SEQUENCE LISTING

<110> BOARD OF REGENTS, THE UNIVERSITY OF TEXAS

<120> ANTI-OX40 ANTIBODIES USEFUL TO TREAT CANCER

<130> 07P53WO2

<140>
<141>

<150> 61/380,827
<151> 2010-09-08

<150> 61/375,999
<151> 2010-08-23

<160> 24

<170> PatentIn version 3.5

<210> 1
<211> 5
<212> PRT
<213> Mus sp.

<400> 1
Asp Tyr Ser Met His
1 5

<210> 2
<211> 17
<212> PRT
<213> Mus sp.

<400> 2
Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe Lys
1 5 10 15

Gly

<210> 3
<211> 13
<212> PRT
<213> Mus sp.

<400> 3
Pro Tyr Tyr Asp Tyr Val Ser Tyr Tyr Ala Met Asp Tyr
1 5 10

<210> 4
<211> 122
<212> PRT
<213> Mus sp.

<400> 4
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

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

Ser Met His Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
        35                  40                  45

Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe
    50                  55                  60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Ala Tyr
65                  70                  75                  80

Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys
                85                  90                  95

Ala Asn Pro Tyr Tyr Asp Tyr Val Ser Tyr Tyr Ala Met Asp Tyr Trp
            100                 105                 110

Gly His Gly Thr Ser Val Thr Val Ser Ser
        115                 120
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<210> 5
<211> 122
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 5

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

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

Ser Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Lys Trp Met
        35                  40                  45

Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe
    50                  55                  60

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

Leu Gln Ile Ser Ser Leu Lys Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95
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Ala Asn Pro Tyr Tyr Asp Tyr Val Ser Tyr Tyr Ala Met Asp Tyr Trp
100 105 110

Gly Gln Gly Thr Thr Val Thr Val Ser Ser
115 120

<210> 6
<211> 458
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 6
actagtacca ccatggcttg ggtgtggacc ttgctattcc tgatggcagc tgcccaaagt 60

atccaagcac aggttcagtt ggtgcagtct ggatctgagc tgaagaagcc tggagcctca 120

gtcaaggttt cctgcaaggc ttctggttat accttcacag actattcaat gcactgggtg 180

cgacaggctc caggacaagg tttaaagtgg atgggctgga taaacactga gactggtgag 240

ccaacatatg cagatgactt caagggacgg tttgtcttct ctttggacac ctctgtcagc 300

actgcctatt tgcagatcag cagcctcaaa gctgaggaca cggctgtgta ttactgtgct 360

aatccctact atgattacgt ctcttactat gctatggact actggggtca gggaaccacg 420

gtcaccgtct cctcaggtaa gaatggcctc tcaagctt 458

<210> 7
<211> 11
<212> PRT
<213> Mus sp.

<400> 7
Lys Ala Ser Gln Asp Val Ser Thr Ala Val Ala
1 5 10

<210> 8
<211> 7
<212> PRT
<213> Mus sp.

<400> 8
Ser Ala Ser Tyr Leu Tyr Thr
1 5

<210> 9
<211> 9
<212> PRT
<213> Mus sp.

<400> 9
Gln Gln His Tyr Ser Thr Pro Arg Thr

1 5

<210> 10
<211> 107
<212> PRT
<213> Mus sp.

<400> 10
Asp Ile Val Met Thr Gln Ser His Lys Phe Met Ser Thr Ser Val Arg
1 5 10 15

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

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 11
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polypeptide

<400> 11
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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

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

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

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln His Tyr Ser Thr Pro Arg
85 90 95

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

<210> 12
<211> 416
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

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ggtgttgacg gagacattca gatgacccag tctccatcct ccctgtccgc atcagtggga 120

gacagggtca ccatcacctg caaggccagt caggatgtga gtactgctgt agcctggtat 180

caacagaaac caggaaaagc ccctaaacta ctgatttact cggcatccta cctctacact 240

ggagtccctt cacgcttcag tggcagtgga tctgggacgg atttcacttt caccatcagc 300

agtctgcagc ctgaagacat tgcaacatat tactgtcagc aacattatag tactcctcgg 360

acgttcggtc agggcaccaa gctggaaatc aaacgtaagt agaatccaaa gaattc 416

<210> 13
<211> 5
<212> PRT
<213> Mus sp.

