

SEQUENCE LISTING

<110> argenx BVBA

<120> GARP-TGF-beta ANTIBODIES

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<150> GB1707561.5

<151> 2017-05-11

<160> 48

<170> PatentIn version 3.5

<210> 1

<211> 126

<212> PRT

<213> Llama glama

<400> 1

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

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

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

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

Gln Gly Arg Val Thr Phe Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

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

Ala Arg Asn Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Gln Val Thr Val Ser Ser
 115 120 125

<210> 2
 <211> 107
 <212> PRT
 <213> Llama glama

<400> 2

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

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

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

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

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

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

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

<210> 3
 <211> 107
 <212> PRT
 <213> Llama glama

<400> 3

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

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

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

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

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

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

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

<210> 4
 <211> 5
 <212> PRT
 <213> Llama glama

<400> 4

Ser Tyr Tyr Ile Asp
 1 5

<210> 5
 <211> 17
 <212> PRT
 <213> Llama glama

<400> 5

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

Gly

<210> 6
 <211> 17
 <212> PRT
 <213> Llama glama

<400> 6

Asn	Glu	Trp	Glu	Thr	Val	Val	Val	Gly	Asp	Leu	Met	Tyr	Glu	Tyr	Glu
1				5					10					15	

Tyr

<210> 7
 <211> 17
 <212> PRT
 <213> Llama glama

<400> 7

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

Gly

<210> 8
 <211> 17
 <212> PRT
 <213> Llama glama

<400> 8

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

Gly

<210> 9
 <211> 11
 <212> PRT
 <213> Llama glama

<400> 9

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

<210> 10

<211> 7

<212> PRT

<213> Llama glama

<400> 10

Gly Ala Ser Arg Leu Lys Thr
1 5

<210> 11

<211> 9

<212> PRT

<213> Llama glama

<400> 11

Gln Gln Tyr Ala Ser Val Pro Val Thr
1 5

<210> 12

<211> 17

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 12

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

Gly

<210> 13

<211> 17

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 13

Tyr Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu Tyr Glu
 1 5 10 15

Tyr

<210> 14

<211> 126

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 14

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

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

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

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

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

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

Ala Arg Tyr Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
 100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 15
 <211> 107
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 15

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

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

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

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

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

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

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

<210> 16
 <211> 452
 <212> PRT
 <213> Artificial

<220>

<223> antibody fragment

<400> 16

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

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

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

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

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Tyr Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser
115 120 125

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Leu Ser Leu Gly
 450

<210> 17
 <211> 214
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 17

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

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

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

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

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

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

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

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

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

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

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

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

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

Phe Asn Arg Gly Glu Cys
 210

<210> 18

<211> 378

<212> DNA

<213> Artificial

<220>

<223> antibody fragment

<400> 18

caagtccaac ttgtccaacc gggggcggaa gtgcggaagc cgggggcgag cgtgaaagtc 60

tcgtgcaagg catcgggata ccgattcaca tcatattaca tcgactgggt caggcaagcg 120

ccggggcaag ggctggaatg gatggggcgg atcgaccgag aggatgccgg gacgaaatat 180

gcgcaaaaat tccaagggcg cgtcacgatg acggccgaca catcgacgag cacggtatac 240
 gtggagctga gctcgctgag gagcgaggac accgcggtat actactgcgc gcgatacgaa 300
 tgggagaccg tcgtcgtcgg ggacctgatg tacgaatacg aatactgggg gcaagggacg 360
 cttgtcacgg tctcgagc 378

<210> 19
 <211> 321
 <212> DNA
 <213> Artificial

<220>
 <223> antibody fragment

<400> 19
 gacatccaga tgactcagag cccttccagc ctgagcgcct ctgtgggaga tagagtcacc 60
 atcacatgcc aggctagtca gtcaatttct agttacctgg catggtatca gcagaagcct 120
 ggccaggcac ctaaaatcct gatctacgga gccagtaggc tgaagacagg ggtgccatct 180
 cggttctccg gcagcggatc tgggacatcc ttactctga ccatctcatc cctggagcca 240
 gaagacgccg ctacatacta ttgtcagcag tatgcttccg tgcccgtcac attcggtcag 300
 ggactaagg tcgagatcaa g 321

