

SEQUENCE LISTING

<110> Crescendo Biologics Limited
 <120> Therapeutic molecules that bind to LAG3
 <130> P34455W01
 <150> GB1802573.4
 <151> 2018-02-16
 <160> 259
 <170> PatentIn version 3.5
 <210> 1
 <211> 5
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (1)..(5)
 <223> CDR1 of SeqID NO. 4

<400> 1

Asp Tyr Gly Met Ser
 1 5

<210> 2
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 <213> Homo sapiens

<220>
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 <222> (1)..(17)
 <223> CDR2 of SeqID NO.4

<400> 2

Gly Ile His Trp Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys
 1 5 10 15

Gly

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

<220>
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<222> (1)..(18)
<223> CDR3 of SeqID NO. 4

<400> 3

Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile
1 5 10 15

Asp Phe

<210> 4
<211> 127
<212> PRT
<213> Homo sapiens

<220>
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<222> (1)..(127)
<223> VH binding to LAG-3

<400> 4

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val

50

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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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
 100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser
 115 120 125

<210> 5
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<220>
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 <222> (1)..(5)
 <223> CDR1 of SeqID NO. 8

<400> 5

Asp Tyr Gly Met Ser
 1 5

<210> 6
 <211> 17
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 <213> Homo sapiens

<220>
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 <223> CDR2 of Seq ID NO.8

<400> 6

Gly Ile His Trp Asn Gly Gly Ser Thr Gly Tyr Ala Asp Ser Val Lys

1 5 10 15

Gly

<210> 7
<211> 18
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (1)..(18)
<223> CDR3 of SeqID NO.8

<400> 7

Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile
1 5 10 15

Asp Phe

<210> 8
<211> 127
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<213> Homo sapiens

<220>
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<222> (1)..(127)
<223> VH that binds to LAG-3

<400> 8

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

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

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

35

40

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Ser Gly Ile His Trp Asn Gly Gly Ser Thr 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
 100 105 110

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

<210> 9
 <211> 525
 <212> PRT
 <213> Homo sapiens

<400> 9

Met Trp Glu Ala Gln Phe Leu Gly Leu Leu Phe Leu Gln Pro Leu Trp
 1 5 10 15

Val Ala Pro Val Lys Pro Leu Gln Pro Gly Ala Glu Val Pro Val Val
 20 25 30

Trp Ala Gln Glu Gly Ala Pro Ala Gln Leu Pro Cys Ser Pro Thr Ile
 35 40 45

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

His Gln Pro Asp Ser Gly Pro Pro Ala Ala Ala Pro Gly His Pro Leu
 65 70 75 80

Ala Pro Gly Pro His Pro Ala Ala Pro Ser Ser Trp Gly Pro Arg Pro
85 90 95

Arg Arg Tyr Thr Val Leu Ser Val Gly Pro Gly Gly Leu Arg Ser Gly
100 105 110

Arg Leu Pro Leu Gln Pro Arg Val Gln Leu Asp Glu Arg Gly Arg Gln
115 120 125

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

Gly Glu Tyr Arg Ala Ala Val His Leu Arg Asp Arg Ala Leu Ser Cys
145 150 155 160

Arg Leu Arg Leu Arg Leu Gly Gln Ala Ser Met Thr Ala Ser Pro Pro
165 170 175

Gly Ser Leu Arg Ala Ser Asp Trp Val Ile Leu Asn Cys Ser Phe Ser
180 185 190

Arg Pro Asp Arg Pro Ala Ser Val His Trp Phe Arg Asn Arg Gly Gln
195 200 205

Gly Arg Val Pro Val Arg Glu Ser Pro His His His Leu Ala Glu Ser
210 215 220

Phe Leu Phe Leu Pro Gln Val Ser Pro Met Asp Ser Gly Pro Trp Gly
225 230 235 240

Cys Ile Leu Thr Tyr Arg Asp Gly Phe Asn Val Ser Ile Met Tyr Asn
245 250 255

Leu Thr Val Leu Gly Leu Glu Pro Pro Thr Pro Leu Thr Val Tyr Ala
260 265 270

Gly Ala Gly Ser Arg Val Gly Leu Pro Cys Arg Leu Pro Ala Gly Val
275 280 285

Gly Thr Arg Ser Phe Leu Thr Ala Lys Trp Thr Pro Pro Gly Gly Gly
290 295 300

Pro Asp Leu Leu Val Thr Gly Asp Asn Gly Asp Phe Thr Leu Arg Leu
305 310 315 320

Glu Asp Val Ser Gln Ala Gln Ala Gly Thr Tyr Thr Cys His Ile His
325 330 335

Leu Gln Glu Gln Gln Leu Asn Ala Thr Val Thr Leu Ala Ile Ile Thr
340 345 350

Val Thr Pro Lys Ser Phe Gly Ser Pro Gly Ser Leu Gly Lys Leu Leu
355 360 365

Cys Glu Val Thr Pro Val Ser Gly Gln Glu Arg Phe Val Trp Ser Ser
370 375 380

Leu Asp Thr Pro Ser Gln Arg Ser Phe Ser Gly Pro Trp Leu Glu Ala
385 390 395 400

Gln Glu Ala Gln Leu Leu Ser Gln Pro Trp Gln Cys Gln Leu Tyr Gln
405 410 415

Gly Glu Arg Leu Leu Gly Ala Ala Val Tyr Phe Thr Glu Leu Ser Ser
420 425 430

Pro Gly Ala Gln Arg Ser Gly Arg Ala Pro Gly Ala Leu Pro Ala Gly
435 440 445

His Leu Leu Leu Phe Leu Ile Leu Gly Val Leu Ser Leu Leu Leu Leu
450 455 460

Val Thr Gly Ala Phe Gly Phe His Leu Trp Arg Arg Gln Trp Arg Pro
465 470 475 480

Arg Arg Phe Ser Ala Leu Glu Gln Gly Ile His Pro Pro Gln Ala Gln
485 490 495

Ser Lys Ile Glu Glu Leu Glu Gln Glu Pro Glu Pro Glu Pro Glu Pro
500 505 510

Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Gln Leu
515 520 525

<210> 10
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(381)
<223> Nucleic acid sequence encoding the VH of SeqID NO. 4

