

SEQUENCE LISTING

<110> Capon, Daniel J.
 <120> Hybrid Immunoglobulins With Moving Parts
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 <150> US 60/856,864
 <151> 2006-11-02
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1380 tcaatataa cggcaagcgc tataatgtt tgcagcccca cactcctg gcaaggatgg
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<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<210> 11
<211> 1430
<212> DNA
<213> Artificial Sequence

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 600 gctctatcc cagcgacatc gccgtggagt gggagagcaaa tgggcagccg gagaaacaact
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 780 ccttcgacaa ccatcacag cagaagagcc tctccctgtc tccggagctg caactggagg
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 1380 tcaatatata cgcgaagacg tataatgtt tgcagcccc cactccttg gcaggatggg
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<210> 12
 <211> 1430
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

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 180 cactgaaact cctgggggga ccgtcagctc tccctctccc cccaacaccc aaggacaccc
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 300 ctgagggtcaa gtccaacttg tactgtggagc gctgtggaggt gcataatgcc aagacaagc
 360 cgcgggaggga gcagtacaac agcaggtacc gtgtgtgtcag cgtccctcacc gtccttgacc
 420 aggaactggct gaatggccaag gagtacaagt gcaaggtctc caacaagaagc ctcccaagccc
 480 ccatcgagaa aaccatctcc aagaaccaag ggcagccccc agaaaccaag gtgtacaccc
 540 tgcctcccatc ccgggatgag ctgaaccaag accaggtcag cctgacctgc ctgttcaag
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720 cgttgacaa gacgagtg cagcaggga acgtcttc atgcatgag acgtcttc atgcatgag
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 1380 tcaatataa cgcgaagcgt tataatgtt tgcagcccca cactccttg gcaggatgg
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<210> 13
 <211> 1412
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 13
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 180 gacgtcagt cttctcttc ccccaaaaac ccaagacac cctcatgata tcccggaacc
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 360 acagcacgta cctgtgtgtc agctcttca cgtccttga ccaggacttg ctgaatgca
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 660 tctgtgactc cgaagctcc tcttctctt acagcaagct cacgttggac aagagcaggt
 720 ggcagcagg gaaagcttc tcatgtccg tgatgtcatg ggtcttgcac aaccaataca
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1260
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1320
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1412

<210> 14
<211> 1412
<212> DNA
<213> Artificial Sequence

<220> artificial construct relating to Homo sapiens immunoglobulin

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240
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1380
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1412

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1412 ccttgtagca gcttcaatga agatctgtta ac

<210> 15
<211> 1412
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

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180 gaccgtcagat cttctctcttc ccccaaaaac ccaaggacac cctcatgatac tcccggaacc
240 ctgaggtcac atgctgtgtg gtggaagtgga gccacgaaga ccttgaggtc aagttcaact
300 ggtacgttga cggcgtgtgag gtgcataatg ccaagacaag gccgcgggag gtagcagtaca
360 acagcacgta ccgtgtgttc agcttccca ccgttccga ccaggactgg ctgaatggca
420 aggaagtaca gtgcaggctc tccaacaag ccttccagc ccccatcgag aaaaaccatc
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720 ggcagcagg gtgaagcttc tcatgtccg tgaatgcatg ggtcttgac aaccactaca
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840 aggaaggggg gctggaaagg tgcgtatccg gtgacacacat tgaatgact agtggcggtc
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1320 ccgcttgca ggtcaacaca gcttatctg cgggacaatt ggtcacatat aacggcaaga
1380 cgtataaatg tttagagccc cacacctcct tggcaggatg ggaaccatcc aacgttccctg
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<220> artificial construct relating to Homo Sapiens immunoglobulin

<400> 16

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360

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1020

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1320

1380

1394

<210> 17

<211> 1820

<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 17

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180

240

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<210> 18
 <211> 1364
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

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<210> 19
<211> 737
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

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660 aagtcaacca tcaggcgctg agctcgcccg tcacaagag cttcaacag ggagagtgt
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<210> 20
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1268

<210> 21
<211> 1403
<212> DNA
<213> Artificial Sequence

<220> artificial construct relating to Homo Sapiens immunoglobulin

<400> 21

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<223>

artificial construct relating to Homo Sapiens immunoglobulin

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1260 agcagctcca agtgttttag actctggag agatcacagg ttacctatac atctcagcat
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 2460 atactgcggg acaattgtc acatataacg gcaagacgtg taatgtttg cagccccaca
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 2580 ctgttaac

<210> 27
 <211> 2561
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo sapiens immunoglobulin

<400> 27
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 180 ggtgtgaggt ggtgatgggg aaccttgaga ttgtgtcac gggaacaat gccgacctc
 240 ccttccttga gtgatctga gaagtgcag gctatgtctt cgtggccatg aatgaattc
 300 ctactctacc attgcccaac ctccgcttg tgcgaaggac ccaagcttac gatgggaagt
 360 ttgccattc cgtcatgttg aactataaca ccaactccag ccaacgcttg cgccagctc
 420 gcttgactca gctcacccag attctgtcag ggggtgttta tatgagaag aacgataagc
 480 ttgttcaat ggaacaat gactggagg acatcgtgag ggaacggagt gctgagatag
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 720 gctcaggccc tcaggaacaa gactgtcttg cctgcggca ctccaatgac agtggagcct
 780 gtttacctcg ctgttccacag cctctgtctt acaacaagct aactttccag ctggaacca
 840 atcccccaac caagtatac gatggaggag ttgtgttagc cagctgtccc cataacttg
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 960 atgggtctca gatgtgtgag ccttgttggg gactatgtcc caagcctgt gagggaaacag
 1020 gctctgggag ccgcttccag actgtggact cgagcaacat tgaatgattt gtgaacttga
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 1380
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 1980
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 2160
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 2220
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 2280
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 2340
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 2400
 ctgtgtatc cgtttggcag gtcaacacag ctatatctgc gggaacaattg gtacatatata
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 2520
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<210> 28
 <211> 2585
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

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 tggcggcggg gaccgtccag cccagcgatt ctcagtcatg gtgtgcagga accgagaata
 120
 aactgagctc tctctctgac ctggaacagc agtaaccgagc ctgcgcaag tactatgaaa
 180
 actgtgaggt tgtcatgggc aacctggaga taaccagcat tgaagacaac cgggaacctc
 240
 ccttccctcg gttgttctga gaagtacag gctacgtgtt agtggctctt aatcagtttc
 300
 gttaacctgcc tctggagaat ttacgcattta ttctgtgggac aaaaactttat gaggatcgat
 360

atgcccctggc aatatittta aactacagaa aagatggaaa ctttgactt caagaacttg 420
gattaagaa cttgacagaa atccataatg gtggagtcta tgtagaccag aacaattcc 480
ttgtttatgc agaacaccatt cattggcaag atattgttcg gaaccctagg cttccaact 540
tgactcttgt gtcaacaatat ggtagtccag gatgtggacg ttgcccataag tccgttactg 600
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caaacactct cagcaaatc aaccagagaa tagtaatccg ggaacaacag aaagctgaaa 1500
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 ttaac 2585

<210> 29
 <211> 785
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 29
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 cacctgaact cctggggggg ccctcagtct tcctcttccc cccaaaaccc aaggacaccc 180
 tcatgatctc ccggaccctt gaggtcacat gcgtgggtgt ggacgtgagc cacgaagacc 240
 ctgaggtcaa gttcaactgg tacgtggacg gcgtggaggt gcataatgcc aagacaaagc 300
 cgcgggagga gcagtacaac agcacgtacc gtgtgggtcag cgtcctcacc gtcctgcacc 360
 aggactggct gaatggcaag gagtacaagt gcaaggtctc caacaaagcc ctcccagccc 420
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 ccgtggacaa gagcaggtgg cagcagggga acgtcttctc atgctccgtg atgcatgagg 720
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 ggccg 785

<210> 30
 <211> 785
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 30
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 cacctgaact cctggggggg ccctcagtct tcctcttccc cccaaaaccc aaggacaccc 180
 tcatgatctc ccggaccctt gaggtcacat gcgtgggtgt ggacgtgagc cacgaagacc 240
 ctgaggtcaa gttcaactgg tacgtggacg gcgtggaggt gcataatgcc aagacaaagc 300
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 aggactggct gaatggcaag gagtacaagt gcaaggtctc caacaaagcc ctcccagccc 420

ccatcgagaa aaccatctcc aaagccaaag ggcagccccg agaaccacag gtgtacaccc 480
 tgccccatc ccgggatgag ctgaccaaga accagggtcag cctgacctgc ctggtcaaag 540
 gcttctatcc cagcgacatc gccgtggagt gggagagcaa tgggcagccg gagaacaact 600
 acaagaccac gcctcccgctg ctggactccg acggctcctt cttcctctac agcaagctca 660
 ccgtggacaa gagcagggtg cagcagggga acgtcttctc atgctccgtg atgcatgagg 720
 ctctgcacaa ccactacacg cagaagagcc tctccctgtc tccgggtaaa tgactcgagc 780
 ggccg 785

<210> 31
 <211> 767
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 31
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 ggccctcagt cttcctcttc ccccaaaaac ccaaggacac cctcatgac tcccggacct 180
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 agctgaccaa gaaccaggct agcctgacct gcctggtcaa aggttctat cccagcgaca 540
 tcgccgtgga gtgggagagc aatgggcagc cggagaacaa ctacaagacc acgcctcccg 600
 tgctggactc cgacggctcc ttcttctct acagcaagct caccgtggac aagagcaggt 660
 ggcagcaggg gaacgtcttc tcatgctccg tgatgcatga ggctctgcac aaccactaca 720
 cgcagaagag cctctccctg tctccgggta aatgactcga gcggccg 767

<210> 32
 <211> 251
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 32

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
 1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Asp Lys Thr His Thr Cys Pro Pro
 20 25 30

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
35 40 45

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
50 55 60

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
65 70 75 80

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
85 90 95

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
100 105 110

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
115 120 125

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
130 135 140

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
145 150 155 160

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
165 170 175

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
180 185 190

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
195 200 205

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
210 215 220

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
225 230 235 240

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
245 250

<210> 33
<211> 251
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 33

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

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

<210> 34

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<400> 34

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15

Ala Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
20 25 30

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
35 40 45

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
50 55 60

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
65 70 75 80

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
85 90 95

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
100 105 110

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

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
130 135 140

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
145 150 155 160

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
165 170 175

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
180 185 190

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
195 200 205

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
210 215 220

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
225 230 235 240

Leu Ser Pro Gly Lys
245

<210> 35
<211> 228
<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 35

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Pro Gly Lys
225

<210> 36

<211> 228

<212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
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 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group
 <220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> cysteine or serine
 <220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> cysteine or serine
 <400> 36

Xaa Asp Lys Thr His Thr Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu
 1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
 50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
 65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr

180

185

190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 210 215 220

Ser Pro Gly Lys
 225

<210> 37
 <211> 222
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 <213> Artificial Sequence

<220>
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<220>
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 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<400> 37

Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
 1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 Page 35

130

135

140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 210 215 220

<210> 38

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 38

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 20 25 30

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 50 55 60

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 85 90 95

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 115 120 125

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

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
165 170 175

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 39

<211> 224

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 39

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
50 55 60

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
85 90 95

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
115 120 125

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

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
 210 215 220

<210> 40

<211> 235

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

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<222> (224)..(224)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (235)..(235)

<223> amino acid having a S, Se,Te or Po reactive functional group

<220>

<221> MOD_RES

<222> (235)..(235)

<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 40

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 50 55 60

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 85 90 95

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
115 120 125

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

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa
210 215 220

Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230 235

<210> 41
<211> 234
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (1)..(1)

<220>
<221> MOD_RES
<222> (7)..(7)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (10)..(10)
<223> cysteine or serine

<400> 41

Xaa Asp Lys Thr His Thr Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys val val val Asp Val Ser
35 40 45

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

<210> 42
 <211> 228
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (1)..(1)
 <223> amino acid having a S, Se, Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<400> 42

Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu
210 215 220

Glu Glu Ser Cys
225

<210> 43

<211> 225

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 43

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
20 25 30

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
50 55 60

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
85 90 95

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
115 120 125

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

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
165 170 175

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
210 215 220

Cys
225

<210> 44

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

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<220>

<221> MOD_RES

<222> (1)..(1)

<223> amino acid having a S, Se,Te or Po reactive functional group

<220>

<221> MOD_RES

<222> (7)..(7)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (10)..(10)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (234)..(234)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (245)..(245)

<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 44

Xaa Asp Lys Thr His Thr Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa Ala Glu Ala Gln Asp Gly
225 230 235 240

Glu Leu Asp Gly Xaa
245

<210> 45
<211> 239
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<220>
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<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (4)..(4)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (228)..(228)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (239)..(239)

<220>
<221> MOD_RES
<222> (239)..(239)
<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 45

Xaa Pro Pro Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu val Thr Cys val val val Asp val Ser His Glu Asp Pro Glu val
Page 44

35

40

45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu
210 215 220

Glu Glu Ser Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230 235

<210> 46

<211> 236

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (225)..(225)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (236)..(236)

<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 46

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
20 25 30

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
50 55 60

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
85 90 95

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
115 120 125

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

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
165 170 175

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
210 215 220

Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230 235

<210> 47

<211> 776

<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 47

aagcttgaat tcccaaatg ctgtgtctg cgaatgtct gctgtatgt ctgtctct
120 cgtgtctgt atgtctggga ctgtgtgtgt gtgtctgagt cccaacctg ccaaccac
180 ctgtgtcagg accgtcagtc ttctctctc cccaacaa ccaaggacac ctcatgtatc
240 cccgaaccc tgaggtcacg tgcgtgtgtg tgacgttag ccaagaagac cccgaggtcc
300 agttcaactg gtaagtggac ggcgtggagg tgcatatgc caagaacaag ccaaggagg
360 agcagttcaa cagcagcttc cgtgtgtca gctctctca cgttgtgac caggaactgc
420 tgaacggcaa ggaagtacaag tgcaaggtc ccaacaagg cctccagc ccatcgaga
480 aaaccatctc caaaccaaa ggcagcccc gagaaccaca ggtgtacac ctgccccat
540 cccggaggga gatgaccaag aaccaggtca gctgaacct cctgttcaaa ggtcttacc
600 ccaagacat cgcgttggag tggagagca atggcagc ggagaaacaac taagaacca
660 caactcccat gctgactc gacgtctc ttctctcta cagcaagtc accgtggaca
720 agagcaggtg gcagcaggg aagctctc catgctcgt gatgcatgag gctctgaca
776 accatacac gcagaagagc ctctccctgt ctccgggtaa atgactcgag cggccg

<210> 48
<211> 776
<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 48

aagcttgaat tcccaaatg gcttgacct ttgttact ggtggccctc ctgtgtca
60 gctgcagtc aagctgtct gtgggtgt gtgtctgagt cccaacctg ccaaccac
120 ctgtgtcagg accgtcagtc ttctctctc cccaacaa ccaaggacac ctcatgtatc
180 cccgaaccc tgaggtcacg tgcgtgtgtg tgacgttag ccaagaagac cccgaggtcc
240 agttcaactg gtaagtggac ggcgtggagg tgcatatgc caagaacaag ccaaggagg
300 agcagttcaa cagcagcttc cgttgtgtca gctctctca cgttgtgac caggaactgc
360 tgaacggcaa ggaagtacaag tgcaaggtc ccaacaagg cctccagc ccatcgaga
420 aaaccatctc caaaccaaa ggcagcccc gagaaccaca ggtgtacac ctgccccat
480 cccggaggga gatgaccaag aaccaggtca gctgaacct cctgttcaaa ggtcttacc
540 ccaagacat cgcgttggag tggagagca atggcagc ggagaaacaac taagaacca
600 caactcccat gctgactc gacgtctc ttctctcta cagcaagtc accgtggaca
660 agagcaggtg gcagcaggg aagctctc catgctcgt gatgcatgag gctctgaca
720 accatacac gcagaagagc ctctccctgt ctccgggtaa atgactcgag cggccg
776

<210> 49
<211> 758
<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 49

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aagcttgaat tcccaccatg ctggctgcca cagtcctgac cctggccctg ctgggcaatg      60
cccatgcctg ttgtgtcgag tgcccaccgt gcccagcacc acctgtggca ggaccgtcag      120
tcttcctctt ccccccaaaa cccaaggaca ccctcatgat ctcccggacc cctgaggtca      180
cgtgcgtggt ggtggacgtg agccacgaag accccgaggt ccagttcaac tggtagctgg      240
acggcgtgga ggtgcataat gccaagacaa agccacggga ggagcagttc aacagcacgt      300
tccgtgtggt cagcgtcctc accgttgtgc accaggactg gctgaacggc aaggagtaca      360
agtgaaggt ctccaacaaa ggcctcccag ccccatcga gaaaaccatc tccaaaacca      420
aagggcagcc ccgagaacca caggtgtaca ccctgcccc atcccgggag gagatgacca      480
agaaccaggt cagcctgacc tgcctggtca aaggcttcta cccagcgac atcgccgtgg      540
agtgggagag caatgggcag ccggagaaca actacaagac cacacctccc atgctggact      600
ccgacggctc cttcttcctc tacagcaagc tcaccgtgga caagagcagg tggcagcagg      660
ggaacgtctt ctcatgctcc gtgatgcatg aggtcttgca caaccactac acgcagaaga      720
gcctctccct gtctccgggt aaatgactcg agcggccg      758
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<210> 50

<211> 248

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 50

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Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
1           5           10           15
```

```
Leu Val Cys Ser Gly Leu Ala Cys Cys Val Glu Cys Pro Pro Cys Pro
20           25           30
```

```
Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
35           40           45
```

```
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
50           55           60
```

```
Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
65           70           75           80
```

```
Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
85           90           95
```