<210> 20
 <211> 420
 <212> DNA
 <213> Artificial

<220>
 <223> antibody fragment

<400> 20
 caagtccaac ttgtccaacc gggggcggaa gtgcggaagc cgggggcgag cgtgaaagtc 60
 tcgtgcaagg catcgggata ccgattcaca tcatattaca tcgactgggt caggcaagcg 120
 ccggggcaag ggctggaatg gatggggcgg atcgacccgg aggatgccgg gacgaaatat 180
 gcgcaaaaat tccaagggcg cgtcacgatg acggccgaca catcgacgag cacggtatac 240
 gtggagctga gctcgctgag gagcgaggac accgcggtat actactgcgc gcgatacgaa 300

tgggagaccg tcgtcgtcgg ggacctgatg tacgaatacg aatactgggg gcaagggacg 360
 cttgtcacgg tctcgagcgc tagcaccaag ggccccctcg tgttccccct ggcccccttgc 420

<210> 21
 <211> 936
 <212> DNA
 <213> Artificial

<220>
 <223> antibody fragment

<400> 21
 tccccgtcca cctccgagtc taccgccgct ctgggctgcc tggtgaaaga ctacttcccc 60
 gagcctgtga ccgtgagctg gaactctggc gccctgacct ccggcgtgca caccttcctt 120
 gccgtgctgc aatcctccgg cctgtactcc ctgtcctccg tggtgacagt gccctcctcc 180
 agcctgggca ccaagaccta cacctgtaac gtggaccaca agccctcaa caccaaggtg 240
 gacaagcggg tggaatctaa atacggccct ccctgcccc cctgccctgc ccctgaattt 300
 ctgggcggac cttccgtgtt tctgttcccc ccaaagccca aggacaccct gatgatctcc 360
 cggacccccg aagtgacctg cgtgggtggg gacgtgtccc aggaagatcc agaggtgcag 420
 ttcaactggg atgttgacgg cgtggaagtg cacaacgcca agaccaagcc cagagaggaa 480
 cagttcaact ccacctaccg ggtgggtgtc gtgtgaccg tgctgcacca ggactggctg 540
 aacggcaaag agtacaagtg caaggtgtcc aacaagggcc tgccctccag catcgaaaag 600
 accatctcca aggccaaggg ccagccccgc gagccccagg tgtacaccct gccccctagc 660
 caggaagaga tgaccaagaa ccaggtgtcc ctgacctgtc tggtgaaagg cttctacccc 720
 tccgacattg ccgtggaatg ggagtccaac ggccagcccc agaacaacta caagaccacc 780
 ccccctgtgc tggactccga cggctccttc ttcctgtact ctggctgac agtggataag 840
 tcccgggtggc aggaaggcaa cgtgttctcc tgcagcgtga tgcacgaggc cctgcacaac 900
 cactataccc agaagtccct gtccctgagc ctgggc 936

<210> 22
 <211> 126

<212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 22

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

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

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

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

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

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

Ala Arg Asn Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
 100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 23
 <211> 107
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 23

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

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

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

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

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

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

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

<210> 24

<211> 126

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 24

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

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

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

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

Gln Gly Arg Val Thr Phe Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

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

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

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 25
 <211> 107
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 25

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

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

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

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

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

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

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

<210>	26
<211>	126
<212>	PRT
<213>	Artificial

<220>
<223> antibody fragment

<400> 26

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

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

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

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

Gln Gly Arg Val Thr Phe Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

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

Ala Arg Asn Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 27
 <211> 107
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 27

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

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

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

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

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

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

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

<210> 28
 <211> 126
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 28

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

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

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

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

Gln Gly Arg Val Thr Phe Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr
 65 70 75 80

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

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

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 29

<211> 106

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 29

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

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

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

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

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

Asp Ala Gly Thr Tyr Tyr Cys Gln Gln Tyr Ala Ser Val Pro Val Thr
 85 90 95

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

<210> 30

<211> 126

<212> PRT

<213> Artificial

<220>

<223> antibody fragment

<400> 30

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

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

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

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

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
 65 70 75 80

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

Ala Arg Asn Glu Trp Glu Thr Val Val Val Gly Asp Leu Met Tyr Glu
 100 105 110

Tyr Glu Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120 125

<210> 31
 <211> 107
 <212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 31

