SEQUENCE LISTING

<110> Minomic International Ltd

<120> Therapeutic Antibodies and Uses Thereof
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<210> 2
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<212> DNA
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<211> 461
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<213> Mus musculus
<400> 3
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            20                  25                  30
Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe
        35                  40                  45
Thr Asp Tyr Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60
Arg Trp Met Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Thr
65                  70                  75                  80
Asp Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
                85                  90                  95
Thr Ala Phe Leu Gln Ile Asn Asn Leu Arg Asn Glu Asp Thr Ala Thr
            100                 105                 110
Tyr Phe Cys Ala Arg His Tyr Asp Tyr Gly Gly Phe Pro Tyr Trp Gly
        115                 120                 125
Gln Gly Thr Leu Val Thr Val Ser Ala Ala Lys Thr Thr Pro Pro Ser
    130                 135                 140
Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val
145                 150                 155                 160
Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val
                165                 170                 175
Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala
            180                 185                 190
Val Leu Gln Ser Asp Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro
        195                 200                 205
Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala His Pro
    210                 215                 220
Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly
225                 230                 235                 240
Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile
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Phe Pro Pro Lys Pro Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys
            260                 265                 270
Val Thr Cys Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln
        275                 280                 285
Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln Thr Gln
    290                 295                 300
Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu
305                 310                 315                 320
Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg
                325                 330                 335
Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
            340                 345                 350
Thr Lys Gly Arg Pro Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro
        355                 360                 365
Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr
    370                 375                 380
Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln
385                 390                 395                 400
Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly
                405                 410                 415
Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu
            420                 425                 430
Ala Gly Asn Thr Phe Thr Cys Ser Val Leu His Glu Gly Leu His Asn
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His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Lys
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<210> 4
<211> 234
<212> PRT
<213> Mus musculus
<400> 4

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            20                  25                  30
Ala Ser Val Gly Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Gly Asn
        35                  40                  45
Val His Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro
    50                  55                  60
Gln Leu Leu Val Tyr Thr Ala Lys Thr Leu Ala Asp Gly Val Pro Ser
65                  70                  75                  80
Arg Phe Ser Gly Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn
                85                  90                  95
Ser Leu Gln Pro Glu Asp Phe Gly Thr Tyr Tyr Cys Gln His Phe Trp
            100                 105                 110
Ser Asn Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
        115                 120                 125
Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln
    130                 135                 140
Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr
145                 150                 155                 160
Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln
                165                 170                 175
Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr
            180                 185                 190
Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg
        195                 200                 205
His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro
    210                 215                 220
Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
225                 230
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<210> 5
<211> 1404
<212> DNA
<213> Artificial Sequence
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<223> Mus musculus/Homo-sapiens chimeric sequence
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tgcaaggcca gcggctacgc tttcacagac tattctatga actgggtgaa gcaggcccca      180
ggcaagggcc tgaggtggat gggctggatc aataccgaga caggcgagcc cacctacaca      240
gacgatttca agggccggtt cgctttttcc ctggagacct ctgcctccac agcttttctg      300
cagatcaaca atctgagaaa cgaggacacc gccacatact tctgcgctag gcactacgat      360
tatggcggct ttccttattg gggccagggc accctggtga cagtgtccag cgcctctacc      420
aagggcccat ccgtgtttcc actggctccc tcttccaaga gcacctctgg cggcacagcc      480
gctctgggct gtctggtgaa ggattacttc ccagagcccg tgacagtgtc ttggaactcc      540
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tgggagtcca atggccagcc agagaacaat tacaagacca cacccctgt gctggacagc      1260
gatggctctt tctttctgta ttccaagctg accgtggata agagcaggtg gcagcagggc     1320
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<210> 6
<211> 705
<212> DNA
<213> Artificial Sequence
<220>
<223> Mus musculus/Homo sapiens chimeric sequence
<400> 6
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atcacctgca gagcctctgg caacgtgcac aattacctgg cttggtatca gcagaagcag 180
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agcgacgagc agctgaagtc tggcaccgct tccgtggtgt gcctgctgaa caatttctac 480
cctcgggagg ccaaggtgca gtggaaggtg gataacgctc tgcagtctgg caattcccag 540
gagagcgtga cagagcagga ctctaaggat tccacctata gcctgtccag cacactgacc 600
ctgtccaagg ccgactacga gaagcacaag gtgtatgctt gtgaggtcac tcaccagggg 660
ctgtcaagtc cagtcacaaa gtccttcaat agggggggaat gctga 705

<210> 7
<211> 467
<212> PRT
<213> Artificial Sequence
<220>
<223> Mus musculus/Homon sapiens chimeric sequence
<400> 7
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20 25 30
Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe
35 40 45
Thr Asp Tyr Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
50 55 60
Arg Trp Met Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Thr
65 70 75 80
Asp Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95
Thr Ala Phe Leu Gln Ile Asn Asn Leu Arg Asn Glu Asp Thr Ala Thr
100 105 110
Tyr Phe Cys Ala Arg His Tyr Asp Tyr Gly Gly Phe Pro Tyr Trp Gly
115 120 125
Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser
130 135 140
Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala
145 150 155 160
Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val
165 170 175
Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala
180 185 190
Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val
195 200 205
Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His
210 215 220
Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys
225 230 235 240
Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
245 250 255
Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met
260 265 270
Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His
275 280 285

