

4003140_1
SEQUENCE LISTING

<110> ENOBIA CANADA LIMITED PARTNERSHIP
VANDERBILT UNIVERSITY
Crine, Philippe
Elefteriou, Florent

<120> COMPOSITIONS COMPRISING ALKALINE PHOSPHATASE AND/OR NATRIURETIC
PEPTIDE AND METHODS OF USE THEREOF

<130> 50694-039w03

<150> 61/549,047
<151> 2011-10-19

<150> 61/649,717
<151> 2012-05-21

<160> 1221

<170> PatentIn version 3.5

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<212> PRT
<213> Homo sapiens

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Arg Ile Ser Ser Ser Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
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4003140_1

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Met Ser Gly Leu Gly Cys
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 <213> Dendroaspis angusticeps

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 at the corresponding position in one of SEQ ID NOS: 1-5

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Cys

4003140_1

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<211> 53

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Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
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Ser Gly Leu Gly Cys
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<210> 13

<211> 22

<212> PRT

<213> Bos taurus

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4003140_1

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Gly Leu Gly Cys
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<210> 27
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4003140_1

<212> PRT
<213> *Oryzias latipes*

<400> 27

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Gly Cys

<210> 28
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<213> *Tetraodon nigroviridis*

<400> 28

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<223> Xaa can be any naturally occurring amino acid or any amino acid
at the corresponding position in one of SEQ ID NOS: 4 and 13-29

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<212> PRT

<213> *Oryzias latipes*

<400> 31

Met Ala Val Cys Ser Ser Ser Ser Leu Ile Leu Leu Thr Val Phe Leu
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Ser Val Ala Val Glu Thr Arg Pro Ser Ser Asp Arg Asp Glu Glu Gln
20 25 30

Val Leu Lys Ser Leu Phe Gly Pro His Leu Thr Ser Leu Ile Leu Ala
35 40 45

Pro Pro Thr Ser Asn Asp Ser Thr Glu Gly Ser Ser Gly Ser Pro Glu
50 55 60

Pro Pro Thr Pro Ser Glu Ala Pro Val Leu Ile His Gly Asp Arg Gly
65 70 75 80

Thr Ala Ser Gln Ile Leu Arg Ser Phe Leu Arg Gln Arg Glu Lys Thr
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Arg Arg Trp Gly Arg Lys Pro Met Val Ala Gly Gly Gly Cys Phe Gly
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Met Lys Met Asp Arg Ile Gly Ser Ile Ser Gly Leu Gly Cys
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<210> 32

<211> 130

<212> PRT

<213> *Takifugu rubripes*

<400> 32

Met Ala Ala Ser Ser Ser Ser Phe Val Pro Leu Val Leu Leu Phe Leu
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4003140_1

Ala Ile Pro Val Glu Pro Arg Pro Ser Met Thr Arg Asp Glu Ala Gln
20 25 30

Val Leu Arg Ala Leu Phe Gly Ala Arg Leu Ser Ser Ile Ile Ser Thr
35 40 45

Pro Val Asn Thr Asp Asp Ile Ala Glu Leu Leu Pro Arg Arg Pro Gly
50 55 60

Pro Pro Arg Ser Phe Gly Ala Ser Pro Gly Ala Leu Arg Gly Leu Thr
65 70 75 80

Arg Gly Ser Glu Gly Gly Ser Arg Phe Leu Leu Asp Phe Leu Gln Gln
85 90 95

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100 105 110

Gly Cys Phe Gly Met Lys Ile Asp Arg Ile Gly Ser Ile Ser Gly Leu
115 120 125

Gly Cys
130

<210> 33
<211> 150
<212> PRT
<213> Acipenser transmontanus
<400> 33

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Leu Leu Leu Ile Ser Leu Met Leu Leu Ala Ala Ser Cys Gln Gly Arg
20 25 30

Pro Asp Leu Gln His Arg Asn His Lys Ser Gln Leu Ala Gly Leu Phe
35 40 45

Gly Ala Glu Val Ala Ala Leu Leu Glu Asp Ala Gly Ala Ala Asp Gly
50 55 60

Ser Ser Gly Glu Glu Ala Ala Leu Ser Gln Arg Ala Pro Pro Ser Ile
65 70 75 80

Arg Ala Leu His Pro Arg Ser Gly Arg Leu Gly Leu Arg Asp Asp Leu
85 90 95

Glu Ala Glu Pro Pro Ala Glu Asn Lys Pro Arg Arg Arg Leu Leu Lys
100 105 110

Asp Phe Met Ser Ser Arg Lys Met Phe Arg Gly Arg Thr Lys Lys Met
Page 9

4003140_1

115

120

125

Gln Gln Gly Arg Gly Cys Phe Gly Met Lys Leu Asp Arg Ile Gly Ser
 130 135 140

Met Ser Gly Leu Gly Cys
 145 150

<210> 34
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 <213> Mus musculus

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Met His Leu Ser Gln Leu Ile Ala Cys Ala Leu Leu Leu Ala Leu Leu
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Ser Leu Arg Pro Ser Glu Ala Lys Pro Gly Thr Pro Pro Lys Val Pro
 20 25 30

Arg Thr Pro Pro Gly Glu Glu Leu Ala Asp Ser Gln Ala Ala Gly Gly
 35 40 45

Asn Gln Lys Lys Gly Asp Lys Thr Pro Gly Ser Gly Gly Ala Asn Leu
 50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
 65 70 75 80

Ser Arg Ala Ala Trp Ala Arg Leu Leu His Glu His Pro Asn Ala Arg
 85 90 95

Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
 100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 115 120 125

<210> 35
 <211> 126
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 <213> Mus musculus

<400> 35

Met His Leu Ser Gln Leu Ile Ala Cys Ala Leu Leu Leu Ala Leu Leu
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Ser Leu Arg Pro Ser Glu Ala Lys Pro Gly Thr Pro Pro Lys Val Pro
 20 25 30

Arg Thr Pro Pro Gly Glu Glu Leu Ala Asp Ser Gln Ala Ala Gly Gly
 35 40 45

4003140_1

Asn Gln Lys Lys Gly Asp Lys Thr Pro Gly Ser Gly Gly Ala Asn Leu
50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
65 70 75 80

Ser Arg Ala Ala Trp Ala Arg Leu Leu His Glu His Pro Asn Ala Arg
85 90 95

Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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<210> 36
<211> 147
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<213> Notomys alexis

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Met His Leu Ser Gln Leu Ile Ala Cys Ala Leu Leu Leu Ala Leu Leu
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Ser Leu Arg Pro Ser Glu Ala Lys Pro Gly Thr Pro Pro Lys Val Pro
20 25 30

Arg Thr Pro Pro Gly Glu Glu Leu Ala Asp Ser Gln Ala Ala Gly Gly
35 40 45

Asn Gln Lys Lys Gly Asp Lys Thr Pro Gly Gly Gly Gly Ala Asn Leu
50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Lys Gly Asp Lys Thr Pro Gly Gly
65 70 75 80

Gly Gly Ala Asn Leu Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu
85 90 95

Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Leu Leu His Glu
100 105 110

His Pro Asn Ala Arg Lys Asn Lys Gly Gly Asn Lys Lys Gly Leu Ser
115 120 125

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
130 135 140

Leu Gly Cys
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<210> 37
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 <213> Rattus norvegicus

<400> 37

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 20 25 30

Arg Thr Pro Pro Gly Glu Glu Leu Ala Glu Pro Gln Ala Ala Gly Gly
 35 40 45

Asn Gln Lys Lys Gly Asp Lys Thr Pro Gly Gly Gly Gly Ala Asn Leu
 50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
 65 70 75 80

Ser Arg Ala Ala Trp Ala Arg Leu Leu His Glu His Pro Asn Ala Arg
 85 90 95

Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
 100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 115 120 125

<210> 38
 <211> 126
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 <213> Bos taurus

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Met His Leu Ser Gln Leu Leu Ala Cys Ala Leu Leu Leu Ala Leu Leu
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 20 25 30

Arg Thr Pro Ser Gly Glu Glu Val Ala Glu Pro Gln Ala Ala Gly Gly
 35 40 45

Gly Gln Lys Lys Gly Asp Lys Thr Pro Gly Gly Gly Gly Ala Asn Leu
 50 55 60

Lys Asp Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
 65 70 75 80

Ser Arg Ala Ala Trp Thr Arg Leu Leu His Glu His Pro Asn Ala Arg
 85 90 95

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Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
100 105 110

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115 120 125

<210> 39
<211> 126
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<213> Ovis aries

<400> 39

Met His Leu Ser Gln Leu Leu Ala Cys Ala Leu Leu Leu Ser Leu Leu
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Ser Leu Arg Pro Ser Glu Ala Lys Pro Gly Ala Pro Pro Lys Val Pro
20 25 30

Arg Thr Pro Pro Gly Glu Glu Val Ala Glu Pro Gln Ala Ala Gly Gly
35 40 45

Gly Gln Lys Lys Gly Asp Lys Thr Pro Gly Gly Gly Gly Ala Asn Leu
50 55 60

Lys Asp Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
65 70 75 80

Ser Arg Ala Ala Trp Thr Arg Leu Leu His Glu His Pro Asn Ala Arg
85 90 95

Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
115 120 125

<210> 40
<211> 126
<212> PRT
<213> Sus scrofa

<400> 40

Met His Leu Ser Gln Leu Leu Ala Cys Ala Leu Leu Leu Thr Leu Leu
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20 25 30

Arg Thr Pro Pro Gly Glu Glu Val Ala Glu Pro Gln Ala Ala Gly Gly
35 40 45

4003140_1

Gly Gln Lys Lys Gly Asp Lys Thr Pro Gly Gly Gly Gly Ala Asn Leu
 50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
 65 70 75 80

Ser Arg Ala Ala Trp Ala Arg Leu Leu His Glu His Pro Asn Ala Arg
 85 90 95

Lys Tyr Lys Gly Gly Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
 100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 115 120 125

<210> 41
 <211> 126
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 <213> Homo sapiens

<400> 41

Met His Leu Ser Gln Leu Leu Ala Cys Ala Leu Leu Leu Thr Leu Leu
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 20 25 30

Arg Thr Pro Pro Ala Glu Glu Leu Ala Glu Pro Gln Ala Ala Gly Gly
 35 40 45

Gly Gln Lys Lys Gly Asp Lys Ala Pro Gly Gly Gly Gly Ala Asn Leu
 50 55 60

Lys Gly Asp Arg Ser Arg Leu Leu Arg Asp Leu Arg Val Asp Thr Lys
 65 70 75 80

Ser Arg Ala Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg
 85 90 95

Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
 100 105 110

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 115 120 125

<210> 42
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 <213> Ornithorhynchus anatinus

<400> 42

Met His Leu Ser His Leu Leu Ala Trp Ala Leu Leu Leu Thr Leu Leu
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Ser Leu Arg Ala Glu Ala Lys Pro Pro Ser Pro Gln Pro Gln Val Pro
20 25 30
Arg Ser Pro Gly Asp Glu Ala Ser Glu Ala Val Ala Ala Asn Gly Gly
35 40 45
Gly Lys Lys Gly Asp Lys Glu Pro Lys Gly Asp Arg Pro Arg Leu Leu
50 55 60
Arg Glu Leu Arg Leu Asp Thr Arg Ser Arg Gly Ser Arg Gly Val Trp
65 70 75 80
Thr Arg Leu Leu His Asp His Pro Asn Pro Arg Lys Tyr Lys Pro Ala
85 90 95
Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
100 105 110
Ile Gly Ser Thr Ser Gly Leu Gly Cys
115 120

<210> 43
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<212> PRT
<213> Cavia porcellus

<400> 43

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Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly
20 25 30

Cys

<210> 44
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<212> PRT
<213> Oryzias latipes

<400> 44

Met Asn Leu Ser Tyr Leu Val Ala Cys Gly Leu Leu Val Thr Phe Leu
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Ser Asp Lys Met Asp Ala Gln Pro Leu Thr Pro Ala Gln Gln Lys Ser
20 25 30
Leu Arg Ser Leu Leu Gly Glu Glu Leu Ala Glu Phe Leu Glu Ser Gly
35 40 45

4003140_1

Glu Asn Glu Asn Arg Leu Asp Asp Val Arg Ser Arg Met Arg Leu Leu
 50 55 60

Arg Asp Leu Arg Val Asp Thr Arg Ala Arg Gly Met Trp Ala Arg Leu
 65 70 75 80

Leu Asn Asp Gln Pro Ala Ser Arg Arg His Lys Ser Gly Ser Lys Lys
 85 90 95

Gly Gly Ser Thr Ser Arg Ser Gly Cys Phe Gly His Lys Met Asp Arg
 100 105 110

Ile Gly Thr Ile Ser Gly Met Gly Cys
 115 120

<210> 45
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 <213> Takifugu rubripes

<400> 45

Met Asn Leu Ser Tyr Leu Val Ala Cys Gly Leu Met Ile Thr Leu Leu
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Ser Val Arg Met Gly Ala Lys Pro Leu Ser Gln Ala Gln Gln Lys Ser
 20 25 30

Phe Arg Ser Leu Leu Gly Glu Glu Leu Ala Glu Phe Leu Glu Ser Glu
 35 40 45

Glu Lys Glu Arg Arg Leu Asp Ala Val Arg Ser Arg Leu Arg Leu Leu
 50 55 60

Arg Asp Leu Arg Met Asp Thr Arg Ala Arg Gly Val Trp Ala Arg Leu
 65 70 75 80

Leu Asn Asp Gln Pro Val Pro Arg Arg His Lys Thr Gly Ile Lys Lys
 85 90 95

Gly Gly Ser Ser Arg Ser Gly Cys Phe Gly His Lys Met Asp Arg Ile
 100 105 110

Gly Thr Ile Ser Gly Met Gly Cys
 115 120

<210> 46
 <211> 121
 <212> PRT
 <213> Esox lucius

<400> 46

Met Asn Ile Ser Tyr Leu Val Ala Cys Gly Leu Met Ile Thr Leu Leu
 1 5 10 15

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Ser Val Arg Ser Gly Ala Lys Pro Leu Thr Ala Ala Gln Gln Lys Ser
20 25 30

Leu Arg Asn Leu Leu Gly Glu Glu Leu Ser Glu Phe Leu Ala Ser Gly
35 40 45

Glu Arg Glu Arg Arg Leu Asp Thr Val Arg Ser Arg Val Arg Leu Leu
50 55 60

Arg Asp Leu Arg Met Asp Thr Arg Ala Lys Gly Met Trp Ala Arg Leu
65 70 75 80

Leu Asn Asp Gln Pro Asn Ala Arg Arg His Lys Gln Asn Ser Lys Lys
85 90 95

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

Gly Thr Leu Ser Gly Met Gly Cys Asn
115 120

<210> 47
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<212> PRT
<213> Anguilla japonica

<400> 47

Met Asn Val Ser Gln Leu Met Val Cys Gly Leu Leu Met Ala Leu Phe
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Ser Phe Ser Thr Glu Ala Lys Ser Leu Ile Pro Ala Gln Glu Lys Ser
20 25 30

Leu Arg Asn Leu Leu Gly Glu Glu Leu Ser Glu Tyr Leu Ala Ser Gly
35 40 45

Glu Arg Glu Arg Asn Leu Glu Ser Ala Arg Ser Arg Leu Leu Arg Asp
50 55 60

Leu Arg Leu Asn Thr Arg Ala Arg Gly Met Trp Ser Arg Ile Met Asn
65 70 75 80

Asp Gln Pro Ala Ser Arg Lys Gln Lys Thr Gly Val Lys Lys Gly Ala
85 90 95

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

Ser Thr Leu Ser Gly Met Gly Cys
115 120

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<210> 48
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 <213> Actinopterygii

<400> 48

Met Asn Ile Ser His Leu Val Ala Cys Gly Leu Leu Val Ala Leu Leu
 1 5 10 15
 Thr Val Thr Met Glu Ala Lys Pro Leu Thr Gln Ser Gln Gln Lys Ser
 20 25 30
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 35 40 45
 Glu Gln Glu Ser Gly Ser Glu Asn Leu Arg Ser Arg Ala Arg Leu Leu
 50 55 60
 Arg Asp Leu Arg Leu Asp Ile Arg Ala Lys Ala Ala Trp Ala Arg Leu
 65 70 75 80
 Leu Asn Asp His Pro Asn Pro Arg Lys Ser Lys Gly Ile Asn Lys Lys
 85 90 95
 Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 100 105 110
 Met Ser Gly Leu Gly Cys
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<210> 49
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 <213> Rana catesbeiana

<400> 49

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 1 5 10 15
 Tyr Leu Arg Thr Glu Ala Lys Pro Val Ala Gln Ala His Gln Lys Ser
 20 25 30
 Leu Arg Ala Leu Leu Gly Glu Glu Leu Ala Glu Tyr Leu Val Ser Gly
 35 40 45
 Glu Arg Gly Glu Arg Ser Ile Asp Pro Lys Thr Arg Ala Arg Leu Leu
 50 55 60
 Arg Asp Ile Arg Ala Asp Thr Arg Ser Arg Ala Ala Trp Thr Arg Leu
 65 70 75 80
 Leu Asn Glu His Pro Asn Ser Arg Lys Ile Lys Gly Ile Asn Lys Lys
 Page 18

85 4003140_1 95
90

Gly Thr Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ala
100 105 110

Met Ser Gly Leu Gly Cys
115

<210> 50
<211> 193
<212> PRT
<213> Trimeresurus flavoviridis

<400> 50

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
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Leu Ala Leu Ser Leu Asp Gly Lys Pro Val His Gln Ser Lys Pro Gly
20 25 30

Arg Ser Pro Pro Ile Ser Pro Leu Ser Ala Gln Gln Trp Met Pro Glu
35 40 45

Gly Arg Pro Pro His Pro Ile Pro Pro Leu Ser Val Gln Gln Trp Ser
50 55 60

Gln Gly Arg Pro Arg Ser Glu Val Pro Pro Val Val Val Gln Pro His
65 70 75 80

Glu Ser Pro Ala Gly Gly Thr Thr Ala Phe Arg Glu Glu Leu Ser Pro
85 90 95

Gly Pro Glu Ala Ala Ser Gly Pro Ala Ala Pro His Arg Leu Pro Lys
100 105 110

Ser Lys Gly Ala Ser Ala Thr Ser Ala Ala Ser Arg Pro Met Arg Asp
115 120 125

Leu Arg Thr Asp Gly Lys Gln Glu Arg Gln Lys Trp Gly Arg Met Val
130 135 140

Gln Pro Asp His His Ala Ala Pro Gly Gly Gly Gly Gly Gly Gly
145 150 155 160

Gly Ala Arg Arg Met Lys Gly Leu Ala Lys Lys Ala Met Gly Lys Gly
165 170 175

Cys Phe Gly His Lys Leu Asp Arg Ile Gly Ser Thr Ser Gly Leu Gly
180 185 190

Cys

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<210> 51
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 <212> PRT
 <213> Trimeresurus gramineus

<400> 51

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
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 20 25 30

Ser Pro Pro Ile Ser Pro Leu Leu Val Pro Pro Pro Pro Pro Pro Pro
 35 40 45

His Trp Pro Pro Pro His His Ile Pro Pro Leu Ser Val Gln Lys Phe
 50 55 60

Pro Pro Gly Trp Lys Pro Thr His Pro His His Ile Pro Pro Leu Glu
 65 70 75 80

Val Gln Gln Trp Ser Gln Gly Gly Pro Arg Ser Glu Leu Val Gln Pro
 85 90 95

His Glu Ser Pro Ala Gly Gly Thr Thr Ala Phe Arg Glu Glu Leu Ser
 100 105 110

Leu Gly Pro Glu Ala Ala Ser Gly Pro Ala Ala Pro Gln Arg Leu Pro
 115 120 125

Lys Arg Lys Gly Ala Ser Ala Thr Ser Ala Ala Ser Arg Ser Met Arg
 130 135 140

Asp Leu Arg Ala Asp Gly Lys Gln Ala Arg Gln Lys Trp Gly Arg Met
 145 150 155 160

Val Gln Pro Asp His His Ala Ala Pro Gly Gly Gly Gly Gly Gly Gly
 165 170 175

Gly Gly Ala Arg Arg Leu Lys Gly Leu Ala Lys Lys Ala Val Gly Lys
 180 185 190

Gly Cys Phe Gly Leu Pro Leu Asp Arg Ile Gly Ser Met Ser Gly Met
 195 200 205

Gly Cys
 210

<210> 52
 <211> 256
 <212> PRT

<213> Bothrops jararaca

<400> 52

Met Val Leu Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
 1 5 10 15
 Leu Ala Leu Ser Val Asp Gly Lys Pro Val Gln Gln Trp Ala Gln Ser
 20 25 30
 Trp Pro Gly Pro Asn Ile Pro Pro Leu Lys Val Gln Gln Trp Ala Gln
 35 40 45
 Gly Gly Trp Pro Arg Pro Gly Pro Glu Ile Pro Pro Leu Thr Val Gln
 50 55 60
 Gln Trp Ala Gln Asn Trp Pro His Pro Gln Ile Pro Pro Leu Thr Val
 65 70 75 80
 Gln Gln Trp Ala Gln Gly Arg Ala Pro Gly Pro Pro Ile Pro Pro Leu
 85 90 95
 Thr Val Gln Gln Trp Ala Gln Gly Arg Ala Pro His Pro Pro Ile Pro
 100 105 110
 Pro Ala Pro Leu Gln Lys Trp Ala Pro Leu Gln Lys Trp Ala Pro Leu
 115 120 125
 Leu Gln Pro His Glu Ser Pro Ala Ser Gly Thr Thr Ala Leu Arg Glu
 130 135 140
 Glu Leu Ser Leu Gly Pro Glu Ala Ala Ser Gly Val Pro Ser Ala Gly
 145 150 155 160
 Ala Glu Val Gly Arg Ser Gly Ser Lys Ala Pro Ala Ala Pro His Arg
 165 170 175
 Leu Ser Lys Ser Lys Gly Ala Ala Ala Thr Arg Pro Met Arg Asp Leu
 180 185 190
 Arg Pro Asp Gly Lys Gln Ala Arg Gln Asn Trp Gly Arg Met Ala His
 195 200 205
 His Asp His His Ala Ala Ala Gly Gly Gly Gly Gly Gly Gly Gly
 210 215 220
 Ala Arg Arg Leu Lys Gly Leu Ala Lys Lys Gly Ala Ala Lys Gly Cys
 225 230 235 240
 Phe Gly Leu Lys Leu Asp Arg Ile Gly Thr Met Ser Gly Leu Gly Cys
 245 250 255

4003140_1

<210> 53
 <211> 265
 <212> PRT
 <213> Bothrops jararaca

<400> 53

Met Val Leu Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
 1 5 10 15
 Leu Ala Leu Ser Val Asp Gly Lys Pro Val Gln Gln Trp Ala Gln Gly
 20 25 30
 Gly Trp Pro Arg Pro Gly Pro Glu Ile Pro Pro Leu Lys Val Gln Gln
 35 40 45
 Trp Ala Gln Gly Gly Trp Pro Arg Pro Gly Pro Glu Ile Pro Pro Leu
 50 55 60
 Thr Val Gln Gln Trp Ala Gln Asn Trp Pro His Pro Gln Ile Pro Pro
 65 70 75 80
 Leu Thr Val Gln Gln Trp Ala Gln Trp Gly Arg Pro Pro Gly Pro Pro
 85 90 95
 Ile Pro Pro Leu Thr Val Gln Gln Trp Ala Gln Ala Arg Pro Pro His
 100 105 110
 Pro Pro Ile Pro Pro Ala Pro Leu Gln Lys Trp Ala Pro Val Gln Lys
 115 120 125
 Trp Ala Pro Leu Leu Gln Pro His Glu Ser Pro Ala Ser Gly Thr Thr
 130 135 140
 Ala Leu Arg Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Ser Gly Val
 145 150 155 160
 Pro Ser Ala Gly Ala Glu Val Gly Arg Ser Gly Ser Lys Ala Pro Ala
 165 170 175
 Ala Pro His Arg Leu Ser Lys Ser Lys Gly Ala Ala Ala Thr Ser Ala
 180 185 190
 Ala Ser Arg Pro Met Arg Asp Leu Arg Pro Asp Gly Lys Gln Ala Arg
 195 200 205
 Gln Asn Trp Gly Arg Met Val His His Asp His His Ala Ala Val Gly
 210 215 220
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu
 225 230 235 240
 Ala Lys Lys Gly Ala Ala Lys Gly Cys Phe Gly Leu Lys Val Asp Arg
 Page 22