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

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

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

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

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

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

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

<210> 32
 <211> 17

<212> PRT
 <213> Artificial

<220>
 <223> antibody fragment

<400> 32

Asn Glu Trp Glu Thr Val Val Val Gly Asp Leu Thr Tyr Glu Tyr Glu
 1 5 10 15

Tyr

<210> 33
 <211> 662
 <212> PRT
 <213> Homo sapiens

<400> 33

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

Ala Ala Gln His Gln Asp Lys Val Pro Cys Lys Met Val Asp Lys Lys
 20 25 30

Val Ser Cys Gln Val Leu Gly Leu Leu Gln Val Pro Ser Val Leu Pro
 35 40 45

Pro Asp Thr Glu Thr Leu Asp Leu Ser Gly Asn Gln Leu Arg Ser Ile
 50 55 60

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

Ser Thr Asn Glu Ile Ser Phe Leu Gln Pro Gly Ala Phe Gln Ala Leu
 85 90 95

Thr His Leu Glu His Leu Ser Leu Ala His Asn Arg Leu Ala Met Ala
 100 105 110

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

Leu Asp Leu Ser Gly Asn Ser Leu Tyr Ser Gly Leu Leu Glu Arg Leu
 130 135 140

Leu Gly Glu Ala Pro Ser Leu His Thr Leu Ser Leu Ala Glu Asn Ser
 145 150 155 160

Leu Thr Arg Leu Thr Arg His Thr Phe Arg Asp Met Pro Ala Leu Glu
 165 170 175

Gln Leu Asp Leu His Ser Asn Val Leu Met Asp Ile Glu Asp Gly Ala
 180 185 190

Phe Glu Gly Leu Pro Arg Leu Thr His Leu Asn Leu Ser Arg Asn Ser
 195 200 205

Leu Thr Cys Ile Ser Asp Phe Ser Leu Gln Gln Leu Arg Val Leu Asp
 210 215 220

Leu Ser Cys Asn Ser Ile Glu Ala Phe Gln Thr Ala Ser Gln Pro Gln
 225 230 235 240

Ala Glu Phe Gln Leu Thr Trp Leu Asp Leu Arg Glu Asn Lys Leu Leu
 245 250 255

His Phe Pro Asp Leu Ala Ala Leu Pro Arg Leu Ile Tyr Leu Asn Leu
 260 265 270

Ser Asn Asn Leu Ile Arg Leu Pro Thr Gly Pro Pro Gln Asp Ser Lys
 275 280 285

Gly Ile His Ala Pro Ser Glu Gly Trp Ser Ala Leu Pro Leu Ser Ala
 290 295 300

Pro Ser Gly Asn Ala Ser Gly Arg Pro Leu Ser Gln Leu Leu Asn Leu

305		310		315		320									
Asp	Leu	Ser	Tyr	Asn	Glu	Ile	Glu	Leu	Ile	Pro	Asp	Ser	Phe	Leu	Glu
				325					330					335	
His	Leu	Thr	Ser	Leu	Cys	Phe	Leu	Asn	Leu	Ser	Arg	Asn	Cys	Leu	Arg
			340					345					350		
Thr	Phe	Glu	Ala	Arg	Arg	Leu	Gly	Ser	Leu	Pro	Cys	Leu	Met	Leu	Leu
		355					360					365			
Asp	Leu	Ser	His	Asn	Ala	Leu	Glu	Thr	Leu	Glu	Leu	Gly	Ala	Arg	Ala
	370					375					380				
Leu	Gly	Ser	Leu	Arg	Thr	Leu	Leu	Leu	Gln	Gly	Asn	Ala	Leu	Arg	Asp
385					390					395					400
Leu	Pro	Pro	Tyr	Thr	Phe	Ala	Asn	Leu	Ala	Ser	Leu	Gln	Arg	Leu	Asn
				405					410					415	
Leu	Gln	Gly	Asn	Arg	Val	Ser	Pro	Cys	Gly	Gly	Pro	Asp	Glu	Pro	Gly
			420					425					430		
Pro	Ser	Gly	Cys	Val	Ala	Phe	Ser	Gly	Ile	Thr	Ser	Leu	Arg	Ser	Leu
		435					440					445			
Ser	Leu	Val	Asp	Asn	Glu	Ile	Glu	Leu	Leu	Arg	Ala	Gly	Ala	Phe	Leu
	450					455					460				
His	Thr	Pro	Leu	Thr	Glu	Leu	Asp	Leu	Ser	Ser	Asn	Pro	Gly	Leu	Glu
465					470					475					480
Val	Ala	Thr	Gly	Ala	Leu	Gly	Gly	Leu	Glu	Ala	Ser	Leu	Glu	Val	Leu
				485					490					495	
Ala	Leu	Gln	Gly	Asn	Gly	Leu	Met	Val	Leu	Gln	Val	Asp	Leu	Pro	Cys
			500					505					510		

