	Mnk	[1403-1421]
387	UAAGGAAGAAGAUAAACAC	GUGUUUAUCUUCUUCCUUA	Mnk	[1038-1056]
388	UGUCAAUUGCUUAUUUGUU	AACAAAUAAGCAAUUGACA		[1557-1575]
389	ACUUUGCAUUUAGUCAAAA	UUUUGACUAAAUGCAAAGU		[1134-1152]
390	GAAUUUGGUGGUGUCAAUU	AAUUGACACCACCAAAUUC		[1546-1564]
391	AUUUGUUAUUCUCUCAUGA	UCAUGAGAGAAUAACAAAU		[1368-1386]
392	UUGUUAUUCUCUCAUGAAU	AUUCAUGAGAGAAUAACAA		[1370-1388]
393	UUCCAAAGUCAGCCGUGAA	UUCACGGCUGACUUUGGAA		[963-981]
394	AAUGCUUCUUUCUCAGUUU	AAACUGAGAAAGAAGCAUU	Mnk	[1190-1208]
395	CGUAUUUCUCAUGAAUUAG	CUAAUUCAUGAGAAAUACG		[1066-1084]
396	GUCAGCCGUGAAUUCCACA	UGUGGAAUUCACGGCUGAC		[970-988]
397	UCUGAUGAGUCUCACCAUU	AAUGGUGAGACUCAUCAGA	Mnk	[523-541]
398	ACUAUCACUGUAUUUUAAU	AUUAAAAUACAGUGAUAGU	Mnk	[1349-1367]
399	GCAAUUAAUAAAACAUAAC	GUUAUGUUUUAUUAAUUGC		[1592-1610]
400	UGUGGUUUAUGGACUGAGG	CCUCAGUCCAUAAACCACA		[651-669]
401	GAGAAUAUAACAUUUUAUG	CAUAAAAUGUUAUAUUCUC	Mnk	[1435-1453]
402	GUACCCUGAUGCUACAGAC	GUCUGUAGCAUCAGGGUAC	Mnk	[705-723]
403	CUGAUUCUGGAAGUUCUGA	UCAGAACUUCCAGAAUCAG	Mnk	[230-248]
404	UAAACAAGAGACCCUUCCA	UGGAAGGGUCUCUUGUUUA	Mnk	[372-390]
405	GAAUUGCAGUGAUUUGCUU	AAGCAAAUCACUGCAAUUC		[170-188]
406	UAUUUGAGUCUGGAAAUAA	UUAUUUCCAGACUCAAAUA		[1227-1245]
407	UCUAUUUGAGUCUGGAAAU	AUUUCCAGACUCAAAUAGA		[1225-1243]
408	UAAAAGGAGAAAAAAUACA	UGUAUUUUUUCUCCUUUUA		[1108-1126]
409	AUGGAAAGCGAGGAGUUGA	UCAACUCCUCGCUUUCCAU		[742-760]
410	GGUUUAUGGACUGAGGUCA	UGACCUCAGUCCAUAAACC		[654-672]
411	UGAAGAAACCAAUGACUUU	AAAGUCAUUGGUUUCUUCA		[354-372]
412	CAUUGACUCGAACGACUCU	AGAGUCGUUCGAGUCAAUG		[471-489]
413	UUCCGAUGUGAUUGAUAGU	ACUAUCAAUCACAUCGGAA		[936-954]
414	UUACCCACUUAAAAAGAGA	UCUCUUUUUAAGUGGGUAA	Mnk	[1420-1438]
415	CACUAUAAUCUUUUGUUUU	AAAACAAAAGAUUAUAGUG		[1455-1473]
416	AUUAGAUAGUGCAUCUUCU	AGAAGAUGCACUAUCUAAU	Mnk	[1080-1098]
417	CUCAGAAGCAGAAUCUCCU	AGGAGAUUCUGCUUCUGAG	Mnk,Ms	[311-329]
418	GUGAAUAAAUCUUUUAUCU	AGAUAAAAGAUUUAUUCAC	Mnk	[1515-1533]
419	CAUUCUGAUGAAUCUGAUG	CAUCAGAUUCAUCAGAAUG		[538-556]
420	AGAAAUGCAAACUAUCACU	AGUGAUAGUUUGCAUUUCU	Mnk	[1339-1357]
421	CUUGAAUGUAAUAAGAAUU	AAUUCUUAUUACAUUCAAG		[1532-1550]
422	GAUUUGCUUUUGCCUCCUA	UAGGAGGCAAAAGCAAAUC		[180-198]
423	CAGUGAUUUGCUUUUGCCU	AGGCAAAAGCAAAUCACUG	Ms	[176-194]
424	AGCAUUCCGAUGUGAUUGA	UCAAUCACAUCGGAAUGCU	Mnk	[932-950]
425	AGGAGUUGAAUGGUGCAUA	UAUGCACCAUUCAACUCCU	Mnk	[752-770]

426	AAGGAGAAAAAAUACAAUU	AAUUGUAUUUUUUCUCCUU		[1111-1129]
427	UGGAUGAUGAAGAUGAUGA	UCAUCAUCUUCAUCAUCCA	Mnk	[428-446]
428	ACAAGAGACCCUUCCAAGU	ACUUGGAAGGGUCUCUUGU	Mnk	[375-393]
429	AUAUGGAUGAUGAAGAUGA	UCAUCUUCAUCAUCCAUAU		[425-443]
430	UCACUAUAAUCUUUUGUUU	AAACAAAAGAUUAUAGUGA		[1454-1472]
431	AGUCAAAAGAAAAAAUGCU	AGCAUUUUUUCUUUUGACU	Mnk	[1145-1163]
432	AUGCAAACUAUCACUGUAU	AUACAGUGAUAGUUUGCAU	Mnk	[1343-1361]
433	CAAAAUGAAAGAGAACAUG	CAUGUUCUCUUUCAUUUUG	Mnk	[1170-1188]
434	UGUAUAUUUUGUUGUGAUU	AAUCACAACAAAAUAUACA	Rat	[1483-1501]
435	CUUAAAAAGAGAAUAUAAC	GUUAUAUUCUCUUUUUAAG	Mnk	[1427-1445]
436	UUCUCAGUUUAUUGGUUGA	UCAACCAAUAAACUGAGAA	Mnk	[1199-1217]
437	UCCAAAGUCAGCCGUGAAU	AUUCACGGCUGACUUUGGA		[964-982]
438	UGGACUGAGGUCAAAAUCU	AGAUUUUGACCUCAGUCCA	Mnk	[660-678]
439	UGAGGUCAAUUAAAAGGAG	CUCCUUUUAAUUGACCUCA	Mnk	[1098-1116]
440	UCAGGGUUAUGUCUAUGUU	AACAUAGACAUAACCCUGA		[1309-1327]
441	GUAGAAGCAAACAAAAUAC	GUAUUUUGUUUGCUUCUAC	Mnk	[1399-1417]
442	UGAAAUGCUUCUUUCUCAG	CUGAGAAAGAAGCAUUUCA	Mnk	[1187-1205]
443	CUGAACGCGCCUUCUGAUU	AAUCAGAAGGCGCGUUCAG		[796-814]
444	ACAUGAAAUGCUUCUUUCU	AGAAAGAAGCAUUUCAUGU	Mnk	[1184-1202]
445	CUGACCCAUCUCAGAAGCA	UGCUUCUGAGAUGGGUCAG	Rat,Mnk,Ms	[302-320]
446	AAGGACAGUUAUGAAACGA	UCGUUUCAUAACUGUCCUU		[829-847]
447	GGACUCCAUUGACUCGAAC	GUUCGAGUCAAUGGAGUCC		[465-483]
448	GAUAGUGCAUCUUCUGAGG	CCUCAGAAGAUGCACUAUC	Mnk	[1084-1102]
449	ACAGUUAUGAAACGAGUCA	UGACUCGUUUCAUAACUGU		[833-851]
450	AAGUUAGUGUAUAUUUUGU	ACAAAAUAUACACUAACUU	Mnk	[1476-1494]
451	CCAAAGUCAGCCGUGAAUU	AAUUCACGGCUGACUUUGG		[965-983]
452	UACAAUUUCUCACUUUGCA	UGCAAAGUGAGAAAUUGUA		[1123-1141]
453	CCGACCAAGGAAAACUCAC	GUGAGUUUUCCUUGGUCGG		[143-161]
454	CAUCUCAGAAGCAGAAUCU	AGAUUCUGCUUCUGAGAUG	Rat,Mnk,Ms	[308-326]
455	GAUGAUGACCAUGUGGACA	UGUCCACAUGGUCAUCAUC		[442-460]
456	ACAUGGAUGAUAUGGAUGA	UCAUCCAUAUCAUCCAUGU		[416-434]
457	UAAGAAGUUUCGCAGACCU	AGGUCUGCGAAACUUCUUA		[678-696]
458	CAAAAUACUUUUACCCACU	AGUGGGUAAAAGUAUUUUG	Mnk	[1410-1428]
459	UGGAAGUUCUGAGGAAAAG	CUUUUCCUCAGAACUUCCA	Mnk	[237-255]
460	CGAGGUGAUAGUGUGGUUU	AAACCACACUAUCACCUCG		[640-658]
461	UGACACUGAUGAUUCUCAC	GUGAGAAUCAUCAGUGUCA		[501-519]
462	AAUAUUUGUUAUUCUCUCA	UGAGAGAAUAACAAAUAUU		[1365-1383]
463	GGAGAAAAAAUACAAUUUC	GAAAUUGUAUUUUUUCUCC		[1113-1131]
464	GAUGUCUGCAGCAGCAUUU	AAAUGCUGCUGCAGACAUC		[19-37]
465	CUGAUGAUGUAGAUGACAC	GUGUCAUCUACAUCAUCAG		[488-506]
466	CAUGGAAAGCGAGGAGUUG	CAACUCCUCGCUUUCCAUG		[741-759]
467	UGCAUCUUCUGAGGUCAAU	AUUGACCUCAGAAGAUGCA	Mnk	[1089-1107]
468	GAGACCCUUCCAAGUAAGU	ACUUACUUGGAAGGGUCUC	Mnk	[379-397]
469	GUGGUUUAUGGACUGAGGU	ACCUCAGUCCAUAAACCAC		[652-670]
470	UUGAGUCUGGAAAUAACUA	UAGUUAUUUCCAGACUCAA		[1230-1248]
471	AAACAUAACCUUUUUUACU	AGUAAAAAAGGUUAUGUUU		[1602-1620]
472	CAAAGUCAGCCGUGAAUUC	GAAUUCACGGCUGACUUUG		[966-984]
473	CUCUGAAGAAACCAAUGAC	GUCAUUGGUUUCUUCAGAG		[351-369]
474	AGGACAGUUAUGAAACGAG	CUCGUUUCAUAACUGUCCU		[830-848]
475	GAAUUAGAUAGUGCAUCUU	AAGAUGCACUAUCUAAUUC	Mnk	[1078-1096]
476	AAAGAGAACAUGAAAUGCU	AGCAUUUCAUGUUCUCUUU	Mnk	[1177-1195]
477	GGAAGGACAGUUAUGAAAC	GUUUCAUAACUGUCCUUCC		[827-845]
478	GUUUUCCCACGGUUGUCCA	UGGACAACCGUGGGAAAAC		[1573-1591]
479	AUUCUAUAGAAGAAAUGCA	UGCAUUUCUUCUAUAGAAU	Mnk	[1329-1347]
480	GUGUCCUCUGAAGAAACCA	UGGUUUCUUCAGAGGACAC		[346-364]
481	AUAGUCAGGAACUUUCCAA	UUGGAAAGUUCCUGACUAU		[950-968]

482	UGAAUUAGAUAGUGCAUCU	AGAUGCACUAUCUAAUUCA	Mnk	[1077-1095]
483	AGAUAUGCUGGUUGUAGAC	GUCUACAACCAGCAUAUCU	Mnk	[1011-1029]
484	ACUCUGAUGAUGUAGAUGA	UCAUCUACAUCAUCAGAGU		[485-503]
485	GGUUAUGUCUAUGUUCAUU	AAUGAACAUAGACAUAACC		[1313-1331]
486	GUGAUAGUGUGGUUUAUGG	CCAUAAACCACACUAUCAC		[644-662]
487	AUGAGUCUCACCAUUCUGA	UCAGAAUGGUGAGACUCAU	Mnk	[527-545]
488	UGAGGAAAAGCAGCUUUAC	GUAAAGCUGCUUUUCCUCA	Mnk	[246-264]
489	GAUGUAGAUGACACUGAUG	CAUCAGUGUCAUCUACAUC		[493-511]
490	AAACACCUGAAAUUUCGUA	UACGAAAUUUCAGGUGUUU		[1051-1069]
491	GAACAUGAAAUGCUUCUUU	AAAGAAGCAUUUCAUGUUC	Mnk	[1182-1200]
492	AGUCAGCCGUGAAUUCCAC	GUGGAAUUCACGGCUGACU		[969-987]
493	AAAACAUAACCUUUUUUAC	GUAAAAAAGGUUAUGUUUU		[1601-1619]
494	AUGAAACGAGUCAGCUGGA	UCCAGCUGACUCGUUUCAU	Mnk	[839-857]
495	AAUGAGCAUUCCGAUGUGA	UCACAUCGGAAUGCUCAUU	Mnk	[928-946]
496	CAGCUUUACAACAAAUACC	GGUAUUUGUUGUAAAGCUG	Mnk	[256-274]
497	UCAGCUGGAUGACCAGAGU	ACUCUGGUCAUCCAGCUGA		[849-867]
498	CUUUGCAUUUAGUCAAAAG	CUUUUGACUAAAUGCAAAG		[1135-1153]
499	AUUUGAGUCUGGAAAUAAC	GUUAUUUCCAGACUCAAAU		[1228-1246]
500	UUUAUGUAGAAGCAAACAA	UUGUUUGCUUCUACAUAAA	Mnk	[1394-1412]
501	GUGCCAUACCAGUUAAACA	UGUUUAACUGGUAUGGCAC		

Table B 35 TP53BP2 - tumor protein p53 binding protein, 2

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-72534661:272-3655
1	CAGGGAAGACGAAGAUGAA	UUCAUCUUCGUCUUCCCUG	Chmp	[3532-3550]
2	GGAGAACCAUGAAAACGAA	UUCGUUUUCAUGGUUCUCC	Mnk	[2323-2341]
3	GAAUGAGGGUGAAAUUCAA	UUGAAUUUCACCCUCAUUC	Chmp,Mnk	[3024-3042]
4	CGCUGAGGGAGAAAGAGAA	UUCUCUUUCUCCCUCAGCG		[1605-1623]
5	AGACGAAGAUGAAAUCGAA	UUCGAUUUCAUCUUCGUCU	Chmp	[3538-3556]
6	GAGUGAUGCUGACCUAGAA	UUCUAGGUCAGCAUCACUC	Mnk	[2407-2425]
7	GGUUGUCAGUGAACAAUAA	UUAUUGUUCACUGACAACC		[4169-4187]
8	CCAGAAUAACCCAGAAGAA	UUCUUCUGGGUUAUUCUGG	Chmp	[2800-2818]
9	GGAUCUGACUCUUGCUGAA	UUCAGCAAGAGUCAGAUCC	Chmp,Mnk	[640-658]
10	GAUCAUAGCUGACUUUAAA	UUUAAAGUCAGCUAUGAUC		[4374-4392]
11	CCGUGUAUCUCAGUAACAA	UUGUUACUGAGAUACACGG	Mnk	[288-306]
12	GCUUGAAAGCGAUGAAGAA	UUCUUCAUCGCUUUCAAGC	Mnk	[3763-3781]
13	CAAACUAAAGGCUCUAAAA	UUUUAGAGCCUUUAGUUUG	Mnk	[1466-1484]
14	UGCUCAGGUUGCAAAUAAA	UUUAUUUGCAACCUGAGCA		[1729-1747]
15	GGGAGAAUUUGACCUUGUA	UACAAGGUCAAAUUCUCCC	Chmp,Mnk	[3076-3094]
16	GAAUAAGCGUAAUUCAGAA	UUCUGAAUUACGCUUAUUC	Mnk	[1141-1159]
17	GGUGGAUCUGUGCAAAGAA	UUCUUUGCACAGAUCCACC	Mnk	[361-379]
18	CCUGGUGAAUAUCGAAGAA	UUCUUCGAUAUUCACCAGG	Chmp,Mnk	[593-611]
19	GAUCCAAGUUUAAAAAGAA	UUCUUUUUAAACUUGGAUC	Chmp,Mnk	[560-578]
20	GGAUCAAGUUGAUGAUGGA	UCCAUCAUCAACUUGAUCC	Mnk	[1579-1597]
21	CAUGGGAACUAAACCAAAA	UUUUGGUUUAGUUCCCAUG		[1885-1903]
22	UGAGCAGGAGAAACUUAAA	UUUAAGUUUCUCCUGCUCA		[781-799]
23	GGACAUUUAGCGUGAUGAA	UUCAUCACGCUAAAUGUCC		[3825-3843]
24	CAGAGAACAUUUAUUCCAA	UUGGAAUAAAUGUUCUCUG	Mnk	[2247-2265]
25	CGAGCGUCGAAGAGACAAA	UUUGUCUCUUCGACGCUCG		[18-36]
26	GGAAGCUAAGCUAAAAAAA	UUUUUUUAGCUUAGCUUCC	Chmp,Mnk	[826-844]
27	CAUGGAUAAGCGUGUUAAU	AUUAACACGCUUAUCCAUG	Mnk	[1168-1186]
28	CAUCCACAGGGAAGACGAA	UUCGUCUUCCCUGUGGAUG	Chmp	[3526-3544]
29	GGCUGAAUUUUAAUCUGUA	UACAGAUUAAAAUUCAGCC		[4291-4309]
30	CAUUGUGAGUGGACCAAGA	UCUUGGUCCACUCACAAUG	Chmp,Mnk	[535-553]

