

SEQUENCE LISTING

<110> Exosome Medical International AB

<120> NEW METHOD AND COMPOUND FOR PROSTATE CANCER DIAGNOSIS

<130> PC-21124509

<160> 104

<170> PatentIn version 3.5

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<213> Artificial Sequence

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<400> 1

Cys	Ala	Arg	His	Tyr	Tyr	Asn	Trp	Ala	Ser	Gly	Tyr	Phe	Asp	Tyr	Trp
1				5				10						15	

<210> 2

<211> 18

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<400> 2

Cys	Ala	Arg	Thr	Thr	Ser	Tyr	Tyr	Gly	Tyr	Ser	Ala	His	Phe	Ile	Asp
1				5				10						15	

Tyr Trp

<210> 3

<211> 17

<212> PRT

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<400> 3

Cys Ala Arg Val Tyr Tyr His Tyr Tyr Tyr Tyr Gly Ser Phe Asp Tyr
1 5 10 15

Trp

<210> 4
<211> 17
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<400> 4

Cys Ala Arg Tyr Ser Tyr Tyr Tyr Ala Gly Ser Tyr Tyr Phe Asp Tyr
1 5 10 15

Trp

<210> 5
<211> 17
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<213> Artificial Sequence

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<400> 5

Cys Ala Arg Ser Tyr Ser Trp Tyr Ser Arg Gly Pro Ser Leu Asp Tyr
1 5 10 15

Trp

<210> 6
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<400> 6

Cys Ala Arg Tyr Val Arg Gly Tyr Gly Tyr Gly Tyr Leu Asp Tyr Trp
1 5 10 15

<210> 7
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<400> 7

Cys Ala Arg Tyr Thr His Ser Thr Tyr Gly Tyr Arg Leu Asp Tyr Trp
1 5 10 15

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<400> 8

Cys Ala Arg Val Phe Tyr Tyr Gly Pro Tyr Tyr Phe Ser Tyr His Phe
1 5 10 15

Asp Tyr Trp

<210> 9
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<400> 9

Cys Ala Arg Ser His Tyr Gly Ser Leu Asp Tyr Trp
1 5 10

<210> 10
<211> 14
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<400> 10

Cys	Ala	Arg	Tyr	Ser	Tyr	Tyr	Tyr	Thr	Trp	Leu	Asp	Tyr	Trp
1				5					10				

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<400> 11

Cys	Ala	Arg	Tyr	Thr	Tyr	Tyr	Val	Gly	Gly	Phe	Asp	Tyr	Trp
1				5					10				

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<400> 12

Cys	Ala	Arg	Thr	Tyr	Tyr	Tyr	Phe	Tyr	Pro	Tyr	Gly	Tyr	Tyr	Phe	Asp
1				5					10					15	

Tyr Trp

<210> 13

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Cys	Gln	Gln	Gly	Trp	Tyr	Pro	Pro	Thr	Phe
1				5					10

<210> 14
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<400> 14

Cys Gln Gln Gly Tyr Gly Pro Phe Thr Phe
1 5 10

<210> 15
<211> 10
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<400> 15

Cys Gln Gln Ser Thr His Leu Ser Thr Phe
1 5 10

<210> 16
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<400> 16

Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe
1 5 10

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<400> 17

Cys Gln Gln Ala Phe Tyr Ala His Leu Leu Thr Phe
1 5 10

<210> 18
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<400> 18

Cys Gln Gln Ala Pro Ala Tyr Ser Pro Phe Thr Phe
1 5 10

<210> 19
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<400> 19

Cys Gln Gln Asp Ala Tyr His Pro Pro Thr Phe
1 5 10

<210> 20
<211> 11
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<400> 20

Cys Gln Gln Asp Asp Arg Gly Leu Pro Thr Phe
1 5 10

<210> 21
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<400> 21

Cys	Gln	Gln	Phe	Ser	Tyr	Thr	Leu	Ser	Thr	Phe
1				5					10	

<210> 22

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<400> 22

Cys	Gln	Gln	Phe	Tyr	Pro	Ser	Leu	His	Thr	Phe
1				5					10	

<210> 23

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Cys	Gln	Gln	Gly	Phe	Val	Leu	Ser	Thr	Phe
1				5					10

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<400> 24

Cys	Gln	Gln	Gly	Phe	Tyr	Leu	Pro	Thr	Phe
1				5					10

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<400> 25

Gly Phe Thr Phe Ser Ser Tyr Ala
1 5

<210> 26

<211> 8

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<400> 26

Ile Ser Gly Ser Gly Gly Ser Thr
1 5

<210> 27

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<221> VARIANT

<222> (5)..(8)

<223> Xaa is Y, S or G

<220>

<221> VARIANT

<222> (10)..(10)

<223> Xaa is Y, S or G

<400> 27

Gly Phe Thr Phe Xaa Xaa Xaa Xaa Met Xaa
1 5 10

<210> 28

<211> 12

<212> PRT

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<220>
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<222> (5)..(8)
<223> Xaa is Y, S or G

<400> 28

Gly	Phe	Thr	Phe	Xaa	Xaa	Xaa	Xaa	Ser	Ser	Tyr	Ala
1				5					10		

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<223> Xaa is Y, S or G

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<221> VARIANT
<222> (10)..(10)
<223> Xaa is Y, S or G

<400> 29

Gly	Phe	Thr	Phe	Xaa	Xaa	Xaa	Xaa	Thr	Xaa
1				5					10

<210> 30
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<220>
<221> VARIANT
<222> (5)..(6)
<223> Xaa is Y, S or G

<400> 30

Ile Ser Gly Ser Xaa Xaa Gly Gly Ser Thr
1 5 10

<210> 31
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<400> 31

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

<210> 32
<211> 120
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<400> 32

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg His Tyr Tyr Asn Trp Ala Ser Gly Tyr Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 33
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<400> 33

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Thr Thr Ser Tyr Tyr Gly Tyr Ser Ala His Phe Ile Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 34
<211> 121
<212> PRT
<213> Artificial Sequence

<220>

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<400> 34

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Val Tyr Tyr His Tyr Tyr Tyr Tyr Gly Ser Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 35

<211> 121

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<400> 35

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Tyr Ser Tyr Tyr Tyr Ala Gly Ser Tyr Tyr Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 36
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<400> 36

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ser Tyr Ser Trp Tyr Ser Arg Gly Pro Ser Leu Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 37
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<400> 37

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Tyr Val Arg Gly Tyr Gly Tyr Gly Tyr Leu Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 38
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<400> 38

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Tyr Thr His Ser Thr Tyr Gly Tyr Arg Leu Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 39
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<400> 39

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Val Phe Tyr Tyr Gly Pro Tyr Tyr Phe Ser Tyr His Phe Asp Tyr
100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Ser His Tyr Gly Ser Leu Asp Tyr Trp Gly Gln Gly Thr Leu Val
100 105 110

Thr Val Ser Ser
115

<210> 41
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<212> PRT
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<400> 41

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Tyr Ser Tyr Tyr Tyr Thr Trp Leu Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 42
<211> 118
<212> PRT
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<400> 42

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Tyr Thr Tyr Tyr Val Gly Gly Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 43
<211> 122
<212> PRT
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<400> 43

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Ser Val Lys
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala
85 90 95

Arg Thr Tyr Tyr Tyr Phe Tyr Pro Tyr Gly Tyr Tyr Phe Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 44

<211> 107

<212> PRT

<213> Artificial Sequence

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<400> 44

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Trp Tyr Pro Pro Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 45
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<400> 45

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Tyr Gly Pro Phe Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 46
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<400> 46

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Thr His Leu Ser Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 47
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<212> PRT
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<400> 47

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

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<400> 48

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

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

Leu Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 49
<211> 109
<212> PRT
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<220>
<223> synthetic sequence

<400> 49

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Pro Ala Tyr Ser Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 50
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<400> 50

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asp Ala Tyr His Pro Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 51

<211> 108

<212> PRT

<213> Artificial Sequence

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<400> 51

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Asp Asp Arg Gly Leu Pro
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 52
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<400> 52

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Ser Tyr Thr Leu Ser
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

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<400> 53

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Phe Tyr Pro Ser Leu His
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

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<400> 54

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Phe Val Leu Ser Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 55
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<400> 55

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Phe Tyr Leu Pro Thr
85 90 95

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 56
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<400> 56

Ser Gln Ser Ile Ser Ser Tyr Leu
1 5

<210> 57
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<220>
<221> VARIANT
<222> (5)..(10)
<223> Xaa is Y, S or G

<400> 57

Ser Gln Ser Ile Xaa Xaa Xaa Xaa Xaa Xaa Ser Ser Tyr Leu
1 5 10

<210> 58
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<400> 58

Tyr Ala Ala Ser Ser
1 5

<210> 59
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic sequence

<220>
<221> VARIANT
<222> (4)..(10)
<223> Xaa is Y, S or G

<400> 59

Tyr Ala Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Ser
1 5 10

<210> 60
<211> 255
<212> PRT
<213> Homo sapiens

<400> 60

Met Asp Asp Arg Glu Asp Leu Val Tyr Gln Ala Lys Leu Ala Glu Gln
1 5 10 15

Ala Glu Arg Tyr Asp Glu Met Val Glu Ser Met Lys Lys Val Ala Gly
20 25 30

Met Asp Val Glu Leu Thr Val Glu Glu Arg Asn Leu Leu Ser Val Ala
35 40 45

Tyr Lys Asn Val Ile Gly Ala Arg Arg Ala Ser Trp Arg Ile Ile Ser
50 55 60

Ser Ile Glu Gln Lys Glu Glu Asn Lys Gly Gly Glu Asp Lys Leu Lys
65 70 75 80

Met Ile Arg Glu Tyr Arg Gln Met Val Glu Thr Glu Leu Lys Leu Ile
85 90 95

Cys Cys Asp Ile Leu Asp Val Leu Asp Lys His Leu Ile Pro Ala Ala
100 105 110

Asn Thr Gly Glu Ser Lys Val Phe Tyr Tyr Lys Met Lys Gly Asp Tyr
115 120 125

His Arg Tyr Leu Ala Glu Phe Ala Thr Gly Asn Asp Arg Lys Glu Ala
130 135 140

Ala Glu Asn Ser Leu Val Ala Tyr Lys Ala Ala Ser Asp Ile Ala Met
145 150 155 160

Thr Glu Leu Pro Pro Thr His Pro Ile Arg Leu Gly Leu Ala Leu Asn
165 170 175

Phe Ser Val Phe Tyr Tyr Glu Ile Leu Asn Ser Pro Asp Arg Ala Cys
180 185 190

Arg Leu Ala Lys Ala Ala Phe Asp Asp Ala Ile Ala Glu Leu Asp Thr
195 200 205

Leu Ser Glu Glu Ser Tyr Lys Asp Ser Thr Leu Ile Met Gln Leu Leu
210 215 220

Arg Asp Asn Leu Thr Leu Trp Thr Ser Asp Met Gln Gly Asp Gly Glu
225 230 235 240

Glu Gln Asn Lys Glu Ala Leu Gln Asp Val Glu Asp Glu Asn Gln
245 250 255

<210> 61
<211> 375
<212> PRT
<213> Homo sapiens

<400> 61

Met Asp Asp Asp Ile Ala Ala Leu Val Val Asp Asn Gly Ser Gly Met
1 5 10 15

Cys Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val Phe Pro
20 25 30

Ser Ile Val Gly Arg Pro Arg His Gln Gly Val Met Val Gly Met Gly
35 40 45

Gln Lys Asp Ser Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg Gly Ile
50 55 60

Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Thr Asn Trp Asp
65 70 75 80

Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu Arg Val
85 90 95

Ala Pro Glu Glu His Pro Val Leu Leu Thr Glu Ala Pro Leu Asn Pro
100 105 110

Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn
115 120 125

Thr Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala
130 135 140

Ser Gly Arg Thr Thr Gly Ile Val Met Asp Ser Gly Asp Gly Val Thr
145 150 155 160

His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Leu
165 170 175

Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile
180 185 190

Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile
195 200 205

Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Val Ala Leu Asp Phe Glu
210 215 220

Gln Glu Met Ala Thr Ala Ala Ser Ser Ser Ser Leu Glu Lys Ser Tyr
225 230 235 240

Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Asn Glu Arg Phe Arg
245 250 255

Cys Pro Glu Ala Leu Phe Gln Pro Ser Phe Leu Gly Met Glu Ser Cys
260 265 270

Gly Ile His Glu Thr Thr Phe Asn Ser Ile Met Lys Cys Asp Val Asp
275 280 285

Ile Arg Lys Asp Leu Tyr Ala Asn Thr Val Leu Ser Gly Gly Thr Thr
290 295 300

Met Tyr Pro Gly Ile Ala Asp Arg Met Gln Lys Glu Ile Thr Ala Leu
305 310 315 320

Ala Pro Ser Thr Met Lys Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys
325 330 335

Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe
340 345 350

Gln Gln Met Trp Ile Ser Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser
355 360 365

Ile Val His Arg Lys Cys Phe
370 375

<210> 62
<211> 894
<212> PRT
<213> Homo sapiens

<400> 62

Met Asn Gln Ile Glu Pro Gly Val Gln Tyr Asn Tyr Val Tyr Asp Glu
1 5 10 15

Asp Glu Tyr Met Ile Gln Glu Glu Glu Trp Asp Arg Asp Leu Leu Leu
20 25 30

Asp Pro Ala Trp Glu Lys Gln Gln Arg Lys Thr Phe Thr Ala Trp Cys
35 40 45

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

Asp Phe Arg Asn Gly Leu Lys Leu Met Leu Leu Leu Glu Val Ile Ser
65 70 75 80

Gly Glu Arg Leu Pro Lys Pro Asp Arg Gly Lys Met Arg Phe His Lys
85 90 95

Ile Ala Asn Val Asn Lys Ala Leu Asp Tyr Ile Ala Ser Lys Gly Val
100 105 110

Lys Leu Val Ser Ile Gly Ala Glu Glu Ile Val Asp Gly Asn Val Lys
115 120 125

Met Thr Leu Gly Met Ile Trp Thr Ile Ile Leu Arg Phe Ala Ile Gln
130 135 140

Asp Ile Ser Val Glu Glu Thr Ser Ala Lys Glu Gly Leu Leu Leu Trp
145 150 155 160

Cys Gln Arg Lys Thr Ala Pro Tyr Arg Asn Val Asn Ile Gln Asn Phe
165 170 175

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

His Arg Pro Asp Leu Ile Asp Tyr Ser Lys Leu Asn Lys Asp Asp Pro
195 200 205

Ile Gly Asn Ile Asn Leu Ala Met Glu Ile Ala Glu Lys His Leu Asp
210 215 220

Ile Pro Lys Met Leu Asp Ala Glu Asp Ile Val Asn Thr Pro Lys Pro
225 230 235 240

Asp Glu Arg Ala Ile Met Thr Tyr Val Ser Cys Phe Tyr His Ala Phe
245 250 255

Ala Gly Ala Glu Gln Ala Glu Thr Ala Ala Asn Arg Ile Cys Lys Val
260 265 270

Leu Ala Val Asn Gln Glu Asn Glu Arg Leu Met Glu Glu Tyr Glu Arg

275

280

285

Leu Ala Ser Glu Leu Leu Glu Trp Ile Arg Arg Thr Ile Pro Trp Leu
 290 295 300

Glu Asn Arg Thr Pro Glu Lys Thr Met Gln Ala Met Gln Lys Lys Leu
 305 310 315 320

Glu Asp Phe Arg Asp Tyr Arg Arg Lys His Lys Pro Pro Lys Val Gln
 325 330 335

Glu Lys Cys Gln Leu Glu Ile Asn Phe Asn Thr Leu Gln Thr Lys Leu
 340 345 350

Arg Ile Ser Asn Arg Pro Ala Phe Met Pro Ser Glu Gly Lys Met Val
 355 360 365

Ser Asp Ile Ala Gly Ala Trp Gln Arg Leu Glu Gln Ala Glu Lys Gly
 370 375 380

Tyr Glu Glu Trp Leu Leu Asn Glu Ile Arg Arg Leu Glu Arg Leu Glu
 385 390 395 400

His Leu Ala Glu Lys Phe Arg Gln Lys Ala Ser Thr His Glu Thr Trp
 405 410 415

Ala Tyr Gly Lys Glu Gln Ile Leu Leu Gln Lys Asp Tyr Glu Ser Ala
 420 425 430

Ser Leu Thr Glu Val Arg Ala Leu Leu Arg Lys His Glu Ala Phe Glu
 435 440 445

Ser Asp Leu Ala Ala His Gln Asp Arg Val Glu Gln Ile Ala Ala Ile
 450 455 460

Ala Gln Glu Leu Asn Glu Leu Asp Tyr His Asp Ala Val Asn Val Asn
 465 470 475 480

Asp Arg Cys Gln Lys Ile Cys Asp Gln Trp Asp Arg Leu Gly Thr Leu
 485 490 495

Thr Gln Lys Arg Arg Glu Ala Leu Glu Arg Met Glu Lys Leu Leu Glu
500 505 510

Thr Ile Asp Gln Leu His Leu Glu Phe Ala Lys Arg Ala Ala Pro Phe
515 520 525

Asn Asn Trp Met Glu Gly Ala Met Glu Asp Leu Gln Asp Met Phe Ile
530 535 540

Val His Ser Ile Glu Glu Ile Gln Ser Leu Ile Thr Ala His Glu Gln
545 550 555 560

Phe Lys Ala Thr Leu Pro Glu Ala Asp Gly Glu Arg Gln Ser Ile Met
565 570 575

Ala Ile Gln Asn Glu Val Glu Lys Val Ile Gln Ser Tyr Asn Ile Arg
580 585 590

Ile Ser Ser Ser Asn Pro Tyr Ser Thr Val Thr Met Asp Glu Leu Arg
595 600 605

Thr Lys Trp Asp Lys Val Lys Gln Leu Val Pro Ile Arg Asp Gln Ser
610 615 620

Leu Gln Glu Glu Leu Ala Arg Gln His Ala Asn Glu Arg Leu Arg Arg
625 630 635 640

Gln Phe Ala Ala Gln Ala Asn Ala Ile Gly Pro Trp Ile Gln Asn Lys
645 650 655

Met Glu Glu Ile Ala Arg Ser Ser Ile Gln Ile Thr Gly Ala Leu Glu
660 665 670

Asp Gln Met Asn Gln Leu Lys Gln Tyr Glu His Asn Ile Ile Asn Tyr
675 680 685

Lys Asn Asn Ile Asp Lys Leu Glu Gly Asp His Gln Leu Ile Gln Glu
690 695 700

Ala Leu Val Phe Asp Asn Lys His Thr Asn Tyr Thr Met Glu His Ile

705		710		715		720
Arg Val Gly Trp	Glu Leu Leu Leu Thr Thr	Ile Ala Arg Thr	Ile Asn			
	725	730	735			
Glu Val Glu Thr	Gln Ile Leu Thr	Arg Asp Ala Lys Gly	Ile Thr Gln			
	740	745	750			
Glu Gln Met Asn	Glu Phe Arg	Ala Ser Phe Asn His	Phe Asp Arg Arg			
	755	760	765			
Lys Asn Gly Leu	Met Asp His	Glu Asp Phe Arg	Ala Cys Leu Ile Ser			
	770	775	780			
Met Gly Tyr Asp	Leu Gly Glu Ala Glu Phe	Ala Arg Ile Met Thr	Leu			
785	790	795	800			
Val Asp Pro Asn	Gly Gln Gly Thr	Val Thr Phe Gln Ser	Phe Ile Asp			
	805	810	815			
Phe Met Thr Arg	Glu Thr Ala Asp Thr	Asp Thr Ala Glu Gln Val Ile				
	820	825	830			
Ala Ser Phe Arg	Ile Leu Ala Ser Asp Lys Pro Tyr	Ile Leu Ala Glu				
	835	840	845			
Glu Leu Arg Arg	Glu Leu Pro Pro Asp Gln Ala	Gln Tyr Cys Ile Lys				
	850	855	860			
Arg Met Pro Ala	Tyr Ser Gly Pro Gly Ser	Val Pro Gly Ala Leu Asp				
865	870	875	880			
Tyr Ala Ala Phe	Ser Ser Ala Leu Tyr Gly	Glu Ser Asp Leu				
	885	890				

<210> 63
 <211> 967
 <212> PRT
 <213> Homo sapiens

 <400> 63

Met Ala Lys Gly Phe Tyr Ile Ser Lys Ser Leu Gly Ile Leu Gly Ile
1 5 10 15

Leu Leu Gly Val Ala Ala Val Cys Thr Ile Ile Ala Leu Ser Val Val
20 25 30

Tyr Ser Gln Glu Lys Asn Lys Asn Ala Asn Ser Ser Pro Val Ala Ser
35 40 45

Thr Thr Pro Ser Ala Ser Ala Thr Thr Asn Pro Ala Ser Ala Thr Thr
50 55 60

Leu Asp Gln Ser Lys Ala Trp Asn Arg Tyr Arg Leu Pro Asn Thr Leu
65 70 75 80

Lys Pro Asp Ser Tyr Arg Val Thr Leu Arg Pro Tyr Leu Thr Pro Asn
85 90 95

Asp Arg Gly Leu Tyr Val Phe Lys Gly Ser Ser Thr Val Arg Phe Thr
100 105 110

Cys Lys Glu Ala Thr Asp Val Ile Ile Ile His Ser Lys Lys Leu Asn
115 120 125

Tyr Thr Leu Ser Gln Gly His Arg Val Val Leu Arg Gly Val Gly Gly
130 135 140

Ser Gln Pro Pro Asp Ile Asp Lys Thr Glu Leu Val Glu Pro Thr Glu
145 150 155 160

Tyr Leu Val Val His Leu Lys Gly Ser Leu Val Lys Asp Ser Gln Tyr
165 170 175

Glu Met Asp Ser Glu Phe Glu Gly Glu Leu Ala Asp Asp Leu Ala Gly
180 185 190

Phe Tyr Arg Ser Glu Tyr Met Glu Gly Asn Val Arg Lys Val Val Ala
195 200 205

Thr Thr Gln Met Gln Ala Ala Asp Ala Arg Lys Ser Phe Pro Cys Phe
210 215 220

Asp Glu Pro Ala Met Lys Ala Glu Phe Asn Ile Thr Leu Ile His Pro
225 230 235 240

Lys Asp Leu Thr Ala Leu Ser Asn Met Leu Pro Lys Gly Pro Ser Thr
245 250 255

Pro Leu Pro Glu Asp Pro Asn Trp Asn Val Thr Glu Phe His Thr Thr
260 265 270

Pro Lys Met Ser Thr Tyr Leu Leu Ala Phe Ile Val Ser Glu Phe Asp
275 280 285

Tyr Val Glu Lys Gln Ala Ser Asn Gly Val Leu Ile Arg Ile Trp Ala
290 295 300

Arg Pro Ser Ala Ile Ala Ala Gly His Gly Asp Tyr Ala Leu Asn Val
305 310 315 320

Thr Gly Pro Ile Leu Asn Phe Phe Ala Gly His Tyr Asp Thr Pro Tyr
325 330 335

Pro Leu Pro Lys Ser Asp Gln Ile Gly Leu Pro Asp Phe Asn Ala Gly
340 345 350

Ala Met Glu Asn Trp Gly Leu Val Thr Tyr Arg Glu Asn Ser Leu Leu
355 360 365

Phe Asp Pro Leu Ser Ser Ser Ser Ser Asn Lys Glu Arg Val Val Thr
370 375 380

Val Ile Ala His Glu Leu Ala His Gln Trp Phe Gly Asn Leu Val Thr
385 390 395 400

Ile Glu Trp Trp Asn Asp Leu Trp Leu Asn Glu Gly Phe Ala Ser Tyr
405 410 415

Val Glu Tyr Leu Gly Ala Asp Tyr Ala Glu Pro Thr Trp Asn Leu Lys
420 425 430

Asp Leu Met Val Leu Asn Asp Val Tyr Arg Val Met Ala Val Asp Ala
435 440 445

Leu Ala Ser Ser His Pro Leu Ser Thr Pro Ala Ser Glu Ile Asn Thr
450 455 460

Pro Ala Gln Ile Ser Glu Leu Phe Asp Ala Ile Ser Tyr Ser Lys Gly
465 470 475 480

Ala Ser Val Leu Arg Met Leu Ser Ser Phe Leu Ser Glu Asp Val Phe
485 490 495

Lys Gln Gly Leu Ala Ser Tyr Leu His Thr Phe Ala Tyr Gln Asn Thr
500 505 510

Ile Tyr Leu Asn Leu Trp Asp His Leu Gln Glu Ala Val Asn Asn Arg
515 520 525

Ser Ile Gln Leu Pro Thr Thr Val Arg Asp Ile Met Asn Arg Trp Thr
530 535 540

Leu Gln Met Gly Phe Pro Val Ile Thr Val Asp Thr Ser Thr Gly Thr
545 550 555 560

Leu Ser Gln Glu His Phe Leu Leu Asp Pro Asp Ser Asn Val Thr Arg
565 570 575

Pro Ser Glu Phe Asn Tyr Val Trp Ile Val Pro Ile Thr Ser Ile Arg
580 585 590

Asp Gly Arg Gln Gln Gln Asp Tyr Trp Leu Ile Asp Val Arg Ala Gln
595 600 605

Asn Asp Leu Phe Ser Thr Ser Gly Asn Glu Trp Val Leu Leu Asn Leu
610 615 620

Asn Val Thr Gly Tyr Tyr Arg Val Asn Tyr Asp Glu Glu Asn Trp Arg
625 630 635 640

Lys Ile Gln Thr Gln Leu Gln Arg Asp His Ser Ala Ile Pro Val Ile
645 650 655

Asn Arg Ala Gln Ile Ile Asn Asp Ala Phe Asn Leu Ala Ser Ala His
660 665 670

Lys Val Pro Val Thr Leu Ala Leu Asn Asn Thr Leu Phe Leu Ile Glu
675 680 685

Glu Arg Gln Tyr Met Pro Trp Glu Ala Ala Leu Ser Ser Leu Ser Tyr
690 695 700

Phe Lys Leu Met Phe Asp Arg Ser Glu Val Tyr Gly Pro Met Lys Asn
705 710 715 720

Tyr Leu Lys Lys Gln Val Thr Pro Leu Phe Ile His Phe Arg Asn Asn
725 730 735

Thr Asn Asn Trp Arg Glu Ile Pro Glu Asn Leu Met Asp Gln Tyr Ser
740 745 750

Glu Val Asn Ala Ile Ser Thr Ala Cys Ser Asn Gly Val Pro Glu Cys
755 760 765

Glu Glu Met Val Ser Gly Leu Phe Lys Gln Trp Met Glu Asn Pro Asn
770 775 780

Asn Asn Pro Ile His Pro Asn Leu Arg Ser Thr Val Tyr Cys Asn Ala
785 790 795 800

Ile Ala Gln Gly Gly Glu Glu Glu Trp Asp Phe Ala Trp Glu Gln Phe
805 810 815

Arg Asn Ala Thr Leu Val Asn Glu Ala Asp Lys Leu Arg Ala Ala Leu
820 825 830

Ala Cys Ser Lys Glu Leu Trp Ile Leu Asn Arg Tyr Leu Ser Tyr Thr
835 840 845

Leu Asn Pro Asp Leu Ile Arg Lys Gln Asp Ala Thr Ser Thr Ile Ile
850 855 860

Ser Ile Thr Asn Asn Val Ile Gly Gln Gly Leu Val Trp Asp Phe Val
865 870 875 880

Gln Ser Asn Trp Lys Lys Leu Phe Asn Asp Tyr Gly Gly Gly Ser Phe
885 890 895

Ser Phe Ser Asn Leu Ile Gln Ala Val Thr Arg Arg Phe Ser Thr Glu
900 905 910

Tyr Glu Leu Gln Gln Leu Glu Gln Phe Lys Lys Asp Asn Glu Glu Thr
915 920 925

Gly Phe Gly Ser Gly Thr Arg Ala Leu Glu Gln Ala Leu Glu Lys Thr
930 935 940

Lys Ala Asn Ile Lys Trp Val Lys Glu Asn Lys Glu Val Val Leu Gln
945 950 955 960

Trp Phe Thr Glu Asn Ser Lys
965

<210> 64
<211> 339
<212> PRT
<213> Homo sapiens

<400> 64

Met Ser Thr Val His Glu Ile Leu Cys Lys Leu Ser Leu Glu Gly Asp
1 5 10 15

His Ser Thr Pro Pro Ser Ala Tyr Gly Ser Val Lys Ala Tyr Thr Asn
20 25 30

Phe Asp Ala Glu Arg Asp Ala Leu Asn Ile Glu Thr Ala Ile Lys Thr
35 40 45

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

Asn Ala Gln Arg Gln Asp Ile Ala Phe Ala Tyr Gln Arg Arg Thr Lys
65 70 75 80

Lys Glu Leu Ala Ser Ala Leu Lys Ser Ala Leu Ser Gly His Leu Glu
85 90 95

Thr Val Ile Leu Gly Leu Leu Lys Thr Pro Ala Gln Tyr Asp Ala Ser
100 105 110

Glu Leu Lys Ala Ser Met Lys Gly Leu Gly Thr Asp Glu Asp Ser Leu
115 120 125

Ile Glu Ile Ile Cys Ser Arg Thr Asn Gln Glu Leu Gln Glu Ile Asn
130 135 140

Arg Val Tyr Lys Glu Met Tyr Lys Thr Asp Leu Glu Lys Asp Ile Ile
145 150 155 160

Ser Asp Thr Ser Gly Asp Phe Arg Lys Leu Met Val Ala Leu Ala Lys
165 170 175

Gly Arg Arg Ala Glu Asp Gly Ser Val Ile Asp Tyr Glu Leu Ile Asp
180 185 190

Gln Asp Ala Arg Asp Leu Tyr Asp Ala Gly Val Lys Arg Lys Gly Thr
195 200 205

Asp Val Pro Lys Trp Ile Ser Ile Met Thr Glu Arg Ser Val Pro His
210 215 220

Leu Gln Lys Val Phe Asp Arg Tyr Lys Ser Tyr Ser Pro Tyr Asp Met
225 230 235 240

Leu Glu Ser Ile Arg Lys Glu Val Lys Gly Asp Leu Glu Asn Ala Phe
245 250 255

Leu Asn Leu Val Gln Cys Ile Gln Asn Lys Pro Leu Tyr Phe Ala Asp
260 265 270

Arg Leu Tyr Asp Ser Met Lys Gly Lys Gly Thr Arg Asp Lys Val Leu
275 280 285

Ile Arg Ile Met Val Ser Arg Ser Glu Val Asp Met Leu Lys Ile Arg

290

295

300

Ser Glu Phe Lys Arg Lys Tyr Gly Lys Ser Leu Tyr Tyr Tyr Ile Gln
 305 310 315 320

Gln Asp Thr Lys Gly Asp Tyr Gln Lys Ala Leu Leu Tyr Leu Cys Gly
 325 330 335

Gly Asp Asp

<210> 65

<211> 449

<212> PRT

<213> Homo sapiens

<400> 65

Met Met Lys Thr Leu Leu Leu Phe Val Gly Leu Leu Leu Thr Trp Glu
 1 5 10 15

Ser Gly Gln Val Leu Gly Asp Gln Thr Val Ser Asp Asn Glu Leu Gln
 20 25 30

Glu Met Ser Asn Gln Gly Ser Lys Tyr Val Asn Lys Glu Ile Gln Asn
 35 40 45

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

Glu Glu Arg Lys Thr Leu Leu Ser Asn Leu Glu Glu Ala Lys Lys Lys
 65 70 75 80

Lys Glu Asp Ala Leu Asn Glu Thr Arg Glu Ser Glu Thr Lys Leu Lys
 85 90 95

Glu Leu Pro Gly Val Cys Asn Glu Thr Met Met Ala Leu Trp Glu Glu
 100 105 110

Cys Lys Pro Cys Leu Lys Gln Thr Cys Met Lys Phe Tyr Ala Arg Val
 115 120 125

Cys Arg Ser Gly Ser Gly Leu Val Gly Arg Gln Leu Glu Glu Phe Leu
130 135 140

Asn Gln Ser Ser Pro Phe Tyr Phe Trp Met Asn Gly Asp Arg Ile Asp
145 150 155 160

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

Gln Asp His Phe Ser Arg Ala Ser Ser Ile Ile Asp Glu Leu Phe Gln
180 185 190

Asp Arg Phe Phe Thr Arg Glu Pro Gln Asp Thr Tyr His Tyr Leu Pro
195 200 205

Phe Ser Leu Pro His Arg Arg Pro His Phe Phe Phe Pro Lys Ser Arg
210 215 220

Ile Val Arg Ser Leu Met Pro Phe Ser Pro Tyr Glu Pro Leu Asn Phe
225 230 235 240

His Ala Met Phe Gln Pro Phe Leu Glu Met Ile His Glu Ala Gln Gln
245 250 255

Ala Met Asp Ile His Phe His Ser Pro Ala Phe Gln His Pro Pro Thr
260 265 270

Glu Phe Ile Arg Glu Gly Asp Asp Asp Arg Thr Val Cys Arg Glu Ile
275 280 285

Arg His Asn Ser Thr Gly Cys Leu Arg Met Lys Asp Gln Cys Asp Lys
290 295 300

Cys Arg Glu Ile Leu Ser Val Asp Cys Ser Thr Asn Asn Pro Ser Gln
305 310 315 320

Ala Lys Leu Arg Arg Glu Leu Asp Glu Ser Leu Gln Val Ala Glu Arg
325 330 335

Leu Thr Arg Lys Tyr Asn Glu Leu Leu Lys Ser Tyr Gln Trp Lys Met
340 345 350

Leu Asn Thr Ser Ser Leu Leu Glu Gln Leu Asn Glu Gln Phe Asn Trp
355 360 365

Val Ser Arg Leu Ala Asn Leu Thr Gln Gly Glu Asp Gln Tyr Tyr Leu
370 375 380

Arg Val Thr Thr Val Ala Ser His Thr Ser Asp Ser Asp Val Pro Ser
385 390 395 400

Gly Val Thr Glu Val Val Val Lys Leu Phe Asp Ser Asp Pro Ile Thr
405 410 415

Val Thr Val Pro Val Glu Val Ser Arg Lys Asn Pro Lys Phe Met Glu
420 425 430

Thr Val Ala Glu Lys Ala Leu Gln Glu Tyr Arg Lys Lys His Arg Glu
435 440 445

Glu

<210> 66
<211> 1049
<212> PRT
<213> Homo sapiens

<400> 66

Met Asp Trp Ser Phe Phe Arg Val Val Ala Met Leu Phe Ile Phe Leu
1 5 10 15

Val Val Val Glu Val Asn Ser Glu Phe Arg Ile Gln Val Arg Asp Tyr
20 25 30

Asn Thr Lys Asn Gly Thr Ile Lys Trp His Ser Ile Arg Arg Gln Lys
35 40 45

Arg Glu Trp Ile Lys Phe Ala Ala Ala Cys Arg Glu Gly Glu Asp Asn
50 55 60

Ser Lys Arg Asn Pro Ile Ala Lys Ile His Ser Asp Cys Ala Ala Asn

65					70					75					80				
Gln	Gln	Val	Thr	Tyr 85	Arg	Ile	Ser	Gly	Val 90	Gly	Ile	Asp	Gln	Pro 95	Pro				
Tyr	Gly	Ile	Phe 100	Val	Ile	Asn	Gln	Lys 105	Thr	Gly	Glu	Ile	Asn 110	Ile	Thr				
Ser	Ile	Val 115	Asp	Arg	Glu	Val	Thr 120	Pro	Phe	Phe	Ile	Ile 125	Tyr	Cys	Arg				
Ala	Leu 130	Asn	Ser	Met	Gly	Gln 135	Asp	Leu	Glu	Arg	Pro 140	Leu	Glu	Leu	Arg				
Val 145	Arg	Val	Leu	Asp	Ile 150	Asn	Asp	Asn	Pro	Pro 155	Val	Phe	Ser	Met	Ala 160				
Thr	Phe	Ala	Gly	Gln 165	Ile	Glu	Glu	Asn 170	Ser	Asn	Ala	Asn	Thr	Leu 175	Val				
Met	Ile	Leu	Asn 180	Ala	Thr	Asp	Ala	Asp 185	Glu	Pro	Asn	Asn 190	Leu	Asn	Ser				
Lys	Ile	Ala 195	Phe	Lys	Ile	Ile	Arg 200	Gln	Glu	Pro	Ser	Asp 205	Ser	Pro	Met				
Phe 210	Ile	Ile	Asn	Arg	Asn	Thr 215	Gly	Glu	Ile	Arg	Thr 220	Met	Asn	Asn	Phe				
Leu 225	Asp	Arg	Glu	Gln 230	Tyr	Gly	Gln	Tyr	Ala 235	Leu	Ala	Val	Arg	Gly	Ser 240				
Asp	Arg	Asp	Gly	Gly 245	Ala	Asp	Gly	Met	Ser 250	Ala	Glu	Cys	Glu	Cys 255	Asn				
Ile	Lys	Ile	Leu 260	Asp	Val	Asn	Asp	Asn 265	Ile	Pro	Tyr	Met	Glu 270	Gln	Ser				
Ser	Tyr	Thr 275	Ile	Glu	Ile	Gln	Glu 280	Asn	Thr	Leu	Asn	Ser 285	Asn	Leu	Leu				