<400> 10
gaggtgcagc tggtaggagtc tgggggaggt gtggtacggc ctgggggggtc cctgagactc 60
tcctgttcag cctctggatt cacctttgat gattatggca tgagctgggt ccgccaagct 120
ccagggaagg ggctggagtg ggtctctggt attcattgga atggtggtaa ctcaggttat 180
gcagactctg tgaagggccg attcaccatc tccagagaca acgcaaaaaa ctccctgtat 240
ctgcaaatga acagtctgag agccgaggac acggccttgt attactgtgc gagaatcccc 300
cgagaagatt gtagtagtgc cagctgctat acggatgcta ttgatttctg gggcccaggg 360
acaatgggtca ctgtctcctc a 381

<210> 11
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(381)
<223> Nucleic acid sequence encoding the VH domain of SEQ ID NO. 8

<400> 11
gaggtgcagc tgggtggagtc tggggggaggt gtggtacggc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttgat gattatggca tgagctgggt ccgccaagct 120
ccaggggaagg ggctggagtg ggtctctggt attcattgga atggtggtag cacaggttat 180
gcagactctg tgaagggccg attcaccatc tccagagaca acgcaaaaaa ctccctgtat 240
ctgcaaatga acagtctgag agccgaggac acggccttgt attactgtgc gagaatcccc 300
cgagaagatt gtagtagtgc cagctgctat acggatgcta ttgatttctg gggccaaggg 360
acaatgggtca ctgtctcctc a 381

<210> 12
<211> 288
<212> PRT
<213> Homo sapiens

<400> 12

Met Gln Ile Pro Gln Ala Pro Trp Pro Val Val Trp Ala Val Leu Gln
1 5 10 15

Leu Gly Trp Arg Pro Gly Trp Phe Leu Asp Ser Pro Asp Arg Pro Trp
20 25 30

Asn Pro Pro Thr Phe Ser Pro Ala Leu Leu Val Val Thr Glu Gly Asp
35 40 45

Asn Ala Thr Phe Thr Cys Ser Phe Ser Asn Thr Ser Glu Ser Phe Val
50 55 60

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

Ala Phe Pro Glu Asp Arg Ser Gln Pro Gly Gln Asp Cys Arg Phe Arg
85 90 95

Val Thr Gln Leu Pro Asn Gly Arg Asp Phe His Met Ser Val Val Arg
100 105 110

Ala Arg Arg Asn Asp Ser Gly Thr Tyr Leu Cys Gly Ala Ile Ser Leu
115 120 125

Ala Pro Lys Ala Gln Ile Lys Glu Ser Leu Arg Ala Glu Leu Arg Val
130 135 140

Thr Glu Arg Arg Ala Glu Val Pro Thr Ala His Pro Ser Pro Ser Pro
145 150 155 160

Arg Pro Ala Gly Gln Phe Gln Thr Leu Val Val Gly Val Val Gly Gly
165 170 175

Leu Leu Gly Ser Leu Val Leu Leu Val Trp Val Leu Ala Val Ile Cys
180 185 190

Ser Arg Ala Ala Arg Gly Thr Ile Gly Ala Arg Arg Thr Gly Gln Pro
195 200 205

Leu Lys Glu Asp Pro Ser Ala Val Pro Val Phe Ser Val Asp Tyr Gly
210 215 220

Glu Leu Asp Phe Gln Trp Arg Glu Lys Thr Pro Glu Pro Pro Val Pro
225 230 235 240

Cys Val Pro Glu Gln Thr Glu Tyr Ala Thr Ile Val Phe Pro Ser Gly
245 250 255

Met Gly Thr Ser Ser Pro Ala Arg Arg Gly Ser Ala Asp Gly Pro Arg
260 265 270

Ser Ala Gln Pro Leu Arg Pro Glu Asp Gly His Cys Ser Trp Pro Leu
275 280 285

<210> 13
<211> 125
<212> PRT
<213> Homo sapiens

<400> 13

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 14

<211> 125

<212> PRT

<213> Homo sapiens

<400> 14

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

Thr Met Thr Trp Met Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val

35

40

45

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 15
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 15

Gln 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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 16
<211> 125
<212> PRT
<213> Homo sapiens

<400> 16

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Gly Gly Gly Thr Thr Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 17
<211> 125
<212> PRT
<213> Homo sapiens

<400> 17

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Asn Thr Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 18
<211> 125
<212> PRT
<213> Homo sapiens

<400> 18

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

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

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

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

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

<210> 19
<211> 125
<212> PRT
<213> Homo sapiens

<400> 19

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 20
<211> 125
<212> PRT
<213> Homo sapiens

<400> 20

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Gly Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Pro Leu Arg Leu Gly Glu Ser Pro His Asp Ala Phe

100

105

110

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

<210> 21
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 21

Gln 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 Thr Phe Gly Asp Tyr
 20 25 30

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

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

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

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

<210> 22
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 22

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Leu Gly Gly Asn Thr Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 23

<211> 125

<212> PRT

<213> Homo sapiens

<400> 23

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

Asp Met Thr Trp Ile Arg Gln Ala Pro Gly Lys Gly Gln Glu Trp Val
35 40 45

Ser Tyr Ile Ser Arg Gly Gly Ser Thr Lys Tyr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 24
<211> 125
<212> PRT
<213> Homo sapiens

<400> 24

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

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

Ser Tyr Ile Ser Ser Ser Gly Ser Thr Ile Tyr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 25

<211> 125

<212> PRT

<213> Homo sapiens

<400> 25

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 26
<211> 125
<212> PRT
<213> Homo sapiens

<400> 26

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 Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 27
<211> 125
<212> PRT
<213> Homo sapiens

<400> 27

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

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

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

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

<210> 28
<211> 125
<212> PRT
<213> Homo sapiens

<400> 28

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 29
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 29

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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Val Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 30
<211> 125
<212> PRT
<213> Homo sapiens

