

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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gagagtgttt ataataacta ccgc

24

<210> 124

<211> 9

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 124

gctgcatcc

9

<210> 125

<211> 36

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 125

gtaggatata aaagtgggta tattgatagt attcct

36

<210> 126

<211> 8

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic CDR sequence

<400> 126

Glu Ser Val Tyr Asn Asn Tyr Arg
1 5

<210> 127

<211> 3

<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 aggagtccga gggaggcctg gtccagcctg agggatccct gacactcacc

60

tgcaaagcct ctggactcga cctcagtagc tactactaca tgtgctgggt ccgccaggct

120

ccagggaagg ggctggagtg gatcgcatgc atttatgctg gtagtagtgg tagcacttac	180
tacgcgagct gggcgaaaagg ccgattcacc atctccaaaa cctcgtcgac cacggtgact	240
ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagagggtggt	300
ggtagtactt atgctcaata ttttaacttg 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 tgacccanac accagcctcc gtgtctgcag ctgtgggagg cacagtcagc	60
atcaattgcc agtccagtcc gagtgtttat aggcactact tatcctggta tcagcagaaa	120
ccagggcagc ctcccaagct cctgatctac tgggcttcca ctctggcatc tggggtccca	180
tcgcggttca gcggcagtggt atctgggaca gaggctcactc tcaccatcag cggcgtgcag	240
tgtgacgatg ctgccactta ctactgtgca ggccaatatg 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 ctccttcagt agtatattatt ggatatgctg ggtccgccag	120
gctccagggga aggggctgga gttgatcgca tgcattcaga ttactagtgg tatcacttac	180
tacgcgagct gggcgaaagg ccgattcacc atctccaaaa tgtcgtcgac cacggtgact	240
ctgcaaatga ccagtctgac agtcgcggac acggccacct atttctgtgg gagaagggga	300
tatgggtcct atgctggtac tgggtgcctct gacttgtggg gcccaggcac cctggtcacc	360
gtctcttcag	370

<210> 136
 <211> 331
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide

<400> 136	
gagctcgatc tgaccagac tgcacgtcc gtgtctgcag ctgtgggagg caccgtcacc	60
atcaattgcc agtccagtca gagtgtttat aataacaaca acttagcctg gtatcagcag	120
aaaccagggc agcctcccaa gtcctgatc tacgaagcat ccaaactggc atctggggtc	180
ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat cagcggcgtg	240
cagtgtgacg atgtgccac ttactattgt gcaggcggtt 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 ctgttccagc ctgggggatc cctggcactc	60
acctgcaaag cctctggatt caccctcaat agttattata tgtcctgggt ccgccaggct	120
ccagggaagg ggctggagtg gatcggatgc attgatagtg 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	
accagagac cagcctccgt gtctgcagct gtgggaggca cagtcagcat caattgccag	60
tccagtcaga gtgtttataa gaacgcctat ttatcctact acttagcctg gtatcagcag	120
aaaccagggc agcctcccaa gtcctgatc tactgggctt ccactctggc atctggggtc	180
ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcacat cagcgacgtg	240
cagtgtgacg atgctgccac ttactactgt gcagccgaat atagtaatga tagtgataat	300
ggtttcggcg 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 ctcttcagc agcggctact ggatatgctg ggtccgccag	120
gctccaggga aggggctgga gtggatcgga tgcatttatg ctggtagtag tggtagggcac	180
atttattacg cgacctgggc gaaaggccga ttcaccatct cccaaacctc gtcgaccacg	240
gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacatattt ctgtacaaga	300
gataattatg gtggtggtgg ttctgcttcc aaattgtggg gccagggcac cctggtcacc	360

