SEQUENCE LISTING

<110> The Walter and Eliza Hall Institute of Medical Research

<120> Soluble Mediator

<130> A/16/247

<150> US 61/560,254
<151> 2011-11-15

<150> US 61/705,633
<151> 2012-09-26

<160> 69

<170> PatentIn version 3.5

<210> 1
<211> 523
<212> DNA
<213> Homo sapiens

<400> 1
ctcctggttc aaaagcagct aaaccaaaag aagcctccag acagccctga gatcacctaa 60
aaagctgcta ccaagacagc cacgaagatc ctaccaaaat gaagcgcttc ctcttcctcc 120
tactcaccat cagcctcctg gttatggtac agatacaaac tggactctca ggacaaaacg 180
acaccagcca aaccagcagc ccctcagcat ccagcaacat aagcggaggc attttccttt 240
tcttcgtggc caatgccata atccacctct tctgcttcag ttgaggtgac acgtctcagc 300
cttagccctg tgccccctga aacagctgcc accatcactc gcaagagaat cccctccatc 360
tttgggaggg gttgatgcca gacatcacca ggttgtagaa gttgacaggc agtgccatgg 420
gggcaacagc caaaataggg gggtaatgat gtaggggcca agcagtgccc agctgggggt 480
caataaagtt acccttgtac ttgcaaaaaa aaaaaaaaaa aaa 523

<210> 2
<211> 61
<212> PRT
<213> Homo sapiens

<400> 2

Met Lys Arg Phe Leu Phe Leu Leu Leu Thr Ile Ser Leu Leu Val Met
1 5 10 15
Val Gln Ile Gln Thr Gly Leu Ser Gly Gln Asn Asp Thr Ser Gln Thr
20 25 30
Ser Ser Pro Ser Ala Ser Ser Asn Ile Ser Gly Gly Ile Phe Leu Phe
35 40 45
Phe Val Ala Asn Ala Ile Ile His Leu Phe Cys Phe Ser
50 55 60

<210> 3
<211> 12
<212> PRT
<213> Homo sapiens

<400> 3

Gly Gln Asn Asp Thr Ser Gln Thr Ser Ser Pro Ser
1 5 10

<210> 4
<211> 11
<212> PRT
<213> Pan troglodytes

<400> 4

Ser Gln Asn Ala Thr Ser Gln Ser Ser Pro Ser
1 5 10

<210> 5
<211> 24
<212> PRT
<213> Mus musculus

<400> 5

Gly Gln Ala Thr Thr Ala Ala Ser Gly Thr Asn Lys Asn Ser Thr Ser
1 5 10 15
Thr Lys Lys Thr Pro Leu Lys Ser
20

<210> 6
<211> 46
<212> PRT
<213> Rattus norvegicus

<400> 6

Gly Gln Asn Ser Thr Ala Val Thr Thr Pro Ala Asn Lys Ala Ala Thr
1 5 10 15
Thr Ala Ala Ala Thr Thr Lys Ala Ala Ala Thr Thr Ala Thr Lys Thr
20 25 30
Thr Thr Ala Val Arg Lys Thr Pro Gly Lys Pro Pro Lys Ala
35 40 45

<210> 7
<211> 19
<212> PRT
<213> Canis familiaris

<400> 7

Gly Asn Ser Thr Thr Pro Arg Met Thr Thr Lys Lys Val Lys Ser Ala
1 5 10 15
Thr Pro Ala

<210> 8
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD52-F primer

<400> 8
caaactggac tctcaggaca aa 22

<210> 9
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD52-R primer

<400> 9
caactgaagc agaagaggtg ga 22

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> FOXP3-F primer

<400> 10
atggtttctg aagaaggcaa ac 22

<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> FOXP3-R primer

<400> 11
ggactacttc aagttccaca aca 23

<210> 12
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CTLA-4 F primer

<400> 12
aacctacatg atggggaatg ag 22

<210> 13
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CTLA-4 R primer

<400> 13
ttacataaat ctgggttccg tt 22

<210> 14
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> GITR-F primer

<400> 14
gggaaattca gttttggctt c 21

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> GITR-R primer

<400> 15
acagcgttgt gggtcttgtt 20

<210> 16
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD127 F primer

<400> 16
ccttttgacc tgagtgtcgt ct 22

<210> 17
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD127 R primer

<400> 17
cgtccatttg ttttcatcct tt 22

<210> 18
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL2 alpha forward primer

