

SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Anti-IL36R Antibodies

<130> 36432PCT (10484W001)

<150> 62/698,482

<151> 2018-07-16

<150> 62/846,989

<151> 2019-05-13

<150> 62/866,028

<151> 2019-06-25

<160> 240

<170> PatentIn version 3.5

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<213> Homo sapiens

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ccagggaagg	gcctggagtg	ggtctcagtt	atcagttgga	atagtgatat	cataggctat	180
gcggactctg	tgaagggccg	attcacctgc	tccagagaca	acgccaagaa	ctccctgtat	240
ctgcaaatga	atagtctgag	aactgaggac	acggccttgt	attactgtgc	aaaaggatat	300
aactggaact	tctttgacta	ttggggccag	ggaaccctgg	tcaccgtctc	ctca	354

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			20					25					30		

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

Ser Val Ile Ser Trp Asn Ser Asp Ile Ile Gly Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Gly Tyr Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
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ggccaggctc ccaggctcct catctataat gcagcaaaca gggccactga catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
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Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
 20 25 30

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

Tyr Asn Ala Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
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 ccagggaagg gcctggagtg ggtctcagtt attagttgga atagtgatgt catagcctat 180
 tcggactctg tgaagggccg cttcaccatt tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acagtctggg aactgaggac acggccttat attactgtgc aaaaggccat 300
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Ala Tyr Ser Asp Ser Val
50 55 60

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

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

Ala Lys Gly His Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
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<210> 19

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<213> Homo sapiens

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24

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<210> 23
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Ala Lys Gly His Asn Trp Asn Phe Phe Asp Tyr
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ctctcctgca gggccagtc gagtgtttag agctacttag cctggtacca acagaaacct 120

ggccaggctc ccaggctcct catctataat gtagccaaca gggccacaga catcccagcc 180

aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcgg cctagagcct 240

gaagattttg cagtttattt ctgtcagcag cgtagcaact ggcctctcac tttcggcgga 300
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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
 20 25 30

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

Tyr Asn Val Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Arg Ser Asn Trp Pro Leu
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
 100 105

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<212> DNA
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ccaggggaagg gcctggagtg ggtctcagtt atcagttgga atagtgatgt cataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcagatga atagtctgag agctgaggac acggccttgt attactgtgc aaaaggatat 300
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20 25 30

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Gly Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Gly Tyr Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
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<210> 37
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<400> 38

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<210> 39
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Ala Lys Gly Tyr Asn Trp Asn Phe Phe Asp Tyr
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ggccaggctc ccaggctcct catctataat gcagcaaaca gggccactga catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
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gggaccaagg tggagatcaa a 321

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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

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

Tyr Asn Ala Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

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Gln Ser Val Ser Ser Tyr
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Asn Ala Ala
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<210> 47
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 ccagggaagg gcctggaatg ggtctcagtt attagttgga atagtgatgt catagcctat 180
 tcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acagtctgag aactgaggac acggccttat attactgtac aaaaggccat 300
 aagtggagct tctttgacta ttggggccag ggaaccctgg tcaccgtctc ctca 354

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

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Ala Tyr Ser Asp Ser Val
 50 55 60

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

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

Thr Lys Gly His Lys Trp Ser Phe Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser
115

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Gly Phe Thr Phe Asp Asp Tyr Ala
1 5

<210> 53
<211> 24
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24

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<400> 54

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33

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Thr Lys Gly His Lys Trp Ser Phe Phe Asp Tyr
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 ggccaggctc ccagactcct catctttaat gtagccaaca gggccactga catcccagcc 180
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
 gaagattttg cagtttatta ctgtcagcag cgtagcaact ggctctcac tttcggcgga 300
 gggaccaagg tggagatcaa a 321

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Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
 20 25 30

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

Phe Asn Val Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 59
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<400> 60

Gln Ser Ile Ser Ser Tyr
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<210> 61
<211> 9
<212> DNA
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27

<210> 64
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ccggggaagg ggctggagtg ggtctcaggt attagtggaa atggtggtga cacatactac 180
ggagacttcg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag aggcgaggac acggccgcat atttctgtgt gatagatctt 300
gactattggg gtcagggaac cctgggtcacc gtctcctca 339

<210> 66
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<400> 66

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

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

Ser Gly Ile Ser Gly Asn Gly Gly Asp Thr Tyr Tyr Gly Asp Phe Val
50 55 60

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

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

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

Ser

<210> 67
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<400> 67
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24

<210> 68
 <211> 8
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<400> 68

Gly Phe Thr Phe Ser Asp Tyr Ala
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<210> 69
 <211> 24
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<400> 69
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24

<210> 70
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<400> 70

Ile Ser Gly Asn Gly Gly Asp Thr
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<210> 71
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 <212> DNA
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<400> 71
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<210> 72
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<400> 72

Val Ile Asp Leu Asp Tyr
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<210> 73
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 ggaaaagccc ctaggctcct gatctataag gcgtctatatt taggagatgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagaa ttactctca ccatcagcag cctgcagcct 240
 gatgattttg ctacttatta ctgccaccag tataatagtt atttgtggac gttcggccaa 300
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<400> 74

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

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

Tyr Lys Ala Ser Ile Leu Gly Asp Gly Val Pro Ser Arg Phe Ser Gly
 50 55 60

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

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105

<210> 75
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 <212> DNA
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<400> 75
 cagagtatta gtagctgg

18

<210> 76
 <211> 6
 <212> PRT
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<400> 76

Gln Ser Ile Ser Ser Trp
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<210> 77
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<400> 77
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9

<210> 78
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<400> 78

Lys Ala Ser
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<210> 79

<211> 27

<212> DNA

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27

<210> 80

<211> 9

<212> PRT

<213> Homo sapiens

<400> 80

His Gln Tyr Asn Ser Tyr Leu Trp Thr
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<210> 81

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<212> DNA

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<400> 81

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cagcaccag ggaagggcct ggagtggatt ggatccatct attatactgg gagtacttac 180

tacaacccgt ccctcaagag tcgacttacc atatcaatag acacgtctga gaaccagttc 240

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gaggctaact ggggatccca ctttgactcc tggggccagg gaaccctggt caccgtctcc 360

tca 363

<210> 82

<211> 121

<212> PRT

<213> Homo sapiens

<400> 82

Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln

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

<210> 83
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 <213> Homo sapiens

<400> 83
 ggtggctcca tcagcagtcg tgattactat

30

<210> 84
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 84

Gly	Gly	Ser	Ile	Ser	Ser	Ala	Asp	Tyr	Tyr
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 <212> DNA
 <213> Homo sapiens

<400> 85
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<210> 86
<211> 7
<212> PRT
<213> Homo sapiens

<400> 86
Ile Tyr Tyr Thr Gly Ser Thr
1 5

<210> 87
<211> 39
<212> DNA
<213> Homo sapiens

<400> 87
gcgagcaggagg aggctaactg gggatccac tttgactcc 39

<210> 88
<211> 13
<212> PRT
<213> Homo sapiens

<400> 88
Ala Ser Glu Glu Ala Asn Trp Gly Ser His Phe Asp Ser
1 5 10

<210> 89
<211> 324
<212> DNA
<213> Homo sapiens

<400> 89
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattgac aacttttttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg catcttacta ctgtcaacat agtcacagtg cccatccgat caccttcggc 300
caagggacac gactggagat taaa 324

<210> 90
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 90

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 Asp Asn Phe
 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 Ser Tyr Tyr Cys Gln His Ser His Ser Ala His Pro
 85 90 95

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

<210> 91
 <211> 18
 <212> DNA
 <213> Homo sapiens

<400> 91

cagagcattg acaacttt

18

<210> 92
 <211> 6
 <212> PRT
 <213> Homo sapiens

<400> 92

Gln Ser Ile Asp Asn Phe
 1 5

<210> 93
<211> 9
<212> DNA
<213> Homo sapiens

<400> 93
gctgcatcc

9

<210> 94
<211> 3
<212> PRT
<213> Homo sapiens

<400> 94

Ala Ala Ser
1

<210> 95
<211> 30
<212> DNA
<213> Homo sapiens

<400> 95
caacatagtc acagtgccca tccgatcacc

30

<210> 96
<211> 10
<212> PRT
<213> Homo sapiens

<400> 96

Gln His Ser His Ser Ala His Pro Ile Thr
1 5 10

<210> 97
<211> 363
<212> DNA
<213> Homo sapiens

<400> 97
cagctgcagc tgcaggagtc gggcccagga ctggtgaagc cttcggagac cctgtccctc 60

acctgcactg tctctggtgg ctccatcagc agtagtaatt actactgggg ctggatccgc 120

cagccccag ggaagagact ggagtggatt gggagtatct attatagtgg gagcacctac 180

tacaaccgt ccctcaagac tcgagtcacc atatccgtag acacgtccaa gaatcagttc 240

tccctgaagc tgacctctgt gaccgccgca gacacggctg tgtattactg tgcgagagag 300

gaagcagcag ctttgacgca ctttgacttc tggggccagg gaaccctggt caccgtctcc 360
tca 363

<210> 98
<211> 121
<212> PRT
<213> Homo sapiens

<400> 98

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

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

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Thr Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Glu Glu Ala Ala Ala Leu Thr His Phe Asp Phe Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 99
<211> 30
<212> DNA
<213> Homo sapiens

