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

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Val Gln Leu Leu Cys Pro Gly Gly Ala Ala Pro Arg Ala Arg Lys Val
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Arg Leu Val Ala Ser Cys Lys Cys Lys Arg Leu Thr Arg Phe His Asn
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Ser Pro Gln Gln Pro Gly Ser Arg Asn Arg Gly Arg Gly Gln Gly Arg
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Ile Ile Asn Arg Phe Cys Tyr Gly Gln Cys Asn Ser Phe Tyr Ile Pro
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Arg His Ile Arg Lys Glu Glu Gly Ser Phe Gln Ser Cys Ser Phe Cys
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Val His Phe Pro Gly Ala Ala Gln His Ser His Thr Ser Cys Ser His
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Cys Leu Pro Ala Lys Phe Thr Thr Met His Leu Pro Leu Asn Cys Thr
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Tyr Ser Val Pro Asn Thr Phe Pro Gln Ser Thr Glu Ser Leu Val His
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35 40 45

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

Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly Gly
        115                 120                 125

Glu Ala Pro Arg Ala Arg Lys Val Arg Leu Val Ala Ser Cys Lys Cys
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Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
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Thr Glu Ala Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala
                165                 170                 175

Arg Ser Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
            180                 185                 190
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<210> 47
<211> 20
<212> PRT
<213> Homo sapiens

<400> 47

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Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Glu
1               5                   10                  15

Leu Gly Glu Tyr
            20
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<210> 48
<211> 20
<212> PRT
<213> Homo sapiens

<400> 48

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Thr Glu Ile Ile Pro Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro Glu
1               5                   10                  15

Leu Glu Asn Asn
            20
```

<210> 49
<211> 20
<212> PRT
<213> Homo sapiens

<400> 49

Pro Glu Pro Pro Pro Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala
1 5 10 15

Glu Asn Gly Gly
20

<210> 50
<211> 20
<212> PRT
<213> Homo sapiens

<400> 50

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

Phe Glu Thr Lys
20

<210> 51
<211> 16
<212> PRT
<213> Homo sapiens

<400> 51

Arg Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser
1 5 10 15

<210> 52
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 52

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Glu
1 5 10 15

Leu Gly Glu Tyr Cys
20

<210> 53
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 53

Thr Glu Ile Ile Pro Glu Leu Gly Glu Tyr Pro Glu Pro Pro Pro Glu
1 5 10 15

Leu Glu Asn Asn Cys

20

<210> 54
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 54

Pro Glu Pro Pro Pro Glu Leu Glu Asn Asn Lys Thr Met Asn Arg Ala
1 5 10 15

Glu Asn Gly Gly Cys
20

<210> 55
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 55

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

Phe Glu Thr Lys Cys
20

<210> 56
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 56

Arg Pro Pro His His Pro Phe Glu Thr Lys Asp Val Ser Glu Tyr Ser
1 5 10 15

Cys

<210> 57
<211> 24
<212> PRT
<213> Rattus norvegicus

<400> 57

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Gly
1 5 10 15

Leu Arg Glu Tyr Pro Glu Pro Pro

20

<210> 58
<211> 20
<212> PRT
<213> Rattus norvegicus

<400> 58

Pro Glu Pro Pro Gln Glu Leu Glu Asn Asn Gln Thr Met Asn Arg Ala
1 5 10 15

Glu Asn Gly Gly
20

<210> 59
<211> 20
<212> PRT
<213> Rattus norvegicus

<400> 59

Glu Asn Gly Gly Arg Pro Pro His His Pro Tyr Asp Thr Lys Asp Val
1 5 10 15

Ser Glu Tyr Ser
20

<210> 60
<211> 20
<212> PRT
<213> Rattus norvegicus

<400> 60

Thr Glu Ile Ile Pro Gly Leu Arg Glu Tyr Pro Glu Pro Pro Gln Glu
1 5 10 15

Leu Glu Asn Asn
20

<210> 61
<211> 25
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 61

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Gly
1 5 10 15

Leu Arg Glu Tyr Pro Glu Pro Pro Cys
20 25

<210> 62
<211> 21
<212> PRT

<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 62

Pro Glu Pro Pro Gln Glu Leu Glu Asn Asn Gln Thr Met Asn Arg Ala
1 5 10 15

Glu Asn Gly Gly Cys
20

<210> 63
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 63

Glu Asn Gly Gly Arg Pro Pro His His Pro Tyr Asp Thr Lys Asp Val
1 5 10 15

Ser Glu Tyr Ser Cys
20

<210> 64
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 64

Thr Glu Ile Ile Pro Gly Leu Arg Glu Tyr Pro Glu Pro Pro Gln Glu
1 5 10 15

Leu Glu Asn Asn Cys
20

<210> 65
<211> 190
<212> PRT
<213> Rattus norvegicus

<400> 65

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Gly
1 5 10 15

Leu Arg Glu Tyr Pro Glu Pro Pro Gln Glu Leu Glu Asn Asn Gln Thr
20 25 30

Met Asn Arg Ala Glu Asn Gly Gly Arg Pro Pro His His Pro Tyr Asp
35 40 45

Thr Lys Asp Val Ser Glu Tyr Ser Cys Arg Glu Leu His Tyr Thr Arg
50 55 60

Phe Val Thr Asp Gly Pro Cys Arg Ser Ala Lys Pro Val Thr Glu Leu
65 70 75 80

Val Cys Ser Gly Gln Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile
85 90 95

Gly Arg Val Lys Trp Trp Arg Pro Asn Gly Pro Asp Phe Arg Cys Ile
100 105 110

Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly Gly
115 120 125

Ala Ala Pro Arg Ser Arg Lys Val Arg Leu Val Ala Ser Cys Lys Cys
130 135 140

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
145 150 155 160

Pro Glu Thr Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala
165 170 175

Arg Gly Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
180 185 190

<210> 66
<211> 20
<212> PRT
<213> Homo sapiens

<400> 66

Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly
1 5 10 15

Gly Glu Ala Pro
20

<210> 67
<211> 20
<212> PRT
<213> Homo sapiens

<400> 67

Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg
1 5 10 15

Leu Val Ala Ser
20

<210> 68
<211> 21

<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 68

Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly
1 5 10 15

Gly Glu Ala Pro Cys
20

<210> 69
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 69

Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val Arg
1 5 10 15

Leu Val Ala Ser Cys
20

<210> 70
<211> 17
<212> PRT
<213> Rattus norvegicus

<400> 70

Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly
1 5 10 15

Gly

<210> 71
<211> 16
<212> PRT
<213> Rattus norvegicus

<400> 71

Pro Gly Gly Ala Ala Pro Arg Ser Arg Lys Val Arg Leu Val Ala Ser
1 5 10 15

<210> 72
<211> 18
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 72

Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Ser Pro Gly
1 5 10 15

Gly Cys

<210> 73
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 73

Pro Gly Gly Ala Ala Pro Arg Ser Arg Lys Val Arg Leu Val Ala Ser
1 5 10 15

Cys

<210> 74
<211> 20
<212> PRT
<213> Homo sapiens

<400> 74

Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp
1 5 10 15

Trp Arg Pro Ser
20

<210> 75
<211> 16
<212> PRT
<213> Homo sapiens

<400> 75

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

<210> 76
<211> 18
<212> PRT
<213> Rattus norvegicus

<400> 76

Pro Asn Ala Ile Gly Arg Val Lys Trp Trp Arg Pro Asn Gly Pro Asp
1 5 10 15

Phe Arg

<210> 77

<211> 19
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic peptide

<400> 77

Pro Asn Ala Ile Gly Arg Val Lys Trp Trp Arg Pro Asn Gly Pro Asp
1 5 10 15

Phe Arg Cys

<210> 78
<211> 20
<212> PRT
<213> Homo sapiens

<400> 78

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
1 5 10 15

Thr Glu Ala Ala
20

<210> 79
<211> 20
<212> PRT
<213> Homo sapiens

<400> 79

Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly Arg
1 5 10 15

Lys Pro Arg Pro
20

<210> 80
<211> 20
<212> PRT
<213> Homo sapiens

<400> 80

Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys
1 5 10 15

Ala Asn Gln Ala
20

<210> 81
<211> 16
<212> PRT
<213> Homo sapiens

<400> 81

Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
1 5 10 15

<210> 82
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 82

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
1 5 10 15

Thr Glu Ala Ala Cys
20

<210> 83
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 83

Glu Leu Lys Asp Phe Gly Thr Glu Ala Ala Arg Pro Gln Lys Gly Arg
1 5 10 15

Lys Pro Arg Pro Cys
20

<210> 84
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 84

Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala Arg Ser Ala Lys
1 5 10 15

Ala Asn Gln Ala Cys
20

<210> 85
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Human SOST peptide fragment with additional cysteine added

<400> 85

Arg Ala Arg Ser Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr

1 5 10 15

Cys

<210> 86
<211> 23
<212> PRT
<213> Rattus norvegicus

<400> 86

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
1 5 10 15

Pro Glu Thr Ala Arg Pro Gln
20

<210> 87
<211> 23
<212> PRT
<213> Rattus norvegicus

<400> 87

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

Ala Glu Leu Glu Asn Ala Tyr
20

<210> 88
<211> 24
<212> PRT
<213> Rattus norvegicus

<400> 88

Ser Glu Leu Lys Asp Phe Gly Pro Glu Thr Ala Arg Pro Gln Lys Gly
1 5 10 15

Arg Lys Pro Arg Pro Arg Ala Arg
20

<210> 89
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 89

Lys Arg Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly
1 5 10 15

Pro Glu Thr Ala Arg Pro Gln Cys
20

<210> 90
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 90

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

Ala Glu Leu Glu Asn Ala Tyr Cys
20

<210> 91
<211> 25
<212> PRT
<213> Artificial sequence

<220>
<223> Rat SOST peptide fragment with additional cysteine added

<400> 91

Ser Glu Leu Lys Asp Phe Gly Pro Glu Thr Ala Arg Pro Gln Lys Gly
1 5 10 15

Arg Lys Pro Arg Pro Arg Ala Arg Cys
20 25

<210> 92
<211> 56
<212> PRT
<213> Homo sapiens

<400> 92

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Glu
1 5 10 15

Leu Gly Glu Tyr Pro Glu Pro Pro Pro Glu Leu Glu Asn Asn Lys Thr
20 25 30

Met Asn Arg Ala Glu Asn Gly Gly Arg Pro Pro His His Pro Phe Glu
35 40 45

Thr Lys Asp Val Ser Glu Tyr Ser
50 55

<210> 93
<211> 56
<212> PRT
<213> Rattus norvegicus

<400> 93

Gln Gly Trp Gln Ala Phe Lys Asn Asp Ala Thr Glu Ile Ile Pro Gly
1 5 10 15

Leu Arg Glu Tyr Pro Glu Pro Pro Gln Glu Leu Glu Asn Asn Gln Thr
20 25 30

Met Asn Arg Ala Glu Asn Gly Gly Arg Pro Pro His His Pro Tyr Asp
35 40 45

Thr Lys Asp Val Ser Glu Tyr Ser
50 55

<210> 94
<211> 32
<212> PRT
<213> Homo sapiens

<400> 94

Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro
1 5 10 15

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

<210> 95
<211> 32
<212> PRT
<213> Rattus norvegicus

<400> 95

Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro
1 5 10 15

Gly Gly Ala Ala Pro Arg Ser Arg Lys Val Arg Leu Val Ala Ser Cys
20 25 30

<210> 96
<211> 44
<212> PRT
<213> Homo sapiens

<400> 96

Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly Thr Glu
1 5 10 15

Ala Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala Arg Ser
20 25 30

Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
35 40

<210> 97
<211> 44
<212> PRT
<213> Rattus norvegicus

<400> 97

Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly Pro Glu
1 5 10 15

Thr Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Arg Ala Arg Gly
20 25 30

Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
35 40

<210> 98
<211> 26
<212> PRT
<213> Homo sapiens

<400> 98

Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp
1 5 10 15

Trp Arg Pro Ser Gly Pro Asp Phe Arg Cys
20 25

<210> 99
<211> 26
<212> PRT
<213> Rattus norvegicus

<400> 99

Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Val Lys Trp
1 5 10 15

Trp Arg Pro Asn Gly Pro Asp Phe Arg Cys
20 25

<210> 100
<211> 570
<212> DNA
<213> Homo sapiens

<400> 100
caggggtggc aggcgttcaa gaatgatgcc acggaaatca tccccgagct cggagagtac 60

cccgagcctc caccggagct ggagaacaac aagaccatga accgggcgga gaacggaggg 120

cggcctcccc accacccctt tgagaccaaa gacgtgtccg agtacagctg ccgcgagctg 180

cacttcaccc gctacgtgac cgatgggccg tgccgcagcg ccaagccggt caccgagctg 240

gtgtgctccg gccagtgcgg cccggcgcgc ctgctgccca acgccatcgg ccgcggcaag 300

tggtggcgac ctagtgggcc cgacttccgc tgcatccccg accgctaccg cgcgcagcgc 360

gtgcagctgc tgtgtcccgg tggtgaggcg ccgcgcgcgc gcaaggtgcg cctggtggcc 420

tcgtgcaagt gcaagcgcct cacccgcttc cacaaccagt cggagctcaa ggacttcggg 480

accgaggccg ctcggccgca gaagggccgg aagccgcggc cccgcgcccg gagcgccaaa 540

gccaaccagg ccgagctgga gaacgcctac 570

<210> 101
<211> 570
<212> DNA
<213> Rattus norvegicus

<400> 101
caggggtggc aagccttcaa gaatgatgcc acagaaatca tcccgggact cagagagtac 60

ccagagcctc ctcaggaact agagaacaac cagaccatga accgggccga gaacggaggc 120

agacccccc accatcctta tgacaccaaa gacgtgtccg agtacagctg ccgcgagctg 180

cactacaccc gcttcgtgac cgacggcccg tgccgcagtg ccaagccggt caccgagttg 240

gtgtgctcgg gccagtgcgg ccccgcgcgg ctgctgccca acgccatcgg gcgcgtgaag 300

tggtggcgcc cgaacggacc cgacttccgc tgcatcccgg atcgctaccg cgcgcagcgg 360

gtgcagctgc tgtgccccgg cggcgcggcg ccgcgctcgc gcaaggtgcg tctggtggcc 420

tcgtgcaagt gcaagcgcct cacccgcttc cacaaccagt cggagctcaa ggacttcgga 480

cctgagaccg cgcggccgca gaagggtcgc aagccgcggc cccgcgcccg gggagccaaa 540

gccaaccagg cggagctgga gaacgcctac 570

<210> 102
<211> 532
<212> PRT
<213> Homo sapiens

<400> 102

Met Thr Gln Leu Tyr Ile Tyr Ile Arg Leu Leu Gly Ala Tyr Leu Phe
1 5 10 15

Ile Ile Ser Arg Val Gln Gly Gln Asn Leu Asp Ser Met Leu His Gly
20 25 30

Thr Gly Met Lys Ser Asp Ser Asp Gln Lys Lys Ser Glu Asn Gly Val
35 40 45

Thr Leu Ala Pro Glu Asp Thr Leu Pro Phe Leu Lys Cys Tyr Cys Ser
50 55 60

Gly His Cys Pro Asp Asp Ala Ile Asn Asn Thr Cys Ile Thr Asn Gly
65 70 75 80

His Cys Phe Ala Ile Ile Glu Glu Asp Asp Gln Gly Glu Thr Thr Leu
85 90 95

Ala Ser Gly Cys Met Lys Tyr Glu Gly Ser Asp Phe Gln Cys Lys Asp
100 105 110

Ser Pro Lys Ala Gln Leu Arg Arg Thr Ile Glu Cys Cys Arg Thr Asn
115 120 125

Leu Cys Asn Gln Tyr Leu Gln Pro Thr Leu Pro Pro Val Val Ile Gly
130 135 140