<400> 18
tacaggatgc aactcctgtc tt 22

<210> 19
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL2 alpha reverse primer

<400> 19
gctccagttg tagctgtgtt tt 22

<210> 20
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL2 beta forward primer

<400> 20
gctgttctcc atggctccct ac 22

<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> IL2 beta reverse primer

<400> 21

gtcgggcttg atgatgtgct 20

<210> 22
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL12 alpha forward primer

<400> 22
ctccagaagg ccagacaaac tc 22

<210> 23
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL12 alpha reverse primer

<400> 23
ccaatggtaa acaggcctcc ac 22

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

<220>
<223> 1F1 primer

<400> 24
gaagttctgt tccaggggcc catcgaaggt cgtggtg 37

<210> 25
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> 1R1 primer

<400> 25
tcatttttcg aactgcgggt ggctccaggc gcttttaccc ggagacag 48

<210> 26
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> 1F2 primer

<400> 26
gggggttccg ggggactgga agttctgttc 30

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

<220>
<223> 1R2 primer

<400> 27
cttgatatcg aattctcatt tttcgaactg 30

<210> 28
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> 2F primer

<400> 28
cgctgttacg gatccccacc atgaagcgct tcctc 35

<210> 29
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> 2R1 primer

<400> 29
tccaccgcta cctcctgagg ggctgctggt 30

<210> 30
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> 2R2 primer

<400> 30
tccaccgcta cctcctgaga gtccagtttg 30

<210> 31
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> CD52 forward primer

<400> 31
gttgtgattc agatacaaac agga 24

<210> 32
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD52 reverse primer

<400> 32
aggtattggc aaagaagagg aa 22

<210> 33
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 forward primer

<400> 33
tcaagctcca cttcaagctc tac 23

<210> 34
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-2 reverse primer

<400> 34
cctgtaattc tccatcctgc tc 22

<210> 35
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-4 forward primer

<400> 35
tgagagagat catcggcatt tt 22

<210> 36
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-4 reverse primer

<400> 36
ctctctgtgg tgttcttcgt tg 22

<210> 37
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-10 forward primer

<400> 37
tcggaaatga tccagtttta cc 22

<210> 38
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-10 reverse primer

<400> 38
atcctgaggg tcttcagctt c 21

<210> 39
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-13 forward primer

<400> 39
gagctgagca acatcacaca a 21

<210> 40
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-13 reverse primer

<400> 40
aatccagggc tacacagaac c 21

<210> 41
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Fox3P forward primer

<400> 41
atgttcgcct acttcagaaa cc 22

<210> 42
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> FoxP3 reverse primer

<400> 42
caaattcatc tacggtccac ac 22

<210> 43
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD127 forward primer

<400> 43
gcccaccaga aacagttaga ag 22

<210> 44
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CD127 reverse primer

<400> 44
agtcagggga cctagaggaa ag 22

<210> 45
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> CTLA-4 forward primer

<400> 45
agtttcctgg tcactgctgt tt 22

<210> 46
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> CTLA-4 reverse primer

<400> 46
ttttcacatt ctggctctgt tg 22

<210> 47
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> FASLG forward primer

<400> 47
cggtggtatt tttcatggtt ct 22

<210> 48
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> FASLG reverse primer

<400> 48
tgatacttta aggctttggt tgg 23

<210> 49
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> TGFb1 forward primer

<400> 49
tattgcttca gctccacaga ga 22

<210> 50
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> TGFb1 reverse primer

<400> 50
cagacagaag ttggcatggt ag 22

<210> 51
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> TGFb2 forward primer

<400> 51
taagagggat cttggatgga aa 22

<210> 52
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> TGFb2 reverse primer