Glu Ile Arg Val Ile Asp Leu Asp Glu Glu Phe Ser Ala Asn Trp Met
290 295 300

Ala Val Ile Phe Phe Ile Ser Gly Asn Glu Gly Asn Trp Phe Glu Ile
305 310 315 320

Glu Met Asn Glu Arg Thr Asn Val Gly Ile Leu Lys Val Val Lys Pro
325 330 335

Leu Asp Tyr Glu Ala Met Gln Ser Leu Gln Leu Ser Ile Gly Val Arg
340 345 350

Asn Lys Ala Glu Phe His His Ser Ile Met Ser Gln Tyr Lys Leu Lys
355 360 365

Ala Ser Ala Ile Ser Val Thr Val Leu Asn Val Ile Glu Gly Pro Val
370 375 380

Phe Arg Pro Gly Ser Lys Thr Tyr Val Val Thr Gly Asn Met Gly Ser
385 390 395 400

Asn Asp Lys Val Gly Asp Phe Val Ala Thr Asp Leu Asp Thr Gly Arg
405 410 415

Pro Ser Thr Thr Val Arg Tyr Val Met Gly Asn Asn Pro Ala Asp Leu
420 425 430

Leu Ala Val Asp Ser Arg Thr Gly Lys Leu Thr Leu Lys Asn Lys Val
435 440 445

Thr Lys Glu Gln Tyr Asn Met Leu Gly Gly Lys Tyr Gln Gly Thr Ile
450 455 460

Leu Ser Ile Asp Asp Asn Leu Gln Arg Thr Cys Thr Gly Thr Ile Asn
465 470 475 480

Ile Asn Ile Gln Ser Phe Gly Asn Asp Asp Arg Thr Asn Thr Glu Pro
485 490 495

Asn Thr Lys Ile Thr Thr Asn Thr Gly Arg Gln Glu Ser Thr Ser Ser

500

505

510

Thr Asn Tyr Asp Thr Ser Thr Thr Ser Thr Asp Ser Ser Gln Val Tyr
 515 520 525

Ser Ser Glu Pro Gly Asn Gly Ala Lys Asp Leu Leu Ser Asp Asn Val
 530 535 540

His Phe Gly Pro Ala Gly Ile Gly Leu Leu Ile Met Gly Phe Leu Val
 545 550 555 560

Leu Gly Leu Val Pro Phe Leu Met Ile Cys Cys Asp Cys Gly Gly Ala
 565 570 575

Pro Arg Ser Ala Ala Gly Phe Glu Pro Val Pro Glu Cys Ser Asp Gly
 580 585 590

Ala Ile His Ser Trp Ala Val Glu Gly Pro Gln Pro Glu Pro Arg Asp
 595 600 605

Ile Thr Thr Val Ile Pro Gln Ile Pro Pro Asp Asn Ala Asn Ile Ile
 610 615 620

Glu Cys Ile Asp Asn Ser Gly Val Tyr Thr Asn Glu Tyr Gly Gly Arg
 625 630 635 640

Glu Met Gln Asp Leu Gly Gly Gly Glu Arg Met Thr Gly Phe Glu Leu
 645 650 655

Thr Glu Gly Val Lys Thr Ser Gly Met Pro Glu Ile Cys Gln Glu Tyr
 660 665 670

Ser Gly Thr Leu Arg Arg Asn Ser Met Arg Glu Cys Arg Glu Gly Gly
 675 680 685

Leu Asn Met Asn Phe Met Glu Ser Tyr Phe Cys Gln Lys Ala Tyr Ala
 690 695 700

Tyr Ala Asp Glu Asp Glu Gly Arg Pro Ser Asn Asp Cys Leu Leu Ile
 705 710 715 720

Tyr Asp Ile Glu Gly Val Gly Ser Pro Ala Gly Ser Val Gly Cys Cys
725 730 735

Ser Phe Ile Gly Glu Asp Leu Asp Asp Ser Phe Leu Asp Thr Leu Gly
740 745 750

Pro Lys Phe Lys Lys Leu Ala Asp Ile Ser Leu Gly Lys Glu Ser Tyr
755 760 765

Pro Asp Leu Asp Pro Ser Trp Pro Pro Gln Ser Thr Glu Pro Val Cys
770 775 780

Leu Pro Gln Glu Thr Glu Pro Val Val Ser Gly His Pro Pro Ile Ser
785 790 795 800

Pro His Phe Gly Thr Thr Thr Val Ile Ser Glu Ser Thr Tyr Pro Ser
805 810 815

Gly Pro Gly Val Leu His Pro Lys Pro Ile Leu Asp Pro Leu Gly Tyr
820 825 830

Gly Asn Val Thr Val Thr Glu Ser Tyr Thr Thr Ser Asp Thr Leu Lys
835 840 845

Pro Ser Val His Val His Asp Asn Arg Pro Ala Ser Asn Val Val Val
850 855 860

Thr Glu Arg Val Val Gly Pro Ile Ser Gly Ala Asp Leu His Gly Met
865 870 875 880

Leu Glu Met Pro Asp Leu Arg Asp Gly Ser Asn Val Ile Val Thr Glu
885 890 895

Arg Val Ile Ala Pro Ser Ser Ser Leu Pro Thr Ser Leu Thr Ile His
900 905 910

His Pro Arg Glu Ser Ser Asn Val Val Val Thr Glu Arg Val Ile Gln
915 920 925

Pro Thr Ser Gly Met Ile Gly Ser Leu Ser Met His Pro Glu Leu Ala

930

935

940

Asn Ala His Asn Val Ile Val Thr Glu Arg Val Val Ser Gly Ala Gly
 945 950 955 960

Val Thr Gly Ile Ser Gly Thr Thr Gly Ile Ser Gly Gly Ile Gly Ser
 965 970 975

Ser Gly Leu Val Gly Thr Ser Met Gly Ala Gly Ser Gly Ala Leu Ser
 980 985 990

Gly Ala Gly Ile Ser Gly Gly Gly Ile Gly Leu Ser Ser Leu Gly Gly
 995 1000 1005

Thr Ala Ser Ile Gly His Met Arg Ser Ser Ser Asp His His Phe
 1010 1015 1020

Asn Gln Thr Ile Gly Ser Ala Ser Pro Ser Thr Ala Arg Ser Arg
 1025 1030 1035

Ile Thr Lys Tyr Ser Thr Val Gln Tyr Ser Lys
 1040 1045

<210> 67
 <211> 2871
 <212> PRT
 <213> Homo sapiens

<400> 67

Met Ser Cys Asn Gly Gly Ser His Pro Arg Ile Asn Thr Leu Gly Arg
 1 5 10 15

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

Gly Gly Gly Gly Thr Ser Arg Met Tyr Tyr Ser Arg Arg Gly Val Ile
 35 40 45

Thr Asp Gln Asn Ser Asp Gly Tyr Cys Gln Thr Gly Thr Met Ser Arg
 50 55 60

His Gln Asn Gln Asn Thr Ile Gln Glu Leu Leu Gln Asn Cys Ser Asp
65 70 75 80

Cys Leu Met Arg Ala Glu Leu Ile Val Gln Pro Glu Leu Lys Tyr Gly
85 90 95

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

Gln Ala Asn Asp Gln Met Glu Ile Leu Asp Ser Leu Ile Arg Glu Met
115 120 125

Arg Gln Met Gly Gln Pro Cys Asp Ala Tyr Gln Lys Arg Leu Leu Gln
130 135 140

Leu Gln Glu Gln Met Arg Ala Leu Tyr Lys Ala Ile Ser Val Pro Arg
145 150 155 160

Val Arg Arg Ala Ser Ser Lys Gly Gly Gly Gly Tyr Thr Cys Gln Ser
165 170 175

Gly Ser Gly Trp Asp Glu Phe Thr Lys His Val Thr Ser Glu Cys Leu
180 185 190

Gly Trp Met Arg Gln Gln Arg Ala Glu Met Asp Met Val Ala Trp Gly
195 200 205

Val Asp Leu Ala Ser Val Glu Gln His Ile Asn Ser His Arg Gly Ile
210 215 220

His Asn Ser Ile Gly Asp Tyr Arg Trp Gln Leu Asp Lys Ile Lys Ala
225 230 235 240

Asp Leu Arg Glu Lys Ser Ala Ile Tyr Gln Leu Glu Glu Glu Tyr Glu
245 250 255

Asn Leu Leu Lys Ala Ser Phe Glu Arg Met Asp His Leu Arg Gln Leu
260 265 270

Gln Asn Ile Ile Gln Ala Thr Ser Arg Glu Ile Met Trp Ile Asn Asp
275 280 285

Cys Glu Glu Glu Glu Leu Leu Tyr Asp Trp Ser Asp Lys Asn Thr Asn
290 295 300

Ile Ala Gln Lys Gln Glu Ala Phe Ser Ile Arg Met Ser Gln Leu Glu
305 310 315 320

Val Lys Glu Lys Glu Leu Asn Lys Leu Lys Gln Glu Ser Asp Gln Leu
325 330 335

Val Leu Asn Gln His Pro Ala Ser Asp Lys Ile Glu Ala Tyr Met Asp
340 345 350

Thr Leu Gln Thr Gln Trp Ser Trp Ile Leu Gln Ile Thr Lys Cys Ile
355 360 365

Asp Val His Leu Lys Glu Asn Ala Ala Tyr Phe Gln Phe Phe Glu Glu
370 375 380

Ala Gln Ser Thr Glu Ala Tyr Leu Lys Gly Leu Gln Asp Ser Ile Arg
385 390 395 400

Lys Lys Tyr Pro Cys Asp Lys Asn Met Pro Leu Gln His Leu Leu Glu
405 410 415

Gln Ile Lys Glu Leu Glu Lys Glu Arg Glu Lys Ile Leu Glu Tyr Lys
420 425 430

Arg Gln Val Gln Asn Leu Val Asn Lys Ser Lys Lys Ile Val Gln Leu
435 440 445

Lys Pro Arg Asn Pro Asp Tyr Arg Ser Asn Lys Pro Ile Ile Leu Arg
450 455 460

Ala Leu Cys Asp Tyr Lys Gln Asp Gln Lys Ile Val His Lys Gly Asp
465 470 475 480

Glu Cys Ile Leu Lys Asp Asn Asn Glu Arg Ser Lys Trp Tyr Val Thr
485 490 495

Gly Pro Gly Gly Val Asp Met Leu Val Pro Ser Val Gly Leu Ile Ile
500 505 510

Pro Pro Pro Asn Pro Leu Ala Val Asp Leu Ser Cys Lys Ile Glu Gln
515 520 525

Tyr Tyr Glu Ala Ile Leu Ala Leu Trp Asn Gln Leu Tyr Ile Asn Met
530 535 540

Lys Ser Leu Val Ser Trp His Tyr Cys Met Ile Asp Ile Glu Lys Ile
545 550 555 560

Arg Ala Met Thr Ile Ala Lys Leu Lys Thr Met Arg Gln Glu Asp Tyr
565 570 575

Met Lys Thr Ile Ala Asp Leu Glu Leu His Tyr Gln Glu Phe Ile Arg
580 585 590

Asn Ser Gln Gly Ser Glu Met Phe Gly Asp Asp Asp Lys Arg Lys Ile
595 600 605

Gln Ser Gln Phe Thr Asp Ala Gln Lys His Tyr Gln Thr Leu Val Ile
610 615 620

Gln Leu Pro Gly Tyr Pro Gln His Gln Thr Val Thr Thr Thr Glu Ile
625 630 635 640

Thr His His Gly Thr Cys Gln Asp Val Asn His Asn Lys Val Ile Glu
645 650 655

Thr Asn Arg Glu Asn Asp Lys Gln Glu Thr Trp Met Leu Met Glu Leu
660 665 670

Gln Lys Ile Arg Arg Gln Ile Glu His Cys Glu Gly Arg Met Thr Leu
675 680 685

Lys Asn Leu Pro Leu Ala Asp Gln Gly Ser Ser His His Ile Thr Val
690 695 700

Lys Ile Asn Glu Leu Lys Ser Val Gln Asn Asp Ser Gln Ala Ile Ala
705 710 715 720

Glu Val Leu Asn Gln Leu Lys Asp Met Leu Ala Asn Phe Arg Gly Ser
725 730 735

Glu Lys Tyr Cys Tyr Leu Gln Asn Glu Val Phe Gly Leu Phe Gln Lys
740 745 750

Leu Glu Asn Ile Asn Gly Val Thr Asp Gly Tyr Leu Asn Ser Leu Cys
755 760 765

Thr Val Arg Ala Leu Leu Gln Ala Ile Leu Gln Thr Glu Asp Met Leu
770 775 780

Lys Val Tyr Glu Ala Arg Leu Thr Glu Glu Glu Thr Val Cys Leu Asp
785 790 795 800

Leu Asp Lys Val Glu Ala Tyr Arg Cys Gly Leu Lys Lys Ile Lys Asn
805 810 815

Asp Leu Asn Leu Lys Lys Ser Leu Leu Ala Thr Met Lys Thr Glu Leu
820 825 830

Gln Lys Ala Gln Gln Ile His Ser Gln Thr Ser Gln Gln Tyr Pro Leu
835 840 845

Tyr Asp Leu Asp Leu Gly Lys Phe Gly Glu Lys Val Thr Gln Leu Thr
850 855 860

Asp Arg Trp Gln Arg Ile Asp Lys Gln Ile Asp Phe Arg Leu Trp Asp
865 870 875 880

Leu Glu Lys Gln Ile Lys Gln Leu Arg Asn Tyr Arg Asp Asn Tyr Gln
885 890 895

Ala Phe Cys Lys Trp Leu Tyr Asp Ala Lys Arg Arg Gln Asp Ser Leu
900 905 910

Glu Ser Met Lys Phe Gly Asp Ser Asn Thr Val Met Arg Phe Leu Asn
915 920 925

Glu Gln Lys Asn Leu His Ser Glu Ile Ser Gly Lys Arg Asp Lys Ser
930 935 940

Glu Glu Val Gln Lys Ile Ala Glu Leu Cys Ala Asn Ser Ile Lys Asp
945 950 955 960

Tyr Glu Leu Gln Leu Ala Ser Tyr Thr Ser Gly Leu Glu Thr Leu Leu
965 970 975

Asn Ile Pro Ile Lys Arg Thr Met Ile Gln Ser Pro Ser Gly Val Ile
980 985 990

Leu Gln Glu Ala Ala Asp Val His Ala Arg Tyr Ile Glu Leu Leu Thr
995 1000 1005

Arg Ser Gly Asp Tyr Tyr Arg Phe Leu Ser Glu Met Leu Lys Ser
1010 1015 1020

Leu Glu Asp Leu Lys Leu Lys Asn Thr Lys Ile Glu Val Leu Glu
1025 1030 1035

Glu Glu Leu Arg Leu Ala Arg Asp Ala Asn Ser Glu Asn Cys Asn
1040 1045 1050

Lys Asn Lys Phe Leu Asp Gln Asn Leu Gln Lys Tyr Gln Ala Glu
1055 1060 1065

Cys Ser Gln Phe Lys Ala Lys Leu Ala Ser Leu Glu Glu Leu Lys
1070 1075 1080

Arg Gln Ala Glu Leu Asp Gly Lys Ser Ala Lys Gln Asn Leu Asp
1085 1090 1095

Lys Cys Tyr Gly Gln Ile Lys Glu Leu Asn Glu Lys Ile Thr Arg
1100 1105 1110

Leu Thr Tyr Glu Ile Glu Asp Glu Lys Arg Arg Arg Lys Ser Val
1115 1120 1125

Glu Asp Arg Phe Asp Gln Gln Lys Asn Asp Tyr Asp Gln Leu Gln
1130 1135 1140

Lys Ala Arg Gln Cys Glu Lys Glu Asn Leu Gly Trp Gln Lys Leu
1145 1150 1155

Glu Ser Glu Lys Ala Ile Lys Glu Lys Glu Tyr Glu Ile Glu Arg
1160 1165 1170

Leu Arg Val Leu Leu Gln Glu Glu Gly Thr Arg Lys Arg Glu Tyr
1175 1180 1185

Glu Asn Glu Leu Ala Lys Val Arg Asn His Tyr Asn Glu Glu Met
1190 1195 1200

Ser Asn Leu Arg Asn Lys Tyr Glu Thr Glu Ile Asn Ile Thr Lys
1205 1210 1215

Thr Thr Ile Lys Glu Ile Ser Met Gln Lys Glu Asp Asp Ser Lys
1220 1225 1230

Asn Leu Arg Asn Gln Leu Asp Arg Leu Ser Arg Glu Asn Arg Asp
1235 1240 1245

Leu Lys Asp Glu Ile Val Arg Leu Asn Asp Ser Ile Leu Gln Ala
1250 1255 1260

Thr Glu Gln Arg Arg Arg Ala Glu Glu Asn Ala Leu Gln Gln Lys
1265 1270 1275

Ala Cys Gly Ser Glu Ile Met Gln Lys Lys Gln His Leu Glu Ile
1280 1285 1290

Glu Leu Lys Gln Val Met Gln Gln Arg Ser Glu Asp Asn Ala Arg
1295 1300 1305

His Lys Gln Ser Leu Glu Glu Ala Ala Lys Thr Ile Gln Asp Lys
1310 1315 1320

Asn Lys Glu Ile Glu Arg Leu Lys Ala Glu Phe Gln Glu Glu Ala
1325 1330 1335

Lys Arg Arg Trp Glu Tyr Glu Asn Glu Leu Ser Lys Val Arg Asn
1340 1345 1350

Asn Tyr Asp Glu Glu Ile Ile Ser Leu Lys Asn Gln Phe Glu Thr
1355 1360 1365

Glu Ile Asn Ile Thr Lys Thr Thr Ile His Gln Leu Thr Met Gln
1370 1375 1380

Lys Glu Glu Asp Thr Ser Gly Tyr Arg Ala Gln Ile Asp Asn Leu
1385 1390 1395

Thr Arg Glu Asn Arg Ser Leu Ser Glu Glu Ile Lys Arg Leu Lys
1400 1405 1410

Asn Thr Leu Thr Gln Thr Thr Glu Asn Leu Arg Arg Val Glu Glu
1415 1420 1425

Asp Ile Gln Gln Gln Lys Ala Thr Gly Ser Glu Val Ser Gln Arg
1430 1435 1440

Lys Gln Gln Leu Glu Val Glu Leu Arg Gln Val Thr Gln Met Arg
1445 1450 1455

Thr Glu Glu Ser Val Arg Tyr Lys Gln Ser Leu Asp Asp Ala Ala
1460 1465 1470

Lys Thr Ile Gln Asp Lys Asn Lys Glu Ile Glu Arg Leu Lys Gln
1475 1480 1485

Leu Ile Asp Lys Glu Thr Asn Asp Arg Lys Cys Leu Glu Asp Glu
1490 1495 1500

Asn Ala Arg Leu Gln Arg Val Gln Tyr Asp Leu Gln Lys Ala Asn
1505 1510 1515

Ser Ser Ala Thr Glu Thr Ile Asn Lys Leu Lys Val Gln Glu Gln
1520 1525 1530

Glu Leu Thr Arg Leu Arg Ile Asp Tyr Glu Arg Val Ser Gln Glu
1535 1540 1545

Arg Thr Val Lys Asp Gln Asp Ile Thr Arg Phe Gln Asn Ser Leu
1550 1555 1560

Lys Glu Leu Gln Leu Gln Lys Gln Lys Val Glu Glu Glu Leu Asn
1565 1570 1575

Arg Leu Lys Arg Thr Ala Ser Glu Asp Ser Cys Lys Arg Lys Lys
1580 1585 1590

Leu Glu Glu Glu Leu Glu Gly Met Arg Arg Ser Leu Lys Glu Gln
1595 1600 1605

Ala Ile Lys Ile Thr Asn Leu Thr Gln Gln Leu Glu Gln Ala Ser
1610 1615 1620

Ile Val Lys Lys Arg Ser Glu Asp Asp Leu Arg Gln Gln Arg Asp
1625 1630 1635

Val Leu Asp Gly His Leu Arg Glu Lys Gln Arg Thr Gln Glu Glu
1640 1645 1650

Leu Arg Arg Leu Ser Ser Glu Val Glu Ala Leu Arg Arg Gln Leu
1655 1660 1665

Leu Gln Glu Gln Glu Ser Val Lys Gln Ala His Leu Arg Asn Glu
1670 1675 1680

His Phe Gln Lys Ala Ile Glu Asp Lys Ser Arg Ser Leu Asn Glu
1685 1690 1695

Ser Lys Ile Glu Ile Glu Arg Leu Gln Ser Leu Thr Glu Asn Leu
1700 1705 1710

Thr Lys Glu His Leu Met Leu Glu Glu Glu Leu Arg Asn Leu Arg
1715 1720 1725

Leu Glu Tyr Asp Asp Leu Arg Arg Gly Arg Ser Glu Ala Asp Ser
1730 1735 1740

Asp Lys Asn Ala Thr Ile Leu Glu Leu Arg Ser Gln Leu Gln Ile
1745 1750 1755

Ser Asn Asn Arg Thr Leu Glu Leu Gln Gly Leu Ile Asn Asp Leu
1760 1765 1770

Gln Arg Glu Arg Glu Asn Leu Arg Gln Glu Ile Glu Lys Phe Gln
1775 1780 1785

Lys Gln Ala Leu Glu Ala Ser Asn Arg Ile Gln Glu Ser Lys Asn
1790 1795 1800

Gln Cys Thr Gln Val Val Gln Glu Arg Glu Ser Leu Leu Val Lys
1805 1810 1815

Ile Lys Val Leu Glu Gln Asp Lys Ala Arg Leu Gln Arg Leu Glu
1820 1825 1830

Asp Glu Leu Asn Arg Ala Lys Ser Thr Leu Glu Ala Glu Thr Arg
1835 1840 1845

Val Lys Gln Arg Leu Glu Cys Glu Lys Gln Gln Ile Gln Asn Asp
1850 1855 1860

Leu Asn Gln Trp Lys Thr Gln Tyr Ser Arg Lys Glu Glu Ala Ile
1865 1870 1875

Arg Lys Ile Glu Ser Glu Arg Glu Lys Ser Glu Arg Glu Lys Asn
1880 1885 1890

Ser Leu Arg Ser Glu Ile Glu Arg Leu Gln Ala Glu Ile Lys Arg
1895 1900 1905

Ile Glu Glu Arg Cys Arg Arg Lys Leu Glu Asp Ser Thr Arg Glu
1910 1915 1920

Thr Gln Ser Gln Leu Glu Thr Glu Arg Ser Arg Tyr Gln Arg Glu
1925 1930 1935

Ile Asp Lys Leu Arg Gln Arg Pro Tyr Gly Ser His Arg Glu Thr
1940 1945 1950

Gln Thr Glu Cys Glu Trp Thr Val Asp Thr Ser Lys Leu Val Phe
1955 1960 1965

Asp Gly Leu Arg Lys Lys Val Thr Ala Met Gln Leu Tyr Glu Cys
1970 1975 1980

Gln Leu Ile Asp Lys Thr Thr Leu Asp Lys Leu Leu Lys Gly Lys
1985 1990 1995

Lys Ser Val Glu Glu Val Ala Ser Glu Ile Gln Pro Phe Leu Arg
2000 2005 2010

Gly Ala Gly Ser Ile Ala Gly Ala Ser Ala Ser Pro Lys Glu Lys
2015 2020 2025

Tyr Ser Leu Val Glu Ala Lys Arg Lys Lys Leu Ile Ser Pro Glu
2030 2035 2040

Ser Thr Val Met Leu Leu Glu Ala Gln Ala Ala Thr Gly Gly Ile
2045 2050 2055

Ile Asp Pro His Arg Asn Glu Lys Leu Thr Val Asp Ser Ala Ile
2060 2065 2070

Ala Arg Asp Leu Ile Asp Phe Asp Asp Arg Gln Gln Ile Tyr Ala
2075 2080 2085

Ala Glu Lys Ala Ile Thr Gly Phe Asp Asp Pro Phe Ser Gly Lys
2090 2095 2100

Thr Val Ser Val Ser Glu Ala Ile Lys Lys Asn Leu Ile Asp Arg
2105 2110 2115

Glu Thr Gly Met Arg Leu Leu Glu Ala Gln Ile Ala Ser Gly Gly
2120 2125 2130

Val Val Asp Pro Val Asn Ser Val Phe Leu Pro Lys Asp Val Ala
2135 2140 2145

Leu Ala Arg Gly Leu Ile Asp Arg Asp Leu Tyr Arg Ser Leu Asn
2150 2155 2160

Asp Pro Arg Asp Ser Gln Lys Asn Phe Val Asp Pro Val Thr Lys
2165 2170 2175

Lys Lys Val Ser Tyr Val Gln Leu Lys Glu Arg Cys Arg Ile Glu
2180 2185 2190

Pro His Thr Gly Leu Leu Leu Leu Ser Val Gln Lys Arg Ser Met
2195 2200 2205

Ser Phe Gln Gly Ile Arg Gln Pro Val Thr Val Thr Glu Leu Val
2210 2215 2220

Asp Ser Gly Ile Leu Arg Pro Ser Thr Val Asn Glu Leu Glu Ser
2225 2230 2235

Gly Gln Ile Ser Tyr Asp Glu Val Gly Glu Arg Ile Lys Asp Phe
2240 2245 2250

Leu Gln Gly Ser Ser Cys Ile Ala Gly Ile Tyr Asn Glu Thr Thr
2255 2260 2265

Lys Gln Lys Leu Gly Ile Tyr Glu Ala Met Lys Ile Gly Leu Val
2270 2275 2280

Arg Pro Gly Thr Ala Leu Glu Leu Leu Glu Ala Gln Ala Ala Thr
2285 2290 2295

Gly Phe Ile Val Asp Pro Val Ser Asn Leu Arg Leu Pro Val Glu
2300 2305 2310

Glu Ala Tyr Lys Arg Gly Leu Val Gly Ile Glu Phe Lys Glu Lys
2315 2320 2325

Leu Leu Ser Ala Glu Arg Ala Val Thr Gly Tyr Asn Asp Pro Glu
2330 2335 2340

Thr Gly Asn Ile Ile Ser Leu Phe Gln Ala Met Asn Lys Glu Leu
2345 2350 2355

Ile Glu Lys Gly His Gly Ile Arg Leu Leu Glu Ala Gln Ile Ala
2360 2365 2370

Thr Gly Gly Ile Ile Asp Pro Lys Glu Ser His Arg Leu Pro Val
2375 2380 2385

Asp Ile Ala Tyr Lys Arg Gly Tyr Phe Asn Glu Glu Leu Ser Glu
2390 2395 2400

Ile Leu Ser Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe Asp Pro
2405 2410 2415

Asn Thr Glu Glu Asn Leu Thr Tyr Leu Gln Leu Lys Glu Arg Cys
2420 2425 2430

Ile Lys Asp Glu Glu Thr Gly Leu Cys Leu Leu Pro Leu Lys Glu
2435 2440 2445

Lys Lys Lys Gln Val Gln Thr Ser Gln Lys Asn Thr Leu Arg Lys
2450 2455 2460

Arg Arg Val Val Ile Val Asp Pro Glu Thr Asn Lys Glu Met Ser
2465 2470 2475

Val Gln Glu Ala Tyr Lys Lys Gly Leu Ile Asp Tyr Glu Thr Phe
2480 2485 2490

Lys Glu Leu Cys Glu Gln Glu Cys Glu Trp Glu Glu Ile Thr Ile
2495 2500 2505

Thr Gly Ser Asp Gly Ser Thr Arg Val Val Leu Val Asp Arg Lys
2510 2515 2520

Thr Gly Ser Gln Tyr Asp Ile Gln Asp Ala Ile Asp Lys Gly Leu
2525 2530 2535

Val Asp Arg Lys Phe Phe Asp Gln Tyr Arg Ser Gly Ser Leu Ser
2540 2545 2550

Leu	Thr	Gln	Phe	Ala	Asp	Met	Ile	Ser	Leu	Lys	Asn	Gly	Val	Gly
	2555					2560					2565			
Thr	Ser	Ser	Ser	Met	Gly	Ser	Gly	Val	Ser	Asp	Asp	Val	Phe	Ser
	2570					2575					2580			
Ser	Ser	Arg	His	Glu	Ser	Val	Ser	Lys	Ile	Ser	Thr	Ile	Ser	Ser
	2585					2590					2595			
Val	Arg	Asn	Leu	Thr	Ile	Arg	Ser	Ser	Ser	Phe	Ser	Asp	Thr	Leu
	2600					2605					2610			
Glu	Glu	Ser	Ser	Pro	Ile	Ala	Ala	Ile	Phe	Asp	Thr	Glu	Asn	Leu
	2615					2620					2625			
Glu	Lys	Ile	Ser	Ile	Thr	Glu	Gly	Ile	Glu	Arg	Gly	Ile	Val	Asp
	2630					2635					2640			
Ser	Ile	Thr	Gly	Gln	Arg	Leu	Leu	Glu	Ala	Gln	Ala	Cys	Thr	Gly
	2645					2650					2655			
Gly	Ile	Ile	His	Pro	Thr	Thr	Gly	Gln	Lys	Leu	Ser	Leu	Gln	Asp
	2660					2665					2670			
Ala	Val	Ser	Gln	Gly	Val	Ile	Asp	Gln	Asp	Met	Ala	Thr	Arg	Leu
	2675					2680					2685			
Lys	Pro	Ala	Gln	Lys	Ala	Phe	Ile	Gly	Phe	Glu	Gly	Val	Lys	Gly
	2690					2695					2700			
Lys	Lys	Lys	Met	Ser	Ala	Ala	Glu	Ala	Val	Lys	Glu	Lys	Trp	Leu
	2705					2710					2715			
Pro	Tyr	Glu	Ala	Gly	Gln	Arg	Phe	Leu	Glu	Phe	Gln	Tyr	Leu	Thr
	2720					2725					2730			
Gly	Gly	Leu	Val	Asp	Pro	Glu	Val	His	Gly	Arg	Ile	Ser	Thr	Glu
	2735					2740					2745			
Glu	Ala	Ile	Arg	Lys	Gly	Phe	Ile	Asp	Gly	Arg	Ala	Ala	Gln	Arg
	2750					2755					2760			

Leu Gln Asp Thr Ser Ser Tyr Ala Lys Ile Leu Thr Cys Pro Lys
2765 2770 2775

Thr Lys Leu Lys Ile Ser Tyr Lys Asp Ala Ile Asn Arg Ser Met
2780 2785 2790

Val Glu Asp Ile Thr Gly Leu Arg Leu Leu Glu Ala Ala Ser Val
2795 2800 2805

Ser Ser Lys Gly Leu Pro Ser Pro Tyr Asn Met Ser Ser Ala Pro
2810 2815 2820

Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg Ser Gly Ser Arg
2825 2830 2835

Ser Gly Ser Arg Ser Gly Ser Arg Arg Gly Ser Phe Asp Ala Thr
2840 2845 2850

Gly Asn Ser Ser Tyr Ser Tyr Ser Tyr Ser Phe Ser Ser Ser
2855 2860 2865

Ile Gly His
2870

<210> 68
<211> 766
<212> PRT
<213> Homo sapiens

<400> 68

Met Lys Thr Pro Trp Lys Val Leu Leu Gly Leu Leu Gly Ala Ala Ala
1 5 10 15

Leu Val Thr Ile Ile Thr Val Pro Val Val Leu Leu Asn Lys Gly Thr
20 25 30

Asp Asp Ala Thr Ala Asp Ser Arg Lys Thr Tyr Thr Leu Thr Asp Tyr
35 40 45

Leu Lys Asn Thr Tyr Arg Leu Lys Leu Tyr Ser Leu Arg Trp Ile Ser

50

55

60

Asp His Glu Tyr Leu Tyr Lys Gln Glu Asn Asn Ile Leu Val Phe Asn
65 70 75 80

Ala Glu Tyr Gly Asn Ser Ser Val Phe Leu Glu Asn Ser Thr Phe Asp
85 90 95

Glu Phe Gly His Ser Ile Asn Asp Tyr Ser Ile Ser Pro Asp Gly Gln
100 105 110

Phe Ile Leu Leu Glu Tyr Asn Tyr Val Lys Gln Trp Arg His Ser Tyr
115 120 125

Thr Ala Ser Tyr Asp Ile Tyr Asp Leu Asn Lys Arg Gln Leu Ile Thr
130 135 140

Glu Glu Arg Ile Pro Asn Asn Thr Gln Trp Val Thr Trp Ser Pro Val
145 150 155 160

Gly His Lys Leu Ala Tyr Val Trp Asn Asn Asp Ile Tyr Val Lys Ile
165 170 175

Glu Pro Asn Leu Pro Ser Tyr Arg Ile Thr Trp Thr Gly Lys Glu Asp
180 185 190

Ile Ile Tyr Asn Gly Ile Thr Asp Trp Val Tyr Glu Glu Glu Val Phe
195 200 205

Ser Ala Tyr Ser Ala Leu Trp Trp Ser Pro Asn Gly Thr Phe Leu Ala
210 215 220

Tyr Ala Gln Phe Asn Asp Thr Glu Val Pro Leu Ile Glu Tyr Ser Phe
225 230 235 240

Tyr Ser Asp Glu Ser Leu Gln Tyr Pro Lys Thr Val Arg Val Pro Tyr
245 250 255

Pro Lys Ala Gly Ala Val Asn Pro Thr Val Lys Phe Phe Val Val Asn
260 265 270

Thr Asp Ser Leu Ser Ser Val Thr Asn Ala Thr Ser Ile Gln Ile Thr
275 280 285

Ala Pro Ala Ser Met Leu Ile Gly Asp His Tyr Leu Cys Asp Val Thr
290 295 300

Trp Ala Thr Gln Glu Arg Ile Ser Leu Gln Trp Leu Arg Arg Ile Gln
305 310 315 320

Asn Tyr Ser Val Met Asp Ile Cys Asp Tyr Asp Glu Ser Ser Gly Arg
325 330 335

Trp Asn Cys Leu Val Ala Arg Gln His Ile Glu Met Ser Thr Thr Gly
340 345 350

Trp Val Gly Arg Phe Arg Pro Ser Glu Pro His Phe Thr Leu Asp Gly
355 360 365

Asn Ser Phe Tyr Lys Ile Ile Ser Asn Glu Glu Gly Tyr Arg His Ile
370 375 380

Cys Tyr Phe Gln Ile Asp Lys Lys Asp Cys Thr Phe Ile Thr Lys Gly
385 390 395 400

Thr Trp Glu Val Ile Gly Ile Glu Ala Leu Thr Ser Asp Tyr Leu Tyr
405 410 415

Tyr Ile Ser Asn Glu Tyr Lys Gly Met Pro Gly Gly Arg Asn Leu Tyr
420 425 430

Lys Ile Gln Leu Ser Asp Tyr Thr Lys Val Thr Cys Leu Ser Cys Glu
435 440 445

Leu Asn Pro Glu Arg Cys Gln Tyr Tyr Ser Val Ser Phe Ser Lys Glu
450 455 460

Ala Lys Tyr Tyr Gln Leu Arg Cys Ser Gly Pro Gly Leu Pro Leu Tyr
465 470 475 480

Thr Leu His Ser Ser Val Asn Asp Lys Gly Leu Arg Val Leu Glu Asp

485

490

495

Asn Ser Ala Leu Asp Lys Met Leu Gln Asn Val Gln Met Pro Ser Lys
 500 505 510

Lys Leu Asp Phe Ile Ile Leu Asn Glu Thr Lys Phe Trp Tyr Gln Met
 515 520 525

Ile Leu Pro Pro His Phe Asp Lys Ser Lys Lys Tyr Pro Leu Leu Leu
 530 535 540

Asp Val Tyr Ala Gly Pro Cys Ser Gln Lys Ala Asp Thr Val Phe Arg
 545 550 555 560

Leu Asn Trp Ala Thr Tyr Leu Ala Ser Thr Glu Asn Ile Ile Val Ala
 565 570 575

Ser Phe Asp Gly Arg Gly Ser Gly Tyr Gln Gly Asp Lys Ile Met His
 580 585 590

Ala Ile Asn Arg Arg Leu Gly Thr Phe Glu Val Glu Asp Gln Ile Glu
 595 600 605

Ala Ala Arg Gln Phe Ser Lys Met Gly Phe Val Asp Asn Lys Arg Ile
 610 615 620

Ala Ile Trp Gly Trp Ser Tyr Gly Gly Tyr Val Thr Ser Met Val Leu
 625 630 635 640

Gly Ser Gly Ser Gly Val Phe Lys Cys Gly Ile Ala Val Ala Pro Val
 645 650 655

Ser Arg Trp Glu Tyr Tyr Asp Ser Val Tyr Thr Glu Arg Tyr Met Gly
 660 665 670

Leu Pro Thr Pro Glu Asp Asn Leu Asp His Tyr Arg Asn Ser Thr Val
 675 680 685

Met Ser Arg Ala Glu Asn Phe Lys Gln Val Glu Tyr Leu Leu Ile His
 690 695 700

Gly Thr Ala Asp Asp Asn Val His Phe Gln Gln Ser Ala Gln Ile Ser
705 710 715 720

Lys Ala Leu Val Asp Val Gly Val Asp Phe Gln Ala Met Trp Tyr Thr
725 730 735

Asp Glu Asp His Gly Ile Ala Ser Ser Thr Ala His Gln His Ile Tyr
740 745 750

Thr His Met Ser His Phe Ile Lys Gln Cys Phe Ser Leu Pro
755 760 765

<210> 69
<211> 5088
<212> PRT
<213> Homo sapiens

<400> 69

Met Ser Gly His Thr Leu Pro Pro Leu Pro Val Pro Gly Thr Asn Ser
1 5 10 15

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

Gly Thr Pro Pro Arg Pro Gln Ala Arg Ser Ile Ala Gly Val Tyr Val
35 40 45

Glu Ala Ser Gly Gln Ala Gln Ser Val Tyr Ala Ala Met Glu Gln Gly
50 55 60

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

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

Lys Ala Leu Gln Gln Gly Leu Val Gly Leu Glu Leu Lys Glu Lys Leu
100 105 110

Leu Ala Ala Glu Arg Ala Thr Thr Gly Tyr Pro Asp Pro Tyr Gly Gly
115 120 125

Glu Lys Leu Ala Leu Phe Gln Ala Ile Gly Lys Glu Val Val Asp Arg
130 135 140

Ala Leu Gly Gln Ser Trp Leu Glu Val Gln Leu Ala Thr Gly Gly Leu
145 150 155 160

Val Asp Pro Ala Gln Gly Val Leu Val Ala Pro Glu Pro Ala Cys His
165 170 175

Gln Gly Leu Leu Asp Arg Glu Thr Trp His Lys Leu Ser Glu Leu Glu
180 185 190

Pro Gly Thr Gly Asp Leu Arg Phe Leu Asp Pro Asn Thr Leu Glu Arg
195 200 205

Leu Thr Tyr His Gln Leu Leu Glu Arg Cys Val Arg Ala Pro Gly Ser
210 215 220

Gly Leu Ala Leu Leu Pro Leu Lys Ile Thr Phe Arg Ser Met Gly Gly
225 230 235 240

Ala Val Ser Ala Ala Glu Leu Leu Glu Val Gly Ile Leu Asp Glu Gln
245 250 255

Ala Val Gln Gly Leu Arg Glu Gly Arg Leu Ala Ala Val Asp Val Ser
260 265 270

Ala Arg Ala Glu Val Arg Arg Tyr Leu Glu Gly Thr Gly Ser Val Ala
275 280 285

Gly Val Val Leu Leu Pro Glu Gly His Lys Lys Ser Phe Phe Gln Ala
290 295 300

Ala Thr Glu His Leu Leu Pro Met Gly Thr Ala Leu Pro Leu Leu Glu
305 310 315 320

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

Leu Trp Val Asp Glu Ala Val Arg Ala Gly Leu Val Ser Pro Glu Leu
340 345 350

His Glu Gln Leu Leu Val Ala Glu Gln Ala Val Thr Gly His His Asp
355 360 365

Pro Phe Ser Gly Ser Gln Ile Pro Leu Phe Gln Ala Met Lys Lys Gly
370 375 380

Leu Val Asp Arg Pro Leu Ala Leu Arg Leu Leu Asp Ala Gln Leu Ala
385 390 395 400

Thr Gly Gly Leu Val Cys Pro Ala Arg Arg Leu Arg Leu Pro Leu Glu
405 410 415

Ala Ala Leu Arg Cys Gly Cys Leu Asp Glu Asp Thr Gln Arg Gln Leu
420 425 430

Ser Gln Ala Gly Ser Phe Ser Asp Gly Thr His Gly Gly Leu Arg Tyr
435 440 445

Glu Gln Leu Leu Ala Leu Cys Val Thr Asp Pro Glu Thr Gly Leu Ala
450 455 460

Phe Leu Pro Leu Ser Gly Gly Pro Arg Gly Gly Glu Pro Gln Gly Pro
465 470 475 480

Pro Phe Ile Lys Tyr Ser Thr Arg Gln Ala Leu Ser Thr Ala Thr Ala
485 490 495

Thr Val Ser Val Gly Lys Phe Arg Gly Arg Pro Val Ser Leu Trp Glu
500 505 510

Leu Leu Phe Ser Glu Ala Ile Ser Ser Glu Gln Arg Ala Met Leu Ala
515 520 525

Gln Gln Tyr Gln Glu Gly Thr Leu Ser Val Glu Lys Leu Ala Ala Lys
530 535 540

Leu Ser Ala Thr Leu Glu Gln Ala Ala Ala Thr Ala Arg Val Thr Phe
545 550 555 560

Ser Gly Leu Arg Asp Thr Val Thr Pro Gly Glu Leu Leu Lys Ala Glu
565 570 575

Ile Ile Asp Gln Asp Leu Tyr Glu Arg Leu Glu His Gly Gln Ala Thr
580 585 590

Ala Lys Asp Val Gly Ser Leu Ala Ser Val Gln Arg Tyr Leu Gln Gly
595 600 605

Thr Gly Cys Ile Ala Gly Leu Leu Leu Pro Gly Ser Gln Glu Arg Leu
610 615 620

Ser Ile Tyr Glu Ala Arg Cys Lys Gly Leu Leu Arg Pro Gly Thr Ala
625 630 635 640

Leu Ile Leu Leu Glu Ala Gln Ala Ala Thr Gly Phe Ile Ile Asp Pro
645 650 655

Lys Ala Asn Lys Gly His Ser Val Glu Glu Ala Leu Arg Ala Ala Val
660 665 670

Ile Gly Pro Asp Val Phe Ala Lys Leu Leu Ser Ala Glu Arg Ala Val
675 680 685

Thr Gly Tyr Thr Asp Pro Tyr Thr Gly Gln Gln Ile Ser Leu Phe Gln
690 695 700

Ala Met Gln Lys Gly Leu Ile Val Arg Glu His Gly Ile Arg Leu Leu
705 710 715 720

Glu Ala Gln Ile Ala Thr Gly Gly Val Ile Asp Pro Val His Ser His
725 730 735

Arg Val Pro Val Asp Val Ala Tyr Arg Arg Gly Tyr Phe Asp Gln Met
740 745 750

Leu Asn Leu Ile Leu Leu Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe
755 760 765