<400> 99
ggtggctcca tcagcagtag taattactac 30

<210> 100

<211> 10
<212> PRT
<213> Homo sapiens

<400> 100

Gly Gly Ser Ile Ser Ser Ser Asn Tyr Tyr
1 5 10

<210> 101
<211> 21
<212> DNA
<213> Homo sapiens

<400> 101
atctattata gtgggagcac c

21

<210> 102
<211> 7
<212> PRT
<213> Homo sapiens

<400> 102

Ile Tyr Tyr Ser Gly Ser Thr
1 5

<210> 103
<211> 39
<212> DNA
<213> Homo sapiens

<400> 103
gcgagagagg aagcagcagc ttgacgcac ttgacttc

39

<210> 104
<211> 13
<212> PRT
<213> Homo sapiens

<400> 104

Ala Arg Glu Glu Ala Ala Ala Leu Thr His Phe Asp Phe
1 5 10

<210> 105
<211> 324
<212> DNA
<213> Homo sapiens

<400> 105
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc aactatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctttgct gcatccagtt tacaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacat agtcacagtt cccatccgat caccttcggc 300
caagggacac gactggagat taaa 324

<210> 106
<211> 108
<212> PRT
<213> Homo sapiens

<400> 106
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 Asn Tyr
20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Phe 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 His Ser His Ser Ser His Pro
85 90 95
Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 107
<211> 18
<212> DNA
<213> Homo sapiens

<400> 107

cagagcatta gcaactat

18

<210> 108
<211> 6
<212> PRT
<213> Homo sapiens

<400> 108

Gln Ser Ile Ser Asn Tyr
1 5

<210> 109
<211> 9
<212> DNA
<213> Homo sapiens

<400> 109
gctgcatcc

9

<210> 110
<211> 3
<212> PRT
<213> Homo sapiens

<400> 110

Ala Ala Ser
1

<210> 111
<211> 30
<212> DNA
<213> Homo sapiens

<400> 111
caacatagtc acagttccca tccgatcacc

30

<210> 112
<211> 10
<212> PRT
<213> Homo sapiens

<400> 112

Gln His Ser His Ser Ser His Pro Ile Thr
1 5 10

<210> 113

<211> 366
 <212> DNA
 <213> Homo sapiens

<400> 113
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 tcctgtgcag cctctggatt cacctttgat gattatgcc a tgcactgggt ccggcaagct 120
 ccagggaagg gcctggagtg ggtctcaggt attaattggg ctgggtataa catagactat 180
 gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagatatg 300
 cgtggattca gttatggttt cccctttgac tactggggcc agggaaccct ggtcaccgtc 360
 tcctca 366

<210> 114
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 114
 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15
 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
 35 40 45
 Ser Gly Ile Asn Trp Ala Gly Tyr Asn Ile Asp Tyr Ala Asp Ser Val
 50 55 60
 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
 65 70 75 80
 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
 85 90 95
 Ala Lys Asp Met Arg Gly Phe Ser Tyr Gly Phe Pro Phe Asp Tyr Trp
 100 105 110

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

<210> 115
<211> 24
<212> DNA
<213> Homo sapiens

<400> 115
ggattcacct ttgatgatta tgcc

24

<210> 116
<211> 8
<212> PRT
<213> Homo sapiens

<400> 116

Gly Phe Thr Phe Asp Asp Tyr Ala
1 5

<210> 117
<211> 24
<212> DNA
<213> Homo sapiens

<400> 117
attaattggg ctggttataa cata

24

<210> 118
<211> 8
<212> PRT
<213> Homo sapiens

<400> 118

Ile Asn Trp Ala Gly Tyr Asn Ile
1 5

<210> 119
<211> 45
<212> DNA
<213> Homo sapiens

<400> 119
gcaaaagata tgcgtggatt cagttatggt ttcccctttg actac

45

<210> 120
<211> 15

<212> PRT
<213> Homo sapiens

<400> 120

Ala Lys Asp Met Arg Gly Phe Ser Tyr Gly Phe Pro Phe Asp Tyr
1 5 10 15

<210> 121
<211> 324
<212> DNA
<213> Homo sapiens

<400> 121
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300
caaggacac gactggagat taaa 324

<210> 122
<211> 108
<212> PRT
<213> Homo sapiens

<400> 122

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 Pro
85 90 95

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

<210> 123
<211> 18
<212> DNA
<213> Homo sapiens

<400> 123
cagagcatta gcagctat 18

<210> 124
<211> 6
<212> PRT
<213> Homo sapiens

<400> 124

Gln Ser Ile Ser Ser Tyr
1 5

<210> 125
<211> 9
<212> DNA
<213> Homo sapiens

<400> 125
gctgcatcc 9

<210> 126
<211> 3
<212> PRT
<213> Homo sapiens

<400> 126

Ala Ala Ser
1

<210> 127
<211> 30
<212> DNA
<213> Homo sapiens

<400> 127
caacagagtt acagtacccc tccgatcacc 30

<210> 128
<211> 10
<212> PRT
<213> Homo sapiens

<400> 128

Gln Gln Ser Tyr Ser Thr Pro Pro Ile Thr
1 5 10

<210> 129
<211> 399
<212> DNA
<213> Homo sapiens

<400> 129

gaggtgcagc tggtggagtc tgggggaggc ttggtaaagc cggggggggtc ccttagactc 60
tcctgtgcag cctctggatt tattttcagt aacgcctgga tgaactgggt ccgccaggct 120
ccaggggaagg gactggcgtg ggttggccgt attaaaaccg aaactgatgg tgggacaaca 180
gactacgctg caccgtaaa aggcagattc accatctcaa gagatgactc aaaaaacacg 240
ctgtatctgc aaatgaacag cgtgaaaacc gaggacacag ccgtgtatta ctgtacaggg 300
ggatacagct atggtgacga tagcagcagc tggaacgagg gctactacta ctacggtatg 360
gacgtctggg gccaaaggac cacggtcacc gtctcctca 399

<210> 130
<211> 133
<212> PRT
<213> Homo sapiens

<400> 130

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Ser Asn Ala
20 25 30

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

Gly Arg Ile Lys Thr Glu Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
65 70 75 80

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

Tyr Cys Thr Gly Gly Tyr Ser Tyr Gly Asp Asp Ser Ser Ser Trp Asn
100 105 110

Glu Gly Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr
115 120 125

Val Thr Val Ser Ser
130

<210> 131
<211> 24
<212> DNA
<213> Homo sapiens

<400> 131
ggatttattt tcagtaacgc ctgg

24

<210> 132
<211> 8
<212> PRT
<213> Homo sapiens

<400> 132

Gly Phe Ile Phe Ser Asn Ala Trp
1 5

<210> 133
<211> 30
<212> DNA
<213> Homo sapiens

<400> 133
attaaaaccg aaactgatgg tgggacaaca

30

<210> 134
<211> 10
<212> PRT
<213> Homo sapiens

<400> 134

Ile Lys Thr Glu Thr Asp Gly Gly Thr Thr
1 5 10

<210> 135

<211> 72

<212> DNA

<213> Homo sapiens

<400> 135

acaggggggat acagctatgg tgacgatagc agcagctgga acgagggcta ctactactac 60

ggtatggacg tc 72

<210> 136

<211> 24

<212> PRT

<213> Homo sapiens

<400> 136

Thr Gly Gly Tyr Ser Tyr Gly Asp Asp Ser Ser Ser Trp Asn Glu Gly
1 5 10 15

Tyr Tyr Tyr Tyr Gly Met Asp Val
20

<210> 137

<211> 378

<212> DNA

<213> Homo sapiens

<400> 137

gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60

tcctgtacag cctctggatt cacctttgat gattatgcca tgcactgggt ccggcaagct 120

ccaggggaagg gcctggagtg ggtctcaggt attcgttggga atggtggtag tataggctat 180

gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa gtccttgcac 240

ctgcaaatga acagtctaaa aactgaggac acggccttgt attactgtgc aaaagatata 300

ggcgatattt tgactggttt ttatggagaa tacggaatgg acgtctgggg ccaagggacc 360

acggtcaccg tctcctca 378

<210> 138

<211> 126
 <212> PRT
 <213> Homo sapiens

<400> 138

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

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

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

Ser Gly Ile Arg Trp Asn Gly Gly Ser Ile Gly Tyr Val Asp Ser Val
 50 55 60

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

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

Ala Lys Asp Ile Gly Asp Ile Leu Thr Gly Phe Tyr Gly Glu Tyr Gly
 100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 139
 <211> 24
 <212> DNA
 <213> Homo sapiens

<400> 139

ggattcacct ttgatgatta tgcc

24

<210> 140
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 140

Gly Phe Thr Phe Asp Asp Tyr Ala

1

5

<210> 141
<211> 24
<212> DNA
<213> Homo sapiens

<400> 141
attcgttgga atggtggtag tata

24

<210> 142
<211> 8
<212> PRT
<213> Homo sapiens

<400> 142
Ile Arg Trp Asn Gly Gly Ser Ile
1 5

<210> 143
<211> 57
<212> DNA
<213> Homo sapiens

<400> 143
gcaaaagata taggcgatat tttgactggt ttttatggag aatacggaaat ggacgtc

57

<210> 144
<211> 19
<212> PRT
<213> Homo sapiens

<400> 144
Ala Lys Asp Ile Gly Asp Ile Leu Thr Gly Phe Tyr Gly Glu Tyr Gly
1 5 10 15

Met Asp Val

<210> 145
<211> 321
<212> DNA
<213> Homo sapiens

<400> 145
gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgaaggaga cagagtcacc

60

atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaagca 120
 gggaaagccc ctaacctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
 aggttcagtg gcagtggatc tgggacagag tacactctca ccatcagcag tctgcaacct 240
 gaagattttg caacttacta ctgtcaacag agttacatta tcccgtacac ttttggccag 300
 gggaccaagc tggagatcaa a 321

<210> 146
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 146

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Glu 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 Ala Gly Lys Ala Pro Asn 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 Glu Tyr 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 Ile Ile Pro Tyr
 85 90 95

