SEQUENCE LISTING

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

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

<130> UTFH.P0324WO

<140> Unknown
<141> 2017-02-06

<150> 62/291,987
<151> 2016-02-05

<160> 180

<170> PatentIn version 3.5

<210> 1
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 1
ggactcgacc tcagtagcta ctactac 27

<210> 2
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 2
atttatgctg gtagtagtgg tagcact 27

<210> 3
<211> 42
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 3
gcgagaggtg gtggtagtac ttatgctcaa tattttaact tg 42

<210> 4
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 4

Gly Leu Asp Leu Ser Ser Tyr Tyr Tyr
1 5

<210> 5
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 5

Ile Tyr Ala Gly Ser Ser Gly Ser Thr
1 5

<210> 6
<211> 14
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 6

Ala Arg Gly Gly Gly Ser Thr Tyr Ala Gln Tyr Phe Asn Leu
1 5 10

<210> 7
<211> 27
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 7
ggattctcct tcagtagtat ttattgg 27

<210> 8
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 8
attcagatta ctagtggtat cact 24

<210> 9
<211> 45
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 9
agaaggggat atggtgccta tgctggtact ggtgcctctg acttg 45

<210> 10
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 10

Gly Phe Ser Phe Ser Ser Ile Tyr Trp
1 5

<210> 11
<211> 8
<212> PRT

<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 11

Ile Gln Ile Thr Ser Gly Ile Thr
1 5

<210> 12
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 12

Arg Arg Gly Tyr Gly Ala Tyr Ala Gly Thr Gly Ala Ser Asp Leu
1 5 10 15

<210> 13
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 13
ggattcaccc tcaatagtta ttat 24

<210> 14
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 14
attgatagtg atagtcctac tacg 24

<210> 15

<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 15
gcgagaggct atggtcctgt tcgattggat ctc 33

<210> 16
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 16

Gly Phe Thr Leu Asn Ser Tyr Tyr
1 5

<210> 17
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 17

Ile Asp Ser Asp Ser Pro Thr Thr
1 5

<210> 18
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 18

Ala Arg Gly Tyr Gly Pro Val Arg Leu Asp Leu

1 5 10

<210> 19
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 19
ggattctcct tcagtagcgg ctactgg 27

<210> 20
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 20
atttatgctg gtagtagtgg tgggcac 27

<210> 21
<211> 45
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 21
tgtacaagag ataattatgg tggtggtggt tctgcttcca aattg 45

<210> 22
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 22

Gly Phe Ser Phe Ser Ser Gly Tyr Trp

1 5

<210> 23
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 23

Ile Tyr Ala Gly Ser Ser Gly Gly His
1 5

<210> 24
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 24

Cys Thr Arg Asp Asn Tyr Gly Gly Gly Gly Ser Ala Ser Lys Leu
1 5 10 15

<210> 25
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 25
ggattctcct tcagtagtta tgga 24

<210> 26
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 26
attggtctta gtagtgagat c 21

<210> 27
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 27
gtgagagatc tttatcatag taatggtttg 30

<210> 28
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 28

Gly Phe Ser Phe Ser Ser Tyr Gly
1 5

<210> 29
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 29

Ile Gly Leu Ser Ser Glu Ile
1 5

<210> 30
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 30

Val Arg Asp Leu Tyr His Ser Asn Gly Leu
1 5 10

<210> 31
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 31
ggattctcct tcaatagcgg ctactgg 27

<210> 32
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 32
atctatacta gtagtcctac tggtgcc 27

<210> 33
<211> 45
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 33
tgtacaagag ataattttgg tggtggtggt tctgcttcca aattg 45

<210> 34
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 34

Gly Phe Ser Phe Asn Ser Gly Tyr Trp
1   5

<210> 35
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 35

Ile Tyr Thr Ser Ser Pro Thr Gly Ala
1   5

<210> 36
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 36

Cys Thr Arg Asp Asn Phe Gly Gly Gly Gly Ser Ala Ser Lys Leu
1   5   10   15

<210> 37
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 37
ggattcaccc tcagtagcta ctac   24

<210> 38

<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 38
attgatactg ataatgatat tagg 24

<210> 39
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 39
gggagaggct atggtgcgct tcggttggat ctc 33

<210> 40
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 40

Gly Phe Thr Leu Ser Ser Tyr Tyr
1 5

<210> 41
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 41

Ile Asp Thr Asp Asn Asp Ile Arg
1 5

<210> 42
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 42

Gly Arg Gly Tyr Gly Ala Leu Arg Leu Asp Leu
1 5 10

<210> 43
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 43
ggattctccc tcagtagcta ccac 24

<210> 44
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 44
attaataatt atggtgccac a 21

<210> 45
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 45
gccagaagtc ctgggattcc tggttataat tcg 33