245 4003140_1 255
250

Ile Gly Thr Met Ser Gly Leu Gly Cys
260 265

<210> 54
<211> 265
<212> PRT
<213> Bothrops insularis

<400> 54

Met Val Leu Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
1 5 10 15

Leu Ala Leu Ser Val Asp Gly Lys Pro Val Gln Gln Trp Ala Gln Gly
20 25 30

Gly Trp Pro Arg Pro Gly Pro Glu Ile Pro Pro Leu Lys Val Gln Gln
35 40 45

Trp Ala Gln Gly Gly Trp Pro Arg Pro Gly Pro Glu Ile Pro Pro Leu
50 55 60

Thr Val Gln Gln Trp Ala Gln Asn Trp Pro His Pro Gln Ile Pro Pro
65 70 75 80

Leu Thr Val Gln Gln Trp Ala Gln Leu Gly Pro Pro Pro Arg Pro Gln
85 90 95

Ile Pro Pro Leu Glu Val Gln Gln Trp Ala Gln Gly Arg Ala Pro His
100 105 110

Pro Pro Ile Pro Pro Ala Pro Leu Gln Lys Trp Ala Pro Val Gln Lys
115 120 125

Trp Ala Pro Leu Leu Gln Pro His Glu Ser Pro Ala Ser Gly Thr Thr
130 135 140

Ala Leu Arg Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Ser Gly Val
145 150 155 160

Pro Ser Ala Gly Ala Glu Val Gly Arg Ser Gly Ser Lys Ala Pro Ala
165 170 175

Ala Pro His Arg Leu Ser Lys Ser Lys Gly Ala Ala Ala Thr Ser Ala
180 185 190

Ala Ser Arg Pro Met Arg Asp Leu Arg Pro Asp Gly Lys Gln Ala Arg
195 200 205

Gln Asn Trp Gly Arg Met Val His His Asp His His Ala Ala Val Gly
210 215 220

4003140_1

Gly Gly Gly Gly Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu
225 230 235 240

Ala Lys Lys Gly Ala Ala Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Thr Met Ser Gly Leu Gly Cys
260 265

<210> 55
<211> 181
<212> PRT
<213> Crotalus durissus terrificus

<400> 55

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
1 5 10 15

Leu Ala Val Ser Leu Asp Gly Lys Pro Leu Gln Gln Trp Ser Gln Arg
20 25 30

Trp Pro His Leu Glu Ile Pro Pro Leu Val Val Gln Asn Trp Lys Ser
35 40 45

Pro Thr Gln Leu Gln Ala Arg Glu Ser Pro Ala Gly Gly Thr Thr Ala
50 55 60

Leu Arg Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Leu Asp Thr Pro
65 70 75 80

Pro Ala Gly Pro Asp Gly Gly Pro Arg Gly Ser Lys Ala Ala Ala Ala
85 90 95

Ala Pro Gln Arg Leu Ser Lys Ser Lys Gly Ala Ser Ala Thr Ser Ala
100 105 110

Ala Ser Arg Asp Leu Arg Thr Asp Gly Lys Gln Ala Arg Gln Asn Trp
115 120 125

Gly Arg Leu Val Ser Pro Asp His His Ser Ala Ala Gly Gly Gly Cys
130 135 140

Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu Ala Lys Lys Arg
145 150 155 160

Ala Gly Asn Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
165 170 175

Ser Gly Leu Gly Cys
180

4003140_1

<210> 56
 <211> 181
 <212> PRT
 <213> *Crotalus durissus collilineatus*

<400> 56

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
 1 5 10 15

Leu Ala Val Ser Leu Asp Gly Lys Pro Leu Gln Gln Trp Ser Gln Arg
 20 25 30

Trp Pro His Leu Glu Ile Pro Pro Leu Val Val Gln Asn Trp Lys Ser
 35 40 45

Pro Thr Gln Leu Gln Ala Arg Glu Ser Pro Ala Gly Gly Thr Thr Ala
 50 55 60

Leu Arg Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Leu Asp Thr Pro
 65 70 75 80

Pro Ala Gly Pro Asp Gly Gly Pro Arg Gly Ser Lys Ala Ala Ala Ala
 85 90 95

Ala Pro Gln Arg Leu Ser Lys Ser Lys Gly Ala Ser Ala Thr Ser Ala
 100 105 110

Ala Ser Arg Asp Leu Arg Thr Asp Gly Lys Gln Ala Arg Gln Asn Trp
 115 120 125

Gly Arg Leu Val Ser Pro Asp His His Ser Ala Ala Gly Gly Gly Gly
 130 135 140

Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu Ala Lys Lys Arg
 145 150 155 160

Ala Gly Asn Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
 165 170 175

Ser Gly Leu Gly Cys
 180

<210> 57
 <211> 201
 <212> PRT
 <213> *Sistrurus catenatus edwardsii*

<400> 57

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
 1 5 10 15

Leu Ala Val Ser Leu Asp Gly Lys Pro Val Gln Gln Trp Ser Gln Asn
 Page 25

20

25

30

Trp Pro Gly Pro Lys Val Pro Pro Leu Val Val Gln Gln Trp Ser Gln
 35 40 45
 Asn Trp Pro His Pro Gln Ile Pro Pro Leu Val Val Gln Asn Trp Lys
 50 55 60
 Ser Pro Thr Gln Leu Gln Pro Arg Glu Ser Pro Ala Gly Gly Thr Thr
 65 70 75 80
 Ala Leu Arg Glu Glu Leu Ser Leu Gly Pro Asp Ala Ala Leu Asp Thr
 85 90 95
 Pro Pro Ala Gly Pro Asp Val Gly Pro Arg Gly Ser Lys Ala Ala Ala
 100 105 110
 Ala Pro Gln Arg Leu Ser Lys Ser Lys Gly Ala Ser Ala Thr Ser Thr
 115 120 125
 Ala Ser Arg Pro Met Arg Asp Leu Arg Thr Asp Gly Lys Gln Ala Arg
 130 135 140
 Gln Asn Trp Gly Arg Met Leu Asn Pro Asp His His Ser Ala Pro Gly
 145 150 155 160
 Gly Gly Gly Gly Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu
 165 170 175
 Ala Lys Lys Arg Ala Gly Ser Gly Cys Phe Gly Leu Lys Leu Asp Arg
 180 185 190
 Ile Gly Ser Met Ser Gly Leu Gly Cys
 195 200

<210> 58

<211> 239

<212> PRT

<213> Lachesis muta muta

<400> 58

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
 1 5 10 15
 Leu Ala Val Ser Leu Asp Gly Lys Pro Val Gln Gln Trp Ser His Lys
 20 25 30
 Gly Trp Pro Pro Arg Pro Gln Ile Pro Pro Leu Val Val Gln Gln Trp
 35 40 45
 Ser Gln Lys Pro Trp Pro Pro Gly His His Ile Pro Pro Val Val Val
 50 55 60

4003140_1

Gln Glu Trp Pro Pro Gly His His Ile Pro Pro Leu Val Val Gln Gln
65 70 75 80

Trp Ser Gln Lys Lys Trp Pro Pro Gly His His Ile Pro Pro Leu Val
85 90 95

Val Gln Lys Trp Asp Pro Pro Pro Ile Ser Pro Pro Leu Leu Lys Pro
100 105 110

His Glu Ser Pro Ala Gly Gly Thr Thr Ala Leu Arg Glu Glu Leu Ser
115 120 125

Leu Gly Pro Glu Ala Ala Leu Asp Thr Pro Pro Ala Gly Pro Asp Val
130 135 140

Gly Pro Arg Gly Ser Lys Ala Pro Ala Ala Pro His Arg Leu Pro Lys
145 150 155 160

Ser Lys Gly Ala Ser Ala Thr Ser Ala Ala Ser Arg Pro Met Arg Asp
165 170 175

Leu Arg Thr Asp Gly Lys Gln Ala Arg Gln Asn Trp Gly Arg Met Met
180 185 190

Asn Pro Asp His His Ala Val Gly Gly Gly Gly Gly Gly Gly Gly Ala
195 200 205

Arg Arg Leu Lys Gly Leu Ala Lys Lys Arg Val Gly Asp Gly Cys Phe
210 215 220

Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
225 230 235

<210> 59
<211> 263
<212> PRT
<213> Agkistrodon halys blomhoffi

<400> 59

Met Phe Val Ser Arg Leu Ala Ala Ser Gly Leu Leu Leu Leu Ala Leu
1 5 10 15

Met Ala Leu Ser Leu Asp Gly Lys Pro Val Gln Gln Trp Ser Gln Gly
20 25 30

Arg Pro Pro Gly Pro Pro Ile Pro Arg Leu Val Val Gln Gln Trp Ser
35 40 45

Gln Gly Leu Pro Pro Gly Pro Pro Ile Pro Arg Leu Val Val Gln Gln
50 55 60

4003140_1

Trp Ser Gln Gly Leu Pro Pro Gly Pro Pro Ile Pro Pro Leu Val Val
65 70 75 80

Gln Gln Trp Ser Gln Gly Leu Pro Pro Arg Pro Lys Ile Pro Pro Leu
85 90 95

Val Val Gln Gln Trp Ser Gln Gly Leu Pro Pro Arg Pro Lys Ile Pro
100 105 110

Pro Leu Val Val Gln Lys Trp Asp Pro Pro Pro Val Ser Pro Pro Leu
115 120 125

Leu Leu Gln Pro His Glu Ser Pro Ala Gly Gly Thr Thr Ala Leu Arg
130 135 140

Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Ser Gly Pro Ala Ala Ala
145 150 155 160

Gly Ala Asp Gly Gly Arg Ser Gly Ser Lys Ala Pro Ala Ala Leu His
165 170 175

Arg Leu Ser Lys Ser Lys Gly Ala Ser Ala Thr Ser Ala Ser Ala Ser
180 185 190

Arg Pro Met Arg Asp Leu Arg Thr Asp Gly Lys Gln Ala Arg Gln Asn
195 200 205

Trp Ala Arg Met Val Asn Pro Asp His His Ala Val Gly Gly Cys Cys
210 215 220

Cys Gly Gly Gly Gly Gly Gly Ala Arg Arg Leu Lys Gly Leu Val Lys
225 230 235 240

Lys Gly Val Ala Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
245 250 255

Thr Met Ser Gly Leu Gly Cys
260

<210> 60
<211> 164
<212> PRT
<213> Philodryas olfersii

<400> 60

Met Val Ala Ser Arg Leu Ala Ala Gly Gly Leu Leu Leu Leu Ala Leu
1 5 10 15

Leu Ala Leu Ala Leu Asp Gly Lys Pro Ala Pro Pro Gln Pro Leu Arg
20 25 30

4003140_1

Lys Ala Pro Ala Gly Gly Thr Thr Ala Trp Arg Arg Glu Leu Thr Glu
35 40 45

Gln Pro Glu Gly Ala Ser Arg Pro Ala Ala Gly Gly Gly Gly Gly Gly
50 55 60

Gly Arg Ser Gly Ser Lys Ala Ala Asn Ala Ala Pro Thr Ala Pro Lys
65 70 75 80

Ser Lys Gly Gly Ala Ala Ala Ala Ala Ala Ala Ala Arg Leu Met
85 90 95

Arg Asp Leu Arg Pro Asp Ser Lys Gln Ala Arg Ala Ala Trp Gly Arg
100 105 110

Met Val His Pro Glu His His Ala Gly Gly Gly Gly Gly Gly Gly Gly
115 120 125

Gly Gly Gly Ala Ser Arg Arg Leu Lys Gly Val Ala Lys Lys Gly Leu
130 135 140

Gly Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
145 150 155 160

Gly Leu Gly Cys

<210> 61
<211> 161
<212> PRT
<213> Rhabdophis tigrinus tigrinus
<400> 61

Met Phe Ala Ser Arg Leu Ala Ala Leu Gly Leu Leu Leu Leu Ala Leu
1 5 10 15

Val Leu Asp Gly Lys Pro Ala Pro Pro Pro Gln Pro Leu Arg Lys Ala
20 25 30

Pro Ala Gly Gly Thr Thr Ala Leu Gln Arg Gln Leu Thr Glu Gln Gln
35 40 45

Gln Gln Gln Gln Gln Ala Glu Gly Ser Ser Gly Pro Ala Ala Gly Gly
50 55 60

Gly Gly Gly Arg Ser Gly Ser Lys Thr Ala Asn Ala Ala Pro Thr Ala
65 70 75 80

Pro Lys Ser Lys Gly Ala Ala Ala Ser Ala Ala Ser Arg Leu Leu Arg
85 90 95

Asp Leu Arg Pro Asp Gly Lys Gln Ser Arg Ala Ala Trp Gly Arg Met

4003140_1

100

105

110

Val His Pro Glu His His Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly
 115 120 125
 Gly Ser Arg Arg Leu Lys Gly Leu Pro Lys Lys Gly Leu Gly Ser Gly
 130 135 140
 Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly
 145 150 155 160

Cys

<210> 62
 <211> 221
 <212> PRT
 <213> Bothrops jararacussu

<400> 62

His Glu Lys Pro Ser Arg Ser Gly Ala Lys Ser Ala Ala Val Gly Ala
 1 5 10 15
 Lys Leu Ala Ala Ser Ser Asp Ser Ala Ala Asp Glu Cys Ser Ser Gly
 20 25 30
 Arg Lys Gly Glu Pro Pro Gly Pro Pro Ile Pro Pro Leu Thr Val Gln
 35 40 45
 Gln Trp Ala Gln Ala Arg Pro Pro His Pro Pro Ile Pro Pro Ala Pro
 50 55 60
 Leu Gln Lys Trp Ala Pro Val Gln Lys Trp Ala Pro Val Gln Lys Trp
 65 70 75 80
 Ala Pro Leu Leu Gln Pro His Glu Ser Pro Ala Gly Gly Thr Thr Ala
 85 90 95
 Leu Arg Glu Glu Leu Ser Leu Gly Pro Glu Ala Ala Ser Gly Val Pro
 100 105 110
 Ser Ala Gly Ala Glu Gly Arg Ala Gln Arg Leu Glu Gly Ala Arg Cys
 115 120 125
 Thr Pro Ser Ala Val Glu Glu Gln Arg Gly Gly Gly Asp Leu Gly Gly
 130 135 140
 Val Ala Ala Asp Ala Gly Leu Ala Pro Arg Arg Gln Ala Gly Ala Ala
 145 150 155 160
 Glu Leu Gly Pro Asp Gly Ala Pro Arg Pro Pro Arg Pro Pro Arg Ser
 165 170 175

4003140_1

Gly Arg Arg Ala Ala Ala Ala Ala Ala Glu Arg Gly Ala Arg Arg
180 185 190

Leu Lys Gly Leu Ala Lys Lys Gly Ala Ala Lys Gly Cys Phe Gly Leu
195 200 205

Lys Leu Asp Arg Ile Gly Thr Met Ser Gly Leu Gly Cys
210 215 220

<210> 63
<211> 116
<212> PRT
<213> Petromyzontidae

<400> 63

Ser Gly Ser Glu Pro Trp Glu Gly Gly Phe Leu Pro Arg Val Ser Ser
1 5 10 15

Ser Ser Ser Ser Ser Ser Gly Glu Val Glu Pro Leu Ala Glu Val Thr
20 25 30

Ala Thr Gly Gly Val Ser Gly Gly Val Ser Gly Gly Val Leu Gly Gly
35 40 45

Thr Pro Trp Val Gly Pro Arg Gly His Gln Arg Pro Ser Arg Gly Leu
50 55 60

Ala Glu Gly Gly Ser Gln Val Ser Gly Gly Val Trp Gln Arg Leu Phe
65 70 75 80

Asn Asp Phe Val Ser Asn Gln Arg Arg Phe Arg Gly Arg Thr Lys Lys
85 90 95

Gly Lys Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ser Met Ser
100 105 110

Gly Leu Gly Cys
115

<210> 64
<211> 148
<212> PRT
<213> Lampetra japonica

<400> 64

Met Lys Leu Gln Leu Leu Met Met Val Val Val Val Gly Ser Trp Thr
1 5 10 15

Phe Leu Gly Val Gly Ala Lys Pro Leu Thr Ser Tyr Glu Leu Tyr Asp
20 25 30

4003140_1

Asp Ala Gly Ser Glu Pro Trp Glu Gly Gly Phe Leu Pro Arg Ile Ser
35 40 45

Ser Ser Ser Ser Ser Ser Ala Glu Arg Leu Ala Asp Ala Thr Val Thr
50 55 60

Arg His Gly Gly Gly Gly Gly Gly Gly Gly Asp Asp Gly Thr Ser Trp
65 70 75 80

Glu Leu Pro Gln Gly Pro Pro Gly Pro Pro Arg Ser Ser Arg Gly Leu
85 90 95

Ala Glu Gly Gly Ser Gln Val Ser Gly Gly Val Trp Gln Arg Leu Phe
100 105 110

Asn Asp Phe Val Ser Asn Gln Arg Arg Phe Arg Gly Arg Thr Lys Lys
115 120 125

Gly Lys Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ser Met Ser
130 135 140

Gly Leu Gly Cys
145

<210> 65
<211> 133
<212> PRT
<213> Petromyzontidae

<400> 65

Met Arg Arg Gln Val Leu Val Met Val Val Met Val Val Val Met Val
1 5 10 15

Val Met Ser Gly Lys Ser Val Thr Ala Lys Pro Val Ala Ser Tyr Glu
20 25 30

Leu Leu Asp Asp Thr Asn Ser Glu Pro Trp Glu Gly Gly Ser Leu Leu
35 40 45

Pro Ser Leu Pro Ser Gln Gly Glu Gly Asp Ser His Pro Leu Ser Ala
50 55 60

Glu Gly Gly Pro Trp Glu Arg Gly Ser Gly Pro Gln Arg Ser Ser Arg
65 70 75 80

Gly Ile Gly Gly Gly Ser Gln Val Ser Gly Glu Val Trp Gln Arg Leu
85 90 95

Phe Asn Asp Phe Val Ser Asn Gln Arg Arg Phe Arg Gly Arg Thr Lys
100 105 110

Lys Gly Lys Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ser Met
Page 32

115

120

125

Ser Gly Leu Gly Cys
130

<210> 66
<211> 22
<212> PRT
<213> Gallus gallus

<400> 66

Gly Leu Ser Arg Ser Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 67
<211> 130
<212> PRT
<213> Gallus gallus

<400> 67

Met Lys Leu Leu Phe Cys Pro Gly Phe Phe Leu Leu Leu Ile Val Ser
1 5 10 15

Gln Lys Gln Ala Met Ala Lys Pro Ile Ser Ser Leu Gln Ser Leu Ser
20 25 30

Met Leu Leu Asp Glu Glu Leu Gln His Pro Leu Val Ser Glu Glu Arg
35 40 45

Asp Arg Glu Gln Asp Gly Ser Ile Pro Val Gly Ala Phe Asp Gln Glu
50 55 60

Asp Ala Glu Phe Gln Trp Thr Arg Asn Thr Arg Asp Gln Pro Ala Ser
65 70 75 80

Thr Ser Thr Ala Asp Ser Asp Val Gln Arg Ile Leu Ser Asp Leu Leu
85 90 95

Gly Leu Pro Gln Arg Tyr Gln Asn Arg Ser Lys Lys Gly Leu Ser Arg
100 105 110

Ser Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu
115 120 125

Gly Cys
130

<210> 68
<211> 129
<212> PRT

4003140_1

<213> Rana catesbeiana

<400> 68

Met Ser Tyr Lys Arg Gly Thr Cys Leu Gly Phe Ile Met Leu Leu Met
1 5 10 15

Val Ser His His His Thr Lys Gly Lys Pro Leu Ser Ser Leu Gln Asn
20 25 30

Leu Ser Arg Leu Leu Glu Asp Asn Phe Glu Arg Ser Phe Gly Ser Asp
35 40 45

Glu Ala Asp Gln Gln Leu Val Pro Thr Asp Ser Leu Asp Gln Leu Asp
50 55 60

Pro Glu Leu Gln Trp Asn Lys Asn Arg Leu Glu Gln Gly Asp Ser Pro
65 70 75 80

His Val Asn Glu Met Thr Leu Gln Gln Leu Leu Asn Asp Pro Val Gly
85 90 95

Thr Ser Arg Arg Tyr Arg Gln Arg Asn Lys Lys Gly Tyr Ser Arg Gly
100 105 110

Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Phe Ser Gly Leu Gly
115 120 125

Cys

<210> 69

<211> 136

<212> PRT

<213> Triakis scyllium

<400> 69

Met Ser Gly Gln Thr Ser Phe Tyr Cys Gly Leu Leu Leu Val Leu Leu
1 5 10 15

Ile Gln Ala Gln Ala Arg Pro Arg Ser Asp Asp Ser Leu Gln Thr Leu
20 25 30

Ser Arg Leu Leu Glu Asp Glu Tyr Gly His Tyr Leu Pro Ser Asp Glu
35 40 45

Leu Asn Asn Glu Ala Gln Glu Met Ser Pro Ala Ala Ser Leu Pro Glu
50 55 60

Phe Asn Ala Asp Gln Ser Asp Leu Glu Leu Pro Trp Asp Arg Glu Ser
65 70 75 80

Arg Glu Ile Gly Gly Arg Pro Phe Arg Gln Glu Ala Val Leu Ala Arg
Page 34

85 4003140_1 95
90

Leu Leu Lys Asp Leu Ser Asn Asn Pro Leu Arg Phe Arg Gly Arg Ser
100 105 110

Lys Lys Gly Pro Ser Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile
115 120 125

Gly Ala Met Ser Gly Leu Gly Cys
130 135

<210> 70
<211> 115
<212> PRT
<213> Scyliorhinus canicula

<400> 70

Arg Pro Arg Ser Asp Asp Ser Leu Gln Thr Leu Ser Arg Leu Leu Glu
1 5 10 15

Asp Glu Tyr Gly His Tyr Leu Pro Ser Asp Glu Leu Asn Asn Glu Ala
20 25 30

Glu Glu Met Ser Pro Ala Ala Ser Leu Pro Glu Leu Asn Ala Asp Gln
35 40 45

Ser Asp Leu Glu Leu Pro Trp Glu Arg Glu Ser Arg Glu Ile Gly Gly
50 55 60

Arg Pro Phe Arg Gln Glu Ala Val Leu Ala Arg Leu Leu Lys Asp Leu
65 70 75 80

Ser Asn Asn Pro Leu Arg Phe Arg Gly Arg Ser Lys Lys Gly Pro Ser
85 90 95

Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Met Ser Gly
100 105 110

Leu Gly Cys
115

<210> 71
<211> 135
<212> PRT
<213> Squalus acanthias

<400> 71

Met Ser Gly His Thr Ser Phe Tyr Cys Gly Leu Leu Leu Leu Leu Leu
1 5 10 15

Ile Gln Val Gln Ala Arg Pro Arg Ala Asp Asp Ser Leu Gln Val Leu
20 25 30

4003140_1

Ser Arg Leu Leu Glu Asp Glu Tyr Gly His Phe Asn Ser Glu Glu Leu
35 40 45

Asn Asn Glu Ala Gln Glu Ile Ser Pro Ala Ala Ser Leu Pro Asp Leu
50 55 60

Asn Thr Asp Gln Ser Asp Leu Glu Leu Pro Trp Asp Arg Glu Ser Arg
65 70 75 80

Glu Ile Gly Gly Arg Ser Phe Arg Gln Glu Ala Leu Leu Ala Arg Leu
85 90 95

Leu Gln Asp Leu Ser Asn Asn Pro Leu Arg Phe Lys Gly Arg Ser Lys
100 105 110

Lys Gly Pro Ser Arg Ser Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
115 120 125

