

33093PCT_10234W001_SequenceListing
SEQUENCE LISTING

<110> REGENERON PHARMACEUTICALS, INC.

<120> RODENTS HAVING A HUMANIZED TMPRSS GENE

<130> 33093PCT (10234W001)

<150> 62/301,023

<151> 2016-02-29

<160> 72

<170> PatentIn version 3.5

<210> 1

<211> 3175

<212> DNA

<213> Mus musculus

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<212> PRT

<213> Mus musculus

<400> 2

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 130 135 140

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 145 150 155 160

Ser Ser Gln Arg Lys Ala Trp Tyr Pro Val Cys Gln Asp Asp Trp Ser
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Phe Tyr Ser Ser Gln Gly Ile Pro Asp Gln Ser Gly Ala Thr Ser Phe
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430

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Val Pro Gln Tyr Ala Pro Arg Val Leu Thr Gln Ala Ser Asn Pro Val
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Val Cys Thr Gln Pro Lys Ser Pro Ser Gly Thr Val Cys Thr Ser Lys
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Thr Lys Lys Ala Leu Cys Ile Thr Leu Thr Leu Gly Thr Phe Leu Val
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Gly Ala Ala Leu Ala Ala Gly Leu Leu Trp Lys Phe Met Gly Ser Lys
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Cys Ser Asn Ser Gly Ile Glu Cys Asp Ser Ser Gly Thr Cys Ile Asn
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Pro Ser Asn Trp Cys Asp Gly Val Ser His Cys Pro Gly Gly Glu Asp
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Glu Asn Arg Cys Val Arg Leu Tyr Gly Pro Asn Phe Ile Leu Gln Val
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Tyr Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp
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Asn Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn
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Asn Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser
195 200 205

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Cys Ile Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile
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260 265 270

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275 280 285

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325 330 335

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Gly Ala Thr Glu Glu Lys Gly Lys Thr Ser Glu Val Leu Asn Ala Ala
385 390 395 400

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Asn Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Thr Ser
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Lys Asn Asn Ile Trp Trp Leu Ile Gly Asp Thr Ser Trp Gly Ser Gly
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 <213> Mus musculus

<400> 9

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Pro Ile Ile Ala Val Leu Leu Ser Leu Ile Ala Leu Val Ile Val Ala
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						110
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260

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270

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33093PCT_10234W001_SequenceListing

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<213> Homo sapiens

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 <213> Homo sapiens

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			20				25						30		

Gly	Ile	Pro	Ile	Ile	Ile	Ala	Leu	Leu	Ser	Leu	Ala	Ser	Ile	Ile	Ile
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Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln Leu Cys Asp Gly Glu
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Pro Glu Gly Pro Ala Val Ala Val Arg Leu Ser Lys Asp Arg Ser Thr
100 105 110

Leu Gln Val Leu Asp Ser Ala Thr Gly Asn Trp Phe Ser Ala Cys Phe
115 120 125

Asp Asn Phe Thr Glu Ala Leu Ala Glu Thr Ala Cys Arg Gln Met Gly
130 135 140

Tyr Ser Ser Lys Pro Thr Phe Arg Ala Val Glu Ile Gly Pro Asp Gln
145 150 155 160

Asp Leu Asp Val Val Glu Ile Thr Glu Asn Ser Gln Glu Leu Arg Met
165 170 175

Arg Asn Ser Ser Gly Pro Cys Leu Ser Gly Ser Leu Val Ser Leu His
180 185 190

Cys Leu Ala Cys Gly Lys Ser Leu Lys Thr Pro Arg Val Val Gly Gly
195 200 205

Glu Glu Ala Ser Val Asp Ser Trp Pro Trp Gln Val Ser Ile Gln Tyr
210 215 220

Asp Lys Gln His Val Cys Gly Gly Ser Ile Leu Asp Pro His Trp Val
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Leu Thr Ala Ala His Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp
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260 265 270

Val Ala Lys Ile Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp
275 280 285

Asn Asp Ile Ala Leu Met Lys Leu Gln Phe Pro Leu Thr Phe Ser Gly
290 295 300

Thr Val Arg Pro Ile Cys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro
305 310 315 320

Ala Thr Pro Leu Trp Ile Ile Gly Trp Gly Phe Thr Lys Gln Asn Gly
325 330 335

Gly Lys Met Ser Asp Ile Leu Leu Gln Ala Ser Val Gln Val Ile Asp
340 345 350

Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu Val Thr Glu
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Lys Met Met Cys Ala Gly Ile Pro Glu Gly Gly Val Asp Thr Cys Gln
370 375 380