<210> 46
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 46

Gly Phe Ser Leu Ser Ser Tyr His
1 5

<210> 47
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 47

Ile Asn Asn Tyr Gly Ala Thr
1 5

<210> 48
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 48

Ala Arg Ser Pro Gly Ile Pro Gly Tyr Asn Ser
1 5 10

<210> 49
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 49
ggattctcct tcagtagcaa ttca 24

<210> 50
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 50
attgctagta gtagtagtca tagt 24

<210> 51
<211> 51
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 51
gcgagagatt ctggtaatcg tggttacctt tatgcgggcg actttaactt g 51

<210> 52
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 52

Gly Phe Ser Phe Ser Ser Asn Ser
1 5

<210> 53
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 53

Ile Ala Ser Ser Ser Ser His Ser
1 5

<210> 54
<211> 17
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 54

Ala Arg Asp Ser Gly Asn Arg Gly Tyr Leu Tyr Ala Gly Asp Phe Asn
1 5 10 15

Leu

<210> 55
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 55
ggattcgacc tcagtagctc ctactac 27

<210> 56
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 56
attgacggtg gtgggggtga gcccact 27

<210> 57

<211> 39
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 57
gcgagacgag atgctggtgc tgggaacgcc tttagcttg 39

<210> 58
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 58

Gly Phe Asp Leu Ser Ser Ser Tyr Tyr
1 5

<210> 59
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 59

Ile Asp Gly Gly Gly Gly Glu Pro Thr
1 5

<210> 60
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 60

Ala Arg Arg Asp Ala Gly Ala Gly Asn Ala Phe Ser Leu

1 5 10

<210> 61
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 61
ggattcgact tcagtagcag ctacttt 27

<210> 62
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 62
atttatactg ttattagtcg taagact 27

<210> 63
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 63
gcgagatcgg caacaattga aagattggat ctc 33

<210> 64
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 64

Gly Phe Asp Phe Ser Ser Ser Tyr Phe

1 5

<210> 65
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 65

Ile Tyr Thr Val Ile Ser Arg Lys Thr
1 5

<210> 66
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 66

Ala Arg Ser Ala Thr Ile Glu Arg Leu Asp Leu
1 5 10

<210> 67
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 67
ggattcacca tcaataacta caac 24

<210> 68
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 68
atttggaatg gtgatggcag c 21

<210> 69
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 69
gcgagaaatt ttaacttg 18

<210> 70
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 70

Gly Phe Thr Ile Asn Asn Tyr Asn
1 5

<210> 71
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 71

Ile Trp Asn Gly Asp Gly Ser
1 5

<210> 72
<211> 6
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 72

Ala Arg Asn Phe Asn Leu
1 5

<210> 73
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 73
ccgagtgttt ataggcacta c 21

<210> 74
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 74
tgggcttcc 9

<210> 75
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 75
gcaggcgaat atgctagtga tagtgataat cat 33

<210> 76
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 76

Pro Ser Val Tyr Arg His Tyr
1   5

<210> 77
<211> 3
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 77

Trp Ala Ser
1

<210> 78
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 78

Ala Gly Glu Tyr Ala Ser Asp Ser Asp Asn His
1   5   10

<210> 79
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 79
cagagtgttt ataataacaa caac   24

<210> 80

<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 80
gaagcatcc 9

<210> 81
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 81
gcaggcggtt atgctggcta catttgggct 30

<210> 82
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 82

Gln Ser Val Tyr Asn Asn Asn Asn
1 5

<210> 83
<211> 3
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 83

Glu Ala Ser
1

<210> 84
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 84

Ala Gly Gly Tyr Ala Gly Tyr Ile Trp Ala
1 5 10

<210> 85
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 85
aagaacgcct atttatccta ctac 24

<210> 86
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 86
tgggcttcc 9

<210> 87
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 87
gcagccgaat atagtaatga tagtgataat ggt 33

<210> 88
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 88

Lys Asn Ala Tyr Leu Ser Tyr Tyr
1 5

<210> 89
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 89

Ala Ala Glu Tyr Ser Asn Asp Ser Asp Asn Gly
1 5 10

<210> 90
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 90
cagagtgttt atagtaacaa ccgc 24

<210> 91
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 91

tatgcagcc 9

<210> 92
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 92
gcaggatata aaactgctga ttctgatggt attgct 36

<210> 93
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 93

Gln Ser Val Tyr Ser Asn Asn Arg
1 5

<210> 94
<211> 3
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 94

Tyr Ala Ala
1

<210> 95
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 95

Ala Gly Tyr Lys Thr Ala Asp Ser Asp Gly Ile Ala
1 5 10

<210> 96
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 96
gagagcgttt ataataataa ccgc 24

<210> 97
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 97
tatgcatcc 9

<210> 98
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 98
gtagccttta aaggttatgg tactgacggc aatgct 36