```
Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln
100          105          110
```

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
115 120 125

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
130 135 140

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
145 150 155 160

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
165 170 175

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
180 185 190

Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
195 200 205

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
210 215 220

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
225 230 235 240

Ser Leu Ser Leu Ser Pro Gly Lys
245

<210> 51

<211> 248

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 51

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Cys Val Glu Cys Pro Pro Cys Pro
20 25 30

Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
35 40 45

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
50 55 60

Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val
65 70 75 80

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
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90

95

Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln
100 105 110

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly
115 120 125

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
130 135 140

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
145 150 155 160

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
165 170 175

Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr
180 185 190

Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
195 200 205

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe
210 215 220

Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys
225 230 235 240

Ser Leu Ser Leu Ser Pro Gly Lys
245

<210> 52

<211> 242

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 52

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15

Ala Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly
20 25 30

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
35 40 45

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
50 55 60

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
65 70 75 80

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
85 90 95

Val Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys
100 105 110

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu
115 120 125

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
130 135 140

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
145 150 155 160

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
165 170 175

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met
180 185 190

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
195 200 205

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
210 215 220

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
225 230 235 240

Gly Lys

<210> 53
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
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<400> 53

Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro Pro Val Ala Gly Pro
1 5 10 15

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
20 25 30

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
35 40 45

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
50 55 60

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
65 70 75 80

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
85 90 95

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
100 105 110

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
115 120 125

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
130 135 140

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
145 150 155 160

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
165 170 175

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
180 185 190

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
195 200 205

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
210 215 220

Lys
225

<210> 54
<211> 225
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (2)..(2)
<223> cysteine or serine

<220>

<221> MOD_RES
 <222> (5)..(5)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> cysteine or serine

<400> 54

Xaa Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro
 1 5 10 15

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 20 25 30

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 35 40 45

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 50 55 60

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
 65 70 75 80

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
 85 90 95

Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
 100 105 110

Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 115 120 125

Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 130 135 140

Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 145 150 155 160

Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
 165 170 175

Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 180 185 190

Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 195 200 205

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
 210 215 220

Lys
 225

<210> 55.
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<220>
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 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
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 <222> (7)..(7)
 <223> cysteine or serine

<400> 55

Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser
1 5 10 15

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
35 40 45

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val
65 70 75 80

Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
85 90 95

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr
100 105 110

Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
115 120 125

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp

165

170

175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 56

<211> 221

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (1)..(1)

<223> amino acid having a S, Se,Te or Po reactive functional group

<220>

<221> MOD_RES

<222> (4)..(4)

<223> cysteine or serine

<400> 56

Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
1 5 10 15

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
20 25 30

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
35 40 45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
50 55 60

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
65 70 75 80

Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
85 90 95

Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
100 105 110

Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
115 120 125

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys

130

135

140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 145 150 155 160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 165 170 175

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 180 185 190

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 195 200 205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 210 215 220

<210> 57

<211> 218

<212> PRT

<213> Artificial sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 57

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
 1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp
 35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 50 55 60

Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val
 65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 85 90 95

Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
 100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
 115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe
165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 58

<211> 223

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 58

Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
1 5 10 15

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr
35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
50 55 60

Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His
65 70 75 80

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
85 90 95

Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln
100 105 110

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
115 120 125

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
130 135 140

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
145 150 155 160

Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu
165 170 175

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
180 185 190

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205

Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
210 215 220

<210> 59

<211> 234

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (223)..(223)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (234)..(234)

<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 59

Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
1 5 10 15

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
20 25 30

Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr
35 40 45

Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
50 55 60

Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His
65 70 75 80

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
85 90 95

Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln
100 105 110

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met
115 120 125

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
130 135 140

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
145 150 155 160

Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu
165 170 175

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
180 185 190

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
195 200 205

Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa Ala
210 215 220

Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230

<210> 60
<211> 231
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (2)..(2)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (5)..(5)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (8)..(8)
<223> cysteine or serine

<400> 60

Xaa Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro
1 5 10 15

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
20 25 30

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
Page 59

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

<210> 61
 <211> 230
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

 <220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> cysteine or serine

<400> 61

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Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser
1          5          10          15

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
          20          25          30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
          35          40          45

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
          50          55          60

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val
65          70          75          80

Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
          85          90          95

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr
          100          105          110

Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
          115          120          125

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
          130          135          140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
145          150          155          160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp
          165          170          175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
          180          185          190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
          195          200          205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu
          210          215          220

Gln Leu Glu Glu Ser Cys
225          230

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<210> 62

<211> 227
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<400> 62

Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
 1 5 10 15

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 20 25 30

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
 35 40 45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 50 55 60

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
 65 70 75 80

Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
 85 90 95

Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
 100 105 110

Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
 115 120 125

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 130 135 140

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 145 150 155 160

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 165 170 175

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 180 185 190

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 Page 62

195

200

205

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu
 210 215 220

Glu Ser Cys
 225

<210> 63
 <211> 224
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 63

Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
 1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp
 35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 50 55 60

Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val
 65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 85 90 95

Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
 100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
 115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe
 165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
 210 215 220

<210> 64
 <211> 242
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (2)..(2)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> cysteine or serine

<220>
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 <222> (231)..(231)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (242)..(242)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<400> 64

Xaa Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro
 1 5 10 15

Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser
 20 25 30

Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp
 35 40 45

Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn
 50 55 60

Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val
 65 70 75 80

Val Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu
 85 90 95
 Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys
 100 105 110
 Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr
 115 120 125
 Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr
 130 135 140
 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu
 145 150 155 160
 Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu
 165 170 175
 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys
 180 185 190
 Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu
 195 200 205
 Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu
 210 215 220
 Leu Gln Leu Glu Glu Ser Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp
 225 230 235 240

Gly Xaa

<210> 65
 <211> 241
 <212> PRT
 <213> Artificial Sequence
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 <220>
 <221> MOD_RES
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 <223> amino acid having a S, Se,Te or Po reactive functional group
 <220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine
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 <222> (7)..(7)
 <223> cysteine or serine
 <220>

<221> MOD_RES
 <222> (230)..(230)
 <223> cysteine or serine

 <220>
 <221> MOD_RES
 <222> (241)..(241)
 <223> amino acid having a S, Se,Te or Po reactive functional group

 <400> 65

Xaa Val Glu Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser
 1 5 10 15

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
 20 25 30

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
 35 40 45

Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
 50 55 60

Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val
 65 70 75 80

Ser Val Leu Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
 85 90 95

Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr
 100 105 110

Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
 115 120 125

Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys
 130 135 140

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
 145 150 155 160

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp
 165 170 175

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
 180 185 190

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
 195 200 205

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu
 210 215 220

Gln Leu Glu Glu Ser Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly
 225 230 235 240

Xaa

<210> 66
<211> 238
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (4)..(4)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (227)..(227)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (238)..(238)
<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 66

Xaa Pro Pro Xaa Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu
1 5 10 15

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
20 25 30

Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln
35 40 45

Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
50 55 60

Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu
65 70 75 80

Thr Val Val His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
85 90 95

Val Ser Asn Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
100 105 110

Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
115 120 125

Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
 130 135 140
 Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
 145 150 155 160
 Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly
 165 170 175
 Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
 180 185 190
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
 195 200 205
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu
 210 215 220
 Glu Ser Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
 225 230 235
 <210> 67
 <211> 235
 <212> PRT
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 <220>
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 <220>
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 <222> (224)..(224)
 <223> cysteine or serine
 <220>
 <221> MOD_RES
 <222> (235)..(235)
 <223> cysteine or serine
 <400> 67
 Cys Pro Ala Pro Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro
 1 5 10 15
 Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 20 25 30
 Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp
 35 40 45
 Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 50 55 60
 Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val
 65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 85 90 95
 Lys Gly Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
 100 105 110
 Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
 115 120 125
 Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 130 135 140
 Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 145 150 155 160
 Asn Tyr Lys Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe
 165 170 175
 Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 180 185 190
 Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 195 200 205
 Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa
 210 215 220
 Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
 225 230 235

<210> 68
 <211> 902
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 68
 aagcttgaat tcccaccatg ctgctgctgg cgagatgtct gctgctagtc ctcgtctcct 60
 cgctgctggt atgctcggga ctggcgtgcc cacggtgccc agagcccaaa tcttgtgaca 120
 cacctcccc gtgcccacgg tgcccagagc ccaaattctg tgacacacct ccccatgcc 180
 cacggtgccc agagcccaaa tcttgtgaca cacctcccc gtgcccagg tgcccagcac 240
 ctgaactcct gggaggaccg tcagtcttcc tcttcccccc aaaaccaag gataccctta 300
 tgatttcccg gaccctgag gtcacgtgcg tgggtggtgga cgtgagccac gaagaccccg 360
 aggtccagtt caagtgttac gtggacggcg tggaggtgca taatgccaag acaaagccgc 420
 gggaggagca gtacaacagc acgttccgtg tggtcagcgt cctcaccgtc ctgcaccagg 480
 actggctgaa cggcaaggag tacaagtgc aggtctccaa caaagccctc ccagccccc 540
 tcgagaaaac catctccaaa accaaaggac agccccgaga accacaggtg tacaccctgc 600

cg
660 cccatcccg ggaaggagatg accaagaaac aggtcagcct gacctgacctg gtcaaaagct
720 tctaccccg cgaatcgcg gtgagtgagg agagcagcgg gcaagccggag aacaactaca
780 acaacacgccc tcccatgtctg gactccgagcgt gctccctctt cctctacagc aagctcacccg
840 tggacaagag caggtggcag caggggaaca tcttctcatg ctccgtgatg catgaggtct
900 tgcacaacccg cttaacgag aagagcctct cctgtctcc gggtaaatga ctgagcggc
902

<210> 69
<211> 902
<212> DNA
<213> Artificial Sequence
<220>
<223> artificial construct relating to Homo sapiens immunoglobulin
<400> 69

60 aagcttgat tccacccatg gcttgacct ttgtttact ggtgcccct ctgtgtca
120 gctgaagtc aagtgctct gtggctgccc caggtgccc agagcccaaa tcttgtgaca
180 cacttcccc gtgccacagg tgcacagagc ccaatcttg tgacacacct ccccatgccc
240 caggtgccc agagcccaaa tcttgtgaca cacttcccc gtgcccgaag tgcacagcac
300 ctgaactctt gggaggaccg tcagttctcc tcttcccccc aaaaaccgaag gataccctta
360 tgatttcccc gacccctgag gtcaagtgcg tgtgtgtgga cgtgagccac gaagaccccg
420 aggttccagtt caagtgttac gtgacggcg tggaggtgca taatgccaag acaagccgcg
480 gggaggagca gtacaacagc agttccggt tggtcagcgt cctcacccgtc ctgacccagg
540 actggtgaa cggcaaggag tacaagtga agttctcaa caaagccctc ccagccccc
600 tcgagaaaa catctccaaa accaaaggac agccccgaga accacaggtg tacacccctgc
660 cccatcccg ggaaggagatg accaagaaac aggtcagcct gacctgacctg gtcaaaagct
720 tctaccccg cgaatcgcg gtgagtgagg agagcagcgg gcaagccggag aacaactaca
780 acaacacgccc tcccatgtctg gactccgagcgt gctccctctt cctctacagc aagctcacccg
840 tggacaagag caggtggcag caggggaaca tcttctcatg ctccgtgatg catgaggtct
900 tgcacaacccg cttaacgag aagagcctct cctgtctcc gggtaaatga ctgagcggc
902

<210> 70
<211> 884
<212> DNA
<213> Artificial Sequence
<220>
<223> artificial construct relating to Homo sapiens immunoglobulin
<400> 70
60 aagcttgat tccacccatg ctggtgcca cagttcctgac cctgcccctg ctgggcaatg
120 cccatgacct ccacgggtgc ccaagcccca aatcttgtga cacacccccc ccgtgcccac
180 ggtgcccaga gcccaaatct tgtgacacac ctcccccatg cccaggtgc ccagagccca
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aatctttgtga cacacctccc ccgtgcccaa ggtgccacgc acctgaactc ctgggaggac 240
cgtcagtctt cctcttcccc ccaaaacca aggataccct tatgatttcc cggaccctg 300
aggtcacgtg cgtggtggtg gacgtgagcc acgaagaccc cgagggtccag ttcaagtgg 360
acgtggacgg cgtggagggtg cataatgcc aagacaaagcc gcgggaggag cagtacaaca 420
gcacgttccg tgtggtcagc gtcctcaccg tcctgcacca ggactggctg aacggcaagg 480
agtacaagtg caaggtctcc aacaaagccc tcccagcccc catcgagaaa accatctcca 540
aaaccaaagg acagccccga gaaccacagg tgtacaccct gcccccatcc cgggaggaga 600
tgaccaagaa ccagggtcagc ctgacctgcc tgggtcaaagg cttctacccc agcgacatcg 660
ccgtggagtg ggagagcagc gggcagccgg agaacaacta caacaccacg cctcccatgc 720
tggactccga cggctccttc ttcctctaca gcaagctcac cgtggacaag agcagggtggc 780
agcaggggaa catcttctca tgctccgtga tgcatgaggc tctgcacaac cgcttcacgc 840
agaagagcct ctccctgtct ccgggtaa at gactcgagcg gccg 884

<210> 71
<211> 290
<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 71

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Pro Arg Cys Pro Glu Pro Lys Ser
20 25 30

Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys
35 40 45

Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp
50 55 60

Thr Pro Pro Pro Cys Pro Arg Cys Pro Ala Pro Glu Leu Leu Gly Gly
65 70 75 80

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
85 90 95

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
100 105 110

Asp Pro Glu Val Gln Phe Lys Trp Tyr Val Asp Gly Val Glu Val His
115 120 125

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
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130

135

140

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
145 150 155 160

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
165 170 175

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
180 185 190

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
195 200 205

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
210 215 220

Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr Pro Pro Met
225 230 235 240

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
245 250 255

Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser Cys Ser Val Met His
260 265 270

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro
275 280 285

Gly Lys
290

<210> 72

<211> 290

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 72

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Pro Arg Cys Pro Glu Pro Lys Ser
20 25 30

Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys
35 40 45

Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp
50 55 60

Thr Pro Pro Pro Cys Pro Arg Cys Pro Ala Pro Glu Leu Leu Gly Gly
65 70 75 80

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
85 90 95

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
100 105 110

Asp Pro Glu Val Gln Phe Lys Trp Tyr Val Asp Gly Val Glu Val His
115 120 125

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg
130 135 140

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
145 150 155 160

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
165 170 175

Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
180 185 190

Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln Val Ser Leu
195 200 205

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
210 215 220

Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr Pro Pro Met
225 230 235 240

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
245 250 255

Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser Cys Ser Val Met His
260 265 270

Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro
275 280 285

Gly Lys
290

<210> 73
<211> 284
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 73

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
 1 5 10 15
 Ala Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro
 20 25 30
 Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys
 35 40 45
 Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro
 50 55 60
 Arg Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 65 70 75 80
 Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val
 85 90 95
 Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe
 100 105 110
 Lys Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 115 120 125
 Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr
 130 135 140
 Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 145 150 155 160
 Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr
 165 170 175
 Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 180 185 190
 Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 195 200 205
 Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro
 210 215 220
 Glu Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser
 225 230 235 240
 Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
 245 250 255
 Gly Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg
 260 265 270

Phe Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 275 280

<210> 74
 <211> 267
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo sapiens immunoglobulin
 <400> 74

Cys Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys
 1 5 10 15

Pro Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro
 20 25 30

Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg
 35 40 45

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 50 55 60

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 65 70 75 80

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys
 85 90 95

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 100 105 110

Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val
 115 120 125

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 130 135 140

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys
 145 150 155 160

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 165 170 175

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 180 185 190

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu
 195 200 205

Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe
 210 215 220

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 225 230 235 240

Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe
 245 250 255

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 260 265

<210> 75
 <211> 267
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (16)..(16)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (19)..(19)
 <223> cysteine or serine

<220>
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 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (31)..(31)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (34)..(34)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (40)..(40)
 <223> cysteine or serine

<220>
 <221> MOD_RES

<222> (46)..(46)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (49)..(49)
<223> cysteine or serine

<400> 75

Xaa Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa
1 5 10 15
Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro
20 25 30
Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg
35 40 45
Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
50 55 60
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
65 70 75 80
Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys
85 90 95
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
100 105 110
Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val
115 120 125
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
130 135 140
Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys
145 150 155 160
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
165 170 175
Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
180 185 190
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu
195 200 205
Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe
210 215 220
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
225 230 235 240

Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe
245 250 255

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
260 265

<210> 76
<211> 264