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

<210> 147
 <211> 18
 <212> DNA
 <213> Homo sapiens

<400> 147

cagagcatta gcagctat

18

<210> 148
<211> 6
<212> PRT
<213> Homo sapiens

<400> 148

Gln Ser Ile Ser Ser Tyr
1 5

<210> 149
<211> 9
<212> DNA
<213> Homo sapiens

<400> 149

gctgcatcc

9

<210> 150
<211> 3
<212> PRT
<213> Homo sapiens

<400> 150

Ala Ala Ser
1

<210> 151
<211> 27
<212> DNA
<213> Homo sapiens

<400> 151

caacagagtt acattatccc gtacact

27

<210> 152
<211> 9
<212> PRT
<213> Homo sapiens

<400> 152

Gln Gln Ser Tyr Ile Ile Pro Tyr Thr
1 5

<210> 153
<211> 378
<212> DNA
<213> Homo sapiens

<400> 153
gaagtgcagc tgggtggagtc tgggggaggg ttggtacagc ctggcaggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatgcc a tgactgggt cggcaagct 120
ccaggggaagg gcctggagtg ggtctcaagt gttaggtgga atggtggtat tataggctat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag acctgaggac acggccctct attactgtgc aaaagatata 300
ggcgatgttt tgactgggta ttatggagaa tacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 154
<211> 126
<212> PRT
<213> Homo sapiens

<400> 154
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45
Ser Ser Val Arg Trp Asn Gly Gly Ile Ile Gly Tyr Ala Asp Ser Val
50 55 60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Leu Tyr Tyr Cys
85 90 95
Ala Lys Asp Ile Gly Asp Val Leu Thr Gly Tyr Tyr Gly Glu Tyr Gly
100 105 110
Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 155
<211> 24
<212> DNA
<213> Homo sapiens

<400> 155
ggattcacct ttgatgatta tgcc

24

<210> 156
<211> 8
<212> PRT
<213> Homo sapiens

<400> 156

Gly Phe Thr Phe Asp Asp Tyr Ala
1 5

<210> 157
<211> 24
<212> DNA
<213> Homo sapiens

<400> 157
gttaggtgga atggtggtat tata

24

<210> 158
<211> 8
<212> PRT
<213> Homo sapiens

<400> 158

Val Arg Trp Asn Gly Gly Ile Ile
1 5

<210> 159
<211> 57
<212> DNA
<213> Homo sapiens

<400> 159
gcaaaagata taggcgatgt tttgactggt tattatggag aatacggtat ggacgtc

57

<210> 160
<211> 19
<212> PRT
<213> Homo sapiens

<400> 160

Ala Lys Asp Ile Gly Asp Val Leu Thr Gly Tyr Tyr Gly Glu Tyr Gly
1 5 10 15

Met Asp Val

<210> 161

<211> 321

<212> DNA

<213> Homo sapiens

<400> 161

gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtgggaga cagagtcacc 60
atcgcttgcc gggcaagtca gagcattacc acctatttaa attggtatca gcagaaacca 120
gggaaagccc ctaaactcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagtag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacattt ccccgtagac ttttggccag 300
gggaccaagc tggagatcaa a 321

<210> 162

<211> 107

<212> PRT

<213> Homo sapiens

<400> 162

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 Ala Cys Arg Ala Ser Gln Ser Ile Thr Thr 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 Ile Ser Pro Tyr
85 90 95

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

<210> 163
<211> 18
<212> DNA
<213> Homo sapiens

<400> 163
cagagcatta ccacctat

18

<210> 164
<211> 6
<212> PRT
<213> Homo sapiens

<400> 164

Gln Ser Ile Thr Thr Tyr
1 5

<210> 165
<211> 9
<212> DNA
<213> Homo sapiens

<400> 165
gctgcatcc

9

<210> 166
<211> 3
<212> PRT
<213> Homo sapiens

<400> 166

Ala Ala Ser
1

<210> 167
<211> 27
<212> DNA
<213> Homo sapiens

<400> 167

caacagagtt acatttcccc gtacact

27

<210> 168
<211> 9
<212> PRT
<213> Homo sapiens

<400> 168

Gln Gln Ser Tyr Ile Ser Pro Tyr Thr
1 5

<210> 169
<211> 378
<212> DNA
<213> Homo sapiens

<400> 169
caggtgcagc tgggtggagtc tggggggaggc gtgggtccagc ctgggaagtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt aattatggca tacactgggt ccgccaggct 120
ccaggcaagg ggctggagtg ggtggcgatt atattatatg atggaagtaa tcaacactat 180
gcagattccg tgaagggccg attcaccatt tccagagaca attccaaaaa cacgctgtat 240
cttcaaataa acaacctgag agctgaggac acggccgttt attactgtgc gagagatctt 300
gatcttttga gtggttatta tacaaacggg gacggtatgg acgtctgggg ccaagggacc 360
acggtcaccg tctcctca 378

<210> 170
<211> 126
<212> PRT
<213> Homo sapiens

<400> 170

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

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

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

Ala Ile Ile Leu Tyr Asp Gly Ser Asn Gln His Tyr Ala Asp Ser Val

50

55

60

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

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

Ala Arg Asp Leu Asp Leu Trp Ser Gly Tyr Tyr Thr Asn Gly Asp Gly
 100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
 115 120 125

<210> 171
 <211> 24
 <212> DNA
 <213> Homo sapiens

<400> 171
 ggattcacct tcagtaatta tggc

24

<210> 172
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 172

Gly Phe Thr Phe Ser Asn Tyr Gly
 1 5

<210> 173
 <211> 24
 <212> DNA
 <213> Homo sapiens

<400> 173
 atattatatg atggaagtaa tcaa

24

<210> 174
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 174

Ile Leu Tyr Asp Gly Ser Asn Gln
1 5

<210> 175
<211> 57
<212> DNA
<213> Homo sapiens

<400> 175
gcgagagatc ttgatctttg gagggttat tatacaaacg gggacggtat ggacgtc 57

<210> 176
<211> 19
<212> PRT
<213> Homo sapiens

<400> 176
Ala Arg Asp Leu Asp Leu Trp Ser Gly Tyr Tyr Thr Asn Gly Asp Gly
1 5 10 15

Met Asp Val

<210> 177
<211> 575
<212> PRT
<213> Homo sapiens

<400> 177
Met Trp Ser Leu Leu Leu Cys Gly Leu Ser Ile Ala Leu Pro Leu Ser
1 5 10 15