31	GGGCGCGCCUUAAUGAUAA	UUAUCAUUAAGGCGCGCCC	Chmp,Mnk	[3564-3582]
32	CCAGGUUCUAAGCAAGAAA	UUUCUUGCUUAGAACCUGG	Mnk	[1976-1994]
33	GAGGGAGAAAGAGAAGAAA	UUUCUUCUCUUUCUCCCUC	Rat,Ms	[1609-1627]
34	AGGACAAACUUGCGUAAAA	UUUUACGCAAGUUUGUCCU	Chmp,Mnk	[2981-2999]
35	AGCUAAGAAACAAAUUGAA	UUCAAUUUGUUUCUUAGCU	Mnk	[1080-1098]
36	GCUCAGGUUGCAAAUAAAA	UUUUAUUUGCAACCUGAGC		[1730-1748]
37	GGUACAGUUUGGUGUAAAU	AUUUACACCAAACUGUACC	Chmp,Mnk	[3202-3220]
38	GCAUCUUAAGAAUUAUACA	UGUAUAAUUCUUAAGAUGC	Mnk	[4210-4228]
39	CGUGUAUCUCAGUAACAAU	AUUGUUACUGAGAUACACG	Mnk	[289-307]
40	CCAGUAAUUAGAUGUAGAA	UUCUACAUCUAAUUACUGG	Mnk	[4261-4279]
41	UGAUGAGCUGCCCAUGAAA	UUUCAUGGGCAGCUCAUCA	Chmp,Mnk	[3487-3505]
42	CAGGAUCCAAGUUUAAAAA	UUUUUAAACUUGGAUCCUG	Chmp,Mnk	[557-575]
43	CGUGGUGGAUCUGUGCAAA	UUUGCACAGAUCCACCACG		[358-376]
44	GAAGAAGAAGGCAGCUCUA	UAGAGCUGCCUUCUUCUUC	Mnk	[1207-1225]
45	GAAGGAGACUGCAUGACAA	UUGUCAUGCAGUCUCCUUC	Chmp,Mnk	[3506-3524]
46	GCAGAUAAGUGCGAGGAAA	UUUCCUCGCACUUAUCUGC	Chmp,Mnk	[3356-3374]
47	GCCCAAAUCUCCAGAAUAA	UUAUUCUGGAGAUUUGGGC	Chmp	[2790-2808]
48	CAAGAAUCCUGUCUAGUAA	UUACUAGACAGGAUUCUUG		[3937-3955]
49	CAGGAAGCUAAGCUAAAAA	UUUUUAGCUUAGCUUCCUG	Chmp,Mnk	[824-842]
50	UCAGGAAGCUAAGCUAAAA	UUUUAGCUUAGCUUCCUGA	Chmp,Mnk	[823-841]
51	GGAGAAACUUAAAAGGCUA	UAGCCUUUUAAGUUUCUCC	Chmp	[787-805]
52	GACUGUACCCAAGAAUUAA	UUAAUUCUUGGGUACAGUC		[3612-3630]
53	UGCGCUUUGGGAUUAUGAA	UUCAUAAUCCCAAAGCGCA		[3457-3475]
54	CCGUAAUAUUUGUCAAGAU	AUCUUGACAAAUAUUACGG		[4358-4376]
55	CAACGAUUUGGAAGUCAGA	UCUGACUUCCAAAUCGUUG	Chmp	[467-485]
56	CACCAAGGCCUCUAAAGAA	UUCUUUAGAGGCCUUGGUG		[2451-2469]
57	GGCUGCUUCACAAACUAAA	UUUAGUUUGUGAAGCAGCC	Mnk	[1456-1474]
58	CCAUGGGAACUAAACCAAA	UUUGGUUUAGUUCCCAUGG		[1884-1902]
59	GAAACAAAUUGAAUCAAGA	UCUUGAUUCAAUUUGUUUC	Mnk	[1086-1104]
60	GCUGCAGCUAAGAAACAAA	UUUGUUUCUUAGCUGCAGC	Mnk	[1075-1093]
61	ACUUGUGGAGGAAAUUGAA	UUCAAUUUCCUCCACAAGU	Mnk	[895-913]
62	GAGCAGGAGAAACUUAAAA	UUUUAAGUUUCUCCUGCUC	Chmp	[782-800]
63	AGAUCAUAGCUGACUUUAA	UUAAAGUCAGCUAUGAUCU		[4373-4391]
64	CUGGGACUGUACCCAAGAA	UUCUUGGGUACAGUCCCAG		[3608-3626]
65	AAAGGAGAACGGUGUUAAU	AUUAACACCGUUCUCCUUU	Chmp	[610-628]
66	GUUGGUUGUCAGUGAACAA	UUGUUCACUGACAACCAAC		[4166-4184]
67	AGAAUUAAACCAAGACAAA	UUUGUCUUGGUUUAAUUCU	Ms,Mnk	[3623-3641]
68	AGAUGGGCAUAAUGAAUAA	UUAUUCAUUAUGCCCAUCU	Chmp,Mnk	[3426-3444]
69	CAUUGUGCUGCCUCAUGUA	UACAUGAGGCAGCACAAUG	Chmp,Mnk	[3257-3275]
70	CAUUUAGCGUGAUGAAAUA	UAUUUCAUCACGCUAAAUG		[3828-3846]
71	CAGAGGGAGUGUUUGAAUA	UAUUCAAACACUCCCUCUG	Rat,Ms,Mnk	[1127-1145]
72	CAGUUUGGUGUAAAUGUAA	UUACAUUUACACCAAACUG	Chmp,Mnk	[3206-3224]
73	CUCAGAAAGCCCAGUAGAA	UUCUACUGGGCUUUCUGAG	Mnk	[2608-2626]
74	AGAAGAUGGGCAUAAUGAA	UUCAUUAUGCCCAUCUUCU	Ms,Chmp,Mnk	[3423-3441]
75	AGCUCUACAGCAAAAAGAA	UUCUUUUUGCUGUAGAGCU	Mnk	[1219-1237]
76	GGAGAACGGUGUUAAUAGU	ACUAUUAACACCGUUCUCC	Chmp	[613-631]
77	CGAUGUUUCUUACCGUGUA	UACACGGUAAGAAACAUCG		[276-294]
78	GGACUGUACCCAAGAAUUA	UAAUUCUUGGGUACAGUCC		[3611-3629]
79	GCGCUUAAAGUUUUUGAAA	UUUCAAAAACUUUAAGCGC	Chmp,Mnk	[730-748]
80	GACCAAGACUCAUACCAGA	UCUGGUAUGAGUCUUGGUC	Mnk	[2161-2179]
81	CUCAGGUUGCAAAUAAAAA	UUUUUAUUUGCAACCUGAG		[1731-1749]
82	GAGACUAAGCAAUGGGAAA	UUUCCCAUUGCUUAGUCUC	Mnk	[877-895]
83	CCAGAGUGAUGCUGACCUA	UAGGUCAGCAUCACUCUGG	Mnk	[2404-2422]
84	CCAGCAGCAACAGAUUGAA	UUCAAUCUGUUGCUGCUGG	Chmp,Mnk	[679-697]
85	GAACCAUGAAAACGAAAGA	UCUUUCGUUUUCAUGGUUC	Mnk	[2326-2344]
86	AGUUCAGGAGAACCAUGAA	UUCAUGGUUCUCCUGAACU	Mnk	[2317-2335]

87	GCUCUACAGCAAAAAGAAA	UUUCUUUUUGCUGUAGAGC	Mnk	[1220-1238]
88	CCAAGAUCUCAGGAUCCAA	UUGGAUCCUGAGAUCUUGG	Chmp,Mnk	[548-566]
89	UCAGGAUCCAAGUUUAAAA	UUUUAAACUUGGAUCCUGA	Chmp,Mnk	[556-574]
90	CAGCUAAGAAACAAAUUGA	UCAAUUUGUUUCUUAGCUG	Mnk	[1079-1097]
91	UGUGCUGCCUCAUGUAACA	UGUUACAUGAGGCAGCACA	Chmp,Mnk	[3260-3278]
92	CAGACUUACCCGUAAUAUU	AAUAUUACGGGUAAGUCUG		[4349-4367]
93	GAGAAUGAAGGAUUGAAGA	UCUUCAAUCCUUCAUUCUC		[3793-3811]
94	GAAUUUUAGUCAAUGAAGA	UCUUCAUUGACUAAAAUUC	Mnk	[3668-3686]
95	GAAUGUCUCUAGAAGAGAA	UUCUCUUCUAGAGACAUUC		[3779-3797]
96	GGCCUGAAUUGCUGGUGAA	UUCACCAGCAAUUCAGGCC	Mnk	[1353-1371]
97	GUAGCUUGAAAGCGAUGAA	UUCAUCGCUUUCAAGCUAC	Mnk	[3760-3778]
98	AGGGAAGACGAAGAUGAAA	UUUCAUCUUCGUCUUCCCU	Chmp	[3533-3551]
99	GACCUAGAAGCCUUACGAA	UUCGUAAGGCUUCUAGGUC		[2417-2435]
100	AGAGGGAGUGUUUGAAUAA	UUAUUCAAACACUCCCUCU	Rat,Ms,Mnk	[1128-1146]
101	GGGAGAAAGAGAAGAAAGU	ACUUUCUUCUCUUUCUCCC	Rat,Ms	[1611-1629]
102	CAGAAUUUUAGUCAAUGAA	UUCAUUGACUAAAAUUCUG	Mnk	[3666-3684]
103	GGGCUGCUUCACAAACUAA	UUAGUUUGUGAAGCAGCCC	Mnk	[1455-1473]
104	CCGUGUAGCACUCAGAUAA	UUAUCUGAGUGCUACACGG		[3892-3910]
105	GGAUAAGCGUGUUAAUGAG	CUCAUUAACACGCUUAUCC	Mnk	[1171-1189]
106	CUGAGAAUCAGGAAGCUAA	UUAGCUUCCUGAUUCUCAG	Chmp,Mnk	[816-834]
107	AGCGCUUAAAGUUUUUGAA	UUCAAAAACUUUAAGCGCU	Chmp,Mnk	[729-747]
108	CCUACAAAACCAAAACAGA	UCUGUUUUGGUUUUGUAGG	Mnk	[1775-1793]
109	GAAUCAGGAAGCUAAGCUA	UAGCUUAGCUUCCUGAUUC	Chmp,Mnk	[820-838]
110	CCAUGAAAACGAAAGAAUU	AAUUCUUUCGUUUUCAUGG	Mnk	[2329-2347]
111	GCUACAGACUUACCCGUAA	UUACGGGUAAGUCUGUAGC		[4345-4363]
112	AAAAGUGAGAGCACUUAAA	UUUAAGUGCUCUCACUUUU	Chmp,Mnk	[841-859]
113	CCAGUUACUCCAGAAACAA	UUGUUUCUGGAGUAACUGG	Mnk	[329-347]
114	CAGAAAGCCCAGUAGAAAU	AUUUCUACUGGGCUUUCUG	Mnk	[2610-2628]
115	GAAGGCAGCUCUACAGCAA	UUGCUGUAGAGCUGCCUUC	Mnk	[1213-1231]
116	UGAGGGAGAAAGAGAAGAA	UUCUUCUCUUUCUCCCUCA	Rat,Ms,Mnk	[1608-1626]
117	GGAUCCAAGUUUAAAAAGA	UCUUUUUAAACUUGGAUCC	Chmp,Mnk	[559-577]
118	GCACCAAGGCCUCUAAAGA	UCUUUAGAGGCCUUGGUGC		[2450-2468]
119	GGCAGUCCAGAACCUGAAA	UUUCAGGUUCUGGACUGCC	Mnk	[2282-2300]
120	UUUGUAGGCUGAAUUUUAA	UUAAAAUUCAGCCUACAAA		[4285-4303]
121	GAAAGGAGAACGGUGUUAA	UUAACACCGUUCUCCUUUC	Chmp	[609-627]
122	CCCAAGAAUUAAACCAAGA	UCUUGGUUUAAUUCUUGGG	Ms,Mnk	[3619-3637]
123	AGGCAGCUCUACAGCAAAA	UUUUGCUGUAGAGCUGCCU	Mnk	[1215-1233]
124	CUAAGGAACAGCGCUUAAA	UUUAAGCGCUGUUCCUUAG	Chmp,Mnk	[720-738]
125	CGUGGAACAGAAGAGACUA	UAGUCUCUUCUGUUCCACG	Mnk	[865-883]
126	CUUAAAAGGCUAAAAGAAA	UUUCUUUUAGCCUUUUAAG	Chmp,Mnk	[794-812]
127	CAAUGUAGCUUGAAAGCGA	UCGCUUUCAAGCUACAUUG	Mnk	[3756-3774]
128	GCUUAAAGUUUUUGAAACA	UGUUUCAAAAACUUUAAGC	Chmp,Mnk	[732-750]
129	CUGUUAAGAAGAAGUAAUA	UAUUACUUCUUCUUAACAG		[3695-3713]
130	GGAUGCUCAGGUUGCAAAU	AUUUGCAACCUGAGCAUCC		[1726-1744]
131	ACCGGCUGUGGAAGAAGAA	UUCUUCUUCCACAGCCGGU	Rat,Ms,Mnk	[1197-1215]
132	GGGCAUAAUGAAUAAAGGA	UCCUUUAUUCAUUAUGCCC	Chmp,Mnk	[3430-3448]
133	CCUUGUACAGAGAAUUAUU	AAUAAUUCUCUGUACAAGG	Mnk	[3088-3106]
134	CCACAGGGAAGACGAAGAU	AUCUUCGUCUUCCCUGUGG	Chmp	[3529-3547]
135	GCGACAAUCCUGUUUUCUA	UAGAAAACAGGAUUGUCGC	Mnk	[3918-3936]
136	GCUGAAUUUUAAUCUGUAU	AUACAGAUUAAAAUUCAGC		[4292-4310]
137	AGAAGAAGGCAGCUCUACA	UGUAGAGCUGCCUUCUUCU	Mnk	[1209-1227]
138	GUAGCAUCUUAAGAAUUAU	AUAAUUCUUAAGAUGCUAC	Mnk	[4207-4225]
139	CAACAGAGGGAGUGUUUGA	UCAAACACUCCCUCUGUUG	Rat,Ms,Mnk	[1124-1142]
140	GUUCCUGGUGAAUAUCGAA	UUCGAUAUUCACCAGGAAC	Chmp,Mnk	[590-608]
141	AAAAAGAAAUGGUGUAAAA	UUUUACACCAUUUCUUUUU	Chmp,Mnk	[571-589]
142	GGCACUGCACACUUGUAUA	UAUACAAGUGUGCAGUGCC	Chmp	[4127-4145]

143	CUGAGCAGGAGAAACUUAA	UUAAGUUUCUCCUGCUCAG		[780-798]
144	CUCUCUGCCUCCUGGUAAA	UUUACCAGGAGGCAGAGAG	Mnk	[2962-2980]
145	AAUGUUUGAUGUUCUUCAA	UUGAAGAACAUCAAACAUU	Chmp	[451-469]
146	AACAGAAGAGACUAAGCAA	UUGCUUAGUCUCUUCUGUU	Mnk	[870-888]
147	CAGAUAAGUGCGAGGAAAU	AUUUCCUCGCACUUAUCUG	Chmp,Mnk	[3357-3375]
148	UAAAGUUUUUGAAACAACA	UGUUGUUUCAAAAACUUUA	Mnk	[735-753]
149	CUAGAAGCCUUACGAAAGA	UCUUUCGUAAGGCUUCUAG		[2420-2438]
150	GACUUAUUUUAAUGACAAU	AUUGUCAUUAAAAUAAGUC	Mnk	[3741-3759]
151	UGUAAAAGUUCCUGGUGAA	UUCACCAGGAACUUUUACA	Chmp,Mnk	[583-601]
152	CAGACACUGCCCAACAUGA	UCAUGUUGGGCAGUGUCUG	Rat	[1430-1448]
153	CAAUGAGCAGCACUUCACA	UGUGAAGUGCUGCUCAUUG	Mnk	[304-322]
154	UGGGAAUGCUCUGGAUCAA	UUGAUCCAGAGCAUUCCCA	Mnk	[1567-1585]
155	CCAUCAUACCCAUCCAAGU	ACUUGGAUGGGUAUGAUGG	Rat,Mnk	[2570-2588]
156	CAGUGAACAAUAACUUUAU	AUAAAGUUAUUGUUCACUG		[4175-4193]
157	GAUGAAGAAUGUCUCUAGA	UCUAGAGACAUUCUUCAUC	Mnk	[3773-3791]
158	GAAGAAUGUCUCUAGAAGA	UCUUCUAGAGACAUUCUUC	Mnk	[3776-3794]
159	GCAUCACGGCUCUUCACAA	UUGUGAAGAGCCGUGAUGC	Chmp,Mnk	[3144-3162]
160	AGACUUAUUUUAAUGACAA	UUGUCAUUAAAAUAAGUCU	Mnk	[3740-3758]
161	AGUUUGGUGUAAAUGUAAA	UUUACAUUUACACCAAACU	Chmp,Mnk	[3207-3225]
162	CCUUAUUUUGGACAAACUA	UAGUUUGUCCAAAAUAAGG	Mnk	[1802-1820]
163	CCACGUGGAACAGAAGAGA	UCUCUUCUGUUCCACGUGG	Mnk	[862-880]
164	CGAUGAAAAUACAGACACU	AGUGUCUGUAUUUUCAUCG		[1419-1437]
165	GAAACUUGCUACAGACUUA	UAAGUCUGUAGCAAGUUUC		[4338-4356]
166	GAAUUAUACAUAUGUUUGA	UCAAACAUAUGUAUAAUUC	Mnk	[4219-4237]
167	ACAGUUUGGUGUAAAUGUA	UACAUUUACACCAAACUGU	Chmp,Mnk	[3205-3223]
168	ACUGUACCCAAGAAUUAAA	UUUAAUUCUUGGGUACAGU		[3613-3631]
169	CCAUCUCUGUCCCAUCAUA	UAUGAUGGGACAGAGAUGG	Mnk	[2559-2577]
170	GAGCUUGAUCGCCUCUAUA	UAUAGAGGCGAUCAAGCUC	Mnk	[1052-1070]
171	AAAGUUUUUGAAACAACAA	UUGUUGUUUCAAAAACUUU	Mnk	[736-754]
172	AGGAGCUGCAGCUAAGAAA	UUUCUUAGCUGCAGCUCCU	Mnk	[1071-1089]
173	GGACAUUGUGAGUGGACCA	UGGUCCACUCACAAUGUCC	Chmp,Mnk	[532-550]
174	AAAAGUUCCUGGUGAAUAU	AUAUUCACCAGGAACUUUU	Chmp,Mnk	[586-604]
175	UACGAAAGAAACUGUCUAA	UUAGACAGUUUCUUUCGUA		[2430-2448]
176	AGCUAGAGAUGCUCAAGAA	UUCUUGAGCAUCUCUAGCU		[990-1008]
177	GAUUGAAGCCCAGCAACAA	UUGUUGCUGGGCUUCAAUC	Chmp,Mnk	[691-709]
178	CCAGUUUCAUCUGAUGGAA	UUCCAUCAGAUGAAACUGG	Mnk	[1244-1262]
179	GAAACUGUCUAACGCACCA	UGGUGCGUUAGACAGUUUC		[2437-2455]
180	AGGAAGCUAAGCUAAAAAA	UUUUUUAGCUUAGCUUCCU	Chmp,Mnk	[825-843]
181	AGGAAAUUGAACAGAUGAA	UUCAUCUGUUCAAUUUCCU	Rat,Mnk	[903-921]
182	CCACUCAGCCCAACUAAAU	AUUUAGUUGGGCUGAGUGG	Mnk	[2354-2372]
183	GUGGAACAGAAGAGACUAA	UUAGUCUCUUCUGUUCCAC	Mnk	[866-884]
184	CUUGUAUAUUGUCAGUGAA	UUCACUGACAAUAUACAAG		[4138-4156]
185	GGCAGCUAGAGAUGCUCAA	UUGAGCAUCUCUAGCUGCC		[987-1005]
186	GUCCCAUCAUACCCAUCCA	UGGAUGGGUAUGAUGGGAC	Rat,Mnk	[2567-2585]
187	AUCCAAGUUUAAAAAGAAA	UUUCUUUUUAAACUUGGAU	Chmp,Mnk	[561-579]
188	GAGUUUUUGUAGCAUCUUA	UAAGAUGCUACAAAAACUC		[4199-4217]
189	GGACAAACUUGCGUAAAAC	GUUUUACGCAAGUUUGUCC	Chmp,Mnk	[2982-3000]
190	GUCCGUUCUCAAUGUUUGA	UCAAACAUUGAGAACGGAC	Mnk	[1632-1650]
191	AAGAAUUAAACCAAGACAA	UUGUCUUGGUUUAAUUCUU	Ms,Mnk	[3622-3640]
192	CUUCUUCCUUCGUCAUGAA	UUCAUGACGAAGGAAGAAG	Chmp,Mnk	[499-517]
193	ACCUCCUGUUCCUACAAAA	UUUUGUAGGAACAGGAGGU	Mnk	[1765-1783]
194	CCAUGUAUACGCAACAGCA	UGCUGUUGCGUAUACAUGG		[2100-2118]
195	GAAGUAAUACGAUUAUUUU	AAAAUAAUCGUAUUACUUC	Mnk	[3705-3723]
196	GAAGAACCAGAGCAGUGAA	UUCACUGCUCUGGUUCUUC	Mnk	[1696-1714]
197	CACCAUUAGAGGACAUUUA	UAAAUGUCCUCUAAUGGUG		[3815-3833]
198	CAAGAAUUAAACCAAGACA	UGUCUUGGUUUAAUUCUUG	Ms,Mnk	[3621-3639]