<400> 30

Gln Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 31
<211> 125
<212> PRT

<213> Homo sapiens

<400> 31

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 32

<211> 125

<212> PRT

<213> Homo sapiens

<400> 32

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ser Ile Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 33
<211> 125
<212> PRT
<213> Homo sapiens

<400> 33

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 34
<211> 125
<212> PRT
<213> Homo sapiens

<400> 34

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser

115

120

125

<210> 35
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 35

Gln Ile Thr Leu Lys 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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 36
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 36

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

1	5	10	15
Ser	Leu	Arg	Leu
	20	Ser	Cys
		25	Ala
			Ala
			Ser
			Gly
			Phe
			Thr
			Phe
			Ser
			Asp
			Tyr
			30
Asp	Met	Tyr	Trp
	35	Ile	Arg
		Gln	Ala
		40	Pro
			Gly
			Lys
			Gly
			Leu
			Glu
			Trp
			Val
			45
Ser	Tyr	Ile	Ser
	50	Arg	Gly
		Gly	Ser
		55	Val
			Thr
			Tyr
			Tyr
			Ala
			Asp
			Ser
			Val
			60
Lys	Gly	Arg	Phe
	65	Thr	Ile
		70	Ser
			Arg
			Asp
			Asn
			Ala
			75
			Lys
			Asn
			Ala
			Leu
			Tyr
			80
Leu	Gln	Met	Asn
		85	Ser
			Leu
			Arg
			Ala
			Glu
			90
			Asp
			Met
			Ala
			Val
			Tyr
			Phe
			Cys
			95
Ala	Thr	Glu	Ala
		100	Pro
			Leu
			Arg
			Leu
			105
			Gly
			Glu
			Thr
			Pro
			His
			110
			Ala
			Ala
			Phe
			115
Asp	Ile	Trp	Gly
		120	Gln
			Gly
			Thr
			Met
			Val
			Thr
			Val
			Ser
			Ser
			125
<210>	37		
<211>	125		
<212>	PRT		
<213>	Homo sapiens		
<400>	37		
Gln	Val	Thr	Leu
	1	Lys	Glu
		5	Ser
			Gly
			Gly
			10
			Gly
			Leu
			Val
			Lys
			Pro
			15
			Gly
			Gly
Ser	Leu	Arg	Leu
	20	Ser	Cys
		25	Ala
			Ala
			Ser
			Gly
			Phe
			Thr
			Phe
			Ser
			Asp
			Tyr
			30
Tyr	Met	Ser	Trp
	35	Phe	Arg
		Gln	Ala
		40	Pro
			Gly
			Lys
			Glu
			45
			Arg
			Glu
			Trp
			Ile

Ser Phe Ile Ser Ser Ser Gly Ser Thr Thr Tyr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 38
<211> 125
<212> PRT
<213> Homo sapiens

<400> 38

Gln Val Thr Leu Lys 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 Thr Phe Ser Asp Asn
20 25 30

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

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

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

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

<210> 39
<211> 125
<212> PRT
<213> Homo sapiens

<400> 39

Gln Val Thr Leu Lys 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 40
<211> 125

<212> PRT
<213> Homo sapiens

<400> 40

Gln Ile Thr Leu Lys 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 Thr Phe Ser Asp Tyr
20 25 30

Asp Met Tyr Trp Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

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

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

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

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

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

<210> 41
<211> 125
<212> PRT
<213> Homo sapiens

<400> 41

Gln Val Thr Leu Lys 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 42
<211> 125
<212> PRT
<213> Homo sapiens

<400> 42

Gln Val Thr Leu Lys 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 Thr Phe Ser Asp Tyr
20 25 30

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

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

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

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

<210> 43
 <211> 125
 <212> PRT
 <213> Homo sapiens
 <400> 43

Gln	Val	Thr	Leu	Lys	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	Thr	Phe	Ser	Asp	Tyr
		20						25					30		

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

Ser	Tyr	Ile	Ser	Thr	Gly	Gly	Ser	Thr	Lys	Tyr	Tyr	Thr	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	Asp	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		

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

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

<210> 44
<211> 125
<212> PRT
<213> Homo sapiens

<400> 44

Gln Val Thr Leu Lys 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 Thr Phe Ser Asp Asp
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ser Ile Ile Tyr 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 Val Tyr Tyr Cys
85 90 95

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

Asp Ile Arg Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120 125

<210> 45
<211> 125
<212> PRT
<213> Homo sapiens

<400> 45

Gln Ile Thr Leu Lys 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 Thr Phe Ser Asp Tyr
20 25 30

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

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

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

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

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

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

<210> 46
<211> 125
<212> PRT
<213> Homo sapiens

<400> 46

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Val Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 47
<211> 125
<212> PRT
<213> Homo sapiens

<400> 47

Glu Val Gln Leu Leu 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Val Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 48
<211> 125
<212> PRT
<213> Homo sapiens

<400> 48

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 Thr Phe Ser Asp Tyr
20 25 30

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

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

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

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

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

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

<210> 49

<211> 125
<212> PRT
<213> Homo sapiens

<400> 49

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

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

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

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

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

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

<210> 50
<211> 125
<212> PRT
<213> Homo sapiens

<400> 50

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

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 51
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 51

Gln Val Gln Leu Gln 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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Ser Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 52
<211> 125
<212> PRT
<213> Homo sapiens

<400> 52

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 Thr Phe Ser Asp Ser
20 25 30

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

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

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

Asp Ile Trp Gly His Gly Thr Met Val Thr Val Ser Ser
115 120 125

<210> 53
<211> 125
<212> PRT
<213> Homo sapiens

<400> 53

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 54
<211> 125
<212> PRT
<213> Homo sapiens

<400> 54

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 55
<211> 125
<212> PRT
<213> Homo sapiens

<400> 55

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 56
<211> 125
<212> PRT
<213> Homo sapiens

<400> 56

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ala Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys

85

90

95

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

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

<210> 57

<211> 125

<212> PRT

<213> Homo sapiens

<400> 57

Gln 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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 58
<211> 125
<212> PRT
<213> Homo sapiens

<400> 58

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 59
<211> 125
<212> PRT
<213> Homo sapiens