<210> 99
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 99

Glu Ser Val Tyr Asn Asn Asn Arg
1 5

<210> 100
<211> 3
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 100

Tyr Ala Ser
1

<210> 101
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 101

Val Ala Phe Lys Gly Tyr Gly Thr Asp Gly Asn Ala
1 5 10

<210> 102
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 102
gagagtgttt atagtaacaa ccgc 24

<210> 103
<211> 36
<212> DNA

<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 103
gcaggatata agactgccga ttctgatggt cttggt 36

<210> 104
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 104

Glu Ser Val Tyr Ser Asn Asn Arg
1 5

<210> 105
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 105

Ala Gly Tyr Lys Thr Ala Asp Ser Asp Gly Leu Gly
1 5 10

<210> 106
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 106
ccgagtgttt ataggcacta c 21

<210> 107

<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 107
gcaggcgaat atgctagtga tagtgataat cat 33

<210> 108
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 108

Pro Ser Val Tyr Arg His Tyr
1 5

<210> 109
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 109

Ala Gly Glu Tyr Ala Ser Asp Ser Asp Asn His
1 5 10

<210> 110
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 110
cagaatgttt atagttacaa ccgc 24

<210> 111
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 111
gaagcatcc 9

<210> 112
<211> 39
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 112
gcaggcggtt atgattgtag gagttctgat tgtgatgct 39

<210> 113
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 113

Gln Asn Val Tyr Ser Tyr Asn Arg
1 5

<210> 114
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 114

Ala Gly Gly Tyr Asp Cys Arg Ser Ser Asp Cys Asp Ala

1 5 10

<210> 115
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 115
cagagcatta atagttgg 18

<210> 116
<211> 39
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 116
caacagggtt atagttatag taatgttgat aataatatt 39

<210> 117
<211> 6
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 117

Gln Ser Ile Asn Ser Trp
1 5

<210> 118
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 118

Gln Gln Gly Tyr Ser Tyr Ser Asn Val Asp Asn Asn Ile
1 5 10

<210> 119
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 119
caaagtgttt atcttcagaa caac 24

<210> 120
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 120
cagggcggtt acagtggata tatcaattct 30

<210> 121
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 121

Gln Ser Val Tyr Leu Gln Asn Asn
1 5

<210> 122
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 122

Gln Gly Gly Tyr Ser Gly Tyr Ile Asn Ser
1 5 10

<210> 123
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic CDR sequence

<400> 123
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 aaagtggtta 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 gggcgaaagg ccgattcacc atctccaaaa cctcgtcgac cacggtgact 240

ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagaggtggt 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 gcggcagtgg 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 ctccttcagt agtatttatt ggatatgctg ggtccgccag 120

gctccaggga aggggctgga gttgatcgca tgcattcaga ttactagtgg tatcacttac 180

tacgcgagct gggcgaaagg ccgattcacc atctccaaaa tgtcgtcgac cacggtgact 240

ctgcaaatga ccagtctgac agtcgcggac acggccacct atttctgtgg gagaagggga 300

tatggtgcct atgctggtac tggtgcctct gacttgtggg gcccaggcac cctggtcacc 360

gtctcttcag 370

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

<220>
<223> Synthetic oligonucleotide

<400> 136
gagctcgatc tgacccagac tgcatcgtcc gtgtctgcag ctgtgggagg caccgtcacc 60

atcaattgcc agtccagtca gagtgtttat aataacaaca acttagcctg gtatcagcag 120

aaaccagggc agcctcccaa gctcctgatc tacgaagcat ccaaactggc atctggggtc 180

ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat cagcggcgtg 240

cagtgtgacg atgctgccac 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
acccagacac cagcctccgt gtctgcagct gtgggaggca cagtcagcat caattgccag 60

tccagtcaga gtgtttataa gaacgcctat ttatcctact acttagcctg gtatcagcag 120

aaaccagggc agcctcccaa gctcctgatc tactgggctt ccactctggc atctggggtc 180

ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat 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 ctccttcagt agcggctact ggatatgctg ggtccgccag 120

gctccaggga aggggctgga gtggatcgga tgcatttatg ctggtagtag tggtgggcac 180

atttattacg cgacctgggc gaaaggccga ttcaccatct cccaaacctc gtcgaccacg 240

gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacatattt ctgtacaaga 300

gataattatg gtggtggtgg ttctgcttcc aaattgtggg gcccaggcac cctggtcacc 360

atctcttcag 370

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

<220>
<223> Synthetic oligonucleotide

<400> 140
gagctcgtga tgacccagac tccatccccc gtgtctgcag ctgtgggagg cacagtcacc 60

atcaactgcc agtccagtca gagtgtttat agtaacaacc gcttagcctg gtatcagcag 120

aaaccagggc agcctcccaa gctcctggtc 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 gctcctgatc tattatgcat ccactctggc atctggggtc 180

