SEQUENCE LISTING

<110> GREFERATH, RUTH
HICKMAN, DAVID
MUHS, ANDREAS
PFEIFER, ANDREA
NICOLAU, CLAUDE

<120> MONOCLONAL ANTIBODY

<130> 12593-001-999 (089667-0106)

<140> 11/637,213
<141> 2006-12-11

<150> EP 05027092.5
<151> 2005-12-12

<150> EP 06014729.5
<151> 2006-07-14

<150> EP 06020766.9
<151> 2006-10-02

<160> 45

<170> PatentIn version 3.3

<210> 1
<211> 15
<212> PRT
<213> Homo sapiens

<400> 1
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln
1 5 10 15

<210> 2
<211> 16
<212> PRT
<213> Homo sapiens

<400> 2
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

<210> 3
<211> 15
<212> PRT
<213> Homo sapiens

<400> 3
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His Gln Lys
1 5 10 15

<210> 4
<211> 14
<212> PRT

FOOCEEEEE.0

<213> Homo sapiens

<400> 4
Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu Met
1 5 10

<210> 5
<211> 12
<212> PRT
<213> Homo sapiens

<400> 5
Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val
1 5 10

<210> 6
<211> 17
<212> PRT
<213> Homo sapiens

<400> 6
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
1 5 10 15

Leu

<210> 7
<211> 112
<212> PRT
<213> Homo sapiens

<400> 7
Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
20 25 30

Asn Gly Asp Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

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

F00032112

Thr His Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 8
<211> 112
<212> PRT
<213> Mus musculus

<400> 8
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

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

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

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

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

Ala Ser Gly Asp Tyr Trp Gly Gln Gly Ser Thr Leu Thr Val Ser Ser
100 105 110

<210> 9
<211> 336
<212> DNA
<213> Mus musculus

<400> 9
gatgttgtga tgacccaaac tccactctcc ctgcctgtca gtcttggaga tcaagcctcc 60

atctcttgca gatctagtca gagccttgta tatagtaatg gagacaccta tttacattgg 120

tacctgcaga agccaggcca gtctccaaag ctcctgatct acaaagtttc caaccgattt 180

tctggggtcc cagacaggtt cagtggcagt ggatcaggga cagatttcac actcaagatc 240

agcagagtgg aggctgagga tctgggagtt tatttctgct ctcaaagtac acatgttcct 300

tggacgttcg gtggaggcac caagctagaa atcaaa 336

<210> 10
<211> 417
<212> DNA
<213> Mus musculus

F000033112

<400> 10
atgaagttgc ctgttaggct gttggtgctg atgttctgga ttcctgcttc cagcagtgat 60

gttgtgatga cccaaactcc actctccctg cctgtcagtc ttggagatca agcctccatc 120

tcttgcagat ctagtcagag ccttgtatat agtaatggag acacctattt acattggtac 180

ctgcagaagc caggccagtc tccaaagctc ctgatctaca aagtttccaa ccgattttct 240

ggggtcccag acaggttcag tggcagtgga tcagggacag atttcacact caagatcagc 300

agagtggagg ctgaggatct gggagtttat ttctgctctc aaagtacaca tgttccttgg 360

acgttcggtg gaggcaccaa gctagaaatc aaacgggctg atgctgcacc aactgta 417

<210> 11
<211> 336
<212> DNA
<213> Mus musculus

<400> 11
gaggtgcagc tggtggagtc tgggggaggc ttagtgcagc ctggagggtc cctgaaactc 60

tcctgtgcag cctctggatt cactttcagt agctatggca tgtcttgggt tcgccagact 120

ccagacaaga ggctggaatt ggtcgcaagc atcaatagta atggtggtag cacctattat 180

ccagacagtg tgaagggccg attcaccatc tccagagaca atgccaagaa caccctgtac 240

ctgcaaatga gcagtctgaa gtctgaggac acagccatgt attactgtgc aagtggtgac 300

tactggggcc aaggctccac tctcacagtc tcctca 336

<210> 12
<211> 408
<212> DNA
<213> Mus musculus

<400> 12
atgrasttsg ggytcagmtt grttttcctt gcccttattt taaaaggtgt ccaatgtgag 60

gtgcagctgg tggagtctgg gggaggctta gtgcagcctg gagggtccct gaaactctcc 120

tgtgcagcct ctggattcac tttcagtagc tatggcatgt cttgggttcg ccagactcca 180

gacaagaggc tggaattggt cgcaagcatc aatagtaatg gtggtagcac ctattatcca 240

gacagtgtga agggccgatt caccatctcc agagacaatg ccaagaacac cctgtacctg 300

caaatgagca gtctgaagtc tgaggacaca gccatgtatt actgtgcaag tggtgactac 360

tggggccaag gctccactct cacagtctcc tcagccaaaa caacaccc 408

<210> 13
<211> 10
<212> PRT
<213> Homo sapiens

F00033112

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (7)..(7)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Glu or Asp