Asp Pro Asn Thr His Glu Asn Leu Thr Tyr Leu Gln Leu Leu Glu Arg
770 775 780

Cys Val Arg Asp Pro Glu Thr Gly Leu Tyr Leu Leu Pro Leu Ser Ser
785 790 795 800

Thr Gln Ser Pro Leu Val Asp Ser Ala Thr Gln Gln Ala Phe Gln Asn
805 810 815

Leu Leu Leu Ser Val Lys Tyr Gly Arg Phe Gln Gly Gln Arg Val Ser
820 825 830

Ala Trp Glu Leu Ile Asn Ser Glu Tyr Phe Ser Glu Gly Arg Arg Arg
835 840 845

Gln Leu Leu Arg Arg Tyr Arg Gln Arg Glu Val Thr Leu Gly Gln Val
850 855 860

Ala Lys Leu Leu Glu Ala Glu Thr Gln Arg Gln Ala Asp Ile Met Leu
865 870 875 880

Pro Ala Leu Arg Ser Arg Val Thr Val His Gln Leu Leu Glu Ala Gly
885 890 895

Ile Ile Asp Gln Gln Leu Leu Asp Gln Val Leu Ala Gly Thr Ile Ser
900 905 910

Pro Glu Ala Leu Leu Leu Met Asp Gly Val Arg Arg Tyr Leu Cys Gly
915 920 925

Leu Gly Ala Val Gly Gly Val Arg Leu Leu Pro Ser Gly Gln Arg Leu
930 935 940

Ser Leu Tyr Gln Ala Met Arg Gln Lys Leu Leu Gly Pro Arg Val Ala
945 950 955 960

Leu Ala Leu Leu Glu Ala Gln Ala Ala Thr Gly Thr Ile Met Asp Pro
965 970 975

His Ser Pro Glu Ser Leu Ser Val Asp Glu Ala Val Arg Arg Gly Val
980 985 990

Val Gly Pro Glu Leu Tyr Gly Arg Leu Lys Arg Ala Glu Gly Ala Ile
995 1000 1005

Ala Gly Phe Arg Asp Pro Phe Ser Gly Lys Gln Val Ser Val Phe
1010 1015 1020

Gln Ala Met Lys Lys Gly Leu Ile Pro Trp Glu Gln Ala Ala Arg
1025 1030 1035

Leu Leu Glu Ala Gln Val Ala Thr Gly Gly Ile Ile Asp Pro Thr
1040 1045 1050

Ser His His His Leu Pro Met Pro Val Ala Ile Gln Arg Gly Tyr
1055 1060 1065

Val Asp Gln Glu Met Glu Thr Ala Leu Ser Ser Ser Ser Glu Thr
1070 1075 1080

Phe Pro Thr Pro Asp Gly Gln Gly Arg Thr Ser Tyr Ala Gln Leu
1085 1090 1095

Leu Glu Glu Cys Pro Arg Asp Glu Thr Ser Gly Leu His Leu Leu
1100 1105 1110

Pro Leu Pro Glu Ser Ala Pro Ala Leu Pro Thr Glu Glu Gln Val
1115 1120 1125

Gln Arg Ser Leu Gln Ala Val Pro Gly Ala Lys Asp Gly Thr Ser
1130 1135 1140

Leu Trp Asp Leu Leu Ser Ser Cys His Phe Thr Glu Glu Gln Arg
1145 1150 1155

Arg Gly Leu Leu Glu Asp Val Gln Glu Gly Arg Thr Thr Val Pro
1160 1165 1170

Gln Leu Leu Ala Ser Val Gln Arg Trp Val Gln Glu Thr Lys Leu
1175 1180 1185

Leu Ala Gln Ala Arg Val Met Val Pro Gly Pro Arg Gly Glu Val
1190 1195 1200

Pro Ala Val Trp Leu Leu Asp Ala Gly Ile Ile Thr Gln Glu Thr
1205 1210 1215

Leu Glu Ala Leu Ala Gln Gly Thr Gln Ser Pro Ala Gln Val Ala
1220 1225 1230

Glu Gln Pro Ala Val Lys Ala Cys Leu Trp Gly Thr Gly Cys Val
1235 1240 1245

Ala Gly Val Leu Leu Gln Pro Ser Gly Ala Lys Ala Ser Ile Ala
1250 1255 1260

Gln Ala Val Arg Asp Gly Leu Leu Pro Thr Gly Leu Gly Gln Arg
1265 1270 1275

Leu Leu Glu Ala Gln Val Ala Ser Gly Phe Leu Val Asp Pro Leu
1280 1285 1290

Asn Asn Gln Arg Leu Ser Val Glu Asp Ala Val Lys Val Gly Leu
1295 1300 1305

Val Gly Arg Glu Leu Ser Glu Gln Leu Gly Gln Ala Glu Arg Ala
1310 1315 1320

Ala Ala Gly Tyr Pro Asp Pro Tyr Ser Arg Ala Ser Leu Ser Leu
1325 1330 1335

Trp Gln Ala Met Glu Lys Gly Leu Val Pro Gln Asn Glu Gly Leu
1340 1345 1350

Pro Leu Leu Gln Val Gln Leu Ala Thr Gly Gly Val Val Asp Pro
1355 1360 1365

Val His Gly Val His Leu Pro Gln Ala Ala Ala Cys Arg Leu Gly
1370 1375 1380

Leu Leu Asp Thr Gln Thr Ser Gln Val Leu Thr Ala Val Asp Lys
1385 1390 1395

Asp Asn Lys Phe Phe Phe Asp Pro Ser Ala Arg Asp Gln Val Thr
1400 1405 1410

Tyr Gln Gln Leu Arg Glu Arg Cys Val Cys Asp Ser Glu Thr Gly
1415 1420 1425

Leu Leu Leu Leu Pro Leu Pro Ser Asp Thr Val Leu Glu Val Asp
1430 1435 1440

Asp His Thr Ala Val Ala Leu Arg Ala Met Lys Val Pro Val Ser
1445 1450 1455

Thr Gly Arg Phe Lys Gly Cys Ser Val Ser Leu Trp Asp Leu Leu
1460 1465 1470

Leu Ser Glu Tyr Val Gly Ala Asp Lys Arg Arg Glu Leu Val Ala
1475 1480 1485

Leu Cys Arg Ser Gly Arg Ala Ala Ala Leu Arg Gln Val Val Ser
1490 1495 1500

Ala Val Thr Thr Leu Val Glu Ala Ala Glu Arg Gln Pro Leu Gln
1505 1510 1515

Ala Thr Phe Arg Gly Leu Arg Lys Gln Val Ser Ala Arg Asp Leu
1520 1525 1530

Phe Arg Ala Gln Leu Ile Ser Arg Lys Thr Leu Asp Glu Leu Ser
1535 1540 1545

Gln Gly Thr Thr Thr Val Lys Glu Val Ala Glu Met Asp Ser Val
1550 1555 1560

Lys Arg Ser Leu Glu Gly Gly Asn Phe Ile Ala Gly Val Leu Ile
1565 1570 1575

Gln Gly Thr Gln Glu Arg Met Ser Ile Pro Glu Ala Leu Arg Arg
1580 1585 1590

His Ile Leu Arg Pro Gly Thr Ala Leu Val Leu Leu Glu Ala Gln
1595 1600 1605

Ala Ala Thr Gly Phe Ile Ile Asp Pro Val Glu Asn Arg Lys Leu
1610 1615 1620

Thr Val Glu Glu Ala Phe Lys Ala Gly Met Phe Gly Lys Glu Thr
1625 1630 1635

Tyr Val Lys Leu Leu Ser Ala Glu Arg Ala Val Thr Gly Tyr Thr
1640 1645 1650

Asp Pro Tyr Thr Gly Gln Gln Ile Ser Leu Phe Gln Ala Met Gln
1655 1660 1665

Lys Asp Leu Ile Val Arg Glu His Gly Ile Arg Leu Leu Glu Ala
1670 1675 1680

Gln Ile Ala Thr Gly Gly Ile Ile Asp Pro Val His Ser His Arg
1685 1690 1695

Val Pro Val Asp Val Ala Tyr Arg Cys Gly Tyr Phe Asp Glu Glu
1700 1705 1710

Met Asn Arg Ile Leu Ala Asp Pro Ser Asp Asp Thr Lys Gly Phe
1715 1720 1725

Phe Asp Pro Asn Thr His Glu Asn Leu Thr Tyr Leu Gln Leu Leu
1730 1735 1740

Glu Arg Cys Val Glu Asp Pro Glu Thr Gly Leu Tyr Leu Leu Gln
1745 1750 1755

Ile Ile Lys Lys Gly Glu Asn Tyr Val Tyr Ile Asn Glu Ala Thr
1760 1765 1770

Arg His Val Leu Gln Ser Arg Thr Ala Lys Met Arg Val Gly Arg
1775 1780 1785

Phe Ala Asp Gln Val Val Ser Phe Trp Asp Leu Leu Ser Ser Pro
1790 1795 1800

Tyr Phe Thr Glu Asp Arg Lys Arg Glu Leu Ile Gln Glu Tyr Gly
1805 1810 1815

Ala Gln Ser Gly Gly Leu Glu Lys Leu Leu Glu Ile Ile Thr Thr
1820 1825 1830

Thr Ile Glu Glu Thr Glu Thr Gln Asn Gln Gly Ile Lys Val Ala
1835 1840 1845

Ala Ile Arg Gly Glu Val Thr Ala Ala Asp Leu Phe Asn Ser Arg
1850 1855 1860

Val Ile Asp Gln Lys Thr Leu His Thr Leu Arg Val Gly Arg Thr
1865 1870 1875

Gly Gly Gln Ala Leu Ser Thr Leu Glu Cys Val Lys Pro Tyr Leu
1880 1885 1890

Glu Gly Ser Gly Cys Ile Ala Gly Val Thr Val Pro Ser Thr Arg
1895 1900 1905

Glu Val Met Ser Leu His Glu Ala Ser Arg Lys Glu Leu Ile Pro
1910 1915 1920

Ala Ala Phe Ala Thr Trp Leu Leu Glu Ala Gln Ala Ala Thr Gly
1925 1930 1935

Phe Leu Leu Asp Pro Cys Thr Arg Gln Lys Leu Ser Val Asp Glu
1940 1945 1950

Ala Val Asp Val Gly Leu Val Asn Glu Glu Leu Arg Glu Arg Leu
1955 1960 1965

Leu Lys Ala Glu Arg Ala Ala Thr Gly Tyr Arg Asp Pro Ala Thr
1970 1975 1980

Gly Asp Thr Ile Pro Leu Phe Gln Ala Met Gln Lys Gln Leu Ile
1985 1990 1995

Glu Lys Ala Glu Ala Leu Arg Leu Leu Glu Val Gln Val Ala Thr
2000 2005 2010

Gly Gly Val Ile Asp Pro Gln His His His Arg Leu Pro Leu Glu
2015 2020 2025

Thr Ala Tyr Arg Arg Gly Cys Leu His Lys Asp Ile Tyr Ala Leu
2030 2035 2040

Ile Ser Asp Gln Lys His Met Arg Lys Arg Phe Val Asp Pro Asn
2045 2050 2055

Thr Gln Glu Lys Val Ser Tyr Arg Glu Leu Gln Glu Arg Cys Arg
2060 2065 2070

Pro Gln Glu Asp Thr Gly Trp Leu Leu Phe Pro Val Asn Lys Ala
2075 2080 2085

Ala Arg Asp Ser Glu His Ile Asp Asp Glu Thr Arg Arg Ala Leu
2090 2095 2100

Glu Ala Glu Gln Val Glu Ile Thr Val Gly Arg Phe Arg Gly Gln
2105 2110 2115

Lys Pro Thr Leu Trp Ala Leu Leu Asn Ser Glu Tyr Val Thr Glu
2120 2125 2130

Glu Lys Lys Leu Gln Leu Val Arg Met Tyr Arg Thr His Thr Arg
2135 2140 2145

Arg Ala Leu Gln Thr Val Ala Gln Leu Ile Leu Glu Leu Ile Glu
2150 2155 2160

Lys Gln Glu Thr Ser Asn Lys His Leu Trp Phe Gln Gly Ile Arg
2165 2170 2175

Arg Gln Ile Thr Ala Ser Glu Leu Leu Ser Ser Ala Ile Ile Thr
2180 2185 2190

Glu Glu Met Leu Gln Asp Leu Glu Thr Gly Arg Ser Thr Thr Gln
2195 2200 2205

Glu Leu Met Glu Asp Asp Arg Val Lys Arg Tyr Leu Glu Gly Thr
2210 2215 2220

Ser Cys Ile Ala Gly Val Leu Val Pro Ala Lys Asp Gln Pro Gly
2225 2230 2235

Arg Gln Glu Lys Met Ser Ile Tyr Gln Ala Met Trp Lys Gly Val
2240 2245 2250

Leu Arg Pro Gly Thr Ala Leu Val Leu Leu Glu Ala Gln Ala Ala
2255 2260 2265

Thr Gly Phe Val Ile Asp Pro Val Arg Asn Leu Arg Leu Ser Val
2270 2275 2280

Glu Glu Ala Val Ala Ala Gly Val Val Gly Gly Glu Ile Gln Glu
2285 2290 2295

Lys Leu Leu Ser Ala Glu Arg Ala Val Thr Gly Tyr Thr Asp Pro
2300 2305 2310

Tyr Thr Gly Gln Gln Ile Ser Leu Phe Gln Ala Met Gln Lys Asp
2315 2320 2325

Leu Ile Val Arg Glu His Gly Ile Arg Leu Leu Glu Ala Gln Ile
2330 2335 2340

Ala Thr Gly Gly Val Ile Asp Pro Val His Ser His Arg Val Pro
2345 2350 2355

Val Asp Val Ala Tyr Arg Arg Gly Tyr Phe Asp Glu Glu Met Asn
2360 2365 2370

Arg Val Leu Ala Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe Asp
2375 2380 2385

Pro Asn Thr His Glu Asn Leu Thr Tyr Val Gln Leu Leu Arg Arg
2390 2395 2400

Cys Val Pro Asp Pro Asp Thr Gly Leu Tyr Met Leu Gln Leu Ala
2405 2410 2415

Gly Arg Gly Ser Ala Val His Gln Leu Ser Glu Glu Leu Arg Cys
2420 2425 2430

Ala Leu Arg Asp Ala Arg Val Thr Pro Gly Ser Gly Ala Leu Gln
2435 2440 2445

Gly Gln Ser Val Ser Val Trp Glu Leu Leu Phe Tyr Arg Glu Val
2450 2455 2460

Ser Glu Asp Arg Arg Gln Asp Leu Leu Ser Arg Tyr Arg Ala Gly
2465 2470 2475

Thr Leu Thr Val Glu Glu Leu Gly Ala Thr Leu Thr Ser Leu Leu
2480 2485 2490

Ala Gln Ala Gln Ala Gln Ala Arg Ala Glu Ala Glu Ala Gly Ser
2495 2500 2505

Pro Arg Pro Asp Pro Arg Glu Ala Leu Arg Ala Ala Thr Met Glu
2510 2515 2520

Val Lys Val Gly Arg Leu Arg Gly Arg Ala Val Pro Val Trp Asp
2525 2530 2535

Val Leu Ala Ser Gly Tyr Val Ser Arg Ala Ala Arg Glu Glu Leu
2540 2545 2550

Leu Ala Glu Phe Gly Ser Gly Thr Leu Asp Leu Pro Ala Leu Thr
2555 2560 2565

Arg Arg Leu Thr Ala Ile Ile Glu Glu Ala Glu Glu Ala Pro Gly
2570 2575 2580

Ala Arg Pro Gln Leu Gln Asp Ala Trp Arg Gly Pro Arg Glu Pro
2585 2590 2595

Gly Pro Ala Gly Arg Gly Asp Gly Asp Ser Gly Arg Ser Gln Arg
2600 2605 2610

Glu Gly Gln Gly Glu Gly Glu Thr Gln Glu Ala Ala Ala Ala Ala
2615 2620 2625

Ala Ala Ala Ala Ala Arg Arg Gln Glu Gln Thr Leu Arg Asp Ala
2630 2635 2640

Thr Met Glu Val Gln Arg Gly Gln Phe Gln Gly Arg Pro Val Ser
2645 2650 2655

Val Trp Asp Val Leu Phe Ser Ser Tyr Leu Ser Glu Ala Arg Arg
2660 2665 2670

Asp Glu Leu Leu Ala Gln His Ala Ala Gly Ala Leu Gly Leu Pro
2675 2680 2685

Asp Leu Val Ala Val Leu Thr Arg Val Ile Glu Glu Thr Glu Glu
2690 2695 2700

Arg Leu Ser Lys Val Ser Phe Arg Gly Leu Arg Arg Gln Val Ser
2705 2710 2715

Ala Ser Glu Leu His Thr Ser Gly Ile Leu Gly Pro Glu Thr Leu
2720 2725 2730

Arg Asp Leu Ala Gln Gly Thr Lys Thr Leu Gln Glu Val Thr Glu
2735 2740 2745

Met Asp Ser Val Lys Arg Tyr Leu Glu Gly Thr Ser Cys Ile Ala
2750 2755 2760

Gly Val Leu Val Pro Ala Lys Asp Gln Pro Gly Arg Gln Glu Lys
2765 2770 2775

Met Ser Ile Tyr Gln Ala Met Trp Lys Gly Val Leu Arg Pro Gly
2780 2785 2790

Thr Ala Leu Val Leu Leu Glu Ala Gln Ala Ala Thr Gly Phe Val
2795 2800 2805

Ile Asp Pro Val Arg Asn Leu Arg Leu Ser Val Glu Glu Ala Val
2810 2815 2820

Ala Ala Gly Val Val Gly Gly Glu Ile Gln Glu Lys Leu Leu Ser
2825 2830 2835

Ala Glu Arg Ala Val Thr Gly Tyr Thr Asp Pro Tyr Thr Gly Gln
2840 2845 2850

Gln Ile Ser Leu Phe Gln Ala Met Gln Lys Asp Leu Ile Val Arg
2855 2860 2865

Glu His Gly Ile Arg Leu Leu Glu Ala Gln Ile Ala Thr Gly Gly
2870 2875 2880

Val Ile Asp Pro Val His Ser His Arg Val Pro Val Asp Val Ala
2885 2890 2895

Tyr Gln Arg Gly Tyr Phe Asp Glu Glu Met Asn Arg Val Leu Ala
2900 2905 2910

Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe Asp Pro Asn Thr His
2915 2920 2925

Glu Asn Leu Thr Tyr Val Gln Leu Leu Arg Arg Cys Val Pro Asp
2930 2935 2940

Pro Asp Thr Gly Leu Tyr Met Leu Gln Leu Ala Gly Arg Gly Ser
2945 2950 2955

Ala Val His Gln Leu Ser Glu Glu Leu Arg Cys Ala Leu Arg Asp
2960 2965 2970

Ala Arg Val Thr Pro Gly Ser Gly Ala Leu Gln Gly Gln Ser Val
2975 2980 2985

Ser Val Trp Glu Leu Leu Phe Tyr Arg Glu Val Ser Glu Asp Arg
2990 2995 3000

Arg Gln Asp Leu Leu Ser Arg Tyr Arg Ala Gly Thr Leu Thr Val
3005 3010 3015

Glu Glu Leu Gly Ala Thr Leu Thr Ser Leu Leu Ala Gln Ala Gln
3020 3025 3030

Ala Gln Ala Arg Ala Glu Ala Glu Ala Gly Ser Pro Arg Pro Asp
3035 3040 3045

Pro Arg Glu Ala Leu Arg Ala Ala Thr Met Glu Val Lys Val Gly
3050 3055 3060

Arg Leu Arg Gly Arg Ala Val Pro Val Trp Asp Val Leu Ala Ser
3065 3070 3075

Gly Tyr Val Ser Arg Ala Ala Arg Glu Glu Leu Leu Ala Glu Phe
3080 3085 3090

Gly Ser Gly Thr Leu Asp Leu Pro Ala Leu Thr Arg Arg Leu Thr
3095 3100 3105

Ala Ile Ile Glu Glu Ala Glu Glu Ala Pro Gly Ala Arg Pro Gln
3110 3115 3120

Leu Gln Asp Ala Trp Arg Gly Pro Arg Glu Pro Gly Pro Ala Gly
3125 3130 3135

Arg Gly Asp Gly Asp Ser Gly Arg Ser Gln Arg Glu Gly Gln Gly
3140 3145 3150

Glu Gly Glu Thr Gln Glu Ala Ala Ala Ala Ala Arg Arg Gln Glu
3155 3160 3165

Gln Thr Leu Arg Asp Ala Thr Met Glu Val Gln Arg Gly Gln Phe
3170 3175 3180

Gln Gly Arg Pro Val Ser Val Trp Asp Val Leu Phe Ser Ser Tyr
3185 3190 3195

Leu Ser Glu Ala Arg Arg Asp Glu Leu Leu Ala Gln His Ala Ala
3200 3205 3210

Gly Ala Leu Gly Leu Pro Asp Leu Val Ala Val Leu Thr Arg Val
3215 3220 3225

Ile Glu Glu Thr Glu Glu Arg Leu Ser Lys Val Ser Phe Arg Gly
3230 3235 3240

Leu Arg Cys Gln Val Ser Ala Ser Glu Leu His Thr Ser Gly Ile
3245 3250 3255

Leu Gly Pro Glu Thr Leu Arg Asp Leu Ala Gln Gly Thr Lys Thr
3260 3265 3270

Leu Gln Glu Val Thr Glu Met Asp Ser Val Lys Arg Tyr Leu Glu
3275 3280 3285

Gly Thr Ser Cys Ile Ala Gly Val Leu Val Pro Ala Lys Asp Gln
3290 3295 3300

Pro Gly Arg Gln Glu Lys Met Ser Ile Tyr Gln Ala Met Trp Lys
3305 3310 3315

Gly Val Leu Arg Pro Gly Thr Ala Leu Val Leu Leu Glu Ala Gln
3320 3325 3330

Ala Ala Thr Gly Phe Val Ile Asp Pro Val Arg Asn Leu Arg Leu
3335 3340 3345

Ser Val Glu Glu Ala Val Ala Ala Gly Val Val Gly Gly Glu Ile
3350 3355 3360

Gln Glu Lys Leu Leu Ser Ala Glu Arg Ala Val Thr Gly Tyr Thr
3365 3370 3375

Asp Pro Tyr Thr Gly Gln Gln Ile Ser Leu Phe Gln Ala Met Gln
3380 3385 3390

Lys Asp Leu Ile Val Arg Glu His Gly Ile Arg Leu Leu Glu Ala
3395 3400 3405

Gln Ile Ala Thr Gly Gly Val Ile Asp Pro Val His Ser His Arg
3410 3415 3420

Val Pro Val Asp Val Ala Tyr Arg Arg Gly Tyr Phe Asp Glu Glu
3425 3430 3435

Met Asn Arg Val Leu Ala Asp Pro Ser Asp Asp Thr Lys Gly Phe
3440 3445 3450

Phe Asp Pro Asn Thr His Glu Asn Leu Thr Tyr Val Gln Leu Leu
3455 3460 3465

Arg Arg Cys Val Pro Asp Pro Asp Thr Gly Leu Tyr Met Leu Gln
3470 3475 3480

Leu Ala Gly Arg Gly Ser Ala Val His Gln Leu Ser Glu Glu Leu
3485 3490 3495

Arg Cys Ala Leu Arg Asp Ala Arg Val Thr Pro Gly Ser Gly Ala
3500 3505 3510

Leu Gln Gly Gln Ser Val Ser Val Trp Glu Leu Leu Phe Tyr Arg
3515 3520 3525

Glu Val Ser Glu Asp Arg Arg Gln Asp Leu Leu Ser Arg Tyr Arg
3530 3535 3540

Ala Gly Thr Leu Thr Val Glu Glu Leu Gly Ala Thr Leu Thr Ser
3545 3550 3555

Leu Leu Ala Gln Ala Gln Ala Gln Ala Arg Ala Glu Ala Glu Ala
3560 3565 3570

Gly Ser Pro Arg Pro Asp Pro Arg Glu Ala Leu Arg Ala Ala Thr
3575 3580 3585

Met Glu Val Lys Val Gly Arg Leu Arg Gly Arg Ala Val Pro Val
3590 3595 3600

Trp Asp Val Leu Ala Ser Gly Tyr Val Ser Arg Ala Ala Arg Glu
3605 3610 3615

Glu Leu Leu Ala Glu Phe Gly Ser Gly Thr Leu Asp Leu Pro Ala
3620 3625 3630

Leu Thr Arg Arg Leu Thr Ala Ile Ile Glu Glu Ala Glu Glu Ala
3635 3640 3645

Pro Gly Ala Arg Pro Gln Leu Gln Asp Ala Trp Arg Gly Pro Arg
3650 3655 3660

Glu Pro Gly Pro Ala Gly Arg Gly Asp Gly Asp Ser Gly Arg Ser
3665 3670 3675

Gln Arg Glu Gly Gln Gly Glu Gly Glu Thr Gln Glu Ala Ala Ala
3680 3685 3690

Ala Thr Ala Ala Ala Arg Arg Gln Glu Gln Thr Leu Arg Asp Ala
3695 3700 3705

Thr Met Glu Val Gln Arg Gly Gln Phe Gln Gly Arg Pro Val Ser
3710 3715 3720

Val Trp Asp Val Leu Phe Ser Ser Tyr Leu Ser Glu Ala Arg Arg
3725 3730 3735

Asp Glu Leu Leu Ala Gln His Ala Ala Gly Ala Leu Gly Leu Pro
3740 3745 3750

Asp Leu Val Ala Val Leu Thr Arg Val Ile Glu Glu Thr Glu Glu
3755 3760 3765

Arg Leu Ser Lys Val Ser Phe Arg Gly Leu Arg Arg Gln Val Ser
3770 3775 3780

Ala Ser Glu Leu His Thr Ser Gly Ile Leu Gly Pro Glu Thr Leu
3785 3790 3795

Arg Asp Leu Ala Gln Gly Thr Lys Thr Leu Gln Glu Val Thr Glu
3800 3805 3810

Met Asp Ser Val Lys Arg Tyr Leu Glu Gly Thr Ser Cys Ile Ala
3815 3820 3825

Gly Val Leu Val Pro Ala Lys Asp Gln Pro Gly Arg Gln Glu Lys
3830 3835 3840

Met Ser Ile Tyr Gln Ala Met Trp Lys Gly Val Leu Arg Pro Gly
3845 3850 3855

Thr Ala Leu Val Leu Leu Glu Ala Gln Ala Ala Thr Gly Phe Val
3860 3865 3870

Ile Asp Pro Val Arg Asn Leu Arg Leu Ser Val Glu Glu Ala Val
3875 3880 3885

Ala Ala Gly Val Val Gly Gly Glu Ile Gln Glu Lys Leu Leu Ser
3890 3895 3900

Ala Glu Arg Ala Val Thr Gly Tyr Thr Asp Pro Tyr Thr Gly Gln
3905 3910 3915

Gln Ile Ser Leu Phe Gln Ala Met Gln Lys Asp Leu Ile Val Arg
3920 3925 3930

Glu His Gly Ile Arg Leu Leu Glu Ala Gln Ile Ala Thr Gly Gly
3935 3940 3945

Val Ile Asp Pro Val His Ser His Arg Val Pro Val Asp Val Ala
3950 3955 3960

Tyr Arg Arg Gly Tyr Phe Asp Glu Glu Met Asn Arg Val Leu Ala
3965 3970 3975

Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe Asp Pro Asn Thr His
3980 3985 3990

Glu Asn Leu Thr Tyr Val Gln Leu Leu Arg Arg Cys Val Pro Asp
3995 4000 4005

Pro Asp Thr Gly Leu Tyr Met Leu Gln Leu Ala Gly Arg Gly Ser
4010 4015 4020

Ala Val His Gln Leu Ser Glu Glu Leu Arg Cys Ala Leu Arg Asp
4025 4030 4035

Ala Arg Val Thr Pro Gly Ser Gly Ala Leu Gln Gly Gln Ser Val
4040 4045 4050

Ser Val Trp Glu Leu Leu Phe Tyr Arg Glu Val Ser Glu Asp Arg
4055 4060 4065

Arg Gln Asp Leu Leu Ser Arg Tyr Arg Ala Gly Thr Leu Thr Val
4070 4075 4080

Glu Glu Leu Gly Ala Thr Leu Thr Ser Leu Leu Ala Gln Ala Gln
4085 4090 4095

Ala Gln Ala Arg Ala Glu Ala Glu Ala Gly Ser Pro Arg Pro Asp
4100 4105 4110

Pro Arg Glu Ala Leu Arg Ala Ala Thr Met Glu Val Lys Val Gly
4115 4120 4125

Arg Leu Arg Gly Arg Ala Val Pro Val Trp Asp Val Leu Ala Ser
4130 4135 4140

Gly Tyr Val Ser Arg Ala Ala Arg Glu Glu Leu Leu Ala Glu Phe
4145 4150 4155

Gly Ser Gly Thr Leu Asp Leu Pro Ala Leu Thr Arg Arg Leu Thr
4160 4165 4170

Ala Ile Ile Glu Glu Ala Glu Glu Ala Pro Gly Ala Arg Pro Gln
4175 4180 4185

Leu Gln Asp Ala Trp Arg Gly Pro Arg Glu Pro Gly Pro Ala Gly
4190 4195 4200

Arg Gly Asp Gly Asp Ser Gly Arg Ser Gln Arg Glu Gly Gln Gly
4205 4210 4215

Glu Gly Glu Thr Gln Glu Ala Ala Ala Ala Thr Ala Ala Ala Arg
4220 4225 4230

Arg Gln Glu Gln Thr Leu Arg Asp Ala Thr Met Glu Val Gln Arg
4235 4240 4245

Gly Gln Phe Gln Gly Arg Pro Val Ser Val Trp Asp Val Leu Phe
4250 4255 4260

Ser Ser Tyr Leu Ser Glu Ala Arg Arg Asp Glu Leu Leu Ala Gln
4265 4270 4275

His Ala Ala Gly Ala Leu Gly Leu Pro Asp Leu Val Ala Val Leu
4280 4285 4290

Thr Arg Val Ile Glu Glu Thr Glu Glu Arg Leu Ser Lys Val Ser
4295 4300 4305

Phe Arg Gly Leu Arg Arg Gln Val Ser Ala Ser Glu Leu His Thr
4310 4315 4320

Ser Gly Ile Leu Gly Pro Glu Thr Leu Arg Asp Leu Ala Gln Gly
4325 4330 4335

Thr Lys Thr Leu Gln Glu Val Thr Glu Met Asp Ser Val Lys Arg
4340 4345 4350

Tyr Leu Glu Gly Thr Ser Cys Ile Ala Gly Val Leu Val Pro Ala
4355 4360 4365

Lys Asp Gln Pro Gly His Gln Glu Lys Met Ser Ile Tyr Gln Ala
4370 4375 4380

Met Trp Lys Gly Val Leu Arg Pro Gly Thr Ala Leu Val Leu Leu
4385 4390 4395

Glu Ala Gln Ala Ala Thr Gly Phe Val Ile Asp Pro Val Arg Asn
4400 4405 4410

Leu Arg Leu Ser Val Glu Glu Ala Val Ala Ala Gly Val Val Gly
4415 4420 4425

Gly Glu Ile Gln Glu Lys Leu Leu Ser Ala Glu Arg Ala Val Thr
4430 4435 4440

Gly Tyr Thr Asp Pro Tyr Thr Gly Gln Gln Ile Ser Leu Phe Gln
4445 4450 4455

Ala Met Gln Lys Asp Leu Ile Val Arg Glu His Gly Ile Arg Leu
4460 4465 4470

Leu Glu Ala Gln Ile Ala Thr Gly Gly Val Ile Asp Pro Val His
4475 4480 4485

Ser His Arg Val Pro Val Asp Val Ala Tyr Arg Arg Gly Tyr Phe
4490 4495 4500

Asp Glu Glu Met Asn Arg Val Leu Ala His Pro Ser Asp Asp Thr
4505 4510 4515

Lys Gly Phe Phe Asp Pro Asn Thr His Glu Asn Leu Thr Tyr Val
4520 4525 4530

Gln Leu Leu Arg Arg Cys Val Pro Asp Pro Asp Thr Gly Leu Tyr
4535 4540 4545

Met Leu Gln Leu Ala Gly Arg Gly Ser Ala Val His Gln Leu Ser
4550 4555 4560

Glu Glu Leu Arg Cys Ala Leu Arg Asp Ala Arg Val Met Pro Gly
4565 4570 4575

Ser Gly Ala Leu Gln Gly Gln Ser Val Ser Val Trp Glu Leu Leu
4580 4585 4590

Phe Tyr Arg Glu Val Ser Glu Asp Arg Arg Gln Asp Leu Leu Ser
4595 4600 4605

Arg Tyr Arg Ala Gly Thr Leu Thr Val Glu Glu Leu Gly Ala Thr
4610 4615 4620

Leu Thr Ser Leu Leu Ala Gln Ala Gln Ala Gln Ala Arg Ala Glu
4625 4630 4635

Ala Glu Ala Glu Ala Gly Ser Pro Arg Pro Asp Pro Arg Glu Ala
4640 4645 4650

Leu Arg Ala Ala Thr Met Glu Val Lys Val Gly Arg Leu Arg Gly
4655 4660 4665

Arg Ala Val Pro Val Trp Asp Val Leu Ala Ser Gly Tyr Val Ser
4670 4675 4680

Gly Ala Ala Arg Glu Glu Leu Leu Ala Glu Phe Gly Ser Gly Thr
4685 4690 4695

Leu Asp Leu Pro Ala Leu Thr Arg Arg Leu Thr Ala Ile Ile Glu
4700 4705 4710

Glu Ala Glu Glu Ala Pro Gly Ala Arg Pro Gln Leu Gln Asp Ala
4715 4720 4725

Trp Arg Gly Pro Arg Glu Pro Gly Pro Ala Gly Arg Gly Asp Gly
4730 4735 4740

Asp Ser Gly Arg Ser Gln Arg Glu Gly Gln Gly Glu Gly Glu Thr
4745 4750 4755

Gln Glu Ala Ala Ala Ala Ala Arg Arg Gln Glu Gln Thr Leu Arg
4760 4765 4770

Asp Ala Thr Met Glu Val Gln Arg Gly Gln Phe Gln Gly Arg Pro
4775 4780 4785

Val Ser Val Trp Asp Val Leu Phe Ser Ser Tyr Leu Ser Glu Ala
4790 4795 4800

His Arg Asp Glu Leu Leu Ala Gln His Ala Ala Gly Ala Leu Gly
4805 4810 4815

Leu Pro Asp Leu Val Ala Val Leu Thr Arg Val Ile Glu Glu Thr
4820 4825 4830

Glu Glu Arg Leu Ser Lys Val Ser Phe Arg Gly Leu Arg Arg Gln
4835 4840 4845

Val Ser Ala Ser Glu Leu His Thr Ser Gly Ile Leu Gly Pro Glu
4850 4855 4860

Thr Leu Arg Asp Leu Ala Gln Gly Thr Lys Thr Leu Gln Glu Val
4865 4870 4875

Thr Glu Met Asp Ser Val Lys Arg Tyr Leu Glu Gly Thr Ser Cys
4880 4885 4890

Ile Ala Gly Val Leu Val Pro Ala Lys Asp Gln Pro Gly Arg Gln
4895 4900 4905

Glu Lys Met Ser Ile Tyr Gln Ala Met Trp Lys Gly Val Leu Arg
4910 4915 4920

Pro Gly Thr Ala Leu Val Leu Leu Glu Ala Gln Ala Ala Thr Gly
4925 4930 4935

Phe Val Ile Asp Pro Val Arg Asn Leu Arg Leu Ser Val Glu Glu
4940 4945 4950

Ala Val Ala Ala Gly Val Val Gly Gly Glu Ile Gln Glu Lys Leu
4955 4960 4965

Leu Ser Ala Glu Arg Ala Val Thr Gly Tyr Thr Asp Pro Tyr Thr
4970 4975 4980

Gly Gln Gln Ile Ser Leu Phe Gln Ala Met Gln Lys Asp Leu Ile
4985 4990 4995

Val Arg Glu His Gly Ile Arg Leu Leu Glu Ala Gln Ile Ala Thr
5000 5005 5010

Gly Gly Val Ile Asp Pro Val His Ser His Arg Val Pro Val Asp
5015 5020 5025

Val Ala Tyr Arg Arg Gly Tyr Phe Asp Glu Glu Met Asn Arg Val
5030 5035 5040

Leu Ala Asp Pro Ser Asp Asp Thr Lys Gly Phe Phe Asp Pro Asn
5045 5050 5055

Thr His Glu Asn Leu Thr Tyr Leu Gln Leu Leu Gln Arg Ala Thr
5060 5065 5070

Leu Asp Pro Glu Thr Gly Leu Leu Phe Leu Ser Leu Ser Leu Gln
5075 5080 5085

<210> 70
<211> 586
<212> PRT
<213> Homo sapiens

<400> 70

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

Glu Phe Ala Ile Gln Pro Asn Thr Thr Gly Lys Gln Leu Phe Asp Gln
20 25 30

Val Val Lys Thr Ile Gly Leu Arg Glu Val Trp Tyr Phe Gly Leu His
35 40 45

Tyr Val Asp Asn Lys Gly Phe Pro Thr Trp Leu Lys Leu Asp Lys Lys
50 55 60

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

Arg Ala Lys Phe Tyr Pro Glu Asp Val Ala Glu Glu Leu Ile Gln Asp
85 90 95

Ile Thr Gln Lys Leu Phe Phe Leu Gln Val Lys Glu Gly Ile Leu Ser
100 105 110

Asp Glu Ile Tyr Cys Pro Pro Glu Thr Ala Val Leu Leu Gly Ser Tyr
115 120 125

Ala Val Gln Ala Lys Phe Gly Asp Tyr Asn Lys Glu Val His Lys Ser

130

135

140

Gly Tyr Leu Ser Ser Glu Arg Leu Ile Pro Gln Arg Val Met Asp Gln
 145 150 155 160

His Lys Leu Thr Arg Asp Gln Trp Glu Asp Arg Ile Gln Val Trp His
 165 170 175

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

Lys Ile Ala Gln Asp Leu Glu Met Tyr Gly Ile Asn Tyr Phe Glu Ile
 195 200 205

Lys Asn Lys Lys Gly Thr Asp Leu Trp Leu Gly Val Asp Ala Leu Gly
 210 215 220

Leu Asn Ile Tyr Glu Lys Asp Asp Lys Leu Thr Pro Lys Ile Gly Phe
 225 230 235 240

Pro Trp Ser Glu Ile Arg Asn Ile Ser Phe Asn Asp Lys Lys Phe Val
 245 250 255

Ile Lys Pro Ile Asp Lys Lys Ala Pro Asp Phe Val Phe Tyr Ala Pro
 260 265 270

Arg Leu Arg Ile Asn Lys Arg Ile Leu Gln Leu Cys Met Gly Asn His
 275 280 285

Glu Leu Tyr Met Arg Arg Arg Lys Pro Asp Thr Ile Glu Val Gln Gln
 290 295 300

Met Lys Ala Gln Ala Arg Glu Glu Lys His Gln Lys Gln Leu Glu Arg
 305 310 315 320

Gln Gln Leu Glu Thr Glu Lys Lys Arg Arg Glu Thr Val Glu Arg Glu
 325 330 335

Lys Glu Gln Met Met Arg Glu Lys Glu Glu Leu Met Leu Arg Leu Gln
 340 345 350

Asp Tyr Glu Glu Lys Thr Lys Lys Ala Glu Arg Glu Leu Ser Glu Gln
355 360 365

Ile Gln Arg Ala Leu Gln Leu Glu Glu Glu Arg Lys Arg Ala Gln Glu
370 375 380

Glu Ala Glu Arg Leu Glu Ala Asp Arg Met Ala Ala Leu Arg Ala Lys
385 390 395 400

Glu Glu Leu Glu Arg Gln Ala Val Asp Gln Ile Lys Ser Gln Glu Gln
405 410 415

Leu Ala Ala Glu Leu Ala Glu Tyr Thr Ala Lys Ile Ala Leu Leu Glu
420 425 430

Glu Ala Arg Arg Arg Lys Glu Asp Glu Val Glu Glu Trp Gln His Arg
435 440 445

Ala Lys Glu Ala Gln Asp Asp Leu Val Lys Thr Lys Glu Glu Leu His
450 455 460

Leu Val Met Thr Ala Pro Pro Pro Pro Pro Pro Pro Val Tyr Glu Pro
465 470 475 480

Val Ser Tyr His Val Gln Glu Ser Leu Gln Asp Glu Gly Ala Glu Pro
485 490 495

Thr Gly Tyr Ser Ala Glu Leu Ser Ser Glu Gly Ile Arg Asp Asp Arg
500 505 510

Asn Glu Glu Lys Arg Ile Thr Glu Ala Glu Lys Asn Glu Arg Val Gln
515 520 525

Arg Gln Leu Leu Thr Leu Ser Ser Glu Leu Ser Gln Ala Arg Asp Glu
530 535 540

Asn Lys Arg Thr His Asn Asp Ile Ile His Asn Glu Asn Met Arg Gln
545 550 555 560

Gly Arg Asp Lys Tyr Lys Thr Leu Arg Gln Ile Arg Gln Gly Asn Thr

565

570

575

Lys Gln Arg Ile Asp Glu Phe Glu Ala Leu
 580 585

<210> 71
 <211> 2391
 <212> PRT
 <213> Homo sapiens

<400> 71

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

Lys Tyr Thr Lys Gln Asp Gly Glu Cys Gly Thr Leu Ser Lys Gly Glu
 20 25 30

Leu Lys Glu Leu Leu Glu Lys Glu Leu His Pro Val Leu Lys Asn Pro
 35 40 45

Asp Asp Pro Asp Thr Val Asp Val Ile Met His Met Leu Asp Arg Asp
 50 55 60

His Asp Arg Arg Leu Asp Phe Thr Glu Phe Leu Leu Met Ile Phe Lys
 65 70 75 80

Leu Thr Met Ala Cys Asn Lys Val Leu Ser Lys Glu Tyr Cys Lys Ala
 85 90 95

Ser Gly Ser Lys Lys His Arg Arg Gly His Arg His Gln Glu Glu Glu
 100 105 110

Ser Glu Thr Glu Glu Asp Glu Glu Asp Thr Pro Gly His Lys Ser Gly
 115 120 125

Tyr Arg His Ser Ser Trp Ser Glu Gly Glu Glu His Gly Tyr Ser Ser
 130 135 140

Gly His Ser Arg Gly Thr Val Lys Cys Arg His Gly Ser Asn Ser Arg
 145 150 155 160

Arg Leu Gly Arg Gln Gly Asn Leu Ser Ser Ser Gly Asn Gln Glu Gly
165 170 175

Ser Gln Lys Arg Tyr His Arg Ser Ser Cys Gly His Ser Trp Ser Gly
180 185 190

Gly Lys Asp Arg His Gly Ser Ser Ser Val Glu Leu Arg Glu Arg Ile
195 200 205

Asn Lys Ser His Ile Ser Pro Ser Arg Glu Ser Gly Glu Glu Tyr Glu
210 215 220

Ser Gly Ser Gly Ser Asn Ser Trp Glu Arg Lys Gly His Gly Gly Leu
225 230 235 240

Ser Cys Gly Leu Glu Thr Ser Gly His Glu Ser Asn Ser Thr Gln Ser
245 250 255

Arg Ile Arg Glu Gln Lys Leu Gly Ser Ser Cys Ser Gly Ser Gly Asp
260 265 270

Ser Gly Arg Arg Ser His Ala Cys Gly Tyr Ser Asn Ser Ser Gly Cys
275 280 285

Gly Arg Pro Gln Asn Ala Ser Ser Ser Cys Gln Ser His Arg Phe Gly
290 295 300

Gly Gln Gly Asn Gln Phe Ser Tyr Ile Gln Ser Gly Cys Gln Ser Gly
305 310 315 320

Ile Lys Gly Gly Gln Gly His Gly Cys Val Ser Gly Gly Gln Pro Ser
325 330 335

Gly Cys Gly Gln Pro Glu Ser Asn Pro Cys Ser Gln Ser Tyr Ser Gln
340 345 350

Arg Gly Tyr Gly Ala Arg Glu Asn Gly Gln Pro Gln Asn Cys Gly Gly
355 360 365

Gln Trp Arg Thr Gly Ser Ser Gln Ser Ser Cys Cys Gly Gln Tyr Gly
370 375 380

Ser Gly Gly Ser Gln Ser Cys Ser Asn Gly Gln His Glu Tyr Gly Ser
385 390 395 400

Cys Gly Arg Phe Ser Asn Ser Ser Ser Ser Asn Glu Phe Ser Lys Cys
405 410 415

Asp Gln Tyr Gly Ser Gly Ser Ser Gln Ser Thr Ser Phe Glu Gln His
420 425 430

Gly Thr Gly Leu Ser Gln Ser Ser Gly Phe Glu Gln His Val Cys Gly
435 440 445

Ser Gly Gln Thr Cys Gly Gln His Glu Ser Thr Ser Ser Gln Ser Leu
450 455 460

Gly Tyr Asp Gln His Gly Ser Ser Ser Gly Lys Thr Ser Gly Phe Gly
465 470 475 480

Gln His Gly Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln Cys Gly
485 490 495

Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln His Gly Ser Val Ser
500 505 510

Gly Gln Ser Ser Gly Phe Gly Gln His Gly Ser Val Ser Gly Gln Ser
515 520 525

Ser Gly Phe Gly Gln His Glu Ser Arg Ser Arg Gln Ser Ser Tyr Gly
530 535 540

Gln His Gly Ser Gly Ser Ser Gln Ser Ser Gly Tyr Gly Gln Tyr Gly
545 550 555 560

Ser Arg Glu Thr Ser Gly Phe Gly Gln His Gly Leu Gly Ser Gly Gln
565 570 575

Ser Thr Gly Phe Gly Gln Tyr Gly Ser Gly Ser Gly Gln Ser Ser Gly
580 585 590

Phe Gly Gln His Gly Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln
595 600 605

His Glu Ser Arg Ser Gly Gln Ser Ser Tyr Gly Gln His Ser Ser Gly
610 615 620

Ser Ser Gln Ser Ser Gly Tyr Gly Gln His Gly Ser Arg Gln Thr Ser
625 630 635 640

Gly Phe Gly Gln His Gly Ser Gly Ser Ser Gln Ser Thr Gly Phe Gly
645 650 655

Gln Tyr Gly Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln His Val
660 665 670

Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln His Glu Ser Arg Ser
675 680 685

Gly His Ser Ser Tyr Gly Gln His Gly Phe Gly Ser Ser Gln Ser Ser
690 695 700

Gly Tyr Gly Gln His Gly Ser Ser Ser Gly Gln Thr Ser Gly Phe Gly
705 710 715 720

Gln His Glu Leu Ser Ser Gly Gln Ser Ser Ser Phe Gly Gln His Gly
725 730 735

Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln His Gly Ser Gly Ser
740 745 750

Gly Gln Ser Ser Gly Phe Gly Gln His Glu Ser Arg Ser Gly Gln Ser
755 760 765

Ser Tyr Gly Gln His Ser Ser Gly Ser Ser Gln Ser Ser Gly Tyr Gly
770 775 780

Gln His Gly Ser Arg Gln Thr Ser Gly Phe Gly Gln His Gly Ser Gly
785 790 795 800

Ser Ser Gln Ser Thr Gly Phe Gly Gln Tyr Gly Ser Gly Ser Gly Gln
805 810 815

Ser Ala Gly Phe Gly Gln His Gly Ser Gly Ser Gly Gln Ser Ser Gly
820 825 830

Phe Gly Gln His Glu Ser Arg Ser His Gln Ser Ser Tyr Gly Gln His
835 840 845

Gly Ser Gly Ser Ser Gln Ser Ser Gly Tyr Gly Gln His Gly Ser Ser
850 855 860

Ser Gly Gln Thr Ser Gly Phe Gly Gln His Arg Ser Ser Ser Gly Gln
865 870 875 880

Tyr Ser Gly Phe Gly Gln His Gly Ser Gly Ser Gly Gln Ser Ser Gly
885 890 895

Phe Gly Gln His Gly Thr Gly Ser Gly Gln Tyr Ser Gly Phe Gly Gln
900 905 910

His Glu Ser Arg Ser His Gln Ser Ser Tyr Gly Gln His Gly Ser Gly
915 920 925

Ser Ser Gln Ser Ser Gly Tyr Gly Gln His Gly Ser Ser Ser Gly Gln
930 935 940

Thr Phe Gly Phe Gly Gln His Arg Ser Gly Ser Gly Gln Ser Ser Gly
945 950 955 960

Phe Gly Gln His Gly Ser Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln
965 970 975