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (7)..(7)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (13)..(13)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (22)..(22)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (28)..(28)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (31)..(31)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (37)..(37)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (43)..(43)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (46)..(46)
<223> cysteine or serine

<400> 76

Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa
1 5 10 15
Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro
20 25 30
Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro Ala
35 40 45
Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
50 55 60
Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
65 70 75 80
Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val
85 90 95
Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
100 105 110
Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln
115 120 125
Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
130 135 140
Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
145 150 155 160
Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
165 170 175
Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
180 185 190
Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr
195 200 205
Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
210 215 220
Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe
225 230 235 240
Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys
245 250 255
Ser Leu Ser Leu Ser Pro Gly Lys
260

<210> 77
 <211> 224
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 77

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp
35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
50 55 60

Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu
65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
85 90 95

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe
165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
180 185 190

Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr
195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
210 215 220

<210> 78
 <211> 235
 <212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (224)..(224)

<223> cysteine or serine

<220>

<221> MOD_RES

<222> (235)..(235)

<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 78

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
20 25 30

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp
35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
50 55 60

Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu
65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
85 90 95

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly
100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu
115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe
165 170 175

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
180 185 190

Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr
195 200 205

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa
 210 215 220

Ala Glu Ala Gln Gly Asp Glu Leu Asp Gly Xaa
 225 230 235

<210> 79
 <211> 273
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (10)..(10)
 <223> cysteine or serine

<220>
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 <222> (16)..(16)
 <223> cysteine or serine

<220>
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 <222> (19)..(19)
 <223> cysteine or serine

<220>
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 <222> (25)..(25)
 <223> cysteine or serine

<220>
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 <222> (31)..(31)
 <223> cysteine or serine

<220>
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 <222> (34)..(34)
 <223> cysteine or serine

<220>
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 <222> (40)..(40)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (46)..(46)
 <223> cysteine or serine

<220>

<221> MOD_RES
 <222> (49)..(49)
 <223> cysteine or serine

<400> 79

Xaa Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa
 1 5 10 15

Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro
 20 25 30

Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg
 35 40 45

Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 50 55 60

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 65 70 75 80

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys
 85 90 95

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 100 105 110

Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val
 115 120 125

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 130 135 140

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys
 145 150 155 160

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 165 170 175

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 180 185 190

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu
 195 200 205

Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe
 210 215 220

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 225 230 235 240

Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe
 245 250 255

Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
 260 265 270

Cys

<210> 80
 <211> 270
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (13)..(13)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (16)..(16)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (22)..(22)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (28)..(28)
 <223> cysteine or serine

<220>
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 <222> (31)..(31)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (37)..(37)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (43)..(43)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (46)..(46)
 <223> cysteine or serine

<400> 80

Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa
 1 5 10 15
 Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro
 20 25 30
 Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro Ala
 35 40 45
 Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 50 55 60
 Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 65 70 75 80
 Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val
 85 90 95
 Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 100 105 110
 Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln
 115 120 125
 Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 130 135 140
 Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
 145 150 155 160
 Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
 165 170 175
 Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 180 185 190
 Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr
 195 200 205
 Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 210 215 220
 Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe
 225 230 235 240
 Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys
 245 250 255
 Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
 260 265 270

<210> 81
 <211> 284
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
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 <222> (10)..(10)
 <223> cysteine or serine

<220>
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 <222> (16)..(16)
 <223> cysteine or serine

<220>
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 <222> (19)..(19)
 <223> cysteine or serine

<220>
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 <222> (25)..(25)
 <223> cysteine or serine

<220>
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 <222> (31)..(31)
 <223> cysteine or serine

<220>
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 <222> (34)..(34)
 <223> cysteine or serine

<220>
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 <222> (40)..(40)
 <223> cysteine or serine

<220>
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 <222> (46)..(46)
 <223> cysteine or serine

<220>
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 <222> (49)..(49)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (273)..(273)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (284)..(284)
 <223> amino acid having a S, Se,Te or Po reactive functional group
 <400> 81

Xaa Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa
 1 5 10 15

Pro Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro
 20 25 30

Arg Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg
 35 40 45

Xaa Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 50 55 60

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 65 70 75 80

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys
 85 90 95

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 100 105 110

Glu Glu Gln Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val
 115 120 125

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 130 135 140

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys
 145 150 155 160

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
 165 170 175

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 180 185 190

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu
 195 200 205

Asn Asn Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe
 210 215 220

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 225 230 235 240

Asn Ile Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe
 245 250 255

Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
260 265 270

Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
275 280

<210> 82
<211> 281
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> amino acid having a S, Se,Te or Po reactive functional group

<220>
<221> MOD_RES
<222> (7)..(7)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (13)..(13)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (16)..(16)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (22)..(22)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (28)..(28)
<223> cysteine or serine

<220>
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<222> (31)..(31)
<223> cysteine or serine

<220>
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<222> (37)..(37)
<223> cysteine or serine

<220>
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<222> (43)..(43)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (46)..(46)
<223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (270)..(270)
 <223> cysteine or serine

 <220>
 <221> MOD_RES
 <222> (281)..(281)
 <223> amino acid having a S, Se,Te or Po reactive functional group

 <400> 82

Xaa Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa
 1 5 10 15

Pro Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro
 20 25 30

Glu Pro Lys Ser Xaa Asp Thr Pro Pro Pro Xaa Pro Arg Xaa Pro Ala
 35 40 45

Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro
 50 55 60

Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val
 65 70 75 80

Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val
 85 90 95

Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln
 100 105 110

Phe Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln
 115 120 125

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala
 130 135 140

Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro
 145 150 155 160

Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr
 165 170 175

Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser
 180 185 190

Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr
 195 200 205

Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr
 210 215 220

Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe
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225 230 235 240

Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys
245 250 255

Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Xaa Ala Glu
260 265 270

Ala Gln Asp Gly Glu Leu Asp Gly Xaa
275 280

<210> 83
<211> 767
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 83
aagcttgaat tcccaccatg ctgctgctgg cgagatgtct gctgctagtc ctcgtctcct 60
cgctgctggt atgctcggga ctggcgtgcc catcatgccc agcacctgag ttcctggggg 120
gaccatcagt cttcctgttc cccccaaaac ccaaggacac tctcatgac tcccggaccc 180
ctgagggtcac gtgcgtggtg gtggacgtga gccaggaaga ccccgaggtc cagttcaact 240
ggtacgtgga tggcgtggag gtgcataatg ccaagacaaa gccgcgggag gagcagttca 300
acagcacgta ccgtgtggtc agcgtcctca ccgtcctgca ccaggactgg ctgaacggca 360
aggagtacaa gtgcaagggtc tccaacaaag gcctcccgtc ctccatcgag aaaaccatct 420
ccaaagccaa agggcagccc cgagagccac aggtgtacac cctgccccca tcccaggagg 480
agatgaccaa gaaccagggtc agcctgacct gcctgggtcaa aggccttctac cccagcgaca 540
tcgccgtgga gtgggagagc aatgggcagc cggaagaaca ctacaagacc acgcctccccg 600
tgctggactc cgacggctcc ttcttctct acagcaggct aaccgtggac aagagcaggt 660
ggcaggaggg gaatgtcttc tcatgtccg tgatgcatga ggctctgcac aaccactaca 720
cacagaagag cctctccctg tctctgggta aatgactcga gcggccg 767

<210> 84
<211> 767
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 84
aagcttgaat tcccaccatg gccttgacct ttgctttact ggtggccctc ctggtgctca 60
gctgcaagtc aagctgctct gtgggctgcc catcatgccc agcacctgag ttcctggggg 120
gaccatcagt cttcctgttc cccccaaaac ccaaggacac tctcatgac tcccggaccc 180
ctgagggtcac gtgcgtggtg gtggacgtga gccaggaaga ccccgaggtc cagttcaact 240
ggtacgtgga tggcgtggag gtgcataatg ccaagacaaa gccgcgggag gagcagttca 300

acagcacgta ccgtgtggtc agcgtcctca ccgtcctgca ccaggactgg ctgaacggca 360
aggagtacaa gtgcaagggtc tccaacaaag gcctcccgtc ctccatcgag aaaaccatct 420
ccaaagccaa agggcagccc cgagagccac aggtgtacac cctgccccca tcccaggagg 480
agatgaccaa gaaccagggtc agcctgacct gcctgggtcaa aggtttctac cccagcgaca 540
tcgccgtgga gtgggagagc aatgggcagc cggagaacaa ctacaagacc acgcctcccg 600
tgctggactc cgacggctcc ttcttctct acagcaggct aaccgtggac aagagcaggt 660
ggcaggaggg gaatgtcttc tcatgtctcg tgatgcatga ggctctgcac aaccactaca 720
cacagaagag cctctccctg tctctgggta aatgactcga gcggccg 767

<210> 85
<211> 749
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 85
aagcttgaat tcccaccatg ctggctgcca cagtctgac cctggccctg ctgggcaatg 60
cccatgcctg cccatcatgc ccagcacctg agttcctggg gggaccatca gtcttctctgt 120
tccccccaaa acccaaggac acttctcatga tctcccgac ccctgaggtc acgtgcgtgg 180
tggtggacgt gagccaggaa gaccccgagg tccagttcaa ctggtacgtg gatggcgtgg 240
aggtgcataa tgccaagaca aagccgcggg aggagcagtt caacagcacg taccgtgtgg 300
tcagcgtcct caccgtcctg caccaggact ggctgaacgg caaggagtac aagtgaagg 360
tctccaacaa aggcctcccg tcctccatcg agaaaaccat ctccaaagcc aaagggcagc 420
cccagagacc acaggtgtac accctgcccc catcccagga ggagatgacc aagaaccagg 480
tcagcctgac ctgcctgggtc aaaggcttct accccagcga catcgccgtg gagtgggaga 540
gcaatgggca gccggagaac aactacaaga ccacgcctcc cgtgctggac tccgacggct 600
ccttcttctc ctacagcagg ctaaccgtgg acaagagcag gtggcaggag gggaatgtct 660
tctcatgctc cgtgatgcat gaggtctctgc acaaccacta cacacagaag agcctctccc 720
tgtctctggg taaatgactc gagcggccg 749

<210> 86
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 86

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Pro Ser Cys Pro Ala Pro Glu Phe
Page 91

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

<210> 87
 <211> 245
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

 <400> 87

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
 1 5 10 15
 Lys Ser Ser Cys Ser Val Gly Cys Pro Ser Cys Pro Ala Pro Glu Phe
 20 25 30
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 35 40 45
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 50 55 60
 Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val
 65 70 75 80
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser
 85 90 95
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 100 105 110
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser
 115 120 125
 Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 130 135 140
 Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln
 145 150 155 160
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 165 170 175
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 180 185 190
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu
 195 200 205
 Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser
 210 215 220
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 225 230 235 240
 Leu Ser Leu Gly Lys
 245

<210> 88
 <211> 239
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 88

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15

Ala Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val
20 25 30

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
35 40 45

Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu
50 55 60

Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
65 70 75 80

Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser
85 90 95

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
100 105 110

Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile
115 120 125

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
130 135 140

Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
145 150 155 160

Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
165 170 175

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
180 185 190

Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg
195 200 205

Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
210 215 220

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
225 230 235

<210> 89

<211> 222

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 89

Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
35 40 45

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
210 215 220

<210> 90

<211> 222

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<400> 90

Xaa Pro Ser Xaa Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 35 40 45

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 115 120 125

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 210 215 220

<210> 91
 <211> 219
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 91

Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 20 25 30

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
 35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 50 55 60

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 85 90 95

Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
 100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
 115 120 125

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 130 135 140

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 165 170 175

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
 180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly Lys
 210 215

<210> 92
 <211> 224

<212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 92

Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 20 25 30

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
 35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 50 55 60

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 85 90 95

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
 115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 165 170 175

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
 180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 195 200 205

Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu Glu Glu Ser Cys
 210 215 220

<210> 93
 <211> 235
 <212> PRT
 <213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (224)..(224)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (235)..(235)
<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 93

Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
1 5 10 15

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
20 25 30

Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp
35 40 45

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
50 55 60

Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
65 70 75 80

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
85 90 95

Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
100 105 110

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu
115 120 125

Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
130 135 140

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
145 150 155 160

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
165 170 175

Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn
180 185 190

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
195 200 205

Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu Glu Glu Ser Xaa
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210

215

220

Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
 225 230 235

<210> 94
 <211> 228
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<400> 94

Xaa Pro Ser Xaa Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 35 40 45

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
 100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
 115 120 125

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
 130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
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165 170 175
 Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190
 Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu
 210 215 220

Glu Glu Ser Cys
225

<210> 95
 <211> 225
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 95

Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 1 5 10 15
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 20 25 30
 Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
 35 40 45
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 50 55 60
 Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 65 70 75 80
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 85 90 95
 Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
 100 105 110
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
 115 120 125
 Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 130 135 140
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 165 170 175

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
 180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu Glu Glu Ser
 210 215 220

Cys
 225

<210> 96
 <211> 239
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (1)..(1)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<220>
 <221> MOD_RES
 <222> (4)..(4)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (228)..(228)
 <223> cysteine or serine

<220>
 <221> MOD_RES
 <222> (239)..(239)
 <223> amino acid having a S, Se,Te or Po reactive functional group

<400> 96

Xaa Pro Ser Xaa Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe
 1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val
 35 40 45

Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60

Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu
210 215 220

Glu Glu Ser Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230 235

<210> 97
<211> 236
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (225)..(225)
<223> cysteine or serine

<220>
<221> MOD_RES
<222> (236)..(236)
<223> amino acid having a S, Se,Te or Po reactive functional group

<400> 97

Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
20 25 30

Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn
35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
50 55 60

Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
85 90 95

Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys
100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu
115 120 125

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
130 135 140

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
165 170 175

Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly
180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Leu Glu Leu Gln Leu Glu Glu Ser
210 215 220

Xaa Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Xaa
225 230 235

<210> 98

<211> 767

<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 98

aagcttgaat tcccaccatg ctgctgctgg cgagatgtct gctgctagtc ctcgtctcct 60

cgctgctggt atgctcgga ctggcgtgcc caccgtgccc agcacctgaa ctctggggg 120

ggccctcagt cttcctcttc cccccaaaac ccaaggacac cctcatgac tcccggaccc 180

ctgaaggtcac atgctgtgtg gtgacgtga gccacgaaga cctgaagtc aagttcaact
240
gttacgttga cggcgttgag gtgcataatg ccaagacaag gccgcgggag gagcagtaca
300
acagcacgtc cgtgtgtgtc agcttcttca cgttcttga ccaagacttg ctgaatggca
360
aggagtacaa gtgcagaagtc tccaacaag ccttccagc ccccatcgag aaaaaccatct
420
ccaagccaa aggcagagccc cgaagaaccac aggtgtacac cttgccccca tccgggagt
480
agctgaccaa gaaccaggtc agcttgacct gcttgttcaa aggtttctat ccagcgaca
540
tcgccttga gtggagagc aatgggagc cgaagaaca ctacaagacc acgcttccg
600
tgttgatc cgaagcttct tcttcttct acagcaagct caccgttgac aagagcaggt
660
ggcagcagg gaagcttct tcatgtctcg tgaatgatga ggctctgac aaccataca
720
cgcaagaag ccttcttctg tctccggta aatgactga gcggcgg
767

<210> 99
<211> 767
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 99
aagcttgaat tccaccatg gcttgacct ttgttact gttggcctc ctgtgttca
60
gtcgaagtc aagcttct gtggctgccc caccgtgccc agcactga ctcttgggg
120
ggcctcagt cttcttctt ccccaaac ccaagacac cttcatgac tccgggacc
180
ctgaagtcac atgctgtgtg gtgacgtga gccacgaaga cctgaagtc aagttcaact
240
gttacgttga cggcgttgag gtgcataatg ccaagacaag gccgcgggag gagcagtaca
300
acagcacgtc cgtgtgtgtc agcttcttca cgttcttga ccaagacttg ctgaatggca
360
aggagtacaa gtgcagaagtc tccaacaag ccttccagc ccccatcgag aaaaaccatct
420
ccaagccaa aggcagagccc cgaagaaccac aggtgtacac cttgccccca tccgggagt
480
agctgaccaa gaaccaggtc agcttgacct gcttgttcaa aggtttctat ccagcgaca
540
tcgccttga gtggagagc aatgggagc cgaagaaca ctacaagacc acgcttccg
600
tgttgatc cgaagcttct tcttcttct acagcaagct caccgttgac aagagcaggt
660
ggcagcagg gaagcttct tcatgtctcg tgaatgatga ggctctgac aaccataca
720
cgcaagaag ccttcttctg tctccggta aatgactga gcggcgg
767

<210> 100
<211> 749
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 100
aagcttgaat tccaccatg ctgcttgcca cagttctgac cttggcctg ctgggcaatg
60
cccatgcttg cccacgtgc ccaagacctg aactcctggg ggggacctca gtcttcttct
120

tcccccaaaa acccaaggac accctcatga tctcccgagc ccctgaggtc acatgcgtgg	180
tggtggacgt gagccacgaa gaccctgagg tcaagttcaa ctggtacgtg gacggcgtgg	240
aggtgcataa tgccaagaca aagccgcggg aggagcagta caacagcacg taccgtgtgg	300
tcagcgtcct caccgtcctg caccaggact ggctgaatgg caaggagtac aagtgcaagg	360
tctccaacaa agccctccca gcccctatcg agaaaaccat ctccaaagcc aaagggcagc	420
cccgagaacc acaggtgtac accctgcccc catcccggga tgagctgacc aagaaccagg	480
tcagcctgac ctgcctggtc aaaggcttct atcccagcga catcgccgtg gagtgggaga	540
gcaatgggca gccggagAAC aactacaaga ccacgcctcc cgtgctggac tccgacggct	600
cctttcttct ctacagcaag ctcaccgtgg acaagagcag gtggcagcag gggaacgtct	660
tctcatgctc cgtgatgcat gaggctctgc acaaccacta cagcagaag agcctctccc	720
tgtctccggg taaatgactc gagcggccg	749

<210> 101
 <211> 245
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 101

Met	Leu	Leu	Leu	Ala	Arg	Cys	Leu	Leu	Leu	Val	Leu	Val	Ser	Ser	Leu
1				5						10				15	

Leu	Val	Cys	Ser	Gly	Leu	Ala	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu
			20					25					30		

Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr
		35					40					45			

Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val
	50					55					60				

Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val
65					70					75				80	

Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser
			85						90					95	

Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu
			100					105					110		

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

Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro
	130					135					140				

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
145 150 155 160

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
165 170 175

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
180 185 190

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
195 200 205

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
210 215 220

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
225 230 235 240

Leu Ser Pro Gly Lys
245

<210> 102

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 102

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Pro Pro Cys Pro Ala Pro Glu Leu
20 25 30

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
35 40 45

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
50 55 60

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
65 70 75 80

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
85 90 95

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
100 105 110

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

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
130 135 140

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
145 150 155 160

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
165 170 175

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
180 185 190

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
195 200 205

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
210 215 220

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
225 230 235 240

Leu Ser Pro Gly Lys
245

<210> 103

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 103

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15

Ala Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
20 25 30

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
35 40 45

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
50 55 60

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
65 70 75 80

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
85 90 95

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
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100 105 110
 Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 115 120 125
 Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 130 135 140
 Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 145 150 155 160
 Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 165 170 175
 Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 180 185 190
 Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 195 200 205
 Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 210 215 220
 His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 225 230 235

<210> 104
 <211> 222
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 104

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
 1 5 10 15
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
 20 25 30
 Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
 35 40 45
 Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
 50 55 60
 Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
 65 70 75 80
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