Val Thr Ala Asp Gly Cys Lys Asp Ile Phe Met Lys Asn Glu Ile Leu
20 25 30

Ser Ala Ser Gln Pro Phe Ala Phe Asn Cys Thr Phe Pro Pro Ile Thr
35 40 45

Ser Gly Glu Val Ser Val Thr Trp Tyr Lys Asn Ser Ser Lys Ile Pro
50 55 60

Val Ser Lys Ile Ile Gln Ser Arg Ile His Gln Asp Glu Thr Trp Ile
65 70 75 80

Leu Phe Leu Pro Met Glu Trp Gly Asp Ser Gly Val Tyr Gln Cys Val
85 90 95

Ile Lys Gly Arg Asp Ser Cys His Arg Ile His Val Asn Leu Thr Val
100 105 110

Phe Glu Lys His Trp Cys Asp Thr Ser Ile Gly Gly Leu Pro Asn Leu
115 120 125

Ser Asp Glu Tyr Lys Gln Ile Leu His Leu Gly Lys Asp Asp Ser Leu
130 135 140

Thr Cys His Leu His Phe Pro Lys Ser Cys Val Leu Gly Pro Ile Lys
145 150 155 160

Trp Tyr Lys Asp Cys Asn Glu Ile Lys Gly Glu Arg Phe Thr Val Leu
165 170 175

Glu Thr Arg Leu Leu Val Ser Asn Val Ser Ala Glu Asp Arg Gly Asn
180 185 190

Tyr Ala Cys Gln Ala Ile Leu Thr His Ser Gly Lys Gln Tyr Glu Val
195 200 205

Leu Asn Gly Ile Thr Val Ser Ile Thr Glu Arg Ala Gly Tyr Gly Gly
210 215 220

Ser Val Pro Lys Ile Ile Tyr Pro Lys Asn His Ser Ile Glu Val Gln
225 230 235 240

Leu Gly Thr Thr Leu Ile Val Asp Cys Asn Val Thr Asp Thr Lys Asp
245 250 255

Asn Thr Asn Leu Arg Cys Trp Arg Val Asn Asn Thr Leu Val Asp Asp
260 265 270

Tyr Tyr Asp Glu Ser Lys Arg Ile Arg Glu Gly Val Glu Thr His Val
275 280 285

Ser Phe Arg Glu His Asn Leu Tyr Thr Val Asn Ile Thr Phe Leu Glu
290 295 300

Val Lys Met Glu Asp Tyr Gly Leu Pro Phe Met Cys His Ala Gly Val
 305 310 315 320

Ser Thr Ala Tyr Ile Ile Leu Gln Leu Pro Ala Pro Asp Phe Arg Ala
 325 330 335

Tyr Leu Ile Gly Gly Leu Ile Ala Leu Val Ala Val Ala Val Ser Val
 340 345 350

Val Tyr Ile Tyr Asn Ile Phe Lys Ile Asp Ile Val Leu Trp Tyr Arg
 355 360 365

Ser Ala Phe His Ser Thr Glu Thr Ile Val Asp Gly Lys Leu Tyr Asp
 370 375 380

Ala Tyr Val Leu Tyr Pro Lys Pro His Lys Glu Ser Gln Arg His Ala
 385 390 395 400

Val Asp Ala Leu Val Leu Asn Ile Leu Pro Glu Val Leu Glu Arg Gln
 405 410 415

Cys Gly Tyr Lys Leu Phe Ile Phe Gly Arg Asp Glu Phe Pro Gly Gln
 420 425 430

Ala Val Ala Asn Val Ile Asp Glu Asn Val Lys Leu Cys Arg Arg Leu
 435 440 445

Ile Val Ile Val Val Pro Glu Ser Leu Gly Phe Gly Leu Leu Lys Asn
 450 455 460

Leu Ser Glu Glu Gln Ile Ala Val Tyr Ser Ala Leu Ile Gln Asp Gly
 465 470 475 480

Met Lys Val Ile Leu Ile Glu Leu Glu Lys Ile Glu Asp Tyr Thr Val
 485 490 495

Met Pro Glu Ser Ile Gln Tyr Ile Lys Gln Lys His Gly Ala Ile Arg
 500 505 510

Trp His Gly Asp Phe Thr Glu Gln Ser Gln Cys Met Lys Thr Lys Phe
 515 520 525

Trp Lys Thr Val Arg Tyr His Met Pro Pro Arg Arg Cys Arg Pro Phe
 530 535 540

Pro Pro Val Gln Leu Leu Gln His Thr Pro Cys Tyr Arg Thr Ala Gly
 545 550 555 560

Pro Glu Leu Gly Ser Arg Arg Lys Lys Cys Thr Leu Thr Thr Gly
 565 570 575

<210> 178
 <211> 570
 <212> PRT
 <213> Homo sapiens

<400> 178

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

Gln Ser Asp Ala Ser Glu Arg Cys Asp Asp Trp Gly Leu Asp Thr Met
 20 25 30

Arg Gln Ile Gln Val Phe Glu Asp Glu Pro Ala Arg Ile Lys Cys Pro
 35 40 45

Leu Phe Glu His Phe Leu Lys Phe Asn Tyr Ser Thr Ala His Ser Ala
 50 55 60

Gly Leu Thr Leu Ile Trp Tyr Trp Thr Arg Gln Asp Arg Asp Leu Glu
 65 70 75 80

Glu Pro Ile Asn Phe Arg Leu Pro Glu Asn Arg Ile Ser Lys Glu Lys
 85 90 95

Asp Val Leu Trp Phe Arg Pro Thr Leu Leu Asn Asp Thr Gly Asn Tyr
 100 105 110

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

Leu Glu Val Val Gln Lys Asp Ser Cys Phe Asn Ser Pro Met Lys Leu
 130 135 140

Pro Val His Lys Leu Tyr Ile Glu Tyr Gly Ile Gln Arg Ile Thr Cys
145 150 155 160

Pro Asn Val Asp Gly Tyr Phe Pro Ser Ser Val Lys Pro Thr Ile Thr
165 170 175

Trp Tyr Met Gly Cys Tyr Lys Ile Gln Asn Phe Asn Asn Val Ile Pro
180 185 190

Glu Gly Met Asn Leu Ser Phe Leu Ile Ala Leu Ile Ser Asn Asn Gly
195 200 205

Asn Tyr Thr Cys Val Val Thr Tyr Pro Glu Asn Gly Arg Thr Phe His
210 215 220

Leu Thr Arg Thr Leu Thr Val Lys Val Val Gly Ser Pro Lys Asn Ala
225 230 235 240

Val Pro Pro Val Ile His Ser Pro Asn Asp His Val Val Tyr Glu Lys
245 250 255

Glu Pro Gly Glu Glu Leu Leu Ile Pro Cys Thr Val Tyr Phe Ser Phe
260 265 270

Leu Met Asp Ser Arg Asn Glu Val Trp Trp Thr Ile Asp Gly Lys Lys
275 280 285

Pro Asp Asp Ile Thr Ile Asp Val Thr Ile Asn Glu Ser Ile Ser His
290 295 300

Ser Arg Thr Glu Asp Glu Thr Arg Thr Gln Ile Leu Ser Ile Lys Lys
305 310 315 320

Val Thr Ser Glu Asp Leu Lys Arg Ser Tyr Val Cys His Ala Arg Ser
325 330 335

Ala Lys Gly Glu Val Ala Lys Ala Ala Lys Val Lys Gln Lys Val Pro
340 345 350

Ala Pro Arg Tyr Thr Val Glu Leu Ala Cys Gly Phe Gly Ala Thr Val

355

360

365

Leu Leu Val Val Ile Leu Ile Val Val Tyr His Val Tyr Trp Leu Glu
 370 375 380

Met Val Leu Phe Tyr Arg Ala His Phe Gly Thr Asp Glu Thr Ile Leu
 385 390 395 400

Asp Gly Lys Glu Tyr Asp Ile Tyr Val Ser Tyr Ala Arg Asn Ala Glu
 405 410 415

Glu Glu Glu Phe Val Leu Leu Thr Leu Arg Gly Val Leu Glu Asn Glu
 420 425 430

Phe Gly Tyr Lys Leu Cys Ile Phe Asp Arg Asp Ser Leu Pro Gly Gly
 435 440 445

Ile Val Thr Asp Glu Thr Leu Ser Phe Ile Gln Lys Ser Arg Arg Leu
 450 455 460

Leu Val Val Leu Ser Pro Asn Tyr Val Leu Gln Gly Thr Gln Ala Leu
 465 470 475 480

Leu Glu Leu Lys Ala Gly Leu Glu Asn Met Ala Ser Arg Gly Asn Ile
 485 490 495

Asn Val Ile Leu Val Gln Tyr Lys Ala Val Lys Glu Thr Lys Val Lys
 500 505 510

Glu Leu Lys Arg Ala Lys Thr Val Leu Thr Val Ile Lys Trp Lys Gly
 515 520 525

Glu Lys Ser Lys Tyr Pro Gln Gly Arg Phe Trp Lys Gln Leu Gln Val
 530 535 540

Ala Met Pro Val Lys Lys Ser Pro Arg Arg Ser Ser Ser Asp Glu Gln
 545 550 555 560

Gly Leu Ser Tyr Ser Ser Leu Lys Asn Val
 565 570

<210> 179
 <211> 1338
 <212> DNA
 <213> Homo sapiens

<400> 179
 gaagtgcagc tgggtggagtc tgggggaggc ttggtgcagc ctggcaggtc cctgagactc 60
 tcctgtgcgg cctctggatt cacctttgat gattatgcc a tacactgggt ccggcaagct 120
 ccagggaagg gcctggagtg ggtctcagtt atcagttgga atagtgatat cataggctat 180
 gcggactctg tgaagggccg attcaccgtc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga atagtctgag aactgaggac acggccttgt attactgtgc aaaaggatat 300
 aactggaact tctttgacta ttggggccag ggaaccctgg tcaccgtctc ctcagcctcc 360
 accaagggcc catcggctctt ccccctggcg ccctgctcca ggagcacctc cgagagcaca 420
 gccgccctgg gctgcctggg caaggactac ttccccgaac cggtgacggt gtcgtggaac 480
 tcaggcgccc tgaccagcgg cgtgcacacc ttcccggctg tcctacagtc ctcaggactc 540
 tactccctca gcagcgtggg gaccgtgccc tccagcagct tgggcacgaa gacctacacc 600
 tgcaacgtag atcacaagcc cagcaacacc aaggtggaca agagagttga gtccaaatat 660
 ggtcccccat gcccaccctg cccagcacct gagttcctgg ggggaccatc agtcttcctg 720
 ttcccccaa aaccaagga cactctcatg atctcccga cccctgaggt cacgtgcgtg 780
 gtggtggacg tgagccagga agaccccgag gtccagttca actggtacgt ggatggcgtg 840
 gaggtgcata atgccaagac aaagccgcgg gaggagcagt tcaacagcac gtaccgtgtg 900
 gtcagcgtcc tcaccgtcct gcaccaggac tggctgaacg gcaaggagta caagtgaag 960
 gtctccaaca aaggcctccc gtcctccatc gagaaaacca tctccaaagc caaagggcag 1020
 ccccgagagc cacaggtgta caccctgccc ccatcccagg aggagatgac caagaaccag 1080
 gtcagcctga cctgcctggg caaaggcttc taccacagcg acatcgccgt ggagtgggag 1140
 agcaatgggc agccggagaa caactacaag accacgcctc ccgtgctgga ctccgacggc 1200
 tccttcttcc tctacagcag gtcaccgtg gacaagagca ggtggcagga ggggaatgtc 1260
 ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacacagaa gtccctctcc 1320
 ctgtctctgg gtaaatga 1338

<210> 180
 <211> 445

<212> PRT
<213> Homo sapiens

<400> 180

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

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

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

Ser Val Ile Ser Trp Asn Ser Asp Ile Ile Gly Tyr Ala Asp Ser Val
50 55 60

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

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

Ala Lys Gly Tyr Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
245 250 255

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
275 280 285

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
305 310 315 320

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

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
340 345 350

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
370 375 380

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

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn

420

425

430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 181
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 181
 gaaattgtgt tgacgcagtc tccagccacc ctgtctttat ctccagggga aagagccacc 60
 ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 120
 ggccaggctc ccaggctcct catctataat gcagcaaaca gggccactga catcccagcc 180
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
 gaagattttg cagtttatta ctgtcagcag cgtagcaact ggctctcac tttcggcgga 300
 gggaccaagg tggagatcaa acgaactgtg gctgcacat ctgtcttcat cttcccgcca 360
 tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 182
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 182