His Glu Ser Gly Ser Gly Lys Ser Ser Gly Phe Gly Gln His Glu Ser
980 985 990

Arg Ser Ser Gln Ser Asn Tyr Gly Gln His Gly Ser Gly Ser Ser Gln
995 1000 1005

Ser Ser Gly Tyr Gly Gln His Gly Ser Ser Ser Gly Gln Thr Thr
1010 1015 1020

Gly Phe Gly Gln His Arg Ser Ser Ser Gly Gln Tyr Ser Gly Phe
1025 1030 1035

Gly Gln His Gly Ser Gly Ser Asp Gln Ser Ser Gly Phe Gly Gln
1040 1045 1050

His Gly Thr Gly Ser Gly Gln Ser Ser Gly Phe Gly Gln Tyr Glu
1055 1060 1065

Ser Arg Ser Arg Gln Ser Ser Tyr Gly Gln His Gly Ser Gly Ser
1070 1075 1080

Ser Gln Ser Ser Gly Tyr Gly Gln His Gly Ser Asn Ser Gly Gln
1085 1090 1095

Thr Ser Gly Phe Gly Gln His Arg Pro Gly Ser Gly Gln Ser Ser
1100 1105 1110

Gly Phe Gly Gln Tyr Gly Ser Gly Ser Gly Gln Ser Ser Gly Phe
1115 1120 1125

Gly Gln His Gly Ser Gly Thr Gly Lys Ser Ser Gly Phe Ala Gln
1130 1135 1140

His Glu Tyr Arg Ser Gly Gln Ser Ser Tyr Gly Gln His Gly Thr
1145 1150 1155

Gly Ser Ser Gln Ser Ser Gly Cys Gly Gln His Glu Ser Gly Ser
1160 1165 1170

Gly Pro Thr Thr Ser Phe Gly Gln His Val Ser Gly Ser Asp Asn
1175 1180 1185

Phe Ser Ser Ser Gly Gln His Ile Ser Asp Ser Gly Gln Ser Thr
1190 1195 1200

Gly Phe Gly Gln Tyr Gly Ser Gly Ser Gly Gln Ser Thr Gly Leu
1205 1210 1215

Gly Gln Gly Glu Ser Gln Gln Val Glu Ser Gly Ser Thr Val His
1220 1225 1230

Gly Arg Gln Glu Thr Thr His Gly Gln Thr Ile Asn Thr Thr Arg
1235 1240 1245

His Ser Gln Ser Gly Gln Gly Gln Ser Thr Gln Thr Gly Ser Arg
1250 1255 1260

Val Thr Arg Arg Arg Arg Ser Ser Gln Ser Glu Asn Ser Asp Ser
1265 1270 1275

Glu Val His Ser Lys Val Ser His Arg His Ser Glu His Ile His
1280 1285 1290

Thr Gln Ala Gly Ser His Tyr Pro Lys Ser Gly Ser Thr Val Arg
1295 1300 1305

Arg Arg Gln Gly Thr Thr His Gly Gln Arg Gly Asp Thr Thr Arg
1310 1315 1320

His Gly His Ser Gly His Gly Gln Ser Thr Gln Thr Gly Ser Arg
1325 1330 1335

Thr Ser Gly Arg Gln Arg Phe Ser His Ser Asp Ala Thr Asp Ser
1340 1345 1350

Glu Val His Ser Gly Val Ser His Arg Pro His Ser Gln Glu Gln
1355 1360 1365

Thr His Ser Gln Ala Gly Ser Gln His Gly Glu Ser Glu Ser Thr
1370 1375 1380

Val His Glu Arg His Glu Thr Thr Tyr Gly Gln Thr Gly Glu Ala
1385 1390 1395

Thr Gly His Gly His Ser Gly His Gly Gln Ser Thr Gln Arg Gly
1400 1405 1410

Ser Arg Thr Thr Gly Arg Arg Gly Ser Gly His Ser Glu Ser Ser
1415 1420 1425

Asp Ser Glu Val His Ser Gly Gly Ser His Arg Pro Gln Ser Gln
1430 1435 1440

Glu Gln Thr His Gly Gln Ala Gly Ser Gln His Gly Glu Ser Gly
1445 1450 1455

Ser Thr Val His Gly Arg His Gly Thr Thr His Gly Gln Thr Gly
1460 1465 1470

Asp Thr Thr Arg His Ala His Tyr His His Gly Lys Ser Thr Gln
1475 1480 1485

Arg Gly Ser Ser Thr Thr Gly Arg Arg Gly Ser Gly His Ser Glu
1490 1495 1500

Ser Ser Asp Ser Glu Val His Ser Gly Gly Ser His Thr His Ser
1505 1510 1515

Gly His Thr His Gly Gln Ser Gly Ser Gln His Gly Glu Ser Glu
1520 1525 1530

Ser Ile Ile His Asp Arg His Arg Ile Thr His Gly Gln Thr Gly
1535 1540 1545

Asp Thr Thr Arg His Ser Tyr Ser Gly His Glu Gln Thr Thr Gln
1550 1555 1560

Thr Gly Ser Arg Thr Thr Gly Arg Gln Arg Thr Ser His Ser Glu
1565 1570 1575

Ser Thr Asp Ser Glu Val His Ser Gly Gly Ser His Arg Pro His
1580 1585 1590

Ser Arg Glu His Thr Tyr Gly Gln Ala Gly Ser Gln His Glu Glu
1595 1600 1605

Pro Glu Phe Thr Val His Glu Arg His Gly Thr Thr His Gly Gln
1610 1615 1620

Ile Gly Asp Thr Thr Gly His Ser His Ser Gly His Gly Gln Ser
1625 1630 1635

Thr Gln Arg Gly Ser Arg Thr Thr Gly Arg Gln Arg Ser Ser His
1640 1645 1650

Ser Glu Ser Ser Asp Ser Glu Val His Ser Gly Val Ser His Thr
1655 1660 1665

His Thr Gly His Thr His Gly Gln Ala Gly Ser Gln His Gly Gln
1670 1675 1680

Ser Glu Ser Ile Val Pro Glu Arg His Gly Thr Thr His Gly Gln
1685 1690 1695

Thr Gly Asp Thr Thr Arg His Ala His Tyr His His Gly Leu Thr
1700 1705 1710

Thr Gln Thr Gly Ser Arg Thr Thr Gly Arg Arg Gly Ser Gly His
1715 1720 1725

Ser Glu Tyr Ser Asp Ser Glu Gly Tyr Ser Gly Val Ser His Thr
1730 1735 1740

His Ser Gly His Thr His Gly Gln Ala Arg Ser Gln His Gly Glu
1745 1750 1755

Ser Glu Ser Ile Val His Glu Arg His Gly Thr Ile His Gly Gln
1760 1765 1770

Thr Gly Asp Thr Thr Arg His Ala His Ser Gly His Gly Gln Ser
1775 1780 1785

Thr Gln Thr Gly Ser Arg Thr Thr Gly Arg Arg Ser Ser Gly His
1790 1795 1800

Ser Glu Tyr Ser Asp Ser Glu Gly His Ser Gly Phe Ser Gln Arg
1805 1810 1815

Pro His Ser Arg Gly His Thr His Gly Gln Ala Gly Ser Gln His
1820 1825 1830

Gly Glu Ser Glu Ser Ile Val Asp Glu Arg His Gly Thr Thr His
1835 1840 1845

Gly Gln Thr Gly Asp Thr Ser Gly His Ser Gln Ser Gly His Gly
1850 1855 1860

Gln Ser Thr Gln Ser Gly Ser Ser Thr Thr Gly Arg Arg Arg Ser
1865 1870 1875

Gly His Ser Glu Ser Ser Asp Ser Glu Val His Ser Gly Gly Ser
1880 1885 1890

His Thr His Ser Gly His Thr His Ser Gln Ala Arg Ser Gln His
1895 1900 1905

Gly Glu Ser Glu Ser Thr Val His Lys Arg His Gln Thr Thr His
1910 1915 1920

Gly Gln Thr Gly Asp Thr Thr Glu His Gly His Pro Ser His Gly
1925 1930 1935

Gln Thr Ile Gln Thr Gly Ser Arg Thr Thr Gly Arg Arg Gly Ser
1940 1945 1950

Gly His Ser Glu Tyr Ser Asp Ser Glu Gly Pro Ser Gly Val Ser
1955 1960 1965

His Thr His Ser Gly His Thr His Gly Gln Ala Gly Ser His Tyr
1970 1975 1980

Pro Glu Ser Gly Ser Ser Val His Glu Arg His Gly Thr Thr His
1985 1990 1995

Gly Gln Thr Ala Asp Thr Thr Arg His Gly His Ser Gly His Gly
2000 2005 2010

Gln Ser Thr Gln Arg Gly Ser Arg Thr Thr Gly Arg Arg Ala Ser
2015 2020 2025

Gly His Ser Glu Tyr Ser Asp Ser Glu Gly His Ser Gly Val Ser
2030 2035 2040

His Thr His Ser Gly His Ala His Gly Gln Ala Gly Ser Gln His
2045 2050 2055

Gly Glu Ser Gly Ser Ser Val His Glu Arg His Gly Thr Thr His
2060 2065 2070

Gly Gln Thr Gly Asp Thr Thr Arg His Ala His Ser Gly His Gly
2075 2080 2085

Gln Ser Thr Gln Arg Gly Ser Arg Thr Ala Gly Arg Arg Gly Ser
2090 2095 2100

Gly His Ser Glu Ser Ser Asp Ser Glu Val His Ser Gly Val Ser
2105 2110 2115

His Thr His Ser Gly His Thr Tyr Gly Gln Ala Arg Ser Gln His
2120 2125 2130

Gly Glu Ser Gly Ser Ala Ile His Gly Arg Gln Gly Thr Ile His
2135 2140 2145

Gly Gln Thr Gly Asp Thr Thr Arg His Gly Gln Ser Gly His Gly
2150 2155 2160

Gln Ser Thr Gln Thr Gly Ser Arg Thr Thr Gly Arg Gln Arg Ser
2165 2170 2175

Ser His Ser Glu Ser Ser Asp Ser Glu Val His Ser Glu Ala Ser
2180 2185 2190

Pro Thr His Ser Gly His Thr His Ser Gln Ala Gly Ser Arg His
2195 2200 2205

Gly Gln Ser Gly Ser Ser Gly His Gly Arg Gln Gly Thr Thr His
2210 2215 2220

Gly Gln Thr Gly Asp Thr Thr Arg His Ala His Tyr Gly Tyr Gly
2225 2230 2235

Gln Ser Thr Gln Arg Gly Ser Arg Thr Thr Gly Arg Arg Gly Ser
2240 2245 2250

Gly His Ser Glu Ser Ser Asp Ser Glu Val His Ser Trp Gly Ser
2255 2260 2265

His Thr His Ser Gly His Ile Gln Gly Gln Ala Gly Ser Gln Gln
2270 2275 2280

Arg Gln Pro Gly Ser Thr Val His Gly Arg Leu Glu Thr Thr His
2285 2290 2295

Gly Gln Thr Gly Asp Thr Thr Arg His Gly His Ser Gly Tyr Gly
2300 2305 2310

Gln Ser Thr Gln Thr Gly Ser Arg Ser Ser Arg Ala Ser His Phe
2315 2320 2325

Gln Ser His Ser Ser Glu Arg Gln Arg His Gly Ser Ser Gln Val
2330 2335 2340

Trp Lys His Gly Ser Tyr Gly Pro Ala Glu Tyr Asp Tyr Gly His
2345 2350 2355

Thr Gly Tyr Gly Pro Ser Gly Gly Ser Arg Lys Ser Ile Ser Asn
2360 2365 2370

Ser His Leu Ser Trp Ser Thr Asp Ser Thr Ala Asn Lys Gln Leu
2375 2380 2385

Ser Arg His
2390

<210> 72
<211> 427
<212> PRT
<213> Homo sapiens

<400> 72

Met Phe Phe Thr Cys Gly Pro Asn Glu Ala Met Val Val Ser Gly Phe
1 5 10 15

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

Pro Cys Ile Gln Gln Ile Gln Arg Ile Ser Leu Asn Thr Leu Thr Leu
35 40 45

Asn Val Lys Ser Glu Lys Val Tyr Thr Arg His Gly Val Pro Ile Ser
50 55 60

Val Thr Gly Ile Ala Gln Val Lys Ile Gln Gly Gln Asn Lys Glu Met
65 70 75 80

Leu Ala Ala Ala Cys Gln Met Phe Leu Gly Lys Thr Glu Ala Glu Ile
85 90 95

Ala His Ile Ala Leu Glu Thr Leu Glu Gly His Gln Arg Ala Ile Met
100 105 110

Ala His Met Thr Val Glu Glu Ile Tyr Lys Asp Arg Gln Lys Phe Ser
115 120 125

Glu Gln Val Phe Lys Val Ala Ser Ser Asp Leu Val Asn Met Gly Ile
130 135 140

Ser Val Val Ser Tyr Thr Leu Lys Asp Ile His Asp Asp Gln Asp Tyr
145 150 155 160

Leu His Ser Leu Gly Lys Ala Arg Thr Ala Gln Val Gln Lys Asp Ala
165 170 175

Arg Ile Gly Glu Ala Glu Ala Lys Arg Asp Ala Gly Ile Arg Glu Ala
180 185 190

Lys Ala Lys Gln Glu Lys Val Ser Ala Gln Tyr Leu Ser Glu Ile Glu
195 200 205

Met Ala Lys Ala Gln Arg Asp Tyr Glu Leu Lys Lys Ala Ala Tyr Asp
210 215 220

Ile Glu Val Asn Thr Arg Arg Ala Gln Ala Asp Leu Ala Tyr Gln Leu

225		230		235		240
Gln Val Ala Lys Thr	Lys Gln Gln Ile	Glu Glu Gln Arg Val	Gln Val			
	245	250	255			
Gln Val Val Glu Arg Ala Gln Gln Val Ala Val Gln Glu Gln Glu Ile						
	260	265	270			
Ala Arg Arg Glu Lys Glu Leu Glu Ala Arg Val Arg Lys Pro Ala Glu						
	275	280	285			
Ala Glu Arg Tyr Lys Leu Glu Arg Leu Ala Glu Ala Glu Lys Ser Gln						
	290	295	300			
Leu Ile Met Gln Ala Glu Ala Glu Ala Ala Ser Val Arg Met Arg Gly						
305	310	315	320			
Glu Ala Glu Ala Phe Ala Ile Gly Ala Arg Ala Arg Ala Glu Ala Glu						
	325	330	335			
Gln Met Ala Lys Lys Ala Glu Ala Phe Gln Leu Tyr Gln Glu Ala Ala						
	340	345	350			
Gln Leu Asp Met Leu Leu Glu Lys Leu Pro Gln Val Ala Glu Glu Ile						
	355	360	365			
Ser Gly Pro Leu Thr Ser Ala Asn Lys Ile Thr Leu Val Ser Ser Gly						
	370	375	380			
Ser Gly Thr Met Gly Ala Ala Lys Val Thr Gly Glu Val Leu Asp Ile						
385	390	395	400			
Leu Thr Arg Leu Pro Glu Ser Val Glu Arg Leu Thr Gly Val Ser Ile						
	405	410	415			
Ser Gln Val Asn His Lys Pro Leu Arg Thr Ala						
	420	425				

<210> 73
 <211> 428
 <212> PRT

<213> Homo sapiens

<400> 73

Met Gly Asn Cys His Thr Val Gly Pro Asn Glu Ala Leu Val Val Ser
1 5 10 15

Gly Gly Cys Cys Gly Ser Asp Tyr Lys Gln Tyr Val Phe Gly Gly Trp
20 25 30

Ala Trp Ala Trp Trp Cys Ile Ser Asp Thr Gln Arg Ile Ser Leu Glu
35 40 45

Ile Met Thr Leu Gln Pro Arg Cys Glu Asp Val Glu Thr Ala Glu Gly
50 55 60

Val Ala Leu Thr Val Thr Gly Val Ala Gln Val Lys Ile Met Thr Glu
65 70 75 80

Lys Glu Leu Leu Ala Val Ala Cys Glu Gln Phe Leu Gly Lys Asn Val
85 90 95

Gln Asp Ile Lys Asn Val Val Leu Gln Thr Leu Glu Gly His Leu Arg
100 105 110

Ser Ile Leu Gly Thr Leu Thr Val Glu Gln Ile Tyr Gln Asp Arg Asp
115 120 125

Gln Phe Ala Lys Leu Val Arg Glu Val Ala Ala Pro Asp Val Gly Arg
130 135 140

Met Gly Ile Glu Ile Leu Ser Phe Thr Ile Lys Asp Val Tyr Asp Lys
145 150 155 160

Val Asp Tyr Leu Ser Ser Leu Gly Lys Thr Gln Thr Ala Val Val Gln
165 170 175

Arg Asp Ala Asp Ile Gly Val Ala Glu Ala Glu Arg Asp Ala Gly Ile
180 185 190

Arg Glu Ala Glu Cys Lys Lys Glu Met Leu Asp Val Lys Phe Met Ala
195 200 205

Asp Thr Lys Ile Ala Asp Ser Lys Arg Ala Phe Glu Leu Gln Lys Ser
210 215 220

Ala Phe Ser Glu Glu Val Asn Ile Lys Thr Ala Glu Ala Gln Leu Ala
225 230 235 240

Tyr Glu Leu Gln Gly Ala Arg Glu Gln Gln Lys Ile Arg Gln Glu Glu
245 250 255

Ile Glu Ile Glu Val Val Gln Arg Lys Lys Gln Ile Ala Val Glu Ala
260 265 270

Gln Glu Ile Leu Arg Thr Asp Lys Glu Leu Ile Ala Thr Val Arg Arg
275 280 285

Pro Ala Glu Ala Glu Ala His Arg Ile Gln Gln Ile Ala Glu Gly Glu
290 295 300

Lys Val Lys Gln Val Leu Leu Ala Gln Ala Glu Ala Glu Lys Ile Arg
305 310 315 320

Lys Ile Gly Glu Ala Glu Ala Ala Val Ile Glu Ala Met Gly Lys Ala
325 330 335

Glu Ala Glu Arg Met Lys Leu Lys Ala Glu Ala Tyr Gln Lys Tyr Gly
340 345 350

Asp Ala Ala Lys Met Ala Leu Val Leu Glu Ala Leu Pro Gln Ile Ala
355 360 365

Ala Lys Ile Ala Ala Pro Leu Thr Lys Val Asp Glu Ile Val Val Leu
370 375 380

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

Glu Leu Pro Ala Ser Val His Ala Leu Thr Gly Val Asp Leu Ser Lys
405 410 415

Ile Pro Leu Ile Lys Lys Ala Thr Gly Val Gln Val
420 425

<210> 74
<211> 335
<212> PRT
<213> Homo sapiens

<400> 74

Met Gly Lys Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg
1 5 10 15

Leu Val Thr Arg Ala Ala Phe Asn Ser Gly Lys Val Asp Ile Val Ala
20 25 30

Ile Asn Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln
35 40 45

Tyr Asp Ser Thr His Gly Lys Phe His Gly Thr Val Lys Ala Glu Asn
50 55 60

Gly Lys Leu Val Ile Asn Gly Asn Pro Ile Thr Ile Phe Gln Glu Arg
65 70 75 80

Asp Pro Ser Lys Ile Lys Trp Gly Asp Ala Gly Ala Glu Tyr Val Val
85 90 95

Glu Ser Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu
100 105 110

Gln Gly Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala
115 120 125

Pro Met Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu
130 135 140

Lys Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu
145 150 155 160

Ala Lys Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr
165 170 175

Thr Val His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser
180 185 190

Gly Lys Leu Trp Arg Asp Gly Arg Gly Ala Leu Gln Asn Ile Ile Pro
195 200 205

Ala Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu
210 215 220

Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Ala Asn Val
225 230 235 240

Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp
245 250 255

Asp Ile Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly
260 265 270

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

Asp Thr His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn
290 295 300

Asp His Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Phe Gly Tyr
305 310 315 320

Ser Asn Arg Val Val Asp Leu Met Ala His Met Ala Ser Lys Glu
325 330 335

<210> 75
<211> 1017
<212> PRT
<213> Homo sapiens

<400> 75

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

Val Leu Leu Thr Phe Lys Ile Phe Leu Val Ile Ile Cys Leu His Val
20 25 30

Val Leu Val Thr Ser Leu Glu Glu Asp Thr Asp Asn Ser Ser Leu Ser
35 40 45

Pro Pro Pro Ala Lys Leu Ser Val Val Ser Phe Ala Pro Ser Ser Asn
50 55 60

Gly Thr Pro Glu Val Glu Thr Thr Ser Leu Asn Asp Val Thr Leu Ser
65 70 75 80

Leu Leu Pro Ser Asn Glu Thr Glu Lys Thr Lys Ile Thr Ile Val Lys
85 90 95

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

Ser Ser Ile Cys Asn Asp Ser Ala Phe Phe Arg Gly Glu Ile Met Phe
115 120 125

Gln Tyr Asp Lys Glu Ser Thr Val Pro Gln Asn Gln His Ile Thr Asn
130 135 140

Gly Thr Leu Thr Gly Val Leu Ser Leu Ser Glu Leu Lys Arg Ser Glu
145 150 155 160

Leu Asn Lys Thr Leu Gln Thr Leu Ser Glu Thr Tyr Phe Ile Met Cys
165 170 175

Ala Thr Ala Glu Ala Gln Ser Thr Leu Asn Cys Thr Phe Thr Ile Lys
180 185 190

Leu Asn Asn Thr Met Asn Ala Cys Ala Val Ile Ala Ala Leu Glu Arg
195 200 205

Val Lys Ile Arg Pro Met Glu His Cys Cys Cys Ser Val Arg Ile Pro
210 215 220

Cys Pro Ser Ser Pro Glu Glu Leu Glu Lys Leu Gln Cys Asp Leu Gln
225 230 235 240

Asp Pro Ile Val Cys Leu Ala Asp His Pro Arg Gly Pro Pro Phe Ser
245 250 255

Ser Ser Gln Ser Ile Pro Val Val Pro Arg Ala Thr Val Leu Ser Gln
260 265 270

Val Pro Lys Ala Thr Ser Phe Ala Glu Pro Pro Asp Tyr Ser Pro Val
275 280 285

Thr His Asn Val Pro Ser Pro Ile Gly Glu Ile Gln Pro Leu Ser Pro
290 295 300

Gln Pro Ser Ala Pro Ile Ala Ser Ser Pro Ala Ile Asp Met Pro Pro
305 310 315 320

Gln Ser Glu Thr Ile Ser Ser Pro Met Pro Gln Thr His Val Ser Gly
325 330 335

Thr Pro Pro Pro Val Lys Ala Ser Phe Ser Ser Pro Thr Val Ser Ala
340 345 350

Pro Ala Asn Val Asn Thr Thr Ser Ala Pro Pro Val Gln Thr Asp Ile
355 360 365

Val Asn Thr Ser Ser Ile Ser Asp Leu Glu Asn Gln Val Leu Gln Met
370 375 380

Glu Lys Ala Leu Ser Leu Gly Ser Leu Glu Pro Asn Leu Ala Gly Glu
385 390 395 400

Met Ile Asn Gln Val Ser Arg Leu Leu His Ser Pro Pro Asp Met Leu
405 410 415

Ala Pro Leu Ala Gln Arg Leu Leu Lys Val Val Asp Asp Ile Gly Leu
420 425 430

Gln Leu Asn Phe Ser Asn Thr Thr Ile Ser Leu Thr Ser Pro Ser Leu
435 440 445

Ala Leu Ala Val Ile Arg Val Asn Ala Ser Ser Phe Asn Thr Thr Thr
450 455 460

Phe Val Ala Gln Asp Pro Ala Asn Leu Gln Val Ser Leu Glu Thr Gln
465 470 475 480

Ala Pro Glu Asn Ser Ile Gly Thr Ile Thr Leu Pro Ser Ser Leu Met
485 490 495

Asn Asn Leu Pro Ala His Asp Met Glu Leu Ala Ser Arg Val Gln Phe
500 505 510

Asn Phe Phe Glu Thr Pro Ala Leu Phe Gln Asp Pro Ser Leu Glu Asn
515 520 525

Leu Ser Leu Ile Ser Tyr Val Ile Ser Ser Ser Val Ala Asn Leu Thr
530 535 540

Val Arg Asn Leu Thr Arg Asn Val Thr Val Thr Leu Lys His Ile Asn
545 550 555 560

Pro Ser Gln Asp Glu Leu Thr Val Arg Cys Val Phe Trp Asp Leu Gly
565 570 575

Arg Asn Gly Gly Arg Gly Gly Trp Ser Asp Asn Gly Cys Ser Val Lys
580 585 590

Asp Arg Arg Leu Asn Glu Thr Ile Cys Thr Cys Ser His Leu Thr Ser
595 600 605

Phe Gly Val Leu Leu Asp Leu Ser Arg Thr Ser Val Leu Pro Ala Gln
610 615 620

Met Met Ala Leu Thr Phe Ile Thr Tyr Ile Gly Cys Gly Leu Ser Ser
625 630 635 640

Ile Phe Leu Ser Val Thr Leu Val Thr Tyr Ile Ala Phe Glu Lys Ile
645 650 655

Arg Arg Asp Tyr Pro Ser Lys Ile Leu Ile Gln Leu Cys Ala Ala Leu
660 665 670

Leu Leu Leu Asn Leu Val Phe Leu Leu Asp Ser Trp Ile Ala Leu Tyr
675 680 685

Lys Met Gln Gly Leu Cys Ile Ser Val Ala Val Phe Leu His Tyr Phe
690 695 700

Leu Leu Val Ser Phe Thr Trp Met Gly Leu Glu Ala Phe His Met Tyr
705 710 715 720

Leu Ala Leu Val Lys Val Phe Asn Thr Tyr Ile Arg Lys Tyr Ile Leu
725 730 735

Lys Phe Cys Ile Val Gly Trp Gly Val Pro Ala Val Val Val Thr Ile
740 745 750

Ile Leu Thr Ile Ser Pro Asp Asn Tyr Gly Leu Gly Ser Tyr Gly Lys
755 760 765

Phe Pro Asn Gly Ser Pro Asp Asp Phe Cys Trp Ile Asn Asn Asn Ala
770 775 780

Val Phe Tyr Ile Thr Val Val Gly Tyr Phe Cys Val Ile Phe Leu Leu
785 790 795 800

Asn Val Ser Met Phe Ile Val Val Leu Val Gln Leu Cys Arg Ile Lys
805 810 815

Lys Lys Lys Gln Leu Gly Ala Gln Arg Lys Thr Ser Ile Gln Asp Leu
820 825 830

Arg Ser Ile Ala Gly Leu Thr Phe Leu Leu Gly Ile Thr Trp Gly Phe
835 840 845

Ala Phe Phe Ala Trp Gly Pro Val Asn Val Thr Phe Met Tyr Leu Phe
850 855 860

Ala Ile Phe Asn Thr Leu Gln Gly Phe Phe Ile Phe Ile Phe Tyr Cys
865 870 875 880

Val Ala Lys Glu Asn Val Arg Lys Gln Trp Arg Arg Tyr Leu Cys Cys
885 890 895

Gly Lys Leu Arg Leu Ala Glu Asn Ser Asp Trp Ser Lys Thr Ala Thr
900 905 910

Asn Gly Leu Lys Lys Gln Thr Val Asn Gln Gly Val Ser Ser Ser Ser
915 920 925

Asn Ser Leu Gln Ser Ser Ser Asn Ser Thr Asn Ser Thr Thr Leu Leu
930 935 940

Val Asn Asn Asp Cys Ser Val His Ala Ser Gly Asn Gly Asn Ala Ser
945 950 955 960

Thr Glu Arg Asn Gly Val Ser Phe Ser Val Gln Asn Gly Asp Val Cys
965 970 975

Leu His Asp Phe Thr Gly Lys Gln His Met Phe Asn Glu Lys Glu Asp
980 985 990

Ser Cys Asn Gly Lys Gly Arg Met Ala Leu Arg Arg Thr Ser Lys Arg
995 1000 1005

Gly Ser Leu His Phe Ile Glu Gln Met
1010 1015

<210> 76
<211> 641
<212> PRT
<213> Homo sapiens

<400> 76

Met Ala Lys Ala Ala Ala Ile Gly Ile Asp Leu Gly Thr Thr Tyr Ser
1 5 10 15

Cys Val Gly Val Phe Gln His Gly Lys Val Glu Ile Ile Ala Asn Asp
20 25 30

Gln Gly Asn Arg Thr Thr Pro Ser Tyr Val Ala Phe Thr Asp Thr Glu
35 40 45

Arg Leu Ile Gly Asp Ala Ala Lys Asn Gln Val Ala Leu Asn Pro Gln

50

55

60

Asn Thr Val Phe Asp Ala Lys Arg Leu Ile Gly Arg Lys Phe Gly Asp
65 70 75 80

Pro Val Val Gln Ser Asp Met Lys His Trp Pro Phe Gln Val Ile Asn
85 90 95

Asp Gly Asp Lys Pro Lys Val Gln Val Ser Tyr Lys Gly Glu Thr Lys
100 105 110

Ala Phe Tyr Pro Glu Glu Ile Ser Ser Met Val Leu Thr Lys Met Lys
115 120 125

Glu Ile Ala Glu Ala Tyr Leu Gly Tyr Pro Val Thr Asn Ala Val Ile
130 135 140

Thr Val Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln Ala Thr Lys Asp
145 150 155 160

Ala Gly Val Ile Ala Gly Leu Asn Val Leu Arg Ile Ile Asn Glu Pro
165 170 175

Thr Ala Ala Ala Ile Ala Tyr Gly Leu Asp Arg Thr Gly Lys Gly Glu
180 185 190

Arg Asn Val Leu Ile Phe Asp Leu Gly Gly Gly Thr Phe Asp Val Ser
195 200 205

Ile Leu Thr Ile Asp Asp Gly Ile Phe Glu Val Lys Ala Thr Ala Gly
210 215 220

Asp Thr His Leu Gly Gly Glu Asp Phe Asp Asn Arg Leu Val Asn His
225 230 235 240

Phe Val Glu Glu Phe Lys Arg Lys His Lys Lys Asp Ile Ser Gln Asn
245 250 255

Lys Arg Ala Val Arg Arg Leu Arg Thr Ala Cys Glu Arg Ala Lys Arg
260 265 270

Thr Leu Ser Ser Ser Thr Gln Ala Ser Leu Glu Ile Asp Ser Leu Phe
275 280 285

Glu Gly Ile Asp Phe Tyr Thr Ser Ile Thr Arg Ala Arg Phe Glu Glu
290 295 300

Leu Cys Ser Asp Leu Phe Arg Ser Thr Leu Glu Pro Val Glu Lys Ala
305 310 315 320

Leu Arg Asp Ala Lys Leu Asp Lys Ala Gln Ile His Asp Leu Val Leu
325 330 335

Val Gly Gly Ser Thr Arg Ile Pro Lys Val Gln Lys Leu Leu Gln Asp
340 345 350

Phe Phe Asn Gly Arg Asp Leu Asn Lys Ser Ile Asn Pro Asp Glu Ala
355 360 365

Val Ala Tyr Gly Ala Ala Val Gln Ala Ala Ile Leu Met Gly Asp Lys
370 375 380

Ser Glu Asn Val Gln Asp Leu Leu Leu Leu Asp Val Ala Pro Leu Ser
385 390 395 400

Leu Gly Leu Glu Thr Ala Gly Gly Val Met Thr Ala Leu Ile Lys Arg
405 410 415

Asn Ser Thr Ile Pro Thr Lys Gln Thr Gln Ile Phe Thr Thr Tyr Ser
420 425 430

Asp Asn Gln Pro Gly Val Leu Ile Gln Val Tyr Glu Gly Glu Arg Ala
435 440 445

Met Thr Lys Asp Asn Asn Leu Leu Gly Arg Phe Glu Leu Ser Gly Ile
450 455 460

Pro Pro Ala Pro Arg Gly Val Pro Gln Ile Glu Val Thr Phe Asp Ile
465 470 475 480

Asp Ala Asn Gly Ile Leu Asn Val Thr Ala Thr Asp Lys Ser Thr Gly

485

490

495

Lys Ala Asn Lys Ile Thr Ile Thr Asn Asp Lys Gly Arg Leu Ser Lys
 500 505 510

Glu Glu Ile Glu Arg Met Val Gln Glu Ala Glu Lys Tyr Lys Ala Glu
 515 520 525

Asp Glu Val Gln Arg Glu Arg Val Ser Ala Lys Asn Ala Leu Glu Ser
 530 535 540

Tyr Ala Phe Asn Met Lys Ser Ala Val Glu Asp Glu Gly Leu Lys Gly
 545 550 555 560

Lys Ile Ser Glu Ala Asp Lys Lys Lys Val Leu Asp Lys Cys Gln Glu
 565 570 575

Val Ile Ser Trp Leu Asp Ala Asn Thr Leu Ala Glu Lys Asp Glu Phe
 580 585 590

Glu His Lys Arg Lys Glu Leu Glu Gln Val Cys Asn Pro Ile Ile Ser
 595 600 605

Gly Leu Tyr Gln Gly Ala Gly Gly Pro Gly Pro Gly Gly Phe Gly Ala
 610 615 620

Gln Gly Pro Lys Gly Gly Ser Gly Ser Gly Pro Thr Ile Glu Glu Val
 625 630 635 640

Asp

<210> 77
 <211> 646
 <212> PRT
 <213> Homo sapiens

<400> 77

Met Ser Lys Gly Pro Ala Val Gly Ile Asp Leu Gly Thr Thr Tyr Ser
 1 5 10 15

Cys Val Gly Val Phe Gln His Gly Lys Val Glu Ile Ile Ala Asn Asp
20 25 30

Gln Gly Asn Arg Thr Thr Pro Ser Tyr Val Ala Phe Thr Asp Thr Glu
35 40 45

Arg Leu Ile Gly Asp Ala Ala Lys Asn Gln Val Ala Met Asn Pro Thr
50 55 60

Asn Thr Val Phe Asp Ala Lys Arg Leu Ile Gly Arg Arg Phe Asp Asp
65 70 75 80

Ala Val Val Gln Ser Asp Met Lys His Trp Pro Phe Met Val Val Asn
85 90 95

Asp Ala Gly Arg Pro Lys Val Gln Val Glu Tyr Lys Gly Glu Thr Lys
100 105 110

Ser Phe Tyr Pro Glu Glu Val Ser Ser Met Val Leu Thr Lys Met Lys
115 120 125

Glu Ile Ala Glu Ala Tyr Leu Gly Lys Thr Val Thr Asn Ala Val Val
130 135 140

Thr Val Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln Ala Thr Lys Asp
145 150 155 160

Ala Gly Thr Ile Ala Gly Leu Asn Val Leu Arg Ile Ile Asn Glu Pro
165 170 175

Thr Ala Ala Ala Ile Ala Tyr Gly Leu Asp Lys Lys Val Gly Ala Glu
180 185 190

Arg Asn Val Leu Ile Phe Asp Leu Gly Gly Gly Thr Phe Asp Val Ser
195 200 205

Ile Leu Thr Ile Glu Asp Gly Ile Phe Glu Val Lys Ser Thr Ala Gly
210 215 220

Asp Thr His Leu Gly Gly Glu Asp Phe Asp Asn Arg Met Val Asn His
225 230 235 240

Phe Ile Ala Glu Phe Lys Arg Lys His Lys Lys Asp Ile Ser Glu Asn
245 250 255

Lys Arg Ala Val Arg Arg Leu Arg Thr Ala Cys Glu Arg Ala Lys Arg
260 265 270

Thr Leu Ser Ser Ser Thr Gln Ala Ser Ile Glu Ile Asp Ser Leu Tyr
275 280 285

Glu Gly Ile Asp Phe Tyr Thr Ser Ile Thr Arg Ala Arg Phe Glu Glu
290 295 300

Leu Asn Ala Asp Leu Phe Arg Gly Thr Leu Asp Pro Val Glu Lys Ala
305 310 315 320

Leu Arg Asp Ala Lys Leu Asp Lys Ser Gln Ile His Asp Ile Val Leu
325 330 335

Val Gly Gly Ser Thr Arg Ile Pro Lys Ile Gln Lys Leu Leu Gln Asp
340 345 350

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

Val Ala Tyr Gly Ala Ala Val Gln Ala Ala Ile Leu Ser Gly Asp Lys
370 375 380

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

Leu Gly Ile Glu Thr Ala Gly Gly Val Met Thr Val Leu Ile Lys Arg
405 410 415

Asn Thr Thr Ile Pro Thr Lys Gln Thr Gln Thr Phe Thr Thr Tyr Ser
420 425 430

Asp Asn Gln Pro Gly Val Leu Ile Gln Val Tyr Glu Gly Glu Arg Ala
435 440 445

Met Thr Lys Asp Asn Asn Leu Leu Gly Lys Phe Glu Leu Thr Gly Ile
450 455 460

Pro Pro Ala Pro Arg Gly Val Pro Gln Ile Glu Val Thr Phe Asp Ile
465 470 475 480

Asp Ala Asn Gly Ile Leu Asn Val Ser Ala Val Asp Lys Ser Thr Gly
485 490 495

Lys Glu Asn Lys Ile Thr Ile Thr Asn Asp Lys Gly Arg Leu Ser Lys
500 505 510

Glu Asp Ile Glu Arg Met Val Gln Glu Ala Glu Lys Tyr Lys Ala Glu
515 520 525

Asp Glu Lys Gln Arg Asp Lys Val Ser Ser Lys Asn Ser Leu Glu Ser
530 535 540

Tyr Ala Phe Asn Met Lys Ala Thr Val Glu Asp Glu Lys Leu Gln Gly
545 550 555 560

Lys Ile Asn Asp Glu Asp Lys Gln Lys Ile Leu Asp Lys Cys Asn Glu
565 570 575

Ile Ile Asn Trp Leu Asp Lys Asn Gln Thr Ala Glu Lys Glu Glu Phe
580 585 590

Glu His Gln Gln Lys Glu Leu Glu Lys Val Cys Asn Pro Ile Ile Thr
595 600 605

Lys Leu Tyr Gln Ser Ala Gly Gly Met Pro Gly Gly Met Pro Gly Gly
610 615 620

Phe Pro Gly Gly Gly Ala Pro Pro Ser Gly Gly Ala Ser Ser Gly Pro
625 630 635 640

Thr Ile Glu Glu Val Asp
645

<210> 78
<211> 632

<212> PRT
<213> Homo sapiens

<400> 78

Ala Asp Leu Ile Asn Asn Leu Gly Thr Ile Ala Lys Ser Gly Thr Lys
1 5 10 15

Ala Phe Met Glu Ala Leu Gln Ala Gly Ala Asp Ile Ser Met Ile Gly
20 25 30

Gln Phe Gly Val Gly Phe Tyr Ser Ala Tyr Leu Val Ala Glu Lys Val
35 40 45

Thr Val Ile Thr Lys His Asn Asp Asp Glu Gln Tyr Ala Trp Glu Ser
50 55 60

Ser Ala Gly Gly Ser Phe Thr Val Arg Thr Asp Thr Gly Glu Pro Met
65 70 75 80

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

Tyr Leu Glu Glu Arg Arg Ile Lys Glu Ile Val Lys Lys His Ser Gln
100 105 110

Phe Ile Gly Tyr Pro Ile Thr Leu Phe Val Glu Lys Glu Arg Asp Lys
115 120 125

Glu Val Ser Asp Asp Glu Ala Glu Glu Lys Glu Asp Lys Glu Glu Glu
130 135 140

Lys Glu Lys Glu Glu Lys Glu Ser Glu Asp Lys Pro Glu Ile Glu Asp
145 150 155 160

Val Gly Ser Asp Glu Glu Glu Glu Lys Lys Asp Gly Asp Lys Lys Lys
165 170 175

Lys Lys Lys Ile Lys Glu Lys Tyr Ile Asp Gln Glu Glu Leu Asn Lys
180 185 190

Thr Lys Pro Ile Trp Thr Arg Asn Pro Asp Asp Ile Thr Asn Glu Glu

195

200

205

Tyr Gly Glu Phe Tyr Lys Ser Leu Thr Asn Asp Trp Glu Asp His Leu
 210 215 220

Ala Val Lys His Phe Ser Val Glu Gly Gln Leu Glu Phe Arg Ala Leu
 225 230 235 240

Leu Phe Val Pro Arg Arg Ala Pro Phe Asp Leu Phe Glu Asn Arg Lys
 245 250 255

Lys Lys Asn Asn Ile Lys Leu Tyr Val Arg Arg Val Phe Ile Met Asp
 260 265 270

Asn Cys Glu Glu Leu Ile Pro Glu Tyr Leu Asn Phe Ile Arg Gly Val
 275 280 285

Val Asp Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg Glu Met Leu Gln
 290 295 300

Gln Ser Lys Ile Leu Lys Val Ile Arg Lys Asn Leu Val Lys Lys Cys
 305 310 315 320

Leu Glu Leu Phe Thr Glu Leu Ala Glu Asp Lys Glu Asn Tyr Lys Lys
 325 330 335

Phe Tyr Glu Gln Phe Ser Lys Asn Ile Lys Leu Gly Ile His Glu Asp
 340 345 350

Ser Gln Asn Arg Lys Lys Leu Ser Glu Leu Leu Arg Tyr Tyr Thr Ser
 355 360 365

Ala Ser Gly Asp Glu Met Val Ser Leu Lys Asp Tyr Cys Thr Arg Met
 370 375 380

Lys Glu Asn Gln Lys His Ile Tyr Tyr Ile Thr Gly Glu Thr Lys Asp
 385 390 395 400

Gln Val Ala Asn Ser Ala Phe Val Glu Arg Leu Arg Lys His Gly Leu
 405 410 415

Glu Val Ile Tyr Met Ile Glu Pro Ile Asp Glu Tyr Cys Val Gln Gln
420 425 430

Leu Lys Glu Phe Glu Gly Lys Thr Leu Val Ser Val Thr Lys Glu Gly
435 440 445

Leu Glu Leu Pro Glu Asp Glu Glu Glu Lys Lys Lys Gln Glu Glu Lys
450 455 460

Lys Thr Lys Phe Glu Asn Leu Cys Lys Ile Met Lys Asp Ile Leu Glu
465 470 475 480

Lys Lys Val Glu Lys Val Val Val Ser Asn Arg Leu Val Thr Ser Pro
485 490 495

Cys Cys Ile Val Thr Ser Thr Tyr Gly Trp Thr Ala Asn Met Glu Arg
500 505 510

Ile Met Lys Ala Gln Ala Leu Arg Asp Asn Ser Thr Met Gly Tyr Met
515 520 525

Ala Ala Lys Lys His Leu Glu Ile Asn Pro Asp His Ser Ile Ile Glu
530 535 540

Thr Leu Arg Gln Lys Ala Glu Ala Asp Lys Asn Asp Lys Ser Val Lys
545 550 555 560

Asp Leu Val Ile Leu Leu Tyr Glu Thr Ala Leu Leu Ser Ser Gly Phe
565 570 575

Ser Leu Glu Asp Pro Gln Thr His Ala Asn Arg Ile Tyr Arg Met Ile
580 585 590

Lys Leu Gly Leu Gly Ile Asp Glu Asp Asp Pro Thr Ala Asp Asp Thr
595 600 605

Ser Ala Ala Val Thr Glu Glu Met Pro Pro Leu Glu Gly Asp Asp Asp
610 615 620

Thr Ser Arg Met Glu Glu Val Asp

625

630

<210> 79
 <211> 824
 <212> PRT
 <213> Homo sapiens

<400> 79

Met Pro Glu Glu Thr Gln Thr Gln Asp Gln Pro Met Glu Glu Glu Glu
 1 5 10 15

Val Glu Thr Phe Ala Phe Gln Ala Glu Ile Ala Gln Leu Met Ser Leu
 20 25 30

Ile Ile Asn Thr Phe Tyr Ser Asn Lys Glu Ile Phe Leu Arg Glu Leu
 35 40 45

Ile Ser Asn Ser Ser Asp Ala Leu Asp Lys Ile Arg Tyr Glu Ser Leu
 50 55 60

Thr Asp Pro Ser Lys Leu Asp Ser Gly Lys Glu Leu His Ile Asn Leu
 65 70 75 80

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

Gly Met Thr Lys Met Pro Glu Glu Val His His Gly Glu Glu Glu Val
 100 105 110

Glu Thr Phe Ala Phe Gln Ala Glu Ile Ala Gln Leu Met Ser Leu Ile
 115 120 125

Ile Asn Thr Phe Tyr Ser Asn Lys Glu Ile Phe Leu Arg Glu Leu Ile
 130 135 140

Ser Asn Ala Ser Asp Ala Leu Asp Lys Ile Arg Tyr Glu Ser Leu Thr
 145 150 155 160

Asp Pro Ser Lys Leu Asp Ser Gly Lys Glu Leu Lys Ile Asp Ile Ile
 165 170 175

Pro Asn Pro Gln Glu Arg Thr Leu Thr Leu Val Asp Thr Gly Ile Gly
180 185 190

Met Thr Lys Ala Asp Leu Ile Asn Asn Leu Gly Thr Ile Ala Lys Ser
195 200 205

Gly Thr Lys Ala Phe Met Glu Ala Leu Gln Ala Gly Ala Asp Ile Ser
210 215 220

Met Ile Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala Tyr Leu Val Ala
225 230 235 240