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Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val
    290                 295                 300
His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr
305                 310                 315                 320
Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly
                325                 330                 335
Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile
            340                 345                 350
Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val
        355                 360                 365
Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser
    370                 375                 380
Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu
385                 390                 395                 400
Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro
                405                 410                 415
Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val
            420                 425                 430
Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met
        435                 440                 445
His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser
    450                 455                 460
Pro Gly Lys
465
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<210> 8
<211> 234
<212> PRT
<213> Artificial Sequence
<220>
<223> Mus musculus/Homon sapiens chimeric sequence
<400> 8

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Gly Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser
            20                  25                  30
Ala Ser Val Gly Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Gly Asn
        35                  40                  45
Val His Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro
    50                  55                  60
Gln Leu Leu Val Tyr Thr Ala Lys Thr Leu Ala Asp Gly Val Pro Ser
65                  70                  75                  80
Arg Phe Ser Gly Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn
                85                  90                  95
Ser Leu Gln Pro Glu Asp Phe Gly Thr Tyr Tyr Cys Gln His Phe Trp
            100                 105                 110
Ser Asn Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
        115                 120                 125
Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
    130                 135                 140
Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr
145                 150                 155                 160
Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
                165                 170                 175
Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
            180                 185                 190
Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
        195                 200                 205
His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
    210                 215                 220
Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225                 230
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<210> 9
<211> 266
<212> PRT
<213> Artificial Sequence
<220>
<223> Mus musculus/Homo sapiens chimeric sequence
<400> 9

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Val His Ser Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys
            20                  25                  30
Pro Gly Glu Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe
        35                  40                  45
Thr Asp Tyr Ser Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
    50                  55                  60
Arg Trp Met Gly Trp Ile Asn Thr Glu Thr Gly Glu Pro Thr Tyr Thr
65                  70                  75                  80
Asp Asp Phe Lys Gly Arg Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
                85                  90                  95
Thr Ala Phe Leu Gln Ile Asn Asn Leu Arg Asn Glu Asp Thr Ala Thr
            100                 105                 110
Tyr Phe Cys Ala Arg His Tyr Asp Tyr Gly Gly Phe Pro Tyr Trp Gly
        115                 120                 125
Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140
Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro
145                 150                 155                 160
Ala Ser Leu Ser Ala Ser Val Gly Glu Thr Val Thr Ile Thr Cys Arg
                165                 170                 175
Ala Ser Gly Asn Val His Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Gln
            180                 185                 190
Gly Lys Ser Pro Gln Leu Leu Val Tyr Thr Ala Lys Thr Leu Ala Asp
        195                 200                 205
Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Gln Tyr Ser
    210                 215                 220
Leu Lys Ile Asn Ser Leu Gln Pro Glu Asp Phe Gly Thr Tyr Tyr Cys
225                 230                 235                 240
Gln His Phe Trp Ser Asn Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu
                245                 250                 255
Glu Ile Lys His His His His His His Cys
            260                 265
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<210> 10
<211> 717
<212> DNA
<213> Mus musculus
<400> 10

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gacagggtca gcgtcacctg caaggccagt cagaatgtgg gttctcatgt agcctggttt      180
cagcagaaac cagggcaatc tcctaaagca ctgatttact cggcatccta ccggtacagc      240
ggagtcactg atcgcttcac aggcagtgga tctgggacag atttcactct caccatcaac      300
aatgtgcagt ctgaagactt ggcagagtat ttctgtcagc aatataacag ttttccattc      360
acgttcggtt cggggacaaa gttggaaata aaacgggctg atgctgcacc aactgtatcc      420
atcttcccac catccagtga gcagttaaca tctggaggtg cctcagtcgt gtgcttcttg      480
aacaacttct accccaaaga catcaatgtc aagtggaaga ttgatggcag tgaacgacaa      540
aatggcgtcc tgaacagttg gactgatcag gacagcaaag acagcaccta cagcatgagc      600
agcaccctca cgttgaccaa ggacgagtat gaacgacata acagctatac ctgtgaggcc      660
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<210> 11
<211> 238
<212> PRT

<213> Mus musculus
<400> 11

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            20                  25                  30
Lys Phe Met Ser Thr Ser Ile Gly Asp Arg Val Ser Val Thr Cys Lys
        35                  40                  45
Ala Ser Gln Asn Val Gly Ser His Val Ala Trp Phe Gln Gln Lys Pro
    50                  55                  60
Gly Gln Ser Pro Lys Ala Leu Ile Tyr Ser Ala Ser Tyr Arg Tyr Ser
65                  70                  75                  80
Gly Val Thr Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr
                85                  90                  95
Leu Thr Ile Asn Asn Val Gln Ser Glu Asp Leu Ala Glu Tyr Phe Cys
            100                 105                 110
Gln Gln Tyr Asn Ser Phe Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu
        115                 120                 125
Glu Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro
    130                 135                 140
Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu
145                 150                 155                 160
Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly
                165                 170                 175
Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser
            180                 185                 190
Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp
        195                 200                 205
Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr
    210                 215                 220
Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
225                 230                 235
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