<400> 13
Ser His Asp Met Ser
1 5

<210> 14
<211> 17
<212> PRT
<213> Mus sp.

<400> 14
Ala Ile Asn Ser Asp Gly Gly Ser Thr Tyr Tyr Pro Asp Thr Met Glu
1 5 10 15

Arg

<210> 15
<211> 11

<212> PRT
<213> Mus sp.

<400> 15
His Tyr Asp Asp Tyr Tyr Ala Trp Phe Ala Tyr
1 5 10

<210> 16
<211> 120
<212> PRT
<213> Mus sp.

<400> 16
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Glu
1 5 10 15

Ser Leu Lys Leu Ser Cys Glu Ser Asn Glu Tyr Glu Phe Pro Ser His
20 25 30

Asp Met Ser Trp Val Arg Lys Thr Pro Glu Lys Arg Leu Glu Leu Val
35 40 45

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

Glu Arg Arg Phe Ile Ile Ser Arg Asp Asn Thr Lys Lys Thr Leu Tyr
65 70 75 80

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

Ala Arg His Tyr Asp Asp Tyr Tyr Ala Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 17
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 17
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Tyr Glu Phe Pro Ser His
20 25 30

```
Asp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Leu Val
        35                  40                  45

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

Glu Arg Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65                  70                  75                  80

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

Ala Arg His Tyr Asp Asp Tyr Tyr Ala Trp Phe Ala Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Met Val Thr Val Ser Ser
        115                 120
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<210> 18
<211> 451
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 18
actagtacca ccatggactt cgggctcagc ttggttttcc ttgtccttat tttaaaaagt 60

gtacagtgtg aggtgcagct ggtggagtct gggggaggct tagtgcagcc tggagggtcc 120

ctgagactct cctgtgcagc ctctgaatac gagttccctt cccatgacat gtcttgggtc 180

cgccaggctc cggggaaggg gctggagttg gtcgcagcca ttaatagtga tggtggtagc 240

acctactatc cagacaccat ggagagacga ttcaccatct ccagagacaa tgccaagaac 300

tcactgtacc tgcaaatgaa cagtctgagg gccgaggaca cagccgtgta ttactgtgca 360

agacactatg atgattacta cgcctggttt gcttactggg gccaagggac tatggtcact 420

gtctcttcag gtgagtccta acttcaagct t 451

<210> 19
<211> 15
<212> PRT
<213> Mus sp.

<400> 19
Arg Ala Ser Lys Ser Val Ser Thr Ser Gly Tyr Ser Tyr Met His
1   5   10   15

<210> 20

<211> 7
<212> PRT
<213> Mus sp.

<400> 20
Leu Ala Ser Asn Leu Glu Ser
1 5

<210> 21
<211> 9
<212> PRT
<213> Mus sp.

<400> 21
Gln His Ser Arg Glu Leu Pro Leu Thr
1 5

<210> 22
<211> 111
<212> PRT
<213> Mus sp.

<400> 22
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Lys Ser Val Ser Thr Ser
20 25 30

Gly Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

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

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Asn Ile His
65 70 75 80

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

Glu Leu Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

<210> 23
<211> 111
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 23

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

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Val Ser Thr Ser
            20                  25                  30

Gly Tyr Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
        35                  40                  45

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

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
65                  70                  75                  80

Ser Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln His Ser Arg
                85                  90                  95

Glu Leu Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
            100                 105                 110
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<210> 24
<211> 428
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic polynucleotide

<400> 24
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ggttccactg gtgaaattgt gctgacacag tctcctgcta ccttatcttt gtctccaggg 120

gaaagggcca ccctctcatg cagggccagc aaaagtgtca gtacatctgg ctatagttat 180

atgcactggt accaacagaa accaggacag gctcccagac tcctcatcta tcttgcatcc 240

aacctagaat ctggggtccc tgccaggttc agtggcagtg ggtctgggac agacttcacc 300

ctcaccatca gcagcctaga gcctgaggat tttgcagttt attactgtca gcacagtagg 360

gagcttccgc tcacgttcgg cggagggacc aaggtcgaga tcaaacgtaa gtacactttt 420

ctgaattc 428