Glu Lys Val Val Val Ile Thr Lys His Asn Asp Asp Glu Gln Tyr Ala
245 250 255

Trp Glu Ser Ser Ala Gly Gly Ser Phe Thr Val Arg Ala Asp His Gly
260 265 270

Glu Pro Ile Gly Arg Gly Thr Lys Val Ile Leu His Leu Lys Glu Asp
275 280 285

Gln Thr Glu Tyr Leu Glu Glu Arg Arg Val Lys Glu Val Val Lys Lys
290 295 300

His Ser Gln Phe Ile Gly Tyr Pro Ile Thr Leu Tyr Leu Glu Lys Glu
305 310 315 320

Arg Glu Lys Glu Ile Ser Asp Asp Glu Ala Glu Glu Glu Lys Gly Glu
325 330 335

Lys Glu Glu Glu Asp Lys Asp Asp Glu Glu Lys Pro Lys Ile Glu Asp
340 345 350

Val Gly Ser Asp Glu Glu Asp Asp Ser Gly Lys Asp Lys Lys Lys Lys
355 360 365

Thr Lys Lys Ile Lys Glu Lys Tyr Ile Asp Gln Glu Glu Leu Asn Lys
370 375 380

Thr Lys Pro Ile Trp Thr Arg Asn Pro Asp Asp Ile Thr Gln Glu Glu
385 390 395 400

Tyr Gly Glu Phe Tyr Lys Ser Leu Thr Asn Asp Trp Glu Asp His Leu
405 410 415

Ala Val Lys His Phe Ser Val Glu Gly Gln Leu Glu Phe Arg Ala Leu
420 425 430

Leu Phe Ile Pro Arg Arg Ala Pro Phe Asp Leu Phe Glu Asn Lys Lys
435 440 445

Lys Lys Asn Asn Ile Lys Leu Tyr Val Arg Arg Val Phe Ile Met Asp
450 455 460

Ser Cys Asp Glu Leu Ile Pro Glu Tyr Leu Asn Phe Ile Arg Gly Val
465 470 475 480

Val Asp Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg Glu Met Leu Gln
485 490 495

Gln Ser Lys Ile Leu Lys Val Ile Arg Lys Asn Ile Val Lys Lys Cys
500 505 510

Leu Glu Leu Phe Ser Glu Leu Ala Glu Asp Lys Glu Asn Tyr Lys Lys
515 520 525

Phe Tyr Glu Ala Phe Ser Lys Asn Leu Lys Leu Gly Ile His Glu Asp
530 535 540

Ser Thr Asn Arg Arg Arg Leu Ser Glu Leu Leu Arg Tyr His Thr Ser
545 550 555 560

Gln Ser Gly Asp Glu Met Thr Ser Leu Ser Glu Tyr Val Ser Arg Met
565 570 575

Lys Glu Thr Gln Lys Ser Ile Tyr Tyr Ile Thr Gly Glu Ser Lys Glu
580 585 590

Gln Val Ala Asn Ser Ala Phe Val Glu Arg Val Arg Lys Arg Gly Phe
595 600 605

Glu Val Val Tyr Met Thr Glu Pro Ile Asp Glu Tyr Cys Val Gln Gln
610 615 620

Leu Lys Glu Phe Asp Gly Lys Ser Leu Val Ser Val Thr Lys Glu Gly
625 630 635 640

Leu Glu Leu Pro Glu Asp Glu Glu Glu Lys Lys Lys Met Glu Glu Ser
645 650 655

Lys Ala Lys Phe Glu Asn Leu Cys Lys Leu Met Lys Glu Ile Leu Asp
660 665 670

Lys Lys Val Glu Lys Val Thr Ile Ser Asn Arg Leu Val Ser Ser Pro
675 680 685

Cys Cys Ile Val Thr Ser Thr Tyr Gly Trp Thr Ala Asn Met Glu Arg
690 695 700

Ile Met Lys Ala Gln Ala Leu Arg Asp Asn Ser Thr Met Gly Tyr Met
705 710 715 720

Met Ala Lys Lys His Leu Glu Ile Asn Pro Asp His Pro Ile Val Glu
725 730 735

Thr Leu Arg Gln Lys Ala Glu Ala Asp Lys Asn Asp Lys Ala Val Lys
740 745 750

Asp Leu Val Val Leu Leu Phe Glu Thr Ala Leu Leu Ser Ser Gly Phe
755 760 765

Ser Leu Glu Asp Pro Gln Thr His Ser Asn Arg Ile Tyr Arg Met Ile
770 775 780

Lys Leu Gly Leu Gly Ile Asp Glu Asp Glu Val Ala Ala Glu Glu Pro
785 790 795 800

Asn Ala Ala Val Pro Asp Glu Ile Pro Pro Leu Glu Gly Asp Glu Asp
805 810 815

Ala Ser Arg Met Glu Glu Val Asp
820

<210> 80
<211> 374
<212> PRT
<213> Homo sapiens

<400> 80

Met Trp Phe Leu Thr Thr Leu Leu Leu Trp Val Pro Val Asp Gly Gln
1 5 10 15

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

Val Phe Gln Glu Glu Thr Val Thr Leu His Cys Glu Val Leu His Leu
35 40 45

Pro Gly Ser Ser Ser Thr Gln Trp Phe Leu Asn Gly Thr Ala Thr Gln
50 55 60

Thr Ser Thr Pro Ser Tyr Arg Ile Thr Ser Ala Ser Val Asn Asp Ser
65 70 75 80

Gly Glu Tyr Arg Cys Gln Arg Gly Leu Ser Gly Arg Ser Asp Pro Ile
85 90 95

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

Val Phe Thr Glu Gly Glu Pro Leu Ala Leu Arg Cys His Ala Trp Lys
115 120 125

Asp Lys Leu Val Tyr Asn Val Leu Tyr Tyr Arg Asn Gly Lys Ala Phe
130 135 140

Lys Phe Phe His Trp Asn Ser Asn Leu Thr Ile Leu Lys Thr Asn Ile
145 150 155 160

Ser His Asn Gly Thr Tyr His Cys Ser Gly Met Gly Lys His Arg Tyr
165 170 175

Thr Ser Ala Gly Ile Ser Val Thr Val Lys Glu Leu Phe Pro Ala Pro

180

185

190

Val Leu Asn Ala Ser Val Thr Ser Pro Leu Leu Glu Gly Asn Leu Val
 195 200 205

Thr Leu Ser Cys Glu Thr Lys Leu Leu Leu Gln Arg Pro Gly Leu Gln
 210 215 220

Leu Tyr Phe Ser Phe Tyr Met Gly Ser Lys Thr Leu Arg Gly Arg Asn
 225 230 235 240

Thr Ser Ser Glu Tyr Gln Ile Leu Thr Ala Arg Arg Glu Asp Ser Gly
 245 250 255

Leu Tyr Trp Cys Glu Ala Ala Thr Glu Asp Gly Asn Val Leu Lys Arg
 260 265 270

Ser Pro Glu Leu Glu Leu Gln Val Leu Gly Leu Gln Leu Pro Thr Pro
 275 280 285

Val Trp Phe His Val Leu Phe Tyr Leu Ala Val Gly Ile Met Phe Leu
 290 295 300

Val Asn Thr Val Leu Trp Val Thr Ile Arg Lys Glu Leu Lys Arg Lys
 305 310 315 320

Lys Lys Trp Asp Leu Glu Ile Ser Leu Asp Ser Gly His Glu Lys Lys
 325 330 335

Val Ile Ser Ser Leu Gln Glu Asp Arg His Leu Glu Glu Glu Leu Lys
 340 345 350

Cys Gln Glu Gln Lys Glu Glu Gln Leu Gln Glu Gly Val His Arg Lys
 355 360 365

Glu Pro Gln Gly Ala Thr
 370

<210> 81

<211> 525

<212> PRT

<213> Homo sapiens

<400> 81

Met Lys Ala Leu Ile Ala Ala Leu Leu Leu Ile Thr Leu Gln Tyr Ser
1 5 10 15

Cys Ala Val Ser Pro Thr Asp Cys Ser Ala Val Glu Pro Glu Ala Glu
20 25 30

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

Gln Leu Leu Arg Ile Ala Asp Ala His Leu Asp Arg Val Glu Asn Thr
50 55 60

Thr Val Tyr Tyr Leu Val Leu Asp Val Gln Glu Ser Asp Cys Ser Val
65 70 75 80

Leu Ser Arg Lys Tyr Trp Asn Asp Cys Glu Pro Pro Asp Ser Arg Arg
85 90 95

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

Ser His Glu Ser Gln Asp Leu Arg Val Ile Asp Phe Asn Cys Thr Thr
115 120 125

Ser Ser Val Ser Ser Ala Leu Ala Asn Thr Lys Asp Ser Pro Val Leu
130 135 140

Ile Asp Phe Phe Glu Asp Thr Glu Arg Tyr Arg Lys Gln Ala Asn Lys
145 150 155 160

Ala Leu Glu Lys Tyr Lys Glu Glu Asn Asp Asp Phe Ala Ser Phe Arg
165 170 175

Val Asp Arg Ile Glu Arg Val Ala Arg Val Arg Gly Gly Glu Gly Thr
180 185 190

Gly Tyr Phe Val Asp Phe Ser Val Arg Asn Cys Pro Arg His His Phe
195 200 205

Pro Arg His Pro Asn Val Phe Gly Phe Cys Arg Ala Asp Leu Phe Tyr
210 215 220

Asp Val Glu Ala Leu Asp Leu Glu Ser Pro Lys Asn Leu Val Ile Asn
225 230 235 240

Cys Glu Val Phe Asp Pro Gln Glu His Glu Asn Ile Asn Gly Val Pro
245 250 255

Pro His Leu Gly His Pro Phe His Trp Gly Gly His Glu Arg Ser Ser
260 265 270

Thr Thr Lys Pro Pro Phe Lys Pro His Gly Ser Arg Asp His His His
275 280 285

Pro His Lys Pro His Glu His Gly Pro Pro Pro Pro Pro Asp Glu Arg
290 295 300

Asp His Ser His Gly Pro Pro Leu Pro Gln Gly Pro Pro Pro Leu Leu
305 310 315 320

Pro Met Ser Cys Ser Ser Cys Gln His Ala Thr Phe Gly Thr Asn Gly
325 330 335

Ala Gln Arg His Ser His Asn Asn Asn Ser Ser Asp Leu His Pro His
340 345 350

Lys His His Ser His Glu Gln His Pro His Gly His His Pro His Ala
355 360 365

His His Pro His Glu His Asp Thr His Arg Gln His Pro His Gly His
370 375 380

His Pro His Gly His His Pro His Gly His His Pro His Gly His His
385 390 395 400

Pro His Gly His His Pro His Cys His Asp Phe Gln Asp Tyr Gly Pro
405 410 415

Cys Asp Pro Pro Pro His Asn Gln Gly His Cys Cys His Gly His Gly
420 425 430

Pro Pro Pro Gly His Leu Arg Arg Arg Gly Pro Gly Lys Gly Pro Arg
435 440 445

Pro Phe His Cys Arg Gln Ile Gly Ser Val Tyr Arg Leu Pro Pro Leu
450 455 460

Arg Lys Gly Glu Val Leu Pro Leu Pro Glu Ala Asn Phe Pro Ser Phe
465 470 475 480

Pro Leu Pro His His Lys His Pro Leu Lys Pro Asp Asn Gln Pro Phe
485 490 495

Pro Gln Ser Val Ser Glu Ser Cys Pro Gly Lys Phe Lys Ser Gly Phe
500 505 510

Pro Gln Val Ser Met Phe Phe Thr His Thr Phe Pro Lys
515 520 525

<210> 82
<211> 509
<212> PRT
<213> Homo sapiens

<400> 82

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

Arg Val Arg Gly Leu Lys Gln Gln Lys Ala Ser Ala Glu Leu Ile Glu
20 25 30

Glu Glu Val Ala Lys Leu Leu Lys Leu Lys Ala Gln Leu Gly Pro Asp
35 40 45

Glu Ser Lys Gln Lys Phe Val Leu Lys Thr Pro Lys Gly Thr Arg Asp
50 55 60

Tyr Ser Pro Arg Gln Met Ala Val Arg Glu Lys Val Phe Asp Val Ile
65 70 75 80

Ile Arg Cys Phe Lys Arg His Gly Ala Glu Val Ile Asp Thr Pro Val
85 90 95

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

Leu Ile Tyr Asp Leu Lys Asp Gln Gly Gly Glu Leu Leu Ser Leu Arg
115 120 125

Tyr Asp Leu Thr Val Pro Phe Ala Arg Tyr Leu Ala Met Asn Lys Leu
130 135 140

Thr Asn Ile Lys Arg Tyr His Ile Ala Lys Val Tyr Arg Arg Asp Asn
145 150 155 160

Pro Ala Met Thr Arg Gly Arg Tyr Arg Glu Phe Tyr Gln Cys Asp Phe
165 170 175

Asp Ile Ala Gly Asn Phe Asp Pro Met Ile Pro Asp Ala Glu Cys Leu
180 185 190

Lys Ile Met Cys Glu Ile Leu Ser Ser Leu Gln Ile Gly Asp Phe Leu
195 200 205

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

Gly Val Ser Asp Ser Lys Phe Arg Thr Ile Cys Ser Ser Val Asp Lys
225 230 235 240

Leu Asp Lys Val Ser Trp Glu Glu Val Lys Asn Glu Met Val Gly Glu
245 250 255

Lys Gly Leu Ala Pro Glu Val Ala Asp Arg Ile Gly Asp Tyr Val Gln
260 265 270

Gln His Gly Gly Val Ser Leu Val Glu Gln Leu Leu Gln Asp Pro Lys
275 280 285

Leu Ser Gln Asn Lys Gln Ala Leu Glu Gly Leu Gly Asp Leu Lys Leu

290

295

300

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

Asp Leu Ser Leu Ala Arg Gly Leu Asp Tyr Tyr Thr Gly Val Ile Tyr
 325 330 335

Glu Ala Val Leu Leu Gln Thr Pro Ala Gln Ala Gly Glu Glu Pro Leu
 340 345 350

Gly Val Gly Ser Val Ala Ala Gly Gly Arg Tyr Asp Gly Leu Val Gly
 355 360 365

Met Phe Asp Pro Lys Gly Arg Lys Val Pro Cys Val Gly Leu Ser Ile
 370 375 380

Gly Val Glu Arg Ile Phe Ser Ile Val Glu Gln Arg Leu Glu Ala Leu
 385 390 395 400

Glu Glu Lys Ile Arg Thr Thr Glu Thr Gln Val Leu Val Ala Ser Ala
 405 410 415

Gln Lys Lys Leu Leu Glu Glu Arg Leu Lys Leu Val Ser Glu Leu Trp
 420 425 430

Asp Ala Gly Ile Lys Ala Glu Leu Leu Tyr Lys Lys Asn Pro Lys Leu
 435 440 445

Leu Asn Gln Leu Gln Tyr Cys Glu Glu Ala Gly Ile Pro Leu Val Ala
 450 455 460

Ile Ile Gly Glu Gln Glu Leu Lys Asp Gly Val Ile Lys Leu Arg Ser
 465 470 475 480

Val Thr Ser Arg Glu Glu Val Asp Val Arg Arg Glu Asp Leu Val Glu
 485 490 495

Glu Ile Lys Arg Arg Thr Gly Gln Pro Leu Cys Ile Cys
 500 505

<210> 83
<211> 214
<212> PRT
<213> Homo sapiens

<400> 83

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

Gly Pro Gly Pro Arg Gln Arg Trp Pro Leu Leu Leu Leu Gly Leu Ala
20 25 30

Met Val Ala His Gly Leu Leu Arg Pro Met Val Ala Pro Gln Ser Gly
35 40 45

Asp Pro Asp Pro Gly Ala Ser Val Gly Ser Ser Arg Ser Ser Leu Arg
50 55 60

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

Pro Arg Cys Trp Pro Arg Gly Phe Trp Ser Glu Pro Gln Ser Leu Cys
85 90 95

Tyr Val Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly Gln Pro Lys
100 105 110

Ala Asn Pro Thr Val Thr Leu Phe Pro Pro Ser Ser Glu Glu Leu Gln
115 120 125

Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly
130 135 140

Ala Val Thr Val Ala Trp Lys Ala Asp Gly Ser Pro Val Lys Ala Gly
145 150 155 160

Val Glu Thr Thr Lys Pro Ser Lys Gln Ser Asn Asn Lys Tyr Ala Ala
165 170 175

Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Arg Ser
180 185 190

Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val Glu Lys Thr Val
195 200 205

Ala Pro Thr Glu Cys Ser
210

<210> 84
<211> 313
<212> PRT
<213> Homo sapiens

<400> 84

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

Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr Cys Ser
20 25 30

Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys Asp Glu Cys
35 40 45

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

Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly Gly Gly Gly Trp Thr
65 70 75 80

Leu Val Ala Ser Val His Glu Asn Asp Met Arg Gly Lys Cys Thr Val
85 90 95

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

Gly Asp Gly Asn Trp Ala Asn Tyr Asn Thr Phe Gly Ser Ala Glu Ala
115 120 125

Ala Thr Ser Asp Asp Tyr Lys Asn Pro Gly Tyr Tyr Asp Ile Gln Ala
130 135 140

Lys Asp Leu Gly Ile Trp His Val Pro Asn Lys Ser Pro Met Gln His

145		150		155		160									
Trp	Arg	Asn	Ser	Ser	Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu
				165					170					175	
Gln	Thr	Leu	Gly	His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val
			180					185					190		
Lys	Tyr	Gly	Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro
		195					200					205			
Val	Val	Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser
	210					215					220				
Pro	Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val
225					230					235					240
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg	Val
				245					250					255	
Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly	Tyr	Phe
			260					265					270		
Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly	Phe	Asp	Trp
		275					280					285			
Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser	Arg	Glu	Ile	Thr
	290					295					300				
Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg							
305					310										

<210> 85
 <211> 325
 <212> PRT
 <213> Homo sapiens

<400> 85

Met	Leu	Ser	Met	Leu	Arg	Thr	Met	Thr	Arg	Leu	Cys	Phe	Leu	Leu	Phe
1				5					10					15	

Phe Ser Val Ala Thr Ser Gly Cys Ser Ala Ala Ala Ala Ser Ser Leu
20 25 30

Glu Met Leu Ser Arg Glu Phe Glu Thr Cys Ala Phe Ser Phe Ser Ser
35 40 45

Leu Pro Arg Ser Cys Lys Glu Ile Lys Glu Arg Cys His Ser Ala Gly
50 55 60

Asp Gly Leu Tyr Phe Leu Arg Thr Lys Asn Gly Val Val Tyr Gln Thr
65 70 75 80

Phe Cys Asp Met Thr Ser Gly Gly Gly Gly Trp Thr Leu Val Ala Ser
85 90 95

Val His Glu Asn Asp Met Arg Gly Lys Cys Thr Val Gly Asp Arg Trp
100 105 110

Ser Ser Gln Gln Gly Asn Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn
115 120 125

Trp Ala Asn Tyr Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp
130 135 140

Asp Tyr Lys Asn Pro Gly Tyr Tyr Asp Ile Gln Ala Lys Asp Leu Gly
145 150 155 160

Ile Trp His Val Pro Asn Lys Ser Pro Met Gln His Trp Arg Asn Ser
165 170 175

Ala Leu Leu Arg Tyr Arg Thr Asn Thr Gly Phe Leu Gln Arg Leu Gly
180 185 190

His Asn Leu Phe Gly Ile Tyr Gln Lys Tyr Pro Val Lys Tyr Arg Ser
195 200 205

Gly Lys Cys Trp Asn Asp Asn Gly Pro Ala Ile Pro Val Val Tyr Asp
210 215 220

Phe Gly Asp Ala Lys Lys Thr Ala Ser Tyr Tyr Ser Pro Tyr Gly Gln
225 230 235 240

Arg Glu Phe Val Ala Gly Phe Val Gln Phe Arg Val Phe Asn Asn Glu
245 250 255

Arg Ala Ala Asn Ala Leu Cys Ala Gly Ile Lys Val Thr Gly Cys Asn
260 265 270

Thr Glu His His Cys Ile Gly Gly Gly Gly Phe Phe Pro Gln Gly Lys
275 280 285

Pro Arg Gln Cys Gly Asp Phe Ser Ala Phe Asp Trp Asp Gly Tyr Gly
290 295 300

Thr His Val Lys Ser Ser Cys Ser Arg Glu Ile Thr Glu Ala Ala Val
305 310 315 320

Leu Leu Phe Tyr Arg
325

<210> 86
<211> 745
<212> PRT
<213> Homo sapiens

<400> 86

Met Glu Val Met Asn Leu Met Glu Gln Pro Ile Lys Val Thr Glu Trp
1 5 10 15

Gln Gln Thr Tyr Thr Tyr Asp Ser Gly Ile His Ser Gly Ala Asn Thr
20 25 30

Cys Val Pro Ser Val Ser Ser Lys Gly Ile Met Glu Glu Asp Glu Ala
35 40 45

Cys Gly Arg Gln Tyr Thr Leu Lys Lys Thr Thr Thr Tyr Thr Gln Gly
50 55 60

Val Pro Pro Ser Gln Gly Asp Leu Glu Tyr Gln Met Ser Thr Thr Ala
65 70 75 80

Arg Ala Lys Arg Val Arg Glu Ala Met Cys Pro Gly Val Ser Gly Glu

85

90

95

Asp Ser Ser Leu Leu Leu Ala Thr Gln Val Glu Gly Gln Ala Thr Asn
 100 105 110

Leu Gln Arg Leu Ala Glu Pro Ser Gln Leu Leu Lys Ser Ala Ile Val
 115 120 125

His Leu Ile Asn Tyr Gln Asp Asp Ala Glu Leu Ala Thr Arg Ala Leu
 130 135 140

Pro Glu Leu Thr Lys Leu Leu Asn Asp Glu Asp Pro Val Val Val Thr
 145 150 155 160

Lys Ala Ala Met Ile Val Asn Gln Leu Ser Lys Lys Glu Ala Ser Arg
 165 170 175

Arg Ala Leu Met Gly Ser Pro Gln Leu Val Ala Ala Val Val Arg Thr
 180 185 190

Met Gln Asn Thr Ser Asp Leu Asp Thr Ala Arg Cys Thr Thr Ser Ile
 195 200 205

Leu His Asn Leu Ser His His Arg Glu Gly Leu Leu Ala Ile Phe Lys
 210 215 220

Ser Gly Gly Ile Pro Ala Leu Val Arg Met Leu Ser Ser Pro Val Glu
 225 230 235 240

Ser Val Leu Phe Tyr Ala Ile Thr Thr Leu His Asn Leu Leu Leu Tyr
 245 250 255

Gln Glu Gly Ala Lys Met Ala Val Arg Leu Ala Asp Gly Leu Gln Lys
 260 265 270

Met Val Pro Leu Leu Asn Lys Asn Asn Pro Lys Phe Leu Ala Ile Thr
 275 280 285

Thr Asp Cys Leu Gln Leu Leu Ala Tyr Gly Asn Gln Glu Ser Lys Leu
 290 295 300

Ile Ile Leu Ala Asn Gly Gly Pro Gln Ala Leu Val Gln Ile Met Arg
305 310 315 320

Asn Tyr Ser Tyr Glu Lys Leu Leu Trp Thr Thr Ser Arg Val Leu Lys
325 330 335

Val Leu Ser Val Cys Pro Ser Asn Lys Pro Ala Ile Val Glu Ala Gly
340 345 350

Gly Met Gln Ala Leu Gly Lys His Leu Thr Ser Asn Ser Pro Arg Leu
355 360 365

Val Gln Asn Cys Leu Trp Thr Leu Arg Asn Leu Ser Asp Val Ala Thr
370 375 380

Lys Gln Glu Gly Leu Glu Ser Val Leu Lys Ile Leu Val Asn Gln Leu
385 390 395 400

Ser Val Asp Asp Val Asn Val Leu Thr Cys Ala Thr Gly Thr Leu Ser
405 410 415

Asn Leu Thr Cys Asn Asn Ser Lys Asn Lys Thr Leu Val Thr Gln Asn
420 425 430

Ser Gly Val Glu Ala Leu Ile His Ala Ile Leu Arg Ala Gly Asp Lys
435 440 445

Asp Asp Ile Thr Glu Pro Ala Val Cys Ala Leu Arg His Leu Thr Ser
450 455 460

Arg His Pro Glu Ala Glu Met Ala Gln Asn Ser Val Arg Leu Asn Tyr
465 470 475 480

Gly Ile Pro Ala Ile Val Lys Leu Leu Asn Gln Pro Asn Gln Trp Pro
485 490 495

Leu Val Lys Ala Thr Ile Gly Leu Ile Arg Asn Leu Ala Leu Cys Pro
500 505 510

Ala Asn His Ala Pro Leu Gln Glu Ala Ala Val Ile Pro Arg Leu Val

515

520

525

Gln Leu Leu Val Lys Ala His Gln Asp Ala Gln Arg His Val Ala Ala
 530 535 540

Gly Thr Gln Gln Pro Tyr Thr Asp Gly Val Arg Met Glu Glu Ile Val
 545 550 555 560

Glu Gly Cys Thr Gly Ala Leu His Ile Leu Ala Arg Asp Pro Met Asn
 565 570 575

Arg Met Glu Ile Phe Arg Leu Asn Thr Ile Pro Leu Phe Val Gln Leu
 580 585 590

Leu Tyr Ser Ser Val Glu Asn Ile Gln Arg Val Ala Ala Gly Val Leu
 595 600 605

Cys Glu Leu Ala Gln Asp Lys Glu Ala Ala Asp Ala Ile Asp Ala Glu
 610 615 620

Gly Ala Ser Ala Pro Leu Met Glu Leu Leu His Ser Arg Asn Glu Gly
 625 630 635 640

Thr Ala Thr Tyr Ala Ala Ala Val Leu Phe Arg Ile Ser Glu Asp Lys
 645 650 655

Asn Pro Asp Tyr Arg Lys Arg Val Ser Val Glu Leu Thr Asn Ser Leu
 660 665 670

Phe Lys His Asp Pro Ala Ala Trp Glu Ala Ala Gln Ser Met Ile Pro
 675 680 685

Ile Asn Glu Pro Tyr Gly Asp Asp Met Asp Ala Thr Tyr Arg Pro Met
 690 695 700

Tyr Ser Ser Asp Val Pro Leu Asp Pro Leu Glu Met His Met Asp Met
 705 710 715 720

Asp Gly Asp Tyr Pro Ile Asp Thr Tyr Ser Asp Gly Leu Arg Pro Pro
 725 730 735

Tyr Pro Thr Ala Asp His Met Leu Ala
740 745

<210> 87
<211> 261
<212> PRT
<213> Homo sapiens

<400> 87

Met Trp Asp Leu Val Leu Ser Ile Ala Leu Ser Val Gly Cys Thr Gly
1 5 10 15

Ala Val Pro Leu Ile Gln Ser Arg Ile Val Gly Gly Trp Glu Cys Glu
20 25 30

Lys His Ser Gln Pro Trp Gln Val Ala Val Tyr Ser His Gly Trp Ala
35 40 45

His Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala
50 55 60

His Cys Leu Lys Lys Asn Ser Gln Val Trp Leu Gly Arg His Asn Leu
65 70 75 80

Phe Glu Pro Glu Asp Thr Gly Gln Arg Val Pro Val Ser His Ser Phe
85 90 95

Pro His Pro Leu Tyr Asn Met Ser Leu Leu Lys His Gln Ser Leu Arg
100 105 110

Pro Asp Glu Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu
115 120 125

Pro Ala Lys Ile Thr Asp Val Val Lys Val Leu Gly Leu Pro Thr Gln
130 135 140

Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile
145 150 155 160

Glu Pro Glu Glu Phe Leu Arg Pro Arg Ser Leu Gln Cys Val Ser Leu
165 170 175

His Leu Leu Ser Asn Asp Met Cys Ala Arg Ala Tyr Ser Glu Lys Val
180 185 190

Thr Glu Phe Met Leu Cys Ala Gly Leu Trp Thr Gly Gly Lys Asp Thr
195 200 205

Cys Gly Gly Asp Ser Gly Gly Pro Leu Val Cys Asn Gly Val Leu Gln
210 215 220

Gly Ile Thr Ser Trp Gly Pro Glu Pro Cys Ala Leu Pro Glu Lys Pro
225 230 235 240

Ala Val Tyr Thr Lys Val Val His Tyr Arg Lys Trp Ile Lys Asp Thr
245 250 255

Ile Ala Ala Asn Pro
260

<210> 88
<211> 1939
<212> PRT
<213> Homo sapiens

<400> 88

Met Ser Ser Asp Ser Glu Met Ala Ile Phe Gly Glu Ala Ala Pro Phe
1 5 10 15

Leu Arg Lys Ser Glu Arg Glu Arg Ile Glu Ala Gln Asn Lys Pro Phe
20 25 30

Asp Ala Lys Thr Ser Val Phe Val Val Asp Pro Lys Glu Ser Phe Val
35 40 45

Lys Ala Thr Val Gln Ser Arg Glu Gly Gly Lys Val Thr Ala Lys Thr
50 55 60

Glu Ala Gly Ala Thr Val Thr Val Lys Asp Asp Gln Val Phe Pro Met
65 70 75 80

Asn Pro Pro Lys Tyr Asp Lys Ile Glu Asp Met Ala Met Met Thr His

85

90

95

Leu His Glu Pro Ala Val Leu Tyr Asn Leu Lys Glu Arg Tyr Ala Ala
 100 105 110

Trp Met Ile Tyr Thr Tyr Ser Gly Leu Phe Cys Val Thr Val Asn Pro
 115 120 125

Tyr Lys Trp Leu Pro Val Tyr Asn Ala Glu Val Val Thr Ala Tyr Arg
 130 135 140

Gly Lys Lys Arg Gln Glu Ala Pro Pro His Ile Phe Ser Ile Ser Asp
 145 150 155 160

Asn Ala Tyr Gln Phe Met Leu Thr Asp Arg Glu Asn Gln Ser Ile Leu
 165 170 175

Ile Thr Gly Glu Ser Gly Ala Gly Lys Thr Val Asn Thr Lys Arg Val
 180 185 190

Ile Gln Tyr Phe Ala Thr Ile Ala Val Thr Gly Glu Lys Lys Lys Glu
 195 200 205

Glu Val Thr Ser Gly Lys Met Gln Gly Thr Leu Glu Asp Gln Ile Ile
 210 215 220

Ser Ala Asn Pro Leu Leu Glu Ala Phe Gly Asn Ala Lys Thr Val Arg
 225 230 235 240

Asn Asp Asn Ser Ser Arg Phe Gly Lys Phe Ile Arg Ile His Phe Gly
 245 250 255

Thr Thr Gly Lys Leu Ala Ser Ala Asp Ile Glu Thr Tyr Leu Leu Glu
 260 265 270

Lys Ser Arg Val Thr Phe Gln Leu Lys Ala Glu Arg Ser Tyr His Ile
 275 280 285

Phe Tyr Gln Ile Met Ser Asn Lys Lys Pro Asp Leu Ile Glu Met Leu
 290 295 300

Leu Ile Thr Thr Asn Pro Tyr Asp Tyr Ala Phe Val Ser Gln Gly Glu
305 310 315 320

Ile Thr Val Pro Ser Ile Asp Asp Gln Glu Glu Leu Met Ala Thr Asp
325 330 335

Ser Ala Ile Glu Ile Leu Gly Phe Thr Ser Asp Glu Arg Val Ser Ile
340 345 350

Tyr Lys Leu Thr Gly Ala Val Met His Tyr Gly Asn Met Lys Phe Lys
355 360 365

Gln Lys Gln Arg Glu Glu Gln Ala Glu Pro Asp Gly Thr Glu Val Ala
370 375 380

Asp Lys Ala Ala Tyr Leu Gln Asn Leu Asn Ser Ala Asp Leu Leu Lys
385 390 395 400

Ala Leu Cys Tyr Pro Arg Val Lys Val Gly Asn Glu Tyr Val Thr Lys
405 410 415

Gly Gln Thr Val Gln Gln Val Tyr Asn Ala Val Gly Ala Leu Ala Lys
420 425 430

Ala Val Tyr Asp Lys Met Phe Leu Trp Met Val Thr Arg Ile Asn Gln
435 440 445

Gln Leu Asp Thr Lys Gln Pro Arg Gln Tyr Phe Ile Gly Val Leu Asp
450 455 460

Ile Ala Gly Phe Glu Ile Phe Asp Phe Asn Ser Leu Glu Gln Leu Cys
465 470 475 480

Ile Asn Phe Thr Asn Glu Lys Leu Gln Gln Phe Phe Asn His His Met
485 490 495

Phe Val Leu Glu Gln Glu Glu Tyr Lys Lys Glu Gly Ile Glu Trp Thr
500 505 510

Phe Ile Asp Phe Gly Met Asp Leu Ala Ala Cys Ile Glu Leu Ile Glu

515

520

525

Lys Pro Met Gly Ile Phe Ser Ile Leu Glu Glu Glu Cys Met Phe Pro
 530 535 540

Lys Ala Thr Asp Thr Ser Phe Lys Asn Lys Leu Tyr Glu Gln His Leu
 545 550 555 560

Gly Lys Ser Asn Asn Phe Gln Lys Pro Lys Pro Ala Lys Gly Lys Pro
 565 570 575

Glu Ala His Phe Ser Leu Ile His Tyr Ala Gly Thr Val Asp Tyr Asn
 580 585 590

Ile Ala Gly Trp Leu Asp Lys Asn Lys Asp Pro Leu Asn Glu Thr Val
 595 600 605

Val Gly Leu Tyr Gln Lys Ser Ala Met Lys Thr Leu Ala Leu Leu Phe
 610 615 620

Val Gly Ala Thr Gly Ala Glu Ala Glu Ala Gly Gly Gly Lys Lys Gly
 625 630 635 640

Gly Lys Lys Lys Gly Ser Ser Phe Gln Thr Val Ser Ala Leu Phe Arg
 645 650 655

Glu Asn Leu Asn Lys Leu Met Thr Asn Leu Arg Ser Thr His Pro His
 660 665 670

Phe Val Arg Cys Ile Ile Pro Asn Glu Thr Lys Thr Pro Gly Ala Met
 675 680 685

Glu His Glu Leu Val Leu His Gln Leu Arg Cys Asn Gly Val Leu Glu
 690 695 700

Gly Ile Arg Ile Cys Arg Lys Gly Phe Pro Ser Arg Ile Leu Tyr Ala
 705 710 715 720

Asp Phe Lys Gln Arg Tyr Lys Val Leu Asn Ala Ser Ala Ile Pro Glu
 725 730 735

Gly Gln Phe Ile Asp Ser Lys Lys Ala Ser Glu Lys Leu Leu Gly Ser
740 745 750

Ile Asp Ile Asp His Thr Gln Tyr Lys Phe Gly His Thr Lys Val Phe
755 760 765

Phe Lys Ala Gly Leu Leu Gly Leu Leu Glu Glu Met Arg Asp Glu Lys
770 775 780

Leu Ala Gln Leu Ile Thr Arg Thr Gln Ala Met Cys Arg Gly Phe Leu
785 790 795 800

Ala Arg Val Glu Tyr Gln Lys Met Val Glu Arg Arg Glu Ser Ile Phe
805 810 815

Cys Ile Gln Tyr Asn Val Arg Ala Phe Met Asn Val Lys His Trp Pro
820 825 830

Trp Met Lys Leu Tyr Phe Lys Ile Lys Pro Leu Leu Lys Ser Ala Glu
835 840 845

Thr Glu Lys Glu Met Ala Asn Met Lys Glu Glu Phe Glu Lys Thr Lys
850 855 860

Glu Glu Leu Ala Lys Thr Glu Ala Lys Arg Lys Glu Leu Glu Glu Lys
865 870 875 880

Met Val Thr Leu Met Gln Glu Lys Asn Asp Leu Gln Leu Gln Val Gln
885 890 895

Ala Glu Ala Asp Ser Leu Ala Asp Ala Glu Glu Arg Cys Asp Gln Leu
900 905 910

Ile Lys Thr Lys Ile Gln Leu Glu Ala Lys Ile Lys Glu Val Thr Glu
915 920 925

Arg Ala Glu Asp Glu Glu Glu Ile Asn Ala Glu Leu Thr Ala Lys Lys
930 935 940

Arg Lys Leu Glu Asp Glu Cys Ser Glu Leu Lys Lys Asp Ile Asp Asp

945		950		955		960
Leu Glu Leu Thr	Leu Ala Lys Val	Glu Lys Glu Lys His	Ala Thr Glu			
	965	970	975			
Asn Lys Val Lys	Asn Leu Thr Glu	Glu Met Ala Gly	Leu Asp Glu Thr			
	980	985	990			
Ile Ala Lys Leu Thr	Lys Glu Lys	Lys Ala Leu Gln	Glu Ala His Gln			
	995	1000	1005			
Gln Thr	Leu Asp Asp Leu	Gln Ala Glu Glu Asp	Lys Val Asn Thr			
1010		1015	1020			
Leu Thr	Lys Ala Lys Ile	Lys Leu Glu Gln Gln	Val Asp Asp Leu			
1025		1030	1035			
Glu Gly	Ser Leu Glu Gln	Glu Lys Lys Ile Arg	Met Asp Leu Glu			
1040		1045	1050			
Arg Ala	Lys Arg Lys Leu	Glu Gly Asp Leu Lys	Leu Ala Gln Glu			
1055		1060	1065			
Ser Thr	Met Asp Ile Glu	Asn Asp Lys Gln Gln	Leu Asp Glu Lys			
1070		1075	1080			
Leu Lys	Lys Lys Glu Phe	Glu Met Ser Gly Leu	Gln Ser Lys Ile			
1085		1090	1095			
Glu Asp	Glu Gln Ala Leu	Gly Met Gln Leu Gln	Lys Lys Ile Lys			
1100		1105	1110			
Glu Leu	Gln Ala Arg Ile	Glu Glu Leu Glu Glu	Glu Ile Glu Ala			
1115		1120	1125			
Glu Arg	Ala Ser Arg Ala	Lys Ala Glu Lys Gln	Arg Ser Asp Leu			
1130		1135	1140			
Ser Arg	Glu Leu Glu Glu	Ile Ser Glu Arg Leu	Glu Glu Ala Gly			
1145		1150	1155			