Ala Met Ser Gly Leu Gly Cys
130 135

<210> 72
<211> 131
<212> PRT
<213> Chondrichthyes

<400> 72

Met Ser Gly Asn Thr Asn Phe Tyr Cys Gly Leu Val Leu Leu Leu Leu
1 5 10 15

Leu Gln Val Gln Gly Arg Pro Arg Ser Asp Asp Ser Leu Gln Ala Leu
20 25 30

Thr Arg Leu Leu Glu Asp Glu Tyr Gly Gln Tyr Phe Thr Thr Glu Asp
35 40 45

Leu Asn Asn Glu Ala Pro Glu Ile Pro Pro Ala Ala Ser Leu Pro Asp
50 55 60

Leu Asn Thr Asp Gln Ser Asp Leu Asp Leu Ser Trp Asp Arg Glu Ser
65 70 75 80

Arg Glu Ile Ala Ser Arg Pro Ile Leu Ala Arg Ile Leu Lys Asp Leu
85 90 95

Ser Asn Asn Pro Leu Arg Phe Arg Gly Arg Ser Lys Lys Gly Pro Ser
100 105 110

Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Met Ser Gly
115 120 125

4003140_1

Leu Gly Cys
130

<210> 73
<211> 131
<212> PRT
<213> Chondrichthyes

<400> 73

Met Ser Gly Asn Thr Asn Phe Tyr Cys Gly Leu Val Leu Leu Leu Leu
1 5 10 15

Leu Gln Val Gln Gly Arg Pro Arg Ser Asp Asp Ser Leu Gln Ala Leu
20 25 30

Thr Arg Leu Leu Glu Asp Glu Tyr Gly Gln Tyr Phe Thr Thr Glu Asp
35 40 45

Leu Asn Asn Glu Ala Pro Glu Ile Pro Pro Ala Ala Ser Leu Pro Asp
50 55 60

Leu Asn Thr Asp Gln Ser Asp Leu Asp Leu Ser Trp Asp Arg Glu Ser
65 70 75 80

Arg Glu Ile Ala Ser Arg Pro Ile Leu Ala Arg Ile Leu Lys Asp Leu
85 90 95

Ser Asn Asn Pro Leu Arg Phe Arg Gly Arg Ser Lys Lys Gly Pro Ser
100 105 110

Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Met Ser Gly
115 120 125

Leu Gly Cys
130

<210> 74
<211> 131
<212> PRT
<213> Chondrichthyes

<400> 74

Met Ser Gly Asn Thr Asn Phe Tyr Cys Gly Leu Val Leu Leu Leu Leu
1 5 10 15

Leu Gln Val Gln Gly Arg Pro Arg Ser Asp Asp Ser Leu Gln Ala Leu
20 25 30

Thr Arg Leu Leu Glu Asp Glu Tyr Gly Gln Tyr Phe Thr Ser Glu Asp
35 40 45

Leu Asn Asn Glu Ala Pro Glu Ile Pro Pro Ala Ala Ser Leu Pro Asp
50 55 60

4003140_1

Leu Asn Thr Asp Gln Pro Asp Phe Asp Leu Ser Trp Asp Arg Glu Ser
65 70 75 80

Arg Glu Ile Ala Ser Arg Pro Ile Leu Ala Arg Ile Leu Lys Asp Leu
85 90 95

Ser Asn Asn Pro Leu Arg Phe Arg Gly Arg Ser Lys Lys Gly Pro Ser
100 105 110

Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Met Ser Gly
115 120 125

Leu Gly Cys
130

<210> 75
<211> 131
<212> PRT
<213> Dasyatis akajei

<400> 75

Met Ser Gly Asn Thr Asn Phe Tyr Cys Gly Leu Val Leu Leu Leu Leu
1 5 10 15

Leu Gln Val Gln Gly Arg Pro Arg Ser Asp Asp Ser Leu Gln Ala Leu
20 25 30

Thr Arg Leu Leu Glu Asp Glu Tyr Gly Gln Tyr Phe Thr Ser Glu Asp
35 40 45

Leu Asn Asn Glu Ala Pro Glu Met Ser Pro Ala Ala Ser Leu Pro Asp
50 55 60

Leu Asn Thr Glu Gln Ser Glu Thr Asp Leu Pro Trp Asp Arg Glu Ser
65 70 75 80

Arg Glu Ile Ala Ser Arg Pro Ile Leu Ala Arg Ile Leu Lys Asp Leu
85 90 95

Asn Asn Ile Pro Leu Arg Phe Arg Gly Arg Ser Lys Lys Gly Pro Ser
100 105 110

Arg Gly Cys Phe Gly Val Lys Leu Asp Arg Ile Gly Ala Met Ser Gly
115 120 125

Leu Gly Cys
130

<210> 76
<211> 139
<212> PRT

<213> *Callorhynchus milii*

<400> 76

Met Asn Ala His Val Ser Phe Pro Cys Gly Leu Met Leu Leu Leu Leu
 1 5 10 15
 Ile Gln Val Gln Val Gln Ala Arg Pro Arg Thr Gly Val Asp Ser Leu
 20 25 30
 Gln Ile Leu Ser Arg Leu Leu Glu Asp Glu Tyr Gly Pro Tyr Leu Ser
 35 40 45
 Ser Glu Asp Ser Asp Met Glu Ala Glu Glu Ala Ser Arg Ala Gly Thr
 50 55 60
 Leu Arg Asp Leu Asn Leu Asp Gln Ala Asp Met Asp Leu Leu Trp Asp
 65 70 75 80
 Arg Asp Ala Arg Asp Ile Gly Gly Arg Ser Phe Gln His Asp Gly Leu
 85 90 95
 Leu Leu Arg Leu Leu Lys Asp Leu Thr Ile Ser Pro Leu Arg Phe Asn
 100 105 110
 Gly Arg Ser Lys Lys Gly Pro Ser Arg Gly Cys Phe Gly Val Lys Leu
 115 120 125
 Asp Arg Ile Gly Ala Met Ser Gly Leu Gly Cys
 130 135

<210> 77

<211> 112

<212> PRT

<213> *Oryzias latipes*

<400> 77

Met Ser Leu Arg Ala Phe Met Leu Cys Val Cys Leu Leu Leu Gln Ser
 1 5 10 15
 Val Gly Ala Arg Pro Ala Ser Glu Leu Gln Asn Leu Glu Arg Leu Leu
 20 25 30
 Gln Asp Gln Leu Ser Ser Thr Glu His Pro Glu Glu Asp Arg Leu Asp
 35 40 45
 Arg Thr Arg Glu Glu Pro Gln Leu Gly Gly Ser Ser Ser Arg Glu Ala
 50 55 60
 Ala Asp Glu Ser Ala Leu Thr Arg Leu Phe Ala Asp Leu Leu Arg Thr
 65 70 75 80
 Ser Lys Arg Ser Trp Gly Arg Tyr Lys Lys Gly Gly Met Arg Ser Cys
 Page 39

85 4003140_1 95
90

Phe Gly Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
100 105 110

<210> 78
<211> 112
<212> PRT
<213> Oryzias latipes

<400> 78

Met Ser Leu Arg Ala Phe Met Leu Cys Val Cys Leu Leu Leu Gln Ser
1 5 10 15

Val Gly Ala Arg Pro Ala Ser Glu Leu Gln Asn Leu Glu Arg Leu Leu
20 25 30

Gln Asp Gln Leu Ser Ser Thr Glu His Pro Glu Glu Asp Arg Leu Asp
35 40 45

Arg Thr Arg Glu Glu Pro Gln Leu Gly Gly Ser Ser Ser Arg Glu Ala
50 55 60

Ala Asp Glu Ser Ala Leu Thr Arg Leu Phe Ala Asp Leu Leu Arg Thr
65 70 75 80

Ser Lys Arg Ser Trp Gly Arg Tyr Lys Lys Gly Gly Met Arg Ser Cys
85 90 95

Phe Gly Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
100 105 110

<210> 79
<211> 158
<212> PRT
<213> Takifugu rubripes

<400> 79

Met Ser Leu Asn Leu Pro Gly Tyr Ala Leu Phe Phe Ile Leu Leu Val
1 5 10 15

Ala Ser Ser Gly Ala Lys Pro Ala Pro Asp Leu Gln Ile Leu Glu Pro
20 25 30

Pro Leu Ser Ser Leu Glu Glu Gln Glu Glu Met Gln Glu Glu Val Gln
35 40 45

Glu Lys Val Gln Glu Gln Gln Glu Glu Val Gln Glu Lys Val Gln Glu
50 55 60

Gln Gln Glu Glu Val Gln Glu Gln Gln Glu Glu Val Gln Glu Gln Gln
65 70 75 80

4003140_1

Glu Glu Gln Gln Glu Glu Val Gln Glu Arg Gly Arg Gly Thr Gly Asp
85 90 95

Val Leu Leu Arg Ala Gln Leu Asp Ser Ser Thr Trp Ala Leu Gln Lys
100 105 110

Asp Asp Val Leu Met Arg Leu Phe Lys Asp Leu Leu Arg Thr Ser Lys
115 120 125

Arg Ser Arg Ser Arg Tyr Lys Lys Gly Gly Leu Arg Ser Cys Phe Gly
130 135 140

Val Arg Leu Ala Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
145 150 155

<210> 80
<211> 128
<212> PRT
<213> Salmo salar

<400> 80

Met Lys Met Ile Ser Asn Ile Gln Phe Phe Cys Leu Thr Ala Leu Val
1 5 10 15

Leu Leu Asn Leu Val Gly Ala Asn Pro Met Ser Asn Leu Gln Ser Leu
20 25 30

Lys Gln Leu Leu Glu Glu Glu Ser His Val Pro Tyr Tyr Ala Ser Asp
35 40 45

Glu Met Gly Val Asp Gly Lys Asp Leu Asn Thr Glu Asn Ile Ala Glu
50 55 60

Glu Val Pro Pro Trp Asp Ser Glu Asp Ala Arg Asn Ser Ala Leu Thr
65 70 75 80

Gly Lys Glu Asp Val Ile Ala Arg Leu Leu Asn Asp Ile Met Thr Thr
85 90 95

Pro Lys Arg Ser Trp Ser Arg Phe Lys Lys Gly Gly Leu Arg Ser Cys
100 105 110

Phe Gly Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
115 120 125

<210> 81
<211> 126
<212> PRT
<213> Esox lucius

<400> 81

Met Ile Ser Asn Ile Gln Phe Cys Cys Leu Ser Val Leu Val Leu Leu
Page 41

4003140_1

1 5 10 15
 Asn Leu Val Gly Ala Lys Pro Val Ser Asn Leu Gln Ser Leu Lys Glu
 20 25 30
 Phe Leu Glu Glu Ser Asn Val Pro Tyr Tyr Gly Ser Glu Glu Ser Glu
 35 40 45
 Val Asp Asp Lys Asp Leu Asn Thr Glu Lys Glu Ala Phe Thr Gly Glu
 50 55 60
 Val Val Gln Pro Trp Leu Thr Glu Asp Arg Ser Ala Leu Thr Gly Lys
 65 70 75 80
 Glu Asn Ala Val Ala Arg Leu Leu Ser Asp Ile Met Thr Thr Pro Lys
 85 90 95
 Arg Ser Trp Gly Arg Phe Lys Lys Gly Gly Met Arg Ser Cys Phe Gly
 100 105 110
 Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
 115 120 125

<210> 82
 <211> 128
 <212> PRT
 <213> Anguilla japonica

<400> 82

Met Ile Ser Asn Ile Thr Ile Tyr Cys Ile Ser Ser Leu Leu Phe Leu
 1 5 10 15
 Asn Leu Val Gly Gly Lys Pro Val Ser Ser Leu Gln Ser Leu Lys Glu
 20 25 30
 Leu Leu Glu Glu Glu Ser Asn Ala Pro Tyr Leu Asp Ser Glu Glu Ala
 35 40 45
 Glu Val Gln Gly Lys Glu Met Asn Ala Glu Asn Ala Ala Phe Thr Lys
 50 55 60
 Ala Ser Leu His Ser Trp Asp Pro Asn Ser Arg Asp Ala Ala Leu Ser
 65 70 75 80
 Ser Asn Glu Asn Ala Leu Val Arg Leu Leu Asn Asp Ile Leu Ser Ser
 85 90 95
 Ser Lys Arg Ser Trp Ser Arg Phe Lys Lys Gly Gly Leu Arg Ser Cys
 100 105 110
 Phe Gly Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
 115 120 125

4003140_1

<210> 83
 <211> 128
 <212> PRT
 <213> Danio rerio

<400> 83

Met Ile Ala Asn Ile Ser Val Phe Cys Val Ser Ser Leu Leu Leu Leu
 1 5 10 15

Asn Leu Val Gly Ala Lys Pro Val Ser Ser Leu Gln Ser Leu Lys Gln
 20 25 30

Leu Leu Asp Glu Glu Val Asn Lys Pro Phe Glu Glu Ser Gln Glu Ser
 35 40 45

Val Met Glu Gln Lys Asp Ala Thr Ala Glu Lys Ser Ala Leu Asp Glu
 50 55 60

Arg Ala Glu Gln Leu Trp Glu Ser Asp Ala Arg Asn Ser Ala Leu Ala
 65 70 75 80

Gly Lys Tyr Gly Met Phe Glu Arg Leu Leu Gly Asp Leu Leu Ser Thr
 85 90 95

Ser Lys Arg Ser Trp Ser Arg Phe Lys Lys Gly Asp Leu Arg Ser Cys
 100 105 110

Phe Gly Val Arg Leu Glu Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
 115 120 125

<210> 84
 <211> 130
 <212> PRT
 <213> Actinopterygii

<400> 84

Met Val Ser Arg Leu Thr Val Tyr Cys Ala Leu Phe Ile Ile Val Leu
 1 5 10 15

Ser Gln Val Ser Ala Lys Pro Val Ser Ser Leu Gln Ser Phe Ala Gln
 20 25 30

Leu Leu Glu Asp Glu Ser Asn His Pro Tyr Val Asp Ser Asp Asp Asp
 35 40 45

Thr Arg Gly Gly Leu Asp Val Ser Ala Glu Ile Ala Thr Asp Asp Ser
 50 55 60

Glu Ala Asp Ile Pro Trp Asn His Asn Phe Arg Asp Leu Gln His Arg
 65 70 75 80

4003140_1

Gln Ala Ala His Ser Ser Arg Met Leu Lys Leu Leu Lys Asp Ile Leu
 85 90 95

Thr Ser Ser Gly Arg Ser Trp Asp Arg Glu Lys Lys Ser Gly Leu Arg
 100 105 110

Ser Cys Phe Gly Val Arg Leu Asp Arg Ile Gly Ser Met Ser Gly Leu
 115 120 125

Gly Cys
 130

<210> 85
 <211> 131
 <212> PRT
 <213> Oncorhynchus mykiss
 <400> 85

Met Leu Tyr Pro Ala Leu Leu Cys Ala Ala Leu Leu Leu Ile Ala Pro
 1 5 10 15

Leu Gly His Thr Glu Gly Arg Thr Leu Tyr Pro Ser Pro Asp Ala Ile
 20 25 30

Gln Phe Val Glu Gln Phe Leu Asp Arg Tyr Asn Asp Leu Thr Leu Asp
 35 40 45

Asp Leu Glu Asn Leu Val Ser Ser Gln Pro Glu Glu Pro Ser Ser Ala
 50 55 60

Phe Thr Ser Gly Val Lys Ile Ala Glu Tyr Pro Lys Trp Ala Asp Ile
 65 70 75 80

Pro Ala Gln Gly Asp Ser Thr Trp Leu Arg Leu Leu Lys Gly Thr Leu
 85 90 95

Ala Asn Gln Lys Arg Ala Val Thr Asp Arg Ser Arg Arg Gly Trp Asn
 100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
 115 120 125

Leu Gly Cys
 130

<210> 86
 <211> 131
 <212> PRT
 <213> Oncorhynchus mykiss
 <400> 86

Met Leu Tyr Pro Ala Leu Leu Cys Ala Ala Leu Leu Leu Ile Ala Pro
 1 5 10 15

4003140_1

Leu Gly His Thr Glu Gly Arg Thr Leu His Pro Ser Pro Asp Ala Ile
20 25 30

Gln Phe Val Glu Gln Phe Leu Asp Arg Tyr Asn Asp Leu Thr Leu Asp
35 40 45

Asp Leu Glu Asn Leu Val Ser Ser Gln Pro Glu Glu Pro Ser Ser Ala
50 55 60

Phe Thr Ser Gly Val Lys Val Ala Glu Tyr Pro Lys Trp Ala Asp Ile
65 70 75 80

Pro Ala Gln Gly Asp Ser Thr Trp Leu Arg Leu Leu Lys Gly Thr Leu
85 90 95

Ala Asn Gln Lys Arg Ala Val Met Asp Arg Ser Arg Arg Gly Trp Asn
100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
115 120 125

Leu Gly Cys
130

<210> 87
<211> 132
<212> PRT
<213> Osmerus mordax

<400> 87

Met Leu Cys Pro Val Leu Leu Cys Ala Thr Leu Val Leu Leu Pro Pro
1 5 10 15

Leu Glu Leu Ser Glu Gly Arg Ala Leu His Pro Ser Pro Glu Gly Leu
20 25 30

Gln Phe Val Glu Gln Phe Leu Glu Arg Cys Thr Asp Leu Leu Asn Leu
35 40 45

Asp Asp Leu Glu Asn Ala Gly Ser Asn Gln Pro Glu Glu Pro Ser Asp
50 55 60

Tyr Ala Asn Gly Val Lys Val Ala Glu Tyr Pro Lys Trp Ala Asp Leu
65 70 75 80

Pro Ala Ala Gln Glu Asp Ser Ala Trp Leu Arg Leu Leu Lys Ala Ala
85 90 95

Leu Ala Asn Gln Lys Arg Ala Glu Pro Asp Arg Ser Arg Arg Ala Trp
100 105 110

4003140_1

Asn Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
115 120 125

Gly Leu Gly Cys
130

<210> 88
<211> 131
<212> PRT
<213> Oreochromis mossambicus
<400> 88

Met Leu Cys Pro Val Leu Leu Cys Ala Ala Leu Leu Leu Leu Thr Pro
1 5 10 15

Leu Glu Ile Thr Glu Ala Arg Ala Leu His Pro Ser Pro Asp Ala Val
20 25 30

Gln Phe Val Glu Gln Phe Leu Glu Arg Tyr Asn Asp Leu Leu Thr Leu
35 40 45

Asp Asp Leu Glu Asn Met Leu Asn Ser Gln Ala Glu Glu Gln Ser Thr
50 55 60

Leu Ser Ser Gly Ser Lys Ala Val Glu Tyr Pro Lys Trp Ala Asp Ala
65 70 75 80

Gln Thr Gln Pro Glu Thr Pro Trp Leu Arg Leu Leu Lys Gly Ala Leu
85 90 95

Ala Asn Gln Lys Arg Ala Glu Pro Asp Arg Ser Arg Arg Gly Trp Asn
100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
115 120 125

Leu Gly Cys
130

<210> 89
<211> 131
<212> PRT
<213> Anoplopoma fimbria
<400> 89

Met Leu Cys Pro Val Leu Leu Cys Ala Thr Leu Leu Leu Leu Thr Pro
1 5 10 15

Leu Glu Ile Thr Glu Ala Arg Ala Leu His Pro Pro Pro Asp Ala Val
20 25 30

Gln Phe Met Glu Gln Phe Leu Glu Arg Tyr Asn Asp Leu Leu Thr Leu
Page 46

4003140_1

35

40

45

Asp Asp Leu Glu Asn Leu Leu Asn Ser Gln Pro Glu Glu Gln Ser Thr
 50 55 60

Phe Ser Ser Gly Val Lys Ala Ala Glu Tyr Pro Lys Trp Ala Asp Ala
 65 70 75 80

Gln Thr Gln Ala Glu Thr Pro Trp Leu Arg Leu Leu Lys Gly Ala Val
 85 90 95

Ala Asn Gln Lys Arg Ala Glu Pro Asp Arg Ser Arg Arg Gly Trp Asn
 100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
 115 120 125

Leu Gly Cys
 130

<210> 90

<211> 131

<212> PRT

<213> Oryzias latipes

<400> 90

Met Leu Cys Pro Val Leu Leu Cys Ala Thr Leu Leu Leu Leu Thr Pro
 1 5 10 15

Phe Glu Val Thr Glu Ala Arg Ala Leu His Pro Ser Ala Asp Ala Val
 20 25 30

Gln Phe Val Glu Gln Phe Leu Asp Arg Tyr Asn Asp Leu Leu Thr Leu
 35 40 45

Asp Asp Leu Glu Asn Leu Leu Asn Thr Gln Pro Glu Glu Gln Ser Thr
 50 55 60

Leu Ser Ser Gly Val Lys Thr Ala Glu Tyr Pro Lys Trp Ala Asp Leu
 65 70 75 80

Gln Thr Gln Pro Glu Thr Pro Trp Phe Arg Leu Leu Lys Gly Ala Leu
 85 90 95

Thr Asn Gln Lys Arg Ala Glu Pro Asp Arg Ser Arg Arg Gly Trp Asn
 100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
 115 120 125

Leu Gly Cys
 130

4003140_1

<210> 91
 <211> 126
 <212> PRT
 <213> Takifugu rubripes

<400> 91

Met Leu Cys Pro Ala Leu Leu Cys Ala Ala Leu Leu Leu Leu Thr Pro
 1 5 10 15
 Val Glu Ile Thr Asp Ala Arg Ala Leu Gln Gln Pro Ser Asp Ala Ala
 20 25 30
 Gln Phe Met Glu Gln Phe Leu Glu Ser Tyr Asn Asp Leu Leu Thr Leu
 35 40 45
 Asp Asp Leu Glu Asn Met Leu Asn Ser His Pro Glu Asp Gln Ser Asn
 50 55 60
 Leu Ser Ser Ser Lys Ala Asp Glu Tyr Pro Lys Trp Ala Glu Ala Asp
 65 70 75 80
 Thr Pro Trp Leu Arg Leu Leu Arg Gly Ala Leu Ala Asn Gln Lys Arg
 85 90 95
 Ala Glu Pro Asp Arg Ser Arg Arg Gly Trp Asn Arg Gly Cys Phe Gly
 100 105 110
 Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 115 120 125

<210> 92
 <211> 131
 <212> PRT
 <213> Anguilla japonica

<400> 92

Met Met Cys Lys Ala Leu Val Phe Ala Val Leu Leu Leu Ala Val Pro
 1 5 10 15
 Leu Glu Arg Ala Asp Ser Arg Ala Leu Arg Thr Pro Val Asp Ala Ile
 20 25 30
 Gln Phe Val Glu Gln Phe Leu Glu His Tyr Asn Asp Leu Leu Asn Ile
 35 40 45
 Asp Asp Leu Glu Asn Gln Thr Gly Asp Gln Leu Glu Ser Pro Gln Pro
 50 55 60
 Leu Ser Ser Gly Leu Lys Val Ala Glu Tyr Pro Lys Trp Val Asp Val
 65 70 75 80

Pro Ser Gln Asn Asp Asn Thr Trp Phe Arg Leu Leu Arg Gly Ala Leu
85 90 95

Ala Asn Arg Lys Arg Ala Leu Pro Asp Arg Ala Lys Arg Gly Trp Asn
100 105 110

Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
115 120 125

Leu Gly Cys
130

Met 1	Met	Gly	Ser	Cys 5	Ser	Ala	Pro	Leu	Leu 10	Thr	Gly	His	Arg	Ile 15	Leu
Cys	Leu	Phe	Leu 20	Leu	Met	Ala	Ser	Ser 25	Leu	Ser	Pro	Ile	His 30	Ser	Arg
Ala	Phe	Arg 35	Ser	Pro	Pro	Leu	Gln 40	Phe	Leu	Ser	Thr	Leu 45	Leu	Glu	Lys
Glu	Tyr 50	Gly	Asn	Leu	Gln	Ser 55	Gly	Pro	Val	Asn	Ile 60	His	Asn	Val	Ser
Ser 65	Glu	Gln	Tyr	Glu	Asp 70	Pro	Gln	Pro	Trp	Ala 75	Asp	Val	Ser	Ser	Val 80
Ser	Lys	Glu	Gln	Ile 85	Trp	Gly	Asp	Glu	Pro 90	Pro	Ala	Asn	Glu	Asn 95	Ala
Leu	Tyr	Leu	Leu 100	Leu	Arg	Arg	Ala	Ala 105	Ala	Asn	Arg	Thr	Trp 110	Ile	Ser
Ala	Asp	Arg 115	Val	Lys	Lys	Ala	Trp 120	Ser	Lys	Gly	Cys	Phe 125	Gly	Leu	Lys
Leu	Asp 130	Arg	Ile	Gly	Ser	Ile 135	Ser	Gly	Leu	Gly	Cys 140				

4003140_1

Leu Leu Ser Ala Ser Val Gln Ala Met Ser Ser Ser Gly Gln Arg Leu
20 25 30

Gln Val Leu Leu Ser Gln Leu Leu Pro Ser Asp Ser Glu Ser Met Pro
35 40 45

Ala Glu Glu Asp Met Lys Glu Gly Ser Ser Ser Glu Pro Gln Leu Leu
50 55 60

Ser Pro Pro Leu Pro Leu Leu Pro Ser Arg Ala Arg Ala Ala His Pro
65 70 75 80

Leu Leu Trp Arg Lys Ala Leu Ala Ser Arg Lys Arg Ala Leu Ser Gly
85 90 95

Asp Trp Ala Trp Lys Ala Val Pro Arg Gly Cys Phe Gly Leu Lys Met
100 105 110

Asp Arg Ile Gly Ala Phe Ser Gly Leu Gly Cys
115 120

<210> 95
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
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<223> Xaa can be any naturally occurring amino acid or any amino acid
at the corresponding position in one of SEQ ID NOS: 31-94