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Glu or Asp

<400> 13
His Xaa Lys Leu Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 14
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, Asn, Gln, Lys or Arg

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (4)..(4)

<223> His, Asn, Gln, Lys or Arg

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Glu or Asp

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Glu or Asp

<400> 14
Xaa His Xaa Xaa Xaa Xaa Phe Phe Xaa Xaa Xaa
1 5 10

<210> 15
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, Asn, Gln, Lys or Arg

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)

F0002E111.0

<223> Glu or Asp

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Glu or Asp

<400> 15
Xaa Xaa Lys Leu Xaa Phe Phe Xaa Xaa Xaa
1 5 10

<210> 16
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Glu or Asp

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Glu or Asp

<400> 16
His Xaa Lys Leu Xaa Phe Phe Xaa Xaa Xaa
1 5 10

<210> 17
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (1)..(1)
<223> His, Asn, Gln, Lys or Arg

<220>
<221> MOD_RES

F0003E112.

<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Glu or Asp

<400> 17
Xaa Xaa Lys Leu Xaa Phe Phe Xaa Xaa Asp
1 5 10

<210> 18
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Glu or Asp

<400> 18
His Xaa Lys Leu Xaa Phe Phe Xaa Xaa Asp
1 5 10

<210> 19
<211> 10
<212> PRT
<213> Homo sapiens

<220>

F00033112.

<221> MOD_RES
<222> (1)..(1)
<223> His, Asn, Gln, Lys or Arg

<220>
<221> MOD_RES
<222> (2)..(2)
<223> Asn or Gln

<220>
<221> MOD_RES
<222> (3)..(3)
<223> Lys, His, Asn, Gln or Arg

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Ala, Val, Leu, norleucine, Met, Phe or Ile

<220>
<221> MOD_RES
<222> (8)..(8)
<223> Ala, Val, Leu, Ser or Ile

<220>
<221> MOD_RES
<222> (9)..(9)
<223> Glu or Asp

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Glu or Asp

<400> 19
Xaa Xaa Xaa Leu Xaa Phe Phe Xaa Xaa Xaa
1 5 10

<210> 20
<211> 11
<212> PRT
<213> Homo sapiens

<400> 20
Val His His Lys Leu Val Phe Phe Ala Glu Asp
1 5 10

<210> 21
<211> 219
<212> PRT
<213> Mus musculus

<400> 21
Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Tyr Ser
20 25 30

Asn Gly Asp Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

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

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

Thr His Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
180 185 190

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys
210 215

<210> 22
<211> 448
<212> PRT
<213> Mus musculus

<400> 22
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr

F000322111

```
            20                  25                  30

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

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

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

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

Ala Ser Gly Asp Tyr Trp Gly Gln Gly Ser Thr Leu Thr Val Ser Ser
            100                 105                 110

Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Cys Gly
        115                 120                 125

Asp Thr Thr Gly Ser Ser Val Thr Leu Gly Cys Leu Val Lys Gly Tyr
    130                 135                 140

Phe Pro Glu Ser Val Thr Val Thr Trp Asn Ser Gly Ser Leu Ser Ser
145                 150                 155                 160

Ser Val His Thr Phe Pro Ala Leu Leu Gln Ser Gly Leu Tyr Thr Met
                165                 170                 175

Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro Ser Gln Thr Val
            180                 185                 190

Thr Cys Ser Val Ala His Pro Ala Ser Ser Thr Thr Val Asp Lys Lys
        195                 200                 205

Leu Glu Pro Ser Gly Pro Ile Ser Thr Ile Asn Pro Cys Pro Pro Cys
    210                 215                 220

Lys Glu Cys His Lys Cys Pro Ala Pro Asn Leu Glu Gly Gly Pro Ser
225                 230                 235                 240

Val Phe Ile Phe Pro Pro Asn Ile Lys Asp Val Leu Met Ile Ser Leu
                245                 250                 255

Thr Pro Lys Val Thr Cys Val Val Val Asp Val Ser Glu Asp Asp Pro
            260                 265                 270
```

```
Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val His Thr Ala
        275                 280                 285

Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Ile Arg Val Val
    290                 295                 300

Ser Thr Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly Lys Glu Phe
305                 310                 315                 320

Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ser Pro Ile Glu Arg Thr
                325                 330                 335

Ile Ser Lys Ile Lys Gly Leu Val Arg Ala Pro Gln Val Tyr Ile Leu
            340                 345                 350

Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys Asp Val Ser Leu Thr Cys
        355                 360                 365

Leu Val Val Gly Phe Asn Pro Gly Asp Ile Ser Val Glu Trp Thr Ser
    370                 375                 380

Asn Gly His Thr Glu Glu Asn Tyr Lys Asp Thr Ala Pro Val Leu Asp
385                 390                 395                 400

Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys Leu Asn Met Lys Thr Ser
                405                 410                 415

Lys Trp Glu Lys Thr Asp Ser Phe Ser Cys Asn Val Arg His Glu Gly
            420                 425                 430

Leu Lys Asn Tyr Tyr Leu Lys Lys Thr Ile Ser Arg Ser Pro Gly Lys
        435                 440                 445
```

