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<120> ANTI-MESOTHELIN ANTIBODIES AND IMMUNOCONJUGATES

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<151> 2010-12-20

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<210> 1
<211> 108
<212> PRT
<213> Homo sapiens

<400> 1
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 Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Glu 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 Tyr Asn Ser Leu Pro Trp
85 90 95

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

<210> 2
<211> 113
<212> PRT
<213> Mus sp.

<400> 2
Asp Ile Met Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln

35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

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

Tyr Leu Ser Ser Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 3
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 3
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 Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

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

Ala Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

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

Tyr Leu Ser Ser Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

Arg

<210> 4
<211> 113
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 4

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

<210> 5
<211> 112
<212> PRT
<213> Homo sapiens

<400> 5

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	Ser	Tyr
			20					25					30		
Ala	Met	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Val	Ile	Ser	Gly	Asp	Gly	Gly	Ser	Thr	Tyr	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	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
				85					90					95	

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

<210> 6
<211> 115
<212> PRT
<213> Mus sp.

<400> 6
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Lys Pro Gly Ala
1 5 10 15

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

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

Gly Tyr Ile Arg Pro Ser Thr Gly Tyr Thr Glu Tyr Asn Gln Lys Phe
50 55 60

Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

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

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

Thr Val Ser
115

<210> 7
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 7
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 Tyr Thr Phe Thr Thr Tyr
20 25 30

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

Gly Tyr Ile Arg Pro Ser Thr Gly Tyr Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

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

Thr Val Ser
115

<210> 8
<211> 115
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 8
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 Tyr Thr Phe Thr Thr Tyr
20 25 30

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

Gly Tyr Ile Arg Pro Ser Thr Gly Tyr Thr Glu Tyr Asn Gln Lys Phe
50 55 60

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

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

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

Thr Val Ser
115

<210> 9
<211> 108
<212> PRT
<213> Homo sapiens

<400> 9
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 Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Glu 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 Tyr Asn Ser Leu Pro Trp
85 90 95

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

<210> 10
<211> 97
<212> PRT
<213> Mus sp.

<400> 10
Gly Ala Ser Leu Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln
1 5 10 15

Asp Ile Ser Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr
20 25 30

Val Lys Leu Leu Ile Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro
35 40 45

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

Ser Asn Leu Glu Gln Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly
65 70 75 80

Asn Thr Leu Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
85 90 95

Arg

<210> 11
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 11
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 Asp 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

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 12
<211> 108
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 12
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 Asp 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

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

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

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

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

<210> 13

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

<400> 13
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 Ser Tyr
20 25 30

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

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

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

Ser

<210> 14
<211> 117
<212> PRT
<213> Mus sp.

<400> 14
Glu Leu Leu Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

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

Phe Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
35 40 45

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

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

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

Ala Arg Phe Asp Gly Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr

100 105 110

Leu Thr Val Ser Ser
115

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

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 15
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

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

Ala Thr Ile Ser Asn Gly Gly Thr Tyr Thr Tyr Tyr Pro 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 Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Phe Asp Gly Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

<210> 16
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 16
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

Phe Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

35 40 45

Ala Thr Ile Ser Asn Gly Gly Thr Tyr Thr Tyr Tyr Pro 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 Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Phe Asp Gly Tyr Ile Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ser
115

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

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 17
Lys Ser Ser Gln Ser Val Leu Tyr Ser Ser Asn Gln Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 18
Trp Ala Ser Thr Arg Glu Ser
1 5

<210> 19
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 19
His Gln Tyr Leu Ser Ser Tyr Thr
1 5

<210> 20
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 20
Gly Tyr Thr Phe Thr Thr Tyr Trp Met His
1 5 10

<210> 21
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 21
Gly Tyr Ile Arg Pro Ser Thr Gly Tyr Thr Glu Tyr Asn Gln Lys Phe
1 5 10 15

Lys Asp

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 22
Ala Arg Ser Arg Trp Leu Leu Asp Tyr
1 5

<210> 23
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 23
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
20