ccatcgcggt tcagcggcag tggatctggg acacagttca ctctcaccat cagcagcgtg 240

caatgtgctg atgctgccac gtattattgt gtagccttta aaggttatgg tactgacggc 300

aatgctttcg gcggagggac 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 ctccttcaat agcggctact gggtatgctg ggtccgccag 120

gctccaggga aggggctgga gtggatcgct tgcatctata ctagtagtcc tactggtgcc 180

atatactacg cgacctgggc gaaaggccga ttcaccatct cccaaacctc gtcgaccacg 240

gtgactctgc aaatgaccag tctgacagcc gcggacacgg ccacctattt 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 tcaaatgcag tggatctggg acacggttca ctctcaccat cagcggcgtg 240

cagtgtgaag atgctgccac ttactactgt gcaggatata agactgccga ttctgatggt 300

cttggtttcg gcggagggac cgaggtggaa atcaaa 336

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

<220>
<223> Synthetic oligonucleotide

<400> 145
gagcagtcgg tgaaggagtc cgagggagac ctggtcaagc ctgagggatc cctgacactc 60

gcctgcacag cttctggatt caccctcagt agctactaca tgtgctgggt ccgccaggct 120

ccagggaagg ggctggaatg gatcgcatgc 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 tggggtccca 180

tcgcggttca gcggcagtgg 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

tgggcaaaag gccgattcac catctccaga acctcgacca cggtggatct gaaaatgacc 240

agtctgacaa ccgaggacac ggccacctat ttctgtgcca gaagtcctgg gattcctggt 300

tataattcgt ggggcccagg 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 gctcctgatc tacgaagcat ccaaactggc atctggggtc 180

ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat cagcggcgtg 240

cagtgtgacg atgctgccac ttactactgt gcaggcggtt 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 ctccttcagt agcaattcaa tgtgctgggt ccgccaggct 120

ccagggaagg ggctggagtg gatcggatgc attgctagta gtagtagtca tagtacttac 180

tacgcgagct gggcgaaagg ccgattcacc atctccaaaa cctcgtcgac cacggtgact 240

ctgcaaatga ccagtctgac agccgcggac atggccacct atttctgtgc gagagattct 300

ggtaatcgtg gttaccttta tgcgggcgac tttaacttgt ggggcccagg caccctggtc 360

accgtctctt cag 373

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

<220>
<223> Synthetic oligonucleotide

<400> 150
gagctcgtgc tgacccagac tccagcctct gtggaggtag ctgtgggagg cacagtcacc 60

atcaattgcc aggccagtca gagcattaat agttggttat cctggtatca gcagaaacca 120

gggcagcgtc ccaaactcct gatctacgaa gcatccactc tggcatctgg ggtctcatcg 180

cggttcagtg gcagtggatc tgggacacag ttcactctca 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 tcctactaca tgtgctgggt ccgccaggct 120

ccagggaagg ggctggagtg gatcgtctgt attgacggtg gtgggggtga gcccactgcc 180

tacccgagct gggcgaaagg ccgattcacc gtctccaaaa 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 gctcctgatc tattatgcat ccactctggc atctggggtc 180

tcatcgcggt tcaaaggcag tggatctggg acacagttca ctctcaccat 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

tgcaaagcct ctggattcga cttcagtagc agctacttta tgtgctgggt ccgccaggct 120

ccagggaggg ggctggagtg gatcgcatgc atttatactg ttattagtcg taagacttat 180

tacgcgagct gggcgaaagg ccgattcacc atctccaaaa cctcggcgac cacggtggat 240

ctgcaaatga ccagtctgac agccgcggac acggccacct atttctgtgc gagatcggca 300

acaattgaaa gattggatct ctggggccag ggcaccctgg tcaccgtctc ctcag 355

<210> 154
<211> 337
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oligonucleotide

<400> 154
gagctcgatc tgacccagac tccatcgccc gtgtctgcac ctgtgggagg cacagtcacc 60

atcaattgcc aggccagtga gagtgtttat aataactacc gcttatcctg gtatcagcag 120

aaaccagggc agcctcccaa gctcctaatc tatgctgcat ccactctggc atctggggtc 180

ccatcgcggt tcaaaggcag tggatctggg acacagttca ctctcgccat cagcgatgtg 240

gtgtgtgacg atgctgccac ttactactgt gtaggatata aaagtggtta tattgatagt 300

attcctttcg gcggagggac cgaggtggtg 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 tggaatggtg atggcagcac atactacgcg 180

agctgggcga aaggccgatt caccatctcc aaaacctcgt cgaccacggt 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 tgacccagac 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

tgtattttcg gcggagggac 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