

SEQUENCE LISTING

<110> THE BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM

<120> EGFL6 SPECIFIC MONOCLONAL ANTIBODIES AND METHODS OF THEIR USE

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<151> 2016-02-05

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<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 127

Ala Ala Ser
1

<210> 128

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 128

Val Gly Tyr Lys Ser Gly Tyr Ile Asp Ser Ile Pro
1 5 10

<210> 129

<211> 24

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 129

gcgagtgttt atagtaacaa ctac

24

<210> 130

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 130
gcaggcgatt atagtagtag tagtgatatg tgtatt 36

<210> 131
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 131

Ala Ser Val Tyr Ser Asn Asn Tyr
1 5

<210> 132
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 132

Ala Gly Asp Tyr Ser Ser Ser Ser Asp Met Cys Ile
1 5 10

<210> 133
<211> 364
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 133
cagtcgctgg aggagtcga gggaggcctg gtccagcctg agggatccct gacactcacc 60
tgcaaagcct ctggactcga cctcagtagc tactactaca tgtgctgggt ccgccaggct 120
ccagggaagg ggctggagtg gatcgcatgc atttatgctg gtagtagtgg tagcacttac 180
tacgcgagct gggcgaaagg ccgattcacc atctccaaaa cctcgtcgac cacggtgact 240
ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagaggtggt 300
ggtagtactt atgctcaata tttaacttg tggggcccag gcaccctggt caccatctcc 360

tcag 364

<210> 134
<211> 331
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g, or t

<400> 134
gagctcgata tgaccanac accagcctcc gtgtctgcag ctgtgggagg cacagtcagc 60
atcaattgcc agtcagtc gagtggttat aggcactact tctctgga tcagcagaaa 120
ccagggcagc ctccaaagct cctgatctac tgggctcca ctctggcatc tggggtcca 180
tcgcggtca gcggcagtg atctgggaca gagttcactc tcaccatcag cggcgtgcag 240
tgtgacgatg ctgccactta ctactgtgca ggcgaatatg ctagtgatag tgataatcat 300
ttcggcggag ggaccgagct ggagatccta g 331

<210> 135
<211> 370
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 135
gagcagtcgg tgaaggagtc cgggggaggc ctggtccagc ctgagggatc cctgacactc 60
acctgcacag cttctggatt ctcttcagt agtatttatt ggatatgctg ggtccgccag 120
gtccaggga aggggctgga gttgatcgca tgcattcaga ttactagtgg taccattac 180
tacgcgagct gggcgaaagg ccgattcacc atctcaaaa tgcgtcgac cacggtgact 240
ctgcaaatga ccagtctgac agtcgcggac acggccacct atttctgtgg gagaagggga 300
tatggtgcct atgctggtac tggtcctct gacttgtggg gccagggcac cctggtcacc 360
gtctcttcag 370

<210> 136
<211> 331

<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 136
gagctcgatc tgaccagac tgcctcgtcc gtgtctgcag ctgtgggagg caccgtcacc 60
atcaattgcc agtcagtc gagtggttat aataacaaca acttagcctg gtatcagcag 120
aaaccagggc agcctccaa gctcctgac tacgaagcat ccaaactggc atctggggtc 180
ccatcgcggt tcaaaggcag tggatctggg acacagtca ctctcaccat cagcggcgtg 240
cagtgtgacg atgctgccac ttactattgt gcaggcgggt atgctggcta catttgggct 300
ttcggcggag ggaccgaggt ggtggtcaaa g 331

<210> 137
<211> 355
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 137
gagcagtcgg tggaggagtc cgggggaggc ctgttcagc ctgggggac cctggcactc 60
acctgcaaag cctctggatt caccctcaat agttattata tgtcctgggt ccgccaggct 120
ccagggaagg ggctggagtg gatcggtatc attgatagt atagtcctac tacgactgcc 180
tacgcgaact gggcgagagg ccgattcacc atctccaaga cctcgtcgac cacggtgact 240
ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagaggctat 300
ggtcctgttc gattggatct ctggggccag ggcaccctgg tcaccgtctc ttcag 355

<210> 138
<211> 334
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 138
accagacac cagcctccgt gtctgcagct gtgggaggca cagtcagcat caattgccag 60
tccagtcaga gtgtttataa gaacgcctat ttatcctact acttagcctg gtatcagcag 120

aaaccagggc agcctccaa gctcctgac tactgggctt ccactctggc atctggggtc 180
ccatcgcggt tcaaaggcag tggatctggg acacagtca ctctcacat cagcgacgtg 240
cagtgtgacg atgctgccac ttactactgt gcagccgaat atagtaatga tagtgataat 300
ggttcggcg gagggaccga ggtggaaatc aaag 334