```
Pro Phe Phe Asp Gly Ser Ile Arg Trp Leu Val Leu Leu Ile Ser Met
145                 150                 155                 160

Ala Val Cys Ile Ile Ala Met Ile Ile Phe Ser Ser Cys Phe Cys Tyr
                165                 170                 175

Lys His Tyr Cys Lys Ser Ile Ser Ser Arg Arg Arg Tyr Asn Arg Asp
            180                 185                 190

Leu Glu Gln Asp Glu Ala Phe Ile Pro Val Gly Glu Ser Leu Lys Asp
        195                 200                 205

Leu Ile Asp Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu Pro Leu
    210                 215                 220

Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Arg Gln Val
225                 230                 235                 240

Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg Gly Glu
                245                 250                 255

Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser Trp Phe
            260                 265                 270

Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu Asn Ile
        275                 280                 285

Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp Thr Gln
    290                 295                 300

Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr Asp Phe
305                 310                 315                 320

Leu Lys Cys Ala Thr Leu Asp Thr Arg Ala Leu Leu Lys Leu Ala Tyr
                325                 330                 335

Ser Ala Ala Cys Gly Leu Cys His Leu His Thr Glu Ile Tyr Gly Thr
            340                 345                 350

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
        355                 360                 365

Leu Ile Lys Lys Asn Gly Ser Cys Cys Ile Ala Asp Leu Gly Leu Ala
    370                 375                 380

Val Lys Phe Asn Ser Asp Thr Asn Glu Val Asp Val Pro Leu Asn Thr
385                 390                 395                 400

Arg Val Gly Thr Lys Arg Tyr Met Ala Pro Glu Val Leu Asp Glu Ser
                405                 410                 415
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Leu Asn Lys Asn His Phe Gln Pro Tyr Ile Met Ala Asp Ile Tyr Ser
420 425 430

Phe Gly Leu Ile Ile Trp Glu Met Ala Arg Arg Cys Ile Thr Gly Gly
435 440 445

Ile Val Glu Glu Tyr Gln Leu Pro Tyr Tyr Asn Met Val Pro Ser Asp
450 455 460

Pro Ser Tyr Glu Asp Met Arg Glu Val Val Cys Val Lys Arg Leu Arg
465 470 475 480

Pro Ile Val Ser Asn Arg Trp Asn Ser Asp Glu Cys Leu Arg Ala Val
485 490 495

Leu Lys Leu Met Ser Glu Cys Trp Ala His Asn Pro Ala Ser Arg Leu
500 505 510

Thr Ala Leu Arg Ile Lys Lys Thr Leu Ala Lys Met Val Glu Ser Gln
515 520 525

Asp Val Lys Ile
530

<210> 103
<211> 502
<212> PRT
<213> Homo sapiens

<400> 103

Met Leu Leu Arg Ser Ala Gly Lys Leu Asn Val Gly Thr Lys Lys Glu
1 5 10 15

Asp Gly Glu Ser Thr Ala Pro Thr Pro Arg Pro Lys Val Leu Arg Cys
20 25 30

Lys Cys His His His Cys Pro Glu Asp Ser Val Asn Asn Ile Cys Ser
35 40 45

Thr Asp Gly Tyr Cys Phe Thr Met Ile Glu Glu Asp Asp Ser Gly Leu
50 55 60

Pro Val Val Thr Ser Gly Cys Leu Gly Leu Glu Gly Ser Asp Phe Gln
65 70 75 80

Cys Arg Asp Thr Pro Ile Pro His Gln Arg Arg Ser Ile Glu Cys Cys
85 90 95

Thr Glu Arg Asn Glu Cys Asn Lys Asp Leu His Pro Thr Leu Pro Pro
100 105 110

Leu Lys Asn Arg Asp Phe Val Asp Gly Pro Ile His His Arg Ala Leu

115 120 125

Leu Ile Ser Val Thr Val Cys Ser Leu Leu Leu Val Leu Ile Ile Leu
130 135 140

Phe Cys Tyr Phe Arg Tyr Lys Arg Gln Glu Thr Arg Pro Arg Tyr Ser
145 150 155 160

Ile Gly Leu Glu Gln Asp Glu Thr Tyr Ile Pro Pro Gly Glu Ser Leu
165 170 175

Arg Asp Leu Ile Glu Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu
180 185 190