<400> 52
ctgaggactt tggtgtgttg ag 22

<210> 53
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNg forward primer

<400> 53
caaaaggatg gtgacatgaa aa 22

<210> 54
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IFNg reverse primer

<400> 54
ttgctgttgc tgaagaaggt ag 22

<210> 55
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-12 alpha forward primer

<400> 55
tcacgctacc tcctcttttt gg 22

<210> 56
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> IL-12 alpha reverse primer

<400> 56
catctgtggt cttcagcagg ttt 23

<210> 57
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Ebi3 forward primer

<400> 57
ccttcccgga catcttctct ct 22

<210> 58
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Ebi3 reverse primer

<400> 58
gcaatacttg gcatggggtt t 21

<210> 59
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> RARA forward primer

<400> 59
ggacaagaac tgcatcatca ac 22

<210> 60
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> RARA reverse primer

<400> 60
gcttgggtgc ctctttcttc 20

<210> 61
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> GITR forward primer

<400> 61
cctaggtcag ccgagtgtag tt 22

<210> 62
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> GITR reverse primer

<400> 62
cacatatgca cctttctttt gg 22

<210> 63
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> GRANZB forward primer

<400> 63
tccttattcg agaggacttt gtg 23

<210> 64
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> GRANZB reverse primer

<400> 64
ctgggtcttc tcctgttctt tg 22

<210> 65
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> ALDH1A forward primer

<400> 65
acaggagagc aagtgtgtga ag 22

<210> 66
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> ALDH1A2 reverse primer

<400> 66
tccacacaga accaagagag aa 22

<210> 67
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> ACTIN forward primer