<210> 139
<211> 370
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 139
gagcagtcgt tggaggagtc cgggggagac ctggtcaagc ctgagggatc cctgacactc 60
acctgcgcag cctctggatt ctcttcagt agcggctact ggatatgctg ggtccgccag 120
gctccagga aggggctgga gtggatcgga tgcatttatg ctggtagtag tgggtggcac 180
atttattacg cgacctgggc gaaaggccga ttaccatct cccaaacctc gtcgaccacg 240
gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacatattt ctgtacaaga 300
gataattatg gtggtggtgg ttctgctcc aaattgtggg gccagggcac cctggtcacc 360
atctcttcag 370

<210> 140
<211> 337
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 140
gagctcgtga tgaccagac tccatcccc gtgtctgcag ctgtgggagg cacagtcacc 60
atcaactgcc agtcagtc gagtgttat agtaacaacc gcttagcctg gtatcagcag 120
aaaccagggc agcctccaa gctcctggtc tattatgcag ccactctggc atctggggtc 180
ccgtcgcggt tcaaaggcag tggatatggg acacagtcca ctctcacat cgccgatgtg 240
gtgtgtgacg atgctgccac ttactactgt gcaggatata aaactgctga ttctgatggt 300
attgcttcg gcggaggac cgaggtggaa atcaaag 337

<210> 141
<211> 346
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 141
cagtcggtga aggagtccga gggaggcctg gtccagcctg agggatccct gacactcacc 60
tgcaaagcct ctggattctc cttcagtagt tatggagtga actgggtccg ccaggctcca 120
gggaaggggc tggagtggat cgcgtatatt ggtcttagta gtgagatcac ttactacgcg 180
ggctgggcga aaggccgatt caccatctcc aagccctcgt cgaccacggg gactctgcaa 240
atgaccagtc tgacagccgc ggacacggcc acctattct gtgtgagaga tctttatcat 300
agtaatggtt tgtggggccc aggcaccctg gtcaccatct cttcag 346

<210> 142
<211> 337
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 142
gagctcgatc tgaccagac tccatcccc gtgtctgcag ctgtgggagg cacagtcacc 60
gtcagttgcc aggccagtga gagcgtttat aataataacc gcttatcctg gtatcagcag 120
aaaccagggc agcctccaa gctcctgac tattatgcat ccactctggc atctggggtc 180
ccatcgcggt tcagcggcag tggatctggg acacagtca ctctcaccat cagcagcgtg 240
caatgtgctg atgctccac gtattattgt gtagccttta aaggttatgg tactgacggc 300
aatgctttcg gcggaggagc cgaggtggaa atcaaag 337

<210> 143
<211> 370
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 143
gagcagtcgg tgaaggagtc cgggggagac ctggtcaagc ctgagggatc cctgacactc 60

acctgcacag cctctggatt ctcttcaat agcggctact gggatatgtg ggtccgccag 120
gctccaggga aggggctgga gtggatcgct tgcattata ctagtagtcc tactgggtgcc 180
atatactacg cgacctgggc gaaaggccga ttcacatct cccaaacctc gtcgaccacg 240
gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacctattt ctgtacaaga 300
gataattttg gtgggtgggtg ttctgctcc aaattgtggg gccagggcac cctggtcacc 360
atctcttcag 370

<210> 144
<211> 336
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 144
gagctcgtga tgaccagac tccatcttc aagtctgtcc ctgtgggagg cacagtcacc 60
atcgattgcc aggccagtga gagtgtttat agtaacaacc gctgtgcctg gtatcagcag 120
aaaccagggc agcctccaa gctcctgac tattatgcat ccactctggc atctggggtc 180
ccgtcgcggt tcaaatgcag tggatctggg acacggttca ctctacat cagcggcgtg 240
cagtgtgaag atgctccac ttactactgt gcaggatata agactgccga ttctgatggt 300
cttggttcg gcggaggac cgaggtggaa atcaaa 336