Gly Ala Thr Ser Ala Gln Ile Glu Met Asn Lys Lys Arg Glu Ala
1160 1165 1170

Glu Phe Gln Lys Met Arg Arg Asp Leu Glu Glu Ala Thr Leu Gln
1175 1180 1185

His Glu Ala Thr Ala Ala Thr Leu Arg Lys Lys His Ala Asp Ser
1190 1195 1200

Val Ala Glu Leu Gly Glu Gln Ile Asp Asn Leu Gln Arg Val Lys
1205 1210 1215

Gln Lys Leu Glu Lys Glu Lys Ser Glu Met Lys Met Glu Ile Asp
1220 1225 1230

Asp Leu Ala Ser Asn Met Glu Thr Val Ser Lys Ala Lys Gly Asn
1235 1240 1245

Leu Glu Lys Met Cys Arg Ala Leu Glu Asp Gln Leu Ser Glu Ile
1250 1255 1260

Lys Thr Lys Glu Glu Glu Gln Gln Arg Leu Ile Asn Asp Leu Thr
1265 1270 1275

Ala Gln Arg Ala Arg Leu Gln Thr Glu Ser Gly Glu Tyr Ser Arg
1280 1285 1290

Gln Leu Asp Glu Lys Asp Thr Leu Val Ser Gln Leu Ser Arg Gly
1295 1300 1305

Lys Gln Ala Phe Thr Gln Gln Ile Glu Glu Leu Lys Arg Gln Leu
1310 1315 1320

Glu Glu Glu Ile Lys Ala Lys Ser Ala Leu Ala His Ala Leu Gln
1325 1330 1335

Ser Ser Arg His Asp Cys Asp Leu Leu Arg Glu Gln Tyr Glu Glu
1340 1345 1350

Glu Gln Glu Ala Lys Ala Glu Leu Gln Arg Ala Met Ser Lys Ala

1355

1360

1365

Asn Ser Glu Val Ala Gln Trp Arg Thr Lys Tyr Glu Thr Asp Ala
1370 1375 1380

Ile Gln Arg Thr Glu Glu Leu Glu Glu Ala Lys Lys Lys Leu Ala
1385 1390 1395

Gln Arg Leu Gln Asp Ala Glu Glu His Val Glu Ala Val Asn Ala
1400 1405 1410

Lys Cys Ala Ser Leu Glu Lys Thr Lys Gln Arg Leu Gln Asn Glu
1415 1420 1425

Val Glu Asp Leu Met Ile Asp Val Glu Arg Thr Asn Ala Ala Cys
1430 1435 1440

Ala Ala Leu Asp Lys Lys Gln Arg Asn Phe Asp Lys Ile Leu Ala
1445 1450 1455

Glu Trp Lys Gln Lys Cys Glu Glu Thr His Ala Glu Leu Glu Ala
1460 1465 1470

Ser Gln Lys Glu Ser Arg Ser Leu Ser Thr Glu Leu Phe Lys Ile
1475 1480 1485

Lys Asn Ala Tyr Glu Glu Ser Leu Asp Gln Leu Glu Thr Leu Lys
1490 1495 1500

Arg Glu Asn Lys Asn Leu Gln Gln Glu Ile Ser Asp Leu Thr Glu
1505 1510 1515

Gln Ile Ala Glu Gly Gly Lys Arg Ile His Glu Leu Glu Lys Ile
1520 1525 1530

Lys Lys Gln Val Glu Gln Glu Lys Ser Glu Leu Gln Ala Ala Leu
1535 1540 1545

Glu Glu Ala Glu Ala Ser Leu Glu His Glu Glu Gly Lys Ile Leu
1550 1555 1560

Arg Ile Gln Leu Glu Leu Asn Gln Val Lys Ser Glu Val Asp Arg
1565 1570 1575

Lys Ile Ala Glu Lys Asp Glu Glu Ile Asp Gln Met Lys Arg Asn
1580 1585 1590

His Ile Arg Ile Val Glu Ser Met Gln Ser Thr Leu Asp Ala Glu
1595 1600 1605

Ile Arg Ser Arg Asn Asp Ala Ile Arg Leu Lys Lys Lys Met Glu
1610 1615 1620

Gly Asp Leu Asn Glu Met Glu Ile Gln Leu Asn His Ala Asn Arg
1625 1630 1635

Met Ala Ala Glu Ala Leu Arg Asn Tyr Arg Asn Thr Gln Ala Ile
1640 1645 1650

Leu Lys Asp Thr Gln Leu His Leu Asp Asp Ala Leu Arg Ser Gln
1655 1660 1665

Glu Asp Leu Lys Glu Gln Leu Ala Met Val Glu Arg Arg Ala Asn
1670 1675 1680

Leu Leu Gln Ala Glu Ile Glu Glu Leu Arg Ala Thr Leu Glu Gln
1685 1690 1695

Thr Glu Arg Ser Arg Lys Ile Ala Glu Gln Glu Leu Leu Asp Ala
1700 1705 1710

Ser Glu Arg Val Gln Leu Leu His Thr Gln Asn Thr Ser Leu Ile
1715 1720 1725

Asn Thr Lys Lys Lys Leu Glu Thr Asp Ile Ser Gln Ile Gln Gly
1730 1735 1740

Glu Met Glu Asp Ile Ile Gln Glu Ala Arg Asn Ala Glu Glu Lys
1745 1750 1755

Ala Lys Lys Ala Ile Thr Asp Ala Ala Met Met Ala Glu Glu Leu

1760

1765

1770

Lys Lys Glu Gln Asp Thr Ser Ala His Leu Glu Arg Met Lys Lys
 1775 1780 1785

Asn Leu Glu Gln Thr Val Lys Asp Leu Gln His Arg Leu Asp Glu
 1790 1795 1800

Ala Glu Gln Leu Ala Leu Lys Gly Gly Lys Lys Gln Ile Gln Lys
 1805 1810 1815

Leu Glu Ala Arg Val Arg Glu Leu Glu Gly Glu Val Glu Ser Glu
 1820 1825 1830

Gln Lys Arg Asn Val Glu Ala Val Lys Gly Leu Arg Lys His Glu
 1835 1840 1845

Arg Lys Val Lys Glu Leu Thr Tyr Gln Thr Glu Glu Asp Arg Lys
 1850 1855 1860

Asn Ile Leu Arg Leu Gln Asp Leu Val Asp Lys Leu Gln Ala Lys
 1865 1870 1875

Val Lys Ser Tyr Lys Arg Gln Ala Glu Glu Ala Glu Glu Gln Ser
 1880 1885 1890

Asn Val Asn Leu Ser Lys Phe Arg Arg Ile Gln His Glu Leu Glu
 1895 1900 1905

Glu Ala Glu Glu Arg Ala Asp Ile Ala Glu Ser Gln Val Asn Lys
 1910 1915 1920

Leu Arg Val Lys Ser Arg Glu Val His Thr Lys Ile Ile Ser Glu
 1925 1930 1935

Glu

<210> 89

<211> 1941

<212> PRT

<213> Homo sapiens

<400> 89

Met Ser Ser Asp Ser Glu Leu Ala Val Phe Gly Glu Ala Ala Pro Phe
1 5 10 15

Leu Arg Lys Ser Glu Arg Glu Arg Ile Glu Ala Gln Asn Arg Pro Phe
20 25 30

Asp Ala Lys Thr Ser Val Phe Val Ala Glu Pro Lys Glu Ser Phe Val
35 40 45

Lys Gly Thr Ile Gln Ser Arg Glu Gly Gly Lys Val Thr Val Lys Thr
50 55 60

Glu Gly Gly Ala Thr Leu Thr Val Lys Asp Asp Gln Val Phe Pro Met
65 70 75 80

Asn Pro Pro Lys Tyr Asp Lys Ile Glu Asp Met Ala Met Met Thr His
85 90 95

Leu His Glu Pro Ala Val Leu Tyr Asn Leu Lys Glu Arg Tyr Ala Ala
100 105 110

Trp Met Ile Tyr Thr Tyr Ser Gly Leu Phe Cys Val Thr Val Asn Pro
115 120 125

Tyr Lys Trp Leu Pro Val Tyr Lys Pro Glu Val Val Thr Ala Tyr Arg
130 135 140

Gly Lys Lys Arg Gln Glu Ala Pro Pro His Ile Phe Ser Ile Ser Asp
145 150 155 160

Asn Ala Tyr Gln Phe Met Leu Thr Asp Arg Glu Asn Gln Ser Ile Leu
165 170 175

Ile Thr Gly Glu Ser Gly Ala Gly Lys Thr Val Asn Thr Lys Arg Val
180 185 190

Ile Gln Tyr Phe Ala Thr Ile Ala Val Thr Gly Glu Lys Lys Lys Glu
195 200 205

Glu Ile Thr Ser Gly Lys Ile Gln Gly Thr Leu Glu Asp Gln Ile Ile
210 215 220

Ser Ala Asn Pro Leu Leu Glu Ala Phe Gly Asn Ala Lys Thr Val Arg
225 230 235 240

Asn Asp Asn Ser Ser Arg Phe Gly Lys Phe Ile Arg Ile His Phe Gly
245 250 255

Thr Thr Gly Lys Leu Ala Ser Ala Asp Ile Glu Thr Tyr Leu Leu Glu
260 265 270

Lys Ser Arg Val Val Phe Gln Leu Lys Ala Glu Arg Ser Tyr His Ile
275 280 285

Phe Tyr Gln Ile Thr Ser Asn Lys Lys Pro Glu Leu Ile Glu Met Leu
290 295 300

Leu Ile Thr Thr Asn Pro Tyr Asp Tyr Pro Phe Val Ser Gln Gly Glu
305 310 315 320

Ile Ser Val Ala Ser Ile Asp Asp Gln Glu Glu Leu Met Ala Thr Asp
325 330 335

Ser Ala Ile Asp Ile Leu Gly Phe Thr Asn Glu Glu Lys Val Ser Ile
340 345 350

Tyr Lys Leu Thr Gly Ala Val Met His Tyr Gly Asn Leu Lys Phe Lys
355 360 365

Gln Lys Gln Arg Glu Glu Gln Ala Glu Pro Asp Gly Thr Glu Val Ala
370 375 380

Asp Lys Ala Ala Tyr Leu Gln Ser Leu Asn Ser Ala Asp Leu Leu Lys
385 390 395 400

Ala Leu Cys Tyr Pro Arg Val Lys Val Gly Asn Glu Tyr Val Thr Lys
405 410 415

Gly Gln Thr Val Glu Gln Val Ser Asn Ala Val Gly Ala Leu Ala Lys
420 425 430

Ala Val Tyr Glu Lys Met Phe Leu Trp Met Val Ala Arg Ile Asn Gln
435 440 445

Gln Leu Asp Thr Lys Gln Pro Arg Gln Tyr Phe Ile Gly Val Leu Asp
450 455 460

Ile Ala Gly Phe Glu Ile Phe Asp Phe Asn Ser Leu Glu Gln Leu Cys
465 470 475 480

Ile Asn Phe Thr Asn Glu Lys Leu Gln Gln Phe Phe Asn His His Met
485 490 495

Phe Val Leu Glu Gln Glu Glu Tyr Lys Lys Glu Gly Ile Glu Trp Thr
500 505 510

Phe Ile Asp Phe Gly Met Asp Leu Ala Ala Cys Ile Glu Leu Ile Glu
515 520 525

Lys Pro Met Gly Ile Phe Ser Ile Leu Glu Glu Glu Cys Met Phe Pro
530 535 540

Lys Ala Thr Asp Thr Ser Phe Lys Asn Lys Leu Tyr Asp Gln His Leu
545 550 555 560

Gly Lys Ser Ala Asn Phe Gln Lys Pro Lys Val Val Lys Gly Lys Ala
565 570 575

Glu Ala His Phe Ala Leu Ile His Tyr Ala Gly Val Val Asp Tyr Asn
580 585 590

Ile Thr Gly Trp Leu Glu Lys Asn Lys Asp Pro Leu Asn Glu Thr Val
595 600 605

Val Gly Leu Tyr Gln Lys Ser Ala Met Lys Thr Leu Ala Gln Leu Phe
610 615 620

Ser Gly Ala Gln Thr Ala Glu Gly Glu Gly Ala Gly Gly Gly Ala Lys
625 630 635 640

Lys Gly Gly Lys Lys Lys Gly Ser Ser Phe Gln Thr Val Ser Ala Leu
645 650 655

Phe Arg Glu Asn Leu Asn Lys Leu Met Thr Asn Leu Arg Ser Thr His
660 665 670

Pro His Phe Val Arg Cys Ile Ile Pro Asn Glu Thr Lys Thr Pro Gly
675 680 685

Ala Met Glu His Glu Leu Val Leu His Gln Leu Arg Cys Asn Gly Val
690 695 700

Leu Glu Gly Ile Arg Ile Cys Arg Lys Gly Phe Pro Ser Arg Ile Leu
705 710 715 720

Tyr Ala Asp Phe Lys Gln Arg Tyr Lys Val Leu Asn Ala Ser Ala Ile
725 730 735

Pro Glu Gly Gln Phe Ile Asp Ser Lys Lys Ala Ser Glu Lys Leu Leu
740 745 750

Ala Ser Ile Asp Ile Asp His Thr Gln Tyr Lys Phe Gly His Thr Lys
755 760 765

Val Phe Phe Lys Ala Gly Leu Leu Gly Leu Leu Glu Glu Met Arg Asp
770 775 780

Asp Lys Leu Ala Gln Leu Ile Thr Arg Thr Gln Ala Arg Cys Arg Gly
785 790 795 800

Phe Leu Ala Arg Val Glu Tyr Gln Arg Met Val Glu Arg Arg Glu Ala
805 810 815

Ile Phe Cys Ile Gln Tyr Asn Ile Arg Ser Phe Met Asn Val Lys His
820 825 830

Trp Pro Trp Met Lys Leu Phe Phe Lys Ile Lys Pro Leu Leu Lys Ser
835 840 845

Ala Glu Thr Glu Lys Glu Met Ala Thr Met Lys Glu Glu Phe Gln Lys
850 855 860

Ile Lys Asp Glu Leu Ala Lys Ser Glu Ala Lys Arg Lys Glu Leu Glu
865 870 875 880

Glu Lys Met Val Thr Leu Leu Lys Glu Lys Asn Asp Leu Gln Leu Gln
885 890 895

Val Gln Ala Glu Ala Glu Gly Leu Ala Asp Ala Glu Glu Arg Cys Asp
900 905 910

Gln Leu Ile Lys Thr Lys Ile Gln Leu Glu Ala Lys Ile Lys Glu Val
915 920 925

Thr Glu Arg Ala Glu Asp Glu Glu Glu Ile Asn Ala Glu Leu Thr Ala
930 935 940

Lys Lys Arg Lys Leu Glu Asp Glu Cys Ser Glu Leu Lys Lys Asp Ile
945 950 955 960

Asp Asp Leu Glu Leu Thr Leu Ala Lys Val Glu Lys Glu Lys His Ala
965 970 975

Thr Glu Asn Lys Val Lys Asn Leu Thr Glu Glu Met Ala Gly Leu Asp
980 985 990

Glu Thr Ile Ala Lys Leu Thr Lys Glu Lys Lys Ala Leu Gln Glu Ala
995 1000 1005

His Gln Gln Thr Leu Asp Asp Leu Gln Ala Glu Glu Asp Lys Val
1010 1015 1020

Asn Thr Leu Thr Lys Ala Lys Ile Lys Leu Glu Gln Gln Val Asp
1025 1030 1035

Asp Leu Glu Gly Ser Leu Glu Gln Glu Lys Lys Leu Arg Met Asp
1040 1045 1050

Leu Glu Arg Ala Lys Arg Lys Leu Glu Gly Asp Leu Lys Leu Ala
1055 1060 1065

Gln Glu Ser Ile Met Asp Ile Glu Asn Glu Lys Gln Gln Leu Asp
1070 1075 1080

Glu Lys Leu Lys Lys Lys Glu Phe Glu Ile Ser Asn Leu Gln Ser
1085 1090 1095

Lys Ile Glu Asp Glu Gln Ala Leu Gly Ile Gln Leu Gln Lys Lys
1100 1105 1110

Ile Lys Glu Leu Gln Ala Arg Ile Glu Glu Leu Glu Glu Glu Ile
1115 1120 1125

Glu Ala Glu Arg Ala Ser Arg Ala Lys Ala Glu Lys Gln Arg Ser
1130 1135 1140

Asp Leu Ser Arg Glu Leu Glu Glu Ile Ser Glu Arg Leu Glu Glu
1145 1150 1155

Ala Gly Gly Ala Thr Ser Ala Gln Ile Glu Met Asn Lys Lys Arg
1160 1165 1170

Glu Ala Glu Phe Gln Lys Met Arg Arg Asp Leu Glu Glu Ala Thr
1175 1180 1185

Leu Gln His Glu Ala Thr Ala Ala Thr Leu Arg Lys Lys His Ala
1190 1195 1200

Asp Ser Val Ala Glu Leu Gly Glu Gln Ile Asp Asn Leu Gln Arg
1205 1210 1215

Val Lys Gln Lys Leu Glu Lys Glu Lys Ser Glu Met Lys Met Glu
1220 1225 1230

Ile Asp Asp Leu Ala Ser Asn Val Glu Thr Val Ser Lys Ala Lys
1235 1240 1245

Gly Asn Leu Glu Lys Met Cys Arg Thr Leu Glu Asp Gln Leu Ser
1250 1255 1260

Glu Leu Lys Ser Lys Glu Glu Glu Gln Gln Arg Leu Ile Asn Asp
1265 1270 1275

Leu Thr Ala Gln Arg Gly Arg Leu Gln Thr Glu Ser Gly Glu Phe
1280 1285 1290

Ser Arg Gln Leu Asp Glu Lys Glu Ala Leu Val Ser Gln Leu Ser
1295 1300 1305

Arg Gly Lys Gln Ala Phe Thr Gln Gln Ile Glu Glu Leu Lys Arg
1310 1315 1320

Gln Leu Glu Glu Glu Ile Lys Ala Lys Asn Ala Leu Ala His Ala
1325 1330 1335

Leu Gln Ser Ser Arg His Asp Cys Asp Leu Leu Arg Glu Gln Tyr
1340 1345 1350

Glu Glu Glu Gln Glu Ser Lys Ala Glu Leu Gln Arg Ala Leu Ser
1355 1360 1365

Lys Ala Asn Thr Glu Val Ala Gln Trp Arg Thr Lys Tyr Glu Thr
1370 1375 1380

Asp Ala Ile Gln Arg Thr Glu Glu Leu Glu Glu Ala Lys Lys Lys
1385 1390 1395

Leu Ala Gln Arg Leu Gln Ala Ala Glu Glu His Val Glu Ala Val
1400 1405 1410

Asn Ala Lys Cys Ala Ser Leu Glu Lys Thr Lys Gln Arg Leu Gln
1415 1420 1425

Asn Glu Val Glu Asp Leu Met Leu Asp Val Glu Arg Thr Asn Ala
1430 1435 1440

Ala Cys Ala Ala Leu Asp Lys Lys Gln Arg Asn Phe Asp Lys Ile
1445 1450 1455

Leu Ala Glu Trp Lys Gln Lys Cys Glu Glu Thr His Ala Glu Leu
1460 1465 1470

Glu Ala Ser Gln Lys Glu Ala Arg Ser Leu Gly Thr Glu Leu Phe
1475 1480 1485

Lys Ile Lys Asn Ala Tyr Glu Glu Ser Leu Asp Gln Leu Glu Thr
1490 1495 1500

Leu Lys Arg Glu Asn Lys Asn Leu Gln Gln Glu Ile Ser Asp Leu
1505 1510 1515

Thr Glu Gln Ile Ala Glu Gly Gly Lys Arg Ile His Glu Leu Glu
1520 1525 1530

Lys Ile Lys Lys Gln Val Glu Gln Glu Lys Cys Glu Leu Gln Ala
1535 1540 1545

Ala Leu Glu Glu Ala Glu Ala Ser Leu Glu His Glu Glu Gly Lys
1550 1555 1560

Ile Leu Arg Ile Gln Leu Glu Leu Asn Gln Val Lys Ser Glu Val
1565 1570 1575

Asp Arg Lys Ile Ala Glu Lys Asp Glu Glu Ile Asp Gln Leu Lys
1580 1585 1590

Arg Asn His Ile Arg Ile Val Glu Ser Met Gln Ser Thr Leu Asp
1595 1600 1605

Ala Glu Ile Arg Ser Arg Asn Asp Ala Ile Arg Leu Lys Lys Lys
1610 1615 1620

Met Glu Gly Asp Leu Asn Glu Met Glu Ile Gln Leu Asn His Ala
1625 1630 1635

Asn Arg Met Ala Ala Glu Ala Leu Arg Asn Tyr Arg Asn Thr Gln
1640 1645 1650

Gly Ile Leu Lys Asp Thr Gln Ile His Leu Asp Asp Ala Leu Arg
1655 1660 1665

Ser Gln Glu Asp Leu Lys Glu Gln Leu Ala Met Val Glu Arg Arg
1670 1675 1680

Ala Asn Leu Leu Gln Ala Glu Ile Glu Glu Leu Arg Ala Thr Leu
1685 1690 1695

Glu Gln Thr Glu Arg Ser Arg Lys Ile Ala Glu Gln Glu Leu Leu
1700 1705 1710

Asp Ala Ser Glu Arg Val Gln Leu Leu His Thr Gln Asn Thr Ser
1715 1720 1725

Leu Ile Asn Thr Lys Lys Lys Leu Glu Thr Asp Ile Ser Gln Met
1730 1735 1740

Gln Gly Glu Met Glu Asp Ile Leu Gln Glu Ala Arg Asn Ala Glu
1745 1750 1755

Glu Lys Ala Lys Lys Ala Ile Thr Asp Ala Ala Met Met Ala Glu
1760 1765 1770

Glu Leu Lys Lys Glu Gln Asp Thr Ser Ala His Leu Glu Arg Met
1775 1780 1785

Lys Lys Asn Met Glu Gln Thr Val Lys Asp Leu Gln Leu Arg Leu
1790 1795 1800

Asp Glu Ala Glu Gln Leu Ala Leu Lys Gly Gly Lys Lys Gln Ile
1805 1810 1815

Gln Lys Leu Glu Ala Arg Val Arg Glu Leu Glu Gly Glu Val Glu
1820 1825 1830

Ser Glu Gln Lys Arg Asn Ala Glu Ala Val Lys Gly Leu Arg Lys
1835 1840 1845

His Glu Arg Arg Val Lys Glu Leu Thr Tyr Gln Thr Glu Glu Asp
1850 1855 1860

Arg Lys Asn Ile Leu Arg Leu Gln Asp Leu Val Asp Lys Leu Gln
1865 1870 1875

Ala Lys Val Lys Ser Tyr Lys Arg Gln Ala Glu Glu Ala Glu Glu
1880 1885 1890

Gln Ser Asn Thr Asn Leu Ala Lys Phe Arg Lys Leu Gln His Glu
1895 1900 1905

Leu Glu Glu Ala Glu Glu Arg Ala Asp Ile Ala Glu Ser Gln Val
1910 1915 1920

Asn Lys Leu Arg Val Lys Ser Arg Glu Val His Thr Lys Val Ile
1925 1930 1935

Ser Glu Glu
1940

<210> 90
<211> 6669
<212> PRT
<213> Homo sapiens

<400> 90

Met Ala Asp Asp Glu Asp Tyr Glu Glu Val Val Glu Tyr Tyr Thr Glu
1 5 10 15

Glu Val Val Tyr Glu Glu Val Pro Gly Glu Thr Ile Thr Lys Ile Tyr
20 25 30

Glu Thr Thr Thr Thr Arg Thr Ser Asp Tyr Glu Gln Ser Glu Thr Ser
35 40 45

Lys Pro Ala Leu Ala Gln Pro Ala Leu Ala Gln Pro Ala Ser Ala Lys
50 55 60

Pro Val Glu Arg Arg Lys Val Ile Arg Lys Lys Val Asp Pro Ser Lys
65 70 75 80

Phe Met Thr Pro Tyr Ile Ala His Ser Gln Lys Met Gln Asp Leu Phe
85 90 95

Ser Pro Asn Lys Tyr Lys Glu Lys Phe Glu Lys Thr Lys Gly Gln Pro

100								105							110
Tyr	Ala	Ser	Thr	Thr	Asp	Thr	Pro	Glu	Leu	Arg	Arg	Ile	Lys	Lys	Val
	115						120					125			
Gln	Asp	Gln	Leu	Ser	Glu	Val	Lys	Tyr	Arg	Met	Asp	Gly	Asp	Val	Ala
	130					135					140				
Lys	Thr	Ile	Cys	His	Val	Asp	Glu	Lys	Ala	Lys	Asp	Ile	Glu	His	Ala
145					150					155					160
Lys	Lys	Val	Ser	Gln	Gln	Val	Ser	Lys	Val	Leu	Tyr	Lys	Gln	Asn	Trp
				165					170					175	
Glu	Asp	Thr	Lys	Asp	Lys	Tyr	Leu	Leu	Pro	Pro	Asp	Ala	Pro	Glu	Leu
			180					185					190		
Val	Gln	Ala	Val	Lys	Asn	Thr	Ala	Met	Phe	Ser	Lys	Lys	Leu	Tyr	Thr
	195						200					205			
Glu	Asp	Trp	Glu	Ala	Asp	Lys	Ser	Leu	Phe	Tyr	Pro	Tyr	Asn	Asp	Ser
	210					215					220				
Pro	Glu	Leu	Arg	Arg	Val	Ala	Gln	Ala	Gln	Lys	Ala	Leu	Ser	Asp	Val
225					230					235					240
Ala	Tyr	Lys	Lys	Gly	Leu	Ala	Glu	Gln	Gln	Ala	Gln	Phe	Thr	Pro	Leu
				245					250					255	
Ala	Asp	Pro	Pro	Asp	Ile	Glu	Phe	Ala	Lys	Lys	Val	Thr	Asn	Gln	Val
			260					265					270		
Ser	Lys	Gln	Lys	Tyr	Lys	Glu	Asp	Tyr	Glu	Asn	Lys	Ile	Lys	Gly	Lys
		275					280					285			
Trp	Ser	Glu	Thr	Pro	Cys	Phe	Glu	Val	Ala	Asn	Ala	Arg	Met	Asn	Ala
	290					295					300				
Asp	Asn	Ile	Ser	Thr	Arg	Lys	Tyr	Gln	Glu	Asp	Phe	Glu	Asn	Met	Lys
305					310					315					320

Asp Gln Ile Tyr Phe Met Gln Thr Glu Thr Pro Glu Tyr Lys Met Asn
325 330 335

Lys Lys Ala Gly Val Ala Ala Ser Lys Val Lys Tyr Lys Glu Asp Tyr
340 345 350

Glu Lys Asn Lys Gly Lys Ala Asp Tyr Asn Val Leu Pro Ala Ser Glu
355 360 365

Asn Pro Gln Leu Arg Gln Leu Lys Ala Ala Gly Asp Ala Leu Ser Asp
370 375 380

Lys Leu Tyr Lys Glu Asn Tyr Glu Lys Thr Lys Ala Lys Ser Ile Asn
385 390 395 400

Tyr Cys Glu Thr Pro Lys Phe Lys Leu Asp Thr Val Leu Gln Asn Phe
405 410 415

Ser Ser Asp Lys Lys Tyr Lys Asp Ser Tyr Leu Lys Asp Ile Leu Gly
420 425 430

His Tyr Val Gly Ser Phe Glu Asp Pro Tyr His Ser His Cys Met Lys
435 440 445

Val Thr Ala Gln Asn Ser Asp Lys Asn Tyr Lys Ala Glu Tyr Glu Glu
450 455 460

Asp Arg Gly Lys Gly Phe Phe Pro Gln Thr Ile Thr Gln Glu Tyr Glu
465 470 475 480

Ala Ile Lys Lys Leu Asp Gln Cys Lys Asp His Thr Tyr Lys Val His
485 490 495

Pro Asp Lys Thr Lys Phe Thr Gln Val Thr Asp Ser Pro Val Leu Leu
500 505 510

Gln Ala Gln Val Asn Ser Lys Gln Leu Ser Asp Leu Asn Tyr Lys Ala
515 520 525

Lys His Glu Ser Glu Lys Phe Lys Cys His Ile Pro Pro Asp Thr Pro

530

535

540

Ala Phe Ile Gln His Lys Val Asn Ala Tyr Asn Leu Ser Asp Asn Leu
 545 550 555 560

Tyr Lys Gln Asp Trp Glu Lys Ser Lys Ala Lys Lys Phe Asp Ile Lys
 565 570 575

Val Asp Ala Ile Pro Leu Leu Ala Ala Lys Ala Asn Thr Lys Asn Thr
 580 585 590

Ser Asp Val Met Tyr Lys Lys Asp Tyr Glu Lys Asn Lys Gly Lys Met
 595 600 605

Ile Gly Val Leu Ser Ile Asn Asp Asp Pro Lys Met Leu His Ser Leu
 610 615 620

Lys Val Ala Lys Asn Gln Ser Asp Arg Leu Tyr Lys Glu Asn Tyr Glu
 625 630 635 640

Lys Thr Lys Ala Lys Ser Met Asn Tyr Cys Glu Thr Pro Lys Tyr Gln
 645 650 655

Leu Asp Thr Gln Leu Lys Asn Phe Ser Glu Ala Arg Tyr Lys Asp Leu
 660 665 670

Tyr Val Lys Asp Val Leu Gly His Tyr Val Gly Ser Met Glu Asp Pro
 675 680 685

Tyr His Thr His Cys Met Lys Val Ala Ala Gln Asn Ser Asp Lys Ser
 690 695 700

Tyr Lys Ala Glu Tyr Glu Glu Asp Lys Gly Lys Cys Tyr Phe Pro Gln
 705 710 715 720

Thr Ile Thr Gln Glu Tyr Glu Ala Ile Lys Lys Leu Asp Gln Cys Lys
 725 730 735

Asp His Thr Tyr Lys Val His Pro Asp Lys Thr Lys Phe Thr Ala Val
 740 745 750

Thr Asp Ser Pro Val Leu Leu Gln Ala Gln Leu Asn Thr Lys Gln Leu
755 760 765

Ser Asp Leu Asn Tyr Lys Ala Lys His Glu Gly Glu Lys Phe Lys Cys
770 775 780

His Ile Pro Ala Asp Ala Pro Gln Phe Ile Gln His Arg Val Asn Ala
785 790 795 800

Tyr Asn Leu Ser Asp Asn Val Tyr Lys Gln Asp Trp Glu Lys Ser Lys
805 810 815

Ala Lys Lys Phe Asp Ile Lys Val Asp Ala Ile Pro Leu Leu Ala Ala
820 825 830

Lys Ala Asn Thr Lys Asn Thr Ser Asp Val Met Tyr Lys Lys Asp Tyr
835 840 845

Glu Lys Ser Lys Gly Lys Met Ile Gly Ala Leu Ser Ile Asn Asp Asp
850 855 860

Pro Lys Met Leu His Ser Leu Lys Thr Ala Lys Asn Gln Ser Asp Arg
865 870 875 880

Glu Tyr Arg Lys Asp Tyr Glu Lys Ser Lys Thr Ile Tyr Thr Ala Pro
885 890 895

Leu Asp Met Leu Gln Val Thr Gln Ala Lys Lys Ser Gln Ala Ile Ala
900 905 910

Ser Asp Val Asp Tyr Lys His Ile Leu His Ser Tyr Ser Tyr Pro Pro
915 920 925

Asp Ser Ile Asn Val Asp Leu Ala Lys Lys Ala Tyr Ala Leu Gln Ser
930 935 940

Asp Val Glu Tyr Lys Ala Asp Tyr Asn Ser Trp Met Lys Gly Cys Gly
945 950 955 960

Trp Val Pro Phe Gly Ser Leu Glu Met Glu Lys Ala Lys Arg Ala Ser

965

970

975

Asp Ile Leu Asn Glu Lys Lys Tyr Arg Gln His Pro Asp Thr Leu Lys
 980 985 990

Phe Thr Ser Ile Glu Asp Ala Pro Ile Thr Val Gln Ser Lys Ile Asn
 995 1000 1005

Gln Ala Gln Arg Ser Asp Ile Ala Tyr Lys Ala Lys Gly Glu Glu
 1010 1015 1020

Ile Ile His Lys Tyr Asn Leu Pro Pro Asp Leu Pro Gln Phe Ile
 1025 1030 1035

Gln Ala Lys Val Asn Ala Tyr Asn Ile Ser Glu Asn Met Tyr Lys
 1040 1045 1050

Ala Asp Leu Lys Asp Leu Ser Lys Lys Gly Tyr Asp Leu Arg Thr
 1055 1060 1065

Asp Ala Ile Pro Ile Arg Ala Ala Lys Ala Ala Arg Gln Ala Ala
 1070 1075 1080

Ser Asp Val Gln Tyr Lys Lys Asp Tyr Glu Lys Ala Lys Gly Lys
 1085 1090 1095

Met Val Gly Phe Gln Ser Leu Gln Asp Asp Pro Lys Leu Val His
 1100 1105 1110

Tyr Met Asn Val Ala Lys Ile Gln Ser Asp Arg Glu Tyr Lys Lys
 1115 1120 1125

Asp Tyr Glu Lys Thr Lys Ser Lys Tyr Asn Thr Pro His Asp Met
 1130 1135 1140

Phe Asn Val Val Ala Ala Lys Lys Ala Gln Asp Val Val Ser Asn
 1145 1150 1155

Val Asn Tyr Lys His Ser Leu His His Tyr Thr Tyr Leu Pro Asp
 1160 1165 1170

Ala Met Asp Leu Glu Leu Ser Lys Asn Met Met Gln Ile Gln Ser
1175 1180 1185

Asp Asn Val Tyr Lys Glu Asp Tyr Asn Asn Trp Met Lys Gly Ile
1190 1195 1200

Gly Trp Ile Pro Ile Gly Ser Leu Asp Val Glu Lys Val Lys Lys
1205 1210 1215

Ala Gly Asp Ala Leu Asn Glu Lys Lys Tyr Arg Gln His Pro Asp
1220 1225 1230

Thr Leu Lys Phe Thr Ser Ile Val Asp Ser Pro Val Met Val Gln
1235 1240 1245

Ala Lys Gln Asn Thr Lys Gln Val Ser Asp Ile Leu Tyr Lys Ala
1250 1255 1260

Lys Gly Glu Asp Val Lys His Lys Tyr Thr Met Ser Pro Asp Leu
1265 1270 1275

Pro Gln Phe Leu Gln Ala Lys Cys Asn Ala Tyr Asn Ile Ser Asp
1280 1285 1290

Val Cys Tyr Lys Arg Asp Trp Tyr Asp Leu Ile Ala Lys Gly Asn
1295 1300 1305

Asn Val Leu Gly Asp Ala Ile Pro Ile Thr Ala Ala Lys Ala Ser
1310 1315 1320

Arg Asn Ile Ala Ser Asp Tyr Lys Tyr Lys Glu Ala Tyr Glu Lys
1325 1330 1335

Ser Lys Gly Lys His Val Gly Phe Arg Ser Leu Gln Asp Asp Pro
1340 1345 1350

Lys Leu Val His Tyr Met Asn Val Ala Lys Leu Gln Ser Asp Arg
1355 1360 1365

Glu Tyr Lys Lys Asn Tyr Glu Asn Thr Lys Thr Ser Tyr His Thr

1370

1375

1380

Pro Gly Asp Met Val Ser Ile Thr Ala Ala Lys Met Ala Gln Asp
 1385 1390 1395

Val Ala Thr Asn Val Asn Tyr Lys Gln Pro Leu His His Tyr Thr
 1400 1405 1410

Tyr Leu Pro Asp Ala Met Ser Leu Glu His Thr Arg Asn Val Asn
 1415 1420 1425

Gln Ile Gln Ser Asp Asn Val Tyr Lys Asp Glu Tyr Asn Ser Phe
 1430 1435 1440

Leu Lys Gly Ile Gly Trp Ile Pro Ile Gly Ser Leu Glu Val Glu
 1445 1450 1455

Lys Val Lys Lys Ala Gly Asp Ala Leu Asn Glu Arg Lys Tyr Arg
 1460 1465 1470

Gln His Pro Asp Thr Val Lys Phe Thr Ser Val Pro Asp Ser Met
 1475 1480 1485

Gly Met Val Leu Ala Gln His Asn Thr Lys Gln Leu Ser Asp Leu
 1490 1495 1500

Asn Tyr Lys Val Glu Gly Glu Lys Leu Lys His Lys Tyr Thr Ile
 1505 1510 1515

Asp Pro Glu Leu Pro Gln Phe Ile Gln Ala Lys Val Asn Ala Leu
 1520 1525 1530

Asn Met Ser Asp Ala His Tyr Lys Ala Asp Trp Lys Lys Thr Ile
 1535 1540 1545

Ala Lys Gly Tyr Asp Leu Arg Pro Asp Ala Ile Pro Ile Val Ala
 1550 1555 1560

Ala Lys Ser Ser Arg Asn Ile Ala Ser Asp Cys Lys Tyr Lys Glu
 1565 1570 1575

Ala Tyr Glu Lys Ala Lys Gly Lys Gln Val Gly Phe Leu Ser Leu
1580 1585 1590

Gln Asp Asp Pro Lys Leu Val His Tyr Met Asn Val Ala Lys Ile
1595 1600 1605

Gln Ser Asp Arg Glu Tyr Lys Lys Gly Tyr Glu Ala Ser Lys Thr
1610 1615 1620

Lys Tyr His Thr Pro Leu Asp Met Val Ser Val Thr Ala Ala Lys
1625 1630 1635

Lys Ser Gln Glu Val Ala Thr Asn Ala Asn Tyr Arg Gln Ser Tyr
1640 1645 1650

His His Tyr Thr Leu Leu Pro Asp Ala Leu Asn Val Glu His Ser
1655 1660 1665

Arg Asn Ala Met Gln Ile Gln Ser Asp Asn Leu Tyr Lys Ser Asp
1670 1675 1680

Phe Thr Asn Trp Met Lys Gly Ile Gly Trp Val Pro Ile Glu Ser
1685 1690 1695

Leu Glu Val Glu Lys Ala Lys Lys Ala Gly Glu Ile Leu Ser Glu
1700 1705 1710

Lys Lys Tyr Arg Gln His Pro Glu Lys Leu Lys Phe Thr Tyr Ala
1715 1720 1725

Met Asp Thr Met Glu Gln Ala Leu Asn Lys Ser Asn Lys Leu Asn
1730 1735 1740

Met Asp Lys Arg Leu Tyr Thr Glu Lys Trp Asn Lys Asp Lys Thr
1745 1750 1755

Thr Ile His Val Met Pro Asp Thr Pro Asp Ile Leu Leu Ser Arg
1760 1765 1770

Val Asn Gln Ile Thr Met Ser Asp Lys Leu Tyr Lys Ala Gly Trp

1775	1780	1785
Glu Glu Glu Lys Lys Lys Gly Tyr Asp Leu Arg Pro Asp Ala Ile 1790 1795 1800		
Ala Ile Lys Ala Ala Arg Ala Ser Arg Asp Ile Ala Ser Asp Tyr 1805 1810 1815		
Lys Tyr Lys Lys Ala Tyr Glu Gln Ala Lys Gly Lys His Ile Gly 1820 1825 1830		
Phe Arg Ser Leu Glu Asp Asp Pro Lys Leu Val His Phe Met Gln 1835 1840 1845		
Val Ala Lys Met Gln Ser Asp Arg Glu Tyr Lys Lys Gly Tyr Glu 1850 1855 1860		
Lys Ser Lys Thr Ser Phe His Thr Pro Val Asp Met Leu Ser Val 1865 1870 1875		
Val Ala Ala Lys Lys Ser Gln Glu Val Ala Thr Asn Ala Asn Tyr 1880 1885 1890		
Arg Asn Val Ile His Thr Tyr Asn Met Leu Pro Asp Ala Met Ser 1895 1900 1905		
Phe Glu Leu Ala Lys Asn Met Met Gln Ile Gln Ser Asp Asn Gln 1910 1915 1920		
Tyr Lys Ala Asp Tyr Ala Asp Phe Met Lys Gly Ile Gly Trp Leu 1925 1930 1935		
Pro Leu Gly Ser Leu Glu Ala Glu Lys Asn Lys Lys Ala Met Glu 1940 1945 1950		
Ile Ile Ser Glu Lys Lys Tyr Arg Gln His Pro Asp Thr Leu Lys 1955 1960 1965		
Tyr Ser Thr Leu Met Asp Ser Met Asn Met Val Leu Ala Gln Asn 1970 1975 1980		