<400> 59

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 60
<211> 125
<212> PRT
<213> Homo sapiens

<400> 60

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 61
<211> 125
<212> PRT
<213> Homo sapiens

<400> 61

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 62
<211> 125
<212> PRT
<213> Homo sapiens

<400> 62

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Thr Ile Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 63
<211> 125
<212> PRT
<213> Homo sapiens

<400> 63

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ala Val Lys Phe Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 64

<211> 125

<212> PRT

<213> Homo sapiens

<400> 64

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

35

40

45

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Tyr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 65
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 65

Gln 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 Thr Phe Ser Asp Asn
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ser Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 66
<211> 125
<212> PRT
<213> Homo sapiens

<400> 66

Gln 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 Thr Phe Ser Asp Asp
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 67
<211> 125
<212> PRT
<213> Homo sapiens

<400> 67

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 68
<211> 125
<212> PRT
<213> Homo sapiens

<400> 68

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ala Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Asp Ile Leu Gly Gln Gly Thr Met Val Thr Val Ser Ser
115 120 125

<210> 69
<211> 125
<212> PRT
<213> Homo sapiens

<400> 69

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 70
<211> 125
<212> PRT
<213> Homo sapiens

<400> 70

Gln 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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Thr Ile Lys Tyr Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Pro Leu Arg Leu Gly Glu Ser Pro His Asp Ala Phe

100

105

110

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

<210> 71
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 71

Gln 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 Thr Phe Ser Asp Asn
 20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 72
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 72

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ser Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 73

<211> 125

<212> PRT

<213> Homo sapiens

<400> 73

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Thr Gly Gly Gly Val Lys Tyr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 74
<211> 125
<212> PRT
<213> Homo sapiens

<400> 74

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ala Val Lys Phe Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 75

<211> 125

<212> PRT

<213> Homo sapiens

<400> 75

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 76
<211> 125
<212> PRT
<213> Homo sapiens

<400> 76

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 77
<211> 125
<212> PRT
<213> Homo sapiens

<400> 77

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 78
<211> 125
<212> PRT
<213> Homo sapiens

<400> 78

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

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

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

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

<210> 79
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 79

Gln 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 Thr Phe Ser Gly Ser
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95

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

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

<210> 80
<211> 125
<212> PRT
<213> Homo sapiens

<400> 80

Gln 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 Thr Phe Gly Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Asp Ile Ser Gly Arg Gly Thr Thr Val Thr Val Ser Ser
115 120 125

<210> 81
<211> 125
<212> PRT

<213> Homo sapiens

<400> 81

Gln 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 Thr Phe Ser Asp Asn
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 82

<211> 125

<212> PRT

<213> Homo sapiens

<400> 82

Gln 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 Thr Phe Gly Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Ala Val Lys Phe Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 83
<211> 125
<212> PRT
<213> Homo sapiens

<400> 83

Gln 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 Thr Phe Gly Gly Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 84
<211> 125
<212> PRT
<213> Homo sapiens

<400> 84

Gln 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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Ile Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

Asp Ile Ser Gly Gln Gly Thr Met Val Thr Val Ser Ser

115

120

125

<210> 85
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 85

Gln 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 Thr Gly Phe Thr Phe Ser Asp Ser
 20 25 30

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

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

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

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

<210> 86
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 86

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

1	5	10	15
Ser	Leu	Arg	Leu
20	Ser	Cys	Ala
	25	Ala	Ser
		Gly	Phe
		Thr	Phe
			30
Ser	Met	Thr	Trp
35	Ile	Arg	Gln
	40	Ala	Pro
		Gly	Lys
		Gly	Leu
			45
Ser	Tyr	Ile	Ser
50	Ser	Gly	Gly
	55	Gly	Val
		Lys	Phe
		Tyr	Thr
			60
Lys	Gly	Arg	Phe
65	Thr	Ile	Ser
	70	Arg	Asp
		Asn	Ala
			75
		Lys	Asn
		Ser	Leu
			80
Leu	Gln	Met	Asn
	85	Ser	Leu
		Arg	Ala
		Asp	Asp
		Thr	Ala
			90
		Val	Tyr
			95
Ala	Arg	Glu	Ala
	100	Pro	Leu
		Arg	Leu
		Gly	Glu
			105
		Ser	Pro
		His	Asp
			110
Asp	Ile	Ser	Gly
	115	Gln	Gly
		Thr	Met
		Val	Val
			120
		Ser	Ser
			125
<210> 87			
<211> 125			
<212> PRT			
<213> Homo sapiens			
<400> 87			
Glu	Val	Gln	Leu
1	5	Glu	Ser
		Gly	Gly
		Gly	Leu
			10
		Val	Lys
			15
Ser	Leu	Arg	Leu
20	Ser	Cys	Ala
	25	Ala	Ser
		Gly	Phe
		Thr	Phe
			30
Ser	Met	Thr	Trp
35	Ile	Arg	Gln
	40	Ala	Pro
		Gly	Lys
		Gly	Leu
			45

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 88
<211> 125
<212> PRT
<213> Homo sapiens

<400> 88

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

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

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

<210> 89
<211> 125
<212> PRT
<213> Homo sapiens

<400> 89

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 90
<211> 125

<212> PRT
<213> Homo sapiens

<400> 90

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 91
<211> 125
<212> PRT
<213> Homo sapiens

<400> 91

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 92
<211> 125
<212> PRT
<213> Homo sapiens

<400> 92

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 Thr Phe Ser Asp Ser
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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	Val	Tyr	Tyr	Cys
			85					90					95		

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

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

<210> 93
 <211> 125
 <212> PRT
 <213> Homo sapiens
 <400> 93

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	Thr	Phe	Ser	Asp	Ser
		20						25					30		

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

Ser	Tyr	Ile	Ser	Ser	Gly	Gly	Gly	Val	Lys	Phe	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	Val	Tyr	Tyr	Cys
			85					90					95		

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

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

<210> 94
<211> 125
<212> PRT
<213> Homo sapiens

<400> 94

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 Thr Phe Ser Asp Thr
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 95
<211> 125
<212> PRT
<213> Homo sapiens