 85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 105

<211> 228

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (1)..(1)

<223> cysteine or selenocysteine

<400> 105

Xaa Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
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85

90

95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 210 215 220

Ser Pro Gly Lys
 225

<210> 106
 <211> 758
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 106
 aagcttgaat tcccaccatg ctgctgctgg cgagatgtct gctgctagtc ctcgtctcct 60
 cgctgctggt atgctcggga ctggcgtgcc cagcacctga actcctgggg gggccctcag 120
 tcttctcttt ccccccaaaa cccaaggaca cctcatgat ctcccggacc cctgaggtca 180
 catgctggtt ggtggacgtg agccacgaag accctgaggt caagttcaac tggtagctgg 240
 acggcgtgga ggtgcataat gccaaagaca agccgcggga ggagcagtag aacagcacgt 300
 accgtgtggt cagcgtcctc accgtcctgc accaggactg gctgaatggc aaggagtaca 360
 agtgcaagggt ctccaacaaa gccctcccag ccccatcga gaaaaccatc tccaaagcca 420
 aagggcagcc ccgagaacca caggtgtaca ccctgcccc atcccgggat gagctgacca 480
 agaaccaggt cagcctgacc tgcctggtca aaggcttcta tcccagcgac atcgccgtgg 540
 agtgggagag caatgggcag ccggagaaca actacaagac cagcctccc gtgctggact 600
 ccgacggctc cttcttctc tacagcaagc tcaccgtgga caagagcagg tggcagcagg 660

ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac acgcagaaga 720
gcctctccct gtctccgggt aaatgactcg agcggccg 758

<210> 107
<211> 758
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 107
aagcttgaat tcccaccatg gccttgacct ttgctttact ggtggccctc ctggtgctca 60
gctgcaagtc aagctgctct gtgggctgcc cagcacctga actcctgggg gggccctcag 120
tcttcctctt ccccccaaaa cccaaggaca ccctcatgat ctcccggacc cctgaggtca 180
catgctgtgt ggtggacgtg agccacgaag accctgaggt caagttcaac tggtagctgg 240
acggcgtgga ggtgcataat gccaagacaa agccgcggga ggagcagtag aacagcacgt 300
accgtgtgtt cagcgtcctc accgtcctgc accaggactg gctgaatggc aaggagtaca 360
agtgcagggt ctccaacaaa gccctcccag ccccatcga gaaaaccatc tccaaagcca 420
aagggcagcc ccgagaacca caggtgtaca ccctgcccc atcccgggat gagctgacca 480
agaaccaggt cagcctgacc tgcctgggtc aaggcttcta tcccagcgac atcgccgtgg 540
agtgggagag caatgggcag ccggagaaca actacaagac cagcctccc gtgctggact 600
ccgacggctc tctcttcctc tacagcaagc tcaccgtgga caagagcagg tggcagcagg 660
ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac acgcagaaga 720
gcctctccct gtctccgggt aaatgactcg agcggccg 758

<210> 108
<211> 740
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 108
aagcttgaat tcccaccatg ctggctgcca cagtcttgac cctggccctg ctgggcaatg 60
cccatgctg cccagcacct gaactcctgg gggggccctc agtcttcctc tccccccaa 120
aaccgaagga caccctcatg atctcccga cccctgaggt cacatgctg gtggtggacg 180
tgagccacga agaccctgag gtcaagttca actggtacgt ggacggcgtg gaggtgcata 240
atgccaagac aaagccgcgg gaggagcagt acaacagcac gtaccgtgtg gtcagcgtcc 300
tcaccgtcct gcaccaggac tggctgaatg gcaaggagta caagtgcagg gtctccaaca 360
aagccctccc agccccatc gagaaaacca tctccaaagc caaagggcag ccccgagaac 420
cacaggtgta caccctgccc ccatcccggg atgagctgac caagaaccag gtcagcctga 480
cctgcctggt caaaggcttc tatcccagcg acatcgccgt ggagtgggag agcaatgggc 540

agccggagaa caactacaag accacgcctc ccgtgctgga ctccgacggc tccttcttcc 600
tctacagcaa gctcaccgtg gacaagagca ggtggcagca ggggaacgtc ttctcatgct 660
ccgtgatgca tgaggctctg cacaaccact acacgcagaa gagcctctcc ctgtctccgg 720
gtaaatgact cgagcggccg 740

<210> 109
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 109

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Pro Ala Pro Glu Leu Leu Gly Gly
20 25 30

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
35 40 45

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
50 55 60

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
65 70 75 80

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
85 90 95

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
100 105 110

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
115 120 125

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
130 135 140

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
145 150 155 160

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
165 170 175

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
180 185 190

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
195 200 205

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
210 215 220

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
225 230 235 240

Gly Lys

<210> 110
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 110

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Pro Ala Pro Glu Leu Leu Gly Gly
20 25 30

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
35 40 45

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
50 55 60

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
65 70 75 80

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
85 90 95

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
100 105 110

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
115 120 125

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
130 135 140

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
145 150 155 160

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
165 170 175

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
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185

190

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 195 200 205

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 210 215 220

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 225 230 235 240

Gly Lys

<210> 111

<211> 236

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 111

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
 1 5 10 15

Ala Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe
 20 25 30

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

Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe
 50 55 60

Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro
 65 70 75 80

Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr
 85 90 95

Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val
 100 105 110

Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala
 115 120 125

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg
 130 135 140

Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
 145 150 155 160

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro
165 170 175

Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser
180 185 190

Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln
195 200 205

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His
210 215 220

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
225 230 235

<210> 112

<211> 219

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 112

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
1 5 10 15

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
20 25 30

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
35 40 45

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
50 55 60

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
65 70 75 80

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
85 90 95

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
100 105 110

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
115 120 125

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

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
145 150 155 160

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
165 170 175

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
180 185 190

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
195 200 205

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215

<210> 113

<211> 222

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (1)..(1)

<223> cysteine or selenocysteine

<400> 113

Xaa Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
165 170 175

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
180 185 190

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
195 200 205

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
210 215 220

<210> 114
<211> 1427
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 114
aagcttgaat tcccaccatg agctttccat gtaaatttgt agccagcttc cttctgattt 60
tcaatgtttc ttccaaaggt gcagtctcca aaactcacac atgcccaccg tgcccagcac 120
ctgaactcct gggggggccc tcagtcttcc tcttcccccc aaaaccaag gacaccctca 180
tgatctcccc gaccctgag gtcacatgcg tgggtggtgga cgtgagccac gaagaccctg 240
aggccaagt caactggtac gtggacggcg tggaggtgca taatgccaag acaaagccgc 300
gggaggagca gtacaacagc acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg 360
actggctgaa tggcaaggag tacaagtgca aggtctccaa caaagccctc ccagccccca 420
tcgagaaaac catctccaaa gccaaagggc agccccgaga accacaggtg tacaccctgc 480
ccccatcccc ggatgagctg accaagaacc aggtcagcct gacctgcctg gtcaaaggct 540
tctatcccag cgacatcgcc gtggagtggg agagcaatgg gcagccggag aacaactaca 600
agaccacgcc tcccgtgctg gactccgacg gctccttctt cctctacagc aagctcaccg 660
tggacaagag cagggtggcag caggggaacg tcttctcatg ctccgtgatg catgaggctc 720
tgcacaacca ctacacgcag aagagcctct cctgtctctc ggagctgcaa ctggaggaga 780
gctgtgcgga ggcgcaggac ggggagctgg acgggtgctg atccggtgac accattgtaa 840
tgactagtgg cggtccgcgc actgtggctg aactggaggg caaaccttc accgcactga 900
ttcgcggtc tggctaccca tgcctctcag gtttcttccg cacctgtgaa cgtgacgtat 960
atgatctgcg tacacgtgag ggtcattgct tacgtttgac ccatgatcac cgtgttctgg 1020
tgatggatgg tggcctggaa tggcgtgccc cgggtgaact ggaacgcggc gaccgcctgg 1080
tgatggatga tgcagctggc gagtttccgg cactggcaac cttccgtggc ctgctggcgg 1140
ctggccgcca ggatgtttat gacgctactg ttacgggtgc tagcgcattc actgctaattg 1200

gcttcattgt acacgcatgt ggcgagcagc ccgggaccgg tctgaactca ggcctcacga	1260
caaatcctgg tgtatccgct tggcaggtca acacagctta tactgcggga caattggtca	1320
catataacgg caagacgtat aaatgtttgc agccccacac ctccttggca ggatgggaac	1380
catccaacgt tcctgccttg tggcagcttc aatgactcga gcggccg	1427

<210> 115
 <211> 1430
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 115	
aagcttgaat tcccaccatg aaccggggag tcccttttag gcacttgctt ctggtgctgc	60
aactggcgct cctcccagca gccactcagg gaaaaactca cacatgccca ccgtgcccag	120
cacctgaact cctggggggg ccctcagtct tcctcttccc cccaaaaccc aaggacaccc	180
tcatgatctc ccggaccctt gaggtcacat gcgtggtggt ggacgtgagc cacgaagacc	240
ctgaggtcaa gttcaactgg tacgtggacg gcgtggaggt gcataatgcc aagacaaagc	300
cgcgggagga gcagtacaac agcacgtacc gtgtggtcag cgtcctcacc gtcctgcacc	360
aggactggct gaatggcaag gagtacaagt gcaaggcttc caacaaagcc ctcccagccc	420
ccatcgagaa aaccatctcc aaagccaaag ggcagccccg agaaccacag gtgtacaccc	480
tgcccccatc ccgggatgag ctgaccaaga accagggtcag cctgacctgc ctggtcaaag	540
gcttctatcc cagcgacatc gccgtggagt gggagagcaa tgggcagccg gagaacaact	600
acaagaccac gcctcccgtg ctggactccg acggctcctt cttcctctac agcaagctca	660
ccgtggacaa gagcagggtg cagcagggga acgtcttctc atgctccgtg atgcatgagg	720
ctctgcacaa ccactacacg cagaagagcc tctccctgtc tccggagctg caactggagg	780
agagctgtgc ggaggcgcag gacggggagc tggacgggtg cgtatccggt gacaccattg	840
taatgactag tggcgggtccg cgcactgtgg ctgaactgga gggcaaaccg ttcaccgcac	900
tgattcgagg ctctgggtac ccatgcccct caggtttctt ccgcacctgt gaacgtgacg	960
tatatgatct gcgtacacgt gaggggtcatt gcttacgttt gacctatgat caccgtgttc	1020
tgggtgatgga tgggtggcctg gaatggcgtg ccgcgggtga actggaacgc ggcgaccgcc	1080
tgggtgatgga tgatgcagct ggcgagtttc cggcactggc aaccttccgt ggcctgcgtg	1140
gcgctggccg ccaggatggt tatgacgcta ctgtttacgg tgctagcgca ttcactgcta	1200
atggcttcat tgtacacgca tgtggcgagc agcccgggac cggctctgaac tcaggcctca	1260
cgacaaatcc tgggtgtatcc gcttggcagg tcaacacagc ttataactgcg ggacaattgg	1320
tcacatataa cggcaagacg tataaatgtt tgcagcccca cacctccttg gcaggatggg	1380
aaccatccaa cgttcctgcc ttgtggcagc ttcaatgact cgagcggccg	1430

<210> 116
 <211> 465

<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 116

Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn
1 5 10 15

Val Ser Ser Lys Gly Ala Val Ser Lys Thr His Thr Cys Pro Pro Cys
20 25 30

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
35 40 45

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
50 55 60

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
65 70 75 80

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
85 90 95

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
100 105 110

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
115 120 125

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
130 135 140

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
145 150 155 160

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
165 170 175

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
180 185 190

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
195 200 205

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
210 215 220

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
225 230 235 240

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
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Met Asn Arg Gly Val Pro Phe Arg His Leu Leu Leu Val Leu Gln Leu
 1 5 10 15
 Ala Leu Leu Pro Ala Ala Thr Gln Gly Lys Thr His Thr Cys Pro Pro
 20 25 30
 Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 35 40 45
 Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 50 55 60
 Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 65 70 75 80
 Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 85 90 95
 Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 100 105 110
 Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 115 120 125
 Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 130 135 140
 Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 145 150 155 160
 Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 165 170 175
 Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 180 185 190
 Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 195 200 205
 Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 210 215 220
 Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 225 230 235 240
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
 245 250 255
 Cys Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Cys Val Ser Gly Asp
 260 265 270

Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu
 Page 122

275

280

285

Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro
 290 295 300

Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr
 305 310 315 320

Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val
 325 330 335

Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly
 340 345 350

Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala
 355 360 365

Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala
 370 375 380

Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His
 385 390 395 400

Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr
 405 410 415

Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly
 420 425 430

Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His
 435 440 445

Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln
 450 455 460

Leu Gln
 465

<210> 118

<211> 441

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<400> 118

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
 1 5 10 15

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 20 25 30

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 35 40 45
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 50 55 60
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 65 70 75 80
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 85 90 95
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 100 105 110
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 115 120 125
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 130 135 140
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 145 150 155 160
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 165 170 175
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 180 185 190
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 195 200 205
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220
 Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly Glu Leu
 225 230 235 240
 Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro
 245 250 255
 Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg
 260 265 270
 Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg
 275 280 285
 Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr
 290 295 300
 His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala
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305 310 315 320

Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala
325 330 335

Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly
340 345 350

Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr
355 360 365

Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly
370 375 380

Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val
385 390 395 400

Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr
405 410 415

Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser
420 425 430

Asn Val Pro Ala Leu Trp Gln Leu Gln
435 440

<210> 119

<211> 242

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> THIOLEST

<222> (242)..(242)

<223> glycine-thioester

<400> 119

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
1 5 10 15

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
20 25 30

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
35 40 45

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
50 55 60

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
65 70 75 80

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 85 90 95
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 100 105 110
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 115 120 125
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 130 135 140
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 145 150 155 160
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 165 170 175
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 180 185 190
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 195 200 205
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220
 Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly Glu Leu
 225 230 235 240

Asp Xaa

<210> 120
 <211> 243
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> MOD_RES
 <222> (243)..(243)
 <223> cysteine or selenocysteine

<400> 120

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
 1 5 10 15

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 20 25 30

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 35 40 45
 Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 50 55 60
 Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 65 70 75 80
 Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 85 90 95
 Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 100 105 110
 Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 115 120 125
 Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 130 135 140
 Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 145 150 155 160
 Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 165 170 175
 Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 180 185 190
 Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
 195 200 205
 Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 210 215 220
 Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly Glu Leu
 225 230 235 240
 Asp Gly Xaa

<210> 121
 <211> 800
 <212> DNA
 <213> Artificial sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 121
 aagcttgaat tcccaccatg agctttccat gtaaatttgt agccagcttc cttctgattt 60

tcaatgtttc ttccaaaggt gcagttctca aaactcacac atgcccaccg tgcccagcac 120
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ctgaactctt gggggggc tcagtcttc tcttcccc aaaaaccgaag gacacccca
tgatctcccg gacccctgaag gtcaacatgctg tgggtgttga cgtgaagccac gaagaccctg
300 aggtccaagt caactgttac gtgaagcgctg tgaaggttga taatgccaaag acaagccgc
360 gggagagaga gtacaacagc agtaaccgtg tggtaagcgt cctcaaccgtc ctgacacag
420 actgctga tggcaaggag tacaagtca agtctcca caaagccctc ccagcccca
480 tcgaaaaac catctcca gccaaggc agcccgaga accaaggtg tacaccctgc
540 ccccatcccg gtagagctg accaagaac aggtcagcct gacctgctg gtcaaggct
600 tctatccag cgacatcgcc gtgaggtgg agagcaatgg gcagccggag aacaactaca
660 agacccagcc tccgtctg gactccgag gctccctt cctctacagc agctcacg
720 tggacaagag cagttggag cagggaacg tcttctcatg ctccgtgatg catgagctc
780 tgacaacca ctacacgag aagacctc cctgtctc ggagctgcaa ctgagagaga
800 gctgttgact cgagcgccg

<210> 122
<211> 803
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 122
aagcttgat tccacatg aacggggag tccctttag gcacttgct ctgtgtctg
60 aactggcgt cctccagga gccactcagg gaaaaactca cacatggcca ccgtgccag
120 caactgaact cctggggggg cctcagct tcccttccc cccaacc aaagacacc
180 tcatgattc ccggacccct gaggtcacat gctgtgtgtg ggaagctgagc caggaagacc
240 ctgaggtcaa gtccaactg tactgtgagc gctgtgaggt gcataatgcc aagacaagc
300 cggggagga gcatgaac agcacgtacc gtgtgtcatg cgtccctacc gtccctgacc
360 aggaactggt gaatggcaag gatacaagt gcaaggtctc caacaagcc ctcacagccc
420 ccatcgagaa aacctctc aaagccaag ggacgcccc agaaccaag gtgtacaccc
480 tgcacccatc ccggatgag ctgaaccaag accaagctag cctgaacctgc ctgttcaaa
540 tgcacccatc ccggatgag ctgaaccaag accaagctag cctgaacctgc ctgttcaaa
600 gcttctacc cagcgacatc gctgtgaggt gctgtgaggt gcataatgcc aagacaagc
660 acaagaacac gccctccgtg ctggaactcg aggtctctt cttctctac agcaagctca
720 ccgtggacaa gagcaggttg cagcaaggga agtcttctc atgctccgtg atgcatgagg
780 ctctgcacaa ccactacag cagaagacc tctccctgtc tccggagctg caactggagg
803 agagctgtg actcgagcg ccg

<210> 123
<211> 256
<212> PRT
<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 123

Met Ser Phe Pro Cys Lys Phe Val Ala Ser Phe Leu Leu Ile Phe Asn
1 5 10 15

Val Ser Ser Lys Gly Ala Val Ser Lys Thr His Thr Cys Pro Pro Cys
20 25 30

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
35 40 45

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
50 55 60

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
65 70 75 80

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
85 90 95

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
100 105 110

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
115 120 125

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
130 135 140

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
145 150 155 160

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
165 170 175

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
180 185 190

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
195 200 205

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
210 215 220

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
225 230 235 240

Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys
245 250 255

<210> 124
 <211> 257
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 124

Met Asn Arg Gly Val Pro Phe Arg His Leu Leu Leu Val Leu Gln Leu
 1 5 10 15

Ala Leu Leu Pro Ala Ala Thr Gln Gly Lys Thr His Thr Cys Pro Pro
 20 25 30

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
 35 40 45

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
 50 55 60

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
 65 70 75 80

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
 85 90 95

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
 100 105 110

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
 115 120 125

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
 130 135 140

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
 145 150 155 160

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
 165 170 175

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
 180 185 190

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 195 200 205

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 210 215 220

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 225 230 235 240

Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
245 250 255

Cys

<210> 125
<211> 232
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 125

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
1 5 10 15

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
20 25 30

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
35 40 45

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
50 55 60

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
65 70 75 80

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
85 90 95

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
100 105 110

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
115 120 125

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
130 135 140

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
145 150 155 160

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
165 170 175

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
180 185 190

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His
195 200 205

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
210 215 220

Glu Leu Gln Leu Glu Glu Ser Cys
225 230

<210> 126

<211> 466

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 126

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Asp Lys Thr His Thr Cys Pro Pro
20 25 30

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
35 40 45

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
50 55 60

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
65 70 75 80

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
85 90 95

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
100 105 110

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
115 120 125

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
130 135 140

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
145 150 155 160

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
165 170 175

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
180 185 190

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
Page 132

195		200		205											
Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly
	210					215					220				
Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr
225					230					235					240
Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Glu	Leu	Gln	Leu	Glu	Glu	Ser
				245					250					255	
Cys	Ala	Glu	Ala	Gln	Asp	Gly	Glu	Leu	Asp	Gly	Cys	Val	Ser	Gly	Asp
			260					265					270		
Thr	Ile	Val	Met	Thr	Ser	Gly	Gly	Pro	Arg	Thr	Val	Ala	Glu	Leu	Glu
		275					280					285			
Gly	Lys	Pro	Phe	Thr	Ala	Leu	Ile	Arg	Gly	Ser	Gly	Tyr	Pro	Cys	Pro
	290					295					300				
Ser	Gly	Phe	Phe	Arg	Thr	Cys	Glu	Arg	Asp	Val	Tyr	Asp	Leu	Arg	Thr
305					310					315					320
Arg	Glu	Gly	His	Cys	Leu	Arg	Leu	Thr	His	Asp	His	Arg	Val	Leu	Val
				325					330					335	
Met	Asp	Gly	Gly	Leu	Glu	Trp	Arg	Ala	Ala	Gly	Glu	Leu	Glu	Arg	Gly
			340					345					350		
Asp	Arg	Leu	Val	Met	Asp	Asp	Ala	Ala	Gly	Glu	Phe	Pro	Ala	Leu	Ala
		355					360					365			
Thr	Phe	Arg	Gly	Leu	Arg	Gly	Ala	Gly	Arg	Gln	Asp	Val	Tyr	Asp	Ala
	370					375					380				
Thr	Val	Tyr	Gly	Ala	Ser	Ala	Phe	Thr	Ala	Asn	Gly	Phe	Ile	Val	His
385					390					395					400
Ala	Cys	Gly	Glu	Gln	Pro	Gly	Thr	Gly	Leu	Asn	Ser	Gly	Leu	Thr	Thr
				405					410					415	
Asn	Pro	Gly	Val	Ser	Ala	Trp	Gln	Val	Asn	Thr	Ala	Tyr	Thr	Ala	Gly
			420					425					430		
Gln	Leu	Val	Thr	Tyr	Asn	Gly	Lys	Thr	Tyr	Lys	Cys	Leu	Gln	Pro	His
		435					440					445			
Thr	Ser	Leu	Ala	Gly	Trp	Glu	Pro	Ser	Asn	Val	Pro	Ala	Leu	Trp	Gln
	450					455					460				
Leu	Gln														
465															

<210> 127
<211> 466
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 127

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15
Lys Ser Ser Cys Ser Val Gly Cys Asp Lys Thr His Thr Cys Pro Pro
20 25 30
Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
35 40 45
Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
50 55 60
Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
65 70 75 80
Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
85 90 95
Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
100 105 110
Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
115 120 125
Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
130 135 140
Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
145 150 155 160
Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
165 170 175
Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
180 185 190
Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
195 200 205
Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
210 215 220
Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
Page 134

225 230 235 240
 Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser
 245 250 255
 Cys Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Cys Val Ser Gly Asp
 260 265 270
 Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu
 275 280 285
 Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro
 290 295 300
 Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr
 305 310 315 320
 Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val
 325 330 335
 Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly
 340 345 350
 Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala
 355 360 365
 Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala
 370 375 380
 Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His
 385 390 395 400
 Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr
 405 410 415
 Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly
 420 425 430
 Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His
 435 440 445
 Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln
 450 455 460
 Leu Gln
 465

<210> 128
 <211> 460
 <212> PRT
 <213> Artificial Sequence
 <220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 128

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15
Ala Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
20 25 30
Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
35 40 45
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
50 55 60
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
65 70 75 80
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
85 90 95
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
100 105 110
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
115 120 125
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
130 135 140
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
145 150 155 160
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
165 170 175
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
180 185 190
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
195 200 205
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
210 215 220
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