199	GCAGCAAGUUCAAUAUAUU	AAUAUAUUGAACUUGCUGC	Mnk	[2081-2099]
200	CCCAGAAGAACCAAAUCCA	UGGAUUUGGUUCUUCUGGG	Chmp	[2809-2827]
201	GGGAUGCUCAGGUUGCAAA	UUUGCAACCUGAGCAUCCC		[1725-1743]
202	AAUUUUAGUCAAUGAAGAA	UUCUUCAUUGACUAAAAUU	Mnk	[3669-3687]
203	CUUUGGAGGGAGAAUUUGA	UCAAAUUCUCCCUCCAAAG	Chmp,Mnk	[3069-3087]
204	AAGGCAGCUCUACAGCAAA	UUUGCUGUAGAGCUGCCUU	Mnk	[1214-1232]
205	GAAUAACCCAGAAGAACCA	UGGUUCUUCUGGGUUAUUC	Chmp	[2803-2821]
206	GAGCGUAUCGCUCAUGGAA	UUCCAUGAGCGAUACGCUC		[3008-3026]
207	ACAGCAAAAAGAAAAUCUA	UAGAUUUUCUUUUUGCUGU	Mnk	[1225-1243]
208	CUCUGUUAAGAAGAAGUAA	UUACUUCUUCUUAACAGAG		[3693-3711]
209	GCCCAGUAGAAAUCCAGAA	UUCUGGAUUUCUACUGGGC	Mnk	[2616-2634]
210	ACUUAAAAGGCUAAAAGAA	UUCUUUUAGCCUUUUAAGU	Chmp	[793-811]
211	CACUCAGCCCAACUAAAUU	AAUUUAGUUGGGCUGAGUG	Mnk	[2355-2373]
212	GCGUUGACCAAGACUCAUA	UAUGAGUCUUGGUCAACGC	Mnk	[2156-2174]
213	AAUUGAAUCAAGAGCAGAA	UUCUGCUCUUGAUUCAAUU	Mnk	[1092-1110]
214	UGAGCAGCACUUCACAGAA	UUCUGUGAAGUGCUGCUCA	Ms,Mnk	[307-325]
215	AGAUAAGUAUACAGCGACA	UGUCGCUGUAUACUUAUCU		[3905-3923]
216	CCUGUUCCUACAAAACCAA	UUGGUUUUGUAGGAACAGG	Mnk	[1769-1787]
217	CCCUGAUUGGAGUCCUUCA	UGAAGGACUCCAAUCAGGG	Mnk	[1498-1516]
218	CAUGCAGACUGCUGCAGAU	AUCUGCAGCAGUCUGCAUG	Chmp,Mnk	[3343-3361]
219	AAAUGUAAAUGCUGCUGAU	AUCAGCAGCAUUUACAUUU	Chmp,Mnk	[3217-3235]
220	UAAGCUACGGUACCAGUAA	UUACUGGUACCGUAGCUUA		[4249-4267]
221	GGUCCAAGAUGAUGCCGAU	AUCGGCAUCAUCUUGGACC	Mnk	[261-279]
222	GAAGAAGUAAUACGAUUAU	AUAAUCGUAUUACUUCUUC	Mnk	[3702-3720]
223	GAGACUGCAUGACAAUCAU	AUGAUUGUCAUGCAGUCUC	Chmp,Mnk	[3510-3528]
224	CCAUGACAAUCAGUCUGCA	UGCAGACUGAUUGUCAUGG		[1027-1045]
225	UGGUGAAUAUCGAAGAAAG	CUUUCUUCGAUAUUCACCA	Chmp,Mnk	[595-613]
226	GACCUUGUACAGAGAAUUA	UAAUUCUCUGUACAAGGUC	Rat,Mnk	[3086-3104]
227	CACAGAAGUUCCAGUUACU	AGUAACUGGAACUUCUGUG	Mnk	[319-337]
228	GAGAACCAUGAAAACGAAA	UUUCGUUUUCAUGGUUCUC	Mnk	[2324-2342]
229	UCAGGUUGCAAAUAAAAAU	AUUUUUAUUUGCAACCUGA		[1732-1750]
230	GACGAAGAUGAAAUCGAAU	AUUCGAUUUCAUCUUCGUC	Chmp	[3539-3557]
231	GUAUAUUGUCAGUGAAGAA	UUCUUCACUGACAAUAUAC		[4141-4159]
232	GGUGAAUAUCGAAGAAAGG	CCUUUCUUCGAUAUUCACC	Chmp,Mnk	[596-614]
233	AGGGAUAUGUUCCACGUAA	UUACGUGGAACAUAUCCCU	Chmp	[3585-3603]
234	CGCGUUGACCAAGACUCAU	AUGAGUCUUGGUCAACGCG	Mnk	[2155-2173]
235	AGUUUUUGUAGCAUCUUAA	UUAAGAUGCUACAAAAACU		[4200-4218]
236	UCUCAGGAUCCAAGUUUAA	UUAAACUUGGAUCCUGAGA	Chmp,Mnk	[554-572]
237	GAAACGUAGUUCUAUUACA	UGUAAUAGAACUACGUUUC	Mnk	[2467-2485]
238	ACGCACCAAGGCCUCUAAA	UUUAGAGGCCUUGGUGCGU		[2448-2466]
239	UGCUCUGGAUCAAGUUGAU	AUCAACUUGAUCCAGAGCA	Mnk	[1573-1591]
240	GAGGAAGGCUACACUCAGU	ACUGAGUGUAGCCUUCCUC	Chmp,Mnk	[3377-3395]
241	CCACCUCCUGUUCCUACAA	UUGUAGGAACAGGAGGUGG	Rat,Mnk	[1763-1781]
242	GCACCCAGAGAACAUUUAU	AUAAAUGUUCUCUGGGUGC	Mnk	[2242-2260]
243	GUACCAGUAAUUAGAUGUA	UACAUCUAAUUACUGGUAC	Mnk	[4258-4276]
244	GCGUGAUGAAAUAAAGCAU	AUGCUUUAUUUCAUCACGC		[3834-3852]
245	AAGAAUUAAUCUCUGUUAA	UUAACAGAGAUUAAUUCUU		[3683-3701]
246	GUUUGUAGGCUGAAUUUUA	UAAAAUUCAGCCUACAAAC		[4284-4302]
247	GAAUAUCGAAGAAAGGAGA	UCUCCUUUCUUCGAUAUUC	Chmp,Mnk	[599-617]
248	GGAUAAUGAGCGAAUGUUU	AAACAUUCGCUCAUUAUCC	Chmp,Mnk	[439-457]
249	AUCAGGAAGCUAAGCUAAA	UUUAGCUUAGCUUCCUGAU	Chmp,Mnk	[822-840]
250	GGGCCGAUGAAAAUACAGA	UCUGUAUUUUCAUCGGCCC	Mnk	[1415-1433]
251	GAAAUUGAACAGAUGAAUA	UAUUCAUCUGUUCAAUUUC	Mnk	[905-923]
252	ACUAAGGAACAGCGCUUAA	UUAAGCGCUGUUCCUUAGU	Chmp,Mnk	[719-737]
253	UCACAAGACUUAUUUUAAU	AUUAAAAUAAGUCUUGUGA	Mnk	[3735-3753]
254	AAGCUACGGUACCAGUAAU	AUUACUGGUACCGUAGCUU		[4250-4268]

255	CUCAUGUAACAACGUCCAA	UUGGACGUUGUUACAUGAG	Chmp,Mnk	[3268-3286]
256	GAGAAACUUAAAAGGCUAA	UUAGCCUUUUAAGUUUCUC	Chmp	[788-806]
257	GGGACUGUACCCAAGAAUU	AAUUCUUGGGUACAGUCCC		[3610-3628]
258	GUCUCUAGAAGAGAAUGAA	UUCAUUCUCUUCUAGAGAC		[3783-3801]
259	AGAUCAGCGACAACAGCAA	UUGCUGUUGUCGCUGAUCU	Chmp,Mnk	[754-772]
260	GGCAGCUCUACAGCAAAAA	UUUUUGCUGUAGAGCUGCC	Mnk	[1216-1234]
261	GAAUAAAGGAGUCAUUUAU	AUAAAUGACUCCUUUAUUC	Chmp,Mnk	[3439-3457]
262	UGAAGAAUUCACCAUUAGA	UCUAAUGGUGAAUUCUUCA		[3806-3824]
263	CACUGGGAAUGCUCUGGAU	AUCCAGAGCAUUCCCAGUG	Mnk	[1564-1582]
264	CCAAGGCUCUGCUUCUGUA	UACAGAAGCAGAGCCUUGG		[1537-1555]
265	GUAUAUGGUAAGCCUGUAA	UUACAGGCUUACCAUAUAC	Mnk	[2198-2216]
266	CUCUGCUUCUGUACCUCAA	UUGAGGUACAGAAGCAGAG		[1543-1561]
267	GGUUCGGGUCCAAGAUGAU	AUCAUCUUGGACCCGAACC	Mnk	[255-273]
268	GCUGCUAUCUCCCAGCAUA	UAUGCUGGGAGAUAGCAGC		[1927-1945]
269	GUAUCUCAGAAAUUAGAAA	UUUCUAAUUUCUGAGAUAC		[4323-4341]
270	GGAAACUUGUGGAGGAAAU	AUUUCCUCCACAAGUUUCC	Mnk	[891-909]
271	CGUCUACUAUGCCUCGGAU	AUCCGAGGCAUAGUAGACG		[1326-1344]
272	CUCAGGAUCCAAGUUUAAA	UUUAAACUUGGAUCCUGAG	Chmp,Mnk	[555-573]
273	UGACAAUCAUCCACAGGGA	UCCCUGUGGAUGAUUGUCA	Chmp,Mnk	[3519-3537]
274	CUACAAAACCAAAACAGAU	AUCUGUUUUGGUUUUGUAG	Mnk	[1776-1794]
275	GUUCUUCAACGAUUUGGAA	UUCCAAAUCGUUGAAGAAC	Chmp	[461-479]
276	AGCUGCAGCUAAGAAACAA	UUGUUUCUUAGCUGCAGCU	Mnk	[1074-1092]
277	GACACUGCCCAACAUGAGA	UCUCAUGUUGGGCAGUGUC		[1432-1450]
278	AACGCACCAAGGCCUCUAA	UUAGAGGCCUUGGUGCGUU		[2447-2465]
279	AGGAGAACCAUGAAAACGA	UCGUUUUCAUGGUUCUCCU	Mnk	[2322-2340]
280	AUGACAAUGUAGCUUGAAA	UUUCAAGCUACAUUGUCAU	Mnk	[3752-3770]
281	CCUUUGGUACUCUGAGGAA	UUCCUCAGAGUACCAAAGG	Mnk	[1680-1698]
282	CAGAAGAACCAAAUCCAGA	UCUGGAUUUGGUUCUUCUG	Chmp	[2811-2829]
283	CUUAUUUUGGACAAACUAA	UUAGUUUGUCCAAAAUAAG	Mnk	[1803-1821]
284	CAGUUUCAUCUGAUGGAAA	UUUCCAUCAGAUGAAACUG	Mnk	[1245-1263]
285	AAUCCUUACCGAAACCAGA	UCUGGUUUCGGUAAGGAUU	Mnk	[2390-2408]
286	CUCCAGGCCUUGAUUAUGA	UCAUAAUCAAGGCCUGGAG	Chmp	[2748-2766]
287	AAUUAAUCUCUGUUAAGAA	UUCUUAACAGAGAUUAAUU		[3686-3704]
288	GCGAAUGUUUGAUGUUCUU	AAGAACAUCAAACAUUCGC	Chmp	[448-466]
289	GGGAAGACGAAGAUGAAAU	AUUUCAUCUUCGUCUUCCC	Chmp	[3534-3552]
290	CAGCGCUUAAAGUUUUUGA	UCAAAAACUUUAAGCGCUG	Chmp,Mnk	[728-746]
291	AGUUCUCAGCAGUUGUCAA	UUGACAACUGCUGAGAACU	Mnk	[1853-1871]
292	CAGUUACUCCAGAAACAAU	AUUGUUUCUGGAGUAACUG	Mnk	[330-348]
293	UGAGCUGCCCAUGAAAGAA	UUCUUUCAUGGGCAGCUCA	Chmp,Mnk	[3490-3508]
294	CAGCUCUACAGCAAAAAGA	UCUUUUUGCUGUAGAGCUG	Mnk	[1218-1236]
295	CAGGGACAUUGUGAGUGGA	UCCACUCACAAUGUCCCUG	Ms,Chmp,Mnk	[529-547]
296	UACCCGUAAUAUUUGUCAA	UUGACAAAUAUUACGGGUA		[4355-4373]
297	AGUUCCAGUUACUCCAGAA	UUCUGGAGUAACUGGAACU	Mnk	[325-343]
298	AGUUGAUGAUGGAGAGGUU	AACCUCUCCAUCAUCAACU	Mnk	[1585-1603]
299	UAAUCUCUGUUAAGAAGAA	UUCUUCUUAACAGAGAUUA		[3689-3707]
300	CCUGGUACAGUUUGGUGUA	UACACCAAACUGUACCAGG	Chmp,Mnk	[3199-3217]
301	GAAAGAGAAGAAAGUGCGU	ACGCACUUUCUUCUCUUUC	Rat,Ms	[1615-1633]
302	GCACUUCACAGAAGUUCCA	UGGAACUUCUGUGAAGUGC	Mnk	[313-331]
303	CAGUUGUAAUAAACUUUUU	AAAAAGUUUAUUACAACUG	Mnk	[4395-4413]
304	UACAGAGAAUUAUUUAUGA	UCAUAAAUAAUUCUCUGUA	Mnk	[3093-3111]
305	GCAAAAAUUUCACAAGACU	AGUCUUGUGAAAUUUUUGC	Mnk	[3726-3744]
306	UCAGAAAGCCCAGUAGAAA	UUUCUACUGGGCUUUCUGA	Mnk	[2609-2627]
307	GCUGCAGUAGGUCCCUAUA	UAUAGGGACCUACUGCAGC	Mnk	[1301-1319]
308	GACAAUCAUCCACAGGGAA	UUCCCUGUGGAUGAUUGUC	Chmp	[3520-3538]
309	AAUCCAGAAUCCAUAUUUA	UAAAUAUGGAUUCUGGAUU	Mnk	[2626-2644]
310	CCUCCUGGUAAAAGGACAA	UUGUCCUUUUACCAGGAGG	Chmp,Mnk	[2969-2987]