<400> 67
gatctggcac cacaccttct 20

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> ACTIN reverse primer

<400> 68
ggggtgttga aggtctcaaa 20

<210> 69
<211> 697
<212> PRT

<213> Homo sapiens

<400> 69

```
Met Leu Leu Pro Leu Leu Leu Ser Ser Leu Leu Gly Gly Ser Gln Ala
1               5                  10                  15
Met Asp Gly Arg Phe Trp Ile Arg Val Gln Glu Ser Val Met Val Pro
            20                  25                  30
Glu Gly Leu Cys Ile Ser Val Pro Cys Ser Phe Ser Tyr Pro Arg Gln
        35                  40                  45
Asp Trp Thr Gly Ser Thr Pro Ala Tyr Gly Tyr Trp Phe Lys Ala Val
    50                  55                  60
Thr Glu Thr Thr Lys Gly Ala Pro Val Ala Thr Asn His Gln Ser Arg
65                  70                  75                  80
Glu Val Glu Met Ser Thr Arg Gly Arg Phe Gln Leu Thr Gly Asp Pro
                85                  90                  95
Ala Lys Gly Asn Cys Ser Leu Val Ile Arg Asp Ala Gln Met Gln Asp
            100                 105                 110
Glu Ser Gln Tyr Phe Phe Arg Val Glu Arg Gly Ser Tyr Val Arg Tyr
        115                 120                 125
Asn Phe Met Asn Asp Gly Phe Phe Leu Lys Val Thr Ala Leu Thr Gln
    130                 135                 140
Lys Pro Asp Val Tyr Ile Pro Glu Thr Leu Glu Pro Gly Gln Pro Val
145                 150                 155                 160
Thr Val Ile Cys Val Phe Asn Trp Ala Phe Glu Glu Cys Pro Pro Pro
                165                 170                 175
Ser Phe Ser Trp Thr Gly Ala Ala Leu Ser Ser Gln Gly Thr Lys Pro
            180                 185                 190
Thr Thr Ser His Phe Ser Val Leu Ser Phe Thr Pro Arg Pro Gln Asp
        195                 200                 205
His Asn Thr Asp Leu Thr Cys His Val Asp Phe Ser Arg Lys Gly Val
    210                 215                 220
Ser Val Gln Arg Thr Val Arg Leu Arg Val Ala Tyr Ala Pro Arg Asp
225                 230                 235                 240
Leu Val Ile Ser Ile Ser Arg Asp Asn Thr Pro Ala Leu Glu Pro Gln
                245                 250                 255
Pro Gln Gly Asn Val Pro Tyr Leu Glu Ala Gln Lys Gly Gln Phe Leu
            260                 265                 270
Arg Leu Leu Cys Ala Ala Asp Ser Gln Pro Pro Ala Thr Leu Ser Trp
        275                 280                 285
Val Leu Gln Asn Arg Val Leu Ser Ser Ser His Pro Trp Gly Pro Arg
    290                 295                 300
Pro Leu Gly Leu Glu Leu Pro Gly Val Lys Ala Gly Asp Ser Gly Arg
305                 310                 315                 320
Tyr Thr Cys Arg Ala Glu Asn Arg Leu Gly Ser Gln Gln Arg Ala Leu
                325                 330                 335
Asp Leu Ser Val Gln Tyr Pro Pro Glu Asn Leu Arg Val Met Val Ser
            340                 345                 350
Gln Ala Asn Arg Thr Val Leu Glu Asn Leu Gly Asn Gly Thr Ser Leu
        355                 360                 365
Pro Val Leu Glu Gly Gln Ser Leu Cys Leu Val Cys Val Thr His Ser
    370                 375                 380
Ser Pro Pro Ala Arg Leu Ser Trp Thr Gln Arg Gly Gln Val Leu Ser
385                 390                 395                 400
Pro Ser Gln Pro Ser Asp Pro Gly Val Leu Glu Leu Pro Arg Val Gln
                405                 410                 415
Val Glu His Glu Gly Glu Phe Thr Cys His Ala Arg His Pro Leu Gly
            420                 425                 430
Ser Gln His Val Ser Leu Ser Leu Ser Val His Tyr Ser Pro Lys Leu
        435                 440                 445
Leu Gly Pro Ser Cys Ser Trp Glu Ala Glu Gly Leu His Cys Ser Cys
    450                 455                 460
Ser Ser Gln Ala Ser Pro Ala Pro Ser Leu Arg Trp Trp Leu Gly Glu
465                 470                 475                 480
Glu Leu Leu Glu Gly Asn Ser Ser Gln Asp Ser Phe Glu Val Thr Pro
                485                 490                 495
Ser Ser Ala Gly Pro Trp Ala Asn Ser Ser Leu Ser Leu His Gly Gly
            500                 505                 510
Leu Ser Ser Gly Leu Arg Leu Arg Cys Glu Ala Trp Asn Val His Gly
        515                 520                 525
Ala Gln Ser Gly Ser Ile Leu Gln Leu Pro Asp Lys Lys Gly Leu Ile
    530                 535                 540
Ser Thr Ala Phe Ser Asn Gly Ala Phe Leu Gly Ile Gly Ile Thr Ala
545                 550                 555                 560
Leu Leu Phe Leu Cys Leu Ala Leu Ile Ile Met Lys Ile Leu Pro Lys
                565                 570                 575
Arg Arg Thr Gln Thr Glu Thr Pro Arg Pro Arg Phe Ser Arg His Ser
            580                 585                 590
Thr Ile Leu Asp Tyr Ile Asn Val Val Pro Thr Ala Gly Pro Leu Ala
        595                 600                 605
Gln Lys Arg Asn Gln Lys Ala Thr Pro Asn Ser Pro Arg Thr Pro Leu
    610                 615                 620
Pro Pro Gly Ala Pro Ser Pro Glu Ser Lys Lys Asn Gln Lys Lys Gln
625                 630                 635                 640
Tyr Gln Leu Pro Ser Phe Pro Glu Pro Lys Ser Ser Thr Gln Ala Pro
                645                 650                 655
Glu Ser Gln Glu Ser Gln Glu Glu Leu His Tyr Ala Thr Leu Asn Phe
```

```
                660                 665                 670
Pro Gly Val Arg Pro Arg Pro Glu Ala Arg Met Pro Lys Gly Thr Gln
        675                 680                 685
Ala Asp Tyr Ala Glu Val Lys Phe Gln
    690                 695
```