<220>
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<222> (10)..(12)
<223> Xaa can be any naturally occurring amino acid or any amino acid
at the corresponding position in one of SEQ ID NOS: 31-94

<220>
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<222> (15)..(15)
<223> Xaa can be any naturally occurring amino acid or any amino acid
at the corresponding position in one of SEQ ID NOS: 31-94

<400> 95

Cys Phe Gly Xaa Xaa Xaa Xaa Arg Ile Xaa Xaa Xaa Ser Gly Xaa Gly
1 5 10 15

Cys

<210> 96

4003140_1

<211> 28
 <212> PRT
 <213> Rattus norvegicus

<400> 96

Ser Leu Arg Arg Ser Ser Cys Phe Gly Gly Arg Ile Asp Arg Ile Gly
 1 5 10 15

Ala Gln Ser Gly Leu Gly Cys Asn Ser Phe Arg Tyr
 20 25

<210> 97
 <211> 45
 <212> PRT
 <213> Rattus norvegicus

<400> 97

Ser Gln Asp Ser Ala Phe Arg Ile Gln Glu Arg Leu Arg Asn Ser Lys
 1 5 10 15

Met Ala His Ser Ser Ser Cys Phe Gly Gln Lys Ile Asp Arg Ile Gly
 20 25 30

Ala Val Ser Arg Leu Gly Cys Asp Gly Leu Arg Leu Phe
 35 40 45

<210> 98
 <211> 32
 <212> PRT
 <213> Sus scrofa

<400> 98

Ser Pro Lys Thr Met Arg Asp Ser Gly Cys Phe Gly Arg Arg Leu Asp
 1 5 10 15

Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys Asn Val Leu Arg Arg Tyr
 20 25 30

<210> 99
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (TNP-C)

<400> 99

Ser Asp Ser Lys Ile Gly Asn Gly Cys Phe Gly Phe Pro Leu Asp Arg
 1 5 10 15

Ile Gly Ser Val Ser Gly Leu Gly Cys Asn Arg Ile Met Gln Asn Pro
 20 25 30

Pro Lys Lys Phe Ser Gly Glu
 35

4003140_1

<210> 100
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP)

<400> 100

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 101
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-N1 (C7))

<400> 101

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Asn Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 102
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-G1 (C8))

<400> 102

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Gly Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

4003140_1

<210> 103
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-H1 (C9))

<400> 103

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys His Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 104
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-K1)

<400> 104

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Lys Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 105
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (23)..(23)
 <223> Xaa is hydroxyproline

<400> 105

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Xaa Ser Leu Arg Asp Pro Arg Pro Asn Ala
 20 25 30

4003140_1

Pro Ser Thr Ser Ala
35

<210> 106
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-S3)

<400> 106

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Arg Asp Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala
35

<210> 107
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-A4)

<400> 107

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Leu Ala Asp Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala
35

<210> 108
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-A5)

<400> 108

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Leu Arg Ala Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala
35

4003140_1

<210> 109
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-S3A4 (C12))

<400> 109

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Ala Asp Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 110
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-A4A5)

<400> 110

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Leu Ala Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 111
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-S3A5 (C11))

<400> 111

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Arg Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

4003140_1

<210> 112
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-(A17)S3A5)

<400> 112

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Ala Ser Gly Leu Gly Cys Pro Ser Ser Arg Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 113
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-S3A4A5 (C10))

<400> 113

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 114
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CDNP-(A17)S3A4A5)

<400> 114

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Ala Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala
 35

<210> 115
 <211> 37

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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-S3A4A5R6 (C13))

<400> 115

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Arg Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala
35

<210> 116
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-S3A4A5S7 (C14))

<400> 116

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Pro Ser Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala
35

<210> 117
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (DNP TAIL)

<400> 117

Pro Ser Leu Arg Asp Pro Arg Pro Asn Ala Pro Ser Thr Ser Ala
1 5 10 15

<210> 118
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> CONSENSUS SEQUENCE FOR DNP C-TERMINAL TAIL

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<221> MISC_FEATURE
<222> (1)..(1)

4003140_1

<223> xaa can be any naturally occurring amino acid or any amino acid at the corresponding position in one of SEQ ID NOS: 100-116

<220>

<221> MISC_FEATURE

<222> (3)..(7)

<223> xaa can be any naturally occurring amino acid or any amino acid at the corresponding position in one of SEQ ID NOS: 100-116

<400> 118

Xaa Ser Xaa Xaa Xaa Xaa Xaa Pro Asn Ala Pro Ser Thr Ser Ala
1 5 10 15

<210> 119

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CNP-F17 (C15))

<400> 119

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Phe Ser Gly Leu Gly Cys
20

<210> 120

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CNP-L17 (C16))

<400> 120

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Leu Ser Gly Leu Gly Cys
20

<210> 121

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CNP-I17 (C17))

<400> 121

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Ile Ser Gly Leu Gly Cys
20

4003140_1

<210> 122
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-T17 (C18))

<400> 122

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Thr Ser Gly Leu Gly Cys
 20

<210> 123
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-V17 (C19))

<400> 123

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Val Ser Gly Leu Gly Cys
 20

<210> 124
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-A17 (C1))

<400> 124

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Ala Ser Gly Leu Gly Cys
 20

<210> 125
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-S17)

<400> 125

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

4003140_1

Ser Ser Gly Leu Gly Cys
20

<210> 126
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> CONSENSUS SEQUENCE

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa can be any naturally occurring amino acid or any amino acid
at the corresponding position in one of SEQ ID NOS: 119-125

<400> 126

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Xaa Ser Gly Leu Gly Cys
20

<210> 127
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37)

<400> 127

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 128
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (E6PGCNP37)

<400> 128

Glu Glu Glu Glu Glu Glu Pro Gly Gln Glu His Pro Asn Ala Arg Lys
1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
20 25 30

4003140_1

Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40 45

<210> 129
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C1(E6))

<400> 129

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15

Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 130
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C2(E6))

<400> 130

Glu Glu Glu Glu Glu Glu Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro
 1 5 10 15

Ala Ala Ser Ser Pro Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 131
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C3(E6))

<400> 131

Glu Glu Glu Glu Glu Glu Pro Ser Ser Ala Ala Pro Gln Pro Asn Ala
 1 5 10 15

Pro Ser Thr Ser Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

4003140_1
Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 132
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (C4(E6))

<400> 132

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 133
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (C5(E6))

<400> 133

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 134
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (C6(E6))

<400> 134

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
1 5 10 15

Gly Ala Asn Lys Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

4003140_1

<210> 135
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C7(E6))

<400> 135

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 136
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C8(E6))

<400> 136

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 137
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C9(E6))

<400> 137

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

4003140_1

<210> 138
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C10(E6))

<400> 138

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 139
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C11(E6))

<400> 139

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Lys Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 140
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (D6CNP37)

<400> 140

Asp Asp Asp Asp Asp Asp Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
 1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 141
 <211> 43

4003140_1

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C1(D6))

<400> 141

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15

Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 142
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C2(D6))

<400> 142

Asp Asp Asp Asp Asp Asp Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro
 1 5 10 15

Ala Ala Ser Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 143
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C3(D6))

<400> 143

Asp Asp Asp Asp Asp Asp Gly Ser Ser Ala Ala Pro Gln Pro Asn Ala
 1 5 10 15

Pro Ser Thr Ser Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 144
 <211> 43
 <212> PRT
 <213> Artificial Sequence

4003140_1

<220>

<223> Synthetic Construct (C4(D6))

<400> 144

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 145

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (C5(D6))

<400> 145

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 146

<211> 43

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (C6(D6))

<400> 146

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
1 5 10 15

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 147

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

4003140_1

<223> Synthetic Construct (D6-14AAlinker-CNP)

<400> 147

Asp Asp Asp Asp Asp Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1 5 10 15

Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 148
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-14AAlinker-D6)

<400> 148

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 20 25 30

Gly Gly Gly Gly Asp Asp Asp Asp Asp Asp
 35 40

<210> 149
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-Nterm1)

<400> 149

Gly Ser Ser Ala Ala Pro Arg Pro Asn Ala Pro Ser Thr Ser Ala Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
 20 25 30

Ser Gly Leu Gly Cys
 35

<210> 150
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-Nterm2)

4003140_1

<400> 150

Ala Ser Thr Ser Pro Ala Asn Pro Arg Pro Ala Ala Ser Ser Gly Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 151

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CDNP29-S3A4A5R6 [C14])

<400> 151

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Arg Arg
20 25

<210> 152

<211> 42

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (KA1)

<400> 152

His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
20 25 30

Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
35 40

<210> 153

<211> 48

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (KA1(E6))

<400> 153

Glu Glu Glu Glu Glu Glu His Gly Pro Gln Gly Gln Glu His Pro Asn
1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
 20 25 30 4003140_1

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40 45

<210> 154
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB1)

<400> 154

His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 155
 <211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB1(E6))

<400> 155

Glu Glu Glu Glu Glu Glu His Lys Leu Arg Gly Gln Glu His Pro Asn
 1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
 20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 35 40 45

<210> 156
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-E17)

<400> 156

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Glu Ser Gly Leu Gly Cys
 20

4003140_1

<210> 157
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-R17)

<400> 157

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Arg Ser Gly Leu Gly Cys
 20

<210> 158
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-Y17)

<400> 158

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Tyr Ser Gly Leu Gly Cys
 20

<210> 159
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-C17)

<400> 159

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Cys Ser Gly Leu Gly Cys
 20

<210> 160
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-P17)

<400> 160

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Pro Ser Gly Leu Gly Cys
20

<210> 161
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP-D17)

<400> 161

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Asp Ser Gly Leu Gly Cys
20

<210> 162
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-X17)

<220>
<221> MISC_FEATURE
<222> (32)..(32)
<223> Xaa can be any naturally occurring amino acid, including but not
limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 162

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa
20 25 30

Ser Gly Leu Gly Cys
35

<210> 163
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-F17)

<400> 163

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe
Page 71

20 25 4003140_1 30

Ser Gly Leu Gly Cys
35

<210> 164
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-L17)

<400> 164

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu
20 25 30

Ser Gly Leu Gly Cys
35

<210> 165
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-I17)

<400> 165

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Ile
20 25 30

Ser Gly Leu Gly Cys
35

<210> 166
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-T17)

<400> 166

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Thr
20 25 30

Ser Gly Leu Gly Cys
35

<210> 167
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-E17)

<400> 167

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Glu
20 25 30

Ser Gly Leu Gly Cys
35

<210> 168
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-R17)

<400> 168

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg
20 25 30

Ser Gly Leu Gly Cys
35

<210> 169
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CNP37-Y17)

<400> 169

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr
20 25 30

Ser Gly Leu Gly Cys

35

<210> 170
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP37-C17)

<400> 170

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Cys
 20 25 30

Ser Gly Leu Gly Cys
 35

<210> 171
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP37-P17)

<400> 171

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Pro
 20 25 30

Ser Gly Leu Gly Cys
 35

<210> 172
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP37-D17)

<400> 172

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Asp
 20 25 30

Ser Gly Leu Gly Cys
 35

4003140_1

<210> 173
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA1-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 173

His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 174
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA2-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 174

Ser Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 175
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA3-X17)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 175

Gly Gly Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys
 1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
 20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 176
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA4-X17)

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 176

Gly Gly Gly Ser Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys
 1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
 20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 177
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA5-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 177

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
 1 5 10 15

4003140_1

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 178
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (KA6-X17)

<220>
<221> MISC_FEATURE
<222> (37)..(37)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 178

His Gly Pro Gln Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 179
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (KA7-X17)

<220>
<221> MISC_FEATURE
<222> (40)..(40)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 179

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40 45

4003140_1

<210> 180
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA8-X17)

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 180

Gly Gly Gly His Gly Pro Gln Gly Ser Gly Gly Gly Gly Ser Gly Gly
 1 5 10 15

Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
 20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 181
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB1-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 181

His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 182
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB2-X17)

<220>

4003140_1

<221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 182

Gly Gly Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys
 1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
 20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 183
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB3-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 183

His Lys Leu Arg Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
 1 5 10 15

Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 184
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB4-X17)

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 184

Gly Gly Gly His Lys Leu Arg Gly Ser Gly Gly Gly Gly Ser Gly Gly
 1 5 10 15

4003140_1

Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40 45

<210> 185
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (PGCNP37-X17)

<220>
<221> MISC_FEATURE
<222> (34)..(34)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 185

Pro Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys
1 5 10 15

Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
20 25 30

Ser Xaa Ser Gly Leu Gly Cys
35

<210> 186
<211> 48
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (KA1(E6)-X17)

<220>
<221> MISC_FEATURE
<222> (43)..(43)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 186

Glu Glu Glu Glu Glu Glu His Gly Pro Gln Gly Gln Glu His Pro Asn
1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40 45

<210> 187

4003140_1

<211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA2(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (43)..(43)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 187

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Gln Glu His Pro Asn
 1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
 20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 188
 <211> 51
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA3(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (46)..(46)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 188

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Gly Pro Gln Gly Gln Glu
 1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
 20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
 35 40 45

Leu Gly Cys
 50

<210> 189
 <211> 51
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA4(E6)-X17)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (46)..(46)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 189

Glu Glu Glu Glu Glu Glu Gly Gly Gly Ser Gly Gly Gly Gly Gln Glu
 1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
 20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
 35 40 45

Leu Gly Cys
 50

<210> 190
 <211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA5(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (43)..(43)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 190

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
 20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 191
 <211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KA6(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (43)..(43)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

4003140_1

limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 191

Glu Glu Glu Glu Glu Glu His Gly Pro Gln Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40 45

<210> 192

<211> 51

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (KA7(E6)-X17)

<220>

<221> MISC_FEATURE

<222> (46)..(46)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 192

Glu Glu Glu Glu Glu Glu Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
35 40 45

Leu Gly Cys
50

<210> 193

<211> 51

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (KA8(E6)-X17)

<220>

<221> MISC_FEATURE

<222> (46)..(46)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 193

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Gly Pro Gln Gly Ser Gly
1 5 10 15

4003140_1

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
35 40 45

Leu Gly Cys
50

<210> 194
<211> 48
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (KB1(E6)-X17)

<220>
<221> MISC_FEATURE
<222> (43)..(43)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 194

Glu Glu Glu Glu Glu Glu His Lys Leu Arg Gly Gln Glu His Pro Asn
1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40 45

<210> 195
<211> 51
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (KB2(E6)-X17)

<220>
<221> MISC_FEATURE
<222> (46)..(46)
<223> XXaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 195

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Lys Leu Arg Gly Gln Glu
1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

4003140_1

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
 35 40 45

Leu Gly Cys
 50

<210> 196
 <211> 48
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB3(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (43)..(43)
 <223> Xaa can be any naturally occurring amino acid, including but not
 limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 196

Glu Glu Glu Glu Glu Glu His Lys Leu Arg Gly Ser Gly Gly Gly Gly
 1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
 20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 197
 <211> 51
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (KB4(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (46)..(46)
 <223> Xaa can be any naturally occurring amino acid, including but not
 limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 197

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Lys Leu Arg Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
 20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly
 35 40 45

Leu Gly Cys
 50

4003140_1

<210> 198
 <211> 45
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (E6PGCNP37-X17)

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 198

Glu Glu Glu Glu Glu Glu Pro Gly Gln Glu His Pro Asn Ala Arg Lys
 1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
 20 25 30

Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40 45

<210> 199
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C1(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 199

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15

Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 200
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C2(E6)-X17)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 200

Glu Glu Glu Glu Glu Glu Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro
 1 5 10 15

Ala Ala Ser Ser Pro Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 201
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C3(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 201

Glu Glu Glu Glu Glu Glu Pro Ser Ser Ala Ala Pro Gln Pro Asn Ala
 1 5 10 15

Pro Ser Thr Ser Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 202
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C4(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 202

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys

1 5 4003140_1 15
10
Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 203
<211> 43
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (C5(E6)-X17)

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 203

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 204
<211> 43
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (C6(E6)-X17)

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 204

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
1 5 10 15

Gly Ala Asn Lys Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

4003140_1

<210> 205
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C7(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 205

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 206
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C8(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 206

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 207
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C9(E6)-X17)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 207

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 208
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C10(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 208

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 209
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C11(E6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 209

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

4003140_1

Gly Ala Asn Lys Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 210
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D6CNP37-X17)

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 210

Asp Asp Asp Asp Asp Asp Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

<210> 211
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (C1(D6)-X17)

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 211

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
35 40

4003140_1

<210> 212
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C2(D6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 212

Asp Asp Asp Asp Asp Asp Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro
 1 5 10 15

Ala Ala Ser Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 213
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C3(D6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 213

Asp Asp Asp Asp Asp Asp Gly Ser Ser Ala Ala Pro Gln Pro Asn Ala
 1 5 10 15

Pro Ser Thr Ser Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 214
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C4(D6)-X17)

<220>

4003140_1

<221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 214

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 215
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C5(D6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 215

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln
 1 5 10 15

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 216
 <211> 43
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (C6(D6)-X17)

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 216

Asp Asp Asp Asp Asp Asp Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys
 1 5 10 15

4003140_1

Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 20 25 30

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 217
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (D6-14AAlinker-CNP-X17)

<220>
 <221> MISC_FEATURE
 <222> (37)..(37)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 217

Asp Asp Asp Asp Asp Asp Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1 5 10 15

Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 20 25 30

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 35 40

<210> 218
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-14AAlinker-D6-X17)

<220>
 <221> MISC_FEATURE
 <222> (17)..(17)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 218

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Xaa Ser Gly Leu Gly Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 20 25 30

Gly Gly Gly Gly Asp Asp Asp Asp Asp Asp
 35 40

<210> 219

4003140_1

<211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-Nterm1-X17)

<220>
 <221> MISC_FEATURE
 <222> (32)..(32)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 219

Gly Ser Ser Ala Ala Pro Arg Pro Asn Ala Pro Ser Thr Ser Ala Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa
 20 25 30

Ser Gly Leu Gly Cys
 35

<210> 220
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-Nterm2-X17)

<220>
 <221> MISC_FEATURE
 <222> (32)..(32)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 220

Ala Ser Thr Ser Pro Ala Asn Pro Arg Pro Ala Ala Ser Ser Gly Gly
 1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa
 20 25 30

Ser Gly Leu Gly Cys
 35

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 <213> Artificial Sequence

<220>
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<400> 221

Glu Glu Glu Glu Glu Glu His Gly Pro Gln Gly Gln Glu His Pro Asn
 Page 95

1 5 4003140_1 15
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Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

<210> 222
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<400> 222

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Gln Glu His Pro Asn
1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

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<400> 223

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Gly Pro Gln Gly Gln Glu
1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
50

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<400> 224

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Glu Glu Glu Glu Glu Glu Gly Gly Gly Ser Gly Gly Gly Gly Gln Glu
1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
50

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<400> 225

Glu Glu Glu Glu Glu Glu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

<210> 226
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<213> Artificial Sequence

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<223> Synthetic Construct (KA6(E6)-L17)

<400> 226

Glu Glu Glu Glu Glu Glu His Gly Pro Gln Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

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<212> PRT
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<223> Synthetic Construct (KA7(E6)-L17)

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<400> 227

Glu Glu Glu Glu Glu Glu Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
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<210> 228

<211> 51

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<213> Artificial Sequence

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<223> Synthetic Construct (KA8(E6)-L17)

<400> 228

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Gly Pro Gln Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
50

<210> 229

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<223> Synthetic Construct (KB1(E6)-L17)

<400> 229

Glu Glu Glu Glu Glu Glu His Lys Leu Arg Gly Gln Glu His Pro Asn
1 5 10 15

Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

<210> 230

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<223> Synthetic Construct (KB2(E6)-L17)

<400> 230

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Lys Leu Arg Gly Gln Glu
1 5 10 15

His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
50

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<400> 231

Glu Glu Glu Glu Glu Glu His Lys Leu Arg Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys
20 25 30

Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

<210> 232
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<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (KB4(E6)-L17)

<400> 232

Glu Glu Glu Glu Glu Glu Gly Gly Gly His Lys Leu Arg Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys Gly Leu Ser
20 25 30

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
35 40 45

Leu Gly Cys
50

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<400> 233

Glu Glu Glu Glu Glu Glu Pro Gly Gln Glu His Pro Asn Ala Arg Lys
1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu
20 25 30

Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
35 40 45

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Gly

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Gly Gly

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<400> 303

Gly Gly Gly

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Gly Gly Gly Gly
 1

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<400> 305

Gly Gly Gly Gly Ser
 1 5

<210> 306
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<400> 306

Gly Gly Gly Gly Ser Gly
 1 5

<210> 307
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<400> 307

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10

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<400> 308

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

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<400> 309

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly
20

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<213> Artificial Sequence

<220>
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<400> 310

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
20 25

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<400> 311

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly

<210> 312
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<400> 312

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

4003140_1

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser Gly Gly Gly Gly Ser
35 40

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<400> 313

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
35 40 45

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Lys Gly Ala Asn Lys Lys
1 5

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Lys Gly Ala Asn Gln Lys
1 5

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Lys Gly Ala Asn Lys Gln
1 5

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<223> Synthetic Construct

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Lys Gly Ala Asn Gln Gln
1 5

<210> 318

<211> 6

<212> PRT

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<223> Synthetic Construct

<400> 318

Gln Gly Ala Asn Lys Lys
1 5

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<211> 6

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Gln Gly Ala Asn Gln Lys
1 5

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Gln Gly Ala Asn Lys Gln
1 5

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<223> Synthetic Construct

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Gln Gly Ala Asn Gln Gln
1 5

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<400> 322

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys
1 5 10 15

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<400> 323

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys
1 5 10 15

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<400> 324

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Gln
1 5 10 15

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<400> 325

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Gln
1 5 10 15

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<400> 326

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Gly Ala Asn Lys Lys
1 5 10 15

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<400> 327

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Gly Ala Asn Gln Lys
1 5 10 15

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<400> 328

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Gly Ala Asn Lys Gln
1 5 10 15

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<400> 329

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gln Gly Ala Asn Gln Gln
1 5 10 15

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<400> 330

Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala
1 5 10 15

Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn
20 25 30

Lys Lys

<210> 331
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 <212> PRT
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<220>
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<400> 331

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn
 20 25 30

Lys Lys

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<220>
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<400> 332

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn
 20 25 30

Gln Lys

<210> 333
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<400> 333

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
 1 5 10 15

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln Gly Ala Asn
 20 25 30

Gln Gln

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<400> 334

Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys
 1 5 10 15

<210> 335
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<400> 335

Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys
 1 5 10 15

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Pro Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys
 1 5 10 15

Lys

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<400> 337

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15

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<400> 338

Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro Ala Ala Ser Ser Pro
1 5 10 15

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Pro Ser Ser Ala Ala Pro Gln Pro Asn Ala Pro Ser Thr Ser Ala
1 5 10 15

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<400> 340

Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys
1 5 10 15

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<213> Artificial Sequence

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<400> 341

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln Gly Ala Asn Gln Gln
1 5 10 15

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<400> 342

Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Gln
1 5 10 15

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<400> 343

Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Gln Lys
1 5 10 15

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<400> 344

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln Gly Ala Asn Lys Lys
1 5 10 15

<210> 345
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<213> Artificial Sequence

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<400> 345

Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Gln Gln
1 5 10 15

<210> 346
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<400> 346

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln Gly Ala Asn Gln Lys
1 5 10 15

<210> 347
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<400> 347

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gln Gly Ala Asn Lys Gln
1 5 10 15

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<400> 348

Ala Ser Thr Ser Pro Ala Asn Pro Gln Pro Ala Ala Ser Ser Gly
 1 5 10 15

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<220>
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<400> 349

Gly Ser Ser Ala Ala Pro Gln Pro Asn Ala Pro Ser Thr Ser Ala
 1 5 10 15

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<400> 350

Gly Ser Ser Ala Ala Pro Arg Pro Asn Ala Pro Ser Thr Ser Ala Gly
 1 5 10 15

Leu Ser Lys Gly
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<210> 351
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<220>
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<400> 351

Ala Ser Thr Ser Pro Ala Asn Pro Arg Pro Ala Ala Ser Ser Gly
 1 5 10 15

<210> 352
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<220>
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<400> 352

His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys
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<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 353

His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys
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<210> 354

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Synthetic Construct

<400> 354

Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
 1 5 10 15

Gly Ala Asn Lys Lys
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<210> 355

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> Synthetic Construct

<400> 355

Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
 1 5 10 15

Gly Ala Asn Lys Lys
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<213> Artificial Sequence

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<223> Synthetic Construct

<400> 356

Gly Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys Tyr
1 5 10 15

Lys Gly Ala Asn Lys Lys
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<220>
<223> Synthetic Construct