Pro Leu Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Lys
195 200 205

Gln Ile Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg
210 215 220

Gly Glu Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser
225 230 235 240

Trp Phe Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu
245 250 255

Asn Ile Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp
260 265 270

Thr Gln Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr
275 280 285

Asp Tyr Leu Lys Ser Thr Thr Leu Asp Ala Lys Ser Met Leu Lys Leu
290 295 300

Ala Tyr Ser Ser Val Ser Gly Leu Cys His Leu His Thr Glu Ile Phe
305 310 315 320

Ser Thr Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys
325 330 335

Asn Ile Leu Val Lys Lys Asn Gly Thr Cys Cys Ile Ala Asp Leu Gly
340 345 350

Leu Ala Val Lys Phe Ile Ser Asp Thr Asn Glu Val Asp Ile Pro Pro
355 360 365

Asn Thr Arg Val Gly Thr Lys Arg Tyr Met Pro Pro Glu Val Leu Asp
370 375 380

Glu Ser Leu Asn Arg Asn His Phe Gln Ser Tyr Ile Met Ala Asp Met
385 390 395 400

Tyr Ser Phe Gly Leu Ile Leu Trp Glu Val Ala Arg Arg Cys Val Ser
405 410 415

Gly Gly Ile Val Glu Glu Tyr Gln Leu Pro Tyr His Asp Leu Val Pro
420 425 430

Ser Asp Pro Ser Tyr Glu Asp Met Arg Glu Ile Val Cys Ile Lys Lys
435 440 445

Leu Arg Pro Ser Phe Pro Asn Arg Trp Ser Ser Asp Glu Cys Leu Arg
450 455 460

Gln Met Gly Lys Leu Met Thr Glu Cys Trp Ala His Asn Pro Ala Ser
465 470 475 480

Arg Leu Thr Ala Leu Arg Val Lys Lys Thr Leu Ala Lys Met Ser Glu
485 490 495

Ser Gln Asp Ile Lys Leu
500

<210> 104
<211> 502
<212> PRT
<213> Homo sapiens

<400> 104

Met Leu Leu Arg Ser Ala Gly Lys Leu Asn Val Gly Thr Lys Lys Glu
1 5 10 15

Asp Gly Glu Ser Thr Ala Pro Thr Pro Arg Pro Lys Val Leu Arg Cys
20 25 30

Lys Cys His His His Cys Pro Glu Asp Ser Val Asn Asn Ile Cys Ser
35 40 45

Thr Asp Gly Tyr Cys Phe Thr Met Ile Glu Glu Asp Asp Ser Gly Leu
50 55 60

Pro Val Val Thr Ser Gly Cys Leu Gly Leu Glu Gly Ser Asp Phe Gln
65 70 75 80

Cys Arg Asp Thr Pro Ile Pro His Gln Arg Arg Ser Ile Glu Cys Cys
85 90 95

Thr Glu Arg Asn Glu Cys Asn Lys Asp Leu His Pro Thr Leu Pro Pro
100 105 110

Leu Lys Asn Arg Asp Phe Val Asp Gly Pro Ile His His Arg Ala Leu
115 120 125

```
Leu Ile Ser Val Thr Val Cys Ser Leu Leu Leu Val Leu Ile Ile Leu
    130                 135                 140

Phe Cys Tyr Phe Arg Tyr Lys Arg Gln Glu Thr Arg Pro Arg Tyr Ser
145                 150                 155                 160

Ile Gly Leu Glu Gln Asp Glu Thr Tyr Ile Pro Pro Gly Glu Ser Leu
                165                 170                 175

Arg Asp Leu Ile Glu Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu
            180                 185                 190

Pro Leu Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Lys
        195                 200                 205

Gln Ile Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg
    210                 215                 220

Gly Glu Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser
225                 230                 235                 240

Trp Phe Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu
                245                 250                 255

Asn Ile Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp
            260                 265                 270

Thr Gln Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr
        275                 280                 285

Asp Tyr Leu Lys Ser Thr Thr Leu Asp Ala Lys Ser Met Leu Lys Leu
    290                 295                 300

Ala Tyr Ser Ser Val Ser Gly Leu Cys His Leu His Thr Glu Ile Phe
305                 310                 315                 320

Ser Thr Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys
                325                 330                 335

Asn Ile Leu Val Lys Lys Asn Gly Thr Cys Cys Ile Ala Asp Leu Gly
            340                 345                 350

Leu Ala Val Lys Phe Ile Ser Asp Thr Asn Glu Val Asp Ile Pro Pro
        355                 360                 365

Asn Thr Arg Val Gly Thr Lys Arg Tyr Met Pro Pro Glu Val Leu Asp
    370                 375                 380

Glu Ser Leu Asn Arg Asn His Phe Gln Ser Tyr Ile Met Ala Asp Met
385                 390                 395                 400

Tyr Ser Phe Gly Leu Ile Leu Trp Glu Val Ala Arg Arg Cys Val Ser
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405 410 415

Gly Gly Ile Val Glu Glu Tyr Gln Leu Pro Tyr His Asp Leu Val Pro
420 425 430

Ser Asp Pro Ser Tyr Glu Asp Met Arg Glu Ile Val Cys Ile Lys Lys
435 440 445

Leu Arg Pro Ser Phe Pro Asn Arg Trp Ser Ser Asp Glu Cys Leu Arg
450 455 460

Gln Met Gly Lys Leu Met Thr Glu Cys Trp Ala His Asn Pro Ala Ser
465 470 475 480

Arg Leu Thr Ala Leu Arg Val Lys Lys Thr Leu Ala Lys Met Ser Glu
485 490 495

Ser Gln Asp Ile Lys Leu
500

<210> 105
<211> 532
<212> PRT
<213> Rattus sp.

<400> 105

Met Thr Gln Leu Tyr Thr Tyr Ile Arg Leu Leu Gly Ala Cys Leu Phe
1 5 10 15

Ile Ile Ser His Val Gln Gly Gln Asn Leu Asp Ser Met Leu His Gly
20 25 30

Thr Gly Met Lys Ser Asp Val Asp Gln Lys Lys Pro Glu Asn Gly Val
35 40 45

Thr Leu Ala Pro Glu Asp Thr Leu Pro Phe Leu Lys Cys Tyr Cys Ser
50 55 60

Gly His Cys Pro Asp Asp Ala Ile Asn Asn Thr Cys Ile Thr Asn Gly
65 70 75 80

His Cys Phe Ala Ile Ile Glu Glu Asp Asp Gln Gly Glu Thr Thr Leu
85 90 95

Thr Ser Gly Cys Met Lys Tyr Glu Gly Ser Asp Phe Gln Cys Lys Asp
100 105 110

Ser Pro Lys Ala Gln Leu Arg Arg Thr Ile Glu Cys Cys Arg Thr Asn
115 120 125

Leu Cys Asn Gln Tyr Leu Gln Pro Thr Leu Pro Pro Val Val Ile Gly
130 135 140

Pro Phe Phe Asp Gly Ser Val Arg Trp Leu Ala Val Leu Ile Ser Met
145 150 155 160

Ala Val Cys Ile Val Ala Met Ile Val Phe Ser Ser Cys Phe Cys Tyr
165 170 175

Lys His Tyr Cys Lys Ser Ile Ser Ser Arg Gly Arg Tyr Asn Arg Asp
180 185 190

Leu Glu Gln Asp Glu Ala Phe Ile Pro Val Gly Glu Ser Leu Lys Asp
195 200 205

Leu Ile Asp Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu Pro Leu
210 215 220

Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Arg Gln Val
225 230 235 240

Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg Gly Glu
245 250 255

Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser Trp Phe
260 265 270

Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu Asn Ile
275 280 285

Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp Thr Gln
290 295 300

Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr Asp Phe
305 310 315 320

Leu Lys Cys Ala Thr Leu Asp Thr Arg Ala Leu Leu Lys Leu Ala Tyr
325 330 335

Ser Ala Ala Cys Gly Leu Cys His Leu His Thr Glu Ile Tyr Gly Thr
340 345 350

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
355 360 365

Leu Ile Lys Lys Asn Gly Ser Cys Cys Ile Ala Asp Leu Gly Leu Ala
370 375 380

Val Lys Phe Asn Ser Asp Thr Asn Glu Val Asp Ile Pro Leu Asn Thr
385 390 395 400

Arg Val Gly Thr Arg Arg Tyr Met Ala Pro Glu Val Leu Asp Glu Ser
405 410 415

Leu Ser Lys Asn His Phe Gln Pro Tyr Ile Met Ala Asp Ile Tyr Ser
420 425 430

Phe Gly Leu Ile Ile Trp Glu Met Ala Arg Arg Cys Ile Thr Gly Gly
435 440 445

Ile Val Glu Glu Tyr Gln Leu Pro Tyr Tyr Asn Met Val Pro Ser Asp
450 455 460

Pro Ser Tyr Glu Asp Met Arg Glu Val Val Cys Val Lys Arg Leu Arg
465 470 475 480

Pro Ile Val Ser Asn Arg Trp Asn Ser Asp Glu Cys Leu Arg Ala Val
485 490 495

Leu Lys Leu Met Ser Glu Cys Trp Ala His Asn Pro Ala Ser Arg Leu
500 505 510

Thr Ala Leu Arg Ile Lys Lys Thr Leu Ala Lys Met Val Glu Ser Gln
515 520 525

Asp Val Lys Ile
530

<210> 106
<211> 532
<212> PRT
<213> Rattus norvegicus

<400> 106

Met Thr Gln Leu Tyr Thr Tyr Ile Arg Leu Leu Gly Ala Cys Leu Phe
1 5 10 15

Ile Ile Ser His Val Gln Gly Gln Asn Leu Asp Ser Met Leu His Gly
20 25 30

Thr Gly Met Lys Ser Asp Val Asp Gln Lys Lys Pro Glu Asn Gly Val
35 40 45

Thr Leu Ala Pro Glu Asp Thr Leu Pro Phe Leu Lys Cys Tyr Cys Ser
50 55 60

Gly His Cys Pro Asp Asp Ala Ile Asn Asn Thr Cys Ile Thr Asn Gly
65 70 75 80

His Cys Phe Ala Ile Ile Glu Glu Asp Asp Gln Gly Glu Thr Thr Leu
85 90 95

Thr Ser Gly Cys Met Lys Tyr Glu Gly Ser Asp Phe Gln Cys Lys Asp
100 105 110

Ser Pro Lys Ala Gln Leu Arg Arg Thr Ile Glu Cys Cys Arg Thr Asn
115 120 125

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Leu Cys Asn Gln Tyr Leu Gln Pro Thr Leu Pro Pro Val Val Ile Gly
    130                 135                 140

Pro Phe Phe Asp Gly Ser Val Arg Trp Leu Ala Val Leu Ile Ser Met
145                 150                 155                 160

Ala Val Cys Ile Val Ala Met Ile Val Phe Ser Ser Cys Phe Cys Tyr
                165                 170                 175

Lys His Tyr Cys Lys Ser Ile Ser Ser Arg Gly Arg Tyr Asn Arg Asp
            180                 185                 190

Leu Glu Gln Asp Glu Ala Phe Ile Pro Val Gly Glu Ser Leu Lys Asp
        195                 200                 205

Leu Ile Asp Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu Pro Leu
    210                 215                 220

Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Arg Gln Val
225                 230                 235                 240

Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg Gly Glu
                245                 250                 255

Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser Trp Phe
            260                 265                 270

Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu Asn Ile
        275                 280                 285

Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp Thr Gln
    290                 295                 300

Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr Asp Phe
305                 310                 315                 320

Leu Lys Cys Ala Thr Leu Asp Thr Arg Ala Leu Leu Lys Leu Ala Tyr
                325                 330                 335

Ser Ala Ala Cys Gly Leu Cys His Leu His Thr Glu Ile Tyr Gly Thr
            340                 345                 350

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
        355                 360                 365

Leu Ile Lys Lys Asn Gly Ser Cys Cys Ile Ala Asp Leu Gly Leu Ala
    370                 375                 380

Val Lys Phe Asn Ser Asp Thr Asn Glu Val Asp Ile Pro Leu Asn Thr
385                 390                 395                 400
```

Arg Val Gly Thr Arg Arg Tyr Met Ala Pro Glu Val Leu Asp Glu Ser
405 410 415

Leu Ser Lys Asn His Phe Gln Pro Tyr Ile Met Ala Asp Ile Tyr Ser
420 425 430

Phe Gly Leu Ile Ile Trp Glu Met Ala Arg Arg Cys Ile Thr Gly Gly
435 440 445

Ile Val Glu Glu Tyr Gln Leu Pro Tyr Tyr Asn Met Val Pro Ser Asp
450 455 460

Pro Ser Tyr Glu Asp Met Arg Glu Val Val Cys Val Lys Arg Leu Arg
465 470 475 480

Pro Ile Val Ser Asn Arg Trp Asn Ser Asp Glu Cys Leu Arg Ala Val
485 490 495

Leu Lys Leu Met Ser Glu Cys Trp Ala His Asn Pro Ala Ser Arg Leu
500 505 510

Thr Ala Leu Arg Ile Lys Lys Thr Leu Ala Lys Met Val Glu Ser Gln
515 520 525

Asp Val Lys Ile
530

<210> 107
<211> 532
<212> PRT
<213> Rattus norvegicus

<400> 107

Met Thr Gln Leu Tyr Thr Tyr Ile Arg Leu Leu Gly Ala Cys Leu Phe
1 5 10 15

Ile Ile Ser His Val Gln Gly Gln Asn Leu Asp Ser Met Leu His Gly
20 25 30

Thr Gly Met Lys Ser Asp Val Asp Gln Lys Lys Pro Glu Asn Gly Val
35 40 45

Thr Leu Ala Pro Glu Asp Thr Leu Pro Phe Leu Lys Cys Tyr Cys Ser
50 55 60

Gly His Cys Pro Asp Asp Ala Ile Asn Asn Thr Cys Ile Thr Asn Gly
65 70 75 80

His Cys Phe Ala Ile Ile Glu Glu Asp Asp Gln Gly Glu Thr Thr Leu
85 90 95

Thr Ser Gly Cys Met Lys Tyr Glu Gly Ser Asp Phe Gln Cys Lys Asp

100 105 110

Ser Pro Lys Ala Gln Leu Arg Arg Thr Ile Glu Cys Cys Arg Thr Asn
115 120 125

Leu Cys Asn Gln Tyr Leu Gln Pro Thr Leu Pro Pro Val Val Ile Gly
130 135 140

Pro Phe Phe Asp Gly Ser Val Arg Trp Leu Ala Val Leu Ile Ser Met
145 150 155 160

Ala Val Cys Ile Val Ala Met Ile Val Phe Ser Ser Cys Phe Cys Tyr
165 170 175

Lys His Tyr Cys Lys Ser Ile Ser Ser Arg Gly Arg Tyr Asn Arg Asp
180 185 190

Leu Glu Gln Asp Glu Ala Phe Ile Pro Val Gly Glu Ser Leu Lys Asp
195 200 205

Leu Ile Asp Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu Pro Leu
210 215 220

Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Arg Gln Val
225 230 235 240

Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg Gly Glu
245 250 255

Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser Trp Phe
260 265 270

Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu Asn Ile
275 280 285

Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp Thr Gln
290 295 300

Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr Asp Phe
305 310 315 320

Leu Lys Cys Ala Thr Leu Asp Thr Arg Ala Leu Leu Lys Leu Ala Tyr
325 330 335

Ser Ala Ala Cys Gly Leu Cys His Leu His Thr Glu Ile Tyr Gly Thr
340 345 350

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
355 360 365

Leu Ile Lys Lys Asn Gly Ser Cys Cys Ile Ala Asp Leu Gly Leu Ala
370 375 380

Val Lys Phe Asn Ser Asp Thr Asn Glu Val Asp Ile Pro Leu Asn Thr
385 390 395 400

Arg Val Gly Thr Arg Arg Tyr Met Ala Pro Glu Val Leu Asp Glu Ser
405 410 415

Leu Ser Lys Asn His Phe Gln Pro Tyr Ile Met Ala Asp Ile Tyr Ser
420 425 430

Phe Gly Leu Ile Ile Trp Glu Met Ala Arg Arg Cys Ile Thr Gly Gly
435 440 445

Ile Val Glu Glu Tyr Gln Leu Pro Tyr Tyr Asn Met Val Pro Ser Asp
450 455 460

Pro Ser Tyr Glu Asp Met Arg Glu Val Val Cys Val Lys Arg Leu Arg
465 470 475 480

Pro Ile Val Ser Asn Arg Trp Asn Ser Asp Glu Cys Leu Arg Ala Val
485 490 495

Leu Lys Leu Met Ser Glu Cys Trp Ala His Asn Pro Ala Ser Arg Leu
500 505 510

Thr Ala Leu Arg Ile Lys Lys Thr Leu Ala Lys Met Val Glu Ser Gln
515 520 525

Asp Val Lys Ile
530

<210> 108
<211> 502
<212> PRT
<213> Homo sapiens

<400> 108

Met Leu Leu Arg Ser Ala Gly Lys Leu Asn Val Gly Thr Lys Lys Glu
1 5 10 15

Asp Gly Glu Ser Thr Ala Pro Thr Pro Arg Pro Lys Val Leu Arg Cys
20 25 30

Lys Cys His His His Cys Pro Glu Asp Ser Val Asn Asn Ile Cys Ser
35 40 45

Thr Asp Gly Tyr Cys Phe Thr Met Ile Glu Glu Asp Asp Ser Gly Leu
50 55 60

Pro Val Val Thr Ser Gly Cys Leu Gly Leu Glu Gly Ser Asp Phe Gln
65 70 75 80

Cys Arg Asp Thr Pro Ile Pro His Gln Arg Arg Ser Ile Glu Cys Cys
85 90 95

Thr Glu Arg Asn Glu Cys Asn Lys Asp Leu His Pro Thr Leu Pro Pro
100 105 110

Leu Lys Asn Arg Asp Phe Val Asp Gly Pro Ile His His Arg Ala Leu
115 120 125

Leu Ile Ser Val Thr Val Cys Ser Leu Leu Leu Val Leu Ile Ile Leu
130 135 140

Phe Cys Tyr Phe Arg Tyr Lys Arg Gln Glu Thr Arg Pro Arg Tyr Ser
145 150 155 160

Ile Gly Leu Glu Gln Asp Glu Thr Tyr Ile Pro Pro Gly Glu Ser Leu
165 170 175

Arg Asp Leu Ile Glu Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu
180 185 190

Pro Leu Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Lys
195 200 205

Gln Ile Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg
210 215 220

Gly Glu Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser
225 230 235 240

Trp Phe Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu
245 250 255

Asn Ile Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp
260 265 270

Thr Gln Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr
275 280 285

Asp Tyr Leu Lys Ser Thr Thr Leu Asp Ala Lys Ser Met Leu Lys Leu
290 295 300

Ala Tyr Ser Ser Val Ser Gly Leu Cys His Leu His Thr Glu Ile Phe
305 310 315 320

Ser Thr Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys
325 330 335

Asn Ile Leu Val Lys Lys Asn Gly Thr Cys Cys Ile Ala Asp Leu Gly
340 345 350

Leu Ala Val Lys Phe Ile Ser Asp Thr Asn Glu Val Asp Ile Pro Pro

355 360 365

Asn Thr Arg Val Gly Thr Lys Arg Tyr Met Pro Pro Glu Val Leu Asp
370 375 380

Glu Ser Leu Asn Arg Asn His Phe Gln Ser Tyr Ile Met Ala Asp Met
385 390 395 400

Tyr Ser Phe Gly Leu Ile Leu Trp Glu Val Ala Arg Arg Cys Val Ser
405 410 415

Gly Gly Ile Val Glu Glu Tyr Gln Leu Pro Tyr His Asp Leu Val Pro
420 425 430

Ser Asp Pro Ser Tyr Glu Asp Met Arg Glu Ile Val Cys Ile Lys Lys
435 440 445

Leu Arg Pro Ser Phe Pro Asn Arg Trp Ser Ser Asp Glu Cys Leu Arg
450 455 460

Gln Met Gly Lys Leu Met Thr Glu Cys Trp Ala His Asn Pro Ala Ser
465 470 475 480

Arg Leu Thr Ala Leu Arg Val Lys Lys Thr Leu Ala Lys Met Ser Glu
485 490 495

Ser Gln Asp Ile Lys Leu
500

<210> 109
<211> 502
<212> PRT
<213> Homo sapiens

<400> 109

Met Leu Leu Arg Ser Ala Gly Lys Leu Asn Val Gly Thr Lys Lys Glu
1 5 10 15

Asp Gly Glu Ser Thr Ala Pro Thr Pro Arg Pro Lys Val Leu Arg Cys
20 25 30

Lys Cys His His His Cys Pro Glu Asp Ser Val Asn Asn Ile Cys Ser
35 40 45

Thr Asp Gly Tyr Cys Phe Thr Met Ile Glu Glu Asp Asp Ser Gly Leu
50 55 60

Pro Val Val Thr Ser Gly Cys Leu Gly Leu Glu Gly Ser Asp Phe Gln
65 70 75 80

Cys Arg Asp Thr Pro Ile Pro His Gln Arg Arg Ser Ile Glu Cys Cys
85 90 95

Thr Glu Arg Asn Glu Cys Asn Lys Asp Leu His Pro Thr Leu Pro Pro
100 105 110

Leu Lys Asn Arg Asp Phe Val Asp Gly Pro Ile His His Arg Ala Leu
115 120 125

Leu Ile Ser Val Thr Val Cys Ser Leu Leu Leu Val Leu Ile Ile Leu
130 135 140

Phe Cys Tyr Phe Arg Tyr Lys Arg Gln Glu Thr Arg Pro Arg Tyr Ser
145 150 155 160

Ile Gly Leu Glu Gln Asp Glu Thr Tyr Ile Pro Pro Gly Glu Ser Leu
165 170 175

Arg Asp Leu Ile Glu Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu
180 185 190

Pro Leu Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Lys
195 200 205

Gln Ile Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg
210 215 220

Gly Glu Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser
225 230 235 240

Trp Phe Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu
245 250 255

Asn Ile Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp
260 265 270

Thr Gln Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr
275 280 285

Asp Tyr Leu Lys Ser Thr Thr Leu Asp Ala Lys Ser Met Leu Lys Leu
290 295 300

Ala Tyr Ser Ser Val Ser Gly Leu Cys His Leu His Thr Glu Ile Phe
305 310 315 320

Ser Thr Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys
325 330 335

Asn Ile Leu Val Lys Lys Asn Gly Thr Cys Cys Ile Ala Asp Leu Gly
340 345 350

Leu Ala Val Lys Phe Ile Ser Asp Thr Asn Glu Val Asp Ile Pro Pro
355 360 365

```
Asn Thr Arg Val Gly Thr Lys Arg Tyr Met Pro Pro Glu Val Leu Asp
    370                 375                 380

Glu Ser Leu Asn Arg Asn His Phe Gln Ser Tyr Ile Met Ala Asp Met
385                 390                 395                 400

Tyr Ser Phe Gly Leu Ile Leu Trp Glu Val Ala Arg Arg Cys Val Ser
                405                 410                 415

Gly Gly Ile Val Glu Glu Tyr Gln Leu Pro Tyr His Asp Leu Val Pro
            420                 425                 430

Ser Asp Pro Ser Tyr Glu Asp Met Arg Glu Ile Val Cys Ile Lys Lys
        435                 440                 445

Leu Arg Pro Ser Phe Pro Asn Arg Trp Ser Ser Asp Glu Cys Leu Arg
    450                 455                 460

Gln Met Gly Lys Leu Met Thr Glu Cys Trp Ala His Asn Pro Ala Ser
465                 470                 475                 480

Arg Leu Thr Ala Leu Arg Val Lys Lys Thr Leu Ala Lys Met Ser Glu
                485                 490                 495

Ser Gln Asp Ile Lys Leu
            500
```

<210> 110
<211> 532
<212> PRT
<213> Rattus sp.