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
 20 25 30

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

Tyr Asn Ala Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 183

<211> 1338

<212> DNA

<213> Homo sapiens

<400> 183

gaagtgcagc tgggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60

tcctgtgcag cctctggatt cacctttgat gattatgcc a tgcaactgggt ccggcaaact 120

ccaggggaagg gcctggagtg ggtctcagtt attagttgga atagtgatgt catagcctat 180

tcggactctg tgaagggccg cttcaccatt tccagagaca acgccaagaa ctccctgtat	240
ctgcaaatga acagtctggg aactgaggac acggccttat attactgtgc aaaaggccat	300
aactggaact tctttgacta ttggggccag ggaaccctgg tcaccgtctc ctcagcctcc	360
accaagggcc catcgggtctt ccccctggcg ccctgctcca ggagcacctc cgagagcaca	420
gccgccctgg gctgcctggg caaggactac ttccccgaac cgggtgacggg gtcgtggaac	480
tcaggcgccc tgaccagcgg cgtgcacacc ttcccggctg tcctacagtc ctcaggactc	540
tactccctca gcagcgtggg gaccgtgccc tccagcagct tgggcacgaa gacctacacc	600
tgcaacgtag atcacaagcc cagcaacacc aaggtggaca agagagttga gtccaaatat	660
gggtcccccat gccaccctg cccagcacct gaggttcctgg ggggaccatc agtcttcctg	720
ttccccccaa aaccaagga cactctcatg atctcccga cccctgaggt cacgtgcgtg	780
gtggtggacg tgagccagga agaccccgag gtccagttca actggtacgt ggatggcgtg	840
gaggtgcata atgccaagac aaagccgcgg gaggagcagt tcaacagcac gtaccgtgtg	900
gtcagcgtcc tcaccgtcct gcaccaggac tggctgaacg gcaaggagta caagtgaag	960
gtctccaaca aaggcctccc gtcctccatc gagaaaacca tctccaaagc caaagggcag	1020
ccccgagagc cacaggtgta caccctgccc ccatcccagg aggagatgac caagaaccag	1080
gtcagcctga cctgcctggg caaaggcttc taccacagcg acatcgccgt ggagtgggag	1140
agcaatgggc agccggagaa caactacaag accacgcctc ccgtgctgga ctccgacggc	1200
tccttcttcc tctacagcag gctcaccgtg gacaagagca ggtggcagga ggggaatgtc	1260
ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacacagaa gtccctctcc	1320
ctgtctctgg gtaaatga	1338

<210> 184
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 184

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

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

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Ala Tyr Ser Asp Ser Val
50 55 60

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

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

Ala Lys Gly His Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu

	245		250		255
Val Thr Cys	Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln				
	260		265		270
Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys					
	275		280		285
Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu					
	290		295		300
Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys					
	305		310		315
					320
Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys					
	325		330		335
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser					
	340		345		350
Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys					
	355		360		365
Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln					
	370		375		380
Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly					
	385		390		395
					400
Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln					
	405		410		415
Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn					
	420		425		430
His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys					
	435		440		445

<210> 185
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 185
gaaatttgtg tgacacagtc tccagccacc ctgtctttgt ctccaggaga aagagccacc 60
ctctcctgca gggccagtca gagggttagc agctacttag cctggtacca acagaaacct 120
ggccaggctc ccaggctcct catctataat gtagccaaca gggccacaga catcccagcc 180
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcgg cctagagcct 240
gaagattttg cagtttattt ctgtcagcag cgtagcaact ggctctcac tttcggcgga 300
gggaccaagg tggagatcaa acgaactgtg gctgcacat ctgtcttcat cttcccgcca 360
tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 186
<211> 214
<212> PRT
<213> Homo sapiens

<400> 186
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45
Tyr Asn Val Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
50 55 60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu Pro
65 70 75 80
Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 187

<211> 1338

<212> DNA

<213> Homo sapiens

<400> 187

gaagtgcagc tggtggagtc tgggggaggc ttggtacagc ctggcaggtc cctgagactc 60

tcctgtacag cctctggatt cacctttgat gattatgcca tacactgggt ccggcaatct 120

ccagggaagg gcctggagtg ggtctcagtt atcagttgga atagtgatgt cataggctat 180

gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240

ctgcagatga atagtctgag agctgaggac acggccttgt attactgtgc aaaaggatat 300

aactggaact tctttgacta ttggggccag ggaaccctgg tcaccgtctc ctcagcctcc 360

accaagggcc catcggctctt ccccctggcg ccctgctcca ggagcacctc cgagagcaca 420

gccgccctgg gctgcctggc caaggactac ttccccgaac cggtgacggt gtcgtggaac 480

tcaggcgccc tgaccagcgg cgtgcacacc ttcccggctg tcctacagtc ctcaggactc	540
tactccctca gcagcgtggt gaccgtgccc tccagcagct tgggcacgaa gacctacacc	600
tgcaacgtag atcacaagcc cagcaacacc aagggtggaca agagagttga gtccaaatat	660
ggccccccat gcccacctg cccagcacct gagttcctgg ggggaccatc agtcttcctg	720
ttccccccaa aaccaagga cactctcatg atctcccgga cccctgaggt cacgtgcgtg	780
gtgggtggacg tgagccagga agaccccgag gtccagttca actggtacgt ggatggcgtg	840
gaggtgcata atgccaagac aaagccgcgg gaggagcagt tcaacagcac gtaccgtgtg	900
gtcagcgtcc tcaccgtcct gcaccaggac tggctgaacg gcaaggagta caagtgaag	960
gtctccaaca aaggcctccc gtcctccatc gagaaaacca tctccaaagc caaagggcag	1020
ccccgagagc cacaggtgta caccctgccc ccatcccagg aggagatgac caagaaccag	1080
gtcagcctga cctgcctggt caaaggcttc taccacagcg acatcgccgt ggagtgggag	1140
agcaatgggc agccggagaa caactacaag accacgcctc ccgtgctgga ctccgacggc	1200
tccttcttcc tctacagcag gtcaccgtg gacaagagca ggtggcagga ggggaatgtc	1260
ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacacagaa gtccctctcc	1320
ctgtctctgg gtaaata	1338

<210> 188
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 188

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

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

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Gly Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr

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

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

Ala Lys Gly Tyr Asn Trp Asn Phe Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
245 250 255

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
275 280 285

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
 290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 305 310 315 320

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

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

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

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 189
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 189
 gaaatttgtg tgacgcagtc tccagccacc ctgtctttat ctccagggga aagagccacc 60
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 ggccaggctc ccaggctcct catctataat gcagcaaaca gggccactga catcccagcc 180
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
 gaagattttg cagtttatta ctgtcagcag cgtagcaact ggcctctcac tttcggcgga 300

gggaccaagg tggagatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcc 360
 tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 190
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 190

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
 20 25 30

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

Tyr Asn Ala Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
 50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 191
 <211> 1338
 <212> DNA
 <213> Homo sapiens

<400> 191
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 tcctgtgcag cctctggatt cacctttgat gattatgcc a tgcaactgggt ccggcaagct 120
 ccagggaagg gcctggaatg ggtctcagtt attagtggga atagtgatgt catagcctat 180
 tcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
 ctgcaaatga acagtctgag aactgaggac acggccttat attactgtac aaaaggccat 300
 aagtggagct tctttgacta ttggggccag ggaaccctgg tcaccgtctc ctcagcctcc 360
 accaagggcc catcggctct ccccctggcg ccctgctcca ggagcacctc cgagagcaca 420
 gccgccctgg gctgcctggt caaggactac ttccccgaac cggtgacggt gtcgtggaac 480
 tcaggcgccc tgaccagcgg cgtgcacacc ttcccggctg tcctacagtc ctcaggactc 540
 tactccctca gcagcgtggt gaccgtgccc tccagcagct tgggcacgaa gacctacacc 600
 tgcaacgtag atcacaagcc cagcaacacc aaggtggaca agagagttga gtccaaatat 660
 ggtcccccat gccaccctg cccagcacct gaggttcctgg ggggaccatc agtcttcctg 720
 ttcccccaa aaccaagga cactctcatg atctcccga cccctgaggt cacgtgcgtg 780
 gtggtggacg tgagccagga agaccccgag gtccagttca actggtacgt ggatggcgtg 840

gaggtgcata atgccaagac aaagccgcgg gaggagcagt tcaacagcac gtaccgtgtg 900
 gtcagcgtcc tcaccgtcct gcaccaggac tggctgaacg gcaaggagta caagtgcaag 960
 gtctccaaca aaggcctccc gtcctccatc gagaaaacca tctccaaagc caaagggcag 1020
 ccccgagagc cacaggtgta caccctgccc ccatcccagg aggagatgac caagaaccag 1080
 gtcagcctga cctgcctggt caaaggcttc taccacagcg acatcgccgt ggagtgggag 1140
 agcaatgggc agccggagaa caactacaag accacgcctc ccgtgctgga ctccgacggc 1200
 tccttcttcc tctacagcag gtcaccgtg gacaagagca ggtggcagga ggggaatgtc 1260
 ttctcatgct ccgtgatgca tgaggctctg cacaaccact acacacagaa gtcctcttcc 1320
 ctgtctctgg gtaaatga 1338

<210> 192
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 192

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

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

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

Ser Val Ile Ser Trp Asn Ser Asp Val Ile Ala Tyr Ser Asp Ser Val
 50 55 60

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

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

Thr Lys Gly His Lys Trp Ser Phe Phe Asp Tyr Trp Gly Gln Gly Thr
 100 105 110

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro
115 120 125

Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly
130 135 140

Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn
145 150 155 160

Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln
165 170 175

Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
180 185 190

Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser
195 200 205

Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys
210 215 220

Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu
225 230 235 240

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
245 250 255

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln
260 265 270

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
275 280 285

Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu
290 295 300

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
305 310 315 320

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

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 340 345 350

Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 355 360 365

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 370 375 380

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

Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln
 405 410 415

Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 420 425 430

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 193
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 193
 gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60
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 ggccaggctc ccagactcct catctttaat gtagccaaca gggccactga catcccagcc 180
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 240
 gaagattttg cagtttatta ctgtcagcag cgtagcaact ggcctctcac tttcggcgga 300
 gggaccaagg tggagatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 360
 tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600

ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt

642

<210> 194
<211> 214
<212> PRT
<213> Homo sapiens

<400> 194

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr
20 25 30

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

Phe Asn Val Ala Asn Arg Ala Thr Asp Ile Pro Ala Arg Phe Ser Gly
50 55 60

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

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Leu
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
Page 72

180

185

190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 195
 <211> 1323
 <212> DNA
 <213> Homo sapiens

<400> 195
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 tcctgcgcag cctctggatt cacctttagc gactatgcc a tgagctgggt ccgccaggct 120
 ccggggaagg ggctggagtg ggtctcaggt attagtggaa atgggtggtga cacatactac 180
 ggagacttcg tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag aggcgaggac acggccgcat atttctgtgt gatagatctt 300
 gactattggg gtcagggaa cctgggtcacc gtctcctcag cctccaccaa gggcccatcg 360
 gtcttcccc tggcgccctg ctccaggagc acctccgaga gcacagccgc cctgggctgc 420
 ctgggtcaagg actacttccc cgaaccggtg acgggtgtcgt ggaactcagg cgccctgacc 480
 agcggcgtgc acaccttccc ggctgtccta cagtcctcag gactctactc cctcagcagc 540
 gtgggtgaccg tgccctccag cagcttgggc acgaagacct acacctgcaa cgtagatcac 600
 aagcccagca acaccaaggt ggacaagaga gttgagtcca aatatgggtcc cccatgccca 660
 ccctgcccag cacctgagtt cctgggggga ccatcagtct tcctgttccc cccaaaaccc 720
 aaggacactc tcatgatctc ccggaccct gaggtcacgt gcgtgggtggt ggacgtgagc 780
 caggaagacc ccgaggtcca gttcaactgg tacgtggatg gcgtggaggt gcataatgcc 840
 aagacaaagc cgcgggagga gcagttcaac agcacgtacc gtgtgggtcag cgtcctcacc 900
 gtcctgcacc aggactggct gaacggcaag gagtacaagt gcaaggtctc caacaaaggc 960
 ctcccgctcct ccatcgagaa aacctctcc aaagccaaag ggcagccccg agagccacag 1020
 gtgtacaccc tgccccatc ccaggaggag atgaccaaga accaggtcag cctgacctgc 1080
 ctgggtcaaag gcttctaccc cagcgacatc gccgtggagt gggagagcaa tgggcagccg 1140

gagaacaact acaagaccac gcctcccgtg ctggactccg acggctcctt cttcctctac 1200
 agcaggctca ccgtggacaa gagcaggtgg caggagggga atgtcttctc atgctccgtg 1260
 atgcatgagg ctctgcacaa ccactacaca cagaagtccc tctccctgtc tctgggtaaa 1320
 tga 1323

<210> 196
 <211> 440
 <212> PRT
 <213> Homo sapiens

<400> 196

Glu Val Gln Leu Val 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 Asp Tyr
 20 25 30

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

Ser Gly Ile Ser Gly Asn Gly Gly Asp Thr Tyr Tyr Gly Asp Phe Val
 50 55 60

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

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

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

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser
 115 120 125

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp
 130 135 140

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr
 145 150 155 160

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr
165 170 175

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys
180 185 190

Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp
195 200 205

Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala
210 215 220

Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
225 230 235 240

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
245 250 255

Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
260 265 270

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
275 280 285

Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
290 295 300

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
305 310 315 320

Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro
325 330 335

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr
340 345 350

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
355 360 365

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
370 375 380

Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 385 390 395 400

Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe
 405 410 415

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
 420 425 430

Ser Leu Ser Leu Ser Leu Gly Lys
 435 440

<210> 197
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 197
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 atcacttgcc gggccagtca gagtattagt agctggttgg cctggtatca acagaaacca 120
 ggaaaagccc ctaggctcct gatctataag gcgtctatatt taggagatgg ggtcccatca 180
 aggttcagcg gcagtggatc tgggacagaa ttcactctca ccatcagcag cctgcagcct 240
 gatgattttg ctacttatta ctgccaccag tataatagtt atttgtggac gttcggccaa 300
 gggaccaagg tggaaatcaa acgaactgtg gctgcaccat ctgtcttcat cttcccgcca 360
 tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 198
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 198

Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Glu Gly

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

<210> 199
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 <212> DNA
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<400> 199
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 cagcaccag ggaagggcct ggagtggatt ggatccatct attatactgg gagtacttac 180
 tacaacccgt ccctcaagag tcgacttacc atatcaatag acacgtctga gaaccagttc 240
 tctttgaaac tgacctctct gactgccgcg gacacggccg tgtattactg tgcgagcgag 300
 gaggctaact ggggatccca ctttgactcc tggggccagg gaaccctggt caccgtctcc 360
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 tcgtggaact caggcgccct gaccagcggc gtgcacacct tcccggctgt cctacagtcc 540
 tcaggactct actccctcag cagcgtggtg accgtgccct ccagcagctt gggcacgaag 600
 acctacacct gcaacgtaga tcacaagccc agcaacacca aggtggacaa gagagttgag 660
 tccaaatatg gtcccccatg cccaccctgc ccagcacctg agttcctggg gggaccatca 720
 gtcttcctgt tcccccaaa acccaaggac actctcatga tctcccggac ccctgaggtc 780
 acgtgcgtgg tgggtggacgt gagccaggaa gaccccgagg tccagttcaa ctggtacgtg 840
 gatggcgtgg aggtgcataa tgccaagaca aagccgcggg aggagcagtt caacagcacg 900
 taccgtgtgg tcagcgtcct caccgtcctg caccaggact ggctgaacgg caaggagtac 960
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 aagaaccagg tcagcctgac ctgcctggtc aaaggcttct accccagcga catcgccgtg 1140
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 tccctctccc tgtctctggg taaatga 1347

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<212> PRT
<213> Homo sapiens

<400> 200

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

Asp Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Ser Ile Tyr Tyr Thr Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Ile Asp Thr Ser Glu Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Leu Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Ser Glu Glu Ala Asn Trp Gly Ser His Phe Asp Ser Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145 150 155 160

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
165 170 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
180 185 190

Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His
195 200 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly
210 215 220

Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
245 250 255

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro
260 265 270

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
275 280 285

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val
290 295 300

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
305 310 315 320

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr
325 330 335

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
340 345 350

Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
355 360 365

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
370 375 380

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
385 390 395 400

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser
405 410 415

Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
Page 80

420

425

430

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 435 440 445

<210> 201

<211> 645

<212> DNA

<213> Homo sapiens

<400> 201

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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180

aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240

gaagattttg catcttacta ctgtcaacat agtcacagtg cccatccgat caccttcggc 300

caaggacac gactggagat taaacgaact gtggctgcac catctgtctt catcttccc 360

ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc 420

tatcccagag aggccaaagt acagtggaag gtggataacg cctccaatc gggtaactcc 480

caggagagtg tcacagagca ggacagcaag gacagcacct acagcctcag cagcaccctg 540

acgctgagca aagcagacta cgagaaacac aaagtctacg cctgcgaagt caccatcag 600

ggcctgagct cgcccgtcac aaagagcttc aacaggggag agtgt 645

<210> 202

<211> 215

<212> PRT

<213> Homo sapiens

<400> 202

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asp Asn Phe
 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 Ser Tyr Tyr Cys Gln His Ser His Ser Ala His Pro
85 90 95

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 203
<211> 1347
<212> DNA
<213> Homo sapiens

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cagccccag ggaagagact ggagtggatt gggagtatct attatagtgg gagcacctac 180

tacaacccgt ccctcaagac tcgagtcacc atatccgtag acacgtccaa gaatcagttc	240
tccctgaagc tgacctctgt gaccgccgca gacacggctg tgtattactg tgcgagagag	300
gaagcagcag ctttgacgca ctttgacttc tggggccagg gaaccctggt caccgtctcc	360
tcagcctcca ccaagggccc atcgggtcttc cccctggcgc cctgctccag gagcacctcc	420
gagagcacag ccgccctggg ctgcctggtc aaggactact tccccgaacc ggtgacggtg	480
tcgtggaact caggcgccct gaccagcggc gtgcacacct tcccggctgt cctacagtcc	540
tcaggactct actccctcag cagcgtggtg accgtgccct ccagcagctt gggcacgaag	600
acctacacct gcaacgtaga tcacaagccc agcaacacca aggtggacaa gagagttgag	660
tccaaatatg gtcccccattg cccaccctgc ccagcacctg agttcctggg gggaccatca	720
gtcttcctgt tcccccaaa acccaaggac actctcatga tctcccggac ccctgaggtc	780
acgtgcgtgg tgggtggacgt gagccaggaa gaccccgagg tccagttcaa ctggtacgtg	840
gatggcgtgg aggtgcataa tgccaagaca aagccgcggg aggagcagtt caacagcacg	900
taccgtgtgg tcagcgtcct caccgtcctg caccaggact ggctgaacgg caaggagtac	960
aagtgcaagg tctccaacaa aggcctcccg tcctccatcg agaaaacat ctccaaagcc	1020
aaagggcagc cccgagagcc acaggtgtac accctgcccc catcccagga ggagatgacc	1080
aagaaccagg tcagcctgac ctgcctggtc aaaggcttct accccagcga catcgccgtg	1140
gagtgggaga gcaatgggca gccggagaac aactacaaga ccacgcctcc cgtgctggac	1200
tccgacggct ctttcttcct ctacagcagg ctaccgtgg acaagagcag gtggcaggag	1260
gggaatgtct tctcatgctc cgtgatgcat gaggctctgc acaaccacta cacacagaag	1320
tccctctccc tgtctctggg taaatga	1347