<400> 357

Gly Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys Tyr
1 5 10 15

Lys Gly Ala Asn Lys Lys
20

<210> 358
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<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 358

Gly Gly Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg Lys
1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys
20

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<220>
<223> Synthetic Construct

<400> 359

Gly Gly Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg Lys
1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys
20

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<400> 360

Gly Gly Gly Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala Arg
 1 5 10 15

Lys Tyr Lys Gly Ala Asn Lys Lys
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<210> 361
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 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 361

Gly Gly Gly Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala Arg
 1 5 10 15

Lys Tyr Lys Gly Ala Asn Lys Lys
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<210> 362
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<400> 362

Gly Gly Gly Gly Gly His Gly Pro Gln Gly Gln Glu His Pro Asn Ala
 1 5 10 15

Arg Lys Tyr Lys Gly Ala Asn Lys Lys
 20 25

<210> 363
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<400> 363

Gly Gly Gly Gly Gly His Lys Leu Arg Gly Gln Glu His Pro Asn Ala
 1 5 10 15

Arg Lys Tyr Lys Gly Ala Asn Lys Lys 4003140_1
20 25

<210> 364
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 364

His Gly Pro Gln Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
1 5 10 15

Ala Asn Lys Lys
20

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<400> 365

His Lys Leu Arg Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
1 5 10 15

Ala Asn Lys Lys
20

<210> 366
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<213> Artificial Sequence

<220>
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<400> 366

Gly Gly Gly His Gly Pro Gln Gly Ser Gly Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Lys Gly Ala Asn Lys Lys
20

<210> 367
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<213> Artificial Sequence

<220>
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<400> 367

4003140_1
 Gly Gly Gly His Lys Leu Arg Gly Ser Gly Gly Gly Gly Ser Gly Gly
 1 5 10 15

Gly Lys Gly Ala Asn Lys Lys
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<210> 368
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct

<400> 368

Ser Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
 1 5 10 15

Ala Asn Lys Lys
 20

<210> 369
 <211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 369

Gly Gly Gly Ser Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys
 1 5 10 15

Tyr Lys Gly Ala Asn Lys Lys
 20

<210> 370
 <211> 20
 <212> PRT
 <213> Artificial Sequence

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<400> 370

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Lys Gly
 1 5 10 15

Ala Asn Lys Lys
 20

<210> 371
 <211> 25
 <212> PRT
 <213> Artificial Sequence

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<223> Synthetic Construct

<400> 371

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

Gly Gly Gly Lys Gly Ala Asn Lys Lys
20 25

<210> 372

<211> 23

<212> PRT

<213> Artificial Sequence

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<400> 372

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Lys Gly Ala Asn Lys Lys
20

<210> 373

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct

<400> 373

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Gly Ser Gly Gly Gly Lys Gly Ala Asn Lys Lys
20 25

<210> 374

<211> 5

<212> PRT

<213> Artificial Sequence

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<223> Synthetic Construct

<400> 374

His Gly Pro Gln Gly
1 5

<210> 375

<211> 5

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<400> 375

His Lys Leu Arg Gly
1 5

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<400> 376

Gly His Gly Pro Gln Gly
1 5

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<400> 377

Gly Gly His Gly Pro Gln Gly
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Gly Gly Gly His Gly Pro Gln Gly
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<213> Artificial Sequence

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<223> Synthetic Construct

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Gly Gly Gly Gly His Gly Pro Gln Gly
1 5

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Gly Gly Gly Gly Gly His Gly Pro Gln Gly
 1 5 10

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Gly His Lys Leu Arg Gly
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<400> 382

Gly Gly His Lys Leu Arg Gly
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<400> 383

Gly Gly Gly His Lys Leu Arg Gly
 1 5

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<400> 384

Gly Gly Gly Gly His Lys Leu Arg Gly
 1 5

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<212> PRT
<213> Artificial Sequence

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<400> 385

Gly Gly Gly Gly Gly His Lys Leu Arg Gly
1 5 10

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<223> Synthetic Construct

<400> 386

Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys
1 5 10 15

Lys

<210> 387
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<213> Artificial Sequence

<220>
<223> Synthetic Construct

<400> 387

Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn
1 5 10 15

Lys Lys

<210> 388
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<212> PRT
<213> Artificial Sequence

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<223> Synthetic Construct

<400> 388

Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala
1 5 10 15

Asn Lys Lys

<210> 389
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<212> PRT
<213> Artificial Sequence

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<400> 389

Gly Gly Gly Gly Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly
1 5 10 15

Ala Asn Lys Lys
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<210> 390
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<213> Artificial Sequence

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<223> Synthetic Construct

<400> 390

Leu Lys
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<213> Artificial Sequence

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<400> 391

Asp Ile
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<212> PRT

<213> Artificial Sequence

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<223> Synthetic Construct (Exemplary Fc Sequence (IgG-1))

<400> 401

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
Page 127

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<211> 314

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2st Protein Sequence (With Signal Sequence))

<400> 501

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Ala Ser Trp Ser His Pro Gln
20 25 30

Phe Glu Gln Ser Gly Gly Gly Gly Gly Glu Asn Leu Tyr Phe Gln Gly
35 40 45

Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
50 55 60

4003140_1

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 65 70 75 80
 Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 85 90
 His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
 100 105 110
 Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
 115 120 125
 Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 130 135 140
 Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 145 150 155 160
 Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 165 170 175
 Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
 180 185 190
 Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 195 200 205
 Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 210 215 220
 Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 225 230 235 240
 Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 245 250 255
 Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 260 265 270
 Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 275 280 285
 Gly Gly Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
 290 295 300
 Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 305 310

<210> 502
 <211> 289
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2st Protein Sequence (Without Signal Sequence))

<400> 502

Ala Ser Trp Ser His Pro Gln Phe Glu Gln Ser Gly Gly Gly Gly Gly
 1 5 10 15

Glu Asn Leu Tyr Phe Gln Gly Gly Asp Lys Thr His Thr Cys Pro Pro
 20 25 30

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 35 40 45

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 50 55 60

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 65 70 75 80

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 85 90 95

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 100 105 110

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 115 120 125

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 130 135 140

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 145 150 155 160

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 165 170 175

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 180 185 190

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 195 200 205

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 210 215 220

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 225 230 235 240

4003140_1
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser
 245 250 255

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Leu Ser Lys Gly
 260 265 270

Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly
 275 280 285

Cys

<210> 503
 <211> 290
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2B (w/ sig. seq.))

<400> 503

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

4003140_1

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu
275 280 285

Gly Cys
290

<210> 504
<211> 265
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2B (w/o sig. seq.))

<400> 504

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 145 150 155 160
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 225 230 235 240
 Gly Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
 245 250 255
 Ile Gly Ser Met Ser Gly Leu Gly Cys
 260 265

<210> 505
 <211> 296
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic Construct (NC2B-22 (w/ sig. seq.))
 <400> 505

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15
 Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30
 Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

4003140_1

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
275 280 285

Gly Ser Met Ser Gly Leu Gly Cys
290 295

<210> 506
<211> 271
<212> PRT
<213> Artificial Sequence

<220>

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<223> Synthetic Construct (NC2B-22 (w/o sig. seq.))

<400> 506

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Leu Ser Lys Gly Cys Phe
245 250 255

Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 260 265 4003140_1 270

<210> 507
 <211> 302
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2B-28 (w/ sig. seq.))

<400> 507

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

4003140_1

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly
275 280 285

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
290 295 300

<210> 508

<211> 277

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2B-28 (w/o sig. seq.))

<400> 508

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

4003140_1

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly
245 250 255

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
260 265 270

Ser Gly Leu Gly Cys
275

<210> 509
<211> 308
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-34 (w/ sig. seq.))

<400> 509

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

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Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
290 295 300

Gly Leu Gly Cys
305

<210> 510
<211> 283
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-34 (w/o sig. seq.))

<400> 510

4003140_1
 Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15
 Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30
 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45
 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60
 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 145 150 155 160
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 225 230 235 240
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly
 245 250 255
 Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 260 265 270

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 275 280 4003140_1

<210> 511
 <211> 290
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2-KGANKK (w/ sig. seq.))

<400> 511

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

4003140_1

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu
275 280 285

Gly Cys
290

<210> 512
<211> 265
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-KGANKK (w/o sig. seq.))

<400> 512

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

4003140_1

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Met Ser Gly Leu Gly Cys
260 265

<210> 513
<211> 290
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-KGANQK (w/ sig. seq.))
<400> 513

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

4003140_1

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu
275 280 285

Gly Cys
290

<210> 514

<211> 265

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-KGANQK (w/o sig. seq.))

<400> 514

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

4003140_1

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Met Ser Gly Leu Gly Cys
260 265

<210> 515
<211> 308
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2-CNP53mut2 (w/ sig. seq.))

<400> 515

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
 245 250 255

Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
 260 265 270

4003140_1

Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
290 295 300

Gly Leu Gly Cys
305

<210> 516
<211> 283
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2-CNP53mut2 (w/o sig. seq.))
<400> 516

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

4003140_1

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
225 230 235 240

Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
275 280

<210> 517
<211> 308
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (Fc-CNP53-A (w/ sig. seq.))

<400> 517

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

4003140_1

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
245 250 255

Leu Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Leu Leu Gln
260 265 270

Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Ala Ser
290 295 300

Gly Leu Gly Cys
305

<210> 518
<211> 283
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (Fc-CNP53-A (w/o sig. seq.))

<400> 518

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

4003140_1

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Arg Val Asp Thr Lys Ser Arg Ala
225 230 235 240

Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Ala Ser Gly Leu Gly Cys
275 280

<210> 519
<211> 308
<212> PRT
<213> Artificial Sequence

4003140_1

<220>

<223> Synthetic Construct (Fc-CNP53-AAA (w/ sig. seq.)

<400> 519

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
245 250 255

4003140_1

Leu Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Leu Leu Gln
260 265 270

Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Ala Ala Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Ala Ser
290 295 300

Gly Leu Gly Cys
305

<210> 520
<211> 283
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (Fc-CNP53-AAA (w/o sig. seq.))
<400> 520

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn 4003140_1
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Asp Leu Arg Val Asp Thr Lys Ser Arg Ala
 225 230 235 240
 Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
 245 250 255
 Gly Ala Asn Ala Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 260 265 270
 Asp Arg Ile Gly Ser Ala Ser Gly Leu Gly Cys
 275 280

<210> 521
 <211> 285
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (CNP-16AAlinker-Fc-His10 (NC1))
 <400> 521

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15
 Met Ser Gly Leu Gly Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 20 25 30
 Gly Gly Gly Gly Ser Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 35 40 45
 Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
 50 55 60
 Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 65 70 75 80
 Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 85 90 95
 Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 100 105 110

4003140_1

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
115 120 125

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
130 135 140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
180 185 190

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

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
225 230 235 240

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
245 250 255

Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Glu Asn Leu Tyr Phe
260 265 270

Gln Gly Ser His His His His His His His His His His
275 280 285

<210> 522

<211> 275

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (CNP-6AAlinker-Fc-His10 (NC3))

<400> 522

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys Gly Gly Gly Ser Gly Asp Lys Thr His
20 25 30

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
35 40 45

4003140_1

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
50 55 60

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
65 70 75 80

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
85 90 95

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
100 105 110

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
115 120 125

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
130 135 140

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
145 150 155 160

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
165 170 175

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
180 185 190

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
195 200 205

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
210 215 220

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
225 230 235 240

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly
245 250 255

Gly Glu Asn Leu Tyr Phe Gln Gly Ser His His His His His His His
260 265 270

His His His
275

<210> 523
<211> 255
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (CNP-6AAlinker-Fc)

4003140_1

<400> 523

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys Gly Gly Gly Ser Gly Asp Lys Thr His
 20 25 30

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
 35 40 45

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 50 55 60

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 65 70 75 80

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 85 90 95

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
 100 105 110

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 115 120 125

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 130 135 140

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 145 150 155 160

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 165 170 175

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 180 185 190

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 195 200 205

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 210 215 220

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 225 230 235 240

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 245 250 255

<210> 524

<211> 264

4003140_1

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-Fc)

<400> 524

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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1      5      10      15

Met Ser Gly Leu Gly Cys Pro Ser Leu Arg Asp Pro Arg Pro Asn Ala
      20      25      30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
      35      40      45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
      50      55      60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65      70      75      80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
      85      90      95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
      100      105      110

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
      115      120      125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
      130      135      140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
145      150      155      160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
      165      170      175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
      180      185      190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
      195      200      205

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
      210      215      220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225      230      235      240

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4003140_1
 Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
 260

<210> 525
 <211> 264
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic Construct (CDNP-A17saa-Fc)

<400> 525

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Ala Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Pro Arg Pro Asn Ala
 20 25 30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
 35 40 45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
 85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 100 105 110

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
 115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
 145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
 165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
 195 200 205

4003140_1

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 526
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-A17sra-Fc)

<400> 526

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Ala Ser Gly Leu Gly Cys Pro Ser Ser Arg Ala Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
35 40 45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
100 105 110

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
195 200 205

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 527
<211> 314
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2st-X17 (w/ sig. seq.))

<220>
<221> MISC_FEATURE
<222> (309)..(309)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 527

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Ala Ser Trp Ser His Pro Gln
20 25 30

Phe Glu Gln Ser Gly Gly Gly Gly Glu Asn Leu Tyr Phe Gln Gly
35 40 45

Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
50 55 60

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
65 70 75 80

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
85 90 95

4003140_1

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
100 105 110

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
115 120 125

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
130 135 140

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
145 150 155 160

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
165 170 175

Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val
180 185 190

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
195 200 205

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
210 215 220

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
225 230 235 240

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
245 250 255

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
260 265 270

Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
275 280 285

Gly Gly Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
290 295 300

Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
305 310

<210> 528
<211> 289
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2st-X17 (w/o sig. seq.))

<220>
<221> MISC_FEATURE

4003140_1

<222> (284)..(284)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 528

Ala Ser Trp Ser His Pro Gln Phe Glu Gln Ser Gly Gly Gly Gly Gly
1 5 10 15

Glu Asn Leu Tyr Phe Gln Gly Gly Asp Lys Thr His Thr Cys Pro Pro
20 25 30

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
35 40 45

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
50 55 60

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
65 70 75 80

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
85 90 95

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
100 105 110

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
115 120 125

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
130 135 140

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
145 150 155 160

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
165 170 175

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
180 185 190

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
195 200 205

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
210 215 220

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
225 230 235 240

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser
245 250 255

4003140_1

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Leu Ser Lys Gly
260 265 270

Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly
275 280 285

Cys

<210> 529
<211> 290
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic Construct (NC2B-X17 w/ sig. seq.))

<220>
<221> MISC_FEATURE
<222> (285)..(285)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 529

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
Page 170

4003140_1															
145				150				155				160			
Glu	Glu	Met	Thr	Lys 165	Asn	Gln	Val	Ser	Leu 170	Thr	Cys	Leu	Val	Lys 175	Gly
Phe	Tyr	Pro	Ser 180	Asp	Ile	Ala	Val	Glu 185	Trp	Glu	Ser	Asn	Gly 190	Gln	Pro
Glu	Asn	Asn 195	Tyr	Lys	Thr	Thr	Pro 200	Pro	Val	Leu	Asp	Ser 205	Asp	Gly	Ser
Phe	Phe 210	Leu	Tyr	Ser	Lys	Leu 215	Thr	Val	Asp	Lys	Ser 220	Arg	Trp	Gln	Gln
Gly 225	Asn	Val	Phe	Ser	Cys 230	Ser	Val	Met	His	Glu 235	Ala	Leu	His	Asn	His 240
Tyr	Thr	Gln	Lys	Ser 245	Leu	Ser	Leu	Ser	Pro 250	Gly	Lys	Gly	Gly	Gly 255	Gly
Ser	Gly	Gly	Gly 260	Gly	Ser	Gly	Gly	Gly 265	Gly	Ser	Gly	Gly	Leu 270	Ser	Lys
Gly	Cys	Phe 275	Gly	Leu	Lys	Leu	Asp 280	Arg	Ile	Gly	Ser	Xaa 285	Ser	Gly	Leu
Gly	Cys 290														

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

4003140_1

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Xaa Ser Gly Leu Gly Cys
260 265

<210> 531
<211> 296
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-22-X17 (w/ sig. seq.))

<220>
<221> MISC_FEATURE
<222> (291)..(291)

4003140_1

<223> xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 531

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

4003140_1

Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
275 280 285

Gly Ser Xaa Ser Gly Leu Gly Cys
290 295

<210> 532
<211> 271
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-22-X17 (w/o sig. seq.))

<220>
<221> MISC_FEATURE
<222> (266)..(266)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 532

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

4003140_1

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Leu Ser Lys Gly Cys Phe
245 250 255

Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
260 265 270

<210> 533
<211> 302
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-28-X17 (w/ sig. seq.))

<220>
<221> MISC_FEATURE
<222> (297)..(297)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 533

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
Page 175

85 4003140_1 95
90

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly
275 280 285

Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
290 295 300

<210> 534
<211> 277
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2B-28-X17 (w/o sig. seq.))

<220>
<221> MISC_FEATURE
<222> (272)..(272)
<223> Xaa can be any naturally occurring amino acid, including but not
Page 176

limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 534

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
245 250 255

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa
260 265 270

Ser Gly Leu Gly Cys
275

<210> 535
<211> 308
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic Construct (NC2B-34-X17 (w/ sig. seq.))

<220>
<221> MISC_FEATURE
<222> (303)..(303)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 535

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

4003140_1

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser
290 295 300

Gly Leu Gly Cys
305

<210> 536
<211> 283
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2B-34-X17 (w/o sig. seq.))

<220>
<221> MISC_FEATURE
<222> (278)..(278)
<223> Xaa can be any naturally occurring amino acid

<400> 536

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

4003140_1

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 145 150 155 160
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
 225 230 235 240
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 245 250 255
 Ser Gly Gly Gly Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 260 265 270
 Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 275 280

<210> 537
 <211> 290
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2-KGANKK-X17 (w/ sig. seq.))

<220>
 <221> MISC_FEATURE

4003140_1

<222> (285)..(285)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 537

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

4003140_1

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu
275 280 285

Gly Cys
290

<210> 538
<211> 265
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2-KGANKK-X17 (w/o sig. seq.))

<220>
<221> MISC_FEATURE
<222> (260)..(260)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 538

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
Page 182

4003140_1															
145				150				155				160			
Trp	Glu	Ser	Asn	Gly ₁₆₅	Gln	Pro	Glu	Asn	Asn ₁₇₀	Tyr	Lys	Thr	Thr	Pro ₁₇₅	Pro
Val	Leu	Asp	Ser ₁₈₀	Asp	Gly	Ser	Phe	Phe ₁₈₅	Leu	Tyr	Ser	Lys	Leu ₁₉₀	Thr	Val
Asp	Lys	Ser ₁₉₅	Arg	Trp	Gln	Gln	Gly ₂₀₀	Asn	Val	Phe	Ser	Cys ₂₀₅	Ser	Val	Met
His	Glu ₂₁₀	Ala	Leu	His	Asn	His ₂₁₅	Tyr	Thr	Gln	Lys	Ser ₂₂₀	Leu	Ser	Leu	Ser
Pro ₂₂₅	Gly	Lys	Gly	Gly	Gly ₂₃₀	Gly	Ser	Gly	Gly	Gly ₂₃₅	Gly	Ser	Lys	Gly	Ala ₂₄₀
Asn	Lys	Lys	Gly	Leu ₂₄₅	Ser	Lys	Gly	Cys	Phe ₂₅₀	Gly	Leu	Lys	Leu	Asp ₂₅₅	Arg
Ile	Gly	Ser	Xaa ₂₆₀	Ser	Gly	Leu	Gly	Cys ₂₆₅							

Met 1	Gly	Val	His	Glu 5	Cys	Pro	Ala	Trp	Leu 10	Trp	Leu	Leu	Leu	Ser 15	Leu
Leu	Ser	Leu	Trp 20	Pro	Gly	Ala	Tyr	Ala 25	Asp	Lys	Thr	His	Thr 30	Cys	Pro
Pro	Cys	Pro 35	Ala	Pro	Glu	Leu	Leu 40	Gly	Gly	Pro	Ser	Val 45	Phe	Leu	Phe
Pro	Pro 50	Lys	Pro	Lys	Asp	Thr 55	Leu	Met	Ile	Ser	Arg 60	Thr	Pro	Glu	Val
Thr 65	Cys	Val	Val	Val	Asp 70	Val	Ser	His	Glu	Asp 75	Pro	Glu	Val	Lys	Phe 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95
 Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125
 Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190
 Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205
 Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
 245 250 255
 Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
 260 265 270
 Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser Gly Leu
 275 280 285
 Gly Cys
 290

<210> 540
 <211> 265
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<223> xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 540

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

4003140_1

Ile Gly Ser Xaa Ser Gly Leu Gly Cys
260 265

<210> 541
<211> 308
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<222> (303)..(303)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 541

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

4003140_1

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
245 250 255

Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
260 265 270

Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser
290 295 300

Gly Leu Gly Cys
305

<210> 542
<211> 283
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 542

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr

65 70 4003140_1 80
 75
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 145 150 155 160
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
 225 230 235 240
 Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
 245 250 255
 Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 260 265 270
 Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
 275 280

<210> 543

<211> 308

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (Fc-CNP53-X17 (w/ sig. seq.))

<220>

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<222> (303)..(303)

<223> Xaa can be any naturally occurring amino acid, including but not

limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 543

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
245 250 255

Leu Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Leu Leu Gln
 260 265 270

Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu
 275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser
 290 295 300

Gly Leu Gly Cys
 305

<210> 544
 <211> 283
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (278)..(278)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 544

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

4003140_1

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Arg Val Asp Thr Lys Ser Arg Ala
225 230 235 240

Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
275 280

<210> 545
<211> 308
<212> PRT
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<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 545

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

4003140_1

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95
 Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125
 Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190
 Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205
 Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
 245 250 255
 Leu Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Leu Leu Gln
 260 265 270
 Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Ala Ala Gly Leu
 275 280 285
 Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Xaa Ser
 290 295 300
 Gly Leu Gly Cys
 305

<210> 546

<211> 283

4003140_1

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (Fc-CNP53-AA-X17 (w/o sig. seq.))

<220>
 <221> MISC_FEATURE
 <222> (278)..(278)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 546

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 Page 193

210

215

Pro Gly Lys Gly Gly Gly Asp Leu Arg Val Asp Thr Lys Ser Arg Ala
225 230 235 240

Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg Lys Tyr Lys
245 250 255

Gly Ala Asn Ala Ala Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Xaa Ser Gly Leu Gly Cys
275 280

<210> 547

<211> 285

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CNP-X17-16AAlinker-Fc-His10 (NC1))

<220>

<221> MISC_FEATURE

<222> (17)..(17)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 547

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Xaa Ser Gly Leu Gly Cys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25 30

Gly Gly Gly Gly Ser Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro
35 40 45

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
50 55 60

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
65 70 75 80

Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
85 90 95

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
100 105 110

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
115 120 125

4003140_1

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
 130 135 140

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
 145 150 155 160

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
 165 170 175

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
 180 185 190

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

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
 210 215 220

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
 225 230 235 240

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
 245 250 255

Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Glu Asn Leu Tyr Phe
 260 265 270

Gln Gly Ser His His His His His His His His His His
 275 280 285

<210> 548
 <211> 275
 <212> PRT
 <213> Artificial sequence

<220>
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<220>
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 <222> (17)..(17)
 <223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 548

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Xaa Ser Gly Leu Gly Cys Gly Gly Gly Ser Gly Asp Lys Thr His
 20 25 30

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
 35 40 45

4003140_1

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 50 55 60
 Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 65 70 75 80
 Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 85 90 95
 Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
 100 105 110
 Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 115 120 125
 Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 130 135 140
 Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 145 150 155 160
 Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 165 170 175
 Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 180 185 190
 Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 195 200 205
 Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 210 215 220
 Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 225 230 235 240
 His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly
 245 250 255
 Gly Glu Asn Leu Tyr Phe Gln Gly Ser His His His His His His His
 260 265 270
 His His His
 275

<210> 549

<211> 255

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (CNP-X17-6AAlinker-Fc)

<220>

<221> MISC_FEATURE

<222> (17)..(17)

<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 549

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Xaa Ser Gly Leu Gly Cys Gly Gly Gly Ser Gly Asp Lys Thr His
 20 25 30

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
 35 40 45

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
 50 55 60

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
 65 70 75 80

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
 85 90 95

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
 100 105 110

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
 115 120 125

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 130 135 140

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 145 150 155 160

Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 165 170 175

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 180 185 190

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 195 200 205

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 210 215 220

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 225 230 235 240

4003140_1

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
245 250 255

<210> 550
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-X17-Fc)

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 550

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Xaa Ser Gly Leu Gly Cys Pro Ser Leu Arg Asp Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
35 40 45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
100 105 110

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
Page 198

4003140_1

180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
195 200 205

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 551
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (CDNP-X17-saa-Fc)

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa can be any naturally occurring amino acid, including but not limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 551

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Xaa Ser Gly Leu Gly Cys Pro Ser Ser Ala Ala Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
35 40 45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
100 105 110

4003140_1

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
195 200 205

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 552
<211> 264
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic Construct (CDNP-X17-sra-Fc)

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa can be any naturally occurring amino acid, including but not
limited to Phe, Leu, Ile, Thr, Glu, Arg, Tyr, Cys, Pro, or Asp

<400> 552

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Xaa Ser Gly Leu Gly Cys Pro Ser Ser Arg Ala Pro Arg Pro Asn Ala
20 25 30

Pro Ser Thr Ser Ala Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala
35 40 45

4003140_1

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val
85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
100 105 110

Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
195 200 205

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 553
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANKK (w/sig. seq.))