311	AAUCCUGUUUUCUACAAGA	UCUUGUAGAAAACAGGAUU	Mnk	[3923-3941]
312	AUGAUGAGCUGCCCAUGAA	UUCAUGGGCAGCUCAUCAU	Chmp,Mnk	[3486-3504]
313	AAGAGAAUGAAGGAUUGAA	UUCAAUCCUUCAUUCUCUU		[3791-3809]
314	GAACCAGAGCAGUGAAGAU	AUCUUCACUGCUCUGGUUC	Mnk	[1699-1717]
315	AAAAAGUGAGAGCACUUAA	UUAAGUGCUCUCACUUUUU	Chmp,Mnk	[840-858]
316	GAGAAUUUGACCUUGUACA	UGUACAAGGUCAAAUUCUC	Chmp,Mnk	[3078-3096]
317	AGAAUGAAGGAUUGAAGAA	UUCUUCAAUCCUUCAUUCU		[3794-3812]
318	AGUGUUUGAAUAAGCGUAA	UUACGCUUAUUCAAACACU	Mnk	[1134-1152]
319	UCCAGUUACUCCAGAAACA	UGUUUCUGGAGUAACUGGA	Mnk	[328-346]
320	AAAGGACAAACUUGCGUAA	UUACGCAAGUUUGUCCUUU	Chmp,Mnk	[2979-2997]
321	CCAAGAUGAUGCCGAUGUU	AACAUCGGCAUCAUCUUGG	Mnk	[264-282]
322	UACGGUACCAGUAAUUAGA	UCUAAUUACUGGUACCGUA		[4254-4272]
323	CUCAAUGUUUGAUGCAGUA	UACUGCAUCAAACAUUGAG	Mnk	[1639-1657]
324	CGACAAUCCUGUUUUCUAC	GUAGAAAACAGGAUUGUCG	Mnk	[3919-3937]
325	CAAAACCAAAACAGAUUAA	UUAAUCUGUUUUGGUUUUG	Mnk	[1779-1797]
326	ACCAGUAAUUAGAUGUAGA	UCUACAUCUAAUUACUGGU	Mnk	[4260-4278]
327	UGGUUGUCAGUGAACAAUA	UAUUGUUCACUGACAACCA		[4168-4186]
328	GAGUGUUUGAAUAAGCGUA	UACGCUUAUUCAAACACUC	Mnk	[1133-1151]
329	AGAGAACAUUUAUUCCAAU	AUUGGAAUAAAUGUUCUCU	Mnk	[2248-2266]
330	ACAGAAUUUUAGUCAAUGA	UCAUUGACUAAAAUUCUGU	Mnk	[3665-3683]
331	GCUAAGAAACAAAUUGAAU	AUUCAAUUUGUUUCUUAGC	Mnk	[1081-1099]
332	CUAAGCUACGGUACCAGUA	UACUGGUACCGUAGCUUAG		[4248-4266]
333	UAAUGACAAUGUAGCUUGA	UCAAGCUACAUUGUCAUUA	Mnk	[3750-3768]
334	GUUUGAUGUUCUUCAACGA	UCGUUGAAGAACAUCAAAC	Chmp	[454-472]
335	GAGGGAGUGUUUGAAUAAG	CUUAUUCAAACACUCCCUC	Rat,Ms,Mnk	[1129-1147]
336	CGUGUAGCACUCAGAUAAG	CUUAUCUGAGUGCUACACG		[3893-3911]
337	UAGUAAAUAGGAUCAUUUA	UAAAUGAUCCUAUUUACUA		[3950-3968]
338	GACGGAAGUUCUCAGCAGU	ACUGCUGAGAACUUCCGUC		[1847-1865]
339	GAGGAAAUUGAACAGAUGA	UCAUCUGUUCAAUUUCCUC	Rat,Mnk	[902-920]
340	GGAAUGAGGGUGAAAUUCA	UGAAUUUCACCCUCAUUCC	Chmp,Mnk	[3023-3041]
341	GCAAGAAAGUCCACCUGCU	AGCAGGUGGACUUUCUUGC	Mnk	[1987-2005]
342	CCACACUUUUCAAGUGUAU	AUACACUUGAAAAGUGUGG	Mnk	[2183-2201]
343	CCCGUAAUAUUUGUCAAGA	UCUUGACAAAUAUUACGGG		[4357-4375]
344	GAAACUUAAAAGGCUAAAA	UUUUAGCCUUUUAAGUUUC	Chmp	[790-808]
345	AGUUUUUGAAACAACAAGA	UCUUGUUGUUUCAAAAACU	Mnk	[738-756]
346	GUUCAGGAGAACCAUGAAA	UUUCAUGGUUCUCCUGAAC	Mnk	[2318-2336]
347	AGGAGAAGAUGGGCAUAAU	AUUAUGCCCAUCUUCUCCU	Ms,Chmp,Mnk	[3420-3438]
348	GAAAGUGCGUCCGUUCUCA	UGAGAACGGACGCACUUUC		[1624-1642]
349	AUAAUUUGUUCCAGCAAAA	UUUUGCUGGAACAAAUUAU		[921-939]
350	GAAGCUAAGCUAAAAAAAG	CUUUUUUUAGCUUAGCUUC	Chmp,Mnk	[827-845]
351	GAGCUGCAGCUAAGAAACA	UGUUUCUUAGCUGCAGCUC	Mnk	[1073-1091]
352	AACUUAAAAGGCUAAAAGA	UCUUUUAGCCUUUUAAGUU	Chmp	[792-810]
353	UAGCAUCUUAAGAAUUAUA	UAUAAUUCUUAAGAUGCUA	Mnk	[4208-4226]
354	UGCAGAUAAGUGCGAGGAA	UUCCUCGCACUUAUCUGCA	Chmp,Mnk	[3355-3373]
355	GCUCAGAAAGCCCAGUAGA	UCUACUGGGCUUUCUGAGC	Mnk	[2607-2625]
356	UUCAGCAGCUGCUCCUAAA	UUUAGGAGCAGCUGCUGAA		[4010-4028]
357	UGUCUUUUGUAUCUCAGAA	UUCUGAGAUACAAAAGACA	Mnk	[4315-4333]
358	UGGAUAAGCGUGUUAAUGA	UCAUUAACACGCUUAUCCA	Mnk	[1170-1188]
359	GGAUUAUGAACCUCAGAAU	AUUCUGAGGUUCAUAAUCC	Chmp,Mnk	[3466-3484]
360	UCUCCAGAAUAACCCAGAA	UUCUGGGUUAUUCUGGAGA	Chmp	[2797-2815]
361	CAAAGACACCUUACUUCCA	UGGAAGUAAGGUGUCUUUG	Mnk	[2038-2056]
362	GAAUAAUUUGUUCCAGCAA	UUGCUGGAACAAAUUAUUC		[919-937]
363	GAGAACAUUUAUUCCAAUA	UAUUGGAAUAAAUGUUCUC	Mnk	[2249-2267]
364	GCGACAACAGCAACAAGUU	AACUUGUUGCUGUUGUCGC	Chmp,Mnk	[760-778]
365	AAUCAGGAAGCUAAGCUAA	UUAGCUUAGCUUCCUGAUU	Chmp,Mnk	[821-839]
366	GAAGAGAAUGAAGGAUUGA	UCAAUCCUUCAUUCUCUUC		[3790-3808]

367	CUCUACAGCAAAAAGAAAA	UUUUCUUUUUGCUGUAGAG	Mnk	[1221-1239]
368	AAAGUGCGUCCGUUCUCAA	UUGAGAACGGACGCACUUU		[1625-1643]
369	GACUCUUGCUGAACUUCAG	CUGAAGUUCAGCAAGAGUC	Chmp,Mnk	[646-664]
370	CCCAGACAACAGCCCAAAU	AUUUGGGCUGUUGUCUGGG	Chmp,Mnk	[2779-2797]
371	CUCCCAAUUUCUUUAUGGA	UCCAUAAAGAAAUUGGGAG	Chmp	[3397-3415]
372	AGUUCCUGGUGAAUAUCGA	UCGAUAUUCACCAGGAACU	Chmp,Mnk	[589-607]
373	CAAUGUUUGAUGCAGUAGA	UCUACUGCAUCAAACAUUG	Mnk	[1641-1659]
374	ACCAAGGCCUCUAAAGAAA	UUUCUUUAGAGGCCUUGGU		[2452-2470]
375	ACGUGGUGGAUCUGUGCAA	UUGCACAGAUCCACCACGU		[357-375]
376	GCAAGUUCAAUAUAUUCCA	UGGAAUAUAUUGAACUUGC	Mnk	[2084-2102]
377	GAUGAUGAGCUGCCCAUGA	UCAUGGGCAGCUCAUCAUC	Chmp,Mnk	[3485-3503]
378	AGCUUGAUCGCCUCUAUAA	UUAUAGAGGCGAUCAAGCU	Mnk	[1053-1071]
379	AACUGACCAGGCAGCUAGA	UCUAGCUGCCUGGUCAGUU		[978-996]
380	CAAUCAUCCACAGGGAAGA	UCUUCCCUGUGGAUGAUUG	Chmp	[3522-3540]
381	GACAAACUUGCGUAAAACU	AGUUUUACGCAAGUUUGUC	Chmp	[2983-3001]
382	UGUAGCAUCUUAAGAAUUA	UAAUUCUUAAGAUGCUACA	Mnk	[4206-4224]
383	AAAUUGAACAGAUGAAUAA	UUAUUCAUCUGUUCAAUUU		[906-924]
384	CCUCAUGUAACAACGUCCA	UGGACGUUGUUACAUGAGG	Chmp,Mnk	[3267-3285]
385	GAAUGUUUGAUGUUCUUCA	UGAAGAACAUCAAACAUUC	Rat,Chmp	[450-468]
386	GCCUUAUUUUGGACAAACU	AGUUUGUCCAAAAUAAGGC	Mnk	[1801-1819]
387	CUGGUAAAAGGACAAACUU	AAGUUUGUCCUUUUACCAG	Chmp,Mnk	[2973-2991]
388	UACCCAAGAAUUAAACCAA	UUGGUUUAAUUCUUGGGUA	Ms,Mnk	[3617-3635]
389	CUGUUCCUACAAAACCAAA	UUUGGUUUUGUAGGAACAG	Mnk	[1770-1788]
390	GGAGGAAAUUGAACAGAUG	CAUCUGUUCAAUUUCCUCC	Rat,Mnk	[901-919]
391	UAAUAUUUGUCAAGAUCAU	AUGAUCUUGACAAAUAUUA		[4361-4379]
392	GUAACUUGCUGGGACUGUA	UACAGUCCCAGCAAGUUAC		[3600-3618]
393	GACUUUAAAAACAGUUGUA	UACAACUGUUUUUAAAGUC	Mnk	[4384-4402]
394	CCCGUGUAGCACUCAGAUA	UAUCUGAGUGCUACACGGG		[3891-3909]
395	AAAUACAGACACUGCCCAA	UUGGGCAGUGUCUGUAUUU		[1425-1443]
396	CGGUGUUAAUAGUCCUAGG	CCUAGGACUAUUAACACCG	Chmp	[619-637]
397	GUCUUUUGUAUCUCAGAAA	UUUCUGAGAUACAAAAGAC	Mnk	[4316-4334]
398	UUUAGUCAAUGAAGAAUUA	UAAUUCUUCAUUGACUAAA	Mnk	[3672-3690]
399	GGCAGCAAGUUCAAUAUAU	AUAUAUUGAACUUGCUGCC	Mnk	[2080-2098]
400	AGCCCAGUAGAAAUCCAGA	UCUGGAUUUCUACUGGGCU	Mnk	[2615-2633]
401	AGCAGCUGCUCCUAAACCA	UGGUUUAGGAGCAGCUGCU		[4013-4031]
402	GUUAGUUGGUUGUCAGUGA	UCACUGACAACCAACUAAC		[4162-4180]
403	CCAGAGAACAUUUAUUCCA	UGGAAUAAAUGUUCUCUGG	Mnk	[2246-2264]
404	GAAUUAAUCUCUGUUAAGA	UCUUAACAGAGAUUAAUUC		[3685-3703]
405	AGACUUACCCGUAAUAUUU	AAAUAUUACGGGUAAGUCU		[4350-4368]
406	UGAAUAAGCGUAAUUCAGA	UCUGAAUUACGCUUAUUCA	Mnk	[1140-1158]
407	GGAUGGACUCCAUUACAUU	AAUGUAAUGGAGUCCAUCC	Chmp,Mnk	[3242-3260]
408	CCCUUGCUUUACUGCUAGA	UCUAGCAGUAAAGCAAGGG	Chmp,Mnk	[3045-3063]
409	GAUUUGGAAGUCAGAGGAA	UUCCUCUGACUUCCAAAUC	Chmp,Mnk	[471-489]
410	GGCGCGCCUUAAUGAUAAG	CUUAUCAUUAAGGCGCGCC	Chmp,Mnk	[3565-3583]
411	GCGCCUUAAUGAUAAGGAG	CUCCUUAUCAUUAAGGCGC	Chmp,Mnk	[3568-3586]
412	GGCUCCACAUGUGCUUGAU	AUCAAGCACAUGUGGAGCC		[2830-2848]
413	ACAAACUAAAGGCUCUAAA	UUUAGAGCCUUUAGUUUGU	Mnk	[1465-1483]
414	UGAUGUUCUUCAACGAUUU	AAAUCGUUGAAGAACAUCA	Chmp	[457-475]
415	CUUGCUGAACUUCAGGAAA	UUUCCUGAAGUUCAGCAAG	Chmp,Mnk	[650-668]
416	GACAUUUAGCGUGAUGAAA	UUUCAUCACGCUAAAUGUC		[3826-3844]
417	GUUCCAGUUACUCCAGAAA	UUUCUGGAGUAACUGGAAC	Mnk	[326-344]
418	CAAAAAUUUCACAAGACUU	AAGUCUUGUGAAAUUUUUG	Mnk	[3727-3745]
419	GUUUGGUGUAAAUGUAAAU	AUUUACAUUUACACCAAAC	Chmp,Mnk	[3208-3226]
420	GCUACGGUACCAGUAAUUA	UAAUUACUGGUACCGUAGC		[4252-4270]
421	GAAGAAUUAAUCUCUGUUA	UAACAGAGAUUAAUUCUUC		[3682-3700]
422	GAAGAAGGCAGCUCUACAG	CUGUAGAGCUGCCUUCUUC	Mnk	[1210-1228]

423	GGAAAUUGAACAGAUGAAU	AUUCAUCUGUUCAAUUUCC	Mnk	[904-922]
424	CAGUUCAGGAGAACCAUGA	UCAUGGUUCUCCUGAACUG	Mnk	[2316-2334]
425	CUUAAAGUUUUUGAAACAA	UUGUUUCAAAAACUUUAAG	Mnk	[733-751]
426	GGGAACUAAACCAAAACCA	UGGUUUUGGUUUAGUUCCC		[1888-1906]
427	GUGAAUAUCGAAGAAAGGA	UCCUUUCUUCGAUAUUCAC	Chmp,Mnk	[597-615]
428	CCAGAAGAACCAAAUCCAG	CUGGAUUUGGUUCUUCUGG	Chmp	[2810-2828]
429	CCAGUACAGAGAACAGUGA	UCACUGUUCUCUGUACUGG	Rat,Chmp,Mnk	[2715-2733]
430	GUAUUUAUUGUCUUUUGUA	UACAAAAGACAAUAAAUAC	Mnk	[4307-4325]
431	GAGGGAUAUGUUCCACGUA	UACGUGGAACAUAUCCCUC	Chmp	[3584-3602]
432	AAGAAUCCUGUCUAGUAAA	UUUACUAGACAGGAUUCUU		[3938-3956]
433	ACAGAUUGAAGCCCAGCAA	UUGCUGGGCUUCAAUCUGU	Chmp,Mnk	[688-706]
434	CACCCAGAGAACAUUUAUU	AAUAAAUGUUCUCUGGGUG	Rat,Mnk	[2243-2261]
435	AGUUGCUGAGCAGGAGAAA	UUUCUCCUGCUCAGCAACU		[775-793]
436	CAAGUUGCUGAGCAGGAGA	UCUCCUGCUCAGCAACUUG	Mnk	[773-791]
437	UAGUCAAUGAAGAAUUAAU	AUUAAUUCUUCAUUGACUA	Mnk	[3674-3692]
438	UCAAUAUAUUCCAUGUAUA	UAUACAUGGAAUAUAUUGA	Mnk	[2090-2108]
439	AGAGACUAAGCAAUGGGAA	UUCCCAUUGCUUAGUCUCU	Mnk	[876-894]
440	GGAAGUUCUCAGCAGUUGU	ACAACUGCUGAGAACUUCC	Mnk	[1850-1868]
441	GGGAUUAUGAACCUCAGAA	UUCUGAGGUUCAUAAUCCC	Chmp,Mnk	[3465-3483]
442	GUGCGAGGAAAUGGAGGAA	UUCCUCCAUUUCCUCGCAC	Rat,Ms,Chmp,Mnk	[3364-3382]
443	GUCCAGUUGCGGAUAAUGA	UCAUUAUCCGCAACUGGAC	Chmp,Mnk	[429-447]
444	CUUUAAAAACAGUUGUAAU	AUUACAACUGUUUUUAAAG	Mnk	[4386-4404]
445	GCAACAGAUUGAAGCCCAG	CUGGGCUUCAAUCUGUUGC	Chmp,Mnk	[685-703]
446	UCUGCUUCUGUACCUCAAA	UUUGAGGUACAGAAGCAGA		[1544-1562]
447	UGAGCUUGAUCGCCUCUAU	AUAGAGGCGAUCAAGCUCA	Mnk	[1051-1069]
448	AGAAGCCUUACGAAAGAAA	UUUCUUUCGUAAGGCUUCU		[2422-2440]
449	GCUGAGCAGGAGAAACUUA	UAAGUUUCUCCUGCUCAGC		[779-797]
450	UGGGAAACUUGUGGAGGAA	UUCCUCCACAAGUUUCCCA	Mnk	[889-907]
451	AUCUCAGGAUCCAAGUUUA	UAAACUUGGAUCCUGAGAU	Chmp,Mnk	[553-571]
452	AGACCAGACCCUUUCUCCA	UGGAGAAAGGGUCUGGUCU	Mnk	[1960-1978]
453	CGGAUGGUUCCUUGGUCAU	AUGACCAAGGAACCAUCCG	Mnk	[1383-1401]
454	AGAAGUUCCAGUUACUCCA	UGGAGUAACUGGAACUUCU	Mnk	[322-340]
455	UUAGUUGGUUGUCAGUGAA	UUCACUGACAACCAACUAA		[4163-4181]
456	AACAGAGGGAGUGUUUGAA	UUCAAACACUCCCUCUGUU	Rat,Ms,Mnk	[1125-1143]
457	UGAGAAUCAGGAAGCUAAG	CUUAGCUUCCUGAUUCUCA	Chmp,Mnk	[817-835]
458	GUAGCACUCAGAUAAGUAU	AUACUUAUCUGAGUGCUAC		[3896-3914]
459	ACGGUACCAGUAAUUAGAU	AUCUAAUUACUGGUACCGU		[4255-4273]
460	GAAGAUGGGCAUAAUGAAU	AUUCAUUAUGCCCAUCUUC	Chmp,Mnk	[3424-3442]
461	CCUGGUAAAAGGACAAACU	AGUUUGUCCUUUUACCAGG	Chmp,Mnk	[2972-2990]
462	AGUUUCAUCUGAUGGAAAU	AUUUCCAUCAGAUGAAACU	Mnk	[1246-1264]
463	GUUGUUCCGUCCAUGGGAA	UUCCCAUGGACGGAACAAC	Mnk	[1874-1892]
464	CAUCUUAAGAAUUAUACAU	AUGUAUAAUUCUUAAGAUG	Mnk	[4211-4229]
465	UUUUGUAGCAUCUUAAGAA	UUCUUAAGAUGCUACAAAA		[4203-4221]
466	GGGAAACUUGUGGAGGAAA	UUUCCUCCACAAGUUUCCC	Mnk	[890-908]
467	AGGAAAUGGAGGAAGGCUA	UAGCCUUCCUCCAUUUCCU	Rat,Ms,Chmp,Mnk	[3369-3387]
468	CGUUGACCAAGACUCAUAC	GUAUGAGUCUUGGUCAACG	Mnk	[2157-2175]
469	CUCCAGGUUCUAAGCAAGA	UCUUGCUUAGAACCUGGAG	Mnk	[1974-1992]
470	CUGCAGCUAAGAAACAAAU	AUUUGUUUCUUAGCUGCAG	Mnk	[1076-1094]
471	GAUGUUUCUUACCGUGUAU	AUACACGGUAAGAAACAUC		[277-295]
472	CUGGUACAGUUUGGUGUAA	UUACACCAAACUGUACCAG	Chmp,Mnk	[3200-3218]
473	UUAUGAGGUUGAUGACCCA	UGGGUCAUCAACCUCAUAA	Chmp,Mnk	[3106-3124]
474	CUGCCUCCUGGUAAAAGGA	UCCUUUUACCAGGAGGCAG	Chmp,Mnk	[2966-2984]
475	GGUCUCUCUGGUUCCUGAA	UUCAGGAACCAGAGAGACC	Chmp	[2668-2686]
476	CGAUUUGGAAGUCAGAGGA	UCCUCUGACUUCCAAAUCG	Chmp,Mnk	[470-488]
477	AAGGCACUGCACACUUGUA	UACAAGUGUGCAGUGCCUU	Chmp	[4125-4143]
478	CACAAACUAAAGGCUCUAA	UUAGAGCCUUUAGUUUGUG	Mnk	[1464-1482]