<210> 145
<211> 354
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 145
gagcagtcgg tgaaggagtc cgaggagac ctggtcaagc ctgaggatc cctgacactc 60
gcctgcacag ctctggatt caccctcagt agctactaca tgtgtgggt ccgccaggct 120
ccagggaagg ggctggaatg gatcgcatgc attgatactg ataataat taggactgcc 180
tacgcgagct gggcgagggg ccgattcacc atctccagga cctcgtcgac cacggtgact 240
ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgg gagaggctat 300
gggtcgcttc ggttgatct ctggggccag ggcccctggc caccgtctct tcag 354

<210> 146
<211> 331
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 146
gagctcgatc tgaccagac accagcctcc gtgtctgcag ctgtgggagg cacagtcagc 60
atcaattgcc agtcagtc gagtgttat aggcactact tctctggta tcagcagaaa 120
ccagggcagc ctccaagct cctgatctac tgggcttcca ctctggcatc tggggtccca 180
tcgcggttca gcggcagtg atctgggaca gagttcactc tcaccatcag cggcgtgcag 240
tgtgacgatg ctgccactta ctactgtgca ggcgaatatg ctagtatag tgataatcat 300
ttcggcggag ggaccgaggt ggaaatcaaa g 331

<210> 147
<211> 343
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 147
cagtcggtga aggagtccga gggtcgcctg gtcacgcctg ggacaccct gacactcacc 60
tgcacagtct ctggattctc cctcagtagc taccacatgg gctgggtccg ccaggtcca 120
gggaaggggc tggaatacat cggaatcatt aataattatg gtgccacata ctacgcgagc 180
tgggcaaaag gccgattcac catctccaga acctcgacca cgggtgatct gaaaatgacc 240
agtctgacaa ccgaggacac ggccacctat ttctgtgcca gaagtcctgg gattcctggt 300
tataattcgt ggggccagg caccctggtc accatctct cag 343

<210> 148
<211> 340
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 148

gagctcgatc tgaccagac tccatctcc acgtctcgg ctgtgggagg cacagtcacc 60
 atcaactgcc agtcagtc gaattgttat agttacaacc gcttatcctg gtttcagcag 120
 aaaccagggc agcctccaa gctcctgatc tacgaagcat ccaaactggc atctggggtc 180
 ccatcgcggt tcaaaggcag tggatctggg acacagtca ctctcaccat cagcggcgtg 240
 cagtgtgacg atgctgccac ttactactgt gcaggcgggt atgattgtag gagttctgat 300
 tgtgatgctt tcggcggagg gaccgaggtg gaaatcaaac 340

<210> 149
 <211> 373
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide

<400> 149
 agcagttcgg tggaggagtc cgggggagac ctggtcaagc ccggggcatc cctgacactc 60
 acctgcacag cctctggatt ctcttcagt agcaattcaa tgtgctgggt ccgccaggct 120
 ccagggaagg ggctggagtg gatcggatgc attgctagta gtagtagtca tagtacttac 180
 tacgcgagct gggcgaaagg ccgattcacc atctcaaaa cctcgtcgac cacggtgact 240
 ctgcaaatga ccagtctgac agccgcggac atggccacct atttctgtgc gagagattct 300
 ggtaatcgtg gttaccttta tgcgggcgac tttaactgt ggggccagg caccctggtc 360
 accgtctctt cag 373

<210> 150
 <211> 334
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide

<400> 150
 gagctcgtgc tgaccagac tccagcctct gtggaggtag ctgtgggagg cacagtcacc 60
 atcaattgcc aggccagtc gagcattaat agttggttat cctggatatc gcagaaacca 120
 gggcagcgtc ccaaactcct gatctacgaa gcatccactc tggcatctgg ggtctcatcg 180
 cggttcagtg gcagtggatc tgggacacag ttactctca ccatcagcgg cgtgcagtgt 240
 gacgatgctg ccacttacta ctgtcaacag ggttatagtt atagtaatgt tgataataat 300