<400> 553

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
Page 201

1 5 10 15
 Leu Ser Leu Trp₂₀ Pro Gly Ala Tyr Ala₂₅ Asp Asp Asp Asp Asp₃₀ Asp Asp
 Asp Asp Asp₃₅ Asp Lys Thr His Thr₄₀ Cys Pro Pro Cys₄₅ Pro Ala Pro Glu
 Leu Leu₅₀ Gly Gly Pro Ser Val₅₅ Phe Leu Phe Pro₆₀ Pro Lys Pro Lys Asp
 Thr₆₅ Leu Met Ile Ser Arg₇₀ Thr Pro Glu Val Thr₇₅ Cys Val Val Val Asp₈₀
 Val Ser His Glu₈₅ Asp Pro Glu Val Lys₉₀ Phe Asn Trp Tyr Val Asp₉₅ Gly
 Val Glu Val His₁₀₀ Asn Ala Lys Thr Lys₁₀₅ Pro Arg Glu Glu Gln₁₁₀ Tyr Asn
 Ser Thr Tyr₁₁₅ Arg Val Val Ser Val₁₂₀ Leu Thr Val Leu His₁₂₅ Gln Asp Trp
 Leu Asn₁₃₀ Gly Lys Glu Tyr Lys₁₃₅ Cys Lys Val Ser Asn₁₄₀ Lys Ala Leu Pro
 Ala₁₄₅ Pro Ile Glu Lys Thr₁₅₀ Ile Ser Lys Ala Lys₁₅₅ Gly Gln Pro Arg Glu₁₆₀
 Pro Gln Val Tyr Thr₁₆₅ Leu Pro Pro Ser Arg₁₇₀ Glu Glu Met Thr Lys₁₇₅ Asn
 Gln Val Ser Leu₁₈₀ Thr Cys Leu Val Lys₁₈₅ Gly Phe Tyr Pro Ser₁₉₀ Asp Ile
 Ala Val Glu₁₉₅ Trp Glu Ser Asn Gly₂₀₀ Gln Pro Glu Asn Asn₂₀₅ Tyr Lys Thr
 Thr Pro₂₁₀ Pro Val Leu Asp Ser₂₁₅ Asp Gly Ser Phe Phe₂₂₀ Leu Tyr Ser Lys
 Leu₂₂₅ Thr Val Asp Lys Ser₂₃₀ Arg Trp Gln Gln Gly₂₃₅ Asn Val Phe Ser Cys₂₄₀
 Ser Val Met His₂₄₅ Glu Ala Leu His Asn₂₅₀ Tyr Thr Gln Lys Ser₂₅₅ Leu
 Ser Leu Ser Pro₂₆₀ Gly Lys Gly Gly Gly₂₆₅ Gly Ser Gly Gly Gly₂₇₀ Gly Ser
 Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
 Page 202

4003140_1

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
260 265 270

Leu Gly Cys
275

<210> 555
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK (w/sig. seq.))

<400> 555

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
Page 204

145								150	4003140_1							155				160
Pro	Gln	Val	Tyr	Thr 165	Leu	Pro	Pro	Ser	Arg 170	Glu	Glu	Met	Thr	Lys 175	Asn					
Gln	Val	Ser	Leu 180	Thr	Cys	Leu	Val	Lys 185	Gly	Phe	Tyr	Pro	Ser 190	Asp	Ile					
Ala	Val	Glu 195	Trp	Glu	Ser	Asn	Gly 200	Gln	Pro	Glu	Asn	Asn 205	Tyr	Lys	Thr					
Thr	Pro 210	Pro	Val	Leu	Asp	Ser 215	Asp	Gly	Ser	Phe	Phe 220	Leu	Tyr	Ser	Lys					
Leu 225	Thr	Val	Asp	Lys	Ser 230	Arg	Trp	Gln	Gln	Gly 235	Asn	Val	Phe	Ser	Cys 240					
Ser	Val	Met	His	Glu 245	Ala	Leu	His	Asn	His 250	Tyr	Thr	Gln	Lys	Ser 255	Leu					
Ser	Leu	Ser	Pro 260	Gly	Lys	Gly	Gly	Gly 265	Gly	Ser	Gly	Gly	Gly 270	Gly	Ser					
Lys	Gly	Ala 275	Asn	Gln	Lys	Gly	Leu 280	Ser	Lys	Gly	Cys	Phe 285	Gly	Leu	Lys					
Leu	Asp 290	Arg	Ile	Gly	Ser	Met 295	Ser	Gly	Leu	Gly	Cys 300									

Asp 1	Asp	Asp	Asp	Asp 5	Asp	Asp	Asp	Asp	Asp	Asp 10	Asp	Lys	Thr	His	Thr 15	Cys
Pro	Pro	Cys	Pro 20	Ala	Pro	Glu	Leu	Leu 25	Gly	Gly	Pro	Ser	Val 30	Phe	Leu	
Phe	Pro	Pro 35	Lys	Pro	Lys	Asp	Thr 40	Leu	Met	Ile	Ser	Arg 45	Thr	Pro	Glu	
Val	Thr 50	Cys	Val	Val	Val	Asp 55	Val	Ser	His	Glu	Asp 60	Pro	Glu	Val	Lys	
Phe 65	Asn	Trp	Tyr	Val	Asp 70	Gly	Val	Glu	Val	His 75	Asn	Ala	Lys	Thr	Lys 80	

4003140_1

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
260 265 270

Leu Gly Cys
275

<210> 557
<211> 318
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-CNP53mut2 (w/sig. seq.))
<400> 557

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
Page 206

20

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30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln
260 265 270

Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln
275 280 285

Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
Page 207

290

295

4003140_1
300

Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
305 310 315

<210> 558

<211> 293

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-CNP53mut2 (w/o sig. seq.))

<400> 558

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

4003140_1

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu
245 250 255

Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly
260 265 270

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
275 280 285

Ser Gly Leu Gly Cys
290

<210> 559
<211> 290
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2-KGANKK-F17 (w/sig. seq.))

<400> 559

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
Page 209

4003140_1
140

130

135

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe Ser Gly Leu
275 280 285

Gly Cys
290

<210> 560

<211> 265

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (NC2-KGANKK-F17 (w/o sig. seq.))

<400> 560

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

4003140_1

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Phe Ser Gly Leu Gly Cys
260 265

<210> 561

<211> 290

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-KGANQK-F17 (w/sig. seq.))

<400> 561

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
Page 211

20

25

30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
 245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
 260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe Ser Gly Leu
 275 280 285

Gly Cys

290

<210> 562
 <211> 265
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2-KGANQK-F17 (w/o sig. seq.))
 <400> 562

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220

4003140_1

Pro Gly Lys Gly Gly Gly Ser Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Phe Ser Gly Leu Gly Cys
260 265

<210> 563
<211> 308
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-CNP53mut2-F17 (w/sig. seq.))
<400> 563

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
Page 214

4003140_1

180

185

190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
 245 250 255

Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
 260 265 270

Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
 275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe Ser
 290 295 300

Gly Leu Gly Cys
 305

<210> 564

<211> 283

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-CNP53mut2-F17 (w/o sig. seq.))

<400> 564

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95

4003140_1

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
225 230 235 240

Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
275 280

<210> 565

<211> 300

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-KGANKK-F17 (w/sig. seq.))

<400> 565

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
Page 216

35

40

45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
 65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
 85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
 100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
 115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
 165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 260 265 270

Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
 275 280 285

Leu Asp Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys
 290 295 300

<210> 566

4003140_1

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-KGANKK-F17 (w/o sig. seq.))

<400> 566

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240

4003140_1

Gly Ser Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe Ser Gly
260 265 270

Leu Gly Cys
275

<210> 567
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK-F17 (w/sig. seq.))
<400> 567

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
Page 219

4003140_1

180	185	190
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr	200	205
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys	210	220
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys	225	235
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu	245	250
Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser	260	270
Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys	275	280
Leu Asp Arg Ile Gly Ser Phe Ser Gly Leu Gly Cys	290	295

<210> 568
 <211> 275
 <212> PRT
 <213> Artificial sequence
 <220>
 <223> Synthetic Construct (D10-NC2-KGANQK-F17 (w/o sig. seq.))
 <400> 568

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys	5	10	15
Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu	20	25	30
Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu	35	40	45
Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys	50	55	60
Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys	65	70	75
Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu	85	90	95
Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys	100	105	110

4003140_1

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe Ser Gly
260 265 270

Leu Gly Cys
275

<210> 569

<211> 318

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-CNP53mut2-F17 (w/sig. seq.))

<400> 569

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
Page 221

50

55

Thr 65 Leu Met Ile Ser Arg 70 Thr Pro Glu Val Thr 75 Cys Val Val Val Asp 80
 Val Ser His Glu 85 Asp Pro Glu Val Lys Phe 90 Asn Trp Tyr Val Asp 95 Gly
 Val Glu Val His 100 Asn Ala Lys Thr Lys 105 Pro Arg Glu Glu Gln 110 Tyr Asn
 Ser Thr Tyr 115 Arg Val Val Ser Val 120 Leu Thr Val Leu His 125 Gln Asp Trp
 Leu Asn Gly 130 Lys Glu Tyr Lys 135 Cys Lys Val Ser Asn 140 Lys Ala Leu Pro
 Ala 145 Pro Ile Glu Lys Thr 150 Ile Ser Lys Ala Lys 155 Gly Gln Pro Arg Glu 160
 Pro Gln Val Tyr Thr 165 Leu Pro Pro Ser Arg 170 Glu Glu Met Thr Lys 175 Asn
 Gln Val Ser Leu 180 Thr Cys Leu Val Lys 185 Gly Phe Tyr Pro Ser 190 Asp Ile
 Ala Val Glu 195 Trp Glu Ser Asn Gly 200 Gln Pro Glu Asn Asn 205 Tyr Lys Thr
 Thr Pro 210 Pro Val Leu Asp Ser 215 Asp Gly Ser Phe Phe 220 Leu Tyr Ser Lys
 Leu 225 Thr Val Asp Lys Ser 230 Arg Trp Gln Gln Gly 235 Asn Val Phe Ser Cys 240
 Ser Val Met His Glu 245 Ala Leu His Asn His 250 Tyr Thr Gln Lys Ser 255 Leu
 Ser Leu Ser Pro 260 Gly Lys Gly Gly Gly 265 Asp Leu Gln Val Asp 270 Thr Gln
 Ser Gln Ala 275 Ala Trp Ala Gln Leu 280 Leu Gln Glu His Pro 285 Asn Ala Gln
 Gln Tyr 290 Lys Gly Ala Asn Lys 295 Lys Gly Leu Ser Lys 300 Gly Cys Phe Gly
 Leu 305 Lys Leu Asp Arg Ile 310 Gly Ser Phe Ser Gly 315 Leu Gly Cys

<210> 570

4003140_1

<211> 293
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (D10-NC2-CNP53mut2-F17 (w/o sig. seq.))

<400> 570

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240

4003140_1

Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu
245 250 255

Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly
260 265 270

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Phe
275 280 285

Ser Gly Leu Gly Cys
290

<210> 571

<211> 290

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (NC2-KGANKK-L17 (w/sig. seq.))

<400> 571

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
Page 224

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu
275 280 285

Gly Cys
290

<210> 572

<211> 265

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-KGANKK-L17 (w/o sig. seq.))

<400> 572

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

4003140_1

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Leu Ser Gly Leu Gly Cys
260 265

<210> 573

<211> 290

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-KGANQK-L17 (w/sig. seq.))

<400> 573

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
Page 226

4003140_1
60

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55

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu
275 280 285

Gly Cys
290

<210> 574
<211> 265
<212> PRT
<213> Artificial sequence

4003140_1

<220>

<223> Synthetic Construct (NC2-KGANQK-L17 (w/o sig. seq.))

<400> 574

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

4003140_1

Ile Gly Ser Leu Ser Gly Leu Gly Cys
260 265

<210> 575

<211> 308

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (NC2-CNP53mut2-L17 (w/sig. seq.))

<400> 575

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
Page 229

4003140_1
220

210

215

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
245 250 255

Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
260 265 270

Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser
290 295 300

Gly Leu Gly Cys
305

<210> 576
<211> 283
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-CNP53mut2-L17 (w/o sig. seq.))
<400> 576

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

4003140_1

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220
Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
225 230 235 240
Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
245 250 255
Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270
Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
275 280

<210> 577
<211> 300
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANKK-L17 (w/sig. seq.))
<400> 577

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30
Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
Page 231

4003140_1

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15
 Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240
 Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser
 245 250 255
 Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
 260 265 270

4003140_1

Leu Gly Cys
275

<210> 579
<211> 300
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK-L17 (w/sig. seq.))
<400> 579

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
Page 234

210

215

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
275 280 285

Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
290 295 300

<210> 580
<211> 275
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK-L17 (w/o sig. seq.))
<400> 580

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

4003140_1

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly
260 265 270

Leu Gly Cys
275

<210> 581

<211> 318

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (D10-NC2-CNP53mut2-L17 (w/sig. seq.))

<400> 581

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
Page 236

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln
260 265 270

Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln
275 280 285

Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
290 295 300

Leu Lys Leu Asp Arg Ile Gly Ser Leu Ser Gly Leu Gly Cys
305 310 315

<210> 582
<211> 293
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-CNP53mut2-L17 (w/o sig. seq.))

<400> 582

4003140_1

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15
 Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240
 Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu
 245 250 255
 Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly
 260 265 270

4003140_1

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Leu
 275 280 285

Ser Gly Leu Gly Cys
 290

<210> 583
 <211> 290
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2-KGANKK-R17 (w/sig. seq.))

<400> 583

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 Page 239

[illegible]

4003140_1

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
145 150 155 160
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220
Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240
Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255
Ile Gly Ser Arg Ser Gly Leu Gly Cys
260 265

<210> 585
<211> 290
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (NC2-KGANQK-R17 (w/sig. seq.))

<400> 585

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30
Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
Page 241

85 4003140_1 95
90

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg Ser Gly Leu
275 280 285

Gly Cys
290

<210> 586
<211> 265
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-KGANQK-R17 (w/o sig. seq.))
<400> 586

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

4003140_1

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30
 Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45
 Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60
 His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80
 Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95
 Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110
 Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125
 Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140
 Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
 145 150 155 160
 Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175
 Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190
 Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
 195 200 205
 His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
 210 215 220
 Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
 225 230 235 240
 Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
 245 250 255
 Ile Gly Ser Arg Ser Gly Leu Gly Cys
 260 265

<210> 587

<211> 308

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-CNP53mut2-R17 (w/sig. seq.))

<400> 587

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
 Page 244

245 4003140_1 255
250

Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
260 265 270

Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
275 280 285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg Ser
290 295 300

Gly Leu Gly Cys
305

<210> 588
<211> 283
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-CNP53mut2-R17 (w/o sig. seq.))

<400> 588

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

4003140_1

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
225 230 235 240

Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Arg Ser Gly Leu Gly Cys
275 280

<210> 589
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANKK-R17 (w/sig. seq.))

<400> 589

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
Page 246

4003140_1

100	105	110
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp		
115	120	125
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro		
130	135	140
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu		
145	150	155
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn		
165	170	175
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile		
180	185	190
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr		
195	200	205
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys		
210	215	220
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys		
225	230	235
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu		
245	250	255
Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser		
260	265	270
Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys		
275	280	285
Leu Asp Arg Ile Gly Ser Arg Ser Gly Leu Gly Cys		
290	295	300

<210> 590
 <211> 275
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (D10-NC2-KGANKK-R17 (w/o sig. seq.))

<400> 590

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15
Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

4003140_1

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240
 Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser
 245 250 255
 Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg Ser Gly
 260 265 270
 Leu Gly Cys
 275

<210> 591
 <211> 300
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-KGANQK-R17 (w/sig. seq.))

<400> 591

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
 20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
 35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
 65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
 85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
 100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
 115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
 165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 Page 249

245 4003140_1 255
250

Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
275 280 285

Leu Asp Arg Ile Gly Ser Arg Ser Gly Leu Gly Cys
290 295 300

<210> 592
<211> 275
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK-R17 (w/o sig. seq.))

<400> 592

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

4003140_1

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190
Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205
Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240
Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser
245 250 255
Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg Ser Gly
260 265 270
Leu Gly Cys
275

<210> 593
<211> 318
<212> PRT
<213> Artificial Sequence
<220>
<223> Synthetic Construct (D10-NC2-CNP53mut2-R17 (w/sig. seq.))
<400> 593

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30
Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
Page 251

4003140_1

115

120

125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
 165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln
 260 265 270

Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln
 275 280 285

Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
 290 295 300

Leu Lys Leu Asp Arg Ile Gly Ser Arg Ser Gly Leu Gly Cys
 305 310 315

<210> 594

<211> 293

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-CNP53mut2-R17 (w/o sig. seq.))

<400> 594

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30

4003140_1

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240
 Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu
 245 250 255
 Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly
 260 265 270
 Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Arg
 275 280 285
 Ser Gly Leu Gly Cys
 290

4003140_1

<210> 595
 <211> 290
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (NC2-KGANKK-Y17 (w/sig. seq.))

<400> 595

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 Page 254

4003140_1															
225				230				235				240			
Tyr	Thr	Gln	Lys	Ser ₂₄₅	Leu	Ser	Leu	Ser	Pro ₂₅₀	Gly	Lys	Gly	Gly	Gly	Gly ₂₅₅
Ser	Gly	Gly	Gly ₂₆₀	Gly	Ser	Lys	Gly	Ala ₂₆₅	Asn	Lys	Lys	Gly	Leu ₂₇₀	Ser	Lys
Gly	Cys	Phe ₂₇₅	Gly	Leu	Lys	Leu	Asp ₂₈₀	Arg	Ile	Gly	Ser	Tyr ₂₈₅	Ser	Gly	Leu
Gly	Cys ₂₉₀														

Asp 1	Lys	Thr	His	Thr 5	Cys	Pro	Pro	Cys	Pro 10	Ala	Pro	Glu	Leu	Leu 15	Gly
Gly	Pro	Ser	Val 20	Phe	Leu	Phe	Pro	Pro 25	Lys	Pro	Lys	Asp	Thr 30	Leu	Met
Ile	Ser	Arg 35	Thr	Pro	Glu	Val	Thr 40	Cys	Val	Val	Val	Asp 45	Val	Ser	His
Glu	Asp 50	Pro	Glu	Val	Lys	Phe 55	Asn	Trp	Tyr	Val	Asp 60	Gly	Val	Glu	Val
His 65	Asn	Ala	Lys	Thr	Lys 70	Pro	Arg	Glu	Glu	Gln 75	Tyr	Asn	Ser	Thr	Tyr 80
Arg	Val	Val	Ser	Val 85	Leu	Thr	Val	Leu	His 90	Gln	Asp	Trp	Leu	Asn 95	Gly
Lys	Glu	Tyr	Lys 100	Cys	Lys	Val	Ser	Asn 105	Lys	Ala	Leu	Pro	Ala 110	Pro	Ile
Glu	Lys	Thr 115	Ile	Ser	Lys	Ala	Lys 120	Gly	Gln	Pro	Arg	Glu 125	Pro	Gln	Val
Tyr	Thr 130	Leu	Pro	Pro	Ser	Arg 135	Glu	Glu	Met	Thr	Lys 140	Asn	Gln	Val	Ser
Leu 145	Thr	Cys	Leu	Val	Lys 150	Gly	Phe	Tyr	Pro	Ser 155	Asp	Ile	Ala	Val	Glu 160

4003140_1

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220
Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240
Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255
Ile Gly Ser Tyr Ser Gly Leu Gly Cys
260 265

<210> 597
<211> 290
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (NC2-KGANQK-Y17 (w/sig. seq.))
<400> 597

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
20 25 30
Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
35 40 45
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
50 55 60
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
65 70 75 80
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
85 90 95
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
100 105 110
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
Page 256

4003140_1

115

120

125

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
130 135 140

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
145 150 155 160

Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
165 170 175

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
180 185 190

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
195 200 205

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
210 215 220

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
225 230 235 240

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly
245 250 255

Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys
260 265 270

Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr Ser Gly Leu
275 280 285

Gly Cys
290

<210> 598

<211> 265

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-KGANQK-Y17 (w/o sig. seq.))

<400> 598

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
35 40 45

4003140_1

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
180 185 190

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala
225 230 235 240

Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg
245 250 255

Ile Gly Ser Tyr Ser Gly Leu Gly Cys
260 265

<210> 599

<211> 308

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (NC2-CNP53mut2-Y17 (w/sig. seq.))

<400> 599

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
Page 258

1 5 10 15
 Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Lys Thr His Thr Cys Pro
 20 25 30
 Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 35 40 45
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 50 55 60
 Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 65 70 75 80
 Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 85 90 95
 Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 100 105 110
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 115 120 125
 Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 130 135 140
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 145 150 155 160
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 165 170 175
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
 180 185 190
 Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
 195 200 205
 Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 210 215 220
 Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
 225 230 235 240
 Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly Asp
 245 250 255
 Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu Gln
 260 265 270
 Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly Leu
 Page 259

275

280

285

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr Ser
 290 295 300

Gly Leu Gly Cys
 305

<210> 600

<211> 283

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (NC2-CNP53mut2-Y17 (w/o sig. seq.))

<400> 600

Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
 1 5 10 15

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
 20 25 30

Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
 35 40 45

Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
 50 55 60

His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
 65 70 75 80

Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
 85 90 95

Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
 100 105 110

Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
 115 120 125

Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser
 130 135 140

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

Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
 165 170 175

Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
 180 185 190

4003140_1

Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
195 200 205

His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
210 215 220

Pro Gly Lys Gly Gly Gly Asp Leu Gln Val Asp Thr Gln Ser Gln Ala
225 230 235 240

Ala Trp Ala Gln Leu Leu Gln Glu His Pro Asn Ala Gln Gln Tyr Lys
245 250 255

Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
260 265 270

Asp Arg Ile Gly Ser Tyr Ser Gly Leu Gly Cys
275 280

<210> 601
<211> 300
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANKK-Y17 (w/sig. seq.))

<400> 601

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
Page 261

4003140_1
140

130

135

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
260 265 270

Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
275 280 285

Leu Asp Arg Ile Gly Ser Tyr Ser Gly Leu Gly Cys
290 295 300

<210> 602

<211> 275

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (D10-NC2-KGANKK-Y17 (w/o sig. seq.))

<400> 602

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
50 55 60

4003140_1

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Lys Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr Ser Gly
260 265 270

Leu Gly Cys
275

<210> 603
<211> 300
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (D10-NC2-KGANQK-Y17 (w/sig. seq.))

<400> 603

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
Page 263

1 5 10 15
 Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
 20 25 30
 Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
 35 40 45
 Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 50 55 60
 Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
 65 70 75 80
 Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
 85 90 95
 Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
 100 105 110
 Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
 115 120 125
 Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 130 135 140
 Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 145 150 155 160
 Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
 165 170 175
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 180 185 190
 Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205
 Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220
 Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 245 250 255
 Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 260 265 270
 Lys Gly Ala Asn Gln Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
 Page 264

275

280

285

Leu Asp Arg Ile Gly Ser Tyr Ser Gly Leu Gly Cys
 290 295 300

<210> 604

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-KGANQK-Y17 (w/o sig. seq.))

<400> 604

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
 1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205

4003140_1

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Lys Gly Ala Asn Gln Lys Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr Ser Gly
260 265 270

Leu Gly Cys
275

<210> 605

<211> 318

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (D10-NC2-CNP53mut2-Y17 (w/sig. seq.))