<210> 204
 <211> 448
 <212> PRT
 <213> Homo sapiens

<400> 204

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

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

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

Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Thr Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Glu Glu Ala Ala Ala Leu Thr His Phe Asp Phe Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
115 120 125

Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala
130 135 140

Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
145 150 155 160

Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
165 170 175

Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
180 185 190

Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His
195 200 205

Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly
210 215 220

Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser
225 230 235 240

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
Page 84

<400> 205
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gggaaagccc ctaagctcct gatctttgct gcatccagtt tacaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagat ttcactctca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacat agtcacagtt cccatccgat caccttcggc 300
caagggacac gactggagat taaacgaact gtggctgcac catctgtctt catcttcccg 360
ccatctgatg agcagttgaa atctggaact gcctctgttg tgtgcctgct gaataacttc 420
tatcccagag aggccaaagt acagtggaag gtggataacg ccctccaatc gggtaactcc 480
caggagagtg tcacagagca ggacagcaag gacagcacct acagcctcag cagcaccttg 540
acgctgagca aagcagacta cgagaaacac aaagtctacg cctgcgaagt caccatcag 600
ggcctgagct cgcccgtcac aaagagcttc aacaggggag agtgt 645

<210> 206
<211> 215
<212> PRT
<213> Homo sapiens

<400> 206
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr
20 25 30
Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45
Phe 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 His Ser His Ser Ser His Pro
85 90 95

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser
115 120 125

Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu
130 135 140

Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser
145 150 155 160

Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
165 170 175

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val
180 185 190

Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys
195 200 205

Ser Phe Asn Arg Gly Glu Cys
210 215

<210> 207
<211> 1350
<212> DNA
<213> Homo sapiens

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ccagggaagg gcctggagtg ggtctcaggt attaattggg ctggttataa catagactat 180
gcggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
ctgcaaatga acagtctgag agctgaggac acggccttgt attactgtgc aaaagatatg 300
cgtggattca gttatggttt cccctttgac tactggggcc aggaaccct ggtcaccgtc 360
tcctcagcct ccaccaaggg cccatcggtc ttccccctgg cgccctgctc caggagcacc 420
tccgagagca cagccgccct gggctgcctg gtcaaggact acttccccga accggtgacg 480

gtgtcgtgga actcaggcgc cctgaccagc ggcgtgcaca ctttcccggc tgtcctacag 540
 tcctcaggac tctactccct cagcagcgtg gtgaccgtgc cctccagcag cttgggcacg 600
 aagacctaca cctgcaacgt agatcacaag cccagcaaca ccaaggtgga caagagagtt 660
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 aagtcctctt ccctgtctct gggtaaatga 1350

<210> 208
 <211> 449
 <212> PRT
 <213> Homo sapiens

<400> 208

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
 20 25 30

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

Ser Gly Ile Asn Trp Ala Gly Tyr Asn Ile Asp Tyr Ala Asp Ser Val
 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr

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

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val
 290 295 300

Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu
 305 310 315 320

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys
 325 330 335

Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 340 345 350

Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 355 360 365

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 370 375 380

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu
 385 390 395 400

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys
 405 410 415

Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 420 425 430

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly
 435 440 445

Lys

<210> 209
 <211> 645
 <212> DNA
 <213> Homo sapiens

<400> 209
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 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 210

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 211
 <211> 1383
 <212> DNA
 <213> Homo sapiens

<400> 211
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 aagcccagca acaccaaggt ggacaagaga gttgagtcca aatatggtcc cccatgccca 720

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 aaggacactc tcatgatctc ccggaccctt gaggtcacgt gcgtgggtgg ggacgtgagc 840
 caggaagacc ccgaggtcca gttcaactgg tacgtggatg gcgtggaggt gcataatgcc 900
 aagacaaagc cgcggggagga gcagttcaac agcacgtacc gtgtgggtcag cgtcctcacc 960
 gtcctgcacc aggactggct gaacggcaag gagtacaagt gcaaggtctc caacaaaggc 1020
 ctcccgtcct ccatcgagaa aaccatctcc aaagccaaag ggagagcccg agagccacag 1080
 gtgtacaccc tgcccccatc ccaggaggag atgaccaaga accaggtcag cctgacctgc 1140
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 agcagggtca ccgtggacaa gagcaggtgg caggagggga atgtcttctc atgtccgtg 1320
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<210> 212
 <211> 460
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 <213> Homo sapiens

<400> 212

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

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

Gly Arg Ile Lys Thr Glu Thr Asp Gly Gly Thr Thr Asp Tyr Ala Ala
 50 55 60

Pro Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asp Ser Lys Asn Thr
 65 70 75 80

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

Tyr Cys Thr Gly Gly Tyr Ser Tyr Gly Asp Asp Ser Ser Ser Trp Asn
100 105 110

Glu Gly Tyr Tyr Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr
115 120 125

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
130 135 140

Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys
145 150 155 160

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
165 170 175

Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
180 185 190

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
195 200 205

Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn
210 215 220

Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro
225 230 235 240

Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe
245 250 255

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
260 265 270

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe
275 280 285

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
290 295 300

Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
Page 94

305		310		315		320									
Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val
			325					330					335		
Ser	Asn	Lys	Gly	Leu	Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala
			340					345					350		
Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Gln
		355					360					365			
Glu	Glu	Met	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly
	370					375					380				
Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro
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Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser
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Phe	Phe	Leu	Tyr	Ser	Arg	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu
		420						425					430		
Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His
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Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Leu	Gly	Lys				
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<400> 213	
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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca	180
aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct	240
gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc	300

caagggacac gactggagat taaaactgtg gctgcacat ctgtcttcat cttcccgcc 360
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 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
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<210> 214
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 214

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

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Val Ala Ala
 100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
 115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
 130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
 145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
 165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
 180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
 195 200 205

Phe Asn Arg Gly Glu Cys
 210

<210> 215
 <211> 1362
 <212> DNA
 <213> Homo sapiens

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 ccagggaagg gcctggagtg ggtctcaggt attcgttgg a atggtggtag tataggctat 180
 gtggactctg tgaagggccg attcaccatc tccagagaca acgccaagaa gtccctgcat 240
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 ggcgatattt tgactggttt ttatggagaa tacggaatgg acgtctgggg ccaagggacc 360
 acggtcaccg tctcctcagc ctccaccaag ggcccatcgg tcttccccct ggcgccttgc 420
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 gaaccggtga cggtgtcgtg gaactcaggc gccctgacca gcggcgtgca caccttcccc 540
 gctgtcctac agtcctcagg actctactcc ctcagcagcg tgggtgaccgt gccctccagc 600
 agcttgggca cgaagaccta cacctgcaac gtagatcaca agcccagcaa caccaagggtg 660
 gacaagagag ttgagtccaa atatggtccc ccatgcccac cctgcccagc acctgagttc 720
 ctgggggggac catcagtctt cctgttcccc ccaaaacca aggacactct catgatctcc 780
 cggacccttg aggtcacgtg cgtggtggtg gacgtgagcc aggaagaccc cgaggtccag 840

115					120					125					
Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Cys	Ser	Arg	Ser	Thr
	130					135					140				
Ser	Glu	Ser	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro
145					150					155					160
Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val
				165					170					175	
His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser
			180					185					190		
Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Lys	Thr	Tyr	Thr
		195					200					205			
Cys	Asn	Val	Asp	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Arg	Val
	210					215					220				
Glu	Ser	Lys	Tyr	Gly	Pro	Pro	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Phe
225					230					235					240
Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr
				245					250					255	
Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val
			260					265						270	
Ser	Gln	Glu	Asp	Pro	Glu	Val	Gln	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val
		275					280					285			
Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Phe	Asn	Ser
	290					295					300				
Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu
305					310					315					320
Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly	Leu	Pro	Ser
				325					330					335	

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
340 345 350

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
355 360 365

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385 390 395 400

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
405 410 415

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
420 425 430

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
435 440 445

Leu Ser Leu Gly Lys
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<211> 642
<212> DNA
<213> Homo sapiens

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gggaaagccc ctaacctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca 180
aggttcagtg gcagtggatc tgggacagag tacacttca ccatcagcag tctgcaacct 240
gaagattttg caacttacta ctgtcaacag agttacatta tcccgtacac ttttggccag 300
gggaccaagc tggagatcaa acgaactgtg gctgcacat ctgtcttcat cttcccgcca 360
tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540

ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 218
<211> 214
<212> PRT
<213> Homo sapiens

<400> 218

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Glu Gly
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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 Ala Gly Lys Ala Pro Asn 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 Glu Tyr 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 Ile Ile Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 219
<211> 1362
<212> DNA
<213> Homo sapiens

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caggaggaga tgaccaagaa ccaggtcagc ctgacctgcc tggtaaagg cttctacccc 1140
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cctcccggtgc tggactccga cggctccttc ttcctctaca gcaggctcac cgtggacaag 1260
agcaggtggc aggaggggaa tgtcttctca tgctccgtga tgcattgaggc tctgcacaac 1320
cactacacac agaagtcctt ctccctgtct ctgggtaaat ga 1362

<210> 220
<211> 453
<212> PRT
<213> Homo sapiens

<400> 220

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
20 25 30

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

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

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

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

Ala Lys Asp Ile Gly Asp Val Leu Thr Gly Tyr Tyr Gly Glu Tyr Gly
100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
115 120 125