<210> 24
<211> 15
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 24
Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
1 5 10 15

<210> 25
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 25
Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr
1 5 10 15

<210> 26
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 26
Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys
20 25 30

<210> 27
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 27
Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Phe Cys
20 25 30

<210> 28
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

peptide

<400> 28
Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
1 5 10

<210> 29
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 29
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
20 25

<210> 30
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
1 5 10

<210> 31
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 31
Arg Phe Thr Ile Ser Ala Asp Thr Ser Lys Asn Thr Ala Tyr Leu Gln
1 5 10 15

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
20 25 30

<210> 32
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 32
Trp Gly Gln Gly Thr Leu Val Thr Val Ser

1 5 10

<210> 33
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 33
Arg Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn
1 5 10

<210> 34
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 34
Tyr Thr Ser Arg Leu His Ser
1 5

<210> 35
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 35
Gln Gln Gly Asn Thr Leu Pro Tyr Thr
1 5

<210> 36
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 36
Gly Phe Thr Phe Ser Asp Tyr Phe Met Ser
1 5 10

<210> 37
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 37
Ala Thr Ile Ser Asn Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val
1 5 10 15

Lys Gly

<210> 38
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 38
Ala Arg Phe Asp Gly Tyr Tyr Phe Asp Tyr
1 5 10

<210> 39
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 39
Ala Arg Phe Asp Gly Tyr Ile Phe Asp Tyr
1 5 10

<210> 40
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 40
Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln
1 5 10 15

Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
20 25 30

<210> 41
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<400> 41
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 42
<211> 622
<212> PRT
<213> Homo sapiens

<400> 42
Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
1 5 10 15

Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
20 25 30

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

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

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

Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
85 90 95

Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
100 105 110

Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
115 120 125

Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
130 135 140

Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
145 150 155 160

Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
165 170 175

Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
180 185 190

Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
195 200 205

Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
210 215 220

Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
225 230 235 240

Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly

245 250 255

Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
260 265 270

Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
275 280 285

Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
290 295 300

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

Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
325 330 335

Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
340 345 350

Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
355 360 365

Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
370 375 380

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

Val Asn Lys Gly His Glu Met Ser Pro Gln Val Ala Thr Leu Ile Asp
405 410 415

Arg Phe Val Lys Gly Arg Gly Gln Leu Asp Lys Asp Thr Leu Asp Thr
420 425 430

Leu Thr Ala Phe Tyr Pro Gly Tyr Leu Cys Ser Leu Ser Pro Glu Glu
435 440 445

Leu Ser Ser Val Pro Pro Ser Ser Ile Trp Ala Val Arg Pro Gln Asp
450 455 460

Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp Val Leu Tyr Pro Lys Ala
465 470 475 480

Arg Leu Ala Phe Gln Asn Met Asn Gly Ser Glu Tyr Phe Val Lys Ile
485 490 495

Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu Asp Leu Lys Ala Leu Ser
500 505 510

Gln Gln Asn Val Ser Met Asp Leu Ala Thr Phe Met Lys Leu Arg Thr

515 520 525

Asp Ala Val Leu Pro Leu Thr Val Ala Glu Val Gln Lys Leu Leu Gly
530 535 540

Pro His Val Glu Gly Leu Lys Ala Glu Glu Arg His Arg Pro Val Arg
545 550 555 560

Asp Trp Ile Leu Arg Gln Arg Gln Asp Asp Leu Asp Thr Leu Gly Leu
565 570 575

Gly Leu Gln Gly Gly Ile Pro Asn Gly Tyr Leu Val Leu Asp Leu Ser
580 585 590

Met Gln Glu Ala Leu Ser Gly Thr Pro Cys Leu Leu Gly Pro Gly Pro
595 600 605

Val Leu Thr Val Leu Ala Leu Leu Leu Ala Ser Thr Leu Ala
610 615 620

<210> 43
<211> 285
<212> PRT
<213> Homo sapiens

<400> 43
Glu Val Glu Lys Thr Ala Cys Pro Ser Gly Lys Lys Ala Arg Glu Ile
1 5 10 15