<400> 605

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
Page 266

4003140_1

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 65 70 75 80
 Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 85 90 95
 Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 100 105 110
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 115 120 125
 Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 130 135 140
 Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 145 150 155 160
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 165 170 175
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
 180 185 190
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 195 200 205
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 210 215 220
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
 225 230 235 240
 Asp Leu Gln Val Asp Thr Gln Ser Gln Ala Ala Trp Ala Gln Leu Leu
 245 250 255
 Gln Glu His Pro Asn Ala Gln Gln Tyr Lys Gly Ala Asn Lys Lys Gly
 260 265 270
 Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Tyr
 275 280 285
 Ser Gly Leu Gly Cys
 290

<210> 607
 <211> 300
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (D10-NC2 (w/sig. seq.))
 Page 268

4003140_1

<400> 607

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15

Leu Ser Leu Trp Pro Gly Ala Tyr Ala Asp Asp Asp Asp Asp Asp Asp
20 25 30

Asp Asp Asp Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
245 250 255

Ser Leu Ser Pro Gly Lys Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
Page 269

4003140_1

260 265 270

Gly Gly Gly Gly Ser Gly Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys
275 280 285

Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
290 295 300

<210> 608
<211> 275
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic Construct (D10-NC2 (w/o sig. seq.))

<400> 608

Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Asp Lys Thr His Thr Cys
1 5 10 15

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
20 25 30

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
35 40 45

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
50 55 60

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
65 70 75 80

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
85 90 95

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
100 105 110

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
115 120 125

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
130 135 140

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
145 150 155 160

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
165 170 175

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
180 185 190

4003140_1

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
195 200 205

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
210 215 220

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Gly Gly Gly
225 230 235 240

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Leu Ser
245 250 255

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
260 265 270

Leu Gly Cys
275

<210> 609

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<210> 610

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<210> 633

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

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

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Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe
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Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp
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Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
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Gly Ser Met Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
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Met Ser Gly Leu Gly Cys
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Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu
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Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
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Gly Leu Gly Cys
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Leu Gly Cys
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Lys Tyr Lys Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly
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Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Gly Ala Asn Lys Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
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Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Ser Gly Leu Gly Cys
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Gly Leu Gly Cys
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Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys Gly
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Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Asn
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Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
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Met Ser Gly Leu Gly Cys
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Met Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys Lys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
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Met Ser Gly Leu Gly Cys
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Met Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
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Met Ser Gly Leu Gly Cys
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Met Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
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Met Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
20 25 30

Asn Ser Gly Leu Gly Cys
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Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
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Ser Met Ser Gly Leu Gly Cys
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Met Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Lys
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Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
20 25 30

Ser Met Ser Gly Leu Gly Cys
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Asp Arg Ile Gly Ser Asn Ser Gly Leu Gly Cys
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Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Leu Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
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Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
20 25 30

Met Ser Gly Leu Gly Cys
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20 25 30

Asn Ser Gly Leu Gly Cys
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Pro Gly His Lys Ser Glu Val Ala His Arg Phe Lys Gly Ala Asn Lys
1 5 10 15

Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
20 25 30

Ser Met Ser Gly Leu Gly Cys
35

<210> 1056

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1056

Met Gly His Lys Ser Glu Val Ala His Arg Phe Lys Gly Ala Asn Lys
1 5 10 15

Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
20 25 30

Ser Met Ser Gly Leu Gly Cys
35

<210> 1057

<211> 23

<212> PRT

<213> Artificial Sequence

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<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1057

Arg Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
1 5 10 15

Ser Met Ser Gly Leu Gly Cys
20

<210> 1058

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1058

Glu Arg Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
1 5 10 15

Gly Ser Met Ser Gly Leu Gly Cys
20

<210> 1059

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1059

Gly Ala Asn Gln Gln Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
20 25

<210> 1060

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1060

Gly Ala Asn Arg Arg Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
20 25

<210> 1061

4003140_1

<211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1061

Gly Ala Asn Pro Arg Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 20 25

<210> 1062
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 1062

Gly Ala Asn Ser Ser Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu
 1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 20 25

<210> 1063
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1063

Gly Ala Asn Pro Arg Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu
 1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 20 25

<210> 1064
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1064

Gly Ala Asn Arg Arg Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu
 1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
 Page 322

20 25 4003140_1

<210> 1065
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1065

Gly Ala Asn Gln Gln Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu
1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
20 25

<210> 1066
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1066

Gly Ala Asn Ser Ser Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu
1 5 10 15

Asp Arg Ile Gly Ser Met Ser Gly Leu Gly Cys
20 25

<210> 1067
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1067

Ala Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Gly Leu Ser
1 5 10 15

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
20 25 30

Leu Gly Cys
35

<210> 1068
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

4003140_1

<400> 1068

Ala Ala Trp Ala Arg Leu Leu Gln Glu His Pro Asn Ala Arg Gly Leu
1 5 10 15

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
20 25 30

Gly Leu Gly Cys
35

<210> 1069

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1069

Asp Leu Arg Val Asp Thr Lys Ser Arg Ala Ala Trp Ala Arg Gly Leu
1 5 10 15

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
20 25 30

Gly Leu Gly Cys
35

<210> 1070

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1070

Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Pro Lys
1 5 10 15

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
20 25 30

Met Ser Gly Leu Gly Cys
35

<210> 1071

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1071

4003140_1

Gly Gln Glu His Pro Asn Ala Arg Lys Tyr Lys Gly Ala Asn Gln Lys
1 5 10 15

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
20 25 30

Met Ser Gly Leu Gly Cys
35

<210> 1072
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1072

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1073
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1073

Glu Arg Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
1 5 10 15

Gly Ser Met Ser Gly Leu Gly Cys
20

<210> 1074
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1074

Arg Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
1 5 10 15

Ser Met Ser Gly Leu Gly Cys
20

<210> 1075

4003140_1

<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1075

Gly Leu Ser Arg Gly Cys Phe Gly Leu Arg Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1076
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is D-Phe

<400> 1076

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1077
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is 3-amino-2-phenylpropionic acid

<400> 1077

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1078
<211> 22
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1078

Arg Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1079

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1079

Glu Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1080

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1080

Gly Leu Ser Lys Arg Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1081

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1081

Gly Leu Ser Lys Gln Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

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<210> 1082
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1082

Gly Leu Ser Lys Ser Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1083
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1083

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Ser Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1084
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1084

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Asn Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1085
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1085

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Arg Ser
 1 5 10 15

4003140_1

Met Ser Gly Leu Gly Cys
20

<210> 1086
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Cit

<400> 1086

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Xaa Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1087
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1087

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Ser Leu Gly Cys
20

<210> 1088
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1088

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Arg Leu Gly Cys
20

<210> 1089
<211> 22
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1089

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Asn Leu Gly Cys
20

<210> 1090

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1090

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Ser Cys
20

<210> 1091

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1091

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Thr Cys
20

<210> 1092

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1092

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Arg Cys
20

4003140_1

<210> 1093
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (6)..(7)
 <223> [CH2NH] bond between residues 6 and 7

<400> 1093

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1094
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa is N-Me-Phe

<400> 1094

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1095
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa is t-Bu-Gly

<400> 1095

Gly Leu Ser Lys Gly Cys Phe Xaa Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

4003140_1

Met Ser Gly Leu Gly Cys
20

<210> 1096
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is NHCH₂CH(Ph)CO

<400> 1096

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1097
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1097

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gly Leu
1 5 10 15

Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
20 25 30

Gly Leu Gly Cys
35

<210> 1098
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1098

Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

4003140_1

Ser Gly Leu Gly Cys
35

<210> 1099
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1099

Gly Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Gly Ala Asn Pro
1 5 10 15

Arg Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
20 25 30

Ser Met Ser Gly Leu Gly Cys
35

<210> 1100
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1100

Gly His His Ser His Glu Gln His Pro His Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1101
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1101

Gly Ala His His Pro His Glu His Asp Thr His Gly Ala Asn Gln Gln
1 5 10 15

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
20 25 30

Met Ser Gly Leu Gly Cys

35

<210> 1102
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1102

Phe Gly Ile Pro Met Asp Arg Ile Gly Arg Asn Pro Arg Gly Leu Ser
 1 5 10 15

Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser Gly
 20 25 30

Leu Gly Cys
 35

<210> 1103
 <211> 40
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1103

Gly Lys Arg Thr Gly Gln Tyr Lys Leu Gly Ser Lys Thr Gly Pro Gly
 1 5 10 15

Pro Lys Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile
 20 25 30

Gly Ser Met Ser Gly Leu Gly Cys
 35 40

<210> 1104
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1104

Ser Pro Lys Met Val Gln Gly Ser Gly Cys Phe Gly Leu Lys Leu Asp
 1 5 10 15

Arg Ile Gly Ser Met Ser Gly Leu Gly Cys Lys Val Leu Arg Arg His
 20 25 30

<210> 1105
 <211> 37
 <212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1105

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1106

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1106

Gly Val Pro Gln Val Ser Thr Ser Thr Gly Ala Asn Gln Gln Gly Leu
1 5 10 15

Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met Ser
20 25 30

Gly Leu Gly Cys
35

<210> 1107

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1107

Gly Gln Pro Ser Ser Ser Ser Gln Ser Thr Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1108

<211> 37

<212> PRT

<213> Artificial Sequence

4003140_1

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1108

Gly Ser Thr Gly Gln Trp His Ser Glu Ser Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1109

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1109

Gly Gln Thr His Ser Ser Gly Thr Gln Ser Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1110

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1110

Gly Ser Ser Ser Ser Ser Ser Ser Ser Ser Gly Ala Asn Gln Gln Gly
1 5 10 15

Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser Met
20 25 30

Ser Gly Leu Gly Cys
35

<210> 1111

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (6)..(7)
 <223> [CH2NH] bond between residues 6 and 7

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa is N-Me-Leu

<220>
 <221> MISC_FEATURE
 <222> (20)..(20)
 <223> Xaa is N-Me-Leu

<400> 1111

Gly Leu Ser Lys Gly Cys Phe Gly Xaa Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Xaa Gly Cys
 20

<210> 1112
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa is N-Me-Leu

<220>
 <221> MISC_FEATURE
 <222> (20)..(20)
 <223> Xaa is N-Me-Leu

<400> 1112

Gly Leu Ser Lys Gly Cys Phe Gly Xaa Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Xaa Gly Cys
 20

<210> 1113
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)

<223> Xaa is N-Me-Leu

<220>

<221> MISC_FEATURE

<222> (11)..(11)

<223> Xaa is N-Me-Leu

<220>

<221> MISC_FEATURE

<222> (20)..(20)

<223> Xaa is N-Me-Leu

<400> 1113

Gly Leu Ser Lys Gly Cys Phe Gly Xaa Lys Xaa Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Xaa Gly Cys
20

<210> 1114

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<220>

<221> MISC_FEATURE

<222> (9)..(9)

<223> Xaa is N-Me-Leu

<220>

<221> MISC_FEATURE

<222> (11)..(11)

<223> Xaa is N-Me-Leu

<400> 1114

Gly Leu Ser Lys Gly Cys Phe Gly Xaa Lys Xaa Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1115

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1115

Gly Leu Ser Arg Gly Cys Tyr Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

4003140_1

<210> 1116
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1116

Gly Leu Ser Arg Gly Cys Phe Val Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1117
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1117

Gly Leu Ser Arg Gly Cys Phe Ser Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1118
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1118

Gly Leu Ser Arg Gly Cys Phe Thr Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1119
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1119

Gly Leu Ser Arg Gly Cys Phe Gly Thr Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

4003140_1

Met Ser Gly Leu Gly Cys
20

<210> 1120
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1120

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Arg Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1121
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa is Cit

<400> 1121

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Xaa Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1122
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1122

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Val Ser Gly Leu Gly Cys
20

<210> 1123
<211> 22
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1123

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Val Gly Cys
20

<210> 1124

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<220>

<221> MISC_FEATURE

<222> (20)..(20)

<223> Xaa is t-Bu-Ala

<400> 1124

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Xaa Gly Cys
20

<210> 1125

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1125

Glu Leu Ser Glu Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1126

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<220>

<221> MISC_FEATURE

4003140_1

<222> (1)..(1)
 <223> Xaa is pentanoic acid

<400> 1126

Xaa Glu Leu Ser Glu Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
 1 5 10 15

Ser Met Ser Gly Leu Gly Cys
 20

<210> 1127
 <211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (1)..(1)
 <223> Xaa is heptanoic acid

<400> 1127

Xaa Glu Leu Ser Glu Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
 1 5 10 15

Ser Met Ser Gly Leu Gly Cys
 20

<210> 1128
 <211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (1)..(1)
 <223> Xaa is pentanoic acid

<400> 1128

Xaa Glu Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
 1 5 10 15

Ser Met Ser Gly Leu Gly Cys
 20

<210> 1129
 <211> 23
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

4003140_1

<220>
 <221> MISC_FEATURE
 <222> (1)..(1)
 <223> Xaa is heptanoic acid

<400> 1129

Xaa Glu Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly
 1 5 10 15

Ser Met Ser Gly Leu Gly Cys
 20

<210> 1130
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (10)..(10)
 <223> Xaa is Cit

<400> 1130

Gly Leu Ser Lys Gly Cys Phe Gly Leu Xaa Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1131
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1131

Gly Leu Ser Lys Gly Cys Phe Gly Leu Gln Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1132
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1132

4003140_1

Gly Leu Ser Lys Gly Cys Phe Gly Leu Arg Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1133
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1133

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Asn Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1134
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1134

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Ser Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1135
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (1)..(22)
<223> All D-amino acids

<400> 1135

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

4003140_1

<210> 1136
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa is N-Me-Leu

<400> 1136

Gly Leu Ser Lys Gly Cys Phe Gly Xaa Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1137
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (11)..(11)
 <223> Xaa is N-Me-Leu

<400> 1137

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Xaa Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1138
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<220>
 <221> MISC_FEATURE
 <222> (20)..(20)
 <223> Xaa is N-Me-Leu

<400> 1138

Gly Leu Ser Lys Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

4003140_1

Met Ser Gly Xaa Gly Cys
20

<210> 1139
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is 3,4-dichloro-Phe

<400> 1139

Gly Leu Ser Gly Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1140
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is 3-Me-Phe

<400> 1140

Gly Leu Ser Gly Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
20

<210> 1141
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)

<400> 1141

Gly Leu Ser Arg Ser Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys

20

<210> 1142
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1142

Gly Leu Ser Arg Arg Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1143
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1143

Gly Leu Ser Gly Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
 20

<210> 1144
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1144

Gly Leu Ser Gly Gly Cys Phe Gly Leu Ser Leu Asp Arg Ile Gly Ser
 1 5 10 15

Met Ser Gly Leu Gly Cys
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<210> 1145
 <211> 22
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (additional CNP variant)

<400> 1145

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Gln
 Page 347

1 5 4003140_1 15
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Met Ser Gly Leu Gly Cys
20

<210> 1146
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)
<400> 1146

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Asn Ser Gly Leu Gly Cys
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<210> 1147
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)
<400> 1147

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Ser Leu Gly Cys
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<210> 1148
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)
<400> 1148

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Arg Leu Gly Cys
20

<210> 1149
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (additional CNP variant)
Page 348

4003140_1

<400> 1149

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Arg Gly Cys
20

<210> 1150

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1150

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Ser Cys
20

<210> 1151

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1151

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Thr Cys
20

<210> 1152

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1152

Gly Leu Ser Arg Gly Cys Phe Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Arg Cys
20

<210> 1153

<211> 22

<212> PRT

4003140_1

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa is D-Phe

<400> 1153

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
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<210> 1154

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa is 3-Cl-Phe

<400> 1154

Gly Leu Ser Lys Gly Cys Xaa Gly Leu Lys Leu Asp Arg Ile Gly Ser
1 5 10 15

Met Ser Gly Leu Gly Cys
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<210> 1155

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (additional CNP variant)

<400> 1155

Arg Ser Ser Cys Phe Gly Gly Arg Ile Ser Arg Ile Gly Ala Cys Phe
1 5 10 15

Phe Phe Phe Phe
20

<210> 1156

<400> 1156

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<210> 1171

<400> 1171
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<210> 1172

<400> 1172
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4003140_1

<210> 1198

<400> 1198
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<210> 1199

<400> 1199
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<210> 1200

<400> 1200
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<210> 1201

<211> 743

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (sTNALP-FcD10 w/sig. seq.)

<400> 1201

Met Val Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1 5 10 15Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
20 25 30Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr
35 40 45Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
65 70 75 80Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
85 90 95Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly
130 135 140Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

4003140_1

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
 180 185 190
 Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205
 Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu
 305 310 315 320
 Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser
 355 360 365
 Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
 420 425 430
 Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445

4003140_1

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys
 450 455 460
 Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val
 465 470 475 480
 Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His
 485 490 495
 Cys Ala Pro Ala Ser Ser Leu Lys Asp Lys Thr His Thr Cys Pro Pro
 500 505 510
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 515 520 525
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 530 535 540
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 545 550 555 560
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 565 570 575
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 580 585 590
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 595 600 605
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 610 615 620
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 625 630 635 640
 Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 645 650 655
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 660 665 670
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 675 680 685
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 690 695 700
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 705 710 715 720

4003140_1

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Asp Ile Asp Asp Asp
725 730 735

Asp Asp Asp Asp Asp Asp Asp
740

<210> 1202

<211> 502

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (hsTNALP (1-502))

<400> 1202

Met Val Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1 5 10 15

Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
20 25 30

Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr
35 40 45

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
65 70 75 80

Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125

Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly
130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
180 185 190

4003140_1
 Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205
 Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu
 305 310 315 320
 Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser
 355 360 365
 Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
 420 425 430
 Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445
 Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys
 450 455 460

4003140_1
 Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val
 465 470 475 480

Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His
 485 490 495

Cys Ala Pro Ala Ser Ser
 500

<210> 1203

<400> 1203
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<210> 1204

<211> 726

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic Construct (sTNALP-FcD10 w/o sig. seq.)

<400> 1204

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
 1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
 20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
 35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
 50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
 65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
 85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
 100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
 115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
 130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
 145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
 Page 359

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
 180 185 190
 His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
 195 200 205
 Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
 210 215 220
 Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
 225 230 235 240
 Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
 245 250 255
 Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
 260 265 270
 Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
 275 280 285
 Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
 290 295 300
 Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
 305 310 315 320
 His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
 325 330 335
 Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
 340 345 350
 Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
 355 360 365
 Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
 370 375 380
 Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
 385 390 395 400
 Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
 405 410 415
 Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
 420 425 430
 Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
 Page 360

435 440 445
 Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
 450 455 460
 His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
 465 470 475 480
 Ala Pro Ala Ser Ser Leu Lys Asp Lys Thr His Thr Cys Pro Pro Cys
 485 490 495
 Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 500 505 510
 Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 515 520 525
 Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 530 535 540
 Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 545 550 555 560
 Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 565 570 575
 His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 580 585 590
 Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 595 600 605
 Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
 610 615 620
 Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 625 630 635 640
 Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 645 650 655
 Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 660 665 670
 Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 675 680 685
 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 690 695 700
 Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys Asp Ile Asp Asp Asp Asp
 Page 361

705 710 4003140_1 715 720

Asp Asp Asp Asp Asp Asp
725

<210> 1205
<211> 485
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Construct (hsTNALP (18-502))

<400> 1205

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
165 170 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
180 185 190

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
195 200 205

4003140_1

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
 210 215 220
 Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
 225 230 235 240
 Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
 245 250 255
 Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
 260 265 270
 Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
 275 280 285
 Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
 290 295 300
 Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
 305 310 315 320
 His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
 325 330 335
 Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
 340 345 350
 Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
 355 360 365
 Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
 370 375 380
 Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
 385 390 395 400
 Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
 405 410 415
 Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
 420 425 430
 Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
 435 440 445
 Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
 450 455 460
 His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His Cys
 465 470 475 480

4003140_1

Ala Pro Ala Ser Ser
485

<210> 1206
<211> 524
<212> PRT
<213> Bos taurus

<400> 1206

Met Ile Ser Pro Phe Leu Leu Leu Ala Ile Gly Thr Cys Phe Ala Ser
1 5 10 15

Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
20 25 30

Ala Gln Gln Thr Leu Lys Asn Ala Leu Arg Leu Gln Thr Leu Asn Thr
35 40 45

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Ser
65 70 75 80

Pro Gly Glu Glu Thr Lys Leu Glu Met Asp Lys Phe Pro Tyr Val Ala
85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125

Gly Val Ser Ala Ala Thr Gln Arg Ser Gln Cys Asn Thr Thr Gln Gly
130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

Ser Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
180 185 190

Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
195 200 205

Met Tyr Asn Ile Lys Asp Ile Glu Val Ile Met Gly Gly Gly Arg Lys
210 215 220

4003140_1

Tyr Met Phe Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Leu Asp Glu
 225 230 235 240

Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asn Leu Ile Asp Ile Trp
 245 250 255

Lys Ser Phe Lys Pro Lys His Lys His Ser His Tyr Val Trp Asn Arg
 260 265 270

Thr Asp Leu Leu Ala Leu Asp Pro His Ser Val Asp Tyr Leu Leu Gly
 275 280 285

Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Ala
 290 295 300

Thr Asp Pro Ser Leu Ser Glu Met Val Glu Met Ala Ile Arg Ile Leu
 305 310 315 320

Asn Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335

Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350

Val Glu Met Asp Gln Ala Ile Gly Gln Ala Gly Ala Met Thr Ser Val
 355 360 365

Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380

Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400

Met Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415

Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
 420 425 430

Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys
 450 455 460

Gly Pro Met Ala His Leu Leu His Gly Val Gln Glu Gln Asn Tyr Ile
 465 470 475 480

Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Arg Asp His
 485 490 495

4003140_1

Cys Ala Ser Ala Ser Ser Ser Gly Ser Pro Ser Pro Gly Pro Leu Leu
 500 505 510

Leu Leu Leu Ala Leu Leu Pro Leu Gly Ser Leu Phe
 515 520

<210> 1207
 <211> 524
 <212> PRT
 <213> Felis catus
 <400> 1207

Met Ile Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
 1 5 10 15

Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
 20 25 30

Ala Gln Gln Thr Leu Lys Asn Ala Leu Arg Leu Gln Lys Leu Asn Thr
 35 40 45

Asn Val Val Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
 50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
 65 70 75 80

Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Tyr Val Ala
 85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
 100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
 115 120 125

Gly Val Ser Ala Ala Thr Gln Arg Thr Gln Cys Asn Thr Thr Gln Gly
 130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ser Gly Lys Ser
 145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
 165 170 175

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
 180 185 190

Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205

Met His Asn Val Arg Asp Ile Glu Val Ile Met Gly Gly Gly Arg Lys

210

215

Tyr Met Phe Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Met Asp Glu
225 230 235 240

Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asn Leu Val Asp Ile Trp
245 250 255

Lys Ser Phe Lys Pro Arg His Lys His Ser His Tyr Val Trp Asn Arg
260 265 270

Thr Glu Leu Leu Thr Leu Asp Pro Tyr Gly Val Asp Tyr Leu Leu Gly
275 280 285

Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Ser Thr
290 295 300

Thr Asp Pro Ser Leu Ser Glu Met Val Glu Ile Ala Ile Lys Ile Leu
305 310 315 320

Ser Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
325 330 335

Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
340 345 350

Val Glu Met Asp Gln Ala Ile Gly Arg Ala Gly Ala Met Thr Ser Val
355 360 365

Glu Asp Thr Leu Thr Ile Val Thr Ala Asp His Ser His Val Phe Thr
370 375 380

Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
385 390 395 400

Met Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ser Ile Leu Tyr Gly
405 410 415

Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
420 425 430

Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
435 440 445

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys
450 455 460

Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile
465 470 475 480

Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Asp His
Page 367

485 4003140_1 495
490

Cys Ala Ser Ala Ser Ser Ala Gly Gly Pro Ser Pro Gly Pro Leu Phe
500 505 510

Leu Leu Leu Ala Leu Pro Ser Leu Gly Ile Leu Phe
515 520

<210> 1208
<211> 524
<212> PRT
<213> Homo sapiens

<400> 1208

Met Ile Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1 5 10 15

Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
20 25 30

Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr
35 40 45

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
65 70 75 80

Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125

Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly
130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
180 185 190

Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
195 200 205

4003140_1

Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu
 305 310 315 320
 Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser
 355 360 365
 Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
 420 425 430
 Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445
 Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys
 450 455 460
 Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val
 465 470 475 480

4003140_1

Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His
485 490 495

Cys Ala Pro Ala Ser Ser Ala Gly Ser Leu Ala Ala Gly Pro Leu Leu
500 505 510

Leu Ala Leu Ala Leu Tyr Pro Leu Ser Val Leu Phe
515 520

<210> 1209
<211> 524
<212> PRT
<213> Mus musculus

<400> 1209

Met Ile Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1 5 10 15

Ser Phe Val Pro Glu Lys Glu Arg Asp Pro Ser Tyr Trp Arg Gln Gln
20 25 30

Ala Gln Glu Thr Leu Lys Asn Ala Leu Lys Leu Gln Lys Leu Asn Thr
35 40 45

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
65 70 75 80

Thr Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125

Gly Val Ser Ala Ala Thr Glu Arg Thr Arg Cys Asn Thr Thr Gln Gly
130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
180 185 190