Asn Ala Lys Ile Met Asn Glu His Leu Tyr Lys Gln Ala Trp Glu
1985 1990 1995

Ala Asp Lys Thr Lys Val His Ile Met Pro Asp Ile Pro Gln Ile
2000 2005 2010

Ile Leu Ala Lys Ala Asn Ala Ile Asn Met Ser Asp Lys Leu Tyr
2015 2020 2025

Lys Leu Ser Leu Glu Glu Ser Lys Lys Lys Gly Tyr Asp Leu Arg
2030 2035 2040

Pro Asp Ala Ile Pro Ile Lys Ala Ala Lys Ala Ser Arg Asp Ile
2045 2050 2055

Ala Ser Asp Tyr Lys Tyr Lys Tyr Asn Tyr Glu Lys Gly Lys Gly
2060 2065 2070

Lys Met Val Gly Phe Arg Ser Leu Glu Asp Asp Pro Lys Leu Val
2075 2080 2085

His Ser Met Gln Val Ala Lys Met Gln Ser Asp Arg Glu Tyr Lys
2090 2095 2100

Lys Asn Tyr Glu Asn Thr Lys Thr Ser Tyr His Thr Pro Ala Asp
2105 2110 2115

Met Leu Ser Val Thr Ala Ala Lys Asp Ala Gln Ala Asn Ile Thr
2120 2125 2130

Asn Thr Asn Tyr Lys His Leu Ile His Lys Tyr Ile Leu Leu Pro
2135 2140 2145

Asp Ala Met Asn Ile Glu Leu Thr Arg Asn Met Asn Arg Ile Gln
2150 2155 2160

Ser Asp Asn Glu Tyr Lys Gln Asp Tyr Asn Glu Trp Tyr Lys Gly
2165 2170 2175

Leu Gly Trp Ser Pro Ala Gly Ser Leu Glu Val Glu Lys Ala Lys

2180

2185

2190

Lys Ala Thr Glu Tyr Ala Ser Asp Gln Lys Tyr Arg Gln His Pro
 2195 2200 2205

Ser Asn Phe Gln Phe Lys Lys Leu Thr Asp Ser Met Asp Met Val
 2210 2215 2220

Leu Ala Lys Gln Asn Ala His Thr Met Asn Lys His Leu Tyr Thr
 2225 2230 2235

Ile Asp Trp Asn Lys Asp Lys Thr Lys Ile His Val Met Pro Asp
 2240 2245 2250

Thr Pro Asp Ile Leu Gln Ala Lys Gln Asn Gln Thr Leu Tyr Ser
 2255 2260 2265

Gln Lys Leu Tyr Lys Leu Gly Trp Glu Glu Ala Leu Lys Lys Gly
 2270 2275 2280

Tyr Asp Leu Pro Val Asp Ala Ile Ser Val Gln Leu Ala Lys Ala
 2285 2290 2295

Ser Arg Asp Ile Ala Ser Asp Tyr Lys Tyr Lys Gln Gly Tyr Arg
 2300 2305 2310

Lys Gln Leu Gly His His Val Gly Phe Arg Ser Leu Gln Asp Asp
 2315 2320 2325

Pro Lys Leu Val Leu Ser Met Asn Val Ala Lys Met Gln Ser Glu
 2330 2335 2340

Arg Glu Tyr Lys Lys Asp Phe Glu Lys Trp Lys Thr Lys Phe Ser
 2345 2350 2355

Ser Pro Val Asp Met Leu Gly Val Val Leu Ala Lys Lys Cys Gln
 2360 2365 2370

Glu Leu Val Ser Asp Val Asp Tyr Lys Asn Tyr Leu His Gln Trp
 2375 2380 2385

Thr Cys Leu Pro Asp Gln Asn Asp Val Val Gln Ala Lys Lys Val
2390 2395 2400

Tyr Glu Leu Gln Ser Glu Asn Leu Tyr Lys Ser Asp Leu Glu Trp
2405 2410 2415

Leu Arg Gly Ile Gly Trp Ser Pro Leu Gly Ser Leu Glu Ala Glu
2420 2425 2430

Lys Asn Lys Arg Ala Ser Glu Ile Ile Ser Glu Lys Lys Tyr Arg
2435 2440 2445

Gln Pro Pro Asp Arg Asn Lys Phe Thr Ser Ile Pro Asp Ala Met
2450 2455 2460

Asp Ile Val Leu Ala Lys Thr Asn Ala Lys Asn Arg Ser Asp Arg
2465 2470 2475

Leu Tyr Arg Glu Ala Trp Asp Lys Asp Lys Thr Gln Ile His Ile
2480 2485 2490

Met Pro Asp Thr Pro Asp Ile Val Leu Ala Lys Ala Asn Leu Ile
2495 2500 2505

Asn Thr Ser Asp Lys Leu Tyr Arg Met Gly Tyr Glu Glu Leu Lys
2510 2515 2520

Arg Lys Gly Tyr Asp Leu Pro Val Asp Ala Ile Pro Ile Lys Ala
2525 2530 2535

Ala Lys Ala Ser Arg Glu Ile Ala Ser Glu Tyr Lys Tyr Lys Glu
2540 2545 2550

Gly Phe Arg Lys Gln Leu Gly His His Ile Gly Ala Arg Asn Ile
2555 2560 2565

Glu Asp Asp Pro Lys Met Met Trp Ser Met His Val Ala Lys Ile
2570 2575 2580

Gln Ser Asp Arg Glu Tyr Lys Lys Asp Phe Glu Lys Trp Lys Thr

2585

2590

2595

Lys Phe Ser Ser Pro Val Asp Met Leu Gly Val Val Leu Ala Lys
 2600 2605 2610

Lys Cys Gln Thr Leu Val Ser Asp Val Asp Tyr Lys Asn Tyr Leu
 2615 2620 2625

His Gln Trp Thr Cys Leu Pro Asp Gln Ser Asp Val Ile His Ala
 2630 2635 2640

Arg Gln Ala Tyr Asp Leu Gln Ser Asp Asn Leu Tyr Lys Ser Asp
 2645 2650 2655

Leu Gln Trp Leu Lys Gly Ile Gly Trp Met Thr Ser Gly Ser Leu
 2660 2665 2670

Glu Asp Glu Lys Asn Lys Arg Ala Thr Gln Ile Leu Ser Asp His
 2675 2680 2685

Val Tyr Arg Gln His Pro Asp Gln Phe Lys Phe Ser Ser Leu Met
 2690 2695 2700

Asp Ser Ile Pro Met Val Leu Ala Lys Asn Asn Ala Ile Thr Met
 2705 2710 2715

Asn His Arg Leu Tyr Thr Glu Ala Trp Asp Lys Asp Lys Thr Thr
 2720 2725 2730

Val His Ile Met Pro Asp Thr Pro Glu Val Leu Leu Ala Lys Gln
 2735 2740 2745

Asn Lys Val Asn Tyr Ser Glu Lys Leu Tyr Lys Leu Gly Leu Glu
 2750 2755 2760

Glu Ala Lys Arg Lys Gly Tyr Asp Met Arg Val Asp Ala Ile Pro
 2765 2770 2775

Ile Lys Ala Ala Lys Ala Ser Arg Asp Ile Ala Ser Glu Phe Lys
 2780 2785 2790

Tyr Lys Glu Gly Tyr Arg Lys Gln Leu Gly His His Ile Gly Ala
2795 2800 2805

Arg Ala Ile Arg Asp Asp Pro Lys Met Met Trp Ser Met His Val
2810 2815 2820

Ala Lys Ile Gln Ser Asp Arg Glu Tyr Lys Lys Asp Phe Glu Lys
2825 2830 2835

Trp Lys Thr Lys Phe Ser Ser Pro Val Asp Met Leu Gly Val Val
2840 2845 2850

Leu Ala Lys Lys Cys Gln Thr Leu Val Ser Asp Val Asp Tyr Lys
2855 2860 2865

Asn Tyr Leu His Gln Trp Thr Cys Leu Pro Asp Gln Ser Asp Val
2870 2875 2880

Ile His Ala Arg Gln Ala Tyr Asp Leu Gln Ser Asp Asn Met Tyr
2885 2890 2895

Lys Ser Asp Leu Gln Trp Met Arg Gly Ile Gly Trp Val Ser Ile
2900 2905 2910

Gly Ser Leu Asp Val Glu Lys Cys Lys Arg Ala Thr Glu Ile Leu
2915 2920 2925

Ser Asp Lys Ile Tyr Arg Gln Pro Pro Asp Arg Phe Lys Phe Thr
2930 2935 2940

Ser Val Thr Asp Ser Leu Glu Gln Val Leu Ala Lys Asn Asn Ala
2945 2950 2955

Ile Thr Met Asn Lys Arg Leu Tyr Thr Glu Ala Trp Asp Lys Asp
2960 2965 2970

Lys Thr Gln Ile His Ile Met Pro Asp Thr Pro Glu Ile Met Leu
2975 2980 2985

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

2990

2995

3000

Ala Asn Glu Glu Ala Lys Lys Lys Gly Tyr Asp Leu Arg Ser Asp
3005 3010 3015

Ala Ile Pro Ile Val Ala Ala Lys Ala Ser Arg Asp Val Ile Ser
3020 3025 3030

Asp Tyr Lys Tyr Lys Asp Gly Tyr Arg Lys Gln Leu Gly His His
3035 3040 3045

Ile Gly Ala Arg Asn Ile Glu Asp Asp Pro Lys Met Met Trp Ser
3050 3055 3060

Met His Val Ala Lys Ile Gln Ser Asp Arg Glu Tyr Lys Lys Asp
3065 3070 3075

Phe Glu Lys Trp Lys Thr Lys Phe Ser Ser Pro Val Asp Met Leu
3080 3085 3090

Gly Val Val Leu Ala Lys Lys Cys Gln Thr Leu Val Ser Asp Val
3095 3100 3105

Asp Tyr Lys Asn Tyr Leu His Glu Trp Thr Cys Leu Pro Asp Gln
3110 3115 3120

Asn Asp Val Ile His Ala Arg Gln Ala Tyr Asp Leu Gln Ser Asp
3125 3130 3135

Asn Ile Tyr Lys Ser Asp Leu Gln Trp Leu Arg Gly Ile Gly Trp
3140 3145 3150

Val Pro Ile Gly Ser Met Asp Val Val Lys Cys Lys Arg Ala Ala
3155 3160 3165

Glu Ile Leu Ser Asp Asn Ile Tyr Arg Gln Pro Pro Asp Lys Leu
3170 3175 3180

Lys Phe Thr Ser Val Thr Asp Ser Leu Glu Gln Val Leu Ala Lys
3185 3190 3195

Asn Asn Ala Leu Asn Met Asn Lys Arg Leu Tyr Thr Glu Ala Trp
3200 3205 3210

Asp Lys Asp Lys Thr Gln Val His Ile Met Pro Asp Thr Pro Glu
3215 3220 3225

Ile Met Leu Ala Arg Gln Asn Lys Ile Asn Tyr Ser Glu Ser Leu
3230 3235 3240

Tyr Arg Gln Ala Met Glu Glu Ala Lys Lys Glu Gly Tyr Asp Leu
3245 3250 3255

Arg Ser Asp Ala Ile Pro Ile Val Ala Ala Lys Ala Ser Arg Asp
3260 3265 3270

Ile Ala Ser Asp Tyr Lys Tyr Lys Glu Ala Tyr Arg Lys Gln Leu
3275 3280 3285

Gly His His Ile Gly Ala Arg Ala Val His Asp Asp Pro Lys Ile
3290 3295 3300

Met Trp Ser Leu His Ile Ala Lys Val Gln Ser Asp Arg Glu Tyr
3305 3310 3315

Lys Lys Asp Phe Glu Lys Tyr Lys Thr Arg Tyr Ser Ser Pro Val
3320 3325 3330

Asp Met Leu Gly Ile Val Leu Ala Lys Lys Cys Gln Thr Leu Val
3335 3340 3345

Ser Asp Val Asp Tyr Lys His Pro Leu His Glu Trp Ile Cys Leu
3350 3355 3360

Pro Asp Gln Asn Asp Ile Ile His Ala Arg Lys Ala Tyr Asp Leu
3365 3370 3375

Gln Ser Asp Asn Leu Tyr Lys Ser Asp Leu Glu Trp Met Lys Gly
3380 3385 3390

Ile Gly Trp Val Pro Ile Asp Ser Leu Glu Val Val Arg Ala Lys

3395		3400		3405
Arg Ala Gly Glu Leu Leu Ser Asp Thr Ile Tyr Arg Gln Arg Pro	3410	3415		3420
Glu Thr Leu Lys Phe Thr Ser Ile Thr Asp Thr Pro Glu Gln Val	3425	3430		3435
Leu Ala Lys Asn Asn Ala Leu Asn Met Asn Lys Arg Leu Tyr Thr	3440	3445		3450
Glu Ala Trp Asp Asn Asp Lys Lys Thr Ile His Val Met Pro Asp	3455	3460		3465
Thr Pro Glu Ile Met Leu Ala Lys Leu Asn Arg Ile Asn Tyr Ser	3470	3475		3480
Asp Lys Leu Tyr Lys Leu Ala Leu Glu Glu Ser Lys Lys Glu Gly	3485	3490		3495
Tyr Asp Leu Arg Leu Asp Ala Ile Pro Ile Gln Ala Ala Lys Ala	3500	3505		3510
Ser Arg Asp Ile Ala Ser Asp Tyr Lys Tyr Lys Glu Gly Tyr Arg	3515	3520		3525
Lys Gln Leu Gly His His Ile Gly Ala Arg Asn Ile Lys Asp Asp	3530	3535		3540
Pro Lys Met Met Trp Ser Ile His Val Ala Lys Ile Gln Ser Asp	3545	3550		3555
Arg Glu Tyr Lys Lys Glu Phe Glu Lys Trp Lys Thr Lys Phe Ser	3560	3565		3570
Ser Pro Val Asp Met Leu Gly Val Val Leu Ala Lys Lys Cys Gln	3575	3580		3585
Ile Leu Val Ser Asp Ile Asp Tyr Lys His Pro Leu His Glu Trp	3590	3595		3600

Thr Cys Leu Pro Asp Gln Asn Asp Val Ile Gln Ala Arg Lys Ala
3605 3610 3615

Tyr Asp Leu Gln Ser Asp Ala Ile Tyr Lys Ser Asp Leu Glu Trp
3620 3625 3630

Leu Arg Gly Ile Gly Trp Val Pro Ile Gly Ser Val Glu Val Glu
3635 3640 3645

Lys Val Lys Arg Ala Gly Glu Ile Leu Ser Asp Arg Lys Tyr Arg
3650 3655 3660

Gln Pro Ala Asp Gln Leu Lys Phe Thr Cys Ile Thr Asp Thr Pro
3665 3670 3675

Glu Ile Val Leu Ala Lys Asn Asn Ala Leu Thr Met Ser Lys His
3680 3685 3690

Leu Tyr Thr Glu Ala Trp Asp Ala Asp Lys Thr Ser Ile His Val
3695 3700 3705

Met Pro Asp Thr Pro Asp Ile Leu Leu Ala Lys Ser Asn Ser Ala
3710 3715 3720

Asn Ile Ser Gln Lys Leu Tyr Thr Lys Gly Trp Asp Glu Ser Lys
3725 3730 3735

Met Lys Asp Tyr Asp Leu Arg Ala Asp Ala Ile Ser Ile Lys Ser
3740 3745 3750

Ala Lys Ala Ser Arg Asp Ile Ala Ser Asp Tyr Lys Tyr Lys Glu
3755 3760 3765

Ala Tyr Glu Lys Gln Lys Gly His His Ile Gly Ala Gln Ser Ile
3770 3775 3780

Glu Asp Asp Pro Lys Ile Met Cys Ala Ile His Ala Gly Lys Ile
3785 3790 3795

Gln Ser Glu Arg Glu Tyr Lys Lys Glu Phe Gln Lys Trp Lys Thr

3800

3805

3810

Lys Phe Ser Ser Pro Val Asp Met Leu Ser Ile Leu Leu Ala Lys
 3815 3820 3825

Lys Cys Gln Thr Leu Val Thr Asp Ile Asp Tyr Arg Asn Tyr Leu
 3830 3835 3840

His Glu Trp Thr Cys Met Pro Asp Gln Asn Asp Ile Ile Gln Ala
 3845 3850 3855

Lys Lys Ala Tyr Asp Leu Gln Ser Asp Ala Leu Tyr Lys Ala Asp
 3860 3865 3870

Leu Glu Trp Leu Arg Gly Ile Gly Trp Met Pro Gln Gly Ser Pro
 3875 3880 3885

Glu Val Leu Arg Val Lys Asn Ala Gln Asn Ile Phe Cys Asp Ser
 3890 3895 3900

Val Tyr Arg Thr Pro Val Val Asn Leu Lys Tyr Thr Ser Ile Val
 3905 3910 3915

Asp Thr Pro Glu Val Val Leu Ala Lys Ser Asn Ala Glu Asn Ile
 3920 3925 3930

Ser Ile Pro Lys Tyr Arg Glu Val Trp Asp Lys Asp Lys Thr Ser
 3935 3940 3945

Ile His Ile Met Pro Asp Thr Pro Glu Ile Asn Leu Ala Arg Ala
 3950 3955 3960

Asn Ala Leu Asn Val Ser Asn Lys Leu Tyr Arg Glu Gly Trp Asp
 3965 3970 3975

Glu Met Lys Ala Gly Cys Asp Val Arg Leu Asp Ala Ile Pro Ile
 3980 3985 3990

Gln Ala Ala Lys Ala Ser Arg Glu Ile Ala Ser Asp Tyr Lys Tyr
 3995 4000 4005

Lys Leu Asp His Glu Lys Gln Lys Gly His Tyr Val Gly Thr Leu
4010 4015 4020

Thr Ala Arg Asp Asp Asn Lys Ile Arg Trp Ala Leu Ile Ala Asp
4025 4030 4035

Lys Leu Gln Asn Glu Arg Glu Tyr Arg Leu Asp Trp Ala Lys Trp
4040 4045 4050

Lys Ala Lys Ile Gln Ser Pro Val Asp Met Leu Ser Ile Leu His
4055 4060 4065

Ser Lys Asn Ser Gln Ala Leu Val Ser Asp Met Asp Tyr Arg Asn
4070 4075 4080

Tyr Leu His Gln Trp Thr Cys Met Pro Asp Gln Asn Asp Val Ile
4085 4090 4095

Gln Ala Lys Lys Ala Tyr Glu Leu Gln Ser Asp Asn Val Tyr Lys
4100 4105 4110

Ala Asp Leu Glu Trp Leu Arg Gly Ile Gly Trp Met Pro Asn Asp
4115 4120 4125

Ser Val Ser Val Asn His Ala Lys His Ala Ala Asp Ile Phe Ser
4130 4135 4140

Glu Lys Lys Tyr Arg Thr Lys Ile Glu Thr Leu Asn Phe Thr Pro
4145 4150 4155

Val Asp Asp Arg Val Asp Tyr Val Thr Ala Lys Gln Ser Gly Glu
4160 4165 4170

Ile Leu Asp Asp Ile Lys Tyr Arg Lys Asp Trp Asn Ala Thr Lys
4175 4180 4185

Ser Lys Tyr Thr Leu Thr Glu Thr Pro Leu Leu His Thr Ala Gln
4190 4195 4200

Glu Ala Ala Arg Ile Leu Asp Gln Tyr Leu Tyr Lys Glu Gly Trp

4205						4210						4215			
Glu	Arg	Gln	Lys	Ala	Thr	Gly	Tyr	Ile	Leu	Pro	Pro	Asp	Ala	Val	
4220						4225					4230				
Pro	Phe	Val	His	Ala	His	His	Cys	Asn	Asp	Val	Gln	Ser	Glu	Leu	
4235						4240					4245				
Lys	Tyr	Lys	Ala	Glu	His	Val	Lys	Gln	Lys	Gly	His	Tyr	Val	Gly	
4250						4255					4260				
Val	Pro	Thr	Met	Arg	Asp	Asp	Pro	Lys	Leu	Val	Trp	Phe	Glu	His	
4265						4270					4275				
Ala	Gly	Gln	Ile	Gln	Asn	Glu	Arg	Leu	Tyr	Lys	Glu	Asp	Tyr	His	
4280						4285					4290				
Lys	Thr	Lys	Ala	Lys	Ile	Asn	Ile	Pro	Ala	Asp	Met	Val	Ser	Val	
4295						4300					4305				
Leu	Ala	Ala	Lys	Gln	Gly	Gln	Thr	Leu	Val	Ser	Asp	Ile	Asp	Tyr	
4310						4315					4320				
Arg	Asn	Tyr	Leu	His	Gln	Trp	Met	Cys	His	Pro	Asp	Gln	Asn	Asp	
4325						4330					4335				
Val	Ile	Gln	Ala	Arg	Lys	Ala	Tyr	Asp	Leu	Gln	Ser	Asp	Asn	Val	
4340						4345					4350				
Tyr	Arg	Ala	Asp	Leu	Glu	Trp	Leu	Arg	Gly	Ile	Gly	Trp	Ile	Pro	
4355						4360					4365				
Leu	Asp	Ser	Val	Asp	His	Val	Arg	Val	Thr	Lys	Asn	Gln	Glu	Met	
4370						4375					4380				
Met	Ser	Gln	Ile	Lys	Tyr	Lys	Lys	Asn	Ala	Leu	Glu	Asn	Tyr	Pro	
4385						4390					4395				
Asn	Phe	Arg	Ser	Val	Val	Asp	Pro	Pro	Glu	Ile	Val	Leu	Ala	Lys	
4400						4405					4410				

Ile Asn Ser Val Asn Gln Ser Asp Val Lys Tyr Lys Glu Thr Phe
4415 4420 4425

Asn Lys Ala Lys Gly Lys Tyr Thr Phe Ser Pro Asp Thr Pro His
4430 4435 4440

Ile Ser His Ser Lys Asp Met Gly Lys Leu Tyr Ser Thr Ile Leu
4445 4450 4455

Tyr Lys Gly Ala Trp Glu Gly Thr Lys Ala Tyr Gly Tyr Thr Leu
4460 4465 4470

Asp Glu Arg Tyr Ile Pro Ile Val Gly Ala Lys His Ala Asp Leu
4475 4480 4485

Val Asn Ser Glu Leu Lys Tyr Lys Glu Thr Tyr Glu Lys Gln Lys
4490 4495 4500

Gly His Tyr Leu Ala Gly Lys Val Ile Gly Glu Phe Pro Gly Val
4505 4510 4515

Val His Cys Leu Asp Phe Gln Lys Met Arg Ser Ala Leu Asn Tyr
4520 4525 4530

Arg Lys His Tyr Glu Asp Thr Lys Ala Asn Val His Ile Pro Asn
4535 4540 4545

Asp Met Met Asn His Val Leu Ala Lys Arg Cys Gln Tyr Ile Leu
4550 4555 4560

Ser Asp Leu Glu Tyr Arg His Tyr Phe His Gln Trp Thr Ser Leu
4565 4570 4575

Leu Glu Glu Pro Asn Val Ile Arg Val Arg Asn Ala Gln Glu Ile
4580 4585 4590

Leu Ser Asp Asn Val Tyr Lys Asp Asp Leu Asn Trp Leu Lys Gly
4595 4600 4605

Ile Gly Cys Tyr Val Trp Asp Thr Pro Gln Ile Leu His Ala Lys

4610						4615					4620			
Lys	Ser	Tyr	Asp	Leu	Gln	Ser	Gln	Leu	Gln	Tyr	Thr	Ala	Ala	Gly
4625						4630					4635			
Lys	Glu	Asn	Leu	Gln	Asn	Tyr	Asn	Leu	Val	Thr	Asp	Thr	Pro	Leu
4640						4645					4650			
Tyr	Val	Thr	Ala	Val	Gln	Ser	Gly	Ile	Asn	Ala	Ser	Glu	Val	Lys
4655						4660					4665			
Tyr	Lys	Glu	Asn	Tyr	His	Gln	Ile	Lys	Asp	Lys	Tyr	Thr	Thr	Val
4670						4675					4680			
Leu	Glu	Thr	Val	Asp	Tyr	Asp	Arg	Thr	Arg	Asn	Leu	Lys	Asn	Leu
4685						4690					4695			
Tyr	Ser	Ser	Asn	Leu	Tyr	Lys	Glu	Ala	Trp	Asp	Arg	Val	Lys	Ala
4700						4705					4710			
Thr	Ser	Tyr	Ile	Leu	Pro	Ser	Ser	Thr	Leu	Ser	Leu	Thr	His	Ala
4715						4720					4725			
Lys	Asn	Gln	Lys	His	Leu	Ala	Ser	His	Ile	Lys	Tyr	Arg	Glu	Glu
4730						4735					4740			
Tyr	Glu	Lys	Phe	Lys	Ala	Leu	Tyr	Thr	Leu	Pro	Arg	Ser	Val	Asp
4745						4750					4755			
Asp	Asp	Pro	Asn	Thr	Ala	Arg	Cys	Leu	Arg	Val	Gly	Lys	Leu	Asn
4760						4765					4770			
Ile	Asp	Arg	Leu	Tyr	Arg	Ser	Val	Tyr	Glu	Lys	Asn	Lys	Met	Lys
4775						4780					4785			
Ile	His	Ile	Val	Pro	Asp	Met	Val	Glu	Met	Val	Thr	Ala	Lys	Asp
4790						4795					4800			
Ser	Gln	Lys	Lys	Val	Ser	Glu	Ile	Asp	Tyr	Arg	Leu	Arg	Leu	His
4805						4810					4815			

Glu Trp Ile Cys His Pro Asp Leu Gln Val Asn Asp His Val Arg
4820 4825 4830

Lys Val Thr Asp Gln Ile Ser Asp Ile Val Tyr Lys Asp Asp Leu
4835 4840 4845

Asn Trp Leu Lys Gly Ile Gly Cys Tyr Val Trp Asp Thr Pro Glu
4850 4855 4860

Ile Leu His Ala Lys His Ala Tyr Asp Leu Arg Asp Asp Ile Lys
4865 4870 4875

Tyr Lys Ala His Met Leu Lys Thr Arg Asn Asp Tyr Lys Leu Val
4880 4885 4890

Thr Asp Thr Pro Val Tyr Val Gln Ala Val Lys Ser Gly Lys Gln
4895 4900 4905

Leu Ser Asp Ala Val Tyr His Tyr Asp Tyr Val His Ser Val Arg
4910 4915 4920

Gly Lys Val Ala Pro Thr Thr Lys Thr Val Asp Leu Asp Arg Ala
4925 4930 4935

Leu His Ala Tyr Lys Leu Gln Ser Ser Asn Leu Tyr Lys Thr Ser
4940 4945 4950

Leu Arg Thr Leu Pro Thr Gly Tyr Arg Leu Pro Gly Asp Thr Pro
4955 4960 4965

His Phe Lys His Ile Lys Asp Thr Arg Tyr Met Ser Ser Tyr Phe
4970 4975 4980

Lys Tyr Lys Glu Ala Tyr Glu His Thr Lys Ala Tyr Gly Tyr Thr
4985 4990 4995

Leu Gly Pro Lys Asp Val Pro Phe Val His Val Arg Arg Val Asn
5000 5005 5010

Asn Val Thr Ser Glu Arg Leu Tyr Arg Glu Leu Tyr His Lys Leu

5015		5020		5025
Lys Asp 5030	Lys Ile His Thr	Thr Pro Asp Thr	Pro Glu Ile Arg Gln 5040	
Val Lys 5045	Lys Thr Gln Glu	Ala Val Ser Glu Leu	Ile Tyr Lys Ser 5055	
Asp Phe 5060	Phe Lys Met Gln	Gly His Met Ile Ser	Leu Pro Tyr Thr 5070	
Pro Gln 5075	Val Ile His Cys	Arg Tyr Val Gly Asp	Ile Thr Ser Asp 5085	
Ile Lys 5090	Tyr Lys Glu Asp	Leu Gln Val Leu Lys	Gly Phe Gly Cys 5100	
Phe Leu 5105	Tyr Asp Thr Pro	Asp Met Val Arg Ser	Arg His Leu Arg 5115	
Lys Leu 5120	Trp Ser Asn Tyr	Leu Tyr Thr Asp Lys	Ala Arg Lys Met 5130	
Arg Asp 5135	Lys Tyr Lys Val	Val Leu Asp Thr Pro	Glu Tyr Arg Lys 5145	
Val Gln 5150	Glu Leu Lys Thr	His Leu Ser Glu Leu	Val Tyr Arg Ala 5160	
Ala Gly 5165	Lys Lys Gln Lys	Ser Ile Phe Thr Ser	Val Pro Asp Thr 5175	
Pro Asp 5180	Leu Leu Arg Ala	Lys Arg Gly Gln Lys	Leu Gln Ser Gln 5190	
Tyr Leu 5195	Tyr Val Glu Leu	Ala Thr Lys Glu Arg	Pro His His His 5205	
Ala Gly 5210	Asn Gln Thr Thr	Ala Leu Lys His Ala	Lys Asp Val Lys 5220	

Asp Met Val Ser Glu Lys Lys Tyr Lys Ile Gln Tyr Glu Lys Met
5225 5230 5235

Lys Asp Lys Tyr Thr Pro Val Pro Asp Thr Pro Ile Leu Ile Arg
5240 5245 5250

Ala Lys Arg Ala Tyr Trp Asn Ala Ser Asp Leu Arg Tyr Lys Glu
5255 5260 5265

Thr Phe Gln Lys Thr Lys Gly Lys Tyr His Thr Val Lys Asp Ala
5270 5275 5280

Leu Asp Ile Val Tyr His Arg Lys Val Thr Asp Asp Ile Ser Lys
5285 5290 5295

Ile Lys Tyr Lys Glu Asn Tyr Met Ser Gln Leu Gly Ile Trp Arg
5300 5305 5310

Ser Ile Pro Asp Arg Pro Glu His Phe His His Arg Ala Val Thr
5315 5320 5325

Asp Thr Val Ser Asp Val Lys Tyr Lys Glu Asp Leu Thr Trp Leu
5330 5335 5340

Lys Gly Ile Gly Cys Tyr Ala Tyr Asp Thr Pro Asp Phe Thr Leu
5345 5350 5355

Ala Glu Lys Asn Lys Thr Leu Tyr Ser Lys Tyr Lys Tyr Lys Glu
5360 5365 5370

Val Phe Glu Arg Thr Lys Ser Asp Phe Lys Tyr Val Ala Asp Ser
5375 5380 5385

Pro Ile Asn Arg His Phe Lys Tyr Ala Thr Gln Leu Met Asn Glu
5390 5395 5400

Lys Lys Tyr Arg Ala Asp Tyr Glu Gln Arg Lys Asp Lys Tyr His
5405 5410 5415

Leu Val Val Asp Glu Pro Arg His Leu Leu Ala Lys Thr Ala Gly

5420

5425

5430

Asp Gln Ile Ser Gln Ile Lys Tyr Arg Lys Asn Tyr Glu Lys Ser
 5435 5440 5445

Lys Asp Lys Phe Thr Ser Ile Val Asp Thr Pro Glu His Leu Arg
 5450 5455 5460

Thr Thr Lys Val Asn Lys Gln Ile Ser Asp Ile Leu Tyr Lys Leu
 5465 5470 5475

Glu Tyr Asn Lys Ala Lys Pro Arg Gly Tyr Thr Thr Ile His Asp
 5480 5485 5490

Thr Pro Met Leu Leu His Val Arg Lys Val Lys Asp Glu Val Ser
 5495 5500 5505

Asp Leu Lys Tyr Lys Glu Val Tyr Gln Arg Asn Lys Ser Asn Cys
 5510 5515 5520

Thr Ile Glu Pro Asp Ala Val His Ile Lys Ala Ala Lys Asp Ala
 5525 5530 5535

Tyr Lys Val Asn Thr Asn Leu Asp Tyr Lys Lys Gln Tyr Glu Ala
 5540 5545 5550

Asn Lys Ala His Trp Lys Trp Thr Pro Asp Arg Pro Asp Phe Leu
 5555 5560 5565

Gln Ala Ala Lys Ser Ser Leu Gln Gln Ser Asp Phe Glu Tyr Lys
 5570 5575 5580

Leu Asp Arg Glu Phe Leu Lys Gly Cys Lys Leu Ser Val Thr Asp
 5585 5590 5595

Asp Lys Asn Thr Val Leu Ala Leu Arg Asn Thr Leu Ile Glu Ser
 5600 5605 5610

Asp Leu Lys Tyr Lys Glu Lys His Val Lys Glu Arg Gly Thr Cys
 5615 5620 5625

His Ala Val Pro Asp Thr Pro Gln Ile Leu Leu Ala Lys Thr Val
5630 5635 5640

Ser Asn Leu Val Ser Glu Asn Lys Tyr Lys Asp His Val Lys Lys
5645 5650 5655

His Leu Ala Gln Gly Ser Tyr Thr Thr Leu Pro Glu Thr Arg Asp
5660 5665 5670

Thr Val His Val Lys Glu Val Thr Lys His Val Ser Asp Thr Asn
5675 5680 5685

Tyr Lys Lys Lys Phe Val Lys Glu Lys Gly Lys Ser Asn Tyr Ser
5690 5695 5700

Ile Met Leu Glu Pro Pro Glu Val Lys His Ala Met Glu Val Ala
5705 5710 5715

Lys Lys Gln Ser Asp Val Ala Tyr Arg Lys Asp Ala Lys Glu Asn
5720 5725 5730

Leu His Tyr Thr Thr Val Ala Asp Arg Pro Asp Ile Lys Lys Ala
5735 5740 5745

Thr Gln Ala Ala Lys Gln Ala Ser Glu Val Glu Tyr Arg Ala Lys
5750 5755 5760

His Arg Lys Glu Gly Ser His Gly Leu Ser Met Leu Gly Arg Pro
5765 5770 5775

Asp Ile Glu Met Ala Lys Lys Ala Ala Lys Leu Ser Ser Gln Val
5780 5785 5790

Lys Tyr Arg Glu Asn Phe Asp Lys Glu Lys Gly Lys Thr Pro Lys
5795 5800 5805

Tyr Asn Pro Lys Asp Ser Gln Leu Tyr Lys Val Met Lys Asp Ala
5810 5815 5820

Asn Asn Leu Ala Ser Glu Val Lys Tyr Lys Ala Asp Leu Lys Lys

5825		5830		5835
Leu His 5840	Lys Pro Val Thr	Asp Met Lys Glu Ser 5845	Leu Ile Met Asn 5850	
His Val 5855	Leu Asn Thr Ser	Gln Leu Ala Ser Ser 5860	Tyr Gln Tyr Lys 5865	
Lys Lys 5870	Tyr Glu Lys Ser	Lys Gly His Tyr His 5875	Thr Ile Pro Asp 5880	
Asn Leu 5885	Glu Gln Leu His	Leu Lys Glu Ala Thr 5890	Glu Leu Gln Ser 5895	
Ile Val 5900	Lys Tyr Lys Glu	Lys Tyr Glu Lys Glu 5905	Arg Gly Lys Pro 5910	
Met Leu 5915	Asp Phe Glu Thr	Pro Thr Tyr Ile Thr 5920	Ala Lys Glu Ser 5925	
Gln Gln 5930	Met Gln Ser Gly	Lys Glu Tyr Arg Lys 5935	Asp Tyr Glu Glu 5940	
Ser Ile 5945	Lys Gly Arg Asn	Leu Thr Gly Leu Glu 5950	Val Thr Pro Ala 5955	
Leu Leu 5960	His Val Lys Tyr	Ala Thr Lys Ile Ala 5965	Ser Glu Lys Glu 5970	
Tyr Arg 5975	Lys Asp Leu Glu	Glu Ser Ile Arg Gly 5980	Lys Gly Leu Thr 5985	
Glu Met 5990	Glu Asp Thr Pro	Asp Met Leu Arg Ala 5995	Lys Asn Ala Thr 6000	
Gln Ile 6005	Leu Asn Glu Lys	Glu Tyr Lys Arg Asp 6010	Leu Glu Leu Glu 6015	
Val Lys 6020	Gly Arg Gly Leu	Asn Ala Met Ala Asn 6025	Glu Thr Pro Asp 6030	

Phe Met Arg Ala Arg Asn Ala Thr Asp Ile Ala Ser Gln Ile Lys
6035 6040 6045

Tyr Lys Gln Ser Ala Glu Met Glu Lys Ala Asn Phe Thr Ser Val
6050 6055 6060

Val Asp Thr Pro Glu Ile Ile His Ala Gln Gln Val Lys Asn Leu
6065 6070 6075

Ser Ser Gln Lys Lys Tyr Lys Glu Asp Ala Glu Lys Ser Met Ser
6080 6085 6090

Tyr Tyr Glu Thr Val Leu Asp Thr Pro Glu Ile Gln Arg Val Arg
6095 6100 6105

Glu Asn Gln Lys Asn Phe Ser Leu Leu Gln Tyr Gln Cys Asp Leu
6110 6115 6120

Lys Asn Ser Lys Gly Lys Ile Thr Val Val Gln Asp Thr Pro Glu
6125 6130 6135

Ile Leu Arg Val Lys Glu Asn Gln Lys Asn Phe Ser Ser Val Leu
6140 6145 6150

Tyr Lys Glu Asp Val Ser Pro Gly Thr Ala Ile Gly Lys Thr Pro
6155 6160 6165

Glu Met Met Arg Val Lys Gln Thr Gln Asp His Ile Ser Ser Val
6170 6175 6180

Lys Tyr Lys Glu Ala Ile Gly Gln Gly Thr Pro Ile Pro Asp Leu
6185 6190 6195

Pro Glu Val Lys Arg Val Lys Glu Thr Gln Lys His Ile Ser Ser
6200 6205 6210

Val Met Tyr Lys Glu Asn Leu Gly Thr Gly Ile Pro Thr Thr Val
6215 6220 6225

Thr Pro Glu Ile Glu Arg Val Lys Arg Asn Gln Glu Asn Phe Ser

6230						6235					6240			
Ser	Val	Leu	Tyr	Lys	Glu	Asn	Leu	Gly	Lys	Gly	Ile	Pro	Thr	Pro
6245						6250					6255			
Ile	Thr	Pro	Glu	Met	Glu	Arg	Val	Lys	Arg	Asn	Gln	Glu	Asn	Phe
6260						6265					6270			
Ser	Ser	Val	Leu	Tyr	Lys	Glu	Asn	Met	Gly	Lys	Gly	Thr	Pro	Leu
6275						6280					6285			
Ala	Val	Thr	Pro	Glu	Met	Glu	Arg	Val	Lys	His	Asn	Gln	Glu	Asn
6290						6295					6300			
Ile	Ser	Ser	Val	Leu	Tyr	Lys	Glu	Asn	Val	Gly	Lys	Ala	Thr	Ala
6305						6310					6315			
Thr	Pro	Val	Thr	Pro	Glu	Met	Gln	Arg	Val	Lys	Arg	Asn	Gln	Glu
6320						6325					6330			
Asn	Ile	Ser	Ser	Val	Leu	Tyr	Lys	Glu	Asn	Leu	Gly	Lys	Ala	Thr
6335						6340					6345			
Pro	Thr	Pro	Phe	Thr	Pro	Glu	Met	Glu	Arg	Val	Lys	Arg	Asn	Gln
6350						6355					6360			
Glu	Asn	Phe	Ser	Ser	Val	Leu	Tyr	Lys	Glu	Asn	Met	Arg	Lys	Ala
6365						6370					6375			
Thr	Pro	Thr	Pro	Val	Thr	Pro	Glu	Met	Glu	Arg	Ala	Lys	Arg	Asn
6380						6385					6390			
Gln	Glu	Asn	Ile	Ser	Ser	Val	Leu	Tyr	Ser	Asp	Ser	Phe	Arg	Lys
6395						6400					6405			
Gln	Ile	Gln	Gly	Lys	Ala	Ala	Tyr	Val	Leu	Asp	Thr	Pro	Glu	Met
6410						6415					6420			
Arg	Arg	Val	Arg	Glu	Thr	Gln	Arg	His	Ile	Ser	Thr	Val	Lys	Tyr
6425						6430					6435			

His Glu Asp Phe Glu Lys His Lys Gly Cys Phe Thr Pro Val Val
6440 6445 6450

Thr Asp Pro Ile Thr Glu Arg Val Lys Lys Asn Met Gln Asp Phe
6455 6460 6465

Ser Asp Ile Asn Tyr Arg Gly Ile Gln Arg Lys Val Val Glu Met
6470 6475 6480

Glu Gln Lys Arg Asn Asp Gln Asp Gln Glu Thr Ile Thr Gly Leu
6485 6490 6495

Arg Val Trp Arg Thr Asn Pro Gly Ser Val Phe Asp Tyr Asp Pro
6500 6505 6510

Ala Glu Asp Asn Ile Gln Ser Arg Ser Leu His Met Ile Asn Val
6515 6520 6525

Gln Ala Gln Arg Arg Ser Arg Glu Gln Ser Arg Ser Ala Ser Ala
6530 6535 6540

Leu Ser Ile Ser Gly Gly Glu Glu Lys Ser Glu His Ser Glu Ala
6545 6550 6555

Pro Asp His His Leu Ser Thr Tyr Ser Asp Gly Gly Val Phe Ala
6560 6565 6570

Val Ser Thr Ala Tyr Lys His Ala Lys Thr Thr Glu Leu Pro Gln
6575 6580 6585

Gln Arg Ser Ser Ser Val Ala Thr Gln Gln Thr Thr Val Ser Ser
6590 6595 6600

Ile Pro Ser His Pro Ser Thr Ala Gly Lys Ile Phe Arg Ala Met
6605 6610 6615

Tyr Asp Tyr Met Ala Ala Asp Ala Asp Glu Val Ser Phe Lys Asp
6620 6625 6630

Gly Asp Ala Ile Ile Asn Val Gln Ala Ile Asp Glu Gly Trp Met

6635

6640

6645

Tyr Gly Thr Val Gln Arg Thr Gly Arg Thr Gly Met Leu Pro Ala
 6650 6655 6660

Asn Tyr Val Glu Ala Ile
 6665

<210> 91
 <211> 868
 <212> PRT
 <213> Homo sapiens

<400> 91

Met Ala Thr Phe Ile Ser Val Gln Leu Lys Lys Thr Ser Glu Val Asp
 1 5 10 15

Leu Ala Lys Pro Leu Val Lys Phe Ile Gln Gln Thr Tyr Pro Ser Gly
 20 25 30

Gly Glu Glu Gln Ala Gln Tyr Cys Arg Ala Ala Glu Glu Leu Ser Lys
 35 40 45

Leu Arg Arg Ala Ala Val Gly Arg Pro Leu Asp Lys His Glu Gly Ala
 50 55 60

Leu Glu Thr Leu Leu Arg Tyr Tyr Asp Gln Ile Cys Ser Ile Glu Pro
 65 70 75 80

Lys Phe Pro Phe Ser Glu Asn Gln Ile Cys Leu Thr Phe Thr Trp Lys
 85 90 95

Asp Ala Phe Asp Lys Gly Ser Leu Phe Gly Gly Ser Val Lys Leu Ala
 100 105 110

Leu Ala Ser Leu Gly Tyr Glu Lys Ser Cys Val Leu Phe Asn Cys Ala
 115 120 125

Ala Leu Ala Ser Gln Ile Ala Ala Glu Gln Asn Leu Asp Asn Asp Glu
 130 135 140

Gly Leu Lys Ile Ala Ala Lys His Tyr Gln Phe Ala Ser Gly Ala Phe
145 150 155 160

Leu His Ile Lys Glu Thr Val Leu Ser Ala Leu Ser Arg Glu Pro Thr
165 170 175

Val Asp Ile Ser Pro Asp Thr Val Gly Thr Leu Ser Leu Ile Met Leu
180 185 190

Ala Gln Ala Gln Glu Val Phe Phe Leu Lys Ala Thr Arg Asp Lys Met
195 200 205

Lys Asp Ala Ile Ile Ala Lys Leu Ala Asn Gln Ala Ala Asp Tyr Phe
210 215 220

Gly Asp Ala Phe Lys Gln Cys Gln Tyr Lys Asp Thr Leu Pro Lys Glu
225 230 235 240

Val Phe Pro Val Leu Ala Ala Lys His Cys Ile Met Gln Ala Asn Ala
245 250 255

Glu Tyr His Gln Ser Ile Leu Ala Lys Gln Gln Lys Lys Phe Gly Glu
260 265 270

Glu Ile Ala Arg Leu Gln His Ala Ala Glu Leu Ile Lys Thr Val Ala
275 280 285

Ser Arg Tyr Asp Glu Tyr Val Asn Val Lys Asp Phe Ser Asp Lys Ile
290 295 300

Asn Arg Ala Leu Ala Ala Ala Lys Lys Asp Asn Asp Phe Ile Tyr His
305 310 315 320

Asp Arg Val Pro Asp Leu Lys Asp Leu Asp Pro Ile Gly Lys Ala Thr
325 330 335

Leu Val Lys Ser Thr Pro Val Asn Val Pro Ile Ser Gln Lys Phe Thr
340 345 350

Asp Leu Phe Glu Lys Met Val Pro Val Ser Val Gln Gln Ser Leu Ala
355 360 365

Ala Tyr Asn Gln Arg Lys Ala Asp Leu Val Asn Arg Ser Ile Ala Gln
370 375 380

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

Leu Pro Ala Ala Ile Glu Asp Val Ser Gly Asp Thr Val Pro Gln Ser
405 410 415

Ile Leu Thr Lys Ser Arg Ser Val Ile Glu Gln Gly Gly Ile Gln Thr
420 425 430

Val Asp Gln Leu Ile Lys Glu Leu Pro Glu Leu Leu Gln Arg Asn Arg
435 440 445

Glu Ile Leu Asp Glu Ser Leu Arg Leu Leu Asp Glu Glu Glu Ala Thr
450 455 460

Asp Asn Asp Leu Arg Ala Lys Phe Lys Glu Arg Trp Gln Arg Thr Pro
465 470 475 480

Ser Asn Glu Leu Tyr Lys Pro Leu Arg Ala Glu Gly Thr Asn Phe Arg
485 490 495

Thr Val Leu Asp Lys Ala Val Gln Ala Asp Gly Gln Val Lys Glu Cys
500 505 510

Tyr Gln Ser His Arg Asp Thr Ile Val Leu Leu Cys Lys Pro Glu Pro
515 520 525

Glu Leu Asn Ala Ala Ile Pro Ser Ala Asn Pro Ala Lys Thr Met Gln
530 535 540

Gly Ser Glu Val Val Asn Val Leu Lys Ser Leu Leu Ser Asn Leu Asp
545 550 555 560

Glu Val Lys Lys Glu Arg Glu Gly Leu Glu Asn Asp Leu Lys Ser Val
565 570 575

Asn Phe Asp Met Thr Ser Lys Phe Leu Thr Ala Leu Ala Gln Asp Gly
580 585 590

Val Ile Asn Glu Glu Ala Leu Ser Val Thr Glu Leu Asp Arg Val Tyr
595 600 605

Gly Gly Leu Thr Thr Lys Val Gln Glu Ser Leu Lys Lys Gln Glu Gly
610 615 620

Leu Leu Lys Asn Ile Gln Val Ser His Gln Glu Phe Ser Lys Met Lys
625 630 635 640

Gln Ser Asn Asn Glu Ala Asn Leu Arg Glu Glu Val Leu Lys Asn Leu
645 650 655

Ala Thr Ala Tyr Asp Asn Phe Val Glu Leu Val Ala Asn Leu Lys Glu
660 665 670

Gly Thr Lys Phe Tyr Asn Glu Leu Thr Glu Ile Leu Val Arg Phe Gln
675 680 685

Asn Lys Cys Ser Asp Ile Val Phe Ala Arg Lys Thr Glu Arg Asp Glu
690 695 700

Leu Leu Lys Asp Leu Gln Gln Ser Ile Ala Arg Glu Pro Ser Ala Pro
705 710 715 720

Ser Ile Pro Thr Pro Ala Tyr Gln Ser Ser Pro Ala Gly Gly His Ala
725 730 735

Pro Thr Pro Pro Thr Pro Ala Pro Arg Thr Met Pro Pro Thr Lys Pro
740 745 750

Gln Pro Pro Ala Arg Pro Pro Pro Pro Val Leu Pro Ala Asn Arg Ala
755 760 765

Pro Ser Ala Thr Ala Pro Ser Pro Val Gly Ala Gly Thr Ala Ala Pro
770 775 780

Ala Pro Ser Gln Thr Pro Gly Ser Ala Pro Pro Pro Gln Ala Gln Gly
785 790 795 800

Pro Pro Tyr Pro Thr Tyr Pro Gly Tyr Pro Gly Tyr Cys Gln Met Pro
805 810 815

Met Pro Met Gly Tyr Asn Pro Tyr Ala Tyr Gly Gln Tyr Asn Met Pro
820 825 830

Tyr Pro Pro Val Tyr His Gln Ser Pro Gly Gln Ala Pro Tyr Pro Gly
835 840 845

Pro Gln Gln Pro Ser Tyr Pro Phe Pro Gln Pro Pro Gln Gln Ser Tyr
850 855 860

Tyr Pro Gln Gln
865

<210> 92
<211> 146
<212> PRT
<213> Homo sapiens

<400> 92

Met Arg Leu Leu Gln Leu Leu Phe Arg Ala Ser Pro Ala Thr Leu Leu
1 5 10 15

Leu Val Leu Cys Leu Gln Leu Gly Ala Asn Lys Ala Gln Asp Asn Thr
20 25 30

Arg Lys Ile Ile Ile Lys Asn Phe Asp Ile Pro Lys Ser Val Arg Pro
35 40 45

Asn Asp Glu Val Thr Ala Val Leu Ala Val Gln Thr Glu Leu Lys Glu
50 55 60

Cys Met Val Val Lys Thr Tyr Leu Ile Ser Ser Ile Pro Leu Gln Gly
65 70 75 80

Ala Phe Asn Tyr Lys Tyr Thr Ala Cys Leu Cys Asp Asp Asn Pro Lys
85 90 95

Thr Phe Tyr Trp Asp Phe Tyr Thr Asn Arg Thr Val Gln Ile Ala Ala

100

105

110

Val Val Asp Val Ile Arg Glu Leu Gly Ile Cys Pro Asp Asp Ala Ala
 115 120 125

Val Ile Pro Ile Lys Asn Asn Arg Phe Tyr Thr Ile Glu Ile Leu Lys
 130 135 140

Val Glu
 145

<210> 93
 <211> 261
 <212> PRT
 <213> Homo sapiens

<400> 93

Met Trp Val Pro Val Val Phe Leu Thr Leu Ser Val Thr Trp Ile Gly
 1 5 10 15

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

Lys His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala
 35 40 45

Val Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala
 50 55 60

His Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu
 65 70 75 80

Phe His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe
 85 90 95

Pro His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg
 100 105 110

Pro Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu
 115 120 125

Pro Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln
130 135 140

Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile
145 150 155 160

Glu Pro Glu Glu Phe Leu Thr Pro Lys Lys Leu Gln Cys Val Asp Leu
165 170 175

His Val Ile Ser Asn Asp Val Cys Ala Gln Val His Pro Gln Lys Val
180 185 190

Thr Lys Phe Met Leu Cys Ala Gly Arg Trp Thr Gly Gly Lys Ser Thr
195 200 205

Cys Ser Gly Asp Ser Gly Gly Pro Leu Val Cys Asn Gly Val Leu Gln
210 215 220

Gly Ile Thr Ser Trp Gly Ser Glu Pro Cys Ala Leu Pro Glu Arg Pro
225 230 235 240

Ser Leu Tyr Thr Lys Val Val His Tyr Arg Lys Trp Ile Lys Asp Thr
245 250 255

Ile Val Ala Asn Pro
260

<210> 94
<211> 386
<212> PRT
<213> Homo sapiens

<400> 94

Met Arg Ala Ala Pro Leu Leu Leu Ala Arg Ala Ala Ser Leu Ser Leu
1 5 10 15

Gly Phe Leu Phe Leu Leu Phe Phe Trp Leu Asp Arg Ser Val Leu Ala
20 25 30

Lys Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Ser
35 40 45

Pro Ile Asp Thr Phe Pro Thr Asp Pro Ile Lys Glu Ser Ser Trp Pro
50 55 60

Gln Gly Phe Gly Gln Leu Thr Gln Leu Gly Met Glu Gln His Tyr Glu
65 70 75 80

Leu Gly Glu Tyr Ile Arg Lys Arg Tyr Arg Lys Phe Leu Asn Glu Ser
85 90 95

Tyr Lys His Glu Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr
100 105 110