Asp Glu Ser Leu Ile Phe Tyr Lys Lys Trp Glu Leu Glu Ala Cys Val
20 25 30

Asp Ala Ala Leu Leu Ala Thr Gln Met Asp Arg Val Asn Ala Ile Pro
35 40 45

Phe Thr Tyr Glu Gln Leu Asp Val Leu Lys His Lys Leu Asp Glu Leu
50 55 60

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

Phe Leu Lys Met Ser Pro Glu Asp Ile Arg Lys Trp Asn Val Thr Ser
85 90 95

Leu Glu Thr Leu Lys Ala Leu Leu Glu Val Asn Lys Gly His Glu Met
100 105 110

Ser Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly
115 120 125

Gln Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly
130 135 140

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Tyr Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser
145                 150                 155                 160

Ser Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg
                165                 170                 175

Gln Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met
            180                 185                 190

Asn Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala
        195                 200                 205

Pro Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp
    210                 215                 220

Leu Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr
225                 230                 235                 240

Val Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys
                245                 250                 255

Ala Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg
            260                 265                 270

Gln Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly
        275                 280                 285
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<210> 44
<211> 630
<212> PRT
<213> Homo sapiens

<400> 44

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Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
1               5                   10                  15

Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
            20                  25                  30

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

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

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

Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
                85                  90                  95

Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
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100 105 110

Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
115 120 125

Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
130 135 140

Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
145 150 155 160

Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
165 170 175

Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
180 185 190

Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
195 200 205

Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
210 215 220

Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
225 230 235 240

Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
245 250 255

Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
260 265 270

Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
275 280 285

Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
290 295 300

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

Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
325 330 335

Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
340 345 350

Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
355 360 365

Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile

370 375 380

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

Val Asn Lys Gly His Glu Met Ser Pro Gln Ala Pro Arg Arg Pro Leu
405 410 415

Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln
420 425 430

Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
435 440 445

Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser
450 455 460

Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
465 470 475 480

Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
485 490 495

Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
500 505 510

Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
515 520 525

Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
530 535 540

Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys Ala
545 550 555 560

Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
565 570 575

Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly Gly Ile Pro Asn
580 585 590

Gly Tyr Leu Val Leu Asp Leu Ser Met Gln Glu Ala Leu Ser Gly Thr
595 600 605

Pro Cys Leu Leu Gly Pro Gly Pro Val Leu Thr Val Leu Ala Leu Leu
610 615 620

Leu Ala Ser Thr Leu Ala
625 630

<210> 45

<211> 293
<212> PRT
<213> Homo sapiens

<400> 45

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Glu Val Glu Lys Thr Ala Cys Pro Ser Gly Lys Lys Ala Arg Glu Ile
1               5                  10                  15

Asp Glu Ser Leu Ile Phe Tyr Lys Lys Trp Glu Leu Glu Ala Cys Val
            20                  25                  30

Asp Ala Ala Leu Leu Ala Thr Gln Met Asp Arg Val Asn Ala Ile Pro
        35                  40                  45

Phe Thr Tyr Glu Gln Leu Asp Val Leu Lys His Lys Leu Asp Glu Leu
    50                  55                  60

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

Phe Leu Lys Met Ser Pro Glu Asp Ile Arg Lys Trp Asn Val Thr Ser
                85                  90                  95

Leu Glu Thr Leu Lys Ala Leu Leu Glu Val Asn Lys Gly His Glu Met
            100                 105                 110

Ser Pro Gln Ala Pro Arg Arg Pro Leu Pro Gln Val Ala Thr Leu Ile
        115                 120                 125

Asp Arg Phe Val Lys Gly Arg Gly Gln Leu Asp Lys Asp Thr Leu Asp
    130                 135                 140

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

Glu Leu Ser Ser Val Pro Pro Ser Ser Ile Trp Ala Val Arg Pro Gln
                165                 170                 175

Asp Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp Val Leu Tyr Pro Lys
            180                 185                 190