Gly Asp Ser Gly Gly Pro Leu Met Tyr Gln Ser Asp Gln Trp His Val
385 390 395 400

Val Gly Ile Val Ser Trp Gly Tyr Gly Cys Gly Gly Pro Ser Thr Pro
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33093PCT_10234W001_SequenceListing

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Leu Leu Ile Lys Val Ile Leu Asp Lys Tyr Tyr Phe Leu Cys Gly Gln
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Pro Leu His Phe Ile Pro Arg Lys Gln Leu Cys Asp Gly Glu Leu Asp
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Cys Pro Leu Gly Glu Asp Glu Glu His Cys Val Lys Ser Phe Pro Glu
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Gly Pro Ala Val Ala Val Arg Leu Ser Lys Asp Arg Ser Thr Leu Gln
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Val Leu Asp Ser Ala Thr Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn
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Phe Thr Glu Ala Leu Ala Glu Thr Ala Cys Arg Gln Met Gly Tyr Ser
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Ser Lys Pro Thr Phe Arg Ala Val Glu Ile Gly Pro Asp Gln Asp Leu

145 150 155 160

Ser Ser Gly Pro Cys Leu Ser Gly Ser Leu Val Ser Leu His Cys Leu
180 185 190

Ala Ser Val Asp Ser Trp Pro Trp Gln Val Ser Ile Gln Tyr Asp Lys
210 215 220

Ala Ala His Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp Lys Val
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Lys Ile Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp Asn Asp
275 280 285

Arg Pro Ile Cys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro Ala Thr
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Met Ser Asp Ile Leu Leu Gln Ala Ser Val Gln Val Ile Asp Ser Thr

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Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu Val Thr Glu Lys Met
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Ser Gly Gly Pro Leu Met Tyr Gln Ser Asp Gln Trp His Val Val Gly
 385 390 395 400

Ile Val Ser Trp Gly Tyr Gly Cys Gly Gly Pro Ser Thr Pro Gly Val
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Ala Glu Leu
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Met Ala Gly Leu Leu Ile His Phe Leu Ala Phe Asp Lys Lys Ala Tyr
 35 40 45

Phe Tyr His Ser Ser Phe Gln Ile Leu Asn Val Glu Tyr Thr Glu Ala
 50 55 60

Leu Asn Ser Pro Ala Thr His Glu Tyr Arg Thr Leu Ser Glu Arg Ile
 65 70 75 80

Glu Ala Met Ile Thr Asp Glu Phe Arg Gly Ser Ser Leu Lys Ser Glu
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Phe Ile Arg Thr His Val Val Lys Leu Arg Lys Glu Gly Thr Gly Val
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Val Ala Asp Val Val Met Lys Phe Arg Ser Ser Lys Arg Asn Asn Arg
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Ser Gly Asn Leu Glu Ile Ala Pro Ser Asn Glu Ile Thr Ser Leu Thr
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180 185 190

Glu Pro Gly Asp Trp Pro Trp Gln Val Ser Leu Gln Leu Asn Asn Val
195 200 205

His His Cys Gly Gly Ala Leu Ile Ser Asn Met Trp Val Leu Thr Ala
210 215 220

Ala His Cys Phe Lys Ser Tyr Pro Asn Pro Gln Tyr Trp Thr Ala Thr
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Phe Gly Val Ser Thr Met Ser Pro Arg Leu Arg Val Arg Val Arg Ala
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Arg Val Cys Leu Pro Ala Ala Thr Gln Asn Ile Ile Pro Gly Ser Val
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Ala Tyr Val Thr Gly Trp Gly Ser Leu Thr Tyr Gly Gly Asn Ala Val
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Thr Asn Leu Arg Gln Gly Glu Val Arg Ile Ile Ser Ser Glu Glu Cys

33093PCT_10234W001_SequenceListing

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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 18

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Thr Ile Ala Leu Leu Val Tyr Phe Leu Ala Phe Asp Gln Lys Ser Tyr

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<213> Artificial Sequence

<220>

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<400> 35

ggtgcttgct cccaaga

18

<210> 36

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 36

cctaaaaggt gttgtaatgg

20

<210> 37

<211> 24

<212> DNA

<213> Artificial Sequence

33093PCT_10234W001_SequenceListing

<220>

<223> synthetic oligonucleotide

<400> 37

ggcaataaag aaggaagacg tttt

24

<210> 38

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

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<400> 38

ccagtcaggg acacacatgc tcacacgccc gcccacccgc acacactaca gtcgagataa

60

cttcgtataa tgtatgctat acgaagttat atgcatggcc tccgcgccgg gttttggcgc

120

<210> 39

<211> 198

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 39

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60

tataatgtat gctatacgaa gttatgctag taactataac ggtcctaagg tagcgagcta

120

gccaagtctg tgtgctacca agtagcaaaa ctgagcctgg aactcacaca tgcgtgtctg

180

agagcccagc actatcgc

198

<210> 40

<211> 100

<212> DNA

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<400> 40

33093PCT_10234W001_SequenceListing

taatctgact ttctcttcat cggctctctt tattctaggc tgagctgtaa cgctgccgtc 60
 ccccatcatcc agaagctgct tcccttcaga cctacctacg 100