<400> 95

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 96
<211> 125
<212> PRT
<213> Homo sapiens

<400> 96

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 97
<211> 125
<212> PRT
<213> Homo sapiens

<400> 97

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 Thr Phe Ser Asp Tyr
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 98
<211> 125
<212> PRT
<213> Homo sapiens

<400> 98

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 Thr Phe Ser Asp Ala
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 99

<211> 125
<212> PRT
<213> Homo sapiens

<400> 99

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 Thr Phe Ser Asp Lys
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 100
<211> 125
<212> PRT
<213> Homo sapiens

<400> 100

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 Thr Phe Ser Asp Arg

20

25

30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
 85 90 95

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

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

<210> 101

<211> 125

<212> PRT

<213> Homo sapiens

<400> 101

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 Thr Phe Ser Asp Tyr
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 102
<211> 125
<212> PRT
<213> Homo sapiens

<400> 102

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 Thr Phe Ser Asp Val
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 103
<211> 125
<212> PRT
<213> Homo sapiens

<400> 103

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 Thr Phe Ser Asp Gln
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 104
<211> 125
<212> PRT
<213> Homo sapiens

<400> 104

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 105

<211> 125

<212> PRT

<213> Homo sapiens

<400> 105

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 Thr Phe Ser Asp Ala
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 106
<211> 125
<212> PRT
<213> Homo sapiens

<400> 106

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 Thr Phe Ser Asp Trp
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys

85

90

95

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

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

<210> 107

<211> 125

<212> PRT

<213> Homo sapiens

<400> 107

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 Thr Phe Ser Asp Gly
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
 85 90 95

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

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

<210> 108
<211> 125
<212> PRT
<213> Homo sapiens

<400> 108

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 Thr Phe Ser Asp Thr
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 109
<211> 125
<212> PRT
<213> Homo sapiens

<400> 109

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 Thr Phe Ser Asp Ile
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 110
<211> 125
<212> PRT
<213> Homo sapiens

<400> 110

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 Thr Phe Ser Asp Lys
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 111
<211> 125
<212> PRT
<213> Homo sapiens

<400> 111

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 Thr Phe Ser Asp Arg
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 112
<211> 125
<212> PRT
<213> Homo sapiens

<400> 112

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 Thr Phe Ser Asp Leu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 113
<211> 125
<212> PRT
<213> Homo sapiens

<400> 113

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 Thr Phe Ser Asp Phe
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 114

<211> 125

<212> PRT

<213> Homo sapiens

<400> 114

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 Thr Phe Ser Asp Glu
20 25 30

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

35

40

45

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
 85 90 95

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

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

<210> 115
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 115

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 Thr Phe Ser Asp Glu
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 116

<211> 125

<212> PRT

<213> Homo sapiens

<400> 116

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 117
<211> 125
<212> PRT
<213> Homo sapiens

<400> 117

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 118
<211> 125
<212> PRT
<213> Homo sapiens

<400> 118

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 119
<211> 125
<212> PRT
<213> Homo sapiens

<400> 119

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 120
<211> 125
<212> PRT
<213> Homo sapiens

<400> 120

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Pro Leu Arg Leu Gly Glu Ser Pro His Asp Ala Phe

100

105

110

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

<210> 121
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 121

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 Thr Phe Ser Asp Glu
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
 85 90 95

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

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

<210> 122
 <211> 125
 <212> PRT
 <213> Homo sapiens

<400> 122

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 123

<211> 125

<212> PRT

<213> Homo sapiens

<400> 123

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 124
<211> 125
<212> PRT
<213> Homo sapiens

<400> 124

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 125

<211> 125

<212> PRT

<213> Homo sapiens

<400> 125

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 126
<211> 125
<212> PRT
<213> Homo sapiens

<400> 126

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 127
<211> 125
<212> PRT
<213> Homo sapiens

<400> 127

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 Thr Phe Ser Asp Glu
20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe 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 Val Tyr Tyr Cys
85 90 95

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

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

<210> 128
<211> 375
<212> DNA
<213> Homo sapiens

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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac 180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc 300
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gtcaccgtct cctca 375

<210> 129
<211> 375
<212> DNA
<213> Homo sapiens

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ccagggaagg ggctggagtg ggtttcatat ataagtactg gtggtagtat caaatattac 180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gagagaggcc 300
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gtcactgtct cctca 375

<210> 130
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<212> DNA
<213> Homo sapiens

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ccagggaagg ggctggagtg ggtttcttac ataagtactg gtggtagtat caaatattat 180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gagagaggcc 300
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gtcactgtct cctca 375

<210> 131
<211> 375
<212> DNA
<213> Homo sapiens

<400> 131
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ccagggaagg ggctggagtg ggtttcctac attagtgggtg gtggtactac caaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgacgac acggccgtgt actactgtgc gagagaggcc	300
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gtcactgtct cctca	375

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 <212> DNA
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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactac caaatattac	180
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ctgcaaatga acagcctgag agccgacgac acggccgtat attactgtgc gagagaggcc	300
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gtcactgtct cttca	375

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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaaca acgccaagaa ctactgtat	240
ctgcaaatga gcagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300

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gtcactgtct cctca	375

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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac	180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300
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gtcactgtct cttca	375

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 <212> DNA
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ccagggaagg ggctggagtg ggtttcatac ataagtactg gtggtagtat taaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccggcgac acggccgtgt attactgtgc gagagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctggggcca agggacaatg	360
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<210> 136
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<212> DNA

<213> Homo sapiens

<400> 136

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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatgg acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctggggcca agggacaatg	360
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<210> 137

<211> 375

<212> DNA

<213> Homo sapiens

<400> 137

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ccagggaagg ggctggagtg gatttcatac ataagtcttg gtggtataac caaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgcg agccgacgac acggccgtgt attactgtgc gagagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctggggcca agggacaatg	360
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<210> 138