Leu Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly
115 120 125

Val Ser Ile Trp Asn Pro Ile Leu Leu Trp Gln Pro Ile Pro Val His
130 135 140

Thr Val Pro Leu Ser Glu Asp Gln Leu Leu Tyr Leu Pro Phe Arg Asn
145 150 155 160

Cys Pro Arg Phe Gln Glu Leu Glu Ser Glu Thr Leu Lys Ser Glu Glu
165 170 175

Phe Gln Lys Arg Leu His Pro Tyr Lys Asp Phe Ile Ala Thr Leu Gly
180 185 190

Lys Leu Ser Gly Leu His Gly Gln Asp Leu Phe Gly Ile Trp Ser Lys
195 200 205

Val Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Leu Pro
210 215 220

Ser Trp Ala Thr Glu Asp Thr Met Thr Lys Leu Arg Glu Leu Ser Glu
225 230 235 240

Leu Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser
245 250 255

Arg Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Asn His Met Lys

260

265

270

Arg Ala Thr Gln Ile Pro Ser Tyr Lys Lys Leu Ile Met Tyr Ser Ala
 275 280 285

His Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn
 290 295 300

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

Glu Lys Gly Glu Tyr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln
 325 330 335

His Glu Pro Tyr Pro Leu Met Leu Pro Gly Cys Ser Pro Ser Cys Pro
 340 345 350

Leu Glu Arg Phe Ala Glu Leu Val Gly Pro Val Ile Pro Gln Asp Trp
 355 360 365

Ser Thr Glu Cys Met Thr Thr Asn Ser His Gln Gly Thr Glu Asp Ser
 370 375 380

Thr Asp
 385

<210> 95
 <211> 693
 <212> PRT
 <213> Homo sapiens

<400> 95

Met Ala Ala Leu Gly Val Gln Ser Ile Asn Trp Gln Thr Ala Phe Asn
 1 5 10 15

Arg Gln Ala His His Thr Asp Lys Phe Ser Ser Gln Glu Leu Ile Leu
 20 25 30

Arg Arg Gly Gln Asn Phe Gln Val Leu Met Ile Met Asn Lys Gly Leu
 35 40 45

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

Ser Glu Ser Ala Met Thr Lys Ala Val Phe Pro Leu Ser Asn Gly Ser
65 70 75 80

Ser Gly Gly Trp Ser Ala Val Leu Gln Ala Ser Asn Gly Asn Thr Leu
85 90 95

Thr Ile Ser Ile Ser Ser Pro Ala Ser Ala Pro Ile Gly Arg Tyr Thr
100 105 110

Met Ala Leu Gln Ile Phe Ser Gln Gly Gly Ile Ser Ser Val Lys Leu
115 120 125

Gly Thr Phe Ile Leu Leu Phe Asn Pro Trp Leu Asn Val Asp Ser Val
130 135 140

Phe Met Gly Asn His Ala Glu Arg Glu Glu Tyr Val Gln Glu Asp Ala
145 150 155 160

Gly Ile Ile Phe Val Gly Ser Thr Asn Arg Ile Gly Met Ile Gly Trp
165 170 175

Asn Phe Gly Gln Phe Glu Glu Asp Ile Leu Ser Ile Cys Leu Ser Ile
180 185 190

Leu Asp Arg Ser Leu Asn Phe Arg Arg Asp Ala Ala Thr Asp Val Ala
195 200 205

Ser Arg Asn Asp Pro Lys Tyr Val Gly Arg Val Leu Ser Ala Met Ile
210 215 220

Asn Ser Asn Asp Asp Asn Gly Val Leu Ala Gly Asn Trp Ser Gly Thr
225 230 235 240

Tyr Thr Gly Gly Arg Asp Pro Arg Ser Trp Asn Gly Ser Val Glu Ile
245 250 255

Leu Lys Asn Trp Lys Lys Ser Gly Phe Ser Pro Val Arg Tyr Gly Gln
260 265 270

Cys Trp Val Phe Ala Gly Thr Leu Asn Thr Ala Leu Arg Ser Leu Gly
275 280 285

Ile Pro Ser Arg Val Ile Thr Asn Phe Asn Ser Ala His Asp Thr Asp
290 295 300

Arg Asn Leu Ser Val Asp Val Tyr Tyr Asp Pro Met Gly Asn Pro Leu
305 310 315 320

Asp Lys Gly Ser Asp Ser Val Trp Asn Phe His Val Trp Asn Glu Gly
325 330 335

Trp Phe Val Arg Ser Asp Leu Gly Pro Ser Tyr Gly Gly Trp Gln Val
340 345 350

Leu Asp Ala Thr Pro Gln Glu Arg Ser Gln Gly Val Phe Gln Cys Gly
355 360 365

Pro Ala Ser Val Ile Gly Val Arg Glu Gly Asp Val Gln Leu Asn Phe
370 375 380

Asp Met Pro Phe Ile Phe Ala Glu Val Asn Ala Asp Arg Ile Thr Trp
385 390 395 400

Leu Tyr Asp Asn Thr Thr Gly Lys Gln Trp Lys Asn Ser Val Asn Ser
405 410 415

His Thr Ile Gly Arg Tyr Ile Ser Thr Lys Ala Val Gly Ser Asn Ala
420 425 430

Arg Met Asp Val Thr Asp Lys Tyr Lys Tyr Pro Glu Gly Ser Asp Gln
435 440 445

Glu Arg Gln Val Phe Gln Lys Ala Leu Gly Lys Leu Lys Pro Asn Thr
450 455 460

Pro Phe Ala Ala Thr Ser Ser Met Gly Leu Glu Thr Glu Glu Gln Glu
465 470 475 480

Pro Ser Ile Ile Gly Lys Leu Lys Val Ala Gly Met Leu Ala Val Gly
485 490 495

Lys Glu Val Asn Leu Val Leu Leu Leu Lys Asn Leu Ser Arg Asp Thr
500 505 510

Lys Thr Val Thr Val Asn Met Thr Ala Trp Thr Ile Ile Tyr Asn Gly
515 520 525

Thr Leu Val His Glu Val Trp Lys Asp Ser Ala Thr Met Ser Leu Asp
530 535 540

Pro Glu Glu Glu Ala Glu His Pro Ile Lys Ile Ser Tyr Ala Gln Tyr
545 550 555 560

Glu Lys Tyr Leu Lys Ser Asp Asn Met Ile Arg Ile Thr Ala Val Cys
565 570 575

Lys Val Pro Asp Glu Ser Glu Val Val Val Glu Arg Asp Ile Ile Leu
580 585 590

Asp Asn Pro Thr Leu Thr Leu Glu Val Leu Asn Glu Ala Arg Val Arg
595 600 605

Lys Pro Val Asn Val Gln Met Leu Phe Ser Asn Pro Leu Asp Glu Pro
610 615 620

Val Arg Asp Cys Val Leu Met Val Glu Gly Ser Gly Leu Leu Leu Gly
625 630 635 640

Asn Leu Lys Ile Asp Val Pro Thr Leu Gly Pro Lys Glu Gly Ser Arg
645 650 655

Val Arg Phe Asp Ile Leu Pro Ser Arg Ser Gly Thr Lys Gln Leu Leu
660 665 670

Ala Asp Phe Ser Cys Asn Lys Phe Pro Ala Ile Lys Ala Met Leu Ser
675 680 685

Ile Asp Val Ala Glu
690

<210> 96
<211> 259
<212> PRT
<213> Homo sapiens

<400> 96

Met Asn Ile Leu Ala Pro Val Arg Arg Asp Arg Val Leu Ala Glu Leu
1 5 10 15

Pro Gln Cys Leu Arg Lys Glu Ala Ala Leu His Gly His Lys Asp Phe
20 25 30

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

Gly Phe Lys Ile Ser Lys Val Ile Val Val Gly Asp Leu Ser Val Gly
50 55 60

Lys Thr Cys Leu Ile Asn Arg Phe Cys Lys Asp Thr Phe Asp Lys Asn
65 70 75 80

Tyr Lys Ala Thr Ile Gly Val Asp Phe Glu Met Glu Arg Phe Glu Val
85 90 95

Leu Gly Ile Pro Phe Ser Leu Gln Leu Trp Asp Thr Ala Gly Gln Glu
100 105 110

Arg Phe Lys Cys Ile Ala Ser Thr Tyr Tyr Arg Gly Ala Gln Ala Ile
115 120 125

Ile Ile Val Phe Asn Leu Asn Asp Val Ala Ser Leu Glu His Thr Lys
130 135 140

Gln Trp Leu Ala Asp Ala Leu Lys Glu Asn Asp Pro Ser Ser Val Leu
145 150 155 160

Leu Phe Leu Val Gly Ser Lys Lys Asp Leu Ser Thr Pro Ala Gln Tyr
165 170 175

Ala Leu Met Glu Lys Asp Ala Leu Gln Val Ala Gln Glu Met Lys Ala

180

185

190

Glu Tyr Trp Ala Val Ser Ser Leu Thr Gly Glu Asn Val Arg Glu Phe
 195 200 205

Phe Phe Arg Val Ala Ala Leu Thr Phe Glu Ala Asn Val Leu Ala Glu
 210 215 220

Leu Glu Lys Ser Gly Ala Arg Arg Ile Gly Asp Val Val Arg Ile Asn
 225 230 235 240

Ser Asp Asp Ser Asn Leu Tyr Leu Thr Ala Ser Lys Lys Lys Pro Thr
 245 250 255

Cys Cys Pro

<210> 97
 <211> 462
 <212> PRT
 <213> Homo sapiens

<400> 97

Met Lys Pro Asn Ile Ile Phe Val Leu Ser Leu Leu Leu Ile Leu Glu
 1 5 10 15

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

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

Ser Gly Gln Lys Gly Lys Gln Gln Thr Glu Ser Lys Gly Ser Phe Ser
 50 55 60

Ile Gln Tyr Thr Tyr His Val Asp Ala Asn Asp His Asp Gln Ser Arg
 65 70 75 80

Lys Ser Gln Gln Tyr Asp Leu Asn Ala Leu His Lys Thr Thr Lys Ser
 85 90 95

Gln Arg His Leu Gly Gly Ser Gln Gln Leu Leu His Asn Lys Gln Glu
100 105 110

Gly Arg Asp His Asp Lys Ser Lys Gly His Phe His Arg Val Val Ile
115 120 125

His His Lys Gly Gly Lys Ala His Arg Gly Thr Gln Asn Pro Ser Gln
130 135 140

Asp Gln Gly Asn Ser Pro Ser Gly Lys Gly Ile Ser Ser Gln Tyr Ser
145 150 155 160

Asn Thr Glu Glu Arg Leu Trp Val His Gly Leu Ser Lys Glu Gln Thr
165 170 175

Ser Val Ser Gly Ala Gln Lys Gly Arg Lys Gln Gly Gly Ser Gln Ser
180 185 190

Ser Tyr Val Leu Gln Thr Glu Glu Leu Val Ala Asn Lys Gln Gln Arg
195 200 205

Glu Thr Lys Asn Ser His Gln Asn Lys Gly His Tyr Gln Asn Val Val
210 215 220

Glu Val Arg Glu Glu His Ser Ser Lys Val Gln Thr Ser Leu Cys Pro
225 230 235 240

Ala His Gln Asp Lys Leu Gln His Gly Ser Lys Asp Ile Phe Ser Thr
245 250 255

Gln Asp Glu Leu Leu Val Tyr Asn Lys Asn Gln His Gln Thr Lys Asn
260 265 270

Leu Asn Gln Asp Gln Gln His Gly Arg Lys Ala Asn Lys Ile Ser Tyr
275 280 285

Gln Ser Ser Ser Thr Glu Glu Arg Arg Leu His Tyr Gly Glu Asn Gly
290 295 300

Val Gln Lys Asp Val Ser Gln Ser Ser Ile Tyr Ser Gln Thr Glu Glu
305 310 315 320

Lys Ala Gln Gly Lys Ser Gln Lys Gln Ile Thr Ile Pro Ser Gln Glu
325 330 335

Gln Glu His Ser Gln Lys Ala Asn Lys Ile Ser Tyr Gln Ser Ser Ser
340 345 350

Thr Glu Glu Arg Arg Leu His Tyr Gly Glu Asn Gly Val Gln Lys Asp
355 360 365

Val Ser Gln Arg Ser Ile Tyr Ser Gln Thr Glu Lys Leu Val Ala Gly
370 375 380

Lys Ser Gln Ile Gln Ala Pro Asn Pro Lys Gln Glu Pro Trp His Gly
385 390 395 400

Glu Asn Ala Lys Gly Glu Ser Gly Gln Ser Thr Asn Arg Glu Gln Asp
405 410 415

Leu Leu Ser His Glu Gln Lys Gly Arg His Gln His Gly Ser His Gly
420 425 430

Gly Leu Asp Ile Val Ile Ile Glu Gln Glu Asp Asp Ser Asp Arg His
435 440 445

Leu Ala Gln His Leu Asn Asn Asp Arg Asn Pro Leu Phe Thr
450 455 460

<210> 98
<211> 582
<212> PRT
<213> Homo sapiens

<400> 98

Met Lys Ser Ile Ile Leu Phe Val Leu Ser Leu Leu Leu Ile Leu Glu
1 5 10 15

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

Pro Ser Gly Ser Ser Gln Phe Pro His Gly Gln Lys Gly Gln His Tyr

35

40

45

Phe Gly Gln Lys Asp Gln Gln His Thr Lys Ser Lys Gly Ser Phe Ser
 50 55 60

Ile Gln His Thr Tyr His Val Asp Ile Asn Asp His Asp Trp Thr Arg
 65 70 75 80

Lys Ser Gln Gln Tyr Asp Leu Asn Ala Leu His Lys Ala Thr Lys Ser
 85 90 95

Lys Gln His Leu Gly Gly Ser Gln Gln Leu Leu Asn Tyr Lys Gln Glu
 100 105 110

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

His His Lys Gly Gly Gln Ala His His Gly Thr Gln Asn Pro Ser Gln
 130 135 140

Asp Gln Gly Asn Ser Pro Ser Gly Lys Gly Leu Ser Ser Gln Cys Ser
 145 150 155 160

Asn Thr Glu Lys Arg Leu Trp Val His Gly Leu Ser Lys Glu Gln Ala
 165 170 175

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

Ser Tyr Val Leu Gln Thr Glu Glu Leu Val Val Asn Lys Gln Gln Arg
 195 200 205

Glu Thr Lys Asn Ser His Gln Asn Lys Gly His Tyr Gln Asn Val Val
 210 215 220

Asp Val Arg Glu Glu His Ser Ser Lys Leu Gln Thr Ser Leu His Pro
 225 230 235 240

Ala His Gln Asp Arg Leu Gln His Gly Pro Lys Asp Ile Phe Thr Thr
 245 250 255

Gln Asp Glu Leu Leu Val Tyr Asn Lys Asn Gln His Gln Thr Lys Asn
260 265 270

Leu Ser Gln Asp Gln Glu His Gly Arg Lys Ala His Lys Ile Ser Tyr
275 280 285

Pro Ser Ser Arg Thr Glu Glu Arg Gln Leu His His Gly Glu Lys Ser
290 295 300

Val Gln Lys Asp Val Ser Lys Gly Ser Ile Ser Ile Gln Thr Glu Glu
305 310 315 320

Lys Ile His Gly Lys Ser Gln Asn Gln Val Thr Ile His Ser Gln Asp
325 330 335

Gln Glu His Gly His Lys Glu Asn Lys Ile Ser Tyr Gln Ser Ser Ser
340 345 350

Thr Glu Glu Arg His Leu Asn Cys Gly Glu Lys Gly Ile Gln Lys Gly
355 360 365

Val Ser Lys Gly Ser Ile Ser Ile Gln Thr Glu Glu Gln Ile His Gly
370 375 380

Lys Ser Gln Asn Gln Val Arg Ile Pro Ser Gln Ala Gln Glu Tyr Gly
385 390 395 400

His Lys Glu Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu Glu Arg
405 410 415

Arg Leu Asn Ser Gly Glu Lys Asp Val Gln Lys Gly Val Ser Lys Gly
420 425 430

Ser Ile Ser Ile Gln Thr Glu Glu Lys Ile His Gly Lys Ser Gln Asn
435 440 445

Gln Val Thr Ile Pro Ser Gln Asp Gln Glu His Gly His Lys Glu Asn
450 455 460

Lys Met Ser Tyr Gln Ser Ser Ser Thr Glu Glu Arg Arg Leu Asn Tyr

465 470 475 480

Gly Gly Lys Ser Thr Gln Lys Asp Val Ser Gln Ser Ser Ile Ser Phe
 485 490 495

Gln Ile Glu Lys Leu Val Glu Gly Lys Ser Gln Ile Gln Thr Pro Asn
 500 505 510

Pro Asn Gln Asp Gln Trp Ser Gly Gln Asn Ala Lys Gly Lys Ser Gly
 515 520 525

Gln Ser Ala Asp Ser Lys Gln Asp Leu Leu Ser His Glu Gln Lys Gly
 530 535 540

Arg Tyr Lys Gln Glu Ser Ser Glu Ser His Asn Ile Val Ile Thr Glu
 545 550 555 560

His Glu Val Ala Gln Asp Asp His Leu Thr Gln Gln Tyr Asn Glu Asp
 565 570 575

Arg Asn Pro Ile Ser Thr
 580

<210> 99
 <211> 514
 <212> PRT
 <213> Homo sapiens

<400> 99

Met Val Leu Asp Leu Asp Leu Phe Arg Val Asp Lys Gly Gly Asp Pro
 1 5 10 15

Ala Leu Ile Arg Glu Thr Gln Glu Lys Arg Phe Lys Asp Pro Gly Leu
 20 25 30

Val Asp Gln Leu Val Lys Ala Asp Ser Glu Trp Arg Arg Cys Arg Phe
 35 40 45

Arg Ala Asp Asn Leu Asn Lys Leu Lys Asn Leu Cys Ser Lys Thr Ile
 50 55 60

Gly Glu Lys Met Lys Lys Lys Glu Pro Val Gly Asp Asp Glu Ser Val
65 70 75 80

Pro Glu Asn Val Leu Ser Phe Asp Asp Leu Thr Ala Asp Ala Leu Ala
85 90 95

Asn Leu Lys Val Ser Gln Ile Lys Lys Val Arg Leu Leu Ile Asp Glu
100 105 110

Ala Ile Leu Lys Cys Asp Ala Glu Arg Ile Lys Leu Glu Ala Glu Arg
115 120 125

Phe Glu Asn Leu Arg Glu Ile Gly Asn Leu Leu His Pro Ser Val Pro
130 135 140

Ile Ser Asn Asp Glu Asp Val Asp Asn Lys Val Glu Arg Ile Trp Gly
145 150 155 160

Asp Cys Thr Val Arg Lys Lys Tyr Ser His Val Asp Leu Val Val Met
165 170 175

Val Asp Gly Phe Glu Gly Glu Lys Gly Ala Val Val Ala Gly Ser Arg
180 185 190

Gly Tyr Phe Leu Lys Gly Val Leu Val Phe Leu Glu Gln Ala Leu Ile
195 200 205

Gln Tyr Ala Leu Arg Thr Leu Gly Ser Arg Gly Tyr Ile Pro Ile Tyr
210 215 220

Thr Pro Phe Phe Met Arg Lys Glu Val Met Gln Glu Val Ala Gln Leu
225 230 235 240

Ser Gln Phe Asp Glu Glu Leu Tyr Lys Val Ile Gly Lys Gly Ser Glu
245 250 255

Lys Ser Asp Asp Asn Ser Tyr Asp Glu Lys Tyr Leu Ile Ala Thr Ser
260 265 270

Glu Gln Pro Ile Ala Ala Leu His Arg Asp Glu Trp Leu Arg Pro Glu
275 280 285

Asp Leu Pro Ile Lys Tyr Ala Gly Leu Ser Thr Cys Phe Arg Gln Glu
290 295 300

Val Gly Ser His Gly Arg Asp Thr Arg Gly Ile Phe Arg Val His Gln
305 310 315 320

Phe Glu Lys Ile Glu Gln Phe Val Tyr Ser Ser Pro His Asp Asn Lys
325 330 335

Ser Trp Glu Met Phe Glu Glu Met Ile Thr Thr Ala Glu Glu Phe Tyr
340 345 350

Gln Ser Leu Gly Ile Pro Tyr His Ile Val Asn Ile Val Ser Gly Ser
355 360 365

Leu Asn His Ala Ala Ser Lys Lys Leu Asp Leu Glu Ala Trp Phe Pro
370 375 380

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

Tyr Gln Ala Arg Arg Leu Arg Ile Arg Tyr Gly Gln Thr Lys Lys Met
405 410 415

Met Asp Lys Val Glu Phe Val His Met Leu Asn Ala Thr Met Cys Ala
420 425 430

Thr Thr Arg Thr Ile Cys Ala Ile Leu Glu Asn Tyr Gln Thr Glu Lys
435 440 445

Gly Ile Thr Val Pro Glu Lys Leu Lys Glu Phe Met Pro Pro Gly Leu
450 455 460

Gln Glu Leu Ile Pro Phe Val Lys Pro Ala Pro Ile Glu Gln Glu Pro
465 470 475 480

Ser Lys Lys Gln Lys Lys Gln His Glu Gly Ser Lys Lys Lys Ala Ala
485 490 495

Ala	Arg	Asp	Val	Thr	Leu	Glu	Asn	Arg	Leu	Gln	Asn	Met	Glu	Val	Thr
			500					505					510		

Asp Ala

<210> 100
 <211> 356
 <212> PRT
 <213> Homo sapiens

<400> 100

Met	Ala	Ala	Ala	Ala	Lys	Pro	Asn	Asn	Leu	Ser	Leu	Val	Val	His	Gly
1				5					10					15	

Pro	Gly	Asp	Leu	Arg	Leu	Glu	Asn	Tyr	Pro	Ile	Pro	Glu	Pro	Gly	Pro
			20					25					30		

Asn	Glu	Val	Leu	Leu	Arg	Met	His	Ser	Val	Gly	Ile	Cys	Gly	Ser	Asp
		35					40					45			

Val	His	Tyr	Trp	Glu	Tyr	Gly	Arg	Ile	Gly	Asn	Phe	Ile	Val	Lys	Lys
	50					55					60				

Pro	Met	Val	Leu	Gly	His	Glu	Ala	Ser	Gly	Thr	Val	Glu	Lys	Val	Gly
65					70					75					80

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

Gly	Ala	Pro	Arg	Glu	Asn	Asp	Glu	Phe	Cys	Lys	Met	Gly	Arg	Tyr	Asn
			100					105					110		

Leu	Ser	Pro	Ser	Ile	Phe	Phe	Cys	Ala	Thr	Pro	Pro	Asp	Asp	Gly	Asn
		115					120					125			

Leu	Cys	Arg	Phe	Tyr	Lys	His	Asn	Ala	Ala	Phe	Cys	Tyr	Lys	Leu	Pro
	130					135					140				

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

Gly Ile His Ala Cys Arg Arg Gly Gly Val Thr Leu Gly His Lys Val
165 170 175

Leu Val Cys Gly Ala Gly Pro Ile Gly Met Val Thr Leu Leu Val Ala
180 185 190

Lys Ala Met Gly Ala Ala Gln Val Val Thr Asp Leu Ser Ala Thr
195 200 205

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

Ser Lys Glu Ser Pro Gln Glu Ile Ala Arg Lys Val Glu Gly Gln Leu
225 230 235 240

Gly Cys Lys Pro Glu Val Thr Ile Glu Cys Thr Gly Ala Glu Ala Ser
245 250 255

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

Val Gly Leu Gly Ser Glu Met Thr Thr Val Pro Leu Leu His Ala Ala
275 280 285

Ile Arg Glu Val Asp Ile Lys Gly Val Phe Arg Tyr Cys Asn Thr Trp
290 295 300

Pro Val Ala Ile Ser Met Leu Ala Ser Lys Ser Val Asn Val Lys Pro
305 310 315 320

Leu Val Thr His Arg Phe Pro Leu Glu Lys Ala Leu Glu Ala Phe Glu
325 330 335

Thr Phe Lys Lys Gly Leu Gly Leu Lys Ile Met Leu Lys Cys Pro Ser
340 345 350

Asp Gln Asn Pro
355

<210> 101

<211> 449
<212> PRT
<213> Homo sapiens

<400> 101

Met Arg Glu Cys Ile Ser Ile His Val Gly Gln Ala Gly Val Gln Ile
1 5 10 15

Gly Asn Ala Cys Trp Glu Leu Tyr Cys Leu Glu His Gly Ile Gln Pro
20 25 30

Asp Gly Gln Met Pro Ser Asp Lys Thr Ile Gly Gly Gly Asp Asp Ser
35 40 45

Phe Asn Thr Phe Phe Ser Glu Thr Gly Ala Gly Lys His Val Pro Arg
50 55 60

Ala Val Phe Val Asp Leu Glu Pro Thr Val Ile Asp Glu Val Arg Thr
65 70 75 80

Gly Thr Tyr Arg Gln Leu Phe His Pro Glu Gln Leu Ile Thr Gly Lys
85 90 95

Glu Asp Ala Ala Asn Asn Tyr Ala Arg Gly His Tyr Thr Ile Gly Lys
100 105 110

Glu Ile Ile Asp Leu Val Leu Asp Arg Ile Arg Lys Leu Ala Asp Gln
115 120 125

Cys Thr Gly Leu Gln Gly Phe Leu Val Phe His Ser Phe Gly Gly Gly
130 135 140

Thr Gly Ser Gly Phe Thr Ser Leu Leu Met Glu Arg Leu Ser Val Asp
145 150 155 160

Tyr Gly Lys Lys Ser Lys Leu Glu Phe Ser Ile Tyr Pro Ala Pro Gln
165 170 175

Val Ser Thr Ala Val Val Glu Pro Tyr Asn Ser Ile Leu Thr Thr His
180 185 190

Thr Thr Leu Glu His Ser Asp Cys Ala Phe Met Val Asp Asn Glu Ala
195 200 205

Ile Tyr Asp Ile Cys Arg Arg Asn Leu Asp Ile Glu Arg Pro Thr Tyr
210 215 220

Thr Asn Leu Asn Arg Leu Ile Ser Gln Ile Val Ser Ser Ile Thr Ala
225 230 235 240

Ser Leu Arg Phe Asp Gly Ala Leu Asn Val Asp Leu Thr Glu Phe Gln
245 250 255

Thr Asn Leu Val Pro Tyr Pro Arg Ile His Phe Pro Leu Ala Thr Tyr
260 265 270

Ala Pro Val Ile Ser Ala Glu Lys Ala Tyr His Glu Gln Leu Thr Val
275 280 285

Ala Glu Ile Thr Asn Ala Cys Phe Glu Pro Ala Asn Gln Met Val Lys
290 295 300

Cys Asp Pro Arg His Gly Lys Tyr Met Ala Cys Cys Leu Leu Tyr Arg
305 310 315 320

Gly Asp Val Val Pro Lys Asp Val Asn Ala Ala Ile Ala Thr Ile Lys
325 330 335

Thr Lys Arg Thr Ile Gln Phe Val Asp Trp Cys Pro Thr Gly Phe Lys
340 345 350

Val Gly Ile Asn Tyr Gln Pro Pro Thr Val Val Pro Gly Gly Asp Leu
355 360 365

Ala Lys Val Gln Arg Ala Val Cys Met Leu Ser Asn Thr Thr Ala Val
370 375 380

Ala Glu Ala Trp Ala Arg Leu Asp His Lys Phe Asp Leu Met Tyr Ala
385 390 395 400

Lys Arg Ala Phe Val His Trp Tyr Val Gly Glu Gly Met Glu Glu Gly
405 410 415

Glu Phe Ser Glu Ala Arg Glu Asp Met Ala Ala Leu Glu Lys Asp Tyr
420 425 430

Glu Glu Val Gly Ala Asp Ser Ala Asp Gly Glu Asp Glu Gly Glu Glu
435 440 445

Tyr

<210> 102
<211> 449
<212> PRT
<213> Homo sapiens

<400> 102

Met Arg Glu Cys Ile Ser Ile His Val Gly Gln Ala Gly Val Gln Ile
1 5 10 15

Gly Asn Ala Cys Trp Glu Leu Tyr Cys Leu Glu His Gly Ile Gln Pro
20 25 30

Asp Gly Gln Met Pro Ser Asp Lys Thr Ile Gly Gly Gly Asp Asp Ser
35 40 45

Phe Asn Thr Phe Phe Ser Glu Thr Gly Ala Gly Lys His Val Pro Arg
50 55 60

Ala Val Phe Val Asp Leu Glu Pro Thr Val Ile Asp Glu Val Arg Thr
65 70 75 80

Gly Thr Tyr Arg Gln Leu Phe His Pro Glu Gln Leu Ile Thr Gly Lys
85 90 95

Glu Asp Ala Ala Asn Asn Tyr Ala Arg Gly His Tyr Thr Ile Gly Lys
100 105 110

Glu Ile Ile Asp Leu Val Leu Asp Arg Ile Arg Lys Leu Ala Asp Gln
115 120 125

Cys Thr Gly Leu Gln Gly Phe Leu Val Phe His Ser Phe Gly Gly Gly

130

135

140

Thr Gly Ser Gly Phe Thr Ser Leu Leu Met Glu Arg Leu Ser Val Asp
 145 150 155 160

Tyr Gly Lys Lys Ser Lys Leu Glu Phe Ser Ile Tyr Pro Ala Pro Gln
 165 170 175

Val Ser Thr Ala Val Val Glu Pro Tyr Asn Ser Ile Leu Thr Thr His
 180 185 190

Thr Thr Leu Glu His Ser Asp Cys Ala Phe Met Val Asp Asn Glu Ala
 195 200 205

Ile Tyr Asp Ile Cys Arg Arg Asn Leu Asp Ile Glu Arg Pro Thr Tyr
 210 215 220

Thr Asn Leu Asn Arg Leu Ile Ser Gln Ile Val Ser Ser Ile Thr Ala
 225 230 235 240

Ser Leu Arg Phe Asp Gly Ala Leu Asn Val Asp Leu Thr Glu Phe Gln
 245 250 255

Thr Asn Leu Val Pro Tyr Pro Arg Ile His Phe Pro Leu Ala Thr Tyr
 260 265 270

Ala Pro Val Ile Ser Ala Glu Lys Ala Tyr His Glu Gln Leu Thr Val
 275 280 285

Ala Glu Ile Thr Asn Ala Cys Phe Glu Pro Ala Asn Gln Met Val Lys
 290 295 300

Cys Asp Pro Arg His Gly Lys Tyr Met Ala Cys Cys Leu Leu Tyr Arg
 305 310 315 320

Gly Asp Val Val Pro Lys Asp Val Asn Ala Ala Ile Ala Thr Ile Lys
 325 330 335

Thr Lys Arg Thr Ile Gln Phe Val Asp Trp Cys Pro Thr Gly Phe Lys
 340 345 350

Val Gly Ile Asn Tyr Gln Pro Pro Thr Val Val Pro Gly Gly Asp Leu
355 360 365

Ala Lys Val Gln Arg Ala Val Cys Met Leu Ser Asn Thr Thr Ala Val
370 375 380

Ala Glu Ala Trp Ala Arg Leu Asp His Lys Phe Asp Leu Met Tyr Ala
385 390 395 400

Lys Arg Ala Phe Val His Trp Tyr Val Gly Glu Gly Met Glu Glu Gly
405 410 415

Glu Phe Ser Glu Ala Arg Glu Asp Met Ala Ala Leu Glu Lys Asp Tyr
420 425 430

Glu Glu Val Gly Ala Asp Ser Ala Asp Gly Glu Asp Glu Gly Glu Glu
435 440 445

Tyr

<210> 103
<211> 448
<212> PRT
<213> Homo sapiens

<400> 103

Met Arg Glu Cys Ile Ser Val His Val Gly Gln Ala Gly Val Gln Met
1 5 10 15

Gly Asn Ala Cys Trp Glu Leu Tyr Cys Leu Glu His Gly Ile Gln Pro
20 25 30

Asp Gly Gln Met Pro Ser Asp Lys Thr Ile Gly Gly Gly Asp Asp Ser
35 40 45

Phe Thr Thr Phe Phe Cys Glu Thr Gly Ala Gly Lys His Val Pro Arg
50 55 60

Ala Val Phe Val Asp Leu Glu Pro Thr Val Ile Asp Glu Ile Arg Asn
65 70 75 80

Gly Pro Tyr Arg Gln Leu Phe His Pro Glu Gln Leu Ile Thr Gly Lys
85 90 95

Glu Asp Ala Ala Asn Asn Tyr Ala Arg Gly His Tyr Thr Ile Gly Lys
100 105 110

Glu Ile Ile Asp Pro Val Leu Asp Arg Ile Arg Lys Leu Ser Asp Gln
115 120 125

Cys Thr Gly Leu Gln Gly Phe Leu Val Phe His Ser Phe Gly Gly Gly
130 135 140

Thr Gly Ser Gly Phe Thr Ser Leu Leu Met Glu Arg Leu Ser Val Asp
145 150 155 160

Tyr Gly Lys Lys Ser Lys Leu Glu Phe Ser Ile Tyr Pro Ala Pro Gln
165 170 175

Val Ser Thr Ala Val Val Glu Pro Tyr Asn Ser Ile Leu Thr Thr His
180 185 190

Thr Thr Leu Glu His Ser Asp Cys Ala Phe Met Val Asp Asn Glu Ala
195 200 205

Ile Tyr Asp Ile Cys Arg Arg Asn Leu Asp Ile Glu Arg Pro Thr Tyr
210 215 220

Thr Asn Leu Asn Arg Leu Ile Ser Gln Ile Val Ser Ser Ile Thr Ala
225 230 235 240

Ser Leu Arg Phe Asp Gly Ala Leu Asn Val Asp Leu Thr Glu Phe Gln
245 250 255

Thr Asn Leu Val Pro Tyr Pro Arg Ile His Phe Pro Leu Ala Thr Tyr
260 265 270

Ala Pro Val Ile Ser Ala Glu Lys Ala Tyr His Glu Gln Leu Ser Val
275 280 285

Ala Glu Ile Thr Asn Ala Cys Phe Glu Pro Ala Asn Gln Met Val Lys
290 295 300

Cys Asp Pro Arg His Gly Lys Tyr Met Ala Cys Cys Leu Leu Tyr Arg
305 310 315 320

Gly Asp Val Val Pro Lys Asp Val Asn Ala Ala Ile Ala Ala Ile Lys
325 330 335

Thr Lys Arg Ser Ile Gln Phe Val Asp Trp Cys Pro Thr Gly Phe Lys
340 345 350

Val Gly Ile Asn Tyr Gln Pro Pro Thr Val Val Pro Gly Gly Asp Leu
355 360 365

Ala Lys Val Gln Arg Ala Val Cys Met Leu Ser Asn Thr Thr Ala Ile
370 375 380

Ala Glu Ala Trp Ala Arg Leu Asp His Lys Phe Asp Leu Met Tyr Ala
385 390 395 400

Lys Arg Ala Phe Val His Trp Tyr Val Gly Glu Gly Met Glu Glu Gly
405 410 415

Glu Phe Ser Glu Ala Arg Glu Asp Met Ala Ala Leu Glu Lys Asp Tyr
420 425 430

Glu Glu Val Gly Ile Asp Ser Tyr Glu Asp Glu Asp Glu Gly Glu Glu
435 440 445

<210> 104
<211> 444
<212> PRT
<213> Homo sapiens

<400> 104

Met Arg Glu Ile Val His Ile Gln Ala Gly Gln Cys Gly Asn Gln Ile
1 5 10 15

Gly Ala Lys Phe Trp Glu Val Ile Ser Asp Glu His Gly Ile Asp Pro
20 25 30

Thr Gly Thr Tyr His Gly Asp Ser Asp Leu Gln Leu Asp Arg Ile Ser
35 40 45

Val Tyr Tyr Asn Glu Ala Thr Gly Gly Lys Tyr Val Pro Arg Ala Ile
50 55 60

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

Phe Gly Gln Ile Phe Arg Pro Asp Asn Phe Val Phe Gly Gln Ser Gly
85 90 95

Ala Gly Asn Asn Trp Ala Lys Gly His Tyr Thr Glu Gly Ala Glu Leu
100 105 110

Val Asp Ser Val Leu Asp Val Val Arg Lys Glu Ala Glu Ser Cys Asp
115 120 125

Cys Leu Gln Gly Phe Gln Leu Thr His Ser Leu Gly Gly Gly Thr Gly
130 135 140

Ser Gly Met Gly Thr Leu Leu Ile Ser Lys Ile Arg Glu Glu Tyr Pro
145 150 155 160

Asp Arg Ile Met Asn Thr Phe Ser Val Val Pro Ser Pro Lys Val Ser
165 170 175

Asp Thr Val Val Glu Pro Tyr Asn Ala Thr Leu Ser Val His Gln Leu
180 185 190

Val Glu Asn Thr Asp Glu Thr Tyr Cys Ile Asp Asn Glu Ala Leu Tyr
195 200 205

Asp Ile Cys Phe Arg Thr Leu Lys Leu Thr Thr Pro Thr Tyr Gly Asp
210 215 220

Leu Asn His Leu Val Ser Ala Thr Met Ser Gly Val Thr Thr Cys Leu
225 230 235 240

Arg Phe Pro Gly Gln Leu Asn Ala Asp Leu Arg Lys Leu Ala Val Asn

245

250

255

Met Val Pro Phe Pro Arg Leu His Phe Phe Met Pro Gly Phe Ala Pro
260 265 270

Leu Thr Ser Arg Gly Ser Gln Gln Tyr Arg Ala Leu Thr Val Pro Glu
275 280 285

Leu Thr Gln Gln Val Phe Asp Ala Lys Asn Met Met Ala Ala Cys Asp
290 295 300

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

Met Ser Met Lys Glu Val Asp Glu Gln Met Leu Asn Val Gln Asn Lys
325 330 335

Asn Ser Ser Tyr Phe Val Glu Trp Ile Pro Asn Asn Val Lys Thr Ala
340 345 350

Val Cys Asp Ile Pro Pro Arg Gly Leu Lys Met Ala Val Thr Phe Ile
355 360 365

Gly Asn Ser Thr Ala Ile Gln Glu Leu Phe Lys Arg Ile Ser Glu Gln
370 375 380

Phe Thr Ala Met Phe Arg Arg Lys Ala Phe Leu His Trp Tyr Thr Gly
385 390 395 400

Glu Gly Met Asp Glu Met Glu Phe Thr Glu Ala Glu Ser Asn Met Asn
405 410 415

Asp Leu Val Ser Glu Tyr Gln Gln Tyr Gln Asp Ala Thr Ala Glu Glu
420 425 430

Glu Glu Asp Phe Gly Glu Glu Ala Glu Glu Glu Ala
435 440