

SEQUENCE LISTING

<110> argenx BVBA

<120> GARP-TGF-beta ANTIBODIES

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<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	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 cccttcagc ctgagcgctt ctgtgggaga tagagtcacc	60
atcacatgcc aggctagtca gtcaatttct agttacctgg catggtatca gcagaagcct	120
ggccaggcac ctaaaatcct gatctacgga gccagtaggc tgaagacagg ggtgccatct	180
cggtttctccg gcagcggatc tgggacatcc tttactctga ccatctcatc cctggagcca	240
gaagacgccg ctacatacta ttgtcagcag tatgcttccg tgcccgtcac attcggtcag	300
ggcactaagg 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 ggcccctccg tgttccccct ggccccttgc	420

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

<220>
 <223> antibody fragment

<400> 21	
tcccgggtcca 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
ctgggaggac cttccgtgtt tctgttcccc ccaaagccca aggacaccct gatgatctcc	360
cggacccccg aagtgacctg cgtgggtggtg gacgtgtccc aggaagatcc agaggtgcag	420
ttcaactggg atgttgacgg cgtggaagtg cacaacgcca agaccaagcc cagagaggaa	480
cagttcaact ccacctaccg ggtgggtgtcc gtgctgaccg tgctgcacca ggactggctg	540
aacggcaaag agtacaagtg caaggtgtcc aacaagggcc tgccctccag catcgaaaag	600
accatctcca aggccaaggg ccagccccgc gagccccagg tgtacaccct gccccttagc	660
caggaagaga tgaccaagaa ccaggtgtcc ctgacctgtc tggtgaaagg cttctacccc	720
tccgacattg ccgtggaatg ggagtccaac ggccagcccg agaacaacta caagaccacc	780
ccccctgtgc tggactccga cggctccttc ttcctgtact ctcggctgac agtggataag	840
tcccgggtggc aggaaggcaa cgtgttctcc tgcagcgtga tgcacgaggc cctgcacaac	900
cactataccc agaagtcctt 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

<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
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 <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
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<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
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<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