<211> 375

<212> DNA

<213> Homo sapiens

<400> 138

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ccagggaagg ggcaggagtg ggtttcatat attagtcgtg gtggtagtac caaatactac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaggac acggccgtat actactgtgc gagagaggcc	300
cctttacgtt tgggggagac cccccacgat gcttttgata tctggggcca agggacaatg	360
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 <212> DNA
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ccagggaagg ggctggagtg gatttcatac attagtagta gtggtagtac catatactac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagaggcc	300
cctttgcgtt tgggggagtc cccccatgat gcttttgata tctggggcca agggacaatg	360
gtcactgtct cttca	375

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 <212> DNA
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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac	180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300
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<212> DNA
<213> Homo sapiens

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gtcaccgtct cttca 375

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<212> DNA
<213> Homo sapiens

<400> 142
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ctgcaaatga acaccctgag agccgaggac acggccgtgt attactgtgc gaaagaggcc 300
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gtcaccgtct cttca 375

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<211> 375
<212> DNA
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ccagggaagg ggctggagtg ggtttcatac ataagtactg gtggtagtat caaatattac 180
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gagagaggcc 300
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gtcaccgtct cctca 375

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<211> 375
<212> DNA
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ccagggaagg ggctggagtg ggtttcatac ataagtactg gtggcagtat caaatattac 180
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gtcaccgtct cctca 375

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<211> 375
<212> DNA
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ccagggaagg ggctggagtg ggtttcctac ataagtactg gtggtactat caaatattac 180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240

ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300
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gtcactgtct cttca	375

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 <212> DNA
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ccagggaagg ggctggagtg ggtttcatatc ataagtactg gtggtagtat caaatattac	180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaggac acggccgtat actactgtgc gagagaggcc	300
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gtcaccgtct cttca	375

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ccagggaagg ggctggagtg ggtttcatatc attagtagtg gtggtagtat caaatctac	180
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ctgcaaatga acagcctgag agccgaggac acggccgtgt attactgtgc gagagaggcc	300
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gtcaccgtct cttca	375

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<212> DNA
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gagagaggcc 300
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<212> DNA
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acagactctg tgaagggccg attcaccatc tccagggaaca acgccaagaa ctactgtat	240
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gtcaccgtct cctca	375

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ccagggaagg ggctggagtg ggtttcatat attagtcgtg gtggtagtgt aacatactac	180
gcagactctg tgaagggccg attcaccatt tccagggaaca acgccaagaa cgactgtat	240
ctgcaaatga acagcctgag agccgaggac atggccgtat atttttgtgc gacagaggcc	300
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gtcaccgtct cctca	375

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gcagactctg tgaagggccg attcaccatc tccagggaaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaggat acggccgtct attactgtgc gagagaggcc	300

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ctgcaaatga acaccctgag agccgaggac acggccgtgt attactgtgc gaaagaggcc	300
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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gagagaggcc	300
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<213> Homo sapiens

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gcagactctg tgaagggccg attcaccatt tccagggaca acgccaagaa cgactgtat	240
ctgcaaatga acagcctgag agccgaggac atggccgtat atttttgtgc gacagaggcc	300
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<211> 375

<212> DNA

<213> Homo sapiens

<400> 156

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ctgcaaatga acagcctgag agccgacgac acggccgtgt attactgtgc gcgagaggcc	300
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gtcaccgtct cttca	375

<210> 157

<211> 375

<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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gtcaccgtct cctca	375

<210> 219
 <211> 375
 <212> DNA

<213> Homo sapiens

<400> 219

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tcctgtgcag cctctggatt caccttcagt gacgaatcca tgacctggat gcggcaggct	120
ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 220

<211> 375

<212> DNA

<213> Homo sapiens

<400> 220

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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 221

<211> 375

<212> DNA

<213> Homo sapiens

<400> 221

gaggtgcagc tgggtggagtc tgggggaggc ttggtcaagc ctggagggtc cctgagactc	60
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180

gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 222
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 222	
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gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 223
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 223	
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
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gtcaccgtct cctca	375

<210> 224
<211> 375
<212> DNA
<213> Homo sapiens

<400> 224
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc 300
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gtcaccgtct cctca 375

<210> 225
<211> 375
<212> DNA
<213> Homo sapiens

<400> 225
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac 180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc 300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg 360
gtcaccgtct cctca 375

<210> 226
<211> 375
<212> DNA
<213> Homo sapiens

<400> 226

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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 227
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 227	
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 228
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 228	
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240

ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
ccttttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 229
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 229	
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acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
ccttttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 230
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 230	
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acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
ccttttacgtt tgggggagtc ccccatgat gcttttgata tctcgggccca agggacaatg	360
gtcaccgtct cctca	375

<210> 231

<211> 375
<212> DNA
<213> Homo sapiens

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ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc 300
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gtcaccgtct cctca 375

<210> 232
<211> 375
<212> DNA
<213> Homo sapiens

<400> 232
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac 180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc 300
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gtcaccgtct cctca 375

<210> 233
<211> 375
<212> DNA
<213> Homo sapiens

<400> 233
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ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac	180
acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggcca agggacaatg	360
gtcaccgtct cctca	375

<210> 234
 <211> 375
 <212> DNA
 <213> Homo sapiens

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acagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
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gtcaccgtct cctca	375

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ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
cctttacgtt tgggggagtc ccccatgat gcttttgata tctcgggcca agggacaatg	360

gtcaccgtct cctca 375

<210> 236

<211> 375

<212> DNA

<213> Homo sapiens

<400> 236

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gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat 240

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gtcaccgtct cctca 375

<210> 237

<211> 375

<212> DNA

<213> Homo sapiens

<400> 237

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tcctgtgcag cctctggatt caccttcagt gacgaatcca acacctggat gcggcaggct 120

ccagggaagg ggctggagtg ggtttcctac ataagttctg gtggtggtgt caaatTTTtac 180

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ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc 300

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gtcaccgtct cctca 375

<210> 238

<211> 375

<212> DNA

<213> Homo sapiens

<400> 238
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gtcaccgtct cctca 375

<210> 239
<211> 375
<212> DNA
<213> Homo sapiens

<400> 239
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gtcaccgtct cctca 375

<210> 240
<211> 375
<212> DNA
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gcagactctg tgaagggccg attcaccatc tccagggaca acgccaagaa ctactgtat	240
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gtcaccgtct cctca	375