4003140_1

Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205
 Met His Asn Ile Lys Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Leu Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Ile Ser Ile Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg His Lys His Ser His Tyr Val Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Ala Leu Asp Pro Ser Arg Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Leu
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Glu Val Ala Leu Arg Ile Leu
 305 310 315 320
 Thr Lys Asn Leu Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Gln Ala Ile Gly Lys Ala Gly Ala Met Thr Ser Gln
 355 360 365
 Lys Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Asp Gly Glu Arg Glu Asn Val Ser
 420 425 430
 Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445
 Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys
 450 455 460

4003140_1

Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile
465 470 475 480

Pro His Val Met Ala Tyr Ala Ser Cys Ile Gly Ala Asn Leu Asp His
485 490 495

Cys Ala Trp Ala Gly Ser Gly Ser Ala Pro Ser Pro Gly Ala Leu Leu
500 505 510

Leu Pro Leu Ala Val Leu Ser Leu Pro Thr Leu Phe
515 520

<210> 1210

<211> 524

<212> PRT

<213> Rattus norvegicus

<400> 1210

Met Ile Leu Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
1 5 10 15

Ser Phe Val Pro Glu Lys Glu Lys Asp Pro Ser Tyr Trp Arg Gln Gln
20 25 30

Ala Gln Glu Thr Leu Lys Asn Ala Leu Lys Leu Gln Lys Leu Asn Thr
35 40 45

Asn Val Ala Lys Asn Ile Ile Met Phe Leu Gly Asp Gly Met Gly Val
50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
65 70 75 80

Thr Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
115 120 125

Gly Val Ser Ala Ala Thr Glu Arg Thr Arg Cys Asn Thr Thr Gln Gly
130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
145 150 155 160

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
165 170 175

4003140_1
 Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
 180 185 190
 Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205
 Met His Asn Ile Lys Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Arg Thr Asp Val Glu Tyr Glu Leu Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Ile Ser Ile Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg His Lys His Ser His Tyr Val Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Ala Leu Asp Pro Ser Arg Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Leu
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Glu Val Ala Leu Arg Ile Leu
 305 310 315 320
 Thr Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Glu Ala Ile Gly Lys Ala Gly Thr Met Thr Ser Gln
 355 360 365
 Lys Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Val Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Asp Gly Glu Arg Glu Asn Val Ser
 420 425 430
 Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
 435 440 445

4003140_1
 Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Lys
 450 455 460

Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Ile
 465 470 475 480

Pro His Val Met Ala Tyr Ala Ser Cys Ile Gly Ala Asn Leu Asp His
 485 490 495

Cys Ala Trp Ala Ser Ser Ala Ser Ser Pro Ser Pro Gly Ala Leu Leu
 500 505 510

Leu Pro Leu Ala Leu Phe Pro Leu Arg Thr Leu Phe
 515 520

<210> 1211
 <211> 502
 <212> PRT
 <213> Canis familiaris

<400> 1211

Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala Gln Gln Thr Leu Lys
 1 5 10 15

Tyr Ala Leu Arg Leu Gln Asn Leu Asn Thr Asn Val Ala Lys Asn Val
 20 25 30

Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser Thr Val Thr Ala Thr
 35 40 45

Arg Ile Leu Lys Gly Gln Leu His His Asn Pro Gly Glu Glu Thr Arg
 50 55 60

Leu Glu Met Asp Lys Phe Pro Tyr Val Ala Leu Ser Lys Thr Tyr Asn
 65 70 75 80

Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr Ala Thr Ala Tyr Leu
 85 90 95

Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly Val Ser Ala Ala Thr
 100 105 110

Gln Arg Thr His Cys Asn Thr Thr Gln Gly Asn Glu Val Thr Ser Ile
 115 120 125

Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val Gly Ile Val Thr Thr
 130 135 140

Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala Tyr Ala His Ser Ala
 145 150 155 160

Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro Pro Glu Ala Leu Ser
 Page 374

Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met His Asn Val Lys Asp
 180 185 190
 Ile Glu Val Ile Met Gly Gly Gly Arg Lys Tyr Met Phe Pro Lys Asn
 195 200 205
 Arg Thr Asp Val Glu Tyr Glu Met Asp Glu Lys Ser Thr Gly Ala Arg
 210 215 220
 Leu Asp Gly Leu Asn Leu Ile Asp Ile Trp Lys Asn Phe Lys Pro Arg
 225 230 235 240
 His Lys His Ser His Tyr Val Trp Asn Arg Thr Glu Leu Leu Ala Leu
 245 250 255
 Asp Pro Tyr Thr Val Asp Tyr Leu Leu Gly Leu Phe Asp Pro Gly Asp
 260 265 270
 Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr Asp Pro Ser Leu Ser
 275 280 285
 Glu Met Val Glu Ile Ala Ile Lys Ile Leu Ser Lys Lys Pro Arg Gly
 290 295 300
 Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp His Gly His His Glu
 305 310 315 320
 Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val Glu Met Asp Arg Ala
 325 330 335
 Ile Gly Lys Ala Gly Val Met Thr Ser Leu Glu Asp Thr Leu Thr Val
 340 345 350
 Val Thr Ala Asp His Ser His Val Phe Thr Phe Gly Gly Tyr Thr Pro
 355 360 365
 Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met Val Ser Asp Thr Asp
 370 375 380
 Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Lys
 385 390 395 400
 Val Val Gly Gly Glu Arg Glu Asn Val Ser Met Val Asp Tyr Ala His
 405 410 415
 Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu Arg His Glu Thr His
 420 425 430
 Gly Gly Glu Asp Val Ala Val Phe Ala Lys Gly Pro Met Ala His Leu
 Page 375

4003140_1

435

440

445

Leu His Gly Val His Glu Gln Asn Tyr Ile Pro His Val Met Ala Tyr
 450 455 460

Ala Ala Cys Ile Gly Ala Asn Gln Asp His Cys Ala Ser Ala Ser Ser
 465 470 475 480

Ala Gly Gly Pro Ser Pro Gly Pro Leu Leu Leu Leu Leu Ala Leu Leu
 485 490 495

Pro Val Gly Ile Leu Phe
 500

<210> 1212

<211> 528

<212> PRT

<213> Homo sapiens

<400> 1212

Met Gln Gly Pro Trp Val Leu Leu Leu Leu Gly Leu Arg Leu Gln Leu
 1 5 10 15

Ser Leu Gly Val Ile Pro Ala Glu Glu Glu Asn Pro Ala Phe Trp Asn
 20 25 30

Arg Gln Ala Ala Glu Ala Leu Asp Ala Ala Lys Lys Leu Gln Pro Ile
 35 40 45

Gln Lys Val Ala Lys Asn Leu Ile Leu Phe Leu Gly Asp Gly Leu Gly
 50 55 60

Val Pro Thr Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Lys Asn Gly
 65 70 75 80

Lys Leu Gly Pro Glu Thr Pro Leu Ala Met Asp Arg Phe Pro Tyr Leu
 85 90 95

Ala Leu Ser Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala
 100 105 110

Ala Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Phe Gln Thr
 115 120 125

Ile Gly Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg
 130 135 140

Gly Asn Glu Val Ile Ser Val Met Asn Arg Ala Lys Gln Ala Gly Lys
 145 150 155 160

Ser Val Gly Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala
 165 170 175

4003140_1

Gly Thr Tyr Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp
 180 185 190
 Met Pro Ala Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln
 195 200 205
 Leu Ile Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Phe Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Ala Asp Ala
 225 230 235 240
 Ser Gln Asn Gly Ile Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp
 245 250 255
 Leu Ala Lys His Gln Gly Ala Trp Tyr Val Trp Asn Arg Thr Glu Leu
 260 265 270
 Met Gln Ala Ser Leu Asp Gln Ser Val Thr His Leu Met Gly Leu Phe
 275 280 285
 Glu Pro Gly Asp Thr Lys Tyr Glu Ile His Arg Asp Pro Thr Leu Asp
 290 295 300
 Pro Ser Leu Met Glu Met Thr Glu Ala Ala Leu Arg Leu Leu Ser Arg
 305 310 315 320
 Asn Pro Arg Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His
 325 330 335
 Gly His His Glu Gly Val Ala Tyr Gln Ala Leu Thr Glu Ala Val Met
 340 345 350
 Phe Asp Asp Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp
 355 360 365
 Thr Leu Thr Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly
 370 375 380
 Gly Tyr Thr Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Ser Lys
 385 390 395 400
 Ala Gln Asp Ser Lys Ala Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro
 405 410 415
 Gly Tyr Val Phe Asn Ser Gly Val Arg Pro Asp Val Asn Glu Ser Glu
 420 425 430
 Ser Gly Ser Pro Asp Tyr Gln Gln Gln Ala Ala Val Pro Leu Ser Ser
 435 440 445

4003140_1

Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln
450 455 460

Ala His Leu Val His Gly Val Gln Glu Gln Ser Phe Val Ala His Val
465 470 475 480

Met Ala Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala
485 490 495

Pro Pro Ala Cys Thr Thr Asp Ala Ala His Pro Val Ala Ala Ser Leu
500 505 510

Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu Gly Ala Ser Ala Ala Pro
515 520 525

<210> 1213
<211> 532
<212> PRT
<213> Homo sapiens

<400> 1213

Met Gln Gly Pro Trp Val Leu Leu Leu Leu Gly Leu Arg Leu Gln Leu
1 5 10 15

Ser Leu Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn
20 25 30

Arg Gln Ala Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala
35 40 45

Gln Thr Ala Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly
50 55 60

Val Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp
65 70 75 80

Lys Leu Gly Pro Glu Thr Phe Leu Ala Met Asp Arg Phe Pro Tyr Val
85 90 95

Ala Leu Ser Lys Thr Tyr Ser Val Asp Lys His Val Pro Asp Ser Gly
100 105 110

Ala Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr
115 120 125

Ile Gly Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg
130 135 140

Gly Asn Glu Val Ile Ser Val Met Asn Arg Ala Lys Lys Ala Gly Lys
145 150 155 160

4003140_1

Ser Val Gly Val Val Thr Thr Thr Arg Val Gln His Ala Ser Pro Ala
 165 170 175
 Gly Ala Tyr Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp
 180 185 190
 Val Pro Ala Ser Ala Arg Gln Glu Gly Cys Gln Asp Ile Ala Thr Gln
 195 200 205
 Leu Ile Ser Asn Met Asp Ile Asp Val Ile Leu Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Phe Pro Met Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Tyr
 225 230 235 240
 Ser Gln Gly Gly Thr Arg Leu Asp Gly Lys Asn Leu Val Gln Glu Trp
 245 250 255
 Leu Ala Lys His Gln Gly Ala Arg Tyr Val Trp Asn Arg Thr Glu Leu
 260 265 270
 Leu Gln Ala Ser Leu Asp Pro Ser Val Thr His Leu Met Gly Leu Phe
 275 280 285
 Glu Pro Gly Asp Met Lys Tyr Glu Ile His Arg Asp Ser Thr Leu Asp
 290 295 300
 Pro Ser Leu Met Glu Met Thr Glu Ala Ala Leu Leu Leu Leu Ser Arg
 305 310 315 320
 Asn Pro Arg Gly Phe Phe Leu Phe Val Glu Gly Gly Arg Ile Asp His
 325 330 335
 Gly His His Glu Ser Arg Ala Tyr Arg Ala Leu Thr Glu Thr Ile Met
 340 345 350
 Phe Asp Asp Ala Ile Glu Arg Ala Gly Gln Leu Thr Ser Glu Glu Asp
 355 360 365
 Thr Leu Ser Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly
 370 375 380
 Gly Tyr Pro Leu Arg Gly Ser Ser Ile Phe Gly Leu Ala Pro Gly Lys
 385 390 395 400
 Ala Arg Asp Arg Lys Ala Tyr Thr Val Leu Leu Tyr Gly Asn Gly Pro
 405 410 415
 Gly Tyr Val Leu Lys Asp Gly Ala Arg Pro Asp Val Thr Glu Ser Glu
 420 425 430

4003140_1

Ser Gly Ser Pro Glu Tyr Arg Gln Gln Ser Ala Val Pro Leu Asp Gly
435 440 445

Glu Thr His Ala Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln
450 455 460

Ala His Leu Val His Gly Val Gln Glu Gln Thr Phe Ile Ala His Val
465 470 475 480

Met Ala Phe Ala Ala Cys Leu Glu Pro Tyr Thr Ala Cys Asp Leu Ala
485 490 495

Pro Arg Ala Gly Thr Thr Asp Ala Ala His Pro Gly Pro Ser Val Val
500 505 510

Pro Ala Leu Leu Pro Leu Leu Ala Gly Thr Leu Leu Leu Leu Gly Thr
515 520 525

Ala Thr Ala Pro
530

<210> 1214
<211> 535
<212> PRT
<213> Homo sapiens

<400> 1214

Met Leu Gly Pro Cys Met Leu Leu Leu Leu Leu Leu Gly Leu Arg
1 5 10 15

Leu Gln Leu Ser Leu Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp
20 25 30

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Page 392

4003140_1

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<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

<221> MISC_FEATURE

<222> (357)..(357)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

<221> MISC_FEATURE

<222> (361)..(361)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

<221> MISC_FEATURE

<222> (364)..(365)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

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<222> (368)..(369)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

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<222> (374)..(374)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

<221> MISC_FEATURE

<222> (402)..(402)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

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<221> MISC_FEATURE

<222> (412)..(412)

<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>

<221> MISC_FEATURE
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<222> (475)..(475)
<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

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<222> (480)..(480)
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<222> (488)..(488)
<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>
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<222> (494)..(495)
<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>
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<222> (499)..(499)
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<220>
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<222> (501)..(501)
<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

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<222> (503)..(508)
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<220>
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<222> (510)..(510)
<223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

4003140_1

<220>
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 <222> (512)..(512)
 <223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>
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 <223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<220>
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 <223> Xaa can be any naturally occurring amino acid but not an amino acid corresponding to one or more pathogenic mutations provided in Table 1

<400> 1219

Met Ile Xaa Pro Phe Leu Xaa Leu Ala Ile Gly Thr Cys Xaa Xaa Xaa
 1 5 10 15

Ser Xaa Val Pro Glu Lys Glu Xaa Asp Pro Xaa Tyr Trp Arg Xaa Gln
 20 25 30

Ala Gln Xaa Thr Leu Lys Xaa Ala Leu Xaa Leu Gln Xaa Leu Asn Thr
 35 40 45

Asn Val Ala Lys Asn Xaa Ile Met Phe Leu Gly Asp Gly Met Gly Val
 50 55 60

Ser Thr Val Thr Ala Xaa Arg Ile Leu Lys Gly Gln Leu His His Xaa
 65 70 75 80

Xaa Gly Glu Glu Thr Xaa Leu Glu Met Asp Lys Phe Pro Xaa Val Ala
 85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
 100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
 115 120 125

Gly Val Ser Ala Ala Thr Xaa Arg Xaa Xaa Cys Asn Thr Thr Gln Gly
 130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Xaa Gly Lys Ser
 145 150 155 160

Val Gly Ile Val Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
 165 170 175

4003140_1

Xaa	Tyr	Ala	His	Ser	Ala	Asp	Arg	Asp	Trp	Tyr	Ser	Asp	Asn	Glu	Met
			180					185					190		
Pro	Pro	Glu	Ala	Leu	Ser	Gln	Gly	Cys	Lys	Asp	Ile	Ala	Tyr	Gln	Leu
		195					200					205			
Met	Xaa	Asn	Xaa	Xaa	Asp	Ile	Xaa	Val	Ile	Met	Gly	Gly	Gly	Arg	Lys
	210					215					220				
Tyr	Met	Xaa	Pro	Lys	Asn	Xaa	Thr	Asp	Val	Glu	Tyr	Glu	Xaa	Asp	Glu
225					230					235					240
Lys	Xaa	Xaa	Gly	Xaa	Arg	Leu	Asp	Gly	Leu	Xaa	Leu	Xaa	Xaa	Xaa	Trp
				245					250						255
Lys	Xaa	Phe	Lys	Pro	Xaa	Xaa	Lys	His	Ser	His	Xaa	Xaa	Trp	Asn	Arg
			260					265					270		
Thr	Xaa	Leu	Leu	Xaa	Leu	Asp	Pro	Xaa	Xaa	Val	Asp	Tyr	Leu	Leu	Gly
		275					280					285			
Leu	Phe	Xaa	Pro	Gly	Asp	Met	Gln	Tyr	Glu	Leu	Asn	Arg	Asn	Xaa	Xaa
	290					295					300				
Thr	Asp	Pro	Ser	Leu	Ser	Glu	Met	Val	Xaa	Xaa	Ala	Xaa	Xaa	Ile	Leu
305					310					315					320
Xaa	Lys	Xaa	Xaa	Xaa	Gly	Phe	Phe	Leu	Leu	Val	Glu	Gly	Gly	Arg	Ile
				325					330					335	
Asp	His	Gly	His	His	Glu	Gly	Lys	Ala	Lys	Gln	Ala	Leu	His	Glu	Ala
			340					345					350		
Val	Glu	Met	Asp	Xaa	Ala	Ile	Gly	Xaa	Ala	Gly	Xaa	Xaa	Thr	Ser	Xaa
		355					360					365			
Xaa	Asp	Thr	Leu	Thr	Xaa	Val	Thr	Ala	Asp	His	Ser	His	Val	Phe	Thr
	370					375					380				
Phe	Gly	Gly	Tyr	Thr	Pro	Arg	Gly	Asn	Ser	Ile	Phe	Gly	Leu	Ala	Pro
385					390					395					400
Met	Xaa	Ser	Asp	Thr	Asp	Lys	Lys	Pro	Phe	Thr	Xaa	Ile	Leu	Tyr	Gly
				405					410					415	
Asn	Gly	Pro	Gly	Tyr	Lys	Val	Val	Xaa	Gly	Glu	Arg	Glu	Asn	Val	Ser
			420					425					430		
Met	Val	Asp	Tyr	Ala	His	Asn	Asn	Tyr	Gln	Ala	Gln	Ser	Ala	Val	Pro
		435					440					445			

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Xaa Lys
 450 455 460

Gly Pro Met Ala His Leu Leu His Gly Val Xaa Glu Gln Asn Tyr Xaa
 465 470 475 480

Pro His Val Met Ala Tyr Ala Xaa Cys Ile Gly Ala Asn Xaa Xaa His
 485 490 495

Cys Ala Xaa Ala Xaa Ser Xaa Xaa Xaa Xaa Xaa Gly Xaa Leu Xaa
 500 505 510

Leu Xaa Leu Ala Xaa Xaa Xaa Xaa Xaa Xaa Leu Phe
 515 520

<210> 1220
 <211> 731
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Construct (sTNALP-Fc w/ sig. seq.)

<400> 1220

Met Val Ser Pro Phe Leu Val Leu Ala Ile Gly Thr Cys Leu Thr Asn
 1 5 10 15

Ser Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln
 20 25 30

Ala Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr
 35 40 45

Asn Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val
 50 55 60

Ser Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn
 65 70 75 80

Pro Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala
 85 90 95

Leu Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly
 100 105 110

Thr Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val
 115 120 125

Gly Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly
 130 135 140

Asn Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser
 145 150 155 160

4003140_1

Val Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala
 165 170 175
 Ala Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met
 180 185 190
 Pro Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu
 195 200 205
 Met His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys
 210 215 220
 Tyr Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu
 225 230 235 240
 Lys Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp
 245 250 255
 Lys Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg
 260 265 270
 Thr Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly
 275 280 285
 Leu Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val
 290 295 300
 Thr Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu
 305 310 315 320
 Arg Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile
 325 330 335
 Asp His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala
 340 345 350
 Val Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser
 355 360 365
 Glu Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr
 370 375 380
 Phe Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro
 385 390 395 400
 Met Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly
 405 410 415
 Asn Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser
 420 425 430

4003140_1

Met Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro
435 440 445

Leu Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys
450 455 460

Gly Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val
465 470 475 480

Pro His Val Met Ala Tyr Ala Ala Cys Ile Gly Ala Asn Leu Gly His
485 490 495

Cys Ala Pro Ala Ser Ser Leu Lys Asp Lys Thr His Thr Cys Pro Pro
500 505 510

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
515 520 525

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
530 535 540

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
545 550 555 560

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
565 570 575

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
580 585 590

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
595 600 605

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
610 615 620

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
625 630 635 640

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
645 650 655

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
660 665 670

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
675 680 685

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
690 695 700

4003140_1

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
705 710 715 720

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
725 730

<210> 1221

<211> 714

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Construct (sTNALP-Fc w/o sig. seq.)

<400> 1221

Leu Val Pro Glu Lys Glu Lys Asp Pro Lys Tyr Trp Arg Asp Gln Ala
1 5 10 15

Gln Glu Thr Leu Lys Tyr Ala Leu Glu Leu Gln Lys Leu Asn Thr Asn
20 25 30

Val Ala Lys Asn Val Ile Met Phe Leu Gly Asp Gly Met Gly Val Ser
35 40 45

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Leu His His Asn Pro
50 55 60

Gly Glu Glu Thr Arg Leu Glu Met Asp Lys Phe Pro Phe Val Ala Leu
65 70 75 80

Ser Lys Thr Tyr Asn Thr Asn Ala Gln Val Pro Asp Ser Ala Gly Thr
85 90 95

Ala Thr Ala Tyr Leu Cys Gly Val Lys Ala Asn Glu Gly Thr Val Gly
100 105 110

Val Ser Ala Ala Thr Glu Arg Ser Arg Cys Asn Thr Thr Gln Gly Asn
115 120 125

Glu Val Thr Ser Ile Leu Arg Trp Ala Lys Asp Ala Gly Lys Ser Val
130 135 140

Gly Ile Val Thr Thr Thr Arg Val Asn His Ala Thr Pro Ser Ala Ala
145 150 155 160

Tyr Ala His Ser Ala Asp Arg Asp Trp Tyr Ser Asp Asn Glu Met Pro
165 170 175

Pro Glu Ala Leu Ser Gln Gly Cys Lys Asp Ile Ala Tyr Gln Leu Met
180 185 190

4003140_1

His Asn Ile Arg Asp Ile Asp Val Ile Met Gly Gly Gly Arg Lys Tyr
195 200 205

Met Tyr Pro Lys Asn Lys Thr Asp Val Glu Tyr Glu Ser Asp Glu Lys
210 215 220

Ala Arg Gly Thr Arg Leu Asp Gly Leu Asp Leu Val Asp Thr Trp Lys
225 230 235 240

Ser Phe Lys Pro Arg Tyr Lys His Ser His Phe Ile Trp Asn Arg Thr
245 250 255

Glu Leu Leu Thr Leu Asp Pro His Asn Val Asp Tyr Leu Leu Gly Leu
260 265 270

Phe Glu Pro Gly Asp Met Gln Tyr Glu Leu Asn Arg Asn Asn Val Thr
275 280 285

Asp Pro Ser Leu Ser Glu Met Val Val Val Ala Ile Gln Ile Leu Arg
290 295 300

Lys Asn Pro Lys Gly Phe Phe Leu Leu Val Glu Gly Gly Arg Ile Asp
305 310 315 320

His Gly His His Glu Gly Lys Ala Lys Gln Ala Leu His Glu Ala Val
325 330 335

Glu Met Asp Arg Ala Ile Gly Gln Ala Gly Ser Leu Thr Ser Ser Glu
340 345 350

Asp Thr Leu Thr Val Val Thr Ala Asp His Ser His Val Phe Thr Phe
355 360 365

Gly Gly Tyr Thr Pro Arg Gly Asn Ser Ile Phe Gly Leu Ala Pro Met
370 375 380

Leu Ser Asp Thr Asp Lys Lys Pro Phe Thr Ala Ile Leu Tyr Gly Asn
385 390 395 400

Gly Pro Gly Tyr Lys Val Val Gly Gly Glu Arg Glu Asn Val Ser Met
405 410 415

Val Asp Tyr Ala His Asn Asn Tyr Gln Ala Gln Ser Ala Val Pro Leu
420 425 430

Arg His Glu Thr His Gly Gly Glu Asp Val Ala Val Phe Ser Lys Gly
435 440 445

Pro Met Ala His Leu Leu His Gly Val His Glu Gln Asn Tyr Val Pro
450 455 460

4003140_1

His	Val	Met	Ala	Tyr	Ala	Ala	Cys	Ile	Gly	Ala	Asn	Leu	Gly	His	Cys
465					470					475					480
Ala	Pro	Ala	Ser	Ser	Leu	Lys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
				485					490					495	
Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro
			500					505					510		
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys
		515					520					525			
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp
	530					535					540				
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu
545					550					555					560
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu
				565					570					575	
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn
			580					585					590		
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly
		595					600					605			
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Glu	Glu
	610					615					620				
Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr
625					630					635					640
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
				645					650					655	
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe
			660					665					670		
Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn
		675					680					685			
Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
	690					695					700				
Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys						
705					710										