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
130 135 140

Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
 145 150 155 160

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
 165 170 175

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
 180 185 190

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr
 195 200 205

Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
 210 215 220

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
 225 230 235 240

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 245 250 255

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 260 265 270

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
 275 280 285

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
 290 295 300

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 305 310 315 320

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
 325 330 335

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 340 345 350

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
 355 360 365

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 370 375 380

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 385 390 395 400

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
 405 410 415

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
 420 425 430

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 435 440 445

Leu Ser Leu Gly Lys
 450

<210> 221
 <211> 642
 <212> DNA
 <213> Homo sapiens

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 gaagattttg caacttacta ctgtcaacag agttacattt ccccgtagac ttttgccag 300
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 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gt 642

<210> 222

<211> 214
<212> PRT
<213> Homo sapiens

<400> 222

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 Ala Cys Arg Ala Ser Gln Ser Ile Thr Thr 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 Ile Ser Pro Tyr
85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
Page 106

Phe Asn Arg Gly Glu Cys
210

<210> 223

<211> 1362

<212> DNA

<213> Homo sapiens

<400> 223

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ccaggcaagg ggctggagtg ggtggcgatt atattatatg atggaagtaa tcaacactat	180
gcagattccg tgaagggccg attcaccatt tccagagaca attccaaaaa cacgctgtat	240
cttcaaatga acaacctgag agctgaggac acggccgttt attactgtgc gagagatctt	300
gatctttgga gtggttatta taaaacggg gacggtatgg acgtctgggg ccaagggacc	360
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gaaccggtga cgggtgtcgtg gaactcaggc gccctgacca gcggcgtgca caccttcccc	540
gctgtcctac agtcctcagg actctactcc ctacgcagcg tggtgaccgt gccctccagc	600
agcttgggca cgaagaccta cacctgcaac gtagatcaca agcccagcaa caccaagggtg	660
gacaagagag ttgagtccaa atatggtccc ccatgcccac cctgcccagc acctgagttc	720
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cggacccctg aggtcacgtg cgtgggtggtg gacgtgagcc aggaagaccc cgaggtccag	840
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cagttcaaca gcacgtaccg tgtggtcagc gtcctcaccg tcctgcacca ggactggctg	960
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agcgacatcg ccgtggagtg ggagagcaat gggcagccgg agaacaacta caagaccacg	1200
cctcccgtgc tggactccga cggctccttc ttcctctaca gcaggctcac cgtggacaag	1260

agcaggtggc aggaggggaa tgtcttctca tgctccgtga tgcattgaggc tctgcacaac 1320
 cactacacac agaagtcctt ctccctgtct ctgggtaaat ga 1362

<210> 224
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 224

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

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

Ala Ile Ile Leu Tyr Asp Gly Ser Asn Gln His Tyr Ala Asp Ser Val
 50 55 60

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

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

Ala Arg Asp Leu Asp Leu Trp Ser Gly Tyr Tyr Thr Asn Gly Asp Gly
 100 105 110

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser
 115 120 125

Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr
 130 135 140

Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro
 145 150 155 160

Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val
 165 170 175

His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
180 185 190

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr
195 200 205

Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val
210 215 220

Glu Ser Lys Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe
225 230 235 240

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
245 250 255

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
260 265 270

Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
275 280 285

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
290 295 300

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
305 310 315 320

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
325 330 335

Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
340 345 350

Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
355 360 365

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
370 375 380

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
385 390 395 400

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
 405 410 415

Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
 420 425 430

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 435 440 445

Leu Ser Leu Gly Lys
 450

<210> 225
 <211> 645
 <212> DNA
 <213> Homo sapiens

<400> 225
 gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga cagagtcacc 60
 atcacttgcc gggcaagtca gagcattagc agctatttaa attggtatca gcagaaacca 120
 gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccgtca 180
 aggttcagtg gcagtggatc tgggacagat ttactctca ccatcagcag tctgcaacct 240
 gaagattttg caacttacta ctgtcaacag agttacagta cccctccgat caccttcggc 300
 caagggacac gactggagat taaaactgtg gctgcacat ctgtcttcat cttcccgcca 360
 tctgatgagc agttgaaatc tggaactgcc tctgttgtgt gcctgctgaa taacttctat 420
 cccagagagg ccaaagtaca gtggaagggtg gataacgccc tccaatcggg taactcccag 480
 gagagtgtca cagagcagga cagcaaggac agcacctaca gcctcagcag caccctgacg 540
 ctgagcaaag cagactacga gaaacacaaa gtctacgcct gcgaagtcac ccatcagggc 600
 ctgagctcgc ccgtcacaaa gagcttcaac aggggagagt gttag 645

<210> 226
 <211> 214
 <212> PRT
 <213> Homo sapiens

<400> 226

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 Page 110

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
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Pro	85	90	95
Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Thr Val Ala Ala	100	105	110
Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly	115	120	125
Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala	130	135	140
Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln	145	150	155
Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser	165	170	175
Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr	180	185	190
Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser	195	200	205
Phe Asn Arg Gly Glu Cys	210		

<210> 227
<211> 346
<212> PRT
<213> Artificial Sequence

<220>

<223> Recombinant Human IL-36R polypeptide (hIL-36R.mmH)

<400> 227

Asp Gly Cys Lys Asp Ile Phe Met Lys Asn Glu Ile Leu Ser Ala Ser
1 5 10 15

Gln Pro Phe Ala Phe Asn Cys Thr Phe Pro Pro Ile Thr Ser Gly Glu
20 25 30

Val Ser Val Thr Trp Tyr Lys Asn Ser Ser Lys Ile Pro Val Ser Lys
35 40 45

Ile Ile Gln Ser Arg Ile His Gln Asp Glu Thr Trp Ile Leu Phe Leu
50 55 60

Pro Met Glu Trp Gly Asp Ser Gly Val Tyr Gln Cys Val Ile Lys Gly
65 70 75 80

Arg Asp Ser Cys His Arg Ile His Val Asn Leu Thr Val Phe Glu Lys
85 90 95

His Trp Cys Asp Thr Ser Ile Gly Gly Leu Pro Asn Leu Ser Asp Glu
100 105 110

Tyr Lys Gln Ile Leu His Leu Gly Lys Asp Asp Ser Leu Thr Cys His
115 120 125

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

Asp Cys Asn Glu Ile Lys Gly Glu Arg Phe Thr Val Leu Glu Thr Arg
145 150 155 160

Leu Leu Val Ser Asn Val Ser Ala Glu Asp Arg Gly Asn Tyr Ala Cys
165 170 175

Gln Ala Ile Leu Thr His Ser Gly Lys Gln Tyr Glu Val Leu Asn Gly
Page 112

180

185

190

Ile Thr Val Ser Ile Thr Glu Arg Ala Gly Tyr Gly Gly Ser Val Pro
 195 200 205

Lys Ile Ile Tyr Pro Lys Asn His Ser Ile Glu Val Gln Leu Gly Thr
 210 215 220

Thr Leu Ile Val Asp Cys Asn Val Thr Asp Thr Lys Asp Asn Thr Asn
 225 230 235 240

Leu Arg Cys Trp Arg Val Asn Asn Thr Leu Val Asp Asp Tyr Tyr Asp
 245 250 255

Glu Ser Lys Arg Ile Arg Glu Gly Val Glu Thr His Val Ser Phe Arg
 260 265 270

Glu His Asn Leu Tyr Thr Val Asn Ile Thr Phe Leu Glu Val Lys Met
 275 280 285

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

Tyr Ile Ile Leu Gln Leu Pro Ala Pro Asp Phe Arg Ala Tyr Glu Gln
 305 310 315 320

Lys Leu Ile Ser Glu Glu Asp Leu Gly Gly Glu Gln Lys Leu Ile Ser
 325 330 335

Glu Glu Asp Leu His His His His His His
 340 345

<210> 228
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic peptide

<400> 228

Tyr Lys Gln Ile Leu His Leu
 1 5

<210> 229
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 229

Tyr Lys Gln Ile Leu His Leu Gly Lys Asp
1 5 10

<210> 230
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 230

Gly Val Glu Thr His Val Ser Phe Arg Glu His Asn Tyr Leu
1 5 10

<210> 231
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 231

Ile Leu His Leu
1

<210> 232
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 232

Ile Leu His Leu Gly Lys Asp

1

5

<210> 233
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 233

Gly Val Glu Thr His Val Ser Phe
1 5

<210> 234
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 234

Thr His Val Ser Phe
1 5

<210> 235
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 235

His Val Ser Phe
1

<210> 236
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 236

His Val Ser Phe Arg Glu His Asn Leu
1 5

<210> 237
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 237

His Val Ser Phe Arg Glu His Asn Leu Tyr
1 5 10

<210> 238
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 238

Phe Arg Glu His Asn Leu
1 5

<210> 239
<211> 446
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide: APE6155 heavy chain (comprising an IgG4 constant domain)

<400> 239

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

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

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

Gly Met Phe His Pro Thr Gly Asp Val Thr Arg Leu Asn Gln Lys Phe
50 55 60

Lys Asp Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Thr Thr Ser Met Ile Ile Gly Gly Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
115 120 125

Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala
130 135 140

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
145 150 155 160

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
165 170 175

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
180 185 190

Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val Asp His Lys
195 200 205

Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys Tyr Gly Pro
210 215 220

Pro Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe
225 230 235 240

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
245 250 255

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
260 265 270

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
275 280 285

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
290 295 300

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
305 310 315 320

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

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
340 345 350

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
355 360 365

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly
370 375 380

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

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
405 410 415

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
420 425 430

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
435 440 445

<210> 240
<211> 219
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide: APE6155 light chain (comprising a Kappa constant domain)

<400> 240

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

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Arg
20 25 30

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

Pro Gln Leu Leu Ile Tyr Gln Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

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

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ala Gln Asn
85 90 95

Leu Glu Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
115 120 125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
145 150 155 160

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
180 185 190

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
195 200 205

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
210 215