atctcttcag 370

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

<220>
<223> Synthetic oligonucleotide

<400> 140
gagctcgtga tgacccagac tccatcccc gtgtctgcag ctgtgggagg cacagtcacc 60
atcaactgcc agtccagtca gagtgtttat agtaacaacc gcttagcctg gtatcagcag 120
aaaccagggc agcctcccaa gtccttggtc tattatgcag ccactctggc atctggggtc 180
ccgtcgcggt tcaaaggcag tggatatggg acacagtcca ctctcaccat cgccgatgtg 240
gtgtgtgacg atgctgccac ttactactgt gcaggatata aaactgctga ttctgatggt 300
attgctttcg gcggagggac 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 cgaccacggt gactctgcaa 240
atgaccagtc tgacagccgc ggacacggcc acctatttct 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 tgacccagac tccatccccc gtgtctgcag ctgtgggagg cacagtcacc	60
gtcagttgcc aggccagtga gagcgtttat aataataacc gcttatcctg gtatcagcag	120
aaaccagggc agcctcccaa gtcctgatc tattatgcat ccactctggc atctggggtc	180
ccatcgcggt tcagcggcag tggatctggg acacagttca ctctcaccat cagcagcgtg	240
caatgtgctg atgctgccac gtattattgt gtagccttta aaggttatgg tactgacggc	300
aatgctttcg gcggagggac cgagggtggaa atcaaaag	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 gggatatgctg ggtccgccag	120
gctccagggga aggggctgga gtggatcgct tgcatctata ctagtagtcc tactggtgcc	180
atatactacg cgacctgggc gaaaggccga ttcaccatct cccaaacctc gtcgaccacg	240
gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacctatit ctgtacaaga	300
gataattttg gtggtggtgg ttctgcttcc aaattgtggg gcccaggcac cctggtcacc	360
atctcttcag	370

<210> 144

<211> 336

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 144
gagctcgtga tgacccagac tccatcttcc aagtctgtcc ctgtgggagg cacagtcacc 60
atcgattgcc aggccagtga gagtgtttat agtaacaacc gctgtgcctg gtatcagcag 120
aaaccagggc agcctcccaa gctcctgatc tattatgcat ccactctggc atctggggtc 180
ccgtcgcggt tcaaattgcag tggatctggg acacggttca ctctcaccat cagcggcgtg 240
cagtgtgaag atgctgccac ttactactgt gcaggatata agactgccga ttctgatggg 300
cttggttttcg gcggaggggac cgaggtggaa atcaaa 336

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

<220>
<223> Synthetic oligonucleotide

<400> 145
gagcagtcgg tgaaggagtc cgaggagagac ctggtcaagc ctgagggatc cctgacactc 60
gcctgcacag cttctggatt caccctcagt agctactaca tgtgctgggt ccgccaggct 120
ccagggaagg ggctggaatg gatcgcacatc attgatactg ataatgatat taggactgcc 180
tacgcgagct gggcgagggg ccgattcacc atctccagga cctcgtcgac cacggtgact 240
ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgg gagaggctat 300
ggtgcgcttc ggttggatct ctggggccag ggcccctggt caccgtctct tcag 354

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

<220>
<223> Synthetic oligonucleotide

<400> 146
gagctcgatc tgacccagac accagcctcc gtgtctgcag ctgtgggagg cacagtcagc 60
atcaattgcc agtccagtcc gagtgtttat aggcactact tatcctggta tcagcagaaa 120

ccagggcagc ctcccaagct cctgatctac tgggcttcca ctctggcatc tgggggtccca	180
tcgcggttca gcggcagtg atctgggaca gagttcactc tcaccatcag cggcgtgcag	240
tgtgacgatg ctgccactta ctactgtgca ggcgaatatg ctagtgatag 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 ggacacccct gacactcacc	60
tgcacagtct ctggattctc cctcagtagc taccacatgg gctgggtccg ccaggctcca	120
gggaaggggc tggaatacat cggaatcatt aataattatg gtgccacata ctacgcgagc	180
tgggcaaaaag gccgattcac catctccaga acctcgacca cgggtggatct gaaaatgacc	240
agtctgacaa ccgaggacac ggccacctat ttctgtgcca gaagtcctgg gattcctggt	300
tataattcgt gggggcccagg caccctggtc accatctcct cag	343