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

Ile Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu Asp Leu Lys Ala Leu
    210                 215                 220

Ser Gln Gln Asn Val Ser Met Asp Leu Ala Thr Phe Met Lys Leu Arg
225                 230                 235                 240

Thr Asp Ala Val Leu Pro Leu Thr Val Ala Glu Val Gln Lys Leu Leu
                245                 250                 255
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Gly Pro His Val Glu Gly Leu Lys Ala Glu Glu Arg His Arg Pro Val
260 265 270

Arg Asp Trp Ile Leu Arg Gln Arg Gln Asp Asp Leu Asp Thr Leu Gly
275 280 285

Leu Gly Leu Gln Gly
290

<210> 46
<211> 285
<212> PRT
<213> Macaca fascicularis

<400> 46
Asp Val Glu Arg Thr Thr Cys Pro Pro Glu Lys Glu Val His Glu Ile
1 5 10 15

Asp Glu Asn Leu Ile Phe Tyr Lys Lys Arg Glu Leu Glu Ala Cys Val
20 25 30

Asp Ala Ala Leu Leu Ala Ala Gln Met Asp Arg Val Asp Ala Ile Pro
35 40 45

Phe Thr Tyr Glu Gln Leu Asp Val Leu Lys His Lys Leu Asp Glu Leu
50 55 60

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

Phe Leu Lys Met Ser Pro Glu Asp Ile Arg Lys Trp Asn Val Thr Ser
85 90 95

Leu Glu Thr Leu Lys Ala Leu Leu Lys Val Ser Lys Gly His Glu Met
100 105 110

Ser Ala Gln Val Ala Thr Leu Ile Asp Arg Val Val Val Gly Arg Gly
115 120 125

Gln Leu Asp Lys Asp Thr Val Asp Thr Leu Thr Ala Phe Cys Pro Gly
130 135 140

Cys Leu Cys Ser Leu Ser Pro Glu Arg Leu Ser Ser Val Pro Pro Ser
145 150 155 160

Val Ile Gly Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Gly Pro Arg
165 170 175

Gln Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met
180 185 190

Ser Gly Ser Glu Tyr Phe Val Lys Ile Arg Pro Phe Leu Gly Gly Ala

195 200 205

Pro Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp
210 215 220

Leu Ala Thr Phe Met Lys Leu Arg Arg Glu Ala Val Leu Pro Leu Thr
225 230 235 240

Val Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys
245 250 255

Val Glu Glu Gln His Ser Pro Val Arg Asp Trp Ile Leu Lys Gln Arg
260 265 270

Gln Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly
275 280 285

<210> 47
<211> 285
<212> PRT
<213> Rattus sp.

<400> 47
Asp Thr Glu Gln Lys Ala Cys Pro Pro Gly Lys Glu Pro Asn Val Val
1 5 10 15