225 230 235 240
Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp
245 250 255
Gly Glu Leu Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser
Page 136

260

265

270

Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala
 275 280 285

Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr
 290 295 300

Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu
 305 310 315 320

Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu
 325 330 335

Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp
 340 345 350

Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg
 355 360 365

Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser
 370 375 380

Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro
 385 390 395 400

Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala
 405 410 415

Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn
 420 425 430

Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp
 435 440 445

Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
 450 455 460

<210> 129

<211> 443

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<400> 129

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
 1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
225 230 235 240

Glu Leu Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly
245 250 255

Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu
260 265 270

Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys
275 280 285

Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg
290 295 300

Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp
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305 310 315 320

Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp
325 330 335

Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly
340 345 350

Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala
355 360 365

Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly
370 375 380

Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp
385 390 395 400

Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly
405 410 415

Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu
420 425 430

Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
435 440

<210> 130

<211> 244

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> THIOLEST

<222> (244)..(244)

<223> glycine-thioester

<400> 130

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220

Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
225 230 235 240

Glu Leu Asp Xaa

<210> 131
<211> 245
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (245)..(245)
<223> cysteine or selenocysteine

<400> 131

Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 35 40 45
 His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
 50 55 60
 Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
 65 70 75 80
 Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 85 90 95
 Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 100 105 110
 Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 115 120 125
 Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
 130 135 140
 Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 145 150 155 160
 Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 165 170 175
 Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 180 185 190
 Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 195 200 205
 Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 210 215 220
 Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
 225 230 235 240
 Glu Leu Asp Gly Xaa
 245

<210> 132
 <211> 460
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 132

Met Leu Leu Leu Ala Arg Cys Leu Leu Leu Val Leu Val Ser Ser Leu
 1 5 10 15

Leu Val Cys Ser Gly Leu Ala Cys Pro Pro Cys Pro Ala Pro Glu Leu
 20 25 30
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
 35 40 45
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
 50 55 60
 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
 65 70 75 80
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 85 90 95
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 100 105 110
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
 115 120 125
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 130 135 140
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
 145 150 155 160
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 165 170 175
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 180 185 190
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 195 200 205
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
 210 215 220
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 225 230 235 240
 Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp
 245 250 255
 Gly Glu Leu Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser
 260 265 270
 Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala
 275 280 285

Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr
290 295 300

Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu
305 310 315 320

Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu
325 330 335

Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp
340 345 350

Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg
355 360 365

Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser
370 375 380

Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro
385 390 395 400

Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala
405 410 415

Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn
420 425 430

Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp
435 440 445

Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
450 455 460

<210> 133

<211> 460

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 133

Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
1 5 10 15

Lys Ser Ser Cys Ser Val Gly Cys Pro Pro Cys Pro Ala Pro Glu Leu
20 25 30

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
35 40 45

Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
50 55 60

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
 65 70 75 80
 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
 85 90 95
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
 100 105 110
 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
 115 120 125
 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
 130 135 140
 Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
 145 150 155 160
 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
 165 170 175
 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
 180 185 190
 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
 195 200 205
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
 210 215 220
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
 225 230 235 240
 Leu Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp
 245 250 255
 Gly Glu Leu Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser
 260 265 270
 Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala
 275 280 285
 Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr
 290 295 300
 Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu
 305 310 315 320
 Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu
 325 330 335

Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp
340 345 350

Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg
355 360 365

Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser
370 375 380

Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro
385 390 395 400

Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala
405 410 415

Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn
420 425 430

Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp
435 440 445

Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
450 455 460

<210> 134

<211> 454

<212> PRT

<213> Artificial Sequence

<220> *Protein*

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 134

Met Leu Ala Ala Thr Val Leu Thr Leu Ala Leu Leu Gly Asn Ala His
1 5 10 15

Ala Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
20 25 30

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
35 40 45

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
50 55 60

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
65 70 75 80

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
85 90 95

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
100 105 110

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
 115 120 125
 Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
 130 135 140
 Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
 145 150 155 160
 Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn
 165 170 175
 Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
 180 185 190
 Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
 195 200 205
 Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
 210 215 220
 His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln
 225 230 235 240
 Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Cys
 245 250 255
 Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val
 260 265 270
 Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly
 275 280 285
 Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr
 290 295 300
 Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His
 305 310 315 320
 Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu
 325 330 335
 Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe
 340 345 350
 Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp
 355 360 365
 Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly
 370 375 380

Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser
385 390 395 400

Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala
405 410 415

Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys
420 425 430

Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro
435 440 445

Ala Leu Trp Gln Leu Gln
450

<210> 135

<211> 437

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<400> 135

Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe
1 5 10 15

Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro
20 25 30

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val
35 40 45

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr
50 55 60

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val
65 70 75 80

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys
85 90 95

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser
100 105 110

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro
115 120 125

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val
130 135 140

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

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
 165 170 175
 Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp
 180 185 190
 Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His
 195 200 205
 Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Glu Leu Gln Leu
 210 215 220
 Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly Glu Leu Asp Gly Cys Val
 225 230 235 240
 Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala
 245 250 255
 Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr
 260 265 270
 Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp
 275 280 285
 Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg
 290 295 300
 Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu
 305 310 315 320
 Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro
 325 330 335
 Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val
 340 345 350
 Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe
 355 360 365
 Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly
 370 375 380
 Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr
 385 390 395 400
 Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu
 405 410 415
 Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala
 420 425 430

Leu Trp Gln Leu Gln
435

<210> 136
<211> 443
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> cysteine or selenocysteine

<400> 136

Xaa Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205
Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
210 215 220
Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
225 230 235 240
Glu Leu Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly
245 250 255
Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu
260 265 270
Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys
275 280 285
Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg
290 295 300
Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp
305 310 315 320
Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp
325 330 335
Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly
340 345 350
Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala
355 360 365
Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly
370 375 380
Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp
385 390 395 400
Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly
405 410 415
Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu
420 425 430
Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
435 440

<210> 137
<211> 244
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (1)..(1)
<223> cysteine or selenocysteine

<220>
<221> THIOLEST
<222> (244)..(244)
<223> glycine-thioester

<400> 137

Xaa Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
145 150 155 160

Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
165 170 175

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
180 185 190

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
195 200 205

Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
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210

215

220

Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
 225 230 235 240

Glu Leu Asp Xaa

<210> 138

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (1)..(1)

<223> cysteine or selenocysteine

<220>

<221> MOD_RES

<222> (245)..(245)

<223> cysteine or selenocysteine

<400> 138

Xaa Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu
 1 5 10 15

Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
 20 25 30

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser
 35 40 45

His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu
 50 55 60

Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr
 65 70 75 80

Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn
 85 90 95

Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro
 100 105 110

Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln
 115 120 125

Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val
 130 135 140

Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val
 Page 152

145 150 155 160
 Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro
 165 170 175
 Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
 180 185 190
 Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
 195 200 205
 Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
 210 215 220
 Ser Pro Glu Leu Gln Leu Glu Glu Ser Cys Ala Glu Ala Gln Asp Gly
 225 230 235 240
 Glu Leu Asp Gly Xaa
 245

<210> 139
 <211> 1820
 <212> DNA
 <213> Artificial sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 139
 aagcttgaat tcccaccatg aaccggggag tcccttttag gcacttgctt ctggtgctgc 60
 aactggcgct cctcccagca gccactcagg gaaagaaagt ggtgctgggc aaaaaagggg 120
 atacagtga actgacctgt acagcttccc agaagaagag catacaattc cactggaaaa 180
 actccaacca gataaagatt ctgggaaatc agggctcctt cttaactaaa ggtccatcca 240
 agctgaatga tcgcgctgac tcaagaagaa gcctttggga ccaaggaaac ttccccctga 300
 tcatcaagaa tcttaagata gaagactcag atactttacat ctgtgaagtg gaggaccaga 360
 aggaggaggt gcaattgcta gtgttcggat tgactgccaa ctctgacacc cacctgcttc 420
 aggggcagag cctgaccctg accttgaga gccccctgg tagtagcccc tcagtgaat 480
 gtaggagtcc aaggggtaaa aacatacagg gggggaagac cctctccgtg tctcagctgg 540
 agtccagga tagtggcacc tggacatgca ctgtcttgca gaaccagaag aaggtggagt 600
 tcaaaataga catcgtggtg ctagctttcc agaaggcctc cagcatagtc tataagaaag 660
 agggggaaca ggtggagttc tccttccac tcgcctttac agttgaaaag ctgacgggca 720
 gtggcgagct gtggtggcag gcggagaggg cttcctcctc caagtcttgg atcaccttg 780
 acctgaagaa caaggaagtg tctgtaaaac gggttacca ggaccctaag ctccagatgg 840
 gcaagaagct cccgctccac ctaccctgc cccaggcctt gcctcagtat gctggctctg 900
 gaaacctcac cctggccctt gaagcgaaaa caggaaagt gcacaggaa gtgaacctgg 960
 tggatgatgag agccactcag ctccagaaaa atttgacctg tgaggtgtgg ggaccacct 1020

cccctaagct gatgctgagc ttgaaactgg agaacaagga ggcaaaggtc tcgaagcggg 1080
 agaaggcggg gtgggtgctg aaccctgagg cggggatgtg gcagtgtctg ctgagtgact 1140
 cgggacaggt cctgctggaa tccaacatca aggttctgcc cacatggtcc accccggcgc 1200
 agccaggggtg cgtatccggg gacaccattg taatgactag tggcgggccc cgcactgtgg 1260
 ctgaactgga gggcaaaccg ttcaccgcac tgattcgagg ctctggctac ccatgcccct 1320
 caggtttctt ccgcacctgt gaacgtgacg tatatgatct gcgtacacgt gagggtcatt 1380
 gcttacgttt gacctatgat caccgtgttc tggatgatga tggcggcctg gaatggcgtg 1440
 ccgcgggtga actggaacgc ggcgaccgcc tggatgatga tgatgcagct ggcgagtttc 1500
 cggcactggc aaccttcctg ggcctgcgtg gcgctggccg ccaggatgtt tatgacgcta 1560
 ctgtttacgg tgctagcgca ttcactgcta atggcttcat tgtacacgca tgtggcgagc 1620
 agcccggggac cgggtctgaac tcaggcctca cgacaaatcc tgggtgtatcc gcttggcagg 1680
 tcaacacagc ttatactgcg ggacaattgg tcacatataa cggcaagacg tataaatgtt 1740
 tgcagcccca cacctccttg gcaggatggg aaccatccaa cgttcctgcc ttgtggcagc 1800
 ttcaatgact cgagcggccg 1820

<210> 140
 <211> 596
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 140

Met Asn Arg Gly Val Pro Phe Arg His Leu Leu Leu Val Leu Gln Leu
 1 5 10 15

Ala Leu Leu Pro Ala Ala Thr Gln Gly Lys Lys Val Val Leu Gly Lys
 20 25 30

Lys Gly Asp Thr Val Glu Leu Thr Cys Thr Ala Ser Gln Lys Lys Ser
 35 40 45

Ile Gln Phe His Trp Lys Asn Ser Asn Gln Ile Lys Ile Leu Gly Asn
 50 55 60

Gln Gly Ser Phe Leu Thr Lys Gly Pro Ser Lys Leu Asn Asp Arg Ala
 65 70 75 80

Asp Ser Arg Arg Ser Leu Trp Asp Gln Gly Asn Phe Pro Leu Ile Ile
 85 90 95

Lys Asn Leu Lys Ile Glu Asp Ser Asp Thr Tyr Ile Cys Glu Val Glu
 100 105 110

Asp Gln Lys Glu Glu Val Gln Leu Leu Val Phe Gly Leu Thr Ala Asn

115

120

125

Ser Asp Thr His Leu Leu Gln Gly Gln Ser Leu Thr Leu Thr Leu Glu
 130 135 140

Ser Pro Pro Gly Ser Ser Pro Ser Val Gln Cys Arg Ser Pro Arg Gly
 145 150 155 160

Lys Asn Ile Gln Gly Gly Lys Thr Leu Ser Val Ser Gln Leu Glu Leu
 165 170 175

Gln Asp Ser Gly Thr Trp Thr Cys Thr Val Leu Gln Asn Gln Lys Lys
 180 185 190

Val Glu Phe Lys Ile Asp Ile Val Val Leu Ala Phe Gln Lys Ala Ser
 195 200 205

Ser Ile Val Tyr Lys Lys Glu Gly Glu Gln Val Glu Phe Ser Phe Pro
 210 215 220

Leu Ala Phe Thr Val Glu Lys Leu Thr Gly Ser Gly Glu Leu Trp Trp
 225 230 235 240

Gln Ala Glu Arg Ala Ser Ser Ser Lys Ser Trp Ile Thr Phe Asp Leu
 245 250 255

Lys Asn Lys Glu Val Ser Val Lys Arg Val Thr Gln Asp Pro Lys Leu
 260 265 270

Gln Met Gly Lys Lys Leu Pro Leu His Leu Thr Leu Pro Gln Ala Leu
 275 280 285

Pro Gln Tyr Ala Gly Ser Gly Asn Leu Thr Leu Ala Leu Glu Ala Lys
 290 295 300

Thr Gly Lys Leu His Gln Glu Val Asn Leu Val Val Met Arg Ala Thr
 305 310 315 320

Gln Leu Gln Lys Asn Leu Thr Cys Glu Val Trp Gly Pro Thr Ser Pro
 325 330 335

Lys Leu Met Leu Ser Leu Lys Leu Glu Asn Lys Glu Ala Lys Val Ser
 340 345 350

Lys Arg Glu Lys Ala Val Trp Val Leu Asn Pro Glu Ala Gly Met Trp
 355 360 365

Gln Cys Leu Leu Ser Asp Ser Gly Gln Val Leu Leu Glu Ser Asn Ile
 370 375 380

Lys Val Leu Pro Thr Trp Ser Thr Pro Val Gln Pro Gly Cys Val Ser
 385 390 395 400

Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu
405 410 415

Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro
420 425 430

Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu
435 440 445

Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val
450 455 460

Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu
465 470 475 480

Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala
485 490 495

Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr
500 505 510

Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile
515 520 525

Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu
530 535 540

Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr
545 550 555 560

Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln
565 570 575

Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu
580 585 590

Trp Gln Leu Gln
595

<210> 141

<211> 571

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 141

Lys Lys Val Val Leu Gly Lys Lys Gly Asp Thr Val Glu Leu Thr Cys
1 5 10 15

Thr Ala Ser Gln Lys Lys Ser Ile Gln Phe His Trp Lys Asn Ser Asn
Page 156

20

25

30

Gln Ile Lys Ile Leu Gly Asn Gln Gly Ser Phe Leu Thr Lys Gly Pro
 35 40 45

Ser Lys Leu Asn Asp Arg Ala Asp Ser Arg Arg Ser Leu Trp Asp Gln
 50 55 60

Gly Asn Phe Pro Leu Ile Ile Lys Asn Leu Lys Ile Glu Asp Ser Asp
 65 70 75 80

Thr Tyr Ile Cys Glu Val Glu Asp Gln Lys Glu Glu Val Gln Leu Leu
 85 90 95

Val Phe Gly Leu Thr Ala Asn Ser Asp Thr His Leu Leu Gln Gly Gln
 100 105 110

Ser Leu Thr Leu Thr Leu Glu Ser Pro Pro Gly Ser Ser Pro Ser Val
 115 120 125

Gln Cys Arg Ser Pro Arg Gly Lys Asn Ile Gln Gly Gly Lys Thr Leu
 130 135 140

Ser Val Ser Gln Leu Glu Leu Gln Asp Ser Gly Thr Trp Thr Cys Thr
 145 150 155 160

Val Leu Gln Asn Gln Lys Lys Val Glu Phe Lys Ile Asp Ile Val Val
 165 170 175

Leu Ala Phe Gln Lys Ala Ser Ser Ile Val Tyr Lys Lys Glu Gly Glu
 180 185 190

Gln Val Glu Phe Ser Phe Pro Leu Ala Phe Thr Val Glu Lys Leu Thr
 195 200 205

Gly Ser Gly Glu Leu Trp Trp Gln Ala Glu Arg Ala Ser Ser Ser Lys
 210 215 220

Ser Trp Ile Thr Phe Asp Leu Lys Asn Lys Glu Val Ser Val Lys Arg
 225 230 235 240

Val Thr Gln Asp Pro Lys Leu Gln Met Gly Lys Lys Leu Pro Leu His
 245 250 255

Leu Thr Leu Pro Gln Ala Leu Pro Gln Tyr Ala Gly Ser Gly Asn Leu
 260 265 270

Thr Leu Ala Leu Glu Ala Lys Thr Gly Lys Leu His Gln Glu Val Asn
 275 280 285

Leu Val Val Met Arg Ala Thr Gln Leu Gln Lys Asn Leu Thr Cys Glu
 290 295 300

Val Trp Gly Pro Thr Ser Pro Lys Leu Met Leu Ser Leu Lys Leu Glu
 305 310 315 320
 Asn Lys Glu Ala Lys Val Ser Lys Arg Glu Lys Ala Val Trp Val Leu
 325 330 335
 Asn Pro Glu Ala Gly Met Trp Gln Cys Leu Leu Ser Asp Ser Gly Gln
 340 345 350
 Val Leu Leu Glu Ser Asn Ile Lys Val Leu Pro Thr Trp Ser Thr Pro
 355 360 365
 Val Gln Pro Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly
 370 375 380
 Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu
 385 390 395 400
 Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys
 405 410 415
 Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg
 420 425 430
 Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp
 435 440 445
 Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp
 450 455 460
 Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly
 465 470 475 480
 Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala
 485 490 495
 Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly
 500 505 510
 Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp
 515 520 525
 Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly
 530 535 540
 Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu
 545 550 555 560
 Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
 565 570

<210> 142
 <211> 372
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> THIOLEST
 <222> (372)..(372)
 <223> glycine-thioester

<400> 142

Lys Lys Val Val Leu Gly Lys Lys Gly Asp Thr Val Glu Leu Thr Cys
 1 5 10 15

Thr Ala Ser Gln Lys Lys Ser Ile Gln Phe His Trp Lys Asn Ser Asn
 20 25 30

Gln Ile Lys Ile Leu Gly Asn Gln Gly Ser Phe Leu Thr Lys Gly Pro
 35 40 45

Ser Lys Leu Asn Asp Arg Ala Asp Ser Arg Arg Ser Leu Trp Asp Gln
 50 55 60

Gly Asn Phe Pro Leu Ile Ile Lys Asn Leu Lys Ile Glu Asp Ser Asp
 65 70 75 80

Thr Tyr Ile Cys Glu Val Glu Asp Gln Lys Glu Glu Val Gln Leu Leu
 85 90 95

Val Phe Gly Leu Thr Ala Asn Ser Asp Thr His Leu Leu Gln Gly Gln
 100 105 110

Ser Leu Thr Leu Thr Leu Glu Ser Pro Pro Gly Ser Ser Pro Ser Val
 115 120 125

Gln Cys Arg Ser Pro Arg Gly Lys Asn Ile Gln Gly Gly Lys Thr Leu
 130 135 140

Ser Val Ser Gln Leu Glu Leu Gln Asp Ser Gly Thr Trp Thr Cys Thr
 145 150 155 160

Val Leu Gln Asn Gln Lys Lys Val Glu Phe Lys Ile Asp Ile Val Val
 165 170 175

Leu Ala Phe Gln Lys Ala Ser Ser Ile Val Tyr Lys Lys Glu Gly Glu
 180 185 190

Gln Val Glu Phe Ser Phe Pro Leu Ala Phe Thr Val Glu Lys Leu Thr
 195 200 205

Gly Ser Gly Glu Leu Trp Trp Gln Ala Glu Arg Ala Ser Ser Ser Lys
210 215 220

Ser Trp Ile Thr Phe Asp Leu Lys Asn Lys Glu Val Ser Val Lys Arg
225 230 235 240

Val Thr Gln Asp Pro Lys Leu Gln Met Gly Lys Lys Leu Pro Leu His
245 250 255

Leu Thr Leu Pro Gln Ala Leu Pro Gln Tyr Ala Gly Ser Gly Asn Leu
260 265 270

Thr Leu Ala Leu Glu Ala Lys Thr Gly Lys Leu His Gln Glu Val Asn
275 280 285

Leu Val Val Met Arg Ala Thr Gln Leu Gln Lys Asn Leu Thr Cys Glu
290 295 300

Val Trp Gly Pro Thr Ser Pro Lys Leu Met Leu Ser Leu Lys Leu Glu
305 310 315 320

Asn Lys Glu Ala Lys Val Ser Lys Arg Glu Lys Ala Val Trp Val Leu
325 330 335

Asn Pro Glu Ala Gly Met Trp Gln Cys Leu Leu Ser Asp Ser Gly Gln
340 345 350

Val Leu Leu Glu Ser Asn Ile Lys Val Leu Pro Thr Trp Ser Thr Pro
355 360 365

Val Gln Pro Xaa
370

<210> 143

<211> 373

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (373)..(373)

<223> cysteine or selenocysteine

<400> 143

Lys Lys Val Val Leu Gly Lys Lys Gly Asp Thr Val Glu Leu Thr Cys
1 5 10 15

Thr Ala Ser Gln Lys Lys Ser Ile Gln Phe His Trp Lys Asn Ser Asn
20 25 30

Gln Ile Lys Ile Leu Gly Asn Gln Gly Ser Phe Leu Thr Lys Gly Pro
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35

40

45

Ser Lys Leu Asn Asp Arg Ala Asp Ser Arg Arg Ser Leu Trp Asp Gln
50 55 60

Gly Asn Phe Pro Leu Ile Ile Lys Asn Leu Lys Ile Glu Asp Ser Asp
65 70 75 80

Thr Tyr Ile Cys Glu Val Glu Asp Gln Lys Glu Glu Val Gln Leu Leu
85 90 95

Val Phe Gly Leu Thr Ala Asn Ser Asp Thr His Leu Leu Gln Gly Gln
100 105 110

Ser Leu Thr Leu Thr Leu Glu Ser Pro Pro Gly Ser Ser Pro Ser Val
115 120 125

Gln Cys Arg Ser Pro Arg Gly Lys Asn Ile Gln Gly Gly Lys Thr Leu
130 135 140

Ser Val Ser Gln Leu Glu Leu Gln Asp Ser Gly Thr Trp Thr Cys Thr
145 150 155 160

Val Leu Gln Asn Gln Lys Lys Val Glu Phe Lys Ile Asp Ile Val Val
165 170 175

Leu Ala Phe Gln Lys Ala Ser Ser Ile Val Tyr Lys Lys Glu Gly Glu
180 185 190

Gln Val Glu Phe Ser Phe Pro Leu Ala Phe Thr Val Glu Lys Leu Thr
195 200 205

Gly Ser Gly Glu Leu Trp Trp Gln Ala Glu Arg Ala Ser Ser Ser Lys
210 215 220

Ser Trp Ile Thr Phe Asp Leu Lys Asn Lys Glu Val Ser Val Lys Arg
225 230 235 240

Val Thr Gln Asp Pro Lys Leu Gln Met Gly Lys Lys Leu Pro Leu His
245 250 255

Leu Thr Leu Pro Gln Ala Leu Pro Gln Tyr Ala Gly Ser Gly Asn Leu
260 265 270

Thr Leu Ala Leu Glu Ala Lys Thr Gly Lys Leu His Gln Glu Val Asn
275 280 285

Leu Val Val Met Arg Ala Thr Gln Leu Gln Lys Asn Leu Thr Cys Glu
290 295 300

Val Trp Gly Pro Thr Ser Pro Lys Leu Met Leu Ser Leu Lys Leu Glu
305 310 315 320

Asn Lys Glu Ala Lys Val Ser Lys Arg Glu Lys Ala Val Trp Val Leu
 325 330 335

Asn Pro Glu Ala Gly Met Trp Gln Cys Leu Leu Ser Asp Ser Gly Gln
 340 345 350

Val Leu Leu Glu Ser Asn Ile Lys Val Leu Pro Thr Trp Ser Thr Pro
 355 360 365

Val Gln Pro Gly Xaa
 370

<210> 144
 <211> 1364
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 144
 aagcttgaat tcccaccatg gcttggggtgt ggaccttgct tttcctgatg gcagctgccc 60
 aaagtatcca agcacagatc cagttgggtcc agtctggacc tgagctgaag aagcctggag 120
 agacagtcaa gatctcctgc aaggcttcag gatatacctt cacacactat ggaatgaact 180
 ggggtgaagca ggctccagga aagggtttta agtggatggg ctggataaac acctacactg 240
 gagagccaac atatgctgat gacttcaagg aacactttgc cttctctttg gaaacctctg 300
 ccagcactgt ctttttgtag atcaacaacc tcaaaaatga ggacacggcc acatatttct 360
 gtgcaagaga acggggggat gctatggact actgggggtca gggaacctcc gtcaccgtct 420
 cctcagcctc caccaagggg ccatcggtct tccccctggc accctcctcc aagagcacct 480
 ctggggggcac agcggccctg ggctgcctgg tcaaggacta cttccccgaa ccggtgacgg 540
 tgtcgtggaa ctcaggcgcc ctgaccagcg gcgtgcacac cttcccggtc gtcctacagt 600
 cctcaggact ctactccctc agcagcgtgg tgaccgtgcc ctccagcagc ttgggcaccc 660
 agacctacat ctgcaacgtg aatcacaagc ccagcaacac caaggtggac aagaaagttg 720
 agcccaaadc ttgtgacaaa actcacacag ggtgcgtatc cgggtgacacc attgtaatga 780
 ctagtggcgg gccccgcact gtggctgaac tggagggcaa accggtcacc gcaactgattc 840
 gcggctctgg ctacctatgc ccctcaggtt tcttccgcac ctgtgaacgt gacgtatatg 900
 atctgcgtac acgtgagggg cattgcttac gtttgaccca tgatcaccgt gttctggtga 960
 tggatggtgg cctggaatgg cgtgcccgcg gtgaactgga acgcggcgac cgcctggtga 1020
 tggatgatgc agctggcgag tttccggcac tggcaacctt ccgtggcctg cgtggcgctg 1080
 gccgccagga tgtttatgac gctactgttt acggtgctag cgcattcact gctaattggct 1140
 tcattgtaca cgcattgtgg gagcagcccg ggaccgggtc gaactcaggc ctcacgacaa 1200
 atcctggtgt atccgcttgg caggtcaaca cagcttatac tgcgggacaa ttggtcacat 1260

ataacggcaa gacgtataaa tgtttgcagc cccacacctc cttggcagga tgggaaccat 1320
ccaacgttcc tgccttgtgg cagcttcaat gactcgagcg gccg 1364

<210> 145
<211> 444
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 145

Met Ala Trp Val Trp Thr Leu Leu Phe Leu Met Ala Ala Ala Gln Ser
1 5 10 15

Ile Gln Ala 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 Thr Phe
35 40 45

Thr His Tyr Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu
50 55 60

Lys Trp Met Gly Trp Ile Asn Thr Tyr Thr Gly Glu Pro Thr Tyr Ala
65 70 75 80

Asp Asp Phe Lys Glu His Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser
85 90 95

Thr Val Phe Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr
100 105 110

Tyr Phe Cys Ala Arg Glu Arg Gly Asp Ala Met Asp Tyr Trp Gly Gln
115 120 125

Gly Thr Ser Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val
130 135 140

Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala
145 150 155 160

Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser
165 170 175

Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val
180 185 190

Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro
195 200 205

Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys
210 215 220

Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
225 230 235 240

Lys Thr His Thr Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser
245 250 255

Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala
260 265 270

Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr
275 280 285

Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu
290 295 300

Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu
305 310 315 320

Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp
325 330 335

Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg
340 345 350

Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser
355 360 365

Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro
370 375 380

Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala
385 390 395 400

Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn
405 410 415

Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp
420 425 430

Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
435 440

<210> 146
<211> 425
<212> PRT
<213> Artificial sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 146

Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
Page 164

1 5 10 15
 Thr Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr His Tyr
 20 25 30
 Gly Met Asn Trp Val Lys Gln Ala Pro Gly Lys Gly Leu Lys Trp Met
 35 40 45
 Gly Trp Ile Asn Thr Tyr Thr Gly Glu Pro Thr Tyr Ala Asp Asp Phe
 50 55 60
 Lys Glu His Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Val Phe
 65 70 75 80
 Leu Gln Ile Asn Asn Leu Lys Asn Glu Asp Thr Ala Thr Tyr Phe Cys
 85 90 95
 Ala Arg Glu Arg Gly Asp Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
 100 105 110
 Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
 115 120 125
 Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
 130 135 140
 Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
 145 150 155 160
 Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
 165 170 175
 Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
 180 185 190
 Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
 195 200 205
 Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
 210 215 220
 Thr Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro
 225 230 235 240
 Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg
 245 250 255
 Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg
 260 265 270
 Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr
 275 280 285

His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala
290 295 300

Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala
305 310 315 320

Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly
325 330 335

Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr
340 345 350

Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly
355 360 365

Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val
370 375 380

Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr
385 390 395 400

Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser
405 410 415

Asn Val Pro Ala Leu Trp Gln Leu Gln
420 425

<210> 147
<211> 226
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> THIOLEST
<222> (226)..(226)
<223> glycine-thioester

<400> 147

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

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

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

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

Lys Glu His Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Val Phe
65 70 75 80

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

Ala Arg Glu Arg Gly Asp Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
210 215 220

Thr Xaa
225

<210> 148
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (227)..(227)
<223> cysteine or selenocysteine

<400> 148

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

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

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

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

Lys Glu His Phe Ala Phe Ser Leu Glu Thr Ser Ala Ser Thr Val Phe
65 70 75 80

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

Ala Arg Glu Arg Gly Asp Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser
100 105 110

Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu
115 120 125

Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys
130 135 140

Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser
145 150 155 160

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

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser
180 185 190

Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn
195 200 205

Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His
210 215 220

Thr Gly Xaa
225

<210> 149
<211> 731
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 149
aagcttgaat tcccaccatg aagtcacaga cccaggtctt cgtatttcta ctgctctgtg 60
tgtctggtgc tcatgggagt attgtgatga cccagactcc caaattcctg cttgtatcag 120
caggagacag ggttaccata acctgcacgg ccagtcagag tgtgagtaat gatgtagttt 180
ggtaccaaca gaagccaggg cagtctccta aaatgctgat gtattctgca ttcaatcgct 240

acactggagt ccctgatcgt ttacttgga gaggatacgg gacggatttc actttcacca 300
tcagctctgt gcaggctgaa gacctggcag tttatttctg tcagcaggat tataactctc 360
ctcggacgtt cgggtggaggc accaagctgg agatcaaacg aactgtggct gcaccatctg 420
tcttcatctt cccgccatct gatgagcagt tgaaatctgg aactgcctct gttgtgtgcc 480
tgctgaataa cttctatccc agagaggcca aagtacagtg gaagggtgat aacgccctcc 540
aatcgggtaa ctcccaggag agtgtcacag agcaggacag caaggacagc acctacagcc 600
tcagcagcac cctgacgctg agcaaagcag actacgagaa acacaaagtc tacgcctgcg 660
aagtcaccca tcagggcctg agctcgcccg tcacaaagag cttcaacagg ggagagtgtt 720
agtgactcga g 731

<210> 150
<211> 234
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 150

Met Lys Ser Gln Thr Gln Val Phe Val Phe Leu Leu Leu Cys Val Ser
1 5 10 15

Gly Ala His Gly Ser Ile Val Met Thr Gln Thr Pro Lys Phe Leu Leu
20 25 30

Val Ser Ala Gly Asp Arg Val Thr Ile Thr Cys Thr Ala Ser Gln Ser
35 40 45

Val Ser Asn Asp Val Val Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro
50 55 60

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

Arg Phe Thr Gly Arg Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser
85 90 95

Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Phe Cys Gln Gln Asp Tyr
100 105 110

Asn Ser Pro Arg 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

<210> 151

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 151

Ser Ile Val Met Thr Gln Thr Pro Lys Phe Leu Leu Val Ser Ala Gly
1 5 10 15

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

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

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

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

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala
100 105 110

Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly
115 120 125

Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala
130 135 140

Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
145 150 155 160

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser
165 170 175

Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr
180 185 190

Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser
195 200 205

Phe Asn Arg Gly Glu Cys
210

<210> 152
<211> 1268
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 152
aagcttgaat tcccaccatg ggccctctcca ccgtgcctga cctgctgctg ccgctggtgc 60
tcctggagct gttggtggga atatacccct caggggttat tggactggtc cctcacctag 120
gggacagggga gaagagagat agtgtgtgtc cccaaggaaa atatatccac cctcaaaata 180
attcgatttg ctgtaccaag tgccacaaag gaacctactt gtacaatgac tgtccaggcc 240
cggggcgagga tacggactgc agggagtgtg agagcggctc cttcaccgct tcagaaaacc 300
acctcagaca ctgcctcagc tgctccaaat gccgaaagga aatgggtcag gtggagatct 360
cttcttgcac agtggaccgg gacaccgtgt gtggctgcag gaagaaccag taccggcatt 420
attggagtga aaaccttttc cagtgttca attgcagcct ctgcctcaat gggaccgtgc 480
acctctcctg ccaggagaaa cagaacaccg tgtgcacctg ccatgcaggt ttctttctaa 540
gagaaaacga gtgtgtctcc tgtagtaact gtaagaaaag cctggagtgc acgaagttgt 600
gcctaccca gattgagaat gttaagggca ctgaggactc aggaccaca gtggggtgcg 660
tatccggtga caccattgta atgactagtg gcgggccccg cactgtggct gaactggagg 720
gcaaaccgtt caccgcactg attcgcggct ctggctaccc atgcccctca ggtttcttcc 780
gcacctgtga acgtgacgta tatgatctgc gtacacgtga gggtcattgc ttacgtttga 840
cccatgatca ccgtgttctg gtgatggatg gtggcctgga atggcgtgcc gcgggtgaac 900
tggaacgcgg cgaccgcctg gtgatggatg atgcagctgg cgagtttccg gcaactggcaa 960
ccttccgtgg cctgcgtggc gctggccgcc aggatgttta tgacgtact gtttacggtg 1020
ctagcgcatt cactgctaata ggcttcattg tacacgcatt tggcgagcag cccgggaccg 1080
gtctgaactc aggcctcacg acaaatcctg gtgtatccgc ttggcaggtc aacacagctt 1140
atactgcggg acaattgggtc acatataacg gcaagacgta taaatgtttg cagccccaca 1200
cctccttggc aggatgggaa ccatccaacg ttctgcctt gtggcagctt caatgactcg 1260
agcggccg 1268

<210> 153
<211> 411
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 153

Met Gly Leu Ser Thr Val Pro Asp Leu Leu Leu Pro Leu Val Leu Leu
1 5 10 15

Glu Leu Leu Val Gly Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro
20 25 30

His Leu Gly Asp Arg Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys
35 40 45

Tyr Ile His Pro Gln Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys
50 55 60

Gly Thr Tyr Leu Tyr Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp
65 70 75 80

Cys Arg Glu Cys Glu Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu
85 90 95

Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val
100 105 110

Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg
115 120 125

Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe
130 135 140

Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu
145 150 155 160

Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu
165 170 175

Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr
180 185 190

Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser
195 200 205

Gly Thr Thr Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly
210 215 220

Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu
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225 230 235 240

Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg
260 265 270

Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp
275 280 285

Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp
290 295 300

Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly
305 310 315 320

Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala
325 330 335

Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly
340 345 350

Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp
355 360 365

Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly
370 375 380

Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu
385 390 395 400

Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
405 410

<210>	154
<211>	390
<212>	PRT
<213>	Artificial sequence

Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg
1 5 10 15

Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln
20 25 30

Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr
35 40 45

Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu
50 55 60

Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser
65 70 75 80

Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys
85 90 95

Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg
100 105 110

His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys
115 120 125

Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val
130 135 140

Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser
145 150 155 160

Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro
165 170 175

Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr Gly Cys
180 185 190

Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val
195 200 205

Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly
210 215 220

Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr
225 230 235 240

Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His
245 250 255

Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu
260 265 270

Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe
275 280 285

Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp
290 295 300

Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly
305 310 315 320

Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser
Page 174

325

330

335

Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala
 340 345 350

Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys
 355 360 365

Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro
 370 375 380

Ala Leu Trp Gln Leu Gln
 385 390

<210> 155

<211> 191

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> THIOLEST

<222> (191)..(191)

<223> glycine-thioester

<400> 155

Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg
 1 5 10 15

Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln
 20 25 30

Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr
 35 40 45

Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu
 50 55 60

Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser
 65 70 75 80

Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys
 85 90 95

Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg
 100 105 110

His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys
 115 120 125

Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val
 130 135 140

Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser
145 150 155 160

Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro
165 170 175

Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Thr Xaa
180 185 190

<210> 156
<211> 192
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (192)..(192)
<223> glycine-thioester

<400> 156

Ile Tyr Pro Ser Gly Val Ile Gly Leu Val Pro His Leu Gly Asp Arg
1 5 10 15

Glu Lys Arg Asp Ser Val Cys Pro Gln Gly Lys Tyr Ile His Pro Gln
20 25 30

Asn Asn Ser Ile Cys Cys Thr Lys Cys His Lys Gly Thr Tyr Leu Tyr
35 40 45

Asn Asp Cys Pro Gly Pro Gly Gln Asp Thr Asp Cys Arg Glu Cys Glu
50 55 60

Ser Gly Ser Phe Thr Ala Ser Glu Asn His Leu Arg His Cys Leu Ser
65 70 75 80

Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val Glu Ile Ser Ser Cys
85 90 95

Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg Lys Asn Gln Tyr Arg
100 105 110

His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe Asn Cys Ser Leu Cys
115 120 125

Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu Lys Gln Asn Thr Val
130 135 140

Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu Asn Glu Cys Val Ser
145 150 155 160

Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr Lys Leu Cys Leu Pro
165 170 175

Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser Gly Thr Gly Xaa
180 185 190

<210> 157
<211> 1403
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<210> 158
<211> 457

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120
agccgggag cacatggccg ctcaagaaat actatgacca gacagctcag atgtgtctgca
180
gcaaatgtc gccggcccaa catgcaaaa tcttctgtac caagacctg gacaccgtgt
240
gtgactcctg tgaagacagc acatacacc agctcttgaa ctggttccc gagtgtctga
300
gtgtgtgtc ccgtgttagc tctgaaccag tggaaatca agcctgcact cgggaacaga
360
accgcattc cacctgcagg ccggtctgt actgcgcgt gagcaagcag gagggtgtgc
420
ggctgtgccc gccgtctgc aagtgccgc ccggtctgg cgtgtccgg ctaggaactg
480
aaacatcaga cgtgtgtgc aagccctgtg cccggggac gtctccaac acgacttcac
540
ccaaggatat ttgcaggccc caccagatct gtaacgtgtt ggcattccct ggaatgcaa
600
gcatgtagc agctgtgacg tccaggtccc ccaaccggag tatgtcccga ggggcagtac
660
actaaccca gccagtgtc acagatccc aacacagca gccaatcca gaaccacaga
720
ctgtccaag caccctctc ctgtccaac tgggcccaa ccccccagc gaaggagca
780
ctggcgacgg gtgcgtatcc gtgacacca tgytaatgac tagtggcgg cccgcactg
840
tggctgaact ggaaggcaaa ccgttcaccc cactgtatcg cggctctgg taccacatgc
900
cctcaggttt cttccgacc tgtgaacgtg acgtatatga tctgcgtaca cgtgaaggctc
960
attgcttacg ttgaacccat gatcacccgt tctgtgtgat ggaatgtggc ctggaatggc
1020
gtgcgcgggg tgaacttgaa cgcgcgcgac gccctgtgat ggaatgacga gctggcggat
1080
ttccggcact ggcaacctc cgtgcctcg gtggcgtcg ccgccaggat gttatgacg
1140
ctaactgtta cgtgtctagc gcattcactg ctaatgtctt catgtacac gcatgtggc
1200
agcagcccg gaccgtctg aactcaggc tcacgacaaa tccgtgtga tccgcttggc
1260
aggtcaacac agcttatac gcgggaacaat tgytcacata taacggcaag acgtataaat
1320
gtttgcagcc ccaacacctc ttgcaggat gggaacacac caacgttctt gcccttggc
1380
agcttcaatg actcgaagcgg ccg

<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 158

Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu
1 5 10 15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr
20 25 30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln
35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys
50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp
65 70 75 80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys
85 90 95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg
100 105 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu
115 120 125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg
130 135 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val
145 150 155 160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr
165 170 175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly
180 185 190

Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser
195 200 205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser
210 215 220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser
225 230 235 240

Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly
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245 250 255
 Asp Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro
 260 265 270
 Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg
 275 280 285
 Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg
 290 295 300
 Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr
 305 310 315 320
 His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala
 325 330 335
 Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala
 340 345 350
 Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly
 355 360 365
 Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr
 370 375 380
 Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly
 385 390 395 400
 Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val
 405 410 415
 Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr
 420 425 430
 Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser
 435 440 445
 Asn Val Pro Ala Leu Trp Gln Leu Gln
 450 455

<210> 159
 <211> 435
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

 <400> 159
 Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr Ala Pro Glu Pro Gly Ser
 1 5 10 15

Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys
20 25 30

Ser Lys Cys Ser Pro Gly Gln His Ala Lys Val Phe Cys Thr Lys Thr
35 40 45

Ser Asp Thr Val Cys Asp Ser Cys Glu Asp Ser Thr Tyr Thr Gln Leu
50 55 60

Trp Asn Trp Val Pro Glu Cys Leu Ser Cys Gly Ser Arg Cys Ser Ser
65 70 75 80

Asp Gln Val Glu Thr Gln Ala Cys Thr Arg Glu Gln Asn Arg Ile Cys
85 90 95

Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu Ser Lys Gln Glu Gly Cys
100 105 110

Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg Pro Gly Phe Gly Val Ala
115 120 125

Arg Pro Gly Thr Glu Thr Ser Asp Val Val Cys Lys Pro Cys Ala Pro
130 135 140

Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr Asp Ile Cys Arg Pro His
145 150 155 160

Gln Ile Cys Asn Val Val Ala Ile Pro Gly Asn Ala Ser Met Asp Ala
165 170 175

Val Cys Thr Ser Thr Ser Pro Thr Arg Ser Met Ala Pro Gly Ala Val
180 185 190

His Leu Pro Gln Pro Val Ser Thr Arg Ser Gln His Thr Gln Pro Thr
195 200 205

Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser Phe Leu Leu Pro Met Gly
210 215 220

Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly Asp Gly Cys Val Ser Gly
225 230 235 240

Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu
245 250 255

Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys
260 265 270

Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg
275 280 285

Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val Leu
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290

295

300

Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg
305 310 315 320

Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu
325 330 335

Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp
340 345 350

Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val
355 360 365

His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr
370 375 380

Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala
385 390 395 400

Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro
405 410 415

His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp
420 425 430

Gln Leu Gln
435

<210> 160
<211> 236
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> THIOLEST
<222> (236)..(236)
<223> glycine-thioester

<400> 160

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

Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys
20 25 30

Ser Lys Cys Ser Pro Gly Gln His Ala Lys Val Phe Cys Thr Lys Thr
35 40 45

Ser Asp Thr Val Cys Asp Ser Cys Glu Asp Ser Thr Tyr Thr Gln Leu
50 55 60

Trp Asn Trp Val Pro Glu Cys Leu Ser Cys Gly Ser Arg Cys Ser Ser
65 70 75 80

Asp Gln Val Glu Thr Gln Ala Cys Thr Arg Glu Gln Asn Arg Ile Cys
85 90 95

Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu Ser Lys Gln Glu Gly Cys
100 105 110

Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg Pro Gly Phe Gly Val Ala
115 120 125

Arg Pro Gly Thr Glu Thr Ser Asp Val Val Cys Lys Pro Cys Ala Pro
130 135 140

Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr Asp Ile Cys Arg Pro His
145 150 155 160

Gln Ile Cys Asn Val Val Ala Ile Pro Gly Asn Ala Ser Met Asp Ala
165 170 175

Val Cys Thr Ser Thr Ser Pro Thr Arg Ser Met Ala Pro Gly Ala Val
180 185 190

His Leu Pro Gln Pro Val Ser Thr Arg Ser Gln His Thr Gln Pro Thr
195 200 205

Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser Phe Leu Leu Pro Met Gly
210 215 220

Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly Asp Xaa
225 230 235

<210> 161

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (237)..(237)

<223> cysteine or selenocysteine

<400> 161

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

Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys
20 25 30

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

<210> 162
 <211> 1499
 <212> DNA
 <213> Artificial sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 162
 aagcttgaat tcccaccatg ggcgccgtcg ccgtctgggc cgcgctggcc gtcggactgg 60
 agctctgggc tgcggcgac gccttgcccg ccaggtggc atttacacc tacgccccg 120
 agccccggag cacatgccg ctcagagaat actatgacca gacagctcag atgtgctgca 180
 gcaaatgctc gccgggcca catgcaaaag tcttctgtac caagacctg gacaccgtgt 240

gtgactcctg tgaggacagc acatacaccc agctctggaa ctgggttccc gagtgcttga 300
 gctgtggctc ccgctgtagc tctgaccagg tggaaactca agcctgcact cgggaacaga 360
 accgcatctg cacctgcagg cccggctggt actgcgcgct gagcaagcag gaggggtgcc 420
 ggctgtgctg gccgctgctg aagtgccgcc cgggcttcgg cgtggccaga ccaggaactg 480
 aaacatcaga cgtggtgtgc aagccctgtg ccccggggac gttctccaac acgacttcat 540
 ccacggatat ttgcaggccc caccagatct gtaacgtggt ggccatccct gggaatgcaa 600
 gcatggatgc agtctgcacg tccacgtccc ccaccggag tatggcccca ggggcagtac 660
 acttacccca gccagtgtcc acacgatccc aacacacgca gccaaactca gaaccagca 720
 ctgctccaag cacctccttc ctgctcccaa tgggccccag cccccagct gaaggagca 780
 ctggcgacga gccc aaatct tgtgacaaa ctacacatg cccaccgtgc ccagcacctg 840
 aactcctggg gggggcctca gtcttctct tcccccaaa acccaaggac accctcatga 900
 tctcccgac ccctgaggtc acatgcgtgg tgggtggacgt gagccacgaa gacctgagg 960
 tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 1020
 aggagcagta caacagcacg taccgtgtgg tcagcgtcct caccgtcctg caccaggact 1080
 ggctgaatgg caaggagtac aagtgaagg tctccaacaa agccctccca gccccatcg 1140
 agaaaaccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 1200
 catcccgga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 1260
 atcccagcga catcgccgtg gagggggaga gcaatgggca gccggagaac aactacaaga 1320
 ccacgcctcc cgtgctggac tccgacggct cttcttctct ctacagcaag ctcaccgtgg 1380
 acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 1440
 acaaccacta cacgcagaag agcctctccc tgtctccggg taaatgactc gagcggccg 1499

<210> 163
 <211> 489
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 163

Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu
 1 5 10 15

Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr
 20 25 30

Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln
 35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys
 50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp
 65 70 75 80
 Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys
 85 90 95
 Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg
 100 105 110
 Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu
 115 120 125
 Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg
 130 135 140
 Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val
 145 150 155 160
 Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr
 165 170 175
 Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly
 180 185 190
 Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser
 195 200 205
 Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser
 210 215 220
 Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser
 225 230 235 240
 Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly
 245 250 255
 Asp Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
 260 265 270
 Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
 275 280 285
 Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val
 290 295 300
 Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr
 305 310 315 320
 Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu
 325 330 335

Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His
340 345 350

Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
355 360 365

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln
370 375 380

Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu
385 390 395 400

Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro
405 410 415

Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn
420 425 430

Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu
435 440 445

Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val
450 455 460

Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln
465 470 475 480

Lys Ser Leu Ser Leu Ser Pro Gly Lys
485

<210> 164

<211> 467

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 164

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

Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln Thr Ala Gln Met Cys Cys
20 25 30

Ser Lys Cys Ser Pro Gly Gln His Ala Lys Val Phe Cys Thr Lys Thr
35 40 45

Ser Asp Thr Val Cys Asp Ser Cys Glu Asp Ser Thr Tyr Thr Gln Leu
50 55 60

Trp Asn Trp Val Pro Glu Cys Leu Ser Cys Gly Ser Arg Cys Ser Ser
65 70 75 80

Asp Gln Val Glu Thr Gln Ala Cys Thr Arg Glu Gln Asn Arg Ile Cys
 85 90 95

Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu Ser Lys Gln Glu Gly Cys
 100 105 110

Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg Pro Gly Phe Gly Val Ala
 115 120 125

Arg Pro Gly Thr Glu Thr Ser Asp Val Val Cys Lys Pro Cys Ala Pro
 130 135 140

Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr Asp Ile Cys Arg Pro His
 145 150 155 160

Gln Ile Cys Asn Val Val Ala Ile Pro Gly Asn Ala Ser Met Asp Ala
 165 170 175

Val Cys Thr Ser Thr Ser Pro Thr Arg Ser Met Ala Pro Gly Ala Val
 180 185 190

His Leu Pro Gln Pro Val Ser Thr Arg Ser Gln His Thr Gln Pro Thr
 195 200 205

Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser Phe Leu Leu Pro Met Gly
 210 215 220

Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly Asp 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

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

<210> 165
 <211> 2906
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 165
 aagcttgaat tcccaccatg gtcagctact gggacaccgg ggtcctgctg tgcgcgctgc 60
 tcagctgtct gcttctcaca ggatctagtt cagggttcaaa attaaaagat cctgaactga 120
 gtttaaaaagg caccacgac atcatgcaag caggccagac actgcatctc caatgcaggg 180
 gggaagcagc ccataaatgg tctttgcctg aaatgggtgag taaggaaagc gaaaggctga 240
 gcataactaa atctgcctgt ggaagaaatg gcaaacaatt ctgcagtact ttaaccttga 300
 acacagctca agcaaaccac actggcttct acagctgcaa atatctagct gtacctactt 360
 caaagaagaa ggaaacagaa tctgcaatct atatatttat tagtgataca ggtagacctt 420
 tcgtagagat gtacagtga atccccgaaa ttatacacat gactgaagga agggagctcg 480
 tcattccctg ccgggttacg tcacctaaca tcaactgttac tttaaaaaag tttccacttg 540
 acactttgat ccctgatgga aaacgcataa tctgggacag tagaaagggc ttcacatat 600
 caaatgcaac gtacaaagaa atagggttct tgacctgtga agcaacagtc aatgggcatt 660
 tgtataagac aaactatctc acacatcgac aaaccaatac aatcatagat gtccaaataa 720
 gcacaccacg cccagtcaaa ttacttagag gccatactct tgtcctcaat tgtactgcta 780
 ccactccctt gaacacgaga gttcaaatga cctggagtta ccctgatgaa aaaaataaga 840

gagcttccgt aaggcgacga attgaccaaa gcaattccca tgcacaata ttctaagtg
 900
 ttcttactat tgacaataag acaagaagact ttatacttgt cgtgtaaggaa
 960
 gtggaccatc attcaaatct gttaacacct cagtgcatat atagataaa gcattcata
 1020
 ctgtgaaca tcgaaaaacag caggtgtcttg aaaccgtagc tggcaagcgg tcttaaccggc
 1080
 tctctatgaa agtgaaggca ttccctcgc cgggaagttgt atggttaaaa gatgggttac
 1140
 ctgcgactga gaaatctgtc cgtatattga ctctgtgcta ctggttaatt atcaaggacg
 1200
 taactgaaga ggatgcaggg aattatataa tcttgcctgag cataaaaacag tcaaatgtgt
 1260
 ttaaaaaact catgccact ctaattgtca atgtgaaaac ccagatttac gaaaaggccg
 1320
 tgtcatcgtt tcagaaaccg gctctctacc catctggcag cagaacaatc ctgacttgta
 1380
 ccgatatg tatccctcaa cctacaatac agtgttcttg gcaaccctgt aaccataatc
 1440
 attccgaagc aaggtgtgac ttgtttcca ataataaga gtcctttatc ctgtagctg
 1500
 acgaacaacat gggaacaaga atgagagca tcactcagcg catggcaata atagaaggaa
 1560
 agaataagat ggtacgacc ttggttggg ctgacctag aatttctgga atctacattt
 1620
 gcatagcttc caataaagtt gggaacttgg gaagaaacat tagcttttat atcacagatg
 1680
 tggcaaatgg gtttcatgtt aacttggaaa aaatgccgac ggaaggagag gacctgaaa
 1740
 tgttctgac agttaacaag ttcttataca gagacgttac ttggaattta ctgcggacag
 1800
 ttaataacag aacaatgcac tacagtata gcaagcaaaa aatggccatc actaaggagc
 1860
 actccatcac tcttaattt accatcatga atgtttccct gcaagattca ggcacctatg
 1920
 cctgcagagc caggaattga tacacagggg aagaaatcct ccagaagaaa gaaattacaa
 1980
 tcagagatca ggaagcacca tacttccctg gaaacctcag tgcatacaca gtggccatca
 2040
 gcagtccac cactttagac tgtcatgcta atgtgttccc cgaagcctcag atcaattgtg
 2100
 ttaaaaaaca ccaaaaaata caacaagagc ctggaattat tttaggaacca ggaagcagca
 2160
 cgtgttttat tgaagagtc acgaagaggg atgaaggtgt ctatcactgc aaagccacca
 2220
 accgaaggg ctctgtgaaa agttcagcat acctcactgt tcaaggaaac tcgacaaggt
 2280
 ctaacttgga ggggtgcgta tccgttgaca ccatgttaat gactagtggc gggcccccga
 2340
 ctgtgtcga actggaaggc aaaccgttca ccgacatgat tcgcggctct ggtatacccat
 2400
 gccccacag ttcttccgc accgttgaaac gtgacgtata tgaatctgcgt acaagtgagg
 2460
 gtcattgtct acgtttgacc catgatccac gtgttcttgg gatggatgtgt ggcctggaaat