479	AGAAGAAGUAAUACGAUUA	UAAUCGUAUUACUUCUUCU	Mnk	[3701-3719]
480	GCUUCUGUACCUCAAAGCA	UGCUUUGAGGUACAGAAGC		[1547-1565]
481	CUCUCUGGUUCCUGAAUCA	UGAUUCAGGAACCAGAGAG	Chmp	[2671-2689]
482	AACCAUGAAAACGAAAGAA	UUCUUUCGUUUUCAUGGUU	Mnk	[2327-2345]
483	ACCUAGAAGCCUUACGAAA	UUUCGUAAGGCUUCUAGGU		[2418-2436]
484	CUACGGUACCAGUAAUUAG	CUAAUUACUGGUACCGUAG		[4253-4271]
485	GCAUGACAAUCAUCCACAG	CUGUGGAUGAUUGUCAUGC	Chmp,Mnk	[3516-3534]
486	GGAUAUGUUCCACGUAACU	AGUUACGUGGAACAUAUCC	Chmp	[3587-3605]
487	UGGUGGAUCUGUGCAAAGA	UCUUUGCACAGAUCCACCA	Rat,Mnk	[360-378]
488	CUGGUGAAUAUCGAAGAAA	UUUCUUCGAUAUUCACCAG	Chmp,Mnk	[594-612]
489	UGGUACAGUUUGGUGUAAA	UUUACACCAAACUGUACCA	Chmp,Mnk	[3201-3219]
490	UCCAGGUUCUAAGCAAGAA	UUCUUGCUUAGAACCUGGA	Mnk	[1975-1993]
491	CUGGGAAUGCUCUGGAUCA	UGAUCCAGAGCAUUCCCAG	Mnk	[1566-1584]
492	AGAAAAUCUACCAGUUUCA	UGAAACUGGUAGAUUUUCU	Mnk	[1234-1252]
493	AUGCUCAGGUUGCAAAUAA	UUAUUUGCAACCUGAGCAU		[1728-1746]
494	AGGAUUGAAGAAUUCACCA	UGGUGAAUUCUUCAAUCCU		[3801-3819]
495	GGGAGUGUUUGAAUAAGCG	CGCUUAUUCAAACACUCCC	Rat,Ms,Mnk	[1131-1149]
496	CACCUCCUGUUCCUACAAA	UUUGUAGGAACAGGAGGUG	Rat,Mnk	[1764-1782]
497	UUACUUCCACCCUUCAGAA	UUCUGAAGGGUGGAAGUAA	Mnk	[2048-2066]
498	UCUAGAAGAGAAUGAAGGA	UCCUUCAUUCUCUUCUAGA		[3786-3804]
499	UGAAUAAAGGAGUCAUUUA	UAAAUGACUCCUUUAUUCA	Chmp,Mnk	[3438-3456]
500	ACAACAAGAUCAGCGACAA	UUGUCGCUGAUCUUGUUGU	Mnk	[748-766]

Table B 36 XIAP - X-linked inhibitor of apoptosis

No.	Sense siRNA	AntiSense siRNA	Other Sp	Human-32528298 :129-1622
1	GGAGCUUUCUGUAUAUAAA	UUUAUAUACAGAAAGCUCC		[1980-1998]
2	GCAUCAUACUAUAACUGAA	UUCAGUUAUAGUAUGAUGC		[1867-1885]
3	UGGUGUUUCUCAUAGAUAA	UUAUCUAUGAGAAACACCA		[5608-5626]
4	GCAUGUUACUACAGAGGAA	UUCCUCUGUAGUAACAUGC		[3317-3335]
5	CGUAUUUAAUGAUAGAAUA	UAUUCUAUCAUUAAAUACG		[2200-2218]
6	GGACAAUCAUCAAUGCAUA	UAUGCAUUGAUGAUUGUCC		[6568-6586]
7	GGGCUAAAACUUAGAAAAA	UUUUUCUAAGUUUUAGCCC		[5549-5567]
8	GGACAAGUCCUAUUUUCAA	UUGAAAAUAGGACUUGUCC		[104-122]
9	GAAAGAGAUUAGUACUGAA	UUCAGUACUAAUCUCUUUC		[1424-1442]
10	AGAAAAUAAUGGAGGAAAA	UUUUCCUCCAUUAUUUUCU		[1297-1315]
11	CAUCAAUAAGGAAGAAGAA	UUCUUCUUCCUUAUUGAUG		[176-194]
12	AGGAAUUUCCCAAAUUCAA	UUGAAUUUGGGAAAUUCCU	Rat,Ms	[870-888]
13	GAGGAAAGUUUGAGAGUAA	UUACUCUCAAACUUUCCUC		[3330-3348]
14	GGGACAAUUGUAUCUUCAA	UUGAAGAUACAAUUGUCCC		[7599-7617]
15	UGAUGUGAACUGACUUUAA	UUAAAGUCAGUUCACAUCA		[1676-1694]
16	CAUGAGUUGUGAAAUUUAA	UUAAAUUUCACAACUCAUG		[4161-4179]
17	CCAGAAUGGUCAGUACAAA	UUUGUACUGACCAUUCUGG		[458-476]
18	AGGAGACCAUGUAUGUAAA	UUUACAUACAUGGUCUCCU		[5455-5473]
19	GUUGCUUCAGGUUCUUAAA	UUUAAGAACCUGAAGCAAC		[4234-4252]
20	CCAUGCUGGUGGAAAGAUA	UAUCUUUCCACCAGCAUGG		[2065-2083]
21	CAACCAAGGAGGAAUUGAA	UUCAAUUCCUCCUUGGUUG		[6630-6648]
22	AGGUGAAGGUGAUAAAGUA	UACUUUAUCACCUUCACCU		[1004-1022]
23	GGCUAAAACUUAGAAAAAA	UUUUUUCUAAGUUUUAGCC		[5550-5568]
24	GUGCAAAGAUUAUAGCUAA	UUAGCUAUAAUCUUUGCAC		[6392-6410]
25	GGACAAUUGUAUCUUCAAA	UUUGAAGAUACAAUUGUCC		[7600-7618]
26	CAAAGAUUAUAGCUAAUUA	UAAUUAGCUAUAAUCUUUG		[6395-6413]
27	UGUGAAUAAUCAUGUGAAA	UUUCACAUGAUUAUUCACA		[8215-8233]
28	UAAGAAGCAUCAUACUAUA	UAUAGUAUGAUGCUUCUUA		[1861-1879]
29	GUAUAAACUAGAAGUUUAA	UUAAACUUCUAGUUUAUAC		[3226-3244]
30	GGGUUUUAAUGUAAUUUAU	AUAAAUUACAUUAAAACCC		[8127-8145]

31	CAGUUUUGAAGGAUCUAAA	UUUAGAUCCUUCAAAACUG		[140-158]
32	GAGAAAACACCAUCACUAA	UUAGUGAUGGUGUUUUCUC		[1197-1215]
33	CAACAAAUCUUCCAAGAAA	UUUCUUGGAAGAUUUGUUG		[886-904]
34	GGCUGGAAGUGACCUUAGA	UCUAAGGUCACUUCCAGCC		[6313-6331]
35	GGCAUUCAUUGUAGAUUAA	UUAAUCUACAAUGAAUGCC		[8340-8358]
36	GGAUGAUUAAGAUGUAUAU	AUAUACAUCUUAAUCAUCC		[3019-3037]
37	GGAAAGUUUGAGAGUAAAA	UUUUACUCUCAAACUUUCC		[3332-3350]
38	CAGGGUUUACAUUACAAGA	UCUUGUAAUGUAAACCCUG		[3264-3282]
39	GAUAGAGAUUGUUUUUAGA	UCUAAAAACAAUCUCUAUC		[2080-2098]
40	CUACCAAGUAGGAAAAAAA	UUUUUUUCCUACUUGGUAG		[1725-1743]
41	GAGGCAACUGAGACUCAAA	UUUGAGUCUCAGUUGCCUC		[6360-6378]
42	GGUCAAACCCUUAAAAAUA	UAUUUUUAAGGGUUUGACC		[6129-6147]
43	CCGGAAUCUUAAUAUUCGA	UCGAAUAUUAAGAUUCCGG		[824-842]
44	AAGGGACAAGAAUAUAUAA	UUAUAUAUUCUUGUCCCUU	Rat	[1128-1146]
45	CAGUGAAGACCCUUGGGAA	UUCCCAAGGGUCUUCACUG		[1064-1082]
46	GGUUCUGGUUGCAGAUCUA	UAGAUCUGCAACCAGAACC		[1352-1370]
47	CGGCUUUUAUCUUGAAAAU	AUUUUCAAGAUAAAAGCCG		[410-428]
48	CAAGGUUGCAAGAGCUCAA	UUGAGCUCUUGCAACCUUG		[5437-5455]
49	GGAUAUACUCAGUUAACAA	UUGUUAACUGAGUAUAUCC		[952-970]
50	CCAUCUAAUUCCGCAAAAA	UUUUUGCGGAAUUAGAUGG		[4341-4359]
51	CUGUGAAAGGAAAAUAAUA	UAUUAUUUUCCUUUCACAG		[5409-5427]
52	AAGAGAAGAUGACUUUUAA	UUAAAAGUCAUCUUCUCUU	Rat	[121-139]
53	GAAGGGACAAGAAUAUAUA	UAUAUAUUCUUGUCCCUUC	Rat	[1127-1145]
54	UGGUCAGUACAAAGUUGAA	UUCAACUUUGUACUGACCA		[464-482]
55	CGAGCAGGGUUUCUUUAUA	UAUAAAGAAACCCUGCUCG		[273-291]
56	AGUAGUAGAUACUUCUGAA	UUCAGAAGUAUCUACUACU		[3092-3110]
57	GAGCCGCACUUCAUUAAAA	UUUUAAUGAAGUGCGGCUC		[4089-4107]
58	UGUUAAGUGUAAAAUGCAA	UUGCAUUUUACACUUAACA		[2262-2280]
59	CACAGGUAUUGGUGACCAA	UUGGUCACCAAUACCUGUG		[701-719]
60	GGACUGAAUUGUUUUAACA	UGUUAAAACAAUUCAGUCC		[4050-4068]
61	AGAGGAGAAGCUUUGCAAA	UUUGCAAAGCUUCUCCUCU	Rat,Ms	[1463-1481]
62	GAGUAAAACUGUAAAAAAU	AUUUUUUACAGUUUUACUC		[3343-3361]
63	GUAUUAGUAUUGUGAAUAA	UUAUUCACAAUACUAAUAC		[8205-8223]
64	AGAUAUGUUAAGUGUAAAA	UUUUACACUUAACAUAUCU		[2257-2275]
65	GGUAUAAACUAGAAGUUUA	UAAACUUCUAGUUUAUACC		[3225-3243]
66	CUGAUUUUGUAAAAUGAAA	UUUCAUUUUACAAAAUCAG	Ms	[2753-2771]
67	GGACAAGAAUAUAUAAACA	UGUUUAUAUAUUCUUGUCC		[1131-1149]
68	GAUUAAAGUCCUUUCAGAA	UUCUGAAAGGACUUUAAUC		[625-643]
69	CCUGGAAAUUUGGGCUAAA	UUUAGCCCAAAUUUCCAGG		[5538-5556]
70	GGUGGAAAACUGAAAAAUU	AAUUUUUCAGUUUUCCACC	Rat	[738-756]
71	ACAAGAUUCUCACAACAAA	UUUGUUGUGAGAAUCUUGU		[3277-3295]
72	CUCAGAUCUUCCAAUUAAU	AUUAAUUGGAAGAUCUGAG	Ms	[2784-2802]
73	GAAAAUAAUGGAGGAAAAA	UUUUUCCUCCAUUAUUUUC		[1298-1316]
74	GAGGAGAAGCUUUGCAAAA	UUUUGCAAAGCUUCUCCUC	Rat,Ms	[1464-1482]
75	GGGUGUAGUGAGUGUAUAU	AUAUACACUCACUACACCC		[4718-4736]
76	AGUAGAUACUUCUGAAAUA	UAUUUCAGAAGUAUCUACU		[3095-3113]
77	CAAAAGAUUUGGAAAGAUA	UAUCUUUCCAAAUCUUUUG		[2345-2363]
78	GAUCAUUUGCAAAGUCAAA	UUUGACUUUGCAAAUGAUC		[4362-4380]
79	GCAGGUUGUAGAUAUAUCA	UGAUAUAUCUACAACCUGC		[560-578]
80	GCUGGUGGAAAGAUAGAGA	UCUCUAUCUUUCCACCAGC		[2069-2087]
81	AGAGUAAAACUGUAAAAAA	UUUUUUACAGUUUUACUCU		[3342-3360]
82	GGUGAAGGUGAUAAAGUAA	UUACUUUAUCACCUUCACC		[1005-1023]
83	UGGGCAGGUUGUAGAUAUA	UAUAUCUACAACCUGCCCA		[557-575]
84	CAAGAUGAGUCAAGUCAGA	UCUGACUUGACUCAUCUUG		[1395-1413]
85	GGAGGAAAAAAUUCAGAUA	UAUCUGAAUUUUUUCCUCC		[1307-1325]
86	AGGAAAGUUUGAGAGUAAA	UUUACUCUCAAACUUUCCU		[3331-3349]

87	CCUGCUUUGUGGAUGAAAA	UUUUCAUCCACAAAGCAGG	Ms	[2669-2687]
88	GGAGCCGCACUUCAUUAAA	UUUAAUGAAGUGCGGCUCC		[4088-4106]
89	GAAUAAAACGUAUUCAAUA	UAUUGAAUACGUUUUAUUC		[8374-8392]
90	GCAUAACAGAGUUAUAGAA	UUCUAUAACUCUGUUAUGC		[6288-6306]
91	UACCAAGUAGGAAAAAAAA	UUUUUUUUCCUACUUGGUA		[1726-1744]
92	CCGGAUCUUUUCCAUCUAA	UUAGAUGGAAAAGAUCCGG		[4330-4348]
93	AGUUUUGAAGGAUCUAAAA	UUUUAGAUCCUUCAAAACU		[141-159]
94	GAAGCAUCAUACUAUAACU	AGUUAUAGUAUGAUGCUUC		[1864-1882]
95	GUCUUAUCUUGUUUCAAAA	UUUUGAAACAAGAUAAGAC		[2725-2743]
96	CCGUUAGGAUGAUUAAGAU	AUCUUAAUCAUCCUAACGG		[3013-3031]
97	CAACGGCUUUUAUCUUGAA	UUCAAGAUAAAAGCCGUUG		[407-425]
98	AGUAGGGUAUAAACUAGAA	UUCUAGUUUAUACCCUACU		[3220-3238]
99	CCAUAACUUUCACUACAUA	UAUGUAGUGAAAGUUAUGG		[6520-6538]
100	CAAGGACUCAAGGACUGAA	UUCAGUCCUUGAGUCCUUG		[4039-4057]
101	GGAGAAAAGUGUUAAAAUU	AAUUUUAACACUUUUCUCC		[3954-3972]
102	CAAGGACAUUAAGAAAAUA	UAUUUUCUUAAUGUCCUUG		[1286-1304]
103	CAUAGUUCUUUUUAGUCAA	UUGACUAAAAAGAACUAUG		[5354-5372]
104	GGAGACUCAGCAGUUGGAA	UUCCAACUGCUGAGUCUCC		[354-372]
105	CCAUUUUAGUGGAUAAAAU	AUUUUAUCCACUAAAAUGG		[4821-4839]
106	GUGCAUACAUUAUAUGCAA	UUGCAUAUAAUGUAUGCAC		[7103-7121]
107	CGUAUUCAAUAAAAUACUA	UAGUAUUUUAUUGAAUACG		[8382-8400]
108	AAGCGUAUUUAAUGAUAGA	UCUAUCAUUAAAUACGCUU		[2197-2215]
109	GUCUAGACUUUAAAUUUAA	UUAAAUUUAAAGUCUAGAC		[3921-3939]
110	GGGAGAAAAGUGUUAAAAU	AUUUUAACACUUUUCUCCC		[3953-3971]
111	GUGCGAAUUAUUUUUUUAA	UUAAAAAAAUAAUUCGCAC		[2159-2177]
112	GACUUUUAACAGUUUUGAA	UUCAAAACUGUUAAAAGUC	Rat,Ms	[131-149]
113	GUGUAGUGAGUGUAUAUAA	UUAUAUACACUCACUACAC		[4720-4738]
114	GGGUUUACAUUACAAGAUU	AAUCUUGUAAUGUAAACCC		[3266-3284]
115	GCUAAAACUUAGAAAAAAU	AUUUUUUCUAAGUUUUAGC		[5551-5569]
116	GCAUUGUCUUAAUUUUUGA	UCAAAAAUUAAGACAAUGC		[4576-4594]
117	CUGGUUUUAGCAUUUACAA	UUGUAAAUGCUAAAACCAG		[4598-4616]
118	CUGUCCAUUUUCUUUUAAA	UUUAAAAGAAAAUGGACAG		[2123-2141]
119	AGAACAGAAGGGACAAGAA	UUCUUGUCCCUUCUGUUCU		[1121-1139]
120	CCACUUAUUUUACAUUUUA	UAAAAUGUAAAAUAAGUGG		[4483-4501]
121	GUACAAGAAGCUAUACGAA	UUCGUAUAGCUUCUUGUAC		[1254-1272]
122	GCAUUAGUUUCACAUGAUA	UAUCAUGUGAAACUAAUGC		[4876-4894]
123	CACUUAGUUUGGUUAUAUA	UAUAUAACCAAACUAAGUG		[3875-3893]
124	CUGAAUUGUUUUAACAUAA	UUAUGUUAAAACAAUUCAG		[4053-4071]
125	AAAAAUUGAUCAUUUGCAA	UUGCAAAUGAUCAAUUUUU		[4355-4373]
126	CUUUUGUUGUGGUGGAAAA	UUUUCCACCACAACAAAAG	Rat	[728-746]
127	GCAGUUUAUUCAUCUGUGA	UCACAGAUGAAUAAACUGC		[5396-5414]
128	GAGGGCUAACUGAUUGGAA	UUCCAAUCAGUUAGCCCUC		[1042-1060]
129	CAUGGAUAUACUCAGUUAA	UUAACUGAGUAUAUCCAUG		[949-967]
130	GGUACAAGAAGCUAUACGA	UCGUAUAGCUUCUUGUACC		[1253-1271]
131	GGUAAGAACUACUGAGAAA	UUUCUCAGUAGUUCUUACC		[1184-1202]
132	CUGCUUUGUGGAUGAAAAA	UUUUUCAUCCACAAAGCAG	Ms	[2670-2688]
133	AGUGAAGAAGCUAGAUUAA	UUAAUCUAGCUUCUUCACU		[612-630]
134	AAGGCUUAGGCAUGUUCAA	UUGAACAUGCCUAAGCCUU	Ms	[2543-2561]
135	GUUAGAGAAAUGAAAUAAA	UUUAUUUCAUUUCUCUAAC		[5006-5024]
136	ACAUGAUAUACCCUUUAAA	UUUAAAGGGUAUAUCAUGU		[4887-4905]
137	AGAUUAAAGUCCUUUCAGA	UCUGAAAGGACUUUAAUCU		[624-642]
138	AGGUCAAACCCUUAAAAAU	AUUUUUAAGGGUUUGACCU		[6128-6146]
139	GUAGAUACUUCUGAAAUAA	UUAUUUCAGAAGUAUCUAC		[3096-3114]
140	CAAACUAAAUUCCAGUUAA	UUAACUGGAAUUUAGUUUG		[4614-4632]
141	CAGGACACUUCACUUCCAA	UUGGAAGUGAAGUGUCCUG		[3989-4007]
142	GGAAGAAGAAUUUGUAGAA	UUCUACAAAUUCUUCUUCC		[185-203]