attttcggcg gagggaccga ggtggtggtc aaag

334

<210> 151

<211> 361

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 151

cagtcgttgg aggagtccgg gggaggcctg gtcaagcctg agggatccct gacactcacc 60

tgcacagcct ctggattcga cctcagtagc tctactaca tgtgtgggt ccgccaggct 120

ccagggaagg ggctggagtg gatcgtctgt attgacggtg gtgggggtga gccactgcc 180

taccgagct gggcgaaagg ccgattcacc gtctcaaaa cctcgtcgac cacggtgact 240

cttcaaatga ccagtctgac agtcgaggac acggccacgt atttctgtgc gagacgagat 300

gctggtgctg ggaacgcctt tagcttgg ggcccaggca ccctggtcac catctcctca 360

g

361

<210> 152

<211> 331

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 152

gagctcgata tgaccagac tccatcccc gtgtctgcag ctgtgggagg cacagtcacc 60

atcagttgcc agtcagtc aagtgtttat ctcagaaca acttagcctg gtatcagcag 120

aaaccagggc agcctccaa gctcctgac tattatgcat ccactctggc atctggggtc 180

tcatcgcggt tcaaaggcag tggatctggg acacagttca ctctacat cagcgacctg 240

gagtgtgacg atgctgccac ttactactgt cagggcggtt acagtggata tatcaattct 300

ttcggcggag ggaccgaggt ggaaatcaaa g

331

<210> 153

<211> 355

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 153

cagtcggtga aggagtccga gggagacctg gtcaagcctg gggcatccct gacactcacc 60

tgcaaaacct ctggattcga cttcagtagc agctacttta tgtgctgggt ccgccaggct 120

ccagggaggg ggctggagtg gatcgcatgc atttactg ttattagtcg taagacttat 180

tacgcgagct gggcgaaagg ccgattcacc atctcaaaa cctcggcgac cacgttgat 240

ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagatcgga 300

acaattgaaa gattggatct ctggggccag ggcaccctgg tcaccgtctc ctacag 355

<210> 154

<211> 337

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 154

gagctcgatc tgaccagac tccatgccc gtgtctgcac ctgtgggagg cacagtcacc 60

atcaattgcc aggccagtga gagtgttat aataactacc gcttatcctg gtatcagcag 120

aaaccagggc agcctccaa gctcctaate tatgtctcat cactctggc atctggggtc 180

ccatcgcggt tcaaaggcag tggatctggg acacagtca ctctcgccat cagcgatgtg 240

gtgtgtgacg atgtgtccac ttactactgt gtaggatata aaagtggta tattgatagt 300

attcctttcg gcggaggagc cgagggtgtg gtcaaag 337

<210> 155

<211> 334

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 155

cagtcgttg aggagtccgg gggagacctg gtcaagcctg gggcatccct gacactcacc 60

tgcacagctt ctggattcac catcaataac tacaacatta actgggtccg ccaggctcca 120

gggaaggggc tggagtggat cgcacgtatt tggaatgggt atggcagcac atactacgcg 180

agctgggcga aaggccgatt caccatctcc aaaacctgt cgaccacggt gactctacaa 240

atgaccagtc tgacagccgc ggacacggcc acctatttct gtgcgagaaa ttttaacttg 300
tggggcccag gcaccctggc caccatctct tcag 334

<210> 156
<211> 337
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 156
gagctcgtgc tgaccagac tccatctccc gtgtctgcag ctgtgggagg cacagtcacc 60
atcaattgcc agtcagtcag gagtgtttat agtaacaact acttaccctg gtttcagcag 120
aaaccagggc agcctcccaa gcccctgatac tattatgcat ccactctggc atctggggtc 180
ccatcgcggc ttaaaggcag tggatctggg acacagttca ctctacccat cagcgacgtg 240
cagtgtgacg atgctgccac ttactactgt gcaggcgatt atagtagtag tagtgatatg 300
tgtattttcg gcggaggac cgagctggaa atcaaag 337