<210> 23
<211> 16
<212> PRT
<213> Mus musculus

<400> 23
```
Arg Ser Ser Gln Ser Leu Val Tyr Ser Asn Gly Asp Thr Tyr Leu His
  1               5                  10                  15
```

<210> 24
<211> 7
<212> PRT
<213> Mus musculus

F00033112

<400> 24
Lys Val Ser Asn Arg Phe Ser
1 5

<210> 25
<211> 9
<212> PRT
<213> Mus musculus

<400> 25
Ser Gln Ser Thr His Val Pro Trp Thr
1 5

<210> 26
<211> 10
<212> PRT
<213> Mus musculus

<400> 26
Gly Phe Thr Phe Ser Ser Tyr Gly Met Ser
1 5 10

<210> 27
<211> 17
<212> PRT
<213> Mus musculus

<400> 27
Ser Ile Asn Ser Asn Gly Gly Ser Thr Tyr Tyr Pro Asp Ser Val Lys Gly
1 5 10 15

<210> 28
<211> 3
<212> PRT
<213> Mus musculus

<400> 28
Gly Asp Tyr
1

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 29
Val His His Gln Lys Leu Val Phe Phe
1 5

<210> 30
<211> 9
<212> PRT

F00033112

<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 30
Ala His His Gln Lys Leu Val Phe Phe
 1   5

<210> 31
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 31
Val Ala His Gln Lys Leu Val Phe Phe
 1   5

<210> 32
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 32
Val His Ala Gln Lys Leu Val Phe Phe
 1   5

<210> 33
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 33
Val His His Ala Lys Leu Val Phe Phe
 1   5

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

<220>
<223> peptide used in second library

<400> 34
Val His His Gln Ala Leu Val Phe Phe
 1   5

F00033112.

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

<220>
<223> peptide used in second library

<400> 35
Val His His Gln Lys Ala Val Phe Phe
 1   5

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 36
Val His His Gln Lys Leu Ala Phe Phe
 1   5

<210> 37
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 37
Val His His Gln Lys Leu Val Ala Phe
 1   5

<210> 38
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in second library

<400> 38
Val His His Gln Lys Leu Val Phe Ala
 1   5

<210> 39
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in third library

F00023112

<400> 39
His His Gln Lys Leu Val Phe Phe Ala
1 5

<210> 40
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in third library

<400> 40
His His Gln Lys Leu Val Phe Phe Gly
1 5

<210> 41
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in third library

<400> 41
His Gln Lys Leu Val Phe Phe Ala Glu
1 5

<210> 42
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in third library

<400> 42
His Gln Lys Leu Val Phe Phe Ala Ala
1 5

<210> 43
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> peptide used in third library

<400> 43
Gln Lys Leu Val Phe Phe Ala Glu Asp
1 5

<210> 44
<211> 9
<212> PRT
<213> Artificial Sequence

F00033112

<220>
<223> peptide used in third library

<400> 44
Gln Lys Leu Val Phe Phe Ala Glu Ala
1 5

<210> 45
<211> 12
<212> PRT
<213> Homo sapiens

<400> 45
Val His His Gln Lys Leu Val Phe Phe Ala Glu Asp
1 5 10

F0003E3112