<400> 110

```
Met Thr Gln Leu Tyr Thr Tyr Ile Arg Leu Leu Gly Ala Cys Leu Phe
1               5                   10                  15

Ile Ile Ser His Val Gln Gly Gln Asn Leu Asp Ser Met Leu His Gly
            20                  25                  30

Thr Gly Met Lys Ser Asp Val Asp Gln Lys Lys Pro Glu Asn Gly Val
        35                  40                  45

Thr Leu Ala Pro Glu Asp Thr Leu Pro Phe Leu Lys Cys Tyr Cys Ser
    50                  55                  60

Gly His Cys Pro Asp Asp Ala Ile Asn Asn Thr Cys Ile Thr Asn Gly
65                  70                  75                  80

His Cys Phe Ala Ile Ile Glu Glu Asp Asp Gln Gly Glu Thr Thr Leu
                85                  90                  95

Thr Ser Gly Cys Met Lys Tyr Glu Gly Ser Asp Phe Gln Cys Lys Asp
            100                 105                 110
```

Ser Pro Lys Ala Gln Leu Arg Arg Thr Ile Glu Cys Cys Arg Thr Asn
115 120 125

Leu Cys Asn Gln Tyr Leu Gln Pro Thr Leu Pro Pro Val Val Ile Gly
130 135 140

Pro Phe Phe Asp Gly Ser Val Arg Trp Leu Ala Val Leu Ile Ser Met
145 150 155 160

Ala Val Cys Ile Val Ala Met Ile Val Phe Ser Ser Cys Phe Cys Tyr
165 170 175

Lys His Tyr Cys Lys Ser Ile Ser Ser Arg Gly Arg Tyr Asn Arg Asp
180 185 190

Leu Glu Gln Asp Glu Ala Phe Ile Pro Val Gly Glu Ser Leu Lys Asp
195 200 205

Leu Ile Asp Gln Ser Gln Ser Ser Gly Ser Gly Ser Gly Leu Pro Leu
210 215 220

Leu Val Gln Arg Thr Ile Ala Lys Gln Ile Gln Met Val Arg Gln Val
225 230 235 240

Gly Lys Gly Arg Tyr Gly Glu Val Trp Met Gly Lys Trp Arg Gly Glu
245 250 255

Lys Val Ala Val Lys Val Phe Phe Thr Thr Glu Glu Ala Ser Trp Phe
260 265 270

Arg Glu Thr Glu Ile Tyr Gln Thr Val Leu Met Arg His Glu Asn Ile
275 280 285

Leu Gly Phe Ile Ala Ala Asp Ile Lys Gly Thr Gly Ser Trp Thr Gln
290 295 300

Leu Tyr Leu Ile Thr Asp Tyr His Glu Asn Gly Ser Leu Tyr Asp Phe
305 310 315 320

Leu Lys Cys Ala Thr Leu Asp Thr Arg Ala Leu Leu Lys Leu Ala Tyr
325 330 335

Ser Ala Ala Cys Gly Leu Cys His Leu His Thr Glu Ile Tyr Gly Thr
340 345 350

Gln Gly Lys Pro Ala Ile Ala His Arg Asp Leu Lys Ser Lys Asn Ile
355 360 365

Leu Ile Lys Lys Asn Gly Ser Cys Cys Ile Ala Asp Leu Gly Leu Ala
370 375 380

Val Lys Phe Asn Ser Asp Thr Asn Glu Val Asp Ile Pro Leu Asn Thr
385 390 395 400

Arg Val Gly Thr Arg Arg Tyr Met Ala Pro Glu Val Leu Asp Glu Ser
405 410 415

Leu Ser Lys Asn His Phe Gln Pro Tyr Ile Met Ala Asp Ile Tyr Ser
420 425 430

Phe Gly Leu Ile Ile Trp Glu Met Ala Arg Arg Cys Ile Thr Gly Gly
435 440 445

Ile Val Glu Glu Tyr Gln Leu Pro Tyr Tyr Asn Met Val Pro Ser Asp
450 455 460

Pro Ser Tyr Glu Asp Met Arg Glu Val Val Cys Val Lys Arg Leu Arg
465 470 475 480

Pro Ile Val Ser Asn Arg Trp Asn Ser Asp Glu Cys Leu Arg Ala Val
485 490 495

Leu Lys Leu Met Ser Glu Cys Trp Ala His Asn Pro Ala Ser Arg Leu
500 505 510

Thr Ala Leu Arg Ile Lys Lys Thr Leu Ala Lys Met Val Glu Ser Gln
515 520 525

Asp Val Lys Ile
530

<210> 111
<211> 530
<212> PRT
<213> Homo sapiens

<400> 111

Met Thr Ser Ser Leu Gln Arg Pro Trp Arg Val Pro Trp Leu Pro Trp
1 5 10 15

Thr Ile Leu Leu Val Ser Thr Ala Ala Ala Ser Gln Asn Gln Glu Arg
20 25 30

Leu Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile Gly Glu
35 40 45

Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly Ser
50 55 60

Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu Val
65 70 75 80

Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His Tyr

85 90 95

Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly Thr
100 105 110

Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe Thr
115 120 125

Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His Ser
130 135 140

Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser Val
145 150 155 160

Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu Thr
165 170 175

Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala Ala
180 185 190

Ala Ser Glu Pro Ser Leu Asp Leu Asp Asn Leu Lys Leu Leu Glu Leu
195 200 205

Ile Gly Arg Gly Arg Tyr Gly Ala Val Tyr Lys Gly Ser Leu Asp Glu
210 215 220

Arg Pro Val Ala Val Lys Val Phe Ser Phe Ala Asn Arg Gln Asn Phe
225 230 235 240

Ile Asn Glu Lys Asn Ile Tyr Arg Val Pro Leu Met Glu His Asp Asn
245 250 255

Ile Ala Arg Phe Ile Val Gly Asp Glu Arg Val Thr Ala Asp Gly Arg
260 265 270

Met Glu Tyr Leu Leu Val Met Glu Tyr Tyr Pro Asn Gly Ser Leu Cys
275 280 285

Lys Tyr Leu Ser Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu
290 295 300

Ala His Ser Val Thr Arg Gly Leu Ala Tyr Leu His Thr Glu Leu Pro
305 310 315 320

Arg Gly Asp His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Asn Ser
325 330 335

Arg Asn Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe
340 345 350

Gly Leu Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Glu
355 360 365

Glu Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala
370 375 380

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
385 390 395 400

Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
405 410 415

Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu Tyr
420 425 430

Gln Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe Glu Asp
435 440 445

Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe Pro Glu
450 455 460

Ala Trp Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys Glu Thr Ile
465 470 475 480

Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg Leu Thr Ala Gln Cys
485 490 495

Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp Glu Arg Asn Lys
500 505 510

Ser Val Ser Pro Thr Val Asn Pro Met Ser Thr Ala Met Gln Asn Glu
515 520 525

Arg Arg
530

<210> 112
<211> 530
<212> PRT
<213> Homo sapiens

<400> 112

Met Thr Ser Ser Leu Gln Arg Pro Trp Arg Val Pro Trp Leu Pro Trp
1 5 10 15

Thr Ile Leu Leu Val Ser Thr Ala Ala Ala Ser Gln Asn Gln Glu Arg
20 25 30

Leu Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile Gly Glu
35 40 45

Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly Ser
50 55 60

Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu Val
65 70 75 80

Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His Tyr
85 90 95

Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly Thr
100 105 110

Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe Thr
115 120 125

Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His Ser
130 135 140

Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser Val
145 150 155 160

Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu Thr
165 170 175

Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala Ala
180 185 190

Ala Ser Glu Pro Ser Leu Asp Leu Asp Asn Leu Lys Leu Leu Glu Leu
195 200 205

Ile Gly Arg Gly Arg Tyr Gly Ala Val Tyr Lys Gly Ser Leu Asp Glu
210 215 220

Arg Pro Val Ala Val Lys Val Phe Ser Phe Ala Asn Arg Gln Asn Phe
225 230 235 240

Ile Asn Glu Lys Asn Ile Tyr Arg Val Pro Leu Met Glu His Asp Asn
245 250 255

Ile Ala Arg Phe Ile Val Gly Asp Glu Arg Val Thr Ala Asp Gly Arg
260 265 270

Met Glu Tyr Leu Leu Val Met Glu Tyr Tyr Pro Asn Gly Ser Leu Cys
275 280 285

Lys Tyr Leu Ser Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu
290 295 300

Ala His Ser Val Thr Arg Gly Leu Ala Tyr Leu His Thr Glu Leu Pro
305 310 315 320

Arg Gly Asp His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Asn Ser
325 330 335

Arg Asn Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe

340 345 350

Gly Leu Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Glu
355 360 365

Glu Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala
370 375 380

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
385 390 395 400

Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
405 410 415

Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu Tyr
420 425 430

Gln Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe Glu Asp
435 440 445

Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe Pro Glu
450 455 460

Ala Trp Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys Glu Thr Ile
465 470 475 480

Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg Leu Thr Ala Gln Cys
485 490 495

Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp Glu Arg Asn Lys
500 505 510

Ser Val Ser Pro Thr Val Asn Pro Met Ser Thr Ala Met Gln Asn Glu
515 520 525

Arg Arg
530

<210> 113
<211> 1037
<212> PRT
<213> Homo sapiens

<400> 113

Met Thr Ser Ser Leu Gln Arg Pro Trp Arg Val Pro Trp Leu Pro Trp
1 5 10 15

Thr Ile Leu Leu Val Ser Thr Ala Ala Ala Ser Gln Asn Gln Glu Arg
20 25 30

Leu Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile Gly Glu
35 40 45

Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly Ser
50 55 60

Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu Val
65 70 75 80

Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His Tyr
85 90 95

Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly Thr
100 105 110

Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe Thr
115 120 125

Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His Ser
130 135 140

Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser Val
145 150 155 160

Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu Thr
165 170 175

Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala Ala
180 185 190

Ala Ser Glu Pro Ser Leu Asp Leu Asp Asn Leu Lys Leu Leu Glu Leu
195 200 205

Ile Gly Arg Gly Arg Tyr Gly Ala Val Tyr Lys Gly Ser Leu Asp Glu
210 215 220

Arg Pro Val Ala Val Lys Val Phe Ser Phe Ala Asn Arg Gln Asn Phe
225 230 235 240

Ile Asn Glu Lys Asn Ile Tyr Arg Val Pro Leu Met Glu His Asp Asn
245 250 255

Ile Ala Arg Phe Ile Val Gly Asp Glu Arg Val Thr Ala Asp Gly Arg
260 265 270

Met Glu Tyr Leu Leu Val Met Glu Tyr Tyr Pro Asn Gly Ser Leu Cys
275 280 285

Lys Tyr Leu Ser Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu
290 295 300

Ala His Ser Val Thr Arg Gly Leu Ala Tyr Leu His Thr Glu Leu Pro
305 310 315 320

Arg Gly Asp His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Asn Ser
325 330 335

Arg Asn Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe
340 345 350

Gly Leu Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Glu
355 360 365

Glu Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala
370 375 380

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
385 390 395 400

Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
405 410 415

Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu Tyr
420 425 430

Gln Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe Glu Asp
435 440 445

Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe Pro Glu
450 455 460

Ala Trp Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys Glu Thr Ile
465 470 475 480

Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg Leu Thr Ala Gln Cys
485 490 495

Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp Glu Arg Asn Lys
500 505 510