 2520
 ggcgttccgc ggttgaaact gaaacgcggc accgccttgg gatggatgat gcaagctggcg
 2580
 agtttccgc actggcaaac ttccgtggcc tgcgttggcg tggcggccag gatgtttatg
 2640
 acgtactgt ttacgttgtt agcgcattca ctgctaattg cttaattgta cagcagatgtg
 2700
 gcaagcagcc cgggaaccgt ctgaacctcag gccacaagac aaatccctgt gtataccgtt
 2760
 ggcaggttcaa cagacttat actgcgggac aattgtgtac atataacggc aagacgtata
 2820
 aatgtttgca gcccacac tcttggcag gatgggaaac atccaacgtt cctgcccgtg
 2880
 ggcagcttca atgactcag cggccg

<210> 166
<211> 958
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo sapiens immunoglobulin
<400> 166

Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu Leu Ser
1 5 10 15

Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Ser Lys Leu Lys Asp Pro
20 25 30

Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr
35 40 45

Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro
50 55 60

Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala
65 70 75 80

Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr
85 90 95

Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val
100 105 110

Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile
115 120 125

Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
130 135 140

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
145 150 155 160

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
165 170 175

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
180 185 190

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
195 200 205

Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
210 215 220

Gln Thr Asn Thr Ile Ile Asp Val Gln Ile Ser Thr Pro Arg Pro Val
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225 230 235 240
 Lys Leu Leu Arg Gly His Thr Leu Val Leu Asn Cys Thr Ala Thr Thr
 245 250 255
 Pro Leu Asn Thr Arg Val Gln Met Thr Trp Ser Tyr Pro Asp Glu Lys
 260 265 270
 Asn Lys Arg Ala Ser Val Arg Arg Arg Ile Asp Gln Ser Asn Ser His
 275 280 285
 Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile Asp Lys Met Gln Asn Lys
 290 295 300
 Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg Ser Gly Pro Ser Phe Lys
 305 310 315 320
 Ser Val Asn Thr Ser Val His Ile Tyr Asp Lys Ala Phe Ile Thr Val
 325 330 335
 Lys His Arg Lys Gln Gln Val Leu Glu Thr Val Ala Gly Lys Arg Ser
 340 345 350
 Tyr Arg Leu Ser Met Lys Val Lys Ala Phe Pro Ser Pro Glu Val Val
 355 360 365
 Trp Leu Lys Asp Gly Leu Pro Ala Thr Glu Lys Ser Ala Arg Tyr Leu
 370 375 380
 Thr Arg Gly Tyr Ser Leu Ile Ile Lys Asp Val Thr Glu Glu Asp Ala
 385 390 395 400
 Gly Asn Tyr Thr Ile Leu Leu Ser Ile Lys Gln Ser Asn Val Phe Lys
 405 410 415
 Asn Leu Thr Ala Thr Leu Ile Val Asn Val Lys Pro Gln Ile Tyr Glu
 420 425 430
 Lys Ala Val Ser Ser Phe Pro Asp Pro Ala Leu Tyr Pro Leu Gly Ser
 435 440 445
 Arg Gln Ile Leu Thr Cys Thr Ala Tyr Gly Ile Pro Gln Pro Thr Ile
 450 455 460
 Lys Trp Phe Trp His Pro Cys Asn His Asn His Ser Glu Ala Arg Cys
 465 470 475 480
 Asp Phe Cys Ser Asn Asn Glu Glu Ser Phe Ile Leu Asp Ala Asp Ser
 485 490 495
 Asn Met Gly Asn Arg Ile Glu Ser Ile Thr Gln Arg Met Ala Ile Ile
 500 505 510

Glu Gly Lys Asn Lys Met Ala Ser Thr Leu Val Val Ala Asp Ser Arg
 515 520 525
 Ile Ser Gly Ile Tyr Ile Cys Ile Ala Ser Asn Lys Val Gly Thr Val
 530 535 540
 Gly Arg Asn Ile Ser Phe Tyr Ile Thr Asp Val Pro Asn Gly Phe His
 545 550 555 560
 Val Asn Leu Glu Lys Met Pro Thr Glu Gly Glu Asp Leu Lys Leu Ser
 565 570 575
 Cys Thr Val Asn Lys Phe Leu Tyr Arg Asp Val Thr Trp Ile Leu Leu
 580 585 590
 Arg Thr Val Asn Asn Arg Thr Met His Tyr Ser Ile Ser Lys Gln Lys
 595 600 605
 Met Ala Ile Thr Lys Glu His Ser Ile Thr Leu Asn Leu Thr Ile Met
 610 615 620
 Asn Val Ser Leu Gln Asp Ser Gly Thr Tyr Ala Cys Arg Ala Arg Asn
 625 630 635 640
 Val Tyr Thr Gly Glu Glu Ile Leu Gln Lys Lys Glu Ile Thr Ile Arg
 645 650 655
 Asp Gln Glu Ala Pro Tyr Leu Leu Arg Asn Leu Ser Asp His Thr Val
 660 665 670
 Ala Ile Ser Ser Ser Thr Thr Leu Asp Cys His Ala Asn Gly Val Pro
 675 680 685
 Glu Pro Gln Ile Thr Trp Phe Lys Asn Asn His Lys Ile Gln Gln Glu
 690 695 700
 Pro Gly Ile Ile Leu Gly Pro Gly Ser Ser Thr Leu Phe Ile Glu Arg
 705 710 715 720
 Val Thr Glu Glu Asp Glu Gly Val Tyr His Cys Lys Ala Thr Asn Gln
 725 730 735
 Lys Gly Ser Val Glu Ser Ser Ala Tyr Leu Thr Val Gln Gly Thr Ser
 740 745 750
 Asp Lys Ser Asn Leu Glu Gly Cys Val Ser Gly Asp Thr Ile Val Met
 755 760 765
 Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe
 770 775 780

Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe
785 790 795 800

Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His
805 810 815

Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly
820 825 830

Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val
835 840 845

Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly
850 855 860

Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly
865 870 875 880

Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu
885 890 895

Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val
900 905 910

Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr
915 920 925

Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala
930 935 940

Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
945 950 955

<210> 167

<211> 932

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 167

Ser Lys Leu Lys Asp Pro Glu Leu Ser Leu Lys Gly Thr Gln His Ile
1 5 10 15

Met Gln Ala Gly Gln Thr Leu His Leu Gln Cys Arg Gly Glu Ala Ala
20 25 30

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

Ser Ile Thr Lys Ser Ala Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser
50 55 60

Thr Leu Thr Leu Asn Thr Ala Gln Ala Asn His Thr Gly Phe Tyr Ser
 65 70 75 80
 Cys Lys Tyr Leu Ala Val Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser
 85 90 95
 Ala Ile Tyr Ile Phe Ile Ser Asp Thr Gly Arg Pro Phe Val Glu Met
 100 105 110
 Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu Leu
 115 120 125
 Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu Lys
 130 135 140
 Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp
 145 150 155 160
 Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile
 165 170 175
 Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys Thr
 180 185 190
 Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln Ile
 195 200 205
 Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val Leu
 210 215 220
 Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr Trp
 225 230 235 240
 Ser Tyr Pro Asp Glu Lys Asn Lys Arg Ala Ser Val Arg Arg Arg Ile
 245 250 255
 Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile
 260 265 270
 Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg
 275 280 285
 Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr Asp
 290 295 300
 Lys Ala Phe Ile Thr Val Lys His Arg Lys Gln Gln Val Leu Glu Thr
 305 310 315 320
 Val Ala Gly Lys Arg Ser Tyr Arg Leu Ser Met Lys Val Lys Ala Phe
 325 330 335

Pro Ser Pro Glu Val Val Trp Leu Lys Asp Gly Leu Pro Ala Thr Glu
 340 345 350
 Lys Ser Ala Arg Tyr Leu Thr Arg Gly Tyr Ser Leu Ile Ile Lys Asp
 355 360 365
 Val Thr Glu Glu Asp Ala Gly Asn Tyr Thr Ile Leu Leu Ser Ile Lys
 370 375 380
 Gln Ser Asn Val Phe Lys Asn Leu Thr Ala Thr Leu Ile Val Asn Val
 385 390 395 400
 Lys Pro Gln Ile Tyr Glu Lys Ala Val Ser Ser Phe Pro Asp Pro Ala
 405 410 415
 Leu Tyr Pro Leu Gly Ser Arg Gln Ile Leu Thr Cys Thr Ala Tyr Gly
 420 425 430
 Ile Pro Gln Pro Thr Ile Lys Trp Phe Trp His Pro Cys Asn His Asn
 435 440 445
 His Ser Glu Ala Arg Cys Asp Phe Cys Ser Asn Asn Glu Glu Ser Phe
 450 455 460
 Ile Leu Asp Ala Asp Ser Asn Met Gly Asn Arg Ile Glu Ser Ile Thr
 465 470 475 480
 Gln Arg Met Ala Ile Ile Glu Gly Lys Asn Lys Met Ala Ser Thr Leu
 485 490 495
 Val Val Ala Asp Ser Arg Ile Ser Gly Ile Tyr Ile Cys Ile Ala Ser
 500 505 510
 Asn Lys Val Gly Thr Val Gly Arg Asn Ile Ser Phe Tyr Ile Thr Asp
 515 520 525
 Val Pro Asn Gly Phe His Val Asn Leu Glu Lys Met Pro Thr Glu Gly
 530 535 540
 Glu Asp Leu Lys Leu Ser Cys Thr Val Asn Lys Phe Leu Tyr Arg Asp
 545 550 555 560
 Val Thr Trp Ile Leu Leu Arg Thr Val Asn Asn Arg Thr Met His Tyr
 565 570 575
 Ser Ile Ser Lys Gln Lys Met Ala Ile Thr Lys Glu His Ser Ile Thr
 580 585 590
 Leu Asn Leu Thr Ile Met Asn Val Ser Leu Gln Asp Ser Gly Thr Tyr
 595 600 605

Ala Cys Arg Ala Arg Asn Val Tyr Thr Gly Glu Glu Ile Leu Gln Lys
610 615 620

Lys Glu Ile Thr Ile Arg Asp Gln Glu Ala Pro Tyr Leu Leu Arg Asn
625 630 635 640

Leu Ser Asp His Thr Val Ala Ile Ser Ser Ser Thr Thr Leu Asp Cys
645 650 655

His Ala Asn Gly Val Pro Glu Pro Gln Ile Thr Trp Phe Lys Asn Asn
660 665 670

His Lys Ile Gln Gln Glu Pro Gly Ile Ile Leu Gly Pro Gly Ser Ser
675 680 685

Thr Leu Phe Ile Glu Arg Val Thr Glu Glu Asp Glu Gly Val Tyr His
690 695 700

Cys Lys Ala Thr Asn Gln Lys Gly Ser Val Glu Ser Ser Ala Tyr Leu
705 710 715 720

Thr Val Gln Gly Thr Ser Asp Lys Ser Asn Leu Glu Gly Cys Val Ser
725 730 735

Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu
740 745 750

Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro
755 760 765

Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu
770 775 780

Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val
785 790 795 800

Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu
805 810 815

Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala
820 825 830

Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr
835 840 845

Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile
850 855 860

Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu
865 870 875 880

Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr
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885

890

895

Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln
 900 905 910

Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu
 915 920 925

Trp Gln Leu Gln
 930

<210> 168
 <211> 733
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> THIOLEST
 <222> (733)..(733)
 <223> glycine-thioester

<400> 168

Ser Lys Leu Lys Asp Pro Glu Leu Ser Leu Lys Gly Thr Gln His Ile
 1 5 10 15

Met Gln Ala Gly Gln Thr Leu His Leu Gln Cys Arg Gly Glu Ala Ala
 20 25 30

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

Ser Ile Thr Lys Ser Ala Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser
 50 55 60

Thr Leu Thr Leu Asn Thr Ala Gln Ala Asn His Thr Gly Phe Tyr Ser
 65 70 75 80

Cys Lys Tyr Leu Ala Val Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser
 85 90 95

Ala Ile Tyr Ile Phe Ile Ser Asp Thr Gly Arg Pro Phe Val Glu Met
 100 105 110

Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu Leu
 115 120 125

Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu Lys
 130 135 140

Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp
 145 150 155 160

Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile
165 170 175

Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys Thr
180 185 190

Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln Ile
195 200 205

Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val Leu
210 215 220

Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr Trp
225 230 235 240

Ser Tyr Pro Asp Glu Lys Asn Lys Arg Ala Ser Val Arg Arg Arg Ile
245 250 255

Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile
260 265 270

Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg
275 280 285

Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr Asp
290 295 300

Lys Ala Phe Ile Thr Val Lys His Arg Lys Gln Gln Val Leu Glu Thr
305 310 315 320

Val Ala Gly Lys Arg Ser Tyr Arg Leu Ser Met Lys Val Lys Ala Phe
325 330 335

Pro Ser Pro Glu Val Val Trp Leu Lys Asp Gly Leu Pro Ala Thr Glu
340 345 350

Lys Ser Ala Arg Tyr Leu Thr Arg Gly Tyr Ser Leu Ile Ile Lys Asp
355 360 365

Val Thr Glu Glu Asp Ala Gly Asn Tyr Thr Ile Leu Leu Ser Ile Lys
370 375 380

Gln Ser Asn Val Phe Lys Asn Leu Thr Ala Thr Leu Ile Val Asn Val
385 390 395 400

Lys Pro Gln Ile Tyr Glu Lys Ala Val Ser Ser Phe Pro Asp Pro Ala
405 410 415

Leu Tyr Pro Leu Gly Ser Arg Gln Ile Leu Thr Cys Thr Ala Tyr Gly
420 425 430

Ile Pro Gln Pro Thr Ile Lys Trp Phe Trp His Pro Cys Asn His Asn
 435 440 445
 His Ser Glu Ala Arg Cys Asp Phe Cys Ser Asn Asn Glu Glu Ser Phe
 450 455 460
 Ile Leu Asp Ala Asp Ser Asn Met Gly Asn Arg Ile Glu Ser Ile Thr
 465 470 475 480
 Gln Arg Met Ala Ile Ile Glu Gly Lys Asn Lys Met Ala Ser Thr Leu
 485 490 495
 Val Val Ala Asp Ser Arg Ile Ser Gly Ile Tyr Ile Cys Ile Ala Ser
 500 505 510
 Asn Lys Val Gly Thr Val Gly Arg Asn Ile Ser Phe Tyr Ile Thr Asp
 515 520 525
 Val Pro Asn Gly Phe His Val Asn Leu Glu Lys Met Pro Thr Glu Gly
 530 535 540
 Glu Asp Leu Lys Leu Ser Cys Thr Val Asn Lys Phe Leu Tyr Arg Asp
 545 550 555 560
 Val Thr Trp Ile Leu Leu Arg Thr Val Asn Asn Arg Thr Met His Tyr
 565 570 575
 Ser Ile Ser Lys Gln Lys Met Ala Ile Thr Lys Glu His Ser Ile Thr
 580 585 590
 Leu Asn Leu Thr Ile Met Asn Val Ser Leu Gln Asp Ser Gly Thr Tyr
 595 600 605
 Ala Cys Arg Ala Arg Asn Val Tyr Thr Gly Glu Glu Ile Leu Gln Lys
 610 615 620
 Lys Glu Ile Thr Ile Arg Asp Gln Glu Ala Pro Tyr Leu Leu Arg Asn
 625 630 635 640
 Leu Ser Asp His Thr Val Ala Ile Ser Ser Ser Thr Thr Leu Asp Cys
 645 650 655
 His Ala Asn Gly Val Pro Glu Pro Gln Ile Thr Trp Phe Lys Asn Asn
 660 665 670
 His Lys Ile Gln Gln Glu Pro Gly Ile Ile Leu Gly Pro Gly Ser Ser
 675 680 685
 Thr Leu Phe Ile Glu Arg Val Thr Glu Glu Asp Glu Gly Val Tyr His
 690 695 700

Cys Lys Ala Thr Asn Gln Lys Gly Ser Val Glu Ser Ser Ala Tyr Leu
705 710 715 720

Thr Val Gln Gly Thr Ser Asp Lys Ser Asn Leu Glu Xaa
725 730

<210> 169
<211> 734
<212> PRT
<213> Artificial sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (734)..(734)
<223> cysteine or selenocysteine

<400> 169

Ser Lys Leu Lys Asp Pro Glu Leu Ser Leu Lys Gly Thr Gln His Ile
1 5 10 15

Met Gln Ala Gly Gln Thr Leu His Leu Gln Cys Arg Gly Glu Ala Ala
20 25 30

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

Ser Ile Thr Lys Ser Ala Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser
50 55 60

Thr Leu Thr Leu Asn Thr Ala Gln Ala Asn His Thr Gly Phe Tyr Ser
65 70 75 80

Cys Lys Tyr Leu Ala Val Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser
85 90 95

Ala Ile Tyr Ile Phe Ile Ser Asp Thr Gly Arg Pro Phe Val Glu Met
100 105 110

Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu Leu
115 120 125

Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu Lys
130 135 140

Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp
145 150 155 160

Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile
165 170 175

Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys Thr
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180

185

190

Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln Ile
 195 200 205

Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val Leu
 210 215 220

Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr Trp
 225 230 235 240

Ser Tyr Pro Asp Glu Lys Asn Lys Arg Ala Ser Val Arg Arg Arg Ile
 245 250 255

Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile
 260 265 270

Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg
 275 280 285

Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr Asp
 290 295 300

Lys Ala Phe Ile Thr Val Lys His Arg Lys Gln Gln Val Leu Glu Thr
 305 310 315 320

Val Ala Gly Lys Arg Ser Tyr Arg Leu Ser Met Lys Val Lys Ala Phe
 325 330 335

Pro Ser Pro Glu Val Val Trp Leu Lys Asp Gly Leu Pro Ala Thr Glu
 340 345 350

Lys Ser Ala Arg Tyr Leu Thr Arg Gly Tyr Ser Leu Ile Ile Lys Asp
 355 360 365

Val Thr Glu Glu Asp Ala Gly Asn Tyr Thr Ile Leu Leu Ser Ile Lys
 370 375 380

Gln Ser Asn Val Phe Lys Asn Leu Thr Ala Thr Leu Ile Val Asn Val
 385 390 395 400

Lys Pro Gln Ile Tyr Glu Lys Ala Val Ser Ser Phe Pro Asp Pro Ala
 405 410 415

Leu Tyr Pro Leu Gly Ser Arg Gln Ile Leu Thr Cys Thr Ala Tyr Gly
 420 425 430

Ile Pro Gln Pro Thr Ile Lys Trp Phe Trp His Pro Cys Asn His Asn
 435 440 445

His Ser Glu Ala Arg Cys Asp Phe Cys Ser Asn Asn Glu Glu Ser Phe
 450 455 460

Ile Leu Asp Ala Asp Ser Asn Met Gly Asn Arg Ile Glu Ser Ile Thr
465 470 475 480

Gln Arg Met Ala Ile Ile Glu Gly Lys Asn Lys Met Ala Ser Thr Leu
485 490 495

Val Val Ala Asp Ser Arg Ile Ser Gly Ile Tyr Ile Cys Ile Ala Ser
500 505 510

Asn Lys Val Gly Thr Val Gly Arg Asn Ile Ser Phe Tyr Ile Thr Asp
515 520 525

Val Pro Asn Gly Phe His Val Asn Leu Glu Lys Met Pro Thr Glu Gly
530 535 540

Glu Asp Leu Lys Leu Ser Cys Thr Val Asn Lys Phe Leu Tyr Arg Asp
545 550 555 560

Val Thr Trp Ile Leu Leu Arg Thr Val Asn Asn Arg Thr Met His Tyr
565 570 575

Ser Ile Ser Lys Gln Lys Met Ala Ile Thr Lys Glu His Ser Ile Thr
580 585 590

Leu Asn Leu Thr Ile Met Asn Val Ser Leu Gln Asp Ser Gly Thr Tyr
595 600 605

Ala Cys Arg Ala Arg Asn Val Tyr Thr Gly Glu Glu Ile Leu Gln Lys
610 615 620

Lys Glu Ile Thr Ile Arg Asp Gln Glu Ala Pro Tyr Leu Leu Arg Asn
625 630 635 640

Leu Ser Asp His Thr Val Ala Ile Ser Ser Ser Thr Thr Leu Asp Cys
645 650 655

His Ala Asn Gly Val Pro Glu Pro Gln Ile Thr Trp Phe Lys Asn Asn
660 665 670

His Lys Ile Gln Gln Glu Pro Gly Ile Ile Leu Gly Pro Gly Ser Ser
675 680 685

Thr Leu Phe Ile Glu Arg Val Thr Glu Glu Asp Glu Gly Val Tyr His
690 695 700

Cys Lys Ala Thr Asn Gln Lys Gly Ser Val Glu Ser Ser Ala Tyr Leu
705 710 715 720

Thr Val Gln Gly Thr Ser Asp Lys Ser Asn Leu Glu Gly Xaa
725 730

<210> 170
 <211> 2924
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 170
 aagcttgaat tcccaccatg cagagcaagg tgctgctggc cgtcgccctg tggctctgcg 60
 tggagacccg ggccgcctct gtgggtttgc ctagtgtttc tcttgatctg cccaggctca 120
 gcatacaaaa agacatactt acaattaagg ctaatacaac tcttcaaatt acttgcaggg 180
 gacagagggga cttggactgg ctttggccca ataatcagag tggcagtgag caaaggggtg 240
 aggtgactga gtgcagcgat ggctcttct gtaagacact cacaattcca aaagtgatcg 300
 gaaatgacac tggagcctac aagtgttct accgggaaac tgacttggcc tcggtcattt 360
 atgtctatgt tcaagattac agatctccat ttattgcttc tgtagtgac caacatggag 420
 tcgtgtacat tactgagaac aaaaacaaaa ctgtggtgat tccatgtctc ggggccattt 480
 caaatctcaa cgtgtcactt tgtgcaagat acccagaaaa gagatttggt cctgatggta 540
 acagaatttc ctgggacagc aagaagggct ttactattcc cagctacatg atcagctatg 600
 ctggcatggt cttctgtgaa gcaaaaatta atgatgaaag ttaccagtct attatgtaca 660
 tagttgtcgt tgtagggtat aggatttatg atgtggttct gagtccgtct catggaattg 720
 aactatctgt tggagaaaaa cttgtcttaa attgtacagc aagaactgaa ctaaagtgtg 780
 ggattgactt caactgggaa tacccttctt cgaagcatca gcataagaaa cttgtaaacc 840
 gagacctaaa aaccagtcct gggagtgaga tgaagaaatt tttgagcacc ttaactatag 900
 atggtgtaac ccggagtgc caaggattgt acacctgtgc agcatccagt gggctgatga 960
 ccaagaagaa cagcacattt gtcagggtcc atgaaaaacc ttttgttgct tttggaagtg 1020
 gcatggaatc tctggtggaa gccacggtgg gggagcgtgt cagaatccct gcgaagtacc 1080
 ttggttacc accccagaa ataaaatggt ataaaatgg aatacccctt gagtccaatc 1140
 acacaattaa agcggggcat gtactgacga ttatggaagt gagtgaagaa gacacaggaa 1200
 attacactgt catccttacc aatcccattt caaaggagaa gcagagccat gtggtctctc 1260
 tggttgtgta tgtcccaccc cagattggtg agaaatctct aatctctcct gtggattcct 1320
 accagtacgg caccactcaa acgctgacat gtacggtcta tgccattcct ccccgcatc 1380
 acatccactg gtattggcag ttggaggaag agtgcgcaa cgagcccagc caagctgtct 1440
 cagtgacaaa ccataccct tgtgaagaat ggagaagtgt ggaggacttc cagggaggaa 1500
 ataaaattga agttaataaa aatcaatttg ctctaattga aggaaaaaac aaaactgtaa 1560
 gtacccttgt tatccaagcg gcaaagtgt cagctttgta caaatgtgaa gcggtcaaca 1620
 aagtcgggag aggagagagg gtgatctcct tccacgtgac caggggtcct gaaattactt 1680
 tgcaacctga catgcagccc actgagcagg agagcgtgtc tttgtggtgc actgcagaca 1740
 gatctacgtt tgagaacctc acatggtaca aacttggccc acagcctctg ccaatccatg 1800

tgggagagtt gccacacct gtttgaaga acttggatac tctttgaaa ttgaatgcca 1860
 ccatgttctc taatagcaca aatgacattt tgatcatgga gcttaagaat gcatccttgc 1920
 aggaccaagg agactatgtc tgccttgctc aagacaggaa gaccaagaaa agacattgcg 1980
 tggtcaggca gctcacagtc ctagagcgtg tggcaccac gatcacagga aacctggaga 2040
 atcagacgac aagtattggg gaaagcatcg aagtctcatg cacggcatct gggaatcccc 2100
 ctccacagat catgtggttt aaagataatg agacccttgt agaagactca ggcattgtat 2160
 tgaaggatgg gaaccggaac ctactatcc gcagagttag gaaggaggac gaaggcctct 2220
 acacctgcca ggcattgagt gttcttggtc gtgcaaaagt ggaggcattt ttcataatag 2280
 aagggtgcca ggaaaagacg aacttgaag ggtgctgac cggtgacacc attgtaatga 2340
 ctagtggcgg gccccgcact gtggctgaac tggagggcaa accgttcacc gactgattc 2400
 gcggctctgg ctacccatgc ccctcagggt tcttccgcac ctgtgaacgt gacgtatatg 2460
 atctgcgtac acgtgagggg cattgcttac gtttgaccca tgatcacctg gttctggtga 2520
 tggatggtgg cctggaatgg cgtgccgcgg gtgaactgga acgcggcgac cgcctggtga 2580
 tggatgatgc agctggcgag tttccggcac tggcaacctt ccgtggcctg cgtggcgctg 2640
 gccgccagga tgtttatgac gctactgttt acggtgctag cgcattcact gctaattggct 2700
 tcattgtaca cgcattgtgc gagcagcccg ggaccggtct gaactcaggc ctcacgacaa 2760
 atcctggtgt atccgcttgg caggtaaca cagcttatac tgcgggacaa ttggtcacat 2820
 ataacggcaa gacgtataaa tgtttgagc cccacacctc cttggcagga tgggaaccat 2880
 ccaacgttcc tgccttggtg cagcttcaat gactcgagcg gccg 2924

<210> 171

<211> 964

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 171

Met Gln Ser Lys Val Leu Leu Ala Val Ala Leu Trp Leu Cys Val Glu
 1 5 10 15

Thr Arg Ala Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro
 20 25 30

Arg Leu Ser Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr
 35 40 45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro
 50 55 60

Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser
 65 70 75 80

Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn
 85 90 95
 Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser
 100 105 110
 Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser
 115 120 125
 Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys
 130 135 140
 Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser
 145 150 155 160
 Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg
 165 170 175
 Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile
 180 185 190
 Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser
 195 200 205
 Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr
 210 215 220
 Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
 225 230 235 240
 Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
 245 250 255
 Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
 260 265 270
 Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
 275 280 285
 Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
 290 295 300
 Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
 305 310 315 320
 Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met
 325 330 335
 Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala
 340 345 350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly
 355 360 365
 Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr
 370 375 380
 Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu
 385 390 395 400
 Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
 405 410 415
 Val Tyr Val Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val
 420 425 430
 Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr
 435 440 445
 Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu
 450 455 460
 Glu Cys Ala Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr
 465 470 475 480
 Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys
 485 490 495
 Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys
 500 505 510
 Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr
 515 520 525
 Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser
 530 535 540
 Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln
 545 550 555 560
 Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser
 565 570 575
 Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro
 580 585 590
 Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr
 595 600 605
 Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile
 610 615 620

625		630		635		640
Val Cys Leu Ala Gln	Asp Arg Lys Thr	Lys Lys Arg His Cys	Val Val			
	645		650		655	
Arg Gln Leu Thr	Val Leu Glu Arg	Val Ala Pro Thr	Ile Thr Gly	Asn		
	660		665		670	
Leu Glu Asn Gln Thr	Thr Ser Ile Gly	Glu Ser Ile Glu	Val Ser Cys			
	675		680		685	
Thr Ala Ser Gly	Asn Pro Pro	Pro Gln Ile Met	Trp Phe Lys	Asp Asn		
	690		695		700	
Glu Thr Leu Val Glu	Asp Ser Gly	Ile Val Leu Lys	Asp Gly Asn	Arg		
	705		710		715	
Asn Leu Thr Ile	Arg Arg Val	Arg Lys Glu	Asp Glu Gly	Leu Tyr Thr		
	725		730		735	
Cys Gln Ala Cys	Ser Val Leu Gly	Cys Ala Lys	Val Glu Ala	Phe Phe		
	740		745		750	
Ile Ile Glu Gly	Ala Gln Glu	Lys Thr Asn	Leu Glu Gly	Cys Val Ser		
	755		760		765	
Gly Asp Thr Ile	Val Met Thr	Ser Gly Gly	Pro Arg Thr	Val Ala Glu		
	770		775		780	
Leu Glu Gly Lys	Pro Phe Thr	Ala Leu Ile	Arg Gly Ser	Gly Tyr Pro		
	785		790		795	
Cys Pro Ser Gly	Phe Phe Arg	Thr Cys Glu	Arg Asp Val	Tyr Asp Leu		
	805		810		815	
Arg Thr Arg Glu	Gly His Cys	Leu Arg Leu	Thr His Asp	His Arg Val		
	820		825		830	
Leu Val Met Asp	Gly Gly Leu	Glu Trp Arg	Ala Ala Gly	Glu Leu Glu		
	835		840		845	
Arg Gly Asp Arg	Leu Val Met	Asp Asp Ala	Ala Gly Glu	Phe Pro Ala		
	850		855		860	
Leu Ala Thr Phe	Arg Gly Leu	Arg Gly Ala	Gly Arg Gln	Asp Val Tyr		
	865		870		875	
Asp Ala Thr Val	Tyr Gly Ala	Ser Ala Phe	Thr Ala Asn	Gly Phe Ile		
	885		890		895	
Val His Ala Cys	Gly Glu Gln	Pro Gly Thr	Gly Leu Asn	Ser Gly Leu		
	900		905		910	

Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr
915 920 925

Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln
930 935 940

Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu
945 950 955 960

Trp Gln Leu Gln

<210> 172

<211> 945

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 172

Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro Arg Leu Ser
1 5 10 15

Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr Leu Gln Ile
20 25 30

Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro Asn Asn Gln
35 40 45

Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser Asp Gly Leu
50 55 60

Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn Asp Thr Gly
65 70 75 80

Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser Val Ile Tyr
85 90 95

Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser Val Ser Asp
100 105 110

Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys Thr Val Val
115 120 125

Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys Ala
130 135 140

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

Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile Ser Tyr Ala
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170

175

Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser Tyr Gln Ser
180 185 190

Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val Val
195 200 205

Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys Leu Val
210 215 220

Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Asn
225 230 235 240

Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val Asn Arg
245 250 255

Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu Ser Thr
260 265 270

Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr Thr Cys
275 280 285

Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe Val Arg
290 295 300

Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met Glu Ser Leu
305 310 315 320

Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala Lys Tyr Leu
325 330 335

Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly Ile Pro Leu
340 345 350

Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr Ile Met Glu
355 360 365

Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu Thr Asn Pro
370 375 380

Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val Val Tyr Val
385 390 395 400

Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val Asp Ser Tyr
405 410 415

Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr Ala Ile Pro
420 425 430

Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu Glu Cys Ala
435 440 445

Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr Pro Cys Glu
 450 455 460
 Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu Val
 465 470 475 480
 Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys Thr Val Ser
 485 490 495
 Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys Glu
 500 505 510
 Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser Phe His Val
 515 520 525
 Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln Pro Thr Glu
 530 535 540
 Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser Thr Phe Glu
 545 550 555 560
 Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro Ile His Val
 565 570 575
 Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr Leu Trp Lys
 580 585 590
 Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile Met
 595 600 605
 Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys Leu
 610 615 620
 Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val Arg Gln Leu
 625 630 635 640
 Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn Leu Glu Asn
 645 650 655
 Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys Thr Ala Ser
 660 665 670
 Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn Glu Thr Leu
 675 680 685
 Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg Asn Leu Thr
 690 695 700
 Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr Cys Gln Ala
 705 710 715 720

Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe Ile Ile Glu
725 730 735

Gly Ala Gln Glu Lys Thr Asn Leu Glu Gly Cys Val Ser Gly Asp Thr
740 745 750

Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly
755 760 765

Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser
770 775 780

Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg
785 790 795 800

Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val Met
805 810 815

Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp
820 825 830

Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr
835 840 845

Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr
850 855 860

Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala
865 870 875 880

Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn
885 890 895

Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln
900 905 910

Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr
915 920 925

Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu
930 935 940

Gln
945

<210> 173

<211> 746

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
 <221> THIOLEST
 <222> (746)..(746)
 <223> glycine-thioester

<400> 173

Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro Arg Leu Ser
 1 5 10 15

Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr Leu Gln Ile
 20 25 30

Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro Asn Asn Gln
 35 40 45

Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser Asp Gly Leu
 50 55 60

Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn Asp Thr Gly
 65 70 75 80

Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser Val Ile Tyr
 85 90 95

Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser Val Ser Asp
 100 105 110

Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys Thr Val Val
 115 120 125

Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys Ala
 130 135 140

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

Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile Ser Tyr Ala
 165 170 175

Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser Tyr Gln Ser
 180 185 190

Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val Val
 195 200 205

Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys Leu Val
 210 215 220

Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Asn
 225 230 235 240

Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val Asn Arg
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250

255

Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu Ser Thr
 260 265 270

Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr Thr Cys
 275 280 285

Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe Val Arg
 290 295 300

Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met Glu Ser Leu
 305 310 315 320

Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala Lys Tyr Leu
 325 330 335

Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly Ile Pro Leu
 340 345 350

Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr Ile Met Glu
 355 360 365

Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu Thr Asn Pro
 370 375 380

Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val Val Tyr Val
 385 390 395 400

Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val Asp Ser Tyr
 405 410 415

Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr Ala Ile Pro
 420 425 430

Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu Glu Cys Ala
 435 440 445

Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr Pro Cys Glu
 450 455 460

Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu Val
 465 470 475 480

Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys Thr Val Ser
 485 490 495

Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys Glu
 500 505 510

Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser Phe His Val
 515 520 525

Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln Pro Thr Glu
530 535 540

Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser Thr Phe Glu
545 550 555 560

Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro Ile His Val
565 570 575

Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr Leu Trp Lys
580 585 590

Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile Met
595 600 605

Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys Leu
610 615 620

Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val Arg Gln Leu
625 630 635 640

Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn Leu Glu Asn
645 650 655

Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys Thr Ala Ser
660 665 670

Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn Glu Thr Leu
675 680 685

Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg Asn Leu Thr
690 695 700

Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr Cys Gln Ala
705 710 715 720

Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe Ile Ile Glu
725 730 735

Gly Ala Gln Glu Lys Thr Asn Leu Glu Xaa
740 745

<210> 174

<211> 747

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (747)..(747)

<223> cysteine or selenocysteine

<400> 174

Ala Ser Val Gly Leu Pro Ser Val Ser Leu Asp Leu Pro Arg Leu Ser
1 5 10 15
Ile Gln Lys Asp Ile Leu Thr Ile Lys Ala Asn Thr Thr Leu Gln Ile
20 25 30
Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro Asn Asn Gln
35 40 45
Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser Asp Gly Leu
50 55 60
Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn Asp Thr Gly
65 70 75 80
Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser Val Ile Tyr
85 90 95
Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser Val Ser Asp
100 105 110
Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys Thr Val Val
115 120 125
Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys Ala
130 135 140
Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg Ile Ser Trp
145 150 155 160
Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile Ser Tyr Ala
165 170 175
Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser Tyr Gln Ser
180 185 190
Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val Val
195 200 205
Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys Leu Val
210 215 220
Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Asn
225 230 235 240
Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val Asn Arg
245 250 255

Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu Ser Thr
260 265 270

Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr Thr Cys
275 280 285

Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe Val Arg
290 295 300

Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met Glu Ser Leu
305 310 315 320

Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala Lys Tyr Leu
325 330 335

Gly Tyr Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly Ile Pro Leu
340 345 350

Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr Ile Met Glu
355 360 365

Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu Thr Asn Pro
370 375 380

Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val Val Tyr Val
385 390 395 400

Pro Pro Gln Ile Gly Glu Lys Ser Leu Ile Ser Pro Val Asp Ser Tyr
405 410 415

Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr Ala Ile Pro
420 425 430

Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu Glu Cys Ala
435 440 445

Asn Glu Pro Ser Gln Ala Val Ser Val Thr Asn Pro Tyr Pro Cys Glu
450 455 460

Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu Val
465 470 475 480

Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys Thr Val Ser
485 490 495

Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys Glu
500 505 510

Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser Phe His Val
515 520 525

Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln Pro Thr Glu
Page 216

530

535

540

Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser Thr Phe Glu
545 550 555 560

Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro Ile His Val
565 570 575

Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr Leu Trp Lys
580 585 590

Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile Met
595 600 605

Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys Leu
610 615 620

Ala Gln Asp Arg Lys Thr Lys Lys Arg His Cys Val Val Arg Gln Leu
625 630 635 640

Thr Val Leu Glu Arg Val Ala Pro Thr Ile Thr Gly Asn Leu Glu Asn
645 650 655

Gln Thr Thr Ser Ile Gly Glu Ser Ile Glu Val Ser Cys Thr Ala Ser
660 665 670

Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn Glu Thr Leu
675 680 685

Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg Asn Leu Thr
690 695 700

Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr Cys Gln Ala
705 710 715 720

Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe Ile Ile Glu
725 730 735

Gly Ala Gln Glu Lys Thr Asn Leu Glu Gly Xaa
740 745

<210> 175

<211> 2957

<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 175

aagcttgaat tcccaccatg cagcggggcg ccgcgctgtg cctgcgactg tggctctgcc 60

tgggactcct ggacggcctg gtgagtggct actccatgac ccccccgacc ttgaacatca 120

cggaggagtc acacgtcatc gacaccggtg acagcctgtc catctcctgc aggggacagc 180

240 accccttggg gttggcttgg ccaggagctc agggggcgcg acccaaggga gacaaggaca
 300 gggaggacac ggggttgggt cgaagctggc agggcacaga cggcaggccc tactgcaagg
 360 ttttgcctgt gcaaggagta catgcccaag acacaggcag ctacgtctgc tactacaagt
 420 acatcaaggc acgcatacga gggcaccaagg ccggccagctc ctacgtgttc gtgagagact
 480 ttgagcagcc attcatcaac aagccctgac cgctcttgtt caacagggaag gacgcctagt
 540 ggtgtgccctt tctgtgtccc atccccggcc tcaatgtcac gctgctgctg caaagctcgg
 600 tgcctgtggcc agacggggcag gagggtgtgt gggatgacgg gctggggcagt ctcgtgtcca
 660 cggccactgtt gcaagatgcc ctgtacctgc agtgcggacg caccctggga gaccaggact
 720 tcccttccaa ccccttccct gttgcacata caggcaacga gctctatgac atccagctgt
 780 tggcccaaggaa gtcgctggag ctgctgtgtag gggaggaagt gttccctgaac tgcacgtgt
 840 gggcttgagt taactcaggt gtccaccttg actgggacta ccagggggaag caggcagagc
 900 ggggttgaagt ggtggcccgag cgaagctccc agcagaccca cacagaaac tccagcatcc
 960 tgaaccataa caactgcagc cagcacgaac tgggtctgta tgtgtgcaag gccacaacag
 1020 gcatccaggc atttcgggag agcacccgag tcatgttga tgaataatccc ttcatcagcg
 1080 tctgagtgtt caaaggaccc atccttgagg ccacggcagg agacgagctg gttgaagctgc
 1140 ccgtgaagt ggcagctgac ccccgcccg agttccagt gtacaagat ggaagggcac
 1200 tgtccgggcg ccacagctca catgcccctg tgtccaagga gttgacagag gccagcacag
 1260 gcaacctaac cctgcgccct tggaaactcc cttgctggct gaggcgcgaac atcagcctgg
 1320 agctgtgtgt gaattgtccc cccagatat atgaggaagg ggccttccct cccagcatct
 1380 actgcgctca caggcccgag gccctccact gccagcccta cgggtgtccc cttccttca
 1440 gcatccagtg gcatgtggc cctgtgacac cctgcaagat gtttggccag cgtagtctcc
 1500 gggggcgga gacagcaagc ctcatgacac agtgcctgta ctggagggcg gttgacacag
 1560 aggatgcgtt gaaccccatc gtaggctgg acacccctgg cgaatttgtg gagggaagga
 1620 ataagacgtt gtagcaagctg gttgatacaga atgtcccaagt gttgtccctg tacaagtgtg
 1680 tggcttccaa caagggtggc caggatgagc ggtcatcta ctctatgtg acccaatcc
 1740 ccgaaggctt caccatacga tcaagcccat ccgaaggagt actagagggc cagccggtgt
 1800 tcttgagctg ccaagccgac agctacaagt acgagcatct gctgttgtac cgcctcaac
 1860 tgtccacagt gcaagatgag caagggaacc cgtcttctgt cgaactgcaag aacgtgtcatc
 1920 tgttcttccc cacccttggc ggcagctgg aggggtggc accctggggcg cggcaccgca
 1980 cgtcagctct gattatcccc cgtctcggc ccgagcaaga gggcccatat gttgtgcaag
 2040 tgcagaaccc ggcagcccat gacaaagcat gtcacccctg gttgcaagg aa gttgcaaggc
 2100 ttggaagcccc tccgctcaca gcaaaactga cggaccctct ggtgaacgtg aggcactcgg
 2160 ttgagatgca gttccttgggt gccggagagc acgcccag catcgttgtg taacaagacg
 2220 agagcctgtc tggagaaag tcttgagctc acttggcggg ctcccaacag aagctgagca

tccagcgcgt gcgcgaggag gatgcgggac gctatctgtg cagcgtgtgc aacgccaagg 2280
 gctgcgtcaa ctctccgcc agcgtggccg tggaaggctc cgaggataag ggcagcatgg 2340
 aggggtgcgt atccggtgac accattgtaa tgactagtgg cgggccccgc actgtggctg 2400
 aactggagggg caaacggttc accgcactga ttcgcggctc tggctaccca tgcccctcag 2460
 gtttcttccg cacctgtgaa cgtgacgtat atgatctgcg tacacgtgag ggtcattgct 2520
 tacgtttgac ccatgatcac cgtgttctgg tgatggatgg tggcctggaa tggcgtgccg 2580
 cgggtgaact ggaacgcggc gaccgcctgg tgatggatga tgcagctggc gagtttccgg 2640
 cactggcaac ctccgtggc ctgcgtggcg ctggccgcca ggatgtttat gacgctactg 2700
 ttacggtgc tagcgcattc actgctaata gcttcattgt acacgcatgt ggcgagcagc 2760
 ccgggaccgg tctgaactca ggcctcacga caaatcctgg tgtatccgct tggcagggtca 2820
 acacagctta tactgcggga caattgggtca catataacgg caagacgtat aaatgtttgc 2880
 agccccacac ctcttggca ggatgggaac catccaacgt tcctgccttg tggcagcttc 2940
 aatgactcga gcggccg 2957

<210> 176
 <211> 975
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 176

Met Gln Arg Gly Ala Ala Leu Cys Leu Arg Leu Trp Leu Cys Leu Gly
 1 5 10 15

Leu Leu Asp Gly Leu Val Ser Gly Tyr Ser Met Thr Pro Pro Thr Leu
 20 25 30

Asn Ile Thr Glu Glu Ser His Val Ile Asp Thr Gly Asp Ser Leu Ser
 35 40 45

Ile Ser Cys Arg Gly Gln His Pro Leu Glu Trp Ala Trp Pro Gly Ala
 50 55 60

Gln Glu Ala Pro Ala Thr Gly Asp Lys Asp Ser Glu Asp Thr Gly Val
 65 70 75 80

Val Arg Asp Cys Glu Gly Thr Asp Ala Arg Pro Tyr Cys Lys Val Leu
 85 90 95

Leu Leu His Glu Val His Ala Asn Asp Thr Gly Ser Tyr Val Cys Tyr
 100 105 110

Tyr Lys Tyr Ile Lys Ala Arg Ile Glu Gly Thr Thr Ala Ala Ser Ser
 115 120 125

Tyr Val Phe Val Arg Asp Phe Glu Gln Pro Phe Ile Asn Lys Pro Asp
130 135 140

Thr Leu Leu Val Asn Arg Lys Asp Ala Met Trp Val Pro Cys Leu Val
145 150 155 160

Ser Ile Pro Gly Leu Asn Val Thr Leu Arg Ser Gln Ser Ser Val Leu
165 170 175

Trp Pro Asp Gly Gln Glu Val Val Trp Asp Asp Arg Arg Gly Met Leu
180 185 190

Val Ser Thr Pro Leu Leu His Asp Ala Leu Tyr Leu Gln Cys Glu Thr
195 200 205

Thr Trp Gly Asp Gln Asp Phe Leu Ser Asn Pro Phe Leu Val His Ile
210 215 220

Thr Gly Asn Glu Leu Tyr Asp Ile Gln Leu Leu Pro Arg Lys Ser Leu
225 230 235 240

Glu Leu Leu Val Gly Glu Lys Leu Val Leu Asn Cys Thr Val Trp Ala
245 250 255

Glu Phe Asn Ser Gly Val Thr Phe Asp Trp Asp Tyr Pro Gly Lys Gln
260 265 270

Ala Glu Arg Gly Lys Trp Val Pro Glu Arg Arg Ser Gln Gln Thr His
275 280 285

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

Leu Gly Ser Tyr Val Cys Lys Ala Asn Asn Gly Ile Gln Arg Phe Arg
305 310 315 320

Glu Ser Thr Glu Val Ile Val His Glu Asn Pro Phe Ile Ser Val Glu
325 330 335

Trp Leu Lys Gly Pro Ile Leu Glu Ala Thr Ala Gly Asp Glu Leu Val
340 345 350

Lys Leu Pro Val Lys Leu Ala Ala Tyr Pro Pro Pro Glu Phe Gln Trp
355 360 365

Tyr Lys Asp Gly Lys Ala Leu Ser Gly Arg His Ser Pro His Ala Leu
370 375 380

Val Leu Lys Glu Val Thr Glu Ala Ser Thr Gly Thr Tyr Thr Leu Ala
385 390 395 400

Leu Trp Asn Ser Ala Ala Gly Leu Arg Arg Asn Ile Ser Leu Glu Leu
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405

410

415

Val Val Asn Val Pro Pro Gln Ile His Glu Lys Glu Ala Ser Ser Pro
420 425 430

Ser Ile Tyr Ser Arg His Ser Arg Gln Ala Leu Thr Cys Thr Ala Tyr
435 440 445

Gly Val Pro Leu Pro Leu Ser Ile Gln Trp His Trp Arg Pro Trp Thr
450 455 460

Pro Cys Lys Met Phe Ala Gln Arg Ser Leu Arg Arg Arg Gln Gln Gln
465 470 475 480

Asp Leu Met Pro Gln Cys Arg Asp Trp Arg Ala Val Thr Thr Gln Asp
485 490 495

Ala Val Asn Pro Ile Glu Ser Leu Asp Thr Trp Thr Glu Phe Val Glu
500 505 510

Gly Lys Asn Lys Thr Val Ser Lys Leu Val Ile Gln Asn Ala Asn Val
515 520 525

Ser Ala Met Tyr Lys Cys Val Val Ser Asn Lys Val Gly Gln Asp Glu
530 535 540

Arg Leu Ile Tyr Phe Tyr Val Thr Thr Ile Pro Asp Gly Phe Thr Ile
545 550 555 560

Glu Ser Lys Pro Ser Glu Glu Leu Leu Glu Gly Gln Pro Val Leu Leu
565 570 575

Ser Cys Gln Ala Asp Ser Tyr Lys Tyr Glu His Leu Arg Trp Tyr Arg
580 585 590

Leu Asn Leu Ser Thr Leu His Asp Ala His Gly Asn Pro Leu Leu Leu
595 600 605

Asp Cys Lys Asn Val His Leu Phe Ala Thr Pro Leu Ala Ala Ser Leu
610 615 620

Glu Glu Val Ala Pro Gly Ala Arg His Ala Thr Leu Ser Leu Ser Ile
625 630 635 640

Pro Arg Val Ala Pro Glu His Glu Gly His Tyr Val Cys Glu Val Gln
645 650 655

Asp Arg Arg Ser His Asp Lys His Cys His Lys Lys Tyr Leu Ser Val
660 665 670

Gln Ala Leu Glu Ala Pro Arg Leu Thr Gln Asn Leu Thr Asp Leu Leu
675 680 685

Val Asn Val Ser Asp Ser Leu Glu Met Gln Cys Leu Val Ala Gly Ala
690 695 700
His Ala Pro Ser Ile Val Trp Tyr Lys Asp Glu Arg Leu Leu Glu Glu
705 710 715 720
Lys Ser Gly Val Asp Leu Ala Asp Ser Asn Gln Lys Leu Ser Ile Gln
725 730 735
Arg Val Arg Glu Glu Asp Ala Gly Arg Tyr Leu Cys Ser Val Cys Asn
740 745 750
Ala Lys Gly Cys Val Asn Ser Ser Ala Ser Val Ala Val Glu Gly Ser
755 760 765
Glu Asp Lys Gly Ser Met Glu Gly Cys Val Ser Gly Asp Thr Ile Val
770 775 780
Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro
785 790 795 800
Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe
805 810 815
Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly
820 825 830
His Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly
835 840 845
Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu
850 855 860
Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg
865 870 875 880
Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr
885 890 895
Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly
900 905 910
Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly
915 920 925
Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val
930 935 940
Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu
945 950 955 960

Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
965 970 975

<210> 177
<211> 951
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 177

Tyr Ser Met Thr Pro Pro Thr Leu Asn Ile Thr Glu Glu Ser His Val
1 5 10 15

Ile Asp Thr Gly Asp Ser Leu Ser Ile Ser Cys Arg Gly Gln His Pro
20 25 30

Leu Glu Trp Ala Trp Pro Gly Ala Gln Glu Ala Pro Ala Thr Gly Asp
35 40 45

Lys Asp Ser Glu Asp Thr Gly Val Val Arg Asp Cys Glu Gly Thr Asp
50 55 60

Ala Arg Pro Tyr Cys Lys Val Leu Leu Leu His Glu Val His Ala Asn
65 70 75 80

Asp Thr Gly Ser Tyr Val Cys Tyr Tyr Lys Tyr Ile Lys Ala Arg Ile
85 90 95

Glu Gly Thr Thr Ala Ala Ser Ser Tyr Val Phe Val Arg Asp Phe Glu
100 105 110

Gln Pro Phe Ile Asn Lys Pro Asp Thr Leu Leu Val Asn Arg Lys Asp
115 120 125

Ala Met Trp Val Pro Cys Leu Val Ser Ile Pro Gly Leu Asn Val Thr
130 135 140

Leu Arg Ser Gln Ser Ser Val Leu Trp Pro Asp Gly Gln Glu Val Val
145 150 155 160

Trp Asp Asp Arg Arg Gly Met Leu Val Ser Thr Pro Leu Leu His Asp
165 170 175

Ala Leu Tyr Leu Gln Cys Glu Thr Thr Trp Gly Asp Gln Asp Phe Leu
180 185 190

Ser Asn Pro Phe Leu Val His Ile Thr Gly Asn Glu Leu Tyr Asp Ile
195 200 205

Gln Leu Leu Pro Arg Lys Ser Leu Glu Leu Leu Val Gly Glu Lys Leu
210 215 220

Val Leu Asn Cys Thr Val Trp Ala Glu Phe Asn Ser Gly Val Thr Phe
 225 230 235 240
 Asp Trp Asp Tyr Pro Gly Lys Gln Ala Glu Arg Gly Lys Trp Val Pro
 245 250 255
 Glu Arg Arg Ser Gln Gln Thr His Thr Glu Leu Ser Ser Ile Leu Thr
 260 265 270
 Ile His Asn Val Ser Gln His Asp Leu Gly Ser Tyr Val Cys Lys Ala
 275 280 285
 Asn Asn Gly Ile Gln Arg Phe Arg Glu Ser Thr Glu Val Ile Val His
 290 295 300
 Glu Asn Pro Phe Ile Ser Val Glu Trp Leu Lys Gly Pro Ile Leu Glu
 305 310 315 320
 Ala Thr Ala Gly Asp Glu Leu Val Lys Leu Pro Val Lys Leu Ala Ala
 325 330 335
 Tyr Pro Pro Pro Glu Phe Gln Trp Tyr Lys Asp Gly Lys Ala Leu Ser
 340 345 350
 Gly Arg His Ser Pro His Ala Leu Val Leu Lys Glu Val Thr Glu Ala
 355 360 365
 Ser Thr Gly Thr Tyr Thr Leu Ala Leu Trp Asn Ser Ala Ala Gly Leu
 370 375 380
 Arg Arg Asn Ile Ser Leu Glu Leu Val Val Asn Val Pro Pro Gln Ile
 385 390 395 400
 His Glu Lys Glu Ala Ser Ser Pro Ser Ile Tyr Ser Arg His Ser Arg
 405 410 415
 Gln Ala Leu Thr Cys Thr Ala Tyr Gly Val Pro Leu Pro Leu Ser Ile
 420 425 430
 Gln Trp His Trp Arg Pro Trp Thr Pro Cys Lys Met Phe Ala Gln Arg
 435 440 445
 Ser Leu Arg Arg Arg Gln Gln Gln Asp Leu Met Pro Gln Cys Arg Asp
 450 455 460
 Trp Arg Ala Val Thr Thr Gln Asp Ala Val Asn Pro Ile Glu Ser Leu
 465 470 475 480
 Asp Thr Trp Thr Glu Phe Val Glu Gly Lys Asn Lys Thr Val Ser Lys
 485 490 495

Leu Val Ile Gln Asn Ala Asn Val Ser Ala Met Tyr Lys Cys Val Val
 500 505 510

Ser Asn Lys Val Gly Gln Asp Glu Arg Leu Ile Tyr Phe Tyr Val Thr
 515 520 525

Thr Ile Pro Asp Gly Phe Thr Ile Glu Ser Lys Pro Ser Glu Glu Leu
 530 535 540

Leu Glu Gly Gln Pro Val Leu Leu Ser Cys Gln Ala Asp Ser Tyr Lys
 545 550 555 560

Tyr Glu His Leu Arg Trp Tyr Arg Leu Asn Leu Ser Thr Leu His Asp
 565 570 575

Ala His Gly Asn Pro Leu Leu Leu Asp Cys Lys Asn Val His Leu Phe
 580 585 590

Ala Thr Pro Leu Ala Ala Ser Leu Glu Glu Val Ala Pro Gly Ala Arg
 595 600 605

His Ala Thr Leu Ser Leu Ser Ile Pro Arg Val Ala Pro Glu His Glu
 610 615 620

Gly His Tyr Val Cys Glu Val Gln Asp Arg Arg Ser His Asp Lys His
 625 630 635 640

Cys His Lys Lys Tyr Leu Ser Val Gln Ala Leu Glu Ala Pro Arg Leu
 645 650 655

Thr Gln Asn Leu Thr Asp Leu Leu Val Asn Val Ser Asp Ser Leu Glu
 660 665 670

Met Gln Cys Leu Val Ala Gly Ala His Ala Pro Ser Ile Val Trp Tyr
 675 680 685

Lys Asp Glu Arg Leu Leu Glu Glu Lys Ser Gly Val Asp Leu Ala Asp
 690 695 700

Ser Asn Gln Lys Leu Ser Ile Gln Arg Val Arg Glu Glu Asp Ala Gly
 705 710 715 720

Arg Tyr Leu Cys Ser Val Cys Asn Ala Lys Gly Cys Val Asn Ser Ser
 725 730 735

Ala Ser Val Ala Val Glu Gly Ser Glu Asp Lys Gly Ser Met Glu Gly
 740 745 750

Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr
 755 760 765

Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser
770 775 780

Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val
785 790 795 800

Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp
805 810 815

His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly
820 825 830

Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu
835 840 845

Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln
850 855 860

Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn
865 870 875 880

Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn
885 890 895

Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr
900 905 910

Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys
915 920 925

Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val
930 935 940

Pro Ala Leu Trp Gln Leu Gln
945 950

<210> 178
<211> 752
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> THIOLEST
<222> (752)..(752)
<223> glycine-thioester

<400> 178

Tyr Ser Met Thr Pro Pro Thr Leu Asn Ile Thr Glu Glu Ser His Val
1 5 10 15

Ile Asp Thr Gly Asp Ser Leu Ser Ile Ser Cys Arg Gly Gln His Pro
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20

25

30

Leu Glu Trp Ala Trp Pro Gly Ala Gln Glu Ala Pro Ala Thr Gly Asp
 35 40 45

Lys Asp Ser Glu Asp Thr Gly Val Val Arg Asp Cys Glu Gly Thr Asp
 50 55 60

Ala Arg Pro Tyr Cys Lys Val Leu Leu Leu His Glu Val His Ala Asn
 65 70 75 80

Asp Thr Gly Ser Tyr Val Cys Tyr Tyr Lys Tyr Ile Lys Ala Arg Ile
 85 90 95

Glu Gly Thr Thr Ala Ala Ser Ser Tyr Val Phe Val Arg Asp Phe Glu
 100 105 110

Gln Pro Phe Ile Asn Lys Pro Asp Thr Leu Leu Val Asn Arg Lys Asp
 115 120 125

Ala Met Trp Val Pro Cys Leu Val Ser Ile Pro Gly Leu Asn Val Thr
 130 135 140

Leu Arg Ser Gln Ser Ser Val Leu Trp Pro Asp Gly Gln Glu Val Val
 145 150 155 160

Trp Asp Asp Arg Arg Gly Met Leu Val Ser Thr Pro Leu Leu His Asp
 165 170 175

Ala Leu Tyr Leu Gln Cys Glu Thr Thr Trp Gly Asp Gln Asp Phe Leu
 180 185 190

Ser Asn Pro Phe Leu Val His Ile Thr Gly Asn Glu Leu Tyr Asp Ile
 195 200 205

Gln Leu Leu Pro Arg Lys Ser Leu Glu Leu Leu Val Gly Glu Lys Leu
 210 215 220

Val Leu Asn Cys Thr Val Trp Ala Glu Phe Asn Ser Gly Val Thr Phe
 225 230 235 240

Asp Trp Asp Tyr Pro Gly Lys Gln Ala Glu Arg Gly Lys Trp Val Pro
 245 250 255

Glu Arg Arg Ser Gln Gln Thr His Thr Glu Leu Ser Ser Ile Leu Thr
 260 265 270

Ile His Asn Val Ser Gln His Asp Leu Gly Ser Tyr Val Cys Lys Ala
 275 280 285

Asn Asn Gly Ile Gln Arg Phe Arg Glu Ser Thr Glu Val Ile Val His
 290 295 300

Glu Asn Pro Phe Ile Ser Val Glu Trp Leu Lys Gly Pro Ile Leu Glu
 305 310 315 320
 Ala Thr Ala Gly Asp Glu Leu Val Lys Leu Pro Val Lys Leu Ala Ala
 325 330 335
 Tyr Pro Pro Pro Glu Phe Gln Trp Tyr Lys Asp Gly Lys Ala Leu Ser
 340 345 350
 Gly Arg His Ser Pro His Ala Leu Val Leu Lys Glu Val Thr Glu Ala
 355 360 365
 Ser Thr Gly Thr Tyr Thr Leu Ala Leu Trp Asn Ser Ala Ala Gly Leu
 370 375 380
 Arg Arg Asn Ile Ser Leu Glu Leu Val Val Asn Val Pro Pro Gln Ile
 385 390 395 400
 His Glu Lys Glu Ala Ser Ser Pro Ser Ile Tyr Ser Arg His Ser Arg
 405 410 415
 Gln Ala Leu Thr Cys Thr Ala Tyr Gly Val Pro Leu Pro Leu Ser Ile
 420 425 430
 Gln Trp His Trp Arg Pro Trp Thr Pro Cys Lys Met Phe Ala Gln Arg
 435 440 445
 Ser Leu Arg Arg Arg Gln Gln Gln Asp Leu Met Pro Gln Cys Arg Asp
 450 455 460
 Trp Arg Ala Val Thr Thr Gln Asp Ala Val Asn Pro Ile Glu Ser Leu
 465 470 475 480
 Asp Thr Trp Thr Glu Phe Val Glu Gly Lys Asn Lys Thr Val Ser Lys
 485 490 495
 Leu Val Ile Gln Asn Ala Asn Val Ser Ala Met Tyr Lys Cys Val Val
 500 505 510
 Ser Asn Lys Val Gly Gln Asp Glu Arg Leu Ile Tyr Phe Tyr Val Thr
 515 520 525
 Thr Ile Pro Asp Gly Phe Thr Ile Glu Ser Lys Pro Ser Glu Glu Leu
 530 535 540
 Leu Glu Gly Gln Pro Val Leu Leu Ser Cys Gln Ala Asp Ser Tyr Lys
 545 550 555 560
 Tyr Glu His Leu Arg Trp Tyr Arg Leu Asn Leu Ser Thr Leu His Asp
 565 570 575

Ala His Gly Asn Pro Leu Leu Leu Asp Cys Lys Asn Val His Leu Phe
580 585 590

Ala Thr Pro Leu Ala Ala Ser Leu Glu Glu Val Ala Pro Gly Ala Arg
595 600 605

His Ala Thr Leu Ser Leu Ser Ile Pro Arg Val Ala Pro Glu His Glu
610 615 620

Gly His Tyr Val Cys Glu Val Gln Asp Arg Arg Ser His Asp Lys His
625 630 635 640

Cys His Lys Lys Tyr Leu Ser Val Gln Ala Leu Glu Ala Pro Arg Leu
645 650 655

Thr Gln Asn Leu Thr Asp Leu Leu Val Asn Val Ser Asp Ser Leu Glu
660 665 670

Met Gln Cys Leu Val Ala Gly Ala His Ala Pro Ser Ile Val Trp Tyr
675 680 685

Lys Asp Glu Arg Leu Leu Glu Glu Lys Ser Gly Val Asp Leu Ala Asp
690 695 700

Ser Asn Gln Lys Leu Ser Ile Gln Arg Val Arg Glu Glu Asp Ala Gly
705 710 715 720

Arg Tyr Leu Cys Ser Val Cys Asn Ala Lys Gly Cys Val Asn Ser Ser
725 730 735

Ala Ser Val Ala Val Glu Gly Ser Glu Asp Lys Gly Ser Met Glu Xaa
740 745 750

<210> 179

<211> 753

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (753)..(753)

<223> cysteine or selenocysteine

<400> 179

Tyr Ser Met Thr Pro Pro Thr Leu Asn Ile Thr Glu Glu Ser His Val
1 5 10 15

Ile Asp Thr Gly Asp Ser Leu Ser Ile Ser Cys Arg Gly Gln His Pro
20 25 30

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

Ala Thr Pro Leu Ala Ala Ser Leu Glu Glu Val Ala Pro Gly Ala Arg
595 600 605

His Ala Thr Leu Ser Leu Ser Ile Pro Arg Val Ala Pro Glu His Glu
610 615 620

Gly His Tyr Val Cys Glu Val Gln Asp Arg Arg Ser His Asp Lys His
625 630 635 640

Cys His Lys Lys Tyr Leu Ser Val Gln Ala Leu Glu Ala Pro Arg Leu
645 650 655

Thr Gln Asn Leu Thr Asp Leu Leu Val Asn Val Ser Asp Ser Leu Glu
660 665 670

Met Gln Cys Leu Val Ala Gly Ala His Ala Pro Ser Ile Val Trp Tyr
675 680 685

Lys Asp Glu Arg Leu Leu Glu Glu Lys Ser Gly Val Asp Leu Ala Asp
690 695 700

Ser Asn Gln Lys Leu Ser Ile Gln Arg Val Arg Glu Glu Asp Ala Gly
705 710 715 720

Arg Tyr Leu Cys Ser Val Cys Asn Ala Lys Gly Cys Val Asn Ser Ser
725 730 735

Ala Ser Val Ala Val Glu Gly Ser Glu Asp Lys Gly Ser Met Glu Gly
740 745 750

Xaa

<210> 180
<211> 2567
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 180
aagcttgaat tcccaccatg cgacctccg ggacggccgg ggcagcgctc ctggcgctgc 60
tggctgcgct ctgcccggcg agtcgggctc tggaggaaaa gaaagtttgc caaggcacga 120
gtaacaagct cagcgagttg ggcacttttg aagatcattt tctcagcctc cagaggatgt 180
tcaataactg tgaggtggtc cttgggaatt tggaattac ctatgtgcag aggaattatg 240
atctttcctt cttaaagacc atccaggagg tggctgggta tgtcctcatt gccctcaaca 300
cagtggagcg aatccctttg gaaaacctgc agatcatcag aggaaatatg tactacgaaa 360
attcctatgc cttagcagtc ttatctaact atgatgcaaa taaaaccgga ctgaaggagc 420

480 tgcacatag aatitacag gaatccctgc atgacgacctg gcggttcag aacaacctg
540 cccgttgcaa cgtggagagc atccagtggc gggacatagt cagcagtgac ttctcagca
600 acatgtcgat ggaattccag aaccacctgg gcaagctgcca aagtgtagt ccaagctgtc
660 ccaatgggag ctgctggggt gcaaggagag agaaatgcca gaaactgacc aaaaatcatc
720 gtgcccagca gtgctccggg cgtgcccgtg gcaagctccc cagtgtactg tgccacaacc
780 agtgtgtctg aggtctgaca gggccccggg agagcgactg cctgtctg cgcaaatcc
840 gagacgagc cagtgcag gacacctgccc cccaactat gctctacaac cccaacagt
900 accgattga tgtgaacccc gagggcaaat acagcttgg tgcacactgc gtgaagaagt
960 gtccccgtaa ttatgtgtg acagatcacg gctgtgtgt ccgagcctgt ggggccgaca
1020 gctatgagat ggaaggaagc ggcgtccgca agtgtagaa gtgcgaagg ccttgccgca
1080 aagtgtgtaa cggataggt atgtgtgaat ttaagactc actctcataaatgtctaga
1140 atatitaaaca cticaaaaaac tgcacctcca tcagtgcgga tctccacatc ctgcccgttg
1200 cattagggg tgactcttc acacatatic ctctctgga tccacagga ctgtatatc
1260 tgaaaacctg aaaggaatc acagggttt tgcgtatca ggccttgctt gaaacagga
1320 cggacctcca tgcctttag aacctagaa tcatagcgg caggaaccaag caacatgtc
1380 agtttctct tgcagtctgc agctgaaca taacatcctt gggattacgc tccctcaagg
1440 agataagtga tggagatgtg ataattcag gaacaaaaaa ttgtgtctat gcaatatcaa
1500 taacttgaa aaaaactgtt gggaacctcg gtcaagaaaac caaatitaa agcaacagag
1560 gtgaaaaacag ctgcaaggcc acaggccagg tctgccaatg cttgtctccc cccgaggct
1620 gctgggtccc ggaagccagg gactgctct cttgccgga tgtcagccga ggcagggaat
1680 gctgtgacaa gtgcaagctc ctggaagggt agccaaggga gtttgtgag aactctgagt
1740 gcatacagt ccaaccagag tgcctgcctc aggcacatga catcacctgc acaggaaggg
1800 gacacagcaa ctgtatccag tgtgcccact acatgacgg cccccactgc gtcaagacct
1860 gccgagcagg agtcatggga gaaacaaca cctgtctg gaagtacga gacgccggcc
1920 atgtgtgcca cctgtgcat ccaactgca cctacggatg cactgggcca ggtcttgaa
1980 gctgtccaac gaatggccct aagatccctc cgggtgctg atccggtagc acctatgtaa
2040 tgaactagtg cgggccccgc actgtgtg aactggagg caaacctgtc accgcactga
2100 ttcgcgctc tggtaacca tgcacctcag gtttcttcg caccgttgaa cgtgacgtat
2160 atgacttgcg tacacgtgag gttcatgtct tacgttgaac ccatgatcac cgtgtctg
2220 tgaatgatat tggccttgaa tggcgtgccc cgggtgaaat ggaacgcggc gacgccttg
2280 tgaatgatat tgcagctgac gacttccgg cactggcaac cttccgtggc ctgctgtggc
2340 ctggccgcca ggaatgtat gacgtactg tttaaggctg tagcgcatc actgctaagt
2400 gcttcattgt acacgcatgt ggcgagcagc ccgggacctg tctgaaatca ggcctcaga
2460 caaatccctg tgtatccct tggcaggctc acacagctta tactgaggga caatggctca
2520 catataacgg caagacgtat aatgtttgc agccccacac ctcccttgca ggaatgggaa

catccaacgt tcctgccttg tggcagcttc aatgactcga gcggccg

2567

<210> 181

<211> 845

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 181

Met Arg Pro Ser Gly Thr Ala Gly Ala Ala Leu Leu Ala Leu Leu Ala
1 5 10 15

Ala Leu Cys Pro Ala Ser Arg Ala Leu Glu Glu Lys Lys Val Cys Gln
20 25 30

Gly Thr Ser Asn Lys Leu Thr Gln Leu Gly Thr Phe Glu Asp His Phe
35 40 45

Leu Ser Leu Gln Arg Met Phe Asn Asn Cys Glu Val Val Leu Gly Asn
50 55 60

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

Thr Ile Gln Glu Val Ala Gly Tyr Val Leu Ile Ala Leu Asn Thr Val
85 90 95

Glu Arg Ile Pro Leu Glu Asn Leu Gln Ile Ile Arg Gly Asn Met Tyr
100 105 110

Tyr Glu Asn Ser Tyr Ala Leu Ala Val Leu Ser Asn Tyr Asp Ala Asn
115 120 125

Lys Thr Gly Leu Lys Glu Leu Pro Met Arg Asn Leu Gln Glu Ile Leu
130 135 140

His Gly Ala Val Arg Phe Ser Asn Asn Pro Ala Leu Cys Asn Val Glu
145 150 155 160

Ser Ile Gln Trp Arg Asp Ile Val Ser Ser Asp Phe Leu Ser Asn Met
165 170 175

Ser Met Asp Phe Gln Asn His Leu Gly Ser Cys Gln Lys Cys Asp Pro
180 185 190

Ser Cys Pro Asn Gly Ser Cys Trp Gly Ala Gly Glu Glu Asn Cys Gln
195 200 205

Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser Gly Arg Cys Arg
210 215 220

Gly Lys Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys
225 230 235 240

Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Arg Lys Phe Arg Asp
245 250 255

Glu Ala Thr Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro
260 265 270

Thr Thr Tyr Gln Met Asp Val Asn Pro Glu Gly Lys Tyr Ser Phe Gly
275 280 285

Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His
290 295 300

Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser Tyr Glu Met Glu Glu
305 