Phe Ile Cys Leu Lys Arg Leu Asn Leu Ala Glu Asn Arg Leu Ser His
 515 520 525

Leu Pro Ala Trp Thr Gln Ala Val Ser Leu Glu Val Leu Asp Leu Arg
 530 535 540

Asn Asn Ser Phe Ser Leu Leu Pro Gly Ser Ala Met Gly Gly Leu Glu
 545 550 555 560

Thr Ser Leu Arg Arg Leu Tyr Leu Gln Gly Asn Pro Leu Ser Cys Cys
 565 570 575

Gly Asn Gly Trp Leu Ala Ala Gln Leu His Gln Gly Arg Val Asp Val
 580 585 590

Asp Ala Thr Gln Asp Leu Ile Cys Arg Phe Ser Ser Gln Glu Glu Val
 595 600 605

Ser Leu Ser His Val Arg Pro Glu Asp Cys Glu Lys Gly Gly Leu Lys
 610 615 620

Asn Ile Asn Leu Ile Ile Ile Leu Thr Phe Ile Leu Val Ser Ala Ile
 625 630 635 640

Leu Leu Thr Thr Leu Ala Ala Cys Cys Cys Val Arg Arg Gln Lys Phe
 645 650 655

Asn Gln Gln Tyr Lys Ala
 660

<210> 34

<211> 390

<212> PRT

<213> Homo sapiens

<400> 34

Met Pro Pro Ser Gly Leu Arg Leu Leu Pro Leu Leu Leu Pro Leu Leu
 1 5 10 15

Trp Leu Leu Val Leu Thr Pro Gly Arg Pro Ala Ala Gly Leu Ser Thr
 20 25 30

Cys Lys Thr Ile Asp Met Glu Leu Val Lys Arg Lys Arg Ile Glu Ala
 35 40 45

Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser Pro Pro Ser
 50 55 60

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

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

Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr Arg Val Leu
 100 105 110

Met Val Glu Thr His Asn Glu Ile Tyr Asp Lys Phe Lys Gln Ser Thr
 115 120 125

His Ser Ile Tyr Met Phe Phe Asn Thr Ser Glu Leu Arg Glu Ala Val
 130 135 140

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

Lys Leu Lys Val Glu Gln His Val Glu Leu Tyr Gln Lys Tyr Ser Asn
 165 170 175

Asn Ser Trp Arg Tyr Leu Ser Asn Arg Leu Leu Ala Pro Ser Asp Ser
 180 185 190

Pro Glu Trp Leu Ser Phe Asp Val Thr Gly Val Val Arg Gln Trp Leu
 195 200 205

Ser Arg Gly Gly Glu Ile Glu Gly Phe Arg Leu Ser Ala His Cys Ser
 210 215 220

Cys Asp Ser Arg Asp Asn Thr Leu Gln Val Asp Ile Asn Gly Phe Thr
 225 230 235 240

Thr Gly Arg Arg Gly Asp Leu Ala Thr Ile His Gly Met Asn Arg Pro
 245 250 255

Phe Leu Leu Leu Met Ala Thr Pro Leu Glu Arg Ala Gln His Leu Gln
 260 265 270

Ser Ser Arg His Arg Arg Ala Leu Asp Thr Asn Tyr Cys Phe Ser Ser
 275 280 285

Thr Glu Lys Asn Cys Cys Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys
 290 295 300