Ser Val Ser Pro Thr Val Asn Pro Met Ser Thr Ala Met Gln Asn Glu
515 520 525

Arg Asn Leu Ser His Asn Arg Arg Val Pro Lys Ile Gly Pro Tyr Pro
530 535 540

Asp Tyr Ser Ser Ser Ser Tyr Ile Glu Asp Ser Ile His His Thr Asp
545 550 555 560

Ser Ile Val Lys Asn Ile Ser Ser Glu His Ser Met Ser Ser Thr Pro
565 570 575

Leu Thr Ile Gly Glu Lys Asn Arg Asn Ser Ile Asn Tyr Glu Arg Gln
580 585 590

Ala Gln Ala Arg Ile Pro Ser Pro Glu Thr Ser Val Thr Ser Leu Ser

595 600 605

Thr Asn Thr Thr Thr Thr Asn Thr Thr Gly Leu Thr Pro Ser Thr Gly
610 615 620

Met Thr Thr Ile Ser Glu Met Pro Tyr Pro Asp Glu Thr Asn Leu His
625 630 635 640

Thr Thr Asn Val Ala Gln Ser Ile Gly Pro Thr Pro Val Cys Leu Gln
645 650 655

Leu Thr Glu Glu Asp Leu Glu Thr Asn Lys Leu Asp Pro Lys Glu Val
660 665 670

Asp Lys Asn Leu Lys Glu Ser Ser Asp Glu Asn Leu Met Glu His Ser
675 680 685

Leu Lys Gln Phe Ser Gly Pro Asp Pro Leu Ser Ser Thr Ser Ser Ser
690 695 700

Leu Leu Tyr Pro Leu Ile Lys Leu Ala Val Glu Ala Thr Gly Gln Gln
705 710 715 720

Asp Phe Thr Gln Thr Ala Asn Gly Gln Ala Cys Leu Ile Pro Asp Val
725 730 735

Leu Pro Thr Gln Ile Tyr Pro Leu Pro Lys Gln Gln Asn Leu Pro Lys
740 745 750

Arg Pro Thr Ser Leu Pro Leu Asn Thr Lys Asn Ser Thr Lys Glu Pro
755 760 765

Arg Leu Lys Phe Gly Ser Lys His Lys Ser Asn Leu Lys Gln Val Glu
770 775 780

Thr Gly Val Ala Lys Met Asn Thr Ile Asn Ala Ala Glu Pro His Val
785 790 795 800

Val Thr Val Thr Met Asn Gly Val Ala Gly Arg Asn His Ser Val Asn
805 810 815

Ser His Ala Ala Thr Thr Gln Tyr Ala Asn Gly Thr Val Leu Ser Gly
820 825 830

Gln Thr Thr Asn Ile Val Thr His Arg Ala Gln Glu Met Leu Gln Asn
835 840 845

Gln Phe Ile Gly Glu Asp Thr Arg Leu Asn Ile Asn Ser Ser Pro Asp
850 855 860

Glu His Glu Pro Leu Leu Arg Arg Glu Gln Gln Ala Gly His Asp Glu
865 870 875 880

Gly Val Leu Asp Arg Leu Val Asp Arg Arg Glu Arg Pro Leu Glu Gly
885 890 895

Gly Arg Thr Asn Ser Asn Asn Asn Asn Ser Asn Pro Cys Ser Glu Gln
900 905 910

Asp Val Leu Ala Gln Gly Val Pro Ser Thr Ala Ala Asp Pro Gly Pro
915 920 925

Ser Lys Pro Arg Arg Ala Gln Arg Pro Asn Ser Leu Asp Leu Ser Ala
930 935 940

Thr Asn Val Leu Asp Gly Ser Ser Ile Gln Ile Gly Glu Ser Thr Gln
945 950 955 960

Asp Gly Lys Ser Gly Ser Gly Glu Lys Ile Lys Lys Arg Val Lys Thr
965 970 975

Pro Tyr Ser Leu Lys Arg Trp Arg Pro Ser Thr Trp Val Ile Ser Thr
980 985 990

Glu Ser Leu Asp Cys Glu Val Asn Asn Asn Gly Ser Asn Arg Ala Val
995 1000 1005

His Ser Lys Ser Ser Thr Ala Val Tyr Leu Ala Glu Gly Gly Thr
1010 1015 1020

Ala Thr Thr Met Val Ser Lys Asp Ile Gly Met Asn Cys Leu
1025 1030 1035

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<211> 1038
<212> PRT
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Leu Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile Gly Glu
35 40 45

Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly Ser
50 55 60

Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu Val
65 70 75 80

Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His Tyr
85 90 95

Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly Thr
100 105 110

Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe Thr
115 120 125

Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His Ser
130 135 140

Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser Val
145 150 155 160

Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu Thr
165 170 175

Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala Ala
180 185 190

Ala Ser Glu Pro Ser Leu Asp Leu Asp Asn Leu Lys Leu Leu Glu Leu
195 200 205

Ile Gly Arg Gly Arg Tyr Gly Ala Val Tyr Lys Gly Ser Leu Asp Glu
210 215 220

Arg Pro Val Ala Val Lys Val Phe Ser Phe Ala Asn Arg Gln Asn Phe
225 230 235 240

Ile Asn Glu Lys Asn Ile Tyr Arg Val Pro Leu Met Glu His Asp Asn
245 250 255

Ile Ala Arg Phe Ile Val Gly Asp Glu Arg Val Thr Ala Asp Gly Arg
260 265 270

Met Glu Tyr Leu Leu Val Met Glu Tyr Tyr Pro Asn Gly Ser Leu Cys
275 280 285

Lys Tyr Leu Ser Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu
290 295 300

Ala His Ser Val Thr Arg Gly Leu Ala Tyr Leu His Thr Glu Leu Pro
305 310 315 320

Arg Gly Asp His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Asn Ser
325 330 335

Arg Asn Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe
340 345 350

Gly Leu Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Glu

355 360 365

Glu Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala
370 375 380

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
385 390 395 400

Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
405 410 415

Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu Tyr
420 425 430

Gln Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe Glu Asp
435 440 445

Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe Pro Glu
450 455 460

Ala Trp Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys Glu Thr Ile
465 470 475 480

Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg Leu Thr Ala Gln Cys
485 490 495

Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp Glu Arg Asn Lys
500 505 510

Ser Val Ser Pro Thr Val Asn Pro Met Ser Thr Ala Met Gln Asn Glu
515 520 525

Arg Asn Leu Ser His Asn Arg Arg Val Pro Lys Ile Gly Pro Tyr Pro
530 535 540

Asp Tyr Ser Ser Ser Ser Tyr Ile Glu Asp Ser Ile His His Thr Asp
545 550 555 560

Ser Ile Val Lys Asn Ile Ser Ser Glu His Ser Met Ser Ser Thr Pro
565 570 575

Leu Thr Ile Gly Glu Lys Asn Arg Asn Ser Ile Asn Tyr Glu Arg Gln
580 585 590

Gln Ala Gln Ala Arg Ile Pro Ser Pro Glu Thr Ser Val Thr Ser Leu
595 600 605

Ser Thr Asn Thr Thr Thr Thr Asn Thr Thr Gly Leu Thr Pro Ser Thr
610 615 620

Gly Met Thr Thr Ile Ser Glu Met Pro Tyr Pro Asp Glu Thr Asn Leu
625 630 635 640

His Thr Thr Asn Val Ala Gln Ser Ile Gly Pro Thr Pro Val Cys Leu
645 650 655

Gln Leu Thr Glu Glu Asp Leu Glu Thr Asn Lys Leu Asp Pro Lys Glu
660 665 670

Val Asp Lys Asn Leu Lys Glu Ser Ser Asp Glu Asn Leu Met Glu His
675 680 685

Ser Leu Lys Gln Phe Ser Gly Pro Asp Pro Leu Ser Ser Thr Ser Ser
690 695 700

Ser Leu Leu Tyr Pro Leu Ile Lys Leu Ala Val Glu Ala Thr Gly Gln
705 710 715 720

Gln Asp Phe Thr Gln Thr Ala Asn Gly Gln Ala Cys Leu Ile Pro Asp
725 730 735

Val Leu Pro Thr Gln Ile Tyr Pro Leu Pro Lys Gln Gln Asn Leu Pro
740 745 750

Lys Arg Pro Thr Ser Leu Pro Leu Asn Thr Lys Asn Ser Thr Lys Glu
755 760 765

Pro Arg Leu Lys Phe Gly Ser Lys His Lys Ser Asn Leu Lys Gln Val
770 775 780

Glu Thr Gly Val Ala Lys Met Asn Thr Ile Asn Ala Ala Glu Pro His
785 790 795 800

Val Val Thr Val Thr Met Asn Gly Val Ala Gly Arg Asn His Ser Val
805 810 815

Asn Ser His Ala Ala Thr Thr Gln Tyr Ala Asn Arg Thr Val Leu Ser
820 825 830

Gly Gln Thr Thr Asn Ile Val Thr His Arg Ala Gln Glu Met Leu Gln
835 840 845

Asn Gln Phe Ile Gly Glu Asp Thr Arg Leu Asn Ile Asn Ser Ser Pro
850 855 860

Asp Glu His Glu Pro Leu Leu Arg Arg Glu Gln Gln Ala Gly His Asp
865 870 875 880

Glu Gly Val Leu Asp Arg Leu Val Asp Arg Arg Glu Arg Pro Leu Glu
885 890 895

Gly Gly Arg Thr Asn Ser Asn Asn Asn Asn Ser Asn Pro Cys Ser Glu
900 905 910

Gln Asp Val Leu Ala Gln Gly Val Pro Ser Thr Ala Ala Asp Pro Gly
915 920 925

Pro Ser Lys Pro Arg Arg Ala Gln Arg Pro Asn Ser Leu Asp Leu Ser
930 935 940

Ala Thr Asn Val Leu Asp Gly Ser Ser Ile Gln Ile Gly Glu Ser Thr
945 950 955 960

Gln Asp Gly Lys Ser Gly Ser Gly Glu Lys Ile Lys Lys Arg Val Lys
965 970 975

Thr Pro Tyr Ser Leu Lys Arg Trp Arg Pro Ser Thr Trp Val Ile Ser
980 985 990

Thr Glu Ser Leu Asp Cys Glu Val Asn Asn Asn Gly Ser Asn Arg Ala
995 1000 1005

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Leu Cys Ala Phe Lys Asp Pro Tyr Gln Gln Asp Leu Gly Ile Gly Glu
35 40 45

Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly Ser
50 55 60

Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu Val
65 70 75 80

Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His Tyr
85 90 95

Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly Thr
100 105 110

Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe Thr

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Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His Ser
    130                 135                 140

Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser Val
145                 150                 155                 160

Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu Thr
                165                 170                 175

Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala Ala
            180                 185                 190

Ala Ser Glu Pro Ser Leu Asp Leu Asp Asn Leu Lys Leu Leu Glu Leu
        195                 200                 205

Ile Gly Arg Gly Arg Tyr Gly Ala Val Tyr Lys Gly Ser Leu Asp Glu
    210                 215                 220

Arg Pro Val Ala Val Lys Val Phe Ser Phe Ala Asn Arg Gln Asn Phe
225                 230                 235                 240

Ile Asn Glu Lys Asn Ile Tyr Arg Val Pro Leu Met Glu His Asp Asn
                245                 250                 255

Ile Ala Arg Phe Ile Val Gly Asp Glu Arg Val Thr Ala Asp Gly Arg
            260                 265                 270

Met Glu Tyr Leu Leu Val Met Glu Tyr Tyr Pro Asn Gly Ser Leu Cys
        275                 280                 285

Lys Tyr Leu Ser Leu His Thr Ser Asp Trp Val Ser Ser Cys Arg Leu
    290                 295                 300

Ala His Ser Val Thr Arg Gly Leu Ala Tyr Leu His Thr Glu Leu Pro
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Arg Gly Asp His Tyr Lys Pro Ala Ile Ser His Arg Asp Leu Asn Ser
                325                 330                 335

Arg Asn Val Leu Val Lys Asn Asp Gly Thr Cys Val Ile Ser Asp Phe
            340                 345                 350