<210> 157
<211> 121
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 157

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

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

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

Ala Cys Ile Tyr Ala Gly Ser Ser Gly Ser Thr Tyr Tyr Ala Ser Trp
50 55 60

Ala Lys Gly Arg Phe Thr Ile Ser Lys Thr Ser Ser Thr Thr Val Thr

65 70 75 80

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

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

Pro Gly Thr Leu Val Thr Ile Ser Ser
 115 120

<210> 158

<211> 109

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 158

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

Thr Val Ser Ile Asn Cys Gln Ser Ser Pro Ser Val Tyr Arg His Tyr
 20 25 30

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

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

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

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

Asp Asn His Phe Gly Gly Gly Thr Glu Leu Glu Ile Leu
 100 105

<210> 159

<211> 123

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 159

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

Ser Leu Thr Leu Thr Cys Thr Ala Ser Gly Phe Ser Phe Ser Ser Ile
20 25 30

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

Ile Ala Cys Ile Gln Ile Thr Ser Gly Ile Thr Tyr Tyr Ala Ser Trp
50 55 60

Ala Lys Gly Arg Phe Thr Ile Ser Lys Met Ser Ser Thr Thr Val Thr
65 70 75 80

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

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

Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 160

<211> 110

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 160

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

Gly Thr Val Thr Ile Asn Cys Gln Ser Ser Gln Ser Val Tyr Asn Asn

20 25 30

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

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

Lys Gly Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Gly Val
65 70 75 80

Gln Cys Asp Asp Ala Ala Thr Tyr Tyr Cys Ala Gly Gly Tyr Ala Gly
85 90 95

Tyr Ile Trp Ala Phe Gly Gly Gly Thr Glu Val Val Val Lys
100 105 110

<210> 161

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 161

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

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

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

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

Ala Arg Gly Arg Phe Thr Ile Ser Lys Thr Ser Ser Thr Thr Val Thr
65 70 75 80

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

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

Leu Val Thr Val Ser Ser
115

<210> 162
<211> 111
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 162

Thr Gln Thr Pro Ala Ser Val Ser Ala Ala Val Gly Gly Thr Val Ser
1 5 10 15

Ile Asn Cys Gln Ser Ser Gln Ser Val Tyr Lys Asn Ala Tyr Leu Ser
20 25 30

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

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

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

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

Asp Ser Asp Asn Gly Phe Gly Gly Gly Thr Glu Val Glu Ile Lys
100 105 110

<210> 163
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 163

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

Ser Leu Thr Leu Thr Cys Ala Ala Ser Gly Phe Ser Phe Ser Ser Gly
20 25 30

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

Ile Gly Cys Ile Tyr Ala Gly Ser Ser Gly Gly His Ile Tyr Tyr Ala
50 55 60

Thr Trp Ala Lys Gly Arg Phe Thr Ile Ser Gln Thr Ser Ser Thr Thr
65 70 75 80

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

Phe Cys Thr Arg Asp Asn Tyr Gly Gly Gly Gly Ser Ala Ser Lys Leu
100 105 110

Trp Gly Pro Gly Thr Leu Val Thr Ile Ser Ser
115 120

<210> 164

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 164

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

Gly Thr Val Thr Ile Asn Cys Gln Ser Ser Gln Ser Val Tyr Ser Asn
20 25 30

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

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

Lys Gly Ser Gly Tyr Gly Thr Gln Ser Thr Leu Thr Ile Ala Asp Val
65 70 75 80

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

Asp Ser Asp Gly Ile Ala Phe Gly Gly Gly Thr Glu Val Glu Ile Lys
100 105 110

<210> 165

<211> 115

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 165

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

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

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

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

Gly Arg Phe Thr Ile Ser Lys Pro Ser Ser Thr Thr Val Thr Leu Gln
65 70 75 80

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

Asp Leu Tyr His Ser Asn Gly Leu Trp Gly Pro Gly Thr Leu Val Thr
100 105 110

Ile Ser Ser
115

<210> 166
<211> 112
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 166

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

Gly Thr Val Thr Val Ser Cys Gln Ala Ser Glu Ser Val Tyr Asn Asn
20 25 30

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

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

Ser Gly Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Ser Val
65 70 75 80

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

Gly Thr Asp Gly Asn Ala Phe Gly Gly Gly Thr Glu Val Glu Ile Lys
100 105 110

<210> 167
<211> 123
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 167

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

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

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

Ile Ala Cys Ile Tyr Thr Ser Ser Pro Thr Gly Ala Ile Tyr Tyr Ala
50 55 60

Thr Trp Ala Lys Gly Arg Phe Thr Ile Ser Gln Thr Ser Ser Thr Thr
65 70 75 80

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

Phe Cys Thr Arg Asp Asn Phe Gly Gly Gly Gly Ser Ala Ser Lys Leu
100 105 110

Trp Gly Pro Gly Thr Leu Val Thr Ile Ser Ser
115 120

<210> 168

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 168

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

Gly Thr Val Thr Ile Asp Cys Gln Ala Ser Glu Ser Val Tyr Ser Asn
20 25 30

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

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

Lys Cys Ser Gly Ser Gly Thr Arg Phe Thr Leu Thr Ile Ser Gly Val
65 70 75 80

Gln Cys Glu Asp Ala Ala Thr Tyr Tyr Cys Ala Gly Tyr Lys Thr Ala
85 90 95