Asp Glu Asn Leu Ile Phe Tyr Gln Asn Trp Glu Leu Glu Ala Cys Val
20 25 30

Asp Gly Thr Leu Leu Ala Gly Gln Met Asp Leu Val Asn Glu Ile Pro
35 40 45

Phe Thr Tyr Glu Gln Leu Ser Ile Phe Lys His Lys Leu Asp Lys Thr
50 55 60

Tyr Pro Gln Gly Tyr Pro Glu Ser Leu Ile Lys Gln Leu Gly His Phe
65 70 75 80

Phe Arg Tyr Val Ser Pro Glu Asp Ile Arg Gln Trp Asn Val Thr Ser
85 90 95

Pro Asp Thr Val Asn Thr Leu Leu Lys Val Ser Lys Gly Gln Lys Met
100 105 110

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

Lys Leu Asp Glu Asp Ile Val Lys Ala Leu Asp Asn Ile Pro Leu Ser
130 135 140

Tyr Leu Cys Asp Phe Ser Pro Gln Asp Leu His Ala Ile Pro Ser Ser
145 150 155 160

Val Met Trp Leu Val Gly Leu His Asp Leu Asp Lys Cys Ser Gln Arg
165 170 175

His Leu Gly Ile Leu Tyr Gln Lys Ala Cys Ser Ala Phe Gln Asn Val
180 185 190

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

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

Ile Ala Thr Phe Lys Lys Leu Gln Val Asp Ala Leu Val Gly Leu Ser
225 230 235 240

Val Ala Glu Val Gln Lys Leu Leu Gly Pro His Ile Gly Asp Leu Lys
245 250 255

Thr Glu Glu Asp Lys Ser Pro Val Arg Asp Trp Leu Phe Arg Gln Gln
260 265 270

Gln Lys Asp Leu Asp Ser Leu Gly Leu Gly Leu Gln Gly
275 280 285

<210> 48
<211> 285
<212> PRT
<213> Mus sp.

<400> 48
Asp Ala Glu Gln Lys Ala Cys Pro Pro Gly Lys Glu Pro Tyr Lys Val
1 5 10 15

Asp Glu Asp Leu Ile Phe Tyr Gln Asn Trp Glu Leu Glu Ala Cys Val
20 25 30

Asp Gly Thr Met Leu Ala Arg Gln Met Asp Leu Val Asn Glu Ile Pro
35 40 45

Phe Thr Tyr Glu Gln Leu Ser Ile Phe Lys His Lys Leu Asp Lys Thr
50 55 60

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

Phe Arg Tyr Val Ser Pro Glu Asp Ile His Gln Trp Asn Val Thr Ser
85 90 95

Pro Asp Thr Val Lys Thr Leu Leu Lys Val Ser Lys Gly Gln Lys Met
100 105 110

Asn Ala Gln Ala Ile Ala Leu Val Ala Cys Tyr Leu Arg Gly Gly Gly

115 120 125

Gln Leu Asp Glu Asp Met Val Lys Ala Leu Gly Asp Ile Pro Leu Ser
130 135 140

Tyr Leu Cys Asp Phe Ser Pro Gln Asp Leu His Ser Val Pro Ser Ser
145 150 155 160

Val Met Trp Leu Val Gly Pro Gln Asp Leu Asp Lys Cys Ser Gln Arg
165 170 175

His Leu Gly Leu Leu Tyr Gln Lys Ala Cys Ser Ala Phe Gln Asn Val
180 185 190

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

Ser Val Lys Asp Leu Arg Ala Leu Ser Gln His Asn Val Ser Met Asp
210 215 220

Ile Ala Thr Phe Lys Arg Leu Gln Val Asp Ser Leu Val Gly Leu Ser
225 230 235 240

Val Ala Glu Val Gln Lys Leu Leu Gly Pro Asn Ile Val Asp Leu Lys
245 250 255

Thr Glu Glu Asp Lys Ser Pro Val Arg Asp Trp Leu Phe Arg Gln His
260 265 270

Gln Lys Asp Leu Asp Arg Leu Gly Leu Gly Leu Gln Gly
275 280 285

<210> 49
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
8xHis tag

<400> 49
His His His His His His His His
1 5

<210> 50
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
6xHis tag

<400> 50
His His His His His His

1 5

<210> 51
<211> 4
<212> PRT
<213> Homo sapiens

<400> 51
Glu Val Glu Lys
1

<210> 52
<211> 4
<212> PRT
<213> Mus sp.

<400> 52
Asp Ala Glu Gln
1

<210> 53
<211> 4
<212> PRT
<213> Macaca fascicularis

<400> 53
Asp Val Glu Arg
1

<210> 54
<211> 81
<212> PRT
<213> Homo sapiens

<400> 54
Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr Leu Cys
1 5 10 15

Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser Ile Trp
20 25 30

Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp
35 40 45

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

Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu
65 70 75 80

Asp

<210> 55
<211> 81
<212> PRT
<213> Macaca fascicularis

<400> 55
Lys Asp Thr Val Asp Thr Leu Thr Ala Phe Cys Pro Gly Cys Leu Cys
1 5 10 15

Ser Leu Ser Pro Glu Arg Leu Ser Ser Val Pro Pro Ser Val Ile Gly
20 25 30

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

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

Glu Tyr Phe Val Lys Ile Arg Pro Phe Leu Gly Gly Ala Pro Thr Glu
65 70 75 80

Asp

<210> 56
<211> 81
<212> PRT
<213> Rattus sp.