<210> 41
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 <213> Artificial Sequence

<220>
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 agctagccaa gtctgtgtgc taccaagtag caaaactgag cctggaactc acacatg 177

<210> 42
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 <213> Artificial Sequence

<220>
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<400> 42
 gagcagggcc atgacacat 19

<210> 43
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 43
 accattagat cccagcactg gaca 24

<210> 44
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33093PCT_10234W001_SequenceListing

<213> Artificial Sequence

<220>

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<400> 44

aaacccttcc cgagagagaa

20

<210> 45

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 45

gaggaacact gtgtcaagga ctt

23

<210> 46

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 46

cctgaaaagc ccggagtggc ag

22

<210> 47

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 47

gggcagagac cacatctga

19

<210> 48

<211> 22

<212> DNA

33093PCT_10234W001_SequenceListing

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 48

ggaagccctc tctcgatact tg

22

<210> 49

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 49

ttctaccctg agggcatgca gc

22

<210> 50

<211> 22

<212> DNA

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<223> synthetic oligonucleotide

<400> 50

tgggatgtag aaggttgtca ga

22

<210> 51

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

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<400> 51

ctgagcctgg aactcacaca tg

22

<210> 52

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<212> DNA

33093PCT_10234W001_SequenceListing

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23

<210> 53

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide

<400> 53

gctgagggtc aggcttgag

19

<210> 54

<211> 21

<212> DNA

<213> Artificial Sequence

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<223> synthetic oligonucleotide

<400> 54

tctgcagggt agggagagaa g

21

<210> 55

<211> 29

<212> DNA

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<400> 55

tgtttcagaa aaggaagact cacgttaca

29

<210> 56

<211> 24

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33093PCT_10234W001_SequenceListing

<213> Artificial Sequence

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<400> 56

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24

<210> 57

<211> 100

<212> DNA

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<400> 57

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attactaact cctcaataaa gaatattatt tgaaataatt

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<210> 58

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<212> DNA

<213> Artificial Sequence

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<400> 58

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60

cttcgtataa tgtatgctat acgaagttat atgcatggcc tccgcgccgg gttttggcgc

120

ctcccgcggg cgccccctc ctcacggcga gcgctgccac gtcagacgaa gggcgcagcg

180

agcgtcctga

190

<210> 59

<211> 171

<212> DNA

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33093PCT_10234W001_SequenceListing

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ataatgtatg ctatacgaag ttatgctagt aactataacg gtcctaaggt agcgagctag 120
ctgcaaccga ggaaaaaacg tgccatgagg tctctgtatc caagtgtgac t 171

<210> 60
<211> 177
<212> DNA
<213> Artificial Sequence

<220>
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<400> 60
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cttcgtataa tgtatgctat acgaagttat gctagtaact ataacgggcc taaggtagcg 120
agctagctgc aaccgaggaa aaaacgtgcc atgaggtctc tgtatccaag tgtgact 177

<210> 61
<211> 21
<212> DNA
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<220>
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<400> 61
tcctctccag acaagaaagc t 21

<210> 62
<211> 30
<212> DNA
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<220>
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<400> 62
tcatagcagc tttcaaattcc taaacgttga 30

33093PCT_10234W001_SequenceListing

<210>	63	
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<210>	64	
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	catgcgatca caggaggaga tc	22
<210>	65	
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<210>	66	
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<400>	66	
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33093PCT_10234W001_SequenceListing

<210>	67	
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<210>	68	
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	cccagtgtta accctacatc tggttcc	27
<210>	69	
<211>	20	
<212>	DNA	
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<400>	69	
	tgggaagaga ctcttgaca	20
<210>	70	
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<212>	DNA	
<213>	Artificial Sequence	
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33093PCT_10234W001_SequenceListing

<210> 71
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 <212> DNA
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<220>
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<400> 71
 atgcatgatc atctatgcgt cagagc 26

<210> 72
 <211> 21
 <212> DNA
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<220>
 <223> synthetic oligonucleotide

<400> 72
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