Gly Leu Ser Met Arg Leu Thr Gly Asn Arg Leu Val Arg Pro Gly Glu
        355                 360                 365

Glu Asp Asn Ala Ala Ile Ser Glu Val Gly Thr Ile Arg Tyr Met Ala
    370                 375                 380

Pro Glu Val Leu Glu Gly Ala Val Asn Leu Arg Asp Cys Glu Ser Ala
385                 390                 395                 400
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Leu Lys Gln Val Asp Met Tyr Ala Leu Gly Leu Ile Tyr Trp Glu Ile
405 410 415

Phe Met Arg Cys Thr Asp Leu Phe Pro Gly Glu Ser Val Pro Glu Tyr
420 425 430

Gln Met Ala Phe Gln Thr Glu Val Gly Asn His Pro Thr Phe Glu Asp
435 440 445

Met Gln Val Leu Val Ser Arg Glu Lys Gln Arg Pro Lys Phe Pro Glu
450 455 460

Ala Trp Lys Glu Asn Ser Leu Ala Val Arg Ser Leu Lys Glu Thr Ile
465 470 475 480

Glu Asp Cys Trp Asp Gln Asp Ala Glu Ala Arg Leu Thr Ala Gln Cys
485 490 495

Ala Glu Glu Arg Met Ala Glu Leu Met Met Ile Trp Glu Arg Asn Lys
500 505 510

Ser Val Ser Pro Thr Val Asn Pro Met Ser Thr Ala Met Gln Asn Glu
515 520 525

Arg Asn Leu Ser His Asn Arg Arg Val Pro Lys Ile Gly Pro Tyr Pro
530 535 540

Asp Tyr Ser Ser Ser Ser Tyr Ile Glu Asp Ser Ile His His Thr Asp
545 550 555 560

Ser Ile Val Lys Asn Ile Ser Ser Glu His Ser Met Ser Ser Thr Pro
565 570 575

Leu Thr Ile Gly Glu Lys Asn Arg Asn Ser Ile Asn Tyr Glu Arg Gln
580 585 590

Gln Ala Gln Ala Arg Ile Pro Ser Pro Glu Thr Ser Val Thr Ser Leu
595 600 605

Ser Thr Asn Thr Thr Thr Thr Asn Thr Thr Gly Leu Thr Pro Ser Thr
610 615 620

Gly Met Thr Thr Ile Ser Glu Met Pro Tyr Pro Asp Glu Thr Asn Leu
625 630 635 640

His Thr Thr Asn Val Ala Gln Ser Ile Gly Pro Thr Pro Val Cys Leu
645 650 655

Gln Leu Thr Glu Glu Asp Leu Glu Thr Asn Lys Leu Asp Pro Lys Glu
660 665 670

Val Asp Lys Asn Leu Lys Glu Ser Ser Asp Glu Asn Leu Met Glu His
675 680 685

Ser Leu Lys Gln Phe Ser Gly Pro Asp Pro Leu Ser Ser Thr Ser Ser
690 695 700

Ser Leu Leu Tyr Pro Leu Ile Lys Leu Ala Val Glu Ala Thr Gly Gln
705 710 715 720

Gln Asp Phe Thr Gln Thr Ala Asn Gly Gln Ala Cys Leu Ile Pro Asp
725 730 735

Val Leu Pro Thr Gln Ile Tyr Pro Leu Pro Lys Gln Gln Asn Leu Pro
740 745 750

Lys Arg Pro Thr Ser Leu Pro Leu Asn Thr Lys Asn Ser Thr Lys Glu
755 760 765

Pro Arg Leu Lys Phe Gly Ser Lys His Lys Ser Asn Leu Lys Gln Val
770 775 780

Glu Thr Gly Val Ala Lys Met Asn Thr Ile Asn Ala Ala Glu Pro His
785 790 795 800

Val Val Thr Val Thr Met Asn Gly Val Ala Gly Arg Asn His Ser Val
805 810 815

Asn Ser His Ala Ala Thr Thr Gln Tyr Ala Asn Arg Thr Val Leu Ser
820 825 830

Gly Gln Thr Thr Asn Ile Val Thr His Arg Ala Gln Glu Met Leu Gln
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Asn Gln Phe Ile Gly Glu Asp Thr Arg Leu Asn Ile Asn Ser Ser Pro
850 855 860

Asp Glu His Glu Pro Leu Leu Arg Arg Glu Gln Gln Ala Gly His Asp
865 870 875 880

Glu Gly Val Leu Asp Arg Leu Val Asp Arg Arg Glu Arg Pro Leu Glu
885 890 895

Gly Gly Arg Thr Asn Ser Asn Asn Asn Asn Ser Asn Pro Cys Ser Glu
900 905 910

Gln Asp Val Leu Ala Gln Gly Val Pro Ser Thr Ala Ala Asp Pro Gly
915 920 925

Pro Ser Lys Pro Arg Arg Ala Gln Arg Pro Asn Ser Leu Asp Leu Ser
930 935 940

Ala Thr Asn Val Leu Asp Gly Ser Ser Ile Gln Ile Gly Glu Ser Thr
945 950 955 960

Gln Asp Gly Lys Ser Gly Ser Gly Glu Lys Ile Lys Lys Arg Val Lys
965 970 975

Thr Pro Tyr Ser Leu Lys Arg Trp Arg Pro Ser Thr Trp Val Ile Ser
980 985 990

Thr Glu Ser Leu Asp Cys Glu Val Asn Asn Asn Gly Ser Asn Arg Ala
995 1000 1005

Val His Ser Lys Ser Ser Thr Ala Val Tyr Leu Ala Glu Gly Gly
1010 1015 1020

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aatcagaagt acagttttat ctagccacat cttggaggag tcgtaagaaa gcagtgggag 180

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tgctgcacag aaaggaacga atgtaataaa gacctacacc ctacactgcc tccattgaaa 360
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<400> 126

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Ser Ala Lys Pro Val Thr Glu Leu Val Cys Ser Gly Gln Cys Gly Pro
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Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg Gly Lys Trp Trp Arg Pro
35 40 45

Ser Gly Pro Asp Phe Arg Cys Ile Pro Asp Arg Tyr Arg Ala Gln Arg
50 55 60

Val Gln Leu Leu Cys Pro Gly Gly Glu Ala Pro Arg Ala Arg Lys Val
65 70 75 80

Arg Leu Val Ala Ser Cys Lys Cys
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<210> 127
<211> 82
<212> PRT
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<400> 127

Cys Arg Pro Ile Asn Ala Thr Leu Ala Val Glu Lys Glu Gly Cys Pro
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Val Cys Ile Thr Val Asn Thr Thr Ile Cys Ala Gly Tyr Cys Pro Thr
20 25 30

Met Thr Arg Val Leu Gln Gly Val Leu Pro Ala Leu Pro Gln Val Val
35 40 45

Cys Asn Tyr Arg Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys
50 55 60

Pro Arg Gly Val Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser Cys
65 70 75 80

Gln Cys

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<400> 128

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Phe Cys Ile Ser Ile Asn Thr Thr Trp Cys Ala Gly Tyr Cys Tyr Thr
20 25 30

Arg Asp Leu Val Tyr Lys Asp Pro Ala Arg Pro Lys Ile Gln Lys Thr
35 40 45

Cys Thr Phe Lys Glu Leu Val Tyr Glu Thr Val Arg Val Pro Gly Cys
50 55 60

Ala His His Ala Asp Ser Leu Tyr Thr Tyr Pro Val Ala Thr Gln Cys
65 70 75 80

His Cys

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<211> 84
<212> PRT
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Tyr Cys Leu Thr Ile Asn Thr Thr Ile Cys Ala Gly Tyr Cys Met Thr
20 25 30

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

Asp Val Cys Thr Tyr Arg Asp Phe Ile Tyr Arg Thr Val Glu Ile Pro
50 55 60

Gly Cys Pro Leu His Val Ala Pro Tyr Phe Ser Tyr Pro Val Ala Leu
65 70 75 80

Ser Cys Lys Cys

<210> 130
<211> 83
<212> PRT
<213> Homo sapiens

<400> 130

Cys Asn Asp Ile Thr Ala Arg Leu Gln Tyr Val Lys Val Gly Ser Cys
1 5 10 15

Lys Ser Glu Val Glu Val Asp Ile His Tyr Cys Gln Gly Lys Cys Ala
20 25 30

Ser Lys Ala Met Tyr Ser Ile Asp Ile Asn Asp Val Gln Asp Gln Cys
35 40 45

Ser Cys Cys Ser Pro Thr Arg Thr Glu Pro Met Gln Val Ala Leu His
50 55 60

Cys Thr Asn Gly Ser Val Val Tyr His Glu Val Leu Asn Ala Met Glu
65 70 75 80

Cys Lys Cys

<210> 131
<211> 80

<212> PRT
<213> Homo sapiens

<400> 131

Cys Ser Thr Val Pro Val Thr Thr Glu Val Ser Tyr Ala Gly Cys Thr
1 5 10 15

Lys Thr Val Leu Met Asn His Cys Ser Gly Ser Cys Gly Thr Phe Val
20 25 30

Met Tyr Ser Ala Lys Ala Gln Ala Leu Asp His Ser Cys Ser Cys Cys
35 40 45

Lys Glu Glu Lys Thr Ser Gln Arg Glu Val Val Leu Ser Cys Pro Asn
50 55 60

Gly Gly Ser Leu Thr His Thr Tyr Thr His Ile Glu Ser Cys Gln Cys
65 70 75 80

<210> 132
<211> 80
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<213> Homo sapiens

<400> 132

Cys Arg Thr Val Pro Phe Ser Gln Thr Ile Thr His Glu Gly Cys Glu
1 5 10 15

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

His Phe Pro Gly Ala Ala Gln His Ser His Thr Ser Cys Ser His Cys
35 40 45

Leu Pro Ala Lys Phe Thr Thr Met His Leu Pro Leu Asn Cys Thr Glu
50 55 60

Leu Ser Ser Val Ile Lys Val Val Met Leu Val Glu Glu Cys Gln Cys
65 70 75 80

<210> 133
<211> 85
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<400> 133

Cys Lys Thr Gln Pro Leu Lys Gln Thr Ile His Glu Glu Gly Cys Asn
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Ser Arg Thr Ile Ile Asn Arg Phe Cys Tyr Gly Gln Cys Asn Ser Phe
20 25 30

Tyr Ile Pro Arg His Ile Arg Lys Glu Glu Gly Ser Phe Gln Ser Cys
35 40 45

Ser Phe Cys Lys Pro Lys Lys Phe Thr Thr Met Met Val Thr Leu Asn
50 55 60

Cys Pro Glu Leu Gln Pro Pro Thr Lys Lys Lys Arg Val Thr Arg Val
65 70 75 80

Lys Gln Cys Arg Cys
85

<210> 134
<211> 86
<212> PRT
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<400> 134

Cys Glu Ala Lys Asn Ile Thr Gln Ile Val Gly His Ser Gly Cys Glu
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Ala Lys Ser Ile Gln Asn Arg Ala Cys Leu Gly Gln Cys Phe Ser Tyr
20 25 30