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

<210> 169

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 169

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

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

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

Ala Cys Ile Asp Thr Asp Asn Asp Ile Arg Thr Ala Tyr Ala Ser Trp
50 55 60

Ala Arg Gly Arg Phe Thr Ile Ser Arg Thr Ser Ser Thr Thr Val Thr
65 70 75 80

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

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

Leu Val Thr Ile Ser Ser
115

<210> 170
<211> 110
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 170

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

Gly Thr Val Ser Ile Asn Cys Gln Ser Ser Pro Ser Val Tyr Arg His
20 25 30

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

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

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

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

Ser Asp Asn His Phe Gly Gly Gly Thr Glu Val Glu Ile Lys
100 105 110

<210> 171
<211> 114
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 171

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

Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Ser Tyr His
20 25 30

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

Ile Ile Asn Asn Tyr Gly Ala Thr Tyr Tyr Ala Ser Trp Ala Lys Gly
50 55 60

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

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

Gly Ile Pro Gly Tyr Asn Ser Trp Gly Pro Gly Thr Leu Val Thr Ile
100 105 110

Ser Ser

<210> 172

<211> 113

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 172

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

Gly Thr Val Thr Ile Asn Cys Gln Ser Ser Gln Asn Val Tyr Ser Tyr
20 25 30

Asn Arg Leu Ser Trp Phe Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu
35 40 45

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

Lys Gly Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Gly Val
65 70 75 80

Gln Cys Asp Asp Ala Ala Thr Tyr Tyr Cys Ala Gly Gly Tyr Asp Cys
85 90 95

Arg Ser Ser Asp Cys Asp Ala Phe Gly Gly Gly Thr Glu Val Glu Ile
100 105 110

Lys

<210> 173

<211> 124

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 173

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

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

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

Gly Cys Ile Ala Ser Ser Ser Ser His Ser Thr Tyr Tyr Ala Ser Trp
50 55 60

Ala Lys Gly Arg Phe Thr Ile Ser Lys Thr Ser Ser Thr Thr Val Thr
65 70 75 80

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

Ala Arg Asp Ser Gly Asn Arg Gly Tyr Leu Tyr Ala Gly Asp Phe Asn
100 105 110

Leu Trp Gly Pro Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 174

<211> 111
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 174

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

Gly Thr Val Thr Ile Asn Cys Gln Ala Ser Gln Ser Ile Asn Ser Trp
 20 25 30

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

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

Ser Gly Ser Gly Thr Gln Phe Thr Leu Thr Ile Ser Gly Val Gln Cys
65 70 75 80

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

Val Asp Asn Asn Ile Phe Gly Gly Gly Thr Glu Val Val Val Lys
 100 105 110

<210> 175
<211> 120
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic polypeptide

<400> 175

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

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

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

Val Cys Ile Asp Gly Gly Gly Glu Pro Thr Ala Tyr Pro Ser Trp
50 55 60

Ala Lys Gly Arg Phe Thr Val Ser Lys Thr Ser Ser Thr Thr Val Thr
65 70 75 80

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

Ala Arg Arg Asp Ala Gly Ala Gly Asn Ala Phe Ser Leu Trp Gly Pro
100 105 110

Gly Thr Leu Val Thr Ile Ser Ser
115 120

<210> 176

<211> 110

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 176

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

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

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

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

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

Glu Cys Asp Asp Ala Ala Thr Tyr Tyr Cys Gln Gly Gly Tyr Ser Gly

85 90 95

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

<210> 177

<211> 118

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 177

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

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

Phe Met Cys Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Ile
35 40 45

Ala Cys Ile Tyr Thr Val Ile Ser Arg Lys Thr Tyr Tyr Ala Ser Trp
50 55 60

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

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

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

Leu Val Thr Val Ser Ser
115

<210> 178

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 178

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

Gly Thr Val Thr Ile Asn Cys Gln Ala Ser Glu Ser Val Tyr Asn Asn
20 25 30

Tyr Arg Leu Ser Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu
35 40 45

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

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

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

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

<210> 179

<211> 111

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 179

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

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

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

Arg Ile Trp Asn Gly Asp Gly Ser Thr Tyr Tyr Ala Ser Trp Ala Lys

50 55 60

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

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

Asn Phe Asn Leu Trp Gly Pro Gly Thr Leu Val Thr Ile Ser Ser
100 105 110

<210> 180

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic polypeptide

<400> 180

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

Gly Thr Val Thr Ile Asn Cys Gln Ser Ser Ala Ser Val Tyr Ser Asn
20 25 30

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

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

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

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

Ser Ser Asp Met Cys Ile Phe Gly Gly Gly Thr Glu Leu Glu Ile Lys
100 105 110