<400> 56
Glu Asp Ile Val Lys Ala Leu Asp Asn Ile Pro Leu Ser Tyr Leu Cys
1 5 10 15

Asp Phe Ser Pro Gln Asp Leu His Ala Ile Pro Ser Ser Val Met Trp
20 25 30

Leu Val Gly Leu His Asp Leu Asp Lys Cys Ser Gln Arg His Leu Gly
35 40 45

Ile Leu Tyr Gln Lys Ala Cys Ser Ala Phe Gln Asn Val Ser Gly Leu
50 55 60

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

Asp

<210> 57
<211> 81
<212> PRT
<213> Mus sp.

<400> 57
Glu Asp Met Val Lys Ala Leu Gly Asp Ile Pro Leu Ser Tyr Leu Cys
1 5 10 15

Asp Phe Ser Pro Gln Asp Leu His Ser Val Pro Ser Ser Val Met Trp
20 25 30

Leu Val Gly Pro Gln Asp Leu Asp Lys Cys Ser Gln Arg His Leu Gly
35 40 45

Leu Leu Tyr Gln Lys Ala Cys Ser Ala Phe Gln Asn Val Ser Gly Leu
50 55 60

Glu Tyr Phe Glu Lys Ile Lys Thr Phe Leu Gly Gly Ala Ser Val Lys
65 70 75 80

Asp

<210> 58
<211> 4
<212> PRT
<213> Homo sapiens

<400> 58
Lys Asp Thr Leu
1

<210> 59
<211> 4
<212> PRT
<213> Mus sp.

<400> 59
Glu Asp Met Val
1

<210> 60
<211> 4
<212> PRT
<213> Homo sapiens

<400> 60
Thr Ala Phe Tyr
1

<210> 61
<211> 4
<212> PRT
<213> Mus sp.

<400> 61
Gly Asp Ile Pro
1

<210> 62
<211> 4
<212> PRT
<213> Homo sapiens

<400> 62
Glu Glu Leu Ser
1

<210> 63

<211> 4
<212> PRT
<213> Mus sp.

<400> 63
Gln Asp Leu His
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<210> 64
<211> 4
<212> PRT
<213> Homo sapiens

<400> 64
Pro Ser Ser Ile
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<210> 65
<211> 4
<212> PRT
<213> Mus sp.

<400> 65
Ser Ser Val Met
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<210> 66
<211> 4
<212> PRT
<213> Homo sapiens

<400> 66
Thr Cys Asp Pro
1

<210> 67
<211> 4
<212> PRT
<213> Mus sp.

<400> 67
Lys Cys Ser Gln
1

<210> 68
<211> 5
<212> PRT
<213> Homo sapiens

<400> 68
Gln Leu Asp Val Leu
1 5

<210> 69
<211> 5
<212> PRT
<213> Mus sp.

<400> 69
His Leu Gly Leu Leu
1 5

<210> 70
<211> 4
<212> PRT
<213> Homo sapiens

<400> 70
Met Asn Gly Ser
1

<210> 71
<211> 4
<212> PRT
<213> Mus sp.

<400> 71
Val Ser Gly Leu
1

<210> 72
<211> 4
<212> PRT
<213> Homo sapiens

<400> 72
Pro Thr Glu Asp
1

<210> 73
<211> 4
<212> PRT
<213> Mus sp.

<400> 73
Ser Thr Lys Asp
1

<210> 74
<211> 4
<212> PRT
<213> Mus sp.

<400> 74
Ser Val Lys Asp
1