Ser Val Pro Asn Thr Phe Pro Gln Ser Thr Glu Ser Leu Val His Cys
35 40 45

Asp Ser Cys Met Pro Ala Gln Ser Met Trp Glu Ile Val Thr Leu Glu
50 55 60

Cys Pro Gly His Glu Glu Val Pro Arg Val Asp Lys Leu Val Glu Lys
65 70 75 80

Ile Leu His Cys Ser Cys
85

<210> 135
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<212> PRT
<213> Homo sapiens

<400> 135

Cys Ile Arg Thr Pro Lys Ile Ser Lys Pro Ile Lys Phe Glu Leu Ser
1 5 10 15

Gly Cys Thr Ser Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys
20 25 30

Thr Asp Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val
35 40 45

Glu Phe Lys Cys Pro Asp Gly Glu Val Met Lys Lys Asn Met Met Phe
50 55 60

Ile Lys Thr Cys Ala Cys

65 70

<210> 136
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Cys Leu Arg Thr Lys Lys Ser Leu Lys Ala Ile His Leu Gln Phe Lys
1 5 10 15

Asn Cys Thr Ser Leu His Thr Tyr Lys Pro Arg Phe Cys Gly Val Cys
20 25 30

Ser Asp Gly Arg Cys Cys Thr Pro His Asn Thr Lys Thr Ile Gln Ala
35 40 45

Glu Phe Gln Cys Ser Pro Gly Gln Ile Val Lys Lys Pro Val Met Val
50 55 60

Ile Gly Thr Cys Thr Cys
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<210> 137
<211> 70
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<400> 137

Cys Ser Lys Thr Lys Lys Ser Pro Glu Pro Val Arg Phe Thr Tyr Ala
1 5 10 15

Gly Cys Leu Ser Val Lys Lys Tyr Arg Pro Lys Tyr Cys Gly Ser Cys
20 25 30

Val Asp Gly Arg Cys Cys Thr Pro Gln Leu Thr Arg Thr Val Lys Met
35 40 45

Arg Phe Arg Cys Glu Asp Gly Glu Thr Phe Ser Lys Asn Val Met Met
50 55 60

Ile Gln Ser Cys Lys Cys
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<210> 138
<211> 205
<212> PRT
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<400> 138

Gln His Tyr Leu His Ile Arg Pro Ala Pro Ser Asp Asn Leu Pro Leu
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Val Asp Leu Ile Glu His Pro Asp Pro Ile Phe Asp Pro Lys Glu Lys

20 25 30

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

Pro Gly Phe Met Ala Thr Ser Pro Pro Glu Asp Arg Pro Gly Gly Gly
50 55 60

Gly Gly Ala Ala Gly Gly Ala Glu Asp Leu Ala Glu Leu Asp Gln Leu
65 70 75 80

Leu Arg Gln Arg Pro Ser Gly Ala Met Pro Ser Glu Ile Lys Gly Leu
85 90 95

Glu Phe Ser Glu Gly Leu Ala Gln Gly Lys Lys Gln Arg Leu Ser Lys
100 105 110

Lys Leu Arg Arg Lys Leu Gln Met Trp Leu Trp Ser Gln Thr Phe Cys
115 120 125

Pro Val Leu Tyr Ala Trp Asn Asp Leu Gly Ser Arg Phe Trp Pro Arg
130 135 140

Tyr Val Lys Val Gly Ser Cys Phe Ser Lys Arg Ser Cys Ser Val Pro
145 150 155 160

Glu Gly Met Val Cys Lys Pro Ser Lys Ser Val His Leu Thr Val Leu
165 170 175

Arg Trp Arg Cys Gln Arg Arg Gly Gly Gln Arg Cys Gly Trp Ile Pro
180 185 190

Ile Gln Tyr Pro Ile Ile Ser Glu Cys Lys Cys Ser Cys
195 200 205

<210> 139
<211> 197
<212> PRT
<213> Gallus gallus

<400> 139

Gln His Tyr Leu His Ile Arg Pro Ala Pro Ser Asp Asn Leu Pro Leu
1 5 10 15

Val Asp Leu Ile Glu His Pro Asp Pro Ile Phe Asp Pro Lys Glu Lys
20 25 30

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

Pro Asn Phe Met Ala Met Ser Leu Pro Glu Asp Arg Leu Gly Val Asp
50 55 60

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

Met Pro Gly Glu Ile Lys Gly Leu Glu Phe Tyr Asp Gly Leu Gln Pro
85 90 95

Gly Lys Lys His Arg Leu Ser Lys Lys Leu Arg Arg Lys Leu Gln Met
100 105 110

Trp Leu Trp Ser Gln Thr Phe Cys Pro Val Leu Tyr Thr Trp Asn Asp
115 120 125

Leu Gly Ser Arg Phe Trp Pro Arg Tyr Val Lys Val Gly Ser Cys Tyr
130 135 140

Ser Lys Arg Ser Cys Ser Val Pro Glu Gly Met Val Cys Lys Pro Ala
145 150 155 160

Lys Ser Val His Leu Thr Ile Leu Arg Trp Arg Cys Gln Arg Arg Gly
165 170 175

Gly Gln Arg Cys Thr Trp Ile Pro Ile Gln Tyr Pro Ile Ile Ala Glu
180 185 190

Cys Lys Cys Ser Cys
195

<210> 140
<211> 196
<212> PRT
<213> Xenopus laevis

<400> 140

Gln His Tyr Leu His Ile Arg Pro Ala Pro Ser Glu Asn Leu Pro Leu
1 5 10 15

Val Asp Leu Ile Glu His Pro Asp Pro Ile Tyr Asp Pro Lys Glu Lys
20 25 30

Asp Leu Asn Glu Thr Leu Leu Arg Thr Leu Met Val Gly His Phe Asp
35 40 45

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

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

Met Pro Ala Glu Ile Lys Gly Leu Glu Phe Tyr Glu Gly Leu Gln Ser
85 90 95

Lys Lys His Arg Leu Ser Lys Lys Leu Arg Arg Lys Leu Gln Met Trp

100 105 110

Leu Trp Ser Gln Thr Phe Cys Pro Val Leu Tyr Thr Trp Asn Asp Leu
115 120 125

Gly Thr Arg Phe Trp Pro Arg Tyr Val Lys Val Gly Ser Cys Tyr Ser
130 135 140

Lys Arg Ser Cys Ser Val Pro Glu Gly Met Val Cys Lys Ala Ala Lys
145 150 155 160

Ser Met His Leu Thr Ile Leu Arg Trp Arg Cys Gln Arg Arg Val Gln
165 170 175

Gln Lys Cys Ala Trp Ile Thr Ile Gln Tyr Pro Val Ile Ser Glu Cys
180 185 190

Lys Cys Ser Cys
195

<210> 141
<211> 195
<212> PRT
<213> Takifugu rubripes

<400> 141

Gln Pro Tyr Tyr Leu Leu Arg Pro Ile Pro Ser Asp Ser Leu Pro Ile
1 5 10 15

Val Glu Leu Lys Glu Asp Pro Gly Pro Val Phe Asp Pro Lys Glu Arg
20 25 30

Asp Leu Asn Glu Thr Glu Leu Lys Ser Val Leu Gly Asp Phe Asp Ser
35 40 45

Arg Phe Leu Ser Val Leu Pro Pro Ala Glu Asp Gly His Ala Gly Asn
50 55 60

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

Lys Glu Ile Arg Ala Val Asp Phe Asp Ala Pro Gln Leu Gly Lys Lys
85 90 95

His Lys Pro Ser Lys Lys Leu Lys Arg Arg Leu Gln Gln Trp Leu Trp
100 105 110

Ala Tyr Ser Phe Cys Pro Leu Ala His Ala Trp Thr Asp Leu Gly Ser
115 120 125

Arg Phe Trp Pro Arg Phe Val Arg Ala Gly Ser Cys Leu Ser Lys Arg
130 135 140

Ser Cys Ser Val Pro Glu Gly Met Thr Cys Lys Pro Ala Thr Ser Thr
145 150 155 160

His Leu Thr Ile Leu Arg Trp Arg Cys Val Gln Arg Lys Val Gly Leu
165 170 175

Lys Cys Ala Trp Ile Pro Met Gln Tyr Pro Val Ile Thr Asp Cys Lys
180 185 190

Cys Ser Cys
195

<210> 142
<211> 196
<212> PRT
<213> Danio rerio

<400> 142

Gln His Tyr Tyr Leu Leu Arg Pro Ile Pro Ser Asp Ser Leu Pro Ile
1 5 10 15

Val Glu Leu Lys Glu Asp Pro Asp Pro Val Leu Asp Pro Lys Glu Arg
20 25 30

Asp Leu Asn Glu Thr Glu Leu Arg Ala Ile Leu Gly Ser His Phe Glu
35 40 45

Gln Asn Phe Met Ser Ile Asn Pro Pro Glu Asp Lys His Ala Gly Gln
50 55 60

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

Met Pro Lys Glu Ile Lys Ala Met Glu Phe Asp Ile Gln His Gly Lys
85 90 95

Lys His Lys Pro Ser Lys Lys Leu Arg Arg Arg Leu Gln Leu Trp Leu
100 105 110

Trp Ser Tyr Thr Phe Cys Pro Val Val His Thr Trp Gln Asp Leu Gly
115 120 125

Asn Arg Phe Trp Pro Arg Tyr Leu Lys Val Gly Ser Cys Tyr Asn Lys
130 135 140

Arg Ser Cys Ser Val Pro Glu Gly Met Val Cys Lys Pro Pro Lys Ser
145 150 155 160

Ser His Leu Thr Val Leu Arg Trp Arg Cys Val Gln Arg Lys Gly Gly
165 170 175

Leu Lys Cys Ala Trp Ile Pro Val Gln Tyr Pro Val Ile Ser Glu Cys

180 185 190

Lys Cys Ser Cys
195

<210> 143
<211> 188
<212> PRT
<213> Mus musculus

<400> 143

Gln Gly Trp Gln Ala Phe Arg Asn Asp Ala Thr Glu Val Ile Pro Gly
1 5 10 15

Leu Gly Glu Tyr Pro Glu Pro Pro Pro Glu Asn Asn Gln Thr Met Asn
20 25 30

Arg Ala Glu Asn Gly Gly Arg Pro Pro His His Pro Tyr Asp Ala Lys
35 40 45

Gly Val Ser Glu Tyr Ser Cys Arg Glu Leu His Tyr Thr Arg Phe Leu
50 55 60

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

Ser Gly Gln Cys Gly Pro Ala Arg Leu Leu Pro Asn Ala Ile Gly Arg
85 90 95

Val Lys Trp Trp Arg Pro Asn Gly Pro Asp Phe Arg Cys Ile Pro Asp
100 105 110

Arg Tyr Arg Ala Gln Arg Val Gln Leu Leu Cys Pro Gly Gly Ala Ala
115 120 125

Pro Arg Ser Arg Lys Val Arg Leu Val Ala Ser Cys Lys Cys Lys Arg
130 135 140

Leu Thr Arg Phe His Asn Gln Ser Glu Leu Lys Asp Phe Gly Pro Glu
145 150 155 160

Thr Ala Arg Pro Gln Lys Gly Arg Lys Pro Arg Pro Gly Ala Arg Gly
165 170 175

Ala Lys Ala Asn Gln Ala Glu Leu Glu Asn Ala Tyr
180 185