Asp Leu Gly Trp Lys Trp Ile His Glu Pro Lys Gly Tyr His Ala Asn
 305 310 315 320

Phe Cys Leu Gly Pro Cys Pro Tyr Ile Trp Ser Leu Asp Thr Gln Tyr
 325 330 335

Ser Lys Val Leu Ala Leu Tyr Asn Gln His Asn Pro Gly Ala Ser Ala
 340 345 350

Ala Pro Cys Cys Val Pro Gln Ala Leu Glu Pro Leu Pro Ile Val Tyr
 355 360 365

Tyr Val Gly Arg Lys Pro Lys Val Glu Gln Leu Ser Asn Met Ile Val
 370 375 380

Arg Ser Cys Lys Cys Ser
 385 390

<210> 35

<211> 249

<212> PRT

<213> Homo sapiens

<400> 35

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

Ile Glu Ala Ile Arg Gly Gln Ile Leu Ser Lys Leu Arg Leu Ala Ser
 20 25 30

Pro Pro Ser Gln Gly Glu Val Pro Pro Gly Pro Leu Pro Glu Ala Val
 35 40 45

Leu Ala Leu Tyr Asn Ser Thr Arg Asp Arg Val Ala Gly Glu Ser Ala
 50 55 60

Glu Pro Glu Pro Glu Pro Glu Ala Asp Tyr Tyr Ala Lys Glu Val Thr
 65 70 75 80

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

Gln Ser Thr His Ser Ile Tyr Met Phe Phe Asn Thr Ser Glu Leu Arg
 100 105 110

Glu Ala Val Pro Glu Pro Val Leu Leu Ser Arg Ala Glu Leu Arg Leu
 115 120 125

Leu Arg Leu Lys Leu Lys Val Glu Gln His Val Glu Leu Tyr Gln Lys
 130 135 140

Tyr Ser Asn Asn Ser Trp Arg Tyr Leu Ser Asn Arg Leu Leu Ala Pro
 145 150 155 160

Ser Asp Ser Pro Glu Trp Leu Ser Phe Asp Val Thr Gly Val Val Arg
 165 170 175

Gln Trp Leu Ser Arg Gly Gly Glu Ile Glu Gly Phe Arg Leu Ser Ala

180

185

190

His Cys Ser Cys Asp Ser Arg Asp Asn Thr Leu Gln Val Asp Ile Asn
 195 200 205

Gly Phe Thr Thr Gly Arg Arg Gly Asp Leu Ala Thr Ile His Gly Met
 210 215 220

Asn Arg Pro Phe Leu Leu Leu Met Ala Thr Pro Leu Glu Arg Ala Gln
 225 230 235 240

His Leu Gln Ser Ser Arg His Arg Arg
 245

<210> 36
 <211> 112
 <212> PRT
 <213> Homo sapiens

<400> 36

Ala Leu Asp Thr Asn Tyr Cys Phe Ser Ser Thr Glu Lys Asn Cys Cys
 1 5 10 15

Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys Asp Leu Gly Trp Lys Trp
 20 25 30

Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Leu Gly Pro Cys
 35 40 45

Pro Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val Leu Ala Leu
 50 55 60

Tyr Asn Gln His Asn Pro Gly Ala Ser Ala Ala Pro Cys Cys Val Pro
 65 70 75 80

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

Lys Val Glu Gln Leu Ser Asn Met Ile Val Arg Ser Cys Lys Cys Ser
 100 105 110

<210> 37
 <211> 10
 <212> PRT
 <213> Homo sapiens
 <400> 37

Glu Pro Lys Ser Cys Asp Lys Thr His Thr
 1 5 10

<210> 38
 <211> 5
 <212> PRT
 <213> Homo sapiens
 <400> 38

Cys Pro Pro Cys Pro
 1 5

<210> 39
 <211> 8
 <212> PRT
 <213> Homo sapiens
 <400> 39

Ala Pro Glu Leu Leu Gly Gly Pro
 1 5

<210> 40
 <211> 12
 <212> PRT
 <213> Homo sapiens
 <400> 40

Glu Leu Lys Thr Pro Leu Gly Asp Thr Thr His Thr
 1 5 10

<210> 41
 <211> 50

<212> PRT
 <213> Homo sapiens

<400> 41

Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys
 1 5 10 15

Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro
 20 25 30

Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg
 35 40 45

Cys Pro
 50

<210> 42
 <211> 8
 <212> PRT
 <213> Homo sapiens

<400> 42

Ala Pro Glu Leu Leu Gly Gly Pro
 1 5

<210> 43
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 43

Glu Ser Lys Tyr Gly Pro Pro
 1 5

<210> 44
 <211> 5
 <212> PRT
 <213> Homo sapiens

<400> 44

Cys Pro Ser Cys Pro
1 5

<210> 45
<211> 8
<212> PRT
<213> Homo sapiens

<400> 45

Ala Pro Glu Phe Leu Gly Gly Pro
1 5

<210> 46
<211> 3
<212> PRT
<213> Homo sapiens

<400> 46

Glu Arg Lys
1

<210> 47
<211> 10
<212> PRT
<213> Homo sapiens

<400> 47

Cys Cys Val Glu Cys Pro Pro Pro Cys Pro
1 5 10

<210> 48
<211> 7
<212> PRT
<213> Homo sapiens

<400> 48

Ala Pro Pro Val Ala Gly Pro
1 5