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

<220>
 <223> Synthetic oligonucleotide

<400> 148	
gagctcgatc tgacccagac tccatcttcc acgtctgcgg ctgtgggagg cacagtcacc	60
atcaactgcc agtccagtca gaatgtttat agttacaacc gcttatcctg gtttcagcag	120
aaaccagggc agcctcccaa gtcctgatc tacgaagcat ccaaactggc atctggggtc	180
ccatcgcggt tcaaaggcag tggatctggg acacagttca 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 gggcgaaaagg ccgattcacc atctccaaaa cctcgtcgac cacggtgact 240

ctgcaaatga ccagtctgac agccgcggac atggccacct atttctgtgc gagagattct 300

ggtaatcgtg gttaccttta tgcgggcgac ttttaacttgt ggggcccagg 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 aggccagtca gagcattaat agttggttat cctggatatca gcagaaacca 120

gggcagcgtc ccaaactcct gatctacgaa gcatccactc tggcatctgg ggtctcatcg 180

cggttcagtg gcagtggatc tgggacacag ttcactctca ccatcagcgg cgtgcagtgt 240

gacgatgctg ccacttacta ctgtcaacag gggtatagtt 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 tcctactaca tgtgctgggt ccgccaggct 120
ccagggaagg ggctggagtg gatcgtctgt attgacgggt gtgggggtga gcccactgcc 180
taccgagct gggcgaaagg ccgattcacc gtctcaaaa cctcgtcgac cacggtgact 240
cttcaaatga ccagtctgac agtcgcggac acggccacgt atttctgtgc gagacgagat 300
gctggtgctg ggaacgcctt tagcttgtgg ggcccaggca ccctggtcac catctcctca 360
g 361

<210> 152
<211> 331
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 152
gagctcgata tgacccagac tccatccccc gtgtctgcag ctgtgggagg cacagtcacc 60
atcagttgcc agtccagtca aagtgtttat cttcagaaca acttagcctg gtatcagcag 120
aaaccagggc agcctcccaa gtcctgatc tattatgcat ccactctggc atctggggtc 180
tcatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat cagcgacctg 240
gagtgtgacg atgctgccac ttactactgt cagggcgggt 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
tgcaaagcct	ctggattcga	cttcagtagc	agctacttta	tgtgctgggt	ccgccaggct	120
ccaggaggagg	ggctggagtg	gatcgcatgc	atttatactg	ttattagtcg	taagacttat	180
tacgcgagct	gggcgaaagg	ccgattcacc	atctccaaaa	cctcggcgac	cacggtggat	240
ctgcaaatga	ccagtctgac	agccgcggac	acggccacct	atttctgtgc	gagatcggca	300
acaattgaaa	gattggatct	ctggggccag	ggcaccttgg	tcaccgtctc	ctcag	355

<210> 154

<211> 337

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 154

gagctcgatc	tgaccagac	tccatcgccc	gtgtctgcac	ctgtgggagg	cacagtcacc	60
atcaattgcc	aggccagtga	gagtgtttat	aataactacc	gcttatcctg	gtatcagcag	120
aaaccagggc	agcctcccaa	gctcctaata	tatgctgcat	ccactctggc	atctggggtc	180
ccatcgcggt	tcaaaggcag	tggatctggg	acacagttca	ctctcgccat	cagcgatgtg	240
gtgtgtgacg	atgctgccac	ttactactgt	gtaggatata	aaagtgggta	tattgatagt	300
attcctttcg	gcggagggac	cgagggtggt	gtcaaag			337

<210> 155

<211> 334

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oligonucleotide

<400> 155

cagtcgttgg	aggagtccgg	gggagacctg	gtcaagcctg	gggcatccct	gacactcacc	60
------------	------------	------------	------------	------------	------------	----

tgcacagctt ctggattcac catcaataac tacaacatta actgggtccg ccaggctcca	120
gggaaggggc tggagtggat cgcacgtatt tggaatgggtg atggcagcac atactacgcg	180
agctggggcga aaggccgatt caccatctcc aaaacctcgt cgaccacgggt gactctacaa	240
atgaccagtc tgacagccgc ggacacggcc acctatttct gtgcgagaaa ttttaacttg	300
tggggcccag gcaccctggt 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 agtccagtgc gagtgtttat agtaacaact acttatcctg gtttcagcag	120
aaaccagggc agcctcccaa gcccctgatc tattatgcat ccactctggc atctggggtc	180
ccatcgcggt ttaaaggcag tggatctggg acacagttca ctctcaccat cagcgacgtg	240
cagtgtgacg atgctgccac ttactactgt gcaggcgatt atagtagtag tagtgatatg	300
tgtatttttcg 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 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