<210> 241
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 241	
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gtcaccgtct cctca	375

<210> 242
 <211> 375
 <212> DNA
 <213> Homo sapiens

<400> 242	
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ctgcaaatga acagcctgag agccgaagac acggccgtgt attactgtgc gcgagaggcc	300
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gtcaccgtct cctca	375

<210> 243
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker Peptides

<220>
<221> MISC_FEATURE
<222> (1)..(10)
<223> 2GS Linker Peptide

<400> 243

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

<210> 244
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Linker Peptide

<220>
<221> misc_feature
<222> (1)..(30)
<223> Nucleic acid encoding Seq ID NO.243

<400> 244
ggaggtggag gttcaggtgg aggtggtagt

30

<210> 245
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker Peptide

<220>
<221> MISC_FEATURE

<222> (1)..(20)
<223> 4GS Linker Peptide

<400> 245

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

Gly Gly Gly Ser
20

<210> 246
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Linker Peptide Sequence

<220>
<221> misc_feature
<222> (1)..(60)
<223> Nucleic acid encoding SeqID NO. 245

<400> 246
ggaggtggag gttcaggagg tgggtggttct ggtggtggcg gttcaggtagg aggtggtagt 60

<210> 247
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Linker Peptide

<220>
<221> MISC_FEATURE
<222> (1)..(30)
<223> 6GS Linker Peptide

<400> 247

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
20 25 30

<210> 248
<211> 90
<212> DNA
<213> Artificial Sequence

<220>
<223> Linker Peptide Sequence

<220>
<221> misc_feature
<222> (1)..(90)
<223> Nucleic acid encoding SeqID No.247

<400> 248
ggtaggtggcg gttcaggcgg aggtggctct ggaggtggag gttcaggagg tggtaggttct 60

ggcggcggtg gatcgggtgg aggtggtagt 90

<210> 249
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide Linker

<220>
<221> MISC_FEATURE
<222> (1)..(45)
<223> 9GS Peptide Linker

<400> 249

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

35

40

45

<210> 250
<211> 135
<212> DNA
<213> Artificial Sequence

<220>
<223> Peptide Linker Sequence

<220>
<221> misc_feature
<222> (1)..(135)
<223> Nucleic acid encoding SeqID NO. 249

<400> 250
ggaggtggag gttcaggagg tgggtggttct ggtggtggcg gttcagggtg aggtggtagt 60
ggaggaggtg gttctggcgg aggaggatcg ggtggaggtg gctcagggtg tggaggtagt 120
ggaggcggtg gcagc 135

<210> 251
<211> 448
<212> PRT
<213> Artificial Sequence

<220>
<223> Trivalent bispecific construct

<220>
<221> MISC_FEATURE
<222> (1)..(448)
<223> VH1.1-6GS-VH1.1-6GS-VH2.63-His6

<400> 251

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

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

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

35

40

45

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
 100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln
 145 150 155 160

Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly Ser Leu Arg
 165 170 175

Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser
 180 185 190

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile
 195 200 205

His Trp Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg
 210 215 220

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

Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile
245 250 255

Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp
260 265 270

Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
275 280 285

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
290 295 300

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
305 310 315 320

Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys
325 330 335

Ala Ala Ser Gly Phe Thr Phe Ser Asp Ser Ser Met Thr Trp Met Arg
340 345 350

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Gly
355 360 365

Gly Gly Val Lys Phe Tyr Thr Asp Ser Val Lys Gly Arg Phe Thr Ile
370 375 380

Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu
385 390 395 400

Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ala Pro Leu
405 410 415

Arg Leu Gly Glu Ser Pro His Asp Ala Phe Asp Ile Ser Gly Gln Gly
420 425 430

Thr Met Val Thr Val Ser Ser Ala Ala Ala His His His His His His

435

440

445

<210> 252

<211> 463

<212> PRT

<213> Artificial Sequence

<220>

<223> Trivalent bispecific construct

<220>

<221> MISC_FEATURE

<222> (1)..(463)

<223> VH1.1-6GS-VH1.1-9GS-VH2.63-His6

<400> 252

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
 100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
 115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln
145 150 155 160

Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly Ser Leu Arg
165 170 175

Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser
180 185 190

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile
195 200 205

His Trp Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg
210 215 220

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

Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile
245 250 255

Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp
260 265 270

Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
275 280 285

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
290 295 300

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
305 310 315 320

Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser

325

330

335

Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala
 340 345 350

Ala Ser Gly Phe Thr Phe Ser Asp Ser Ser Met Thr Trp Met Arg Gln
 355 360 365

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

Gly Val Lys Phe Tyr Thr Asp Ser Val Lys Gly Arg Phe Thr Ile Ser
 385 390 395 400

Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg
 405 410 415

Ala Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ala Pro Leu Arg
 420 425 430

Leu Gly Glu Ser Pro His Asp Ala Phe Asp Ile Ser Gly Gln Gly Thr
 435 440 445

Met Val Thr Val Ser Ser Ala Ala Ala His His His His His His
 450 455 460

<210> 253
 <211> 293
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Bivalent VH construct

<220>
 <221> MISC_FEATURE
 <222> (1)..(293)
 <223> VH1.1-6GS-VH1.1-His6

<400> 253

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln
145 150 155 160

Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly Ser Leu Arg
165 170 175

Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser
180 185 190

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile

195

200

205

His Trp Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg
 210 215 220

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

Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile
 245 250 255

Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp
 260 265 270

Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Ala Ala Ala His
 275 280 285

His His His His His
 290

<210> 254
 <211> 283
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Bivalent VH construct

<220>
 <221> MISC_FEATURE
 <222> (1)..(283)
 <223> VH1.1-4GS-VH1.1-His6

<400> 254

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Arg
145 150 155 160

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe
165 170 175

Asp Asp Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
180 185 190

Glu Trp Val Ser Gly Ile His Trp Asn Gly Gly Asn Ser Gly Tyr Ala
195 200 205

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn
210 215 220

Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu

225 230 235 240

Tyr Tyr Cys Ala Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys
245 250 255