143	CCCUGUUUCUGUUUUAGUA	UACUAAAACAGAAACAGGG		[3820-3838]
144	CCAUCACUAACUAGAAGAA	UUCUUCUAGUUAGUGAUGG		[1206-1224]
145	AUAUCAUCUUGUAUCUUAA	UUAAGAUACAAGAUGAUAU		[2975-2993]
146	AAUCAUCAAUGCAUAUAUA	UAUAUAUGCAUUGAUGAUU		[6572-6590]
147	GGCUAGUAAUAGUAGUAGA	UCUACUACUAUUACUAGCC		[3082-3100]
148	AAAGAUUUGGAAAGAUAUA	UAUAUCUUUCCAAAUCUUU		[2347-2365]
149	CAUUGUAGAUUAAAGCUUA	UAAGCUUUAAUCUACAAUG		[8346-8364]
150	CUGUAUCAUUAAUGUAAUA	UAUUACAUUAAUGAUACAG		[8035-8053]
151	CCAUCCUAAUACCCUUUUA	UAAAAGGGUAUUAGGAUGG		[5497-5515]
152	GCUUAUGUAGGUAAAAGUA	UACUUUUACCUACAUAAGC		[2898-2916]
153	ACUCCAACUUCUAAUCAAA	UUUGAUUAGAAGUUGGAGU		[4263-4281]
154	AGGUGAGUAAGGCAUGUUA	UAACAUGCCUUACUCACCU		[3306-3324]
155	UGUGGUGGAAAACUGAAAA	UUUUCAGUUUUCCACCACA	Rat	[735-753]
156	GGUCAGAUUCUACUUUGAA	UUCAAAGUAGAAUCUGACC		[7963-7981]
157	CACUCCAACUUCUAAUCAA	UUGAUUAGAAGUUGGAGUG		[4262-4280]
158	CCAUGAGUUGUGAAAUUUA	UAAAUUUCACAACUCAUGG		[4160-4178]
159	GAACGUCCAGGGUUUACAU	AUGUAAACCCUGGACGUUC		[3257-3275]
160	CAAGCUACCUUUCUUGAAA	UUUCAAGAAAGGUAGCUUG		[6461-6479]
161	CAUAGACUAAGAAUAAGAA	UUCUUAUUCUUAGUCUAUG		[1848-1866]
162	CAUUUUUCUGGAUUUAGUA	UACUAAAUCCAGAAAAAUG		[8077-8095]
163	GUGAAUAAAACGUAUUCAA	UUGAAUACGUUUUAUUCAC		[8372-8390]
164	AGUCAAAUCUACUUGUUAA	UUAACAAGUAGAUUUGACU		[5367-5385]
165	AACCAAGGAGGAAUUGAAA	UUUCAAUUCCUCCUUGGUU		[6631-6649]
166	AGAUGUAUAUAGGACAAAA	UUUUGUCCUAUAUACAUCU		[3028-3046]
167	ACACCAUCACUAACUAGAA	UUCUAGUUAGUGAUGGUGU		[1203-1221]
168	CAGGGAUAGCAAGGGACAA	UUGUCCCUUGCUAUCCCUG		[7587-7605]
169	UCAGCAUAACAGAGUUAUA	UAUAACUCUGUUAUGCUGA		[6285-6303]
170	CUGUAAAUAUGAACUCCCA	UGGGAGUUCAUAUUUACAG		[5481-5499]
171	CAAAUUUUUGGAGACUUAA	UUAAGUCUCCAAAAAUUUG		[4278-4296]
172	GUUUGAGAGUAAAACUGUA	UACAGUUUUACUCUCAAAC		[3337-3355]
173	CGGAUCUUUUCCAUCUAAU	AUUAGAUGGAAAAGAUCCG		[4331-4349]
174	GGGCCGGAAUCUUAAUAUU	AAUAUUAAGAUUCCGGCCC		[821-839]
175	UGCUGUUAGAGAAAUGAAA	UUUCAUUUCUCUAACAGCA		[5002-5020]
176	CAUAUUAAAUGACACUUUA	UAAAGUGUCAUUUAAUAUG		[6535-6553]
177	CCAGGACACUUCACUUCCA	UGGAAGUGAAGUGUCCUGG		[3988-4006]
178	AAGUAUUUCUGAUUUUGUA	UACAAAAUCAGAAAUACUU		[2745-2763]
179	CAAGGAGCAGCUUGCAAGA	UCUUGCAAGCUGCUCCUUG	Rat,Ms	[968-986]
180	GUACAAAGUUGAAAACUAU	AUAGUUUUCAACUUUGUAC		[470-488]
181	GACAUAGUUUGAAGGUGAA	UUCACCUUCAAACUAUGUC		[6433-6451]
182	GGGAGCCGCACUUCAUUAA	UUAAUGAAGUGCGGCUCCC		[4087-4105]
183	UGAUCAUUUGCAAAGUCAA	UUGACUUUGCAAAUGAUCA		[4361-4379]
184	CUGGAAAUUUGGGCUAAAA	UUUUAGCCCAAAUUUCCAG		[5539-5557]
185	GUGGUGGAAAACUGAAAAA	UUUUUCAGUUUUCCACCAC	Rat	[736-754]
186	CAAAUCUACUUGUUAAAAA	UUUUUAACAAGUAGAUUUG		[5370-5388]
187	CAAUAUUCAUUUAACUCAU	AUGAGUUAAAUGAAUAUUG		[1148-1166]
188	CGUACUUGUGCGAAUUAUU	AAUAAUUCGCACAAGUACG		[2152-2170]
189	AGAUGUGCAUACAUUAUAU	AUAUAAUGUAUGCACAUCU		[7099-7117]
190	UAAUAUGCAUAGAACAAAA	UUUUGUUCUAUGCAUAUUA		[2331-2349]
191	GUCAGUACAAAGUUGAAAA	UUUUCAACUUUGUACUGAC		[466-484]
192	UGAAGAUGUGCAUACAUUA	UAAUGUAUGCACAUCUUCA		[7096-7114]
193	GGUUCAGUUUCAAGGACAU	AUGUCCUUGAAACUGAACC		[1276-1294]
194	GGAUCUUUUCCAUCUAAUU	AAUUAGAUGGAAAAGAUCC		[4332-4350]
195	AGAACAAAAGAUUUGGAAA	UUUCCAAAUCUUUUGUUCU		[2341-2359]
196	GAUUGAAUUCCAUUAGCAU	AUGCUAAUGGAAUUCAAUC		[1703-1721]
197	CCAUGUUGAGAUUCUCAUA	UAUGAGAAUCUCAACAUGG		[2959-2977]
198	GAAGAAUAGUUGUUUAAAU	AUUUAAACAACUAUUCUUC		[3172-3190]

199	ACUAAAAGAUCUUUGUUAA	UUAACAAAGAUCUUUUAGU	Ms	[2856-2874]
200	GUACCUGCAGACAUCAAUA	UAUUGAUGUCUGCAGGUAC		[165-183]
201	ACUGAAUUGUUUUAACAUA	UAUGUUAAAACAAUUCAGU		[4052-4070]
202	CUGCAGACAUCAAUAAGGA	UCCUUAUUGAUGUCUGCAG		[169-187]
203	UGGGCUAAAACUUAGAAAA	UUUUCUAAGUUUUAGCCCA		[5548-5566]
204	UGUUCAAACGCCUGCAAAA	UUUUGCAGGCGUUUGAACA		[2555-2573]
205	AAAUCUGUAUGGAUAGAAA	UUUCUAUCCAUACAGAUUU	Rat,Ms	[1480-1498]
206	CUUUGUGGAUGAAAAAUAU	AUAUUUUUCAUCCACAAAG	Ms	[2673-2691]
207	CGCACUUCAUUAAAAUUCU	AGAAUUUUAAUGAAGUGCG		[4093-4111]
208	GUUUCAAGGACAUUAAGAA	UUCUUAAUGUCCUUGAAAC		[1282-1300]
209	AGAUACUUCUGAAAUAAAU	AUUUAUUUCAGAAGUAUCU		[3098-3116]
210	GGACAUCUAGUCACUUGUA	UACAAGUGACUAGAUGUCC		[1524-1542]
211	GAAUAAGAAGCAUCAUACU	AGUAUGAUGCUUCUUAUUC		[1858-1876]
212	CGUUUUUGUUCCUUGUGGA	UCCACAAGGAACAAAAACG	Ms	[1508-1526]
213	CACAUGAUAUACCCUUUAA	UUAAAGGGUAUAUCAUGUG		[4886-4904]
214	CCCGAAUCAUUGUUUUAUU	AAUAAAACAAUGAUUCGGG		[4906-4924]
215	UCAUUACUUUCAAGCAAAA	UUUUGCUUGAAAGUAAUGA		[1588-1606]
216	GUAUCUUCAAAGUAGACAA	UUGUCUACUUUGAAGAUAC		[7608-7626]
217	UCUAGUGAAUGCUCAGAAA	UUUCUGAGCAUUCACUAGA		[1367-1385]
218	AACUUUCACUACAUAUUAA	UUAAUAUGUAGUGAAAGUU		[6524-6542]
219	UUGGGAACAACAUGCUAAA	UUUAGCAUGUUGUUCCCAA		[1076-1094]
220	GGAUUGAAUUCCAUUAGCA	UGCUAAUGGAAUUCAAUCC		[1702-1720]
221	CAGGGUAUUAGCUGUAUUA	UAAUACAGCUAAUACCCUG		[1798-1816]
222	CAAUCAUCAAUGCAUAUAU	AUAUAUGCAUUGAUGAUUG		[6571-6589]
223	CUUGUAUCUUAAAGUUUCA	UGAAACUUUAAGAUACAAG		[2982-3000]
224	UGCAGACAUCAAUAAGGAA	UUCCUUAUUGAUGUCUGCA		[170-188]
225	AUUGCUUUCUGCUGUAUAA	UUAUACAGCAGAAAGCAAU		[8318-8336]
226	AAAUAAUGGAGGAAAAAAU	AUUUUUUCCUCCAUUAUUU		[1300-1318]
227	CCAUUUUCUUUUAAAGUUA	UAACUUUAAAAGAAAAUGG		[2127-2145]
228	UGUUGUGGUGGAAAACUGA	UCAGUUUUCCACCACAACA	Rat	[732-750]
229	CCAUUUUUCUGGAUUUAGU	ACUAAAUCCAGAAAAAUGG		[8076-8094]
230	GGAAAGAUGUCAAAGAUAU	AUAUCUUUGACAUCUUUCC		[2244-2262]
231	CAGUAGGGUAUAAACUAGA	UCUAGUUUAUACCCUACUG		[3219-3237]
232	CAGCUUUAGUUUUUCUAAU	AUUAGAAAAACUAAAGCUG		[2586-2604]
233	UCUUAUUCUGUAUCAUUAA	UUAAUGAUACAGAAUAAGA		[8028-8046]
234	GAUUCAAGUAGUUUUGCAA	UUGCAAAACUACUUGAAUC		[4512-4530]
235	AGAUUAUAGCUAAUUAGUA	UACUAAUUAGCUAUAAUCU		[6398-6416]
236	GGUUUGUCUUGACCUGGAA	UUCCAGGUCAAGACAAACC		[5526-5544]
237	AAAGAUAUGUUAAGUGUAA	UUACACUUAACAUAUCUUU		[2255-2273]
238	GUGUACCUGCAGACAUCAA	UUGAUGUCUGCAGGUACAC		[163-181]
239	CUGUGAGUUCUGAUAGGAA	UUCCUAUCAGAACUCACAG		[856-874]
240	GUGUGAAAAAGGAAUAAAU	AUUUAUUCCUUUUUCACAC		[2042-2060]
241	UGAUCUAAUUGUAUUAGUA	UACUAAUACAAUUAGAUCA		[8195-8213]
242	GUUGUGGUGGAAAACUGAA	UUCAGUUUUCCACCACAAC	Rat	[733-751]
243	CCUCUUGGAAAUUAUAAAA	UUUUAUAAUUUCCAAGAGG		[3138-3156]
244	CAAGGGUUUUAAUGUAAUU	AAUUACAUUAAAACCCUUG		[8124-8142]
245	GUGCUUUAGUUGUCAUGCA	UGCAUGACAACUAAAGCAC		[314-332]
246	UGGGAUGUAUAUAUAUCAU	AUGAUAUAUAUACAUCCCA		[4983-5001]
247	UUUUUGAAAGCGUAUUUAA	UUAAAUACGCUUUCAAAAA		[2190-2208]
248	ACAUCUAGUCACUUGUAAA	UUUACAAGUGACUAGAUGU		[1526-1544]
249	CAGAAUUUUUAGAAAGUAU	AUACUUUCUAAAAAUUCUG		[2512-2530]
250	CGGAAUCUUAAUAUUCGAA	UUCGAAUAUUAAGAUUCCG		[825-843]
251	AGACAUCAAUAAGGAAGAA	UUCUUCCUUAUUGAUGUCU		[173-191]
252	AUAAUAGGACAAUCAUCAA	UUGAUGAUUGUCCUAUUAU		[6562-6580]
253	GUGGAAAGAUAGAGAUUGU	ACAAUCUCUAUCUUUCCAC		[2073-2091]
254	CAUGCAGACUAUCUUUUGA	UCAAAAGAUAGUCUGCAUG		[534-552]

255	AGGACAUUAAGAAAAUAAU	AUUAUUUUCUUAAUGUCCU		[1288-1306]
256	CAGAGAUCAUUUUGCCUUA	UAAGGCAAAAUGAUCUCUG		[497-515]
257	AAGAAAAUGGGAAGCAAUA	UAUUGCUUCCCAUUUUCUU		[5330-5348]
258	GAUCAAAAGCAUUGUCUUA	UAAGACAAUGCUUUUGAUC		[4568-4586]
259	CAAGGAGACCAUGUAUGUA	UACAUACAUGGUCUCCUUG		[5453-5471]
260	UCUUAAUAUUCGAAGUGAA	UUCACUUCGAAUAUUAAGA		[830-848]
261	CAUUAGCAUUUGCUACCAA	UUGGUAGCAAAUGCUAAUG		[1713-1731]
262	GUGUGGAAAACUAAGAAAA	UUUUCUUAGUUUUCCACAC		[8300-8318]
263	UGGUUUUUUUCACUUAGAA	UUCUAAGUGAAAAAAACCA		[8274-8292]
264	CUGUUCGAAUUUUUUAUAA	UUAUAAAAAAUUCGAACAG		[2473-2491]
265	GUAUAGUCUAGACUUUAAA	UUUAAAGUCUAGACUAUAC		[3916-3934]
266	GAGGAAUUGAAAACACUGA	UCAGUGUUUUCAAUUCCUC		[6638-6656]
267	GAGUCAAGUCAGACUUCAU	AUGAAGUCUGACUUGACUC	Rat	[1401-1419]
268	AGUAAGGCAUGUUACUACA	UGUAGUAACAUGCCUUACU		[3311-3329]
269	AUCUGUGAAAGGAAAAUAA	UUAUUUUCCUUUCACAGAU		[5407-5425]
270	GAUGUAACAAGGGUUUUAA	UUAAAACCCUUGUUACAUC		[8117-8135]
271	CCAGUUCUUUCAUUUUACA	UGUAAAAUGAAAGAACUGG		[6338-6356]
272	CAGACAUCAAUAAGGAAGA	UCUUCCUUAUUGAUGUCUG		[172-190]
273	UGUAGUGAGUGUAUAUAAU	AUUAUAUACACUCACUACA		[4721-4739]
274	AAGAAGGCAGGGCAGUUAA	UUAACUGCCCUGCCUUCUU		[2607-2625]
275	CAGUUUAUUCAUCUGUGAA	UUCACAGAUGAAUAAACUG		[5397-5415]
276	AAAAACACUUGAAUAAGAA	UUCUUAUUCAAGUGUUUUU		[3199-3217]
277	GACUGAUCUAAUUGUAUUA	UAAUACAAUUAGAUCAGUC		[8192-8210]
278	GGAAAAUAAUACUUAUCUU	AAGAUAAGUAUUAUUUUCC		[5417-5435]
279	GUGAGUAAGGCAUGUUACU	AGUAACAUGCCUUACUCAC		[3308-3326]
280	GUCAAAUCUACUUGUUAAA	UUUAACAAGUAGAUUUGAC		[5368-5386]
281	CAUGGAAAGAUGUCAAAGA	UCUUUGACAUCUUUCCAUG		[2241-2259]
282	CAGCAUUAGUUUCACAUGA	UCAUGUGAAACUAAUGCUG		[4874-4892]
283	UGGUUUUAGCAUUUACAAA	UUUGUAAAUGCUAAAACCA		[4599-4617]
284	UAAAGUUCCUGCUGUAAAU	AUUUACAGCAGGAACUUUA		[5470-5488]
285	GGAGGAGGGCUAACUGAUU	AAUCAGUUAGCCCUCCUCC		[1038-1056]
286	GACUGAAUUGUUUUAACAU	AUGUUAAAACAAUUCAGUC		[4051-4069]
287	UGUGAAAUUUAAUGCACAA	UUGUGCAUUAAAUUUCACA		[4168-4186]
288	CUAAAUUCCAGUUAAUUAA	UUAAUUAACUGGAAUUUAG		[4618-4636]
289	CAAGGACUGAAUUGUUUUA	UAAAACAAUUCAGUCCUUG		[4047-4065]
290	GUAGUAGAUACUUCUGAAA	UUUCAGAAGUAUCUACUAC		[3093-3111]
291	UGUCUUAUCUUGUUUCAAA	UUUGAAACAAGAUAAGACA		[2724-2742]
292	UCUGAUUUUGUAAAAUGAA	UUCAUUUUACAAAAUCAGA	Ms	[2752-2770]
293	CUGGUGGAAAGAUAGAGAU	AUCUCUAUCUUUCCACCAG		[2070-2088]
294	UCAGAAAGACAGUAUGCAA	UUGCAUACUGUCUUUCUGA		[1379-1397]
295	GGUCAGUACAAAGUUGAAA	UUUCAACUUUGUACUGACC		[465-483]
296	AGUCCUAUUUUCAAGAGAA	UUCUCUUGAAAAUAGGACU		[109-127]
297	CAAUGUGAAAUGUAAAUGA	UCAUUUACAUUUCACAUUG		[2638-2656]
298	AGAAGAGUUUAAUAGAUUA	UAAUCUAUUAAACUCUUCU	Rat,Ms	[200-218]
299	GUUUCUUUAUACUGGUGAA	UUCACCAGUAUAAAGAAAC		[281-299]
300	GUGCUUUUGUUGUGGUGGA	UCCACCACAACAAAAGCAC		[725-743]
301	AGUAUUUUGCUGAUUUAAA	UUUAAAUCAGCAAAAUACU		[2526-2544]
302	CACUGUACCAUAACUUUCA	UGAAAGUUAUGGUACAGUG		[6513-6531]
303	UGUUGCUUCAGGUUCUUAA	UUAAGAACCUGAAGCAACA		[4233-4251]
304	GAAUCAGUAGGGUAUAAAC	GUUUAUACCCUACUGAUUC		[3215-3233]
305	UAGGAAUUUCCCAAAUUCA	UGAAUUUGGGAAAUUCCUA	Rat,Ms	[869-887]
306	CUUAUUUUUCUGUGAAUAA	UUAUUCACAGAAAAAUAAG	Ms	[8361-8379]
307	CAUCUAAUUCCGCAAAAAU	AUUUUUGCGGAAUUAGAUG		[4342-4360]
308	CAAAUGUUUAUGUUUUCAA	UUGAAAACAUAAACAUUUG		[6484-6502]
309	GAAGAGUUUAAUAGAUUAA	UUAAUCUAUUAAACUCUUC	Rat,Ms	[201-219]
310	UUUUGAAAGCGUAUUUAAU	AUUAAAUACGCUUUCAAAA		[2191-2209]

311	GAGUGUAUAUAAUGUGAUU	AAUCACAUUAUAUACACUC		[4727-4745]
312	GAGUGUCUGGUAAGAACUA	UAGUUCUUACCAGACACUC		[1176-1194]
313	AAGACAGUAUGCAAGAUGA	UCAUCUUGCAUACUGUCUU		[1384-1402]
314	GGAUGAAAAAUAUUUCUGA	UCAGAAAUAUUUUUCAUCC	Ms	[2679-2697]
315	AAAGAUUAUUCUUCUCAAA	UUUGAGAAGAAUAAUCUUU		[6169-6187]
316	GAGCUUUCUGUAUAUAAAU	AUUUAUAUACAGAAAGCUC		[1981-1999]
317	UGGAAAGAUAUACACCAAA	UUUGGUGUAUAUCUUUCCA		[2354-2372]
318	GACAUCUAGUCACUUGUAA	UUACAAGUGACUAGAUGUC		[1525-1543]
319	GUCAAACCCUUAAAAAUAU	AUAUUUUUAAGGGUUUGAC		[6130-6148]
320	CCAAAAUCCUAUGGUACAA	UUGUACCAUAGGAUUUUGG		[1241-1259]
321	GACACUUUAUAACUAAUAU	AUAUUAGUUAUAAAGUGUC		[6545-6563]
322	AAAAAACACUUGAAUAAGA	UCUUAUUCAAGUGUUUUUU		[3198-3216]
323	AAAAGAUUUGGAAAGAUAU	AUAUCUUUCCAAAUCUUUU		[2346-2364]
324	GUCAUUACUUUCAAGCAAA	UUUGCUUGAAAGUAAUGAC		[1587-1605]
325	AGAGUACUAUAUUUGUGAA	UUCACAAAUAUAGUACUCU		[8245-8263]
326	GGUGCAAAUAUCUGUUAGA	UCUAACAGAUAUUUGCACC		[1105-1123]
327	UUGGAAAGAUAUACACCAA	UUGGUGUAUAUCUUUCCAA		[2353-2371]
328	UGCUUUUGUUGUGGUGGAA	UUCCACCACAACAAAAGCA	Rat	[726-744]
329	UGAAUUUCUUGAUUUUUCA	UGAAAAAUCAAGAAAUUCA		[1781-1799]
330	AGUACAAAGUUGAAAACUA	UAGUUUUCAACUUUGUACU		[469-487]
331	AGUUGAGCUUUCUAAGAGA	UCUCUUAGAAAGCUCAACU		[6191-6209]
332	UUAUGUAGGUAAAAGUAGA	UCUACUUUUACCUACAUAA		[2900-2918]
333	UAGGUCAAACCCUUAAAAA	UUUUUAAGGGUUUGACCUA		[6127-6145]
334	AACCAUAGACUAAGAAUAA	UUAUUCUUAGUCUAUGGUU		[1845-1863]
335	CAUAGUAUACUGAUUUAAU	AUUAAAUCAGUAUACUAUG		[1899-1917]
336	UGUGGAGAUUAGAGUUAAU	AUUAACUCUAAUCUCCACA		[1999-2017]
337	CUAAGAAUAAGAAGCAUCA	UGAUGCUUCUUAUUCUUAG		[1854-1872]
338	UGGUAUCCAGGGUGCAAAU	AUUUGCACCCUGGAUACCA		[1095-1113]
339	GGAGUUUACCACUUUCUUA	UAAGAAAGUGGUAAACUCC		[8014-8032]
340	UAUCAUUGCUGUUAGAGAA	UUCUCUAACAGCAAUGAUA		[4996-5014]
341	UGGAGACUCAGCAGUUGGA	UCCAACUGCUGAGUCUCCA		[353-371]
342	UAGUCAUGCAAAGAUUCAA	UUGAAUCUUUGCAUGACUA		[4500-4518]
343	GUGAACUGACUUUAAGUAA	UUACUUAAAGUCAGUUCAC		[1680-1698]
344	AGGGACAAGAAUAUAUAAA	UUUAUAUAUUCUUGUCCCU	Rat	[1129-1147]
345	AAGAAUCAGUAGGGUAUAA	UUAUACCCUACUGAUUCUU		[3213-3231]
346	UAGAUACUUCUGAAAUAAA	UUUAUUUCAGAAGUAUCUA		[3097-3115]
347	GGCUUUUUCCCACUUCAAU	AUUGAAGUGGGAAAAAGCC		[6217-6235]
348	CUUGUAUGUUUAGAGUUAA	UUAACUCUAAACAUACAAG		[4119-4137]
349	CAUGUUACUACAGAGGAAA	UUUCCUCUGUAGUAACAUG		[3318-3336]
350	CAGAAGGGACAAGAAUAUA	UAUAUUCUUGUCCCUUCUG		[1125-1143]
351	GUUUCUCAUAGAUAAGAUA	UAUCUUAUCUAUGAGAAAC		[5612-5630]
352	CUUUUAUCUUGAAAAUAGU	ACUAUUUUCAAGAUAAAAG		[413-431]
353	GCUUGUAGUUAUAGUGACA	UGUCACUAUAACUACAAGC		[2935-2953]
354	GCAAUUAUUUUUAAACCAA	UUGGUUUAAAAAUAAUUGC		[6803-6821]
355	UGAUGAUACCAUCUUCCAA	UUGGAAGAUGGUAUCAUCA		[1226-1244]
356	GAGACAGAGUACUAUAUUU	AAAUAUAGUACUCUGUCUC		[8240-8258]
357	CCGCAAAAAUUGAUCAUUU	AAAUGAUCAAUUUUUGCGG		[4351-4369]
358	UCAGUUUCAAGGACAUUAA	UUAAUGUCCUUGAAACUGA		[1279-1297]
359	AAAGCAUUGUCUUAAUUUU	AAAAUUAAGACAAUGCUUU		[4573-4591]
360	AAGAAGCAUCAUACUAUAA	UUAUAGUAUGAUGCUUCUU		[1862-1880]
361	GAAGAUGUGCAUACAUUAU	AUAAUGUAUGCACAUCUUC		[7097-7115]
362	AGCCGCACUUCAUUAAAAU	AUUUUAAUGAAGUGCGGCU		[4090-4108]
363	AGCUCAAGGAGACCAUGUA	UACAUGGUCUCCUUGAGCU		[5449-5467]
364	GAAAGAUAGAGAUUGUUUU	AAAACAAUCUCUAUCUUUC		[2076-2094]
365	AGUAGUUUUGCAAUAAGUA	UACUUAUUGCAAAACUACU		[4518-4536]
366	GGUGUUUCUCAUAGAUAAG	CUUAUCUAUGAGAAACACC		[5609-5627]

367	UGUGGAAAACUAAGAAAAU	AUUUUCUUAGUUUUCCACA		[8301-8319]
368	GAUCUUUGUUAACUCAGUA	UACUGAGUUAACAAAGAUC		[2863-2881]
369	AGAAAAAAUUCUUACAUGA	UCAUGUAAGAAUUUUUUCU		[5561-5579]
370	UCUAGUCACUUGUAAACAA	UUGUUUACAAGUGACUAGA		[1529-1547]
371	AAAAGAUUAUUCUUCUCAA	UUGAGAAGAAUAAUCUUUU		[6168-6186]
372	UGGUCAGAUUCUACUUUGA	UCAAAGUAGAAUCUGACCA		[7962-7980]
373	GUUCCAUGCUGGUGGAAAG	CUUUCCACCAGCAUGGAAC		[2062-2080]
374	GAAAGCGUAUUUAAUGAUA	UAUCAUUAAAUACGCUUUC		[2195-2213]
375	CCAAAUUGCAGAUUUAUCA	UGAUAAAUCUGCAAUUUGG	Rat,Ms	[390-408]
376	CUAAGUCACUUUACUAAAA	UUUUAGUAAAGUGACUUAG	Ms	[2844-2862]
377	CAAAGAUAUGUUAAGUGUA	UACACUUAACAUAUCUUUG		[2254-2272]
378	GAGACUCAAAGGUGAUGUA	UACAUCACCUUUGAGUCUC		[6369-6387]
379	AAAUGACACUUUAUAACUA	UAGUUAUAAAGUGUCAUUU		[6541-6559]
380	UGAGGCAACUGAGACUCAA	UUGAGUCUCAGUUGCCUCA		[6359-6377]
381	AUAGUUUGAAGGUGAAAAA	UUUUUCACCUUCAAACUAU		[6436-6454]
382	GAGGAGUGUCUGGUAAGAA	UUCUUACCAGACACUCCUC		[1173-1191]
383	GUCUUAAUCUAACUCUAUA	UAUAGAGUUAGAUUAAGAC		[1616-1634]
384	GUAGGAAAAAAAAUGUACA	UGUACAUUUUUUUUCCUAC		[1732-1750]
385	UGAUGAAGAUGUGCAUACA	UGUAUGCACAUCUUCAUCA		[7093-7111]
386	CAAAUUCUGGUAUCCAGAA	UUCUGGAUACCAGAAUUUG		[445-463]
387	AUUGUAUCUUCAAAGUAGA	UCUACUUUGAAGAUACAAU		[7605-7623]
388	GCUACCAAGUAGGAAAAAA	UUUUUUCCUACUUGGUAGC		[1724-1742]
389	AUAGGUCAAACCCUUAAAA	UUUUAAGGGUUUGACCUAU		[6126-6144]
390	ACCUCUUGGAAAUUAUAAA	UUUAUAAUUUCCAAGAGGU		[3137-3155]
391	GUUUGAAGGUGAAAAACUU	AAGUUUUUCACCUUCAAAC		[6439-6457]
392	UGUAUAGUCUAGACUUUAA	UUAAAGUCUAGACUAUACA		[3915-3933]
393	GCUUUUUCCCACUUCAAUA	UAUUGAAGUGGGAAAAAGC		[6218-6236]
394	AUUCAUCUGUGAAAGGAAA	UUUCCUUUCACAGAUGAAU		[5403-5421]
395	GGCAGUUAACCUUUUUGGU	ACCAAAAAGGUUAACUGCC		[2617-2635]
396	CAGUAUGCAAGAUGAGUCA	UGACUCAUCUUGCAUACUG		[1388-1406]
397	CCUUGGGAACAACAUGCUA	UAGCAUGUUGUUCCCAAGG		[1074-1092]
398	UGAGAGUAAAACUGUAAAA	UUUUACAGUUUUACUCUCA		[3340-3358]
399	GAUGUGAACUGACUUUAAG	CUUAAAGUCAGUUCACAUC		[1677-1695]
400	CUAUUGUAGAGGUGAGUAA	UUACUCACCUCUACAAUAG		[3297-3315]
401	AAGAGGAGAAGCUUUGCAA	UUGCAAAGCUUCUCCUCUU	Rat,Ms	[1462-1480]
402	GAAUUUCCCAAAUUCAACA	UGUUGAAUUUGGGAAAUUC	Rat,Ms	[872-890]
403	GGUUGCAAGAGCUCAAGGA	UCCUUGAGCUCUUGCAACC		[5440-5458]
404	GUCUGCUGAUCAAAAGCAU	AUGCUUUUGAUCAGCAGAC		[4561-4579]
405	ACAGGUGAGGCAACUGAGA	UCUCAGUUGCCUCACCUGU		[6354-6372]
406	GAGAGUAAAACUGUAAAAA	UUUUUACAGUUUUACUCUC		[3341-3359]
407	UUAGCAUUUACAAACUAAA	UUUAGUUUGUAAAUGCUAA		[4604-4622]
408	GAUUAAGAUGUAUAUAGGA	UCCUAUAUACAUCUUAAUC		[3023-3041]
409	CAAAUUGCAGAUUUAUCAA	UUGAUAAAUCUGCAAUUUG	Rat,Ms	[391-409]
410	UUCAGAUAGGCUUAACAAA	UUUGUUAAGCCUAUCUGAA		[1960-1978]
411	GCUCAAGGAGACCAUGUAU	AUACAUGGUCUCCUUGAGC		[5450-5468]
412	AAGAUAUGUUAAGUGUAAA	UUUACACUUAACAUAUCUU		[2256-2274]
413	UCAAAAGCAUUGUCUUAAU	AUUAAGACAAUGCUUUUGA		[4570-4588]
414	GCGUAUUUAAUGAUAGAAU	AUUCUAUCAUUAAAUACGC		[2199-2217]
415	GUAGAAGCAUGUUUGUACA	UGUACAAACAUGCUUCUAC		[2914-2932]
416	AGUCAGGUAGGUAGUUCAA	UUGAACUACCUACCUGACU		[4007-4025]
417	GGUAGUUUUUUGACAGGUA	UACCUGUCAAAAAACUACC		[2700-2718]
418	GUCCAGGGUUUACAUUACA	UGUAAUGUAAACCCUGGAC		[3261-3279]
419	UCCAGAAUGGUCAGUACAA	UUGUACUGACCAUUCUGGA		[457-475]
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421	GUAAUUUGUGCAAAGAUUA	UAAUCUUUGCACAAAUUAC		[6385-6403]
422	AGUAAGGAUUCAUCCUUAA	UUAAGGAUGAAUCCUUACU		[2804-2822]

423	GACUCAAAGGUGAUGUAAU	AUUACAUCACCUUUGAGUC		[6371-6389]
424	GAAAUAAAUGUUCUCUCAA	UUGAGAGAACAUUUAUUUC		[3108-3126]
425	CCAAGCUACCUUUCUUGAA	UUCAAGAAAGGUAGCUUGG		[6460-6478]
426	UGCAAAGAUUAUAGCUAAU	AUUAGCUAUAAUCUUUGCA		[6393-6411]
427	AGAUUUGGAAAGAUAUACA	UGUAUAUCUUUCCAAAUCU		[2349-2367]
428	UUGUGGUGGAAAACUGAAA	UUUCAGUUUUCCACCACAA	Rat	[734-752]
429	CAUGCUAAAUGGUAUCCAG	CUGGAUACCAUUUAGCAUG		[1086-1104]
430	GAUUUAAUUUCUAAGUGUA	UACACUUAGAAAUUAAAUC		[1910-1928]
431	GAUGAUACCAUCUUCCAAA	UUUGGAAGAUGGUAUCAUC		[1227-1245]
432	AGUCUAGACUUUAAAUUUA	UAAAUUUAAAGUCUAGACU		[3920-3938]
433	GUUCACUCUAGGAUUUCAA	UUGAAAUCCUAGAGUGAAC		[4460-4478]
434	CAGGGCAGUUAACCUUUUU	AAAAAGGUUAACUGCCCUG		[2614-2632]
435	CCAUGGAUUCAACCAAGGA	UCCUUGGUUGAAUCCAUGG		[6621-6639]
436	GUUCCUGCUGUAAAUAUGA	UCAUAUUUACAGCAGGAAC		[5474-5492]
437	UCCAGGGUUUACAUUACAA	UUGUAAUGUAAACCCUGGA		[3262-3280]
438	CUAAGUGUAAGUGAAUUAA	UUAAUUCACUUACACUUAG		[1920-1938]
439	CUUCCAAAAUCCUAUGGUA	UACCAUAGGAUUUUGGAAG		[1238-1256]
440	UCAUUUAAAACAUUGCAAA	UUUGCAAUGUUUUAAAUGA		[3442-3460]
441	GAAAGGUCCAAAUGUUUAU	AUAAACAUUUGGACCUUUC		[6476-6494]
442	GCAGACUAUCUUUUGAGAA	UUCUCAAAAGAUAGUCUGC		[537-555]
443	AGCAUAACAGAGUUAUAGA	UCUAUAACUCUGUUAUGCU		[6287-6305]
444	GUCAGCUUAUGUAGGUAAA	UUUACCUACAUAAGCUGAC		[2894-2912]
445	CCAUGUAUGUAAAGUUCCU	AGGAACUUUACAUACAUGG		[5461-5479]
446	AAUAGGUCAAACCCUUAAA	UUUAAGGGUUUGACCUAUU		[6125-6143]
447	AUUUCUAAGUGUAAGUGAA	UUCACUUACACUUAGAAAU		[1916-1934]
448	UAUGGUACAAGAAGCUAUA	UAUAGCUUCUUGUACCAUA		[1250-1268]
449	GGCUAACAAGUUUAUUUUA	UAAAAUAAACUUGUUAGCC	Ms	[4196-4214]
450	GUGAGUGUAUAUAAUGUGA	UCACAUUAUAUACACUCAC		[4725-4743]
451	AUAUAGUCAUUAACUUGAA	UUCAAGUUAAUGACUAUAU		[3889-3907]
452	UGUUAACUCAGUAUUUUAA	UUAAAAUACUGAGUUAACA		[2869-2887]
453	UUGCAAAGUCAAAACUAUA	UAUAGUUUUGACUUUGCAA		[4368-4386]
454	UGGAGCUUUCUGUAUAUAA	UUAUAUACAGAAAGCUCCA		[1979-1997]
455	GGCUUUUCCUGUUCUGGGA	UCCCAGAACAGGAAAAGCC		[4072-4090]
456	CAUGUUAUGUUGUUCUUAU	AUAAGAACAACAUAACAUG		[1640-1658]
457	UUCUGGAUUUAGUAAGAAA	UUUCUUACUAAAUCCAGAA		[8082-8100]
458	GGCUUUUAUCUUGAAAAUA	UAUUUUCAAGAUAAAAGCC		[411-429]
459	GCUUUUGUUGUGGUGGAAA	UUUCCACCACAACAAAAGC	Rat	[727-745]
460	GAACAGAAGGGACAAGAAU	AUUCUUGUCCCUUCUGUUC		[1122-1140]
461	GCAAAUAUCUGUUAGAACA	UGUUCUAACAGAUAUUUGC		[1108-1126]
462	UUGGUUAUAUAGUCAUUAA	UUAAUGACUAUAUAACCAA		[3883-3901]
463	AGGAGGAAUUGAAAACACU	AGUGUUUUCAAUUCCUCCU		[6636-6654]
464	AGCUUAUUUUUCUGUGAAU	AUUCACAGAAAAAUAAGCU	Ms	[8359-8377]
465	AGACUUCAUUACAGAAAGA	UCUUUCUGUAAUGAAGUCU		[1411-1429]
466	GCAAUAUAAUCUUUGAAUU	AAUUCAAAGAUUAUAUUGC		[1768-1786]
467	AAUUUAGUCUGCUGAUCAA	UUGAUCAGCAGACUAAAUU		[4555-4573]
468	UAAGGAAGAAGAAUUUGUA	UACAAAUUCUUCUUCCUUA		[182-200]
469	GUUAACUCAGUAUUUUAAA	UUUAAAAUACUGAGUUAAC		[2870-2888]
470	UAUUCAUCUGUGAAAGGAA	UUCCUUUCACAGAUGAAUA		[5402-5420]
471	GAUUAAAAACUUUUGCUAA	UUAGCAAAAGUUUUUAAUC		[214-232]
472	GAUUCUACUUUGAAUCUGA	UCAGAUUCAAAGUAGAAUC		[7968-7986]
473	AAGGAGACCAUGUAUGUAA	UUACAUACAUGGUCUCCUU		[5454-5472]
474	AGUCAGACUUCAUUACAGA	UCUGUAAUGAAGUCUGACU		[1407-1425]
475	AAUGACACUUUAUAACUAA	UUAGUUAUAAAGUGUCAUU		[6542-6560]
476	GUCAGACUUCAUUACAGAA	UUCUGUAAUGAAGUCUGAC		[1408-1426]
477	CACGUACUUGUGCGAAUUA	UAAUUCGCACAAGUACGUG		[2150-2168]
478	CUGACUGACUGAUCUAAUU	AAUUAGAUCAGUCAGUCAG		[8186-8204]

479	AAAAUAAUGGAGGAAAAAA	UUUUUUCCUCCAUUAUUUU		[1299-1317]
480	UUACCGUUAGGAUGAUUAA	UUAAUCAUCCUAACGGUAA		[3010-3028]
481	AUAUGAACUCCCAUCCUAA	UUAGGAUGGGAGUUCAUAU		[5487-5505]
482	AGUCCUGUUUCAGCAUCAA	UUGAUGCUGAAACAGGACU	Rat,Ms	[246-264]
483	CAUCCAUGGAUUCAACCAA	UUGGUUGAAUCCAUGGAUG		[6618-6636]
484	GUAUGUUUAGAGUUAAGCA	UGCUUAACUCUAAACAUAC		[4122-4140]
485	UAAUCAUCUGGAUUUUUUA	UAAAAAAUCCAGAUGAUUA		[1936-1954]
486	UCUCAGAUCUUCCAAUUAA	UUAAUUGGAAGAUCUGAGA	Ms	[2783-2801]
487	GGUUGCAGAUCUAGUGAAU	AUUCACUAGAUCUGCAACC		[1358-1376]
488	GCACUUCAUUAAAAUUCUU	AAGAAUUUUAAUGAAGUGC		[4094-4112]
489	UUAGGAUGAUUAAGAUGUA	UACAUCUUAAUCAUCCUAA		[3016-3034]
490	GAUGAAGAUGUGCAUACAU	AUGUAUGCACAUCUUCAUC		[7094-7112]
491	GGCAAUAUAAUCUUUGAAU	AUUCAAAGAUUAUAUUGCC		[1767-1785]
492	GAAAGAGUAUUGUUAUGUU	AACAUAACAAUACUCUUUC		[3387-3405]
493	GUAAAGUUCCUGCUGUAAA	UUUACAGCAGGAACUUUAC		[5469-5487]
494	GUAUGUAUUACUUUUGUAA	UUACAAAAGUAAUACAUAC		[2492-2510]
495	GCUAAUUUUCCAAGUGGUA	UACCACUUGGAAAAUUAGC		[228-246]
496	UGAACUGACUUUAAGUAAU	AUUACUUAAAGUCAGUUCA		[1681-1699]
497	CCAUAGACUAAGAAUAAGA	UCUUAUUCUUAGUCUAUGG		[1847-1865]
498	GUGAAGAAGCUAGAUUAAA	UUUAAUCUAGCUUCUUCAC		[613-631]
499	ACAGGUAGACCAUGUCUUA	UAAGACAUGGUCUACCUGU		[2712-2730]
500	GCUUAUUUUUCUGUGAAUA	UAUUCACAGAAAAAUAAGC	Ms	[8360-8378]

Claims

1. A method for inhibiting loss of a retinal ganglion cell in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA which down regulates expression of a target gene associated with loss of the retinal ganglion cell, thereby inhibiting loss of the retinal ganglion cell in the subject.

2. The method of claim 1, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

3. The method according to any on of claims 1 or 2, wherein the subject is a human.

4. The method according to any one of claims 1 to 3, wherein the subject is suffering from an ocular disease, an ocular disorder or an ocular injury or at risk of developing an ocular disease, an ocular disorder, or an ocular injury.

5. The method according to any one of claims 1 to 4, wherein said loss of a retinal ganglion cell is associated with an ocular disease, an ocular disorder, or an ocular injury in the subject.

6. The method according to claim 4 or 5, wherein said ocular disease, disorder, or injury comprises neurodegeneration.

7. The method according to anyone of claims 1 to 6, wherein the ophthalmic composition is formulated as a cream, a foam, a paste, an ointment, an emulsion, a liquid solution, an eye drop, a gel, spray, a suspension, a microemulsion, microspheres, microcapsules, nanospheres, nanoparticles, lipid vesicles, liposomes, polymeric vesicles, a patch, or a contact lens.

8. The method according to claim 7, wherein the ophthalmic composition is formulated as an eye drop.

9. The method according to anyone of claims 4 to 8, wherein said disease, disorder, or injury is selected from a group consisting of glaucoma, dry eye, diabetic retinopathy (DR), diabetic macular edema (DME), age related macular degeneration (AMD), optic neuritis, central retinal vein occlusion, brunch retinal

vein occlusion, ischemic optic neuropathy, optic nerve injury, retinopathy of prematurity (ROP) or retinitis pigmentosa (RP), retinal ganglion degeneration, macular degeneration, hereditary optic neuropathy, metabolic optic neuropathy, optic neuropathy due to a toxic agent or neuropathy caused by adverse drug reactions or vitamin deficiency.

10. The method according to claim 9, wherein the said disease, disorder or injury is glaucoma and the target gene is set forth in any one of SEQ ID NO:1-35.

11. The method according to claim 10, wherein the target gene is set forth in any one of SEQ ID NO:1 -2, SEQ ID NO:4, SEQ ID NO:6 - 7, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:19 - 20, SEQ ID NO:21 and SEQ ID NO:28-29.

12. The method according to claim 11, wherein the target gene is set forth in any one of SEQ ID NO:1 - SEQ ID NO:2.

13. The method according to claim 9, wherein said disease, disorder or injury is dry-eye and the target gene is set forth in any one of SEQ ID NO:5, SEQ ID NO:8 - 10, SEQ ID NO:26-27 and SEQ ID NO:30-44.

14. The method according to claim 13, wherein the target gene is set forth in any one of SEQ ID NO:36 - SEQ ID NO:44.

15. The method according to claim 9, wherein said disease, disorder or injury is age related macular degeneration (AMD) and the target gene is set forth in any one of SEQ ID NO:1 -3, SEQ ID NO:5 - 10, SEQ ID NO:12 - 13, SEQ ID NO:24 - 27, SEQ ID NO:30 - 35, SEQ ID NO:45 - 53.

16. The method according to Claim 15, wherein the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:12 and SEQ ID NO:47.

17. The method according to claim 9, wherein said disease, disorder or injury is diabetic macular edema (DME) and the target gene is set forth in any one of SEQ ID NO:1-3, SEQ ID NO:5-10, SEQ ID NO:12-13, SEQ ID NO:24-27, SEQ ID NO:30 -35, SEQ ID NO:45 -53.

18. The method according to Claim 17, wherein the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:12 and SEQ ID NO:47.

19. The method according to claim 9, wherein said disease, disorder or injury is diabetic retinopathy (DR) and the target gene is set forth in any one of SEQ ID NO:1-3, SEQ ID NO:5 -10, SEQ ID NO:12 -13, SEQ ID NO:24 -27, SEQ ID NO:30 - 35, SEQ ID NO:45 -53.

20. The method according to Claim 19, wherein the target gene is set forth in any one of SEQ ID NO: 48 -53.

21. The method according to claim 9, wherein said disease, disorder or injury is retinitis pigmentosa (RP) and the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:14, SEQ ID NO:26 - 35 and SEQ ID NO:54 - 58.

22. The method according to Claim 21, wherein the target gene is set forth in any one of SEQ ID NO: 56 -57.

23. A method of rescuing a retinal ganglion cell from apoptosis in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby rescuing retinal ganglion cell from apoptosis in the subject.

24. The method of claim 23, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

25. A method for promoting survival of a retinal ganglion cell in a subject displaying signs or symptoms of an ocular neuropathy, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene that promotes survival of a retinal ganglion cell, thereby promoting survival of a retinal ganglion cell in the subject.

26. The method of claim 25, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

27. The method according to claim 25 or 26, wherein the signs or symptoms are mediated by apoptosis.

28. A method for preventing, treating or alleviating the effects of an ocular disease associated with death of a retinal ganglion cell in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene associated with the ocular disease, thereby preventing, treating or alleviating the effects of an ocular disease associated with death of a retinal ganglion cell in the subject.

29. The method of claim 28, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

30. A method for treating or preventing retinal ganglion cell death in a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition which comprises: (a) a therapeutically effective amount of at least one siRNA to a target gene associated with retinal ganglion cell death, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof, and thereby treating or preventing retinal ganglion cell death in the subject.

31. The method of claim 30, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

32. A method for preventing retinal ganglion cell death mediated by elevated intraocular pressure (IOP) in the eye of a subject, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby preventing retinal ganglion cell death in the subject.

33. The method of claim 32, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

34. A method of delaying, preventing or rescuing a retinal cell from death in a subject suffering from elevated IOP comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically

effective amount of at least one siRNA to a target gene associated with death of the RGC in the retina of the subject, thereby delaying, preventing or rescuing the retinal cell from injury or death and wherein intraocular pressure (IOP) remains substantially elevated.

35. The method according to claim 34, wherein the target gene is set forth in any one of SEQ ID NO:1-58 .

36. The method according to anyone of claims 32 to 35, wherein the subject is afflicted with glaucoma.

37. A method of treating a subject suffering from retinal ganglion cell loss or retinal ganglion cell damage, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene associated with the retinal ganglion cell loss or damage, thereby treating the subject or reducing retinal ganglion cell death in the subject.

38. The method according to claim 37, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

39. A method for attenuating retinal ganglion cell loss and providing ocular neuroprotection to a subject in need thereof, comprising non-invasively applying to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene associated with retinal ganglion cell loss, thereby attenuating retinal ganglion cell loss and providing ocular neuroprotection to the subject.

40. The method according to claim 39, wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

41. A method for preventing visual field loss associated with loss of retinal ganglion cells in a subject, comprising non-invasively administering to the surface of the eye of the subject an ophthalmic composition comprising a therapeutically effective amount of at least one siRNA to a target gene in the retina of the subject, thereby preventing visual field loss in the subject.

42. The method according to claim 41 , wherein the target gene is set forth in any one of SEQ ID NO:1- 58.

43. An ophthalmic composition for non-invasive treatment of an ocular disease associated with loss of a retinal ganglion cell in a subject, comprising: (a) a therapeutically effective amount of at least one siRNA to a target gene associated with the ocular disease, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof.

44. A topical ophthalmic pharmaceutical composition for non-invasive treatment of an ocular disease associated with pathological abnormalities/changes in the tissues of the visual system, comprising: (a) a therapeutically effective amount of at least one siRNA to a target gene associated with the ocular disease, wherein the target gene is set forth in any one of SEQ ID NO:1- 58, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof.

45. The composition of claim 44, wherein the ocular disease is associated with loss of retinal ganglion cells in the visual system.

46. A topical ophthalmic pharmaceutical composition for use in treating a subject afflicted with ocular disease associated with death of retinal ganglion cells, which comprises: (a) a therapeutically effective amount of at least one siRNA to a target gene associated with the ocular disease, wherein the target gene is set forth in any one of SEQ ID NO:1- 58, and (b) a pharmaceutically acceptable excipient or carrier or mixture thereof.

47. The composition according to any one of claims 43 to 46, wherein siRNA is present at a final concentration of about 5 μg/μl to about 60 μg/μl by volume of the composition.

48. The composition according to claim 47, wherein siRNA is present at a final concentration of about 6.6 μg/μl by volume of the composition.

49. The composition or composition according to claim 47, wherein siRNA is present at a final concentration of about 25 μg/μl by volume of the composition.

50. The composition according to claim 47, wherein siRNA is present at a final concentration of about 33.3 μg/μl by volume of the composition.

51. The composition according to claim 47, wherein siRNA is present at a final concentration of about 50 μg/μl by volume of the composition.

52. The composition according to any one of claims 43 to 51, wherein said ocular disease is selected from a group comprising glaucoma, dry eye, diabetic retinopathy (DR), diabetic macular edema (DME), age related macular degeneration (AMD), optic neuritis, central retinal vein occlusion, brunch retinal vein occlusion, ischemic optic neuropathy, optic nerve injury, retinopathy of prematurity (ROP) or retinitis pigmentosa (RP),retinal ganglion degeneration, macular degeneration, hereditary optic neuropathy, metabolic optic neuropathy, neuropathy due to a toxic agent or that caused by adverse drug reactions or vitamin deficiency.

53. The composition according to anyone of claims 43 to 52, wherein the composition is formulated as a cream, a foam, a paste, an ointment, an emulsion, a liquid solution, an eye drop, a gel, spray, a suspension, a microemulsion, microspheres, microcapsules, nanospheres, nanoparticles, lipid vesicles, liposomes, polymeric vesicles, a patch, or a contact lens.

54. The method according to claim 53, wherein the composition is formulated as an eye drop.

55. A packaged pharmaceutical preparation, comprising: (a) a pharmaceutical composition according to any one of claims 43 to 54 in a container; and (b) instructions for using the composition to treat an ocular disease.

56. Use of a pharmaceutical composition according to any one of claims 43 to 54 in the manufacture of a medicament for promoting retinal ganglion cell survival.

57. A method of treating glaucoma in a subject in need of treatment, the method comprising topically administering to the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:1-35.

58. The method according to Claim 57, wherein the target gene is set forth in any one of SEQ ID NO:1 -2, SEQ ID NO:4, SEQ ID NO:6 - 7, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:19 - 20, SEQ ID NO:21 and SEQ ID NO:28-29.

59. The method according to Claim 58, wherein the target gene is set forth in any one of SEQ ID NO:1 - SEQ ID NO:2.

60. A method of treating dry-eye in a subject in need of treatment, the method comprising topically administering to the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:5, SEQ ID NO:8 - 10, SEQ ID NO:26-27 and SEQ ID NO:30-44.

61. The method according to Claim 60, wherein the target gene is set forth in any one of SEQ ID NO:36 - SEQ ID NO:44.

62. A method of treating age related macular degeneration (AMD) in a subject in need of treatment, the method comprising topically administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:1 -3, SEQ ID NO:5 - 10, SEQ ID NO:12 - 13, SEQ ID NO:24 - 27, SEQ ID NO:30 - 35, SEQ ID NO:45 - 53.

63. The method according to Claim 62, wherein the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:12 and SEQ ID NO:47.

64. A method of treating diabetic macular edema (DME) in a subject in need of treatment, the method comprising topically administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:1-3, SEQ ID NO:5-10, SEQ ID NO:12-13, SEQ ID NO:24-27, SEQ ID NO:30 -35, SEQ ID NO:45 -53.

65. The method according to Claim 64, wherein the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:12 and SEQ ID NO:47.

66. A method of treating diabetic retinopathy (DR) in a subject in need of treatment, the method comprising topically administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:1-3, SEQ ID NO:5 -10, SEQ ID NO:12 -13, SEQ ID NO:24 -27, SEQ ID NO:30 - 35, SEQ ID NO:45 -53.

67. The method according to Claim 66, wherein the target gene is set forth in any one of SEQ ID NO: 48 -53.

68. A method of treating retinitis pigmentosa (RP) in a subject in need of treatment, the method comprising topically administering to the surface of the eye of the subject a therapeutically effective amount of at least one siRNA to a target gene in the eye of the subject, wherein the target gene is set forth in any one of SEQ ID NO:3, SEQ ID NO:14, SEQ ID NO:26 - 35 and SEQ ID NO:54 - 58.

69. The method according to Claim 68, wherein the target gene is set forth in any one of SEQ ID NO: 56 -57.

70. The method according to any one of claims 57 to 69 wherein the siRNA is formulated for topical administration to the surface of the eye.

71. The method according to any one of claims 57 to 69, wherein the siRNA is formulated as a cream, a foam, a paste, an ointment, an emulsion, a liquid solution, an eye drop, a gel, spray, a suspension, a microemulsion, microspheres, microcapsules, nanospheres, nanoparticles, lipid vesicles, liposomes, polymeric vesicles, a patch, or a contact lens.

72. The method according to claim 71, wherein the siRNA is formulated as an eye drop.

73. The method according to any one of claims 57 to 72, wherein the siRNA is administered as an eye drop.