Tyr Thr Asp Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val
260 265 270

Ser Ser Ala Ala Ala His His His His His His
275 280

<210> 255
<211> 303
<212> PRT
<213> Artificial Sequence

<220>
<223> Bivalent VH construct

<220>
<221> MISC_FEATURE
<222> (1)..(303)
<223> VH1.1-8GS-VH1.1-His6

<400> 255

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
165 170 175

Gly Val Val Arg Pro Gly Gly Ser Leu Arg Leu Ser Cys Ser Ala Ser
180 185 190

Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser Trp Val Arg Gln Ala Pro
195 200 205

Gly Lys Gly Leu Glu Trp Val Ser Gly Ile His Trp Asn Gly Gly Asn
210 215 220

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

Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
245 250 255

Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile Pro Arg Glu Asp Cys Ser
260 265 270

Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp Phe Trp Gly Pro Gly Thr

275

280

285

Met Val Thr Val Ser Ser Ala Ala Ala His His His His His His
 290 295 300

<210> 256

<211> 323

<212> PRT

<213> Artificial Sequence

<220>

<223> Bivalent VH construct

<220>

<221> MISC_FEATURE

<222> (1)..(323)

<223> VH1.1-12GS-VH1.1-His6

<400> 256

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Asn Ser 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
 100 105 110

Ala Ile Asp Phe Trp Gly Pro Gly Thr Met Val Thr Val Ser Ser Gly
115 120 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly
145 150 155 160

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
165 170 175

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val
180 185 190

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

Cys Ser Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser Trp Val
210 215 220

Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile His Trp
225 230 235 240

Asn Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr
245 250 255

Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser
260 265 270

Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile Pro Arg
275 280 285

Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp Phe Trp
290 295 300

Gly Pro Gly Thr Met Val Thr Val Ser Ser Ala Ala Ala His His His

305

310

315

320

His His His

<210> 257

<211> 463

<212> PRT

<213> Artificial Sequence

<220>

<223> Trivalent bispecific construct

<220>

<221> MISC_FEATURE

<222> (1)..(463)

<223> VH2.77-9GS- VH 1.1-6GS- VH 1.1-His6

<400> 257

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 Thr Phe Ser Asp Ser
 20 25 30

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

Ser Tyr Ile Ser Ser Gly Gly Gly Val Lys Phe Tyr Thr 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 Val Tyr Tyr Cys
 85 90 95

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

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

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
130 135 140

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
145 150 155 160

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
165 170 175

Ser Gly Gly Gly Val Val Arg Pro Gly Gly Ser Leu Arg Leu Ser Cys
180 185 190

Ser Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser Trp Val Arg
195 200 205

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile His Trp Asn
210 215 220

Gly Gly Asn Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile
225 230 235 240

Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu
245 250 255

Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile Pro Arg Glu
260 265 270

Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp Phe Trp Gly
275 280 285

Pro Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
290 295 300

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly

305 310 315 320

Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu Ser Gly Gly
325 330 335

Gly Val Val Arg Pro Gly Gly Ser Leu Arg Leu Ser Cys Ser Ala Ser
340 345 350

Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser Trp Val Arg Gln Ala Pro
355 360 365

Gly Lys Gly Leu Glu Trp Val Ser Gly Ile His Trp Asn Gly Gly Asn
370 375 380

Ser Gly Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp
385 390 395 400

Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu
405 410 415

Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile Pro Arg Glu Asp Cys Ser
420 425 430

Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp Phe Trp Gly Pro Gly Thr
435 440 445

Met Val Thr Val Ser Ser Ala Ala Ala His His His His His His
450 455 460

<210> 258

<211> 448

<212> PRT

<213> Artificial Sequence

<220>

<223> Trivalent bispecific construct

<220>

<221> MISC_FEATURE

<222> (1)..(448)

<223> VH 1.2-6GS- VH 1.2-6GS- VH 2.92-His6

<400> 258

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

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

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

Ser Gly Ile His Trp Asn Gly Gly Ser Thr 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 Arg Ile Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp
100 105 110

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

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln
145 150 155 160

Leu Val Glu Ser Gly Gly Gly Val Val Arg Pro Gly Gly Ser Leu Arg
165 170 175

Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr Gly Met Ser

180

185

190

Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile
 195 200 205

His Trp Asn Gly Gly Ser Thr Gly Tyr Ala Asp Ser Val Lys Gly Arg
 210 215 220

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

Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Ile
 245 250 255

Pro Arg Glu Asp Cys Ser Ser Ala Ser Cys Tyr Thr Asp Ala Ile Asp
 260 265 270

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
 275 280 285

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 290 295 300

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
 305 310 315 320

Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys
 325 330 335

Ala Ala Ser Gly Phe Thr Phe Ser Asp Glu Ser Met Thr Trp Met Arg
 340 345 350

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Gly
 355 360 365

Gly Gly Val Lys Phe Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile
 370 375 380

Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu
385 390 395 400

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ala Pro Leu
405 410 415

Arg Leu Gly Glu Ser Pro His Asp Ala Phe Asp Ile Ser Gly Gln Gly
420 425 430

Thr Met Val Thr Val Ser Ser Ala Ala Ala His His His His His His
435 440 445

<210> 259
<211> 439
<212> PRT
<213> Artificial Sequence

<220>
<223> Trivalent and bispecific construct

<220>
<221> MISC_FEATURE
<222> (1)..(439)
<223> VH 1.2-6GS- VH 1.2-6GS- VH 2.92

<400> 259

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

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

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

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

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
275 280 285

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
290 295 300

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu Val Gln Leu Val Glu
305 310 315 320

Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys
325 330 335

Ala Ala Ser Gly Phe Thr Phe Ser Asp Glu Ser Met Thr Trp Met Arg
340 345 350

Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Gly
355 360 365

Gly Gly Val Lys Phe Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile
370 375 380

Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu
385 390 395 400

Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Ala Pro Leu
405 410 415

Arg Leu Gly Glu Ser Pro His Asp Ala Phe Asp Ile Ser Gly Gln Gly
420 425 430

Thr Met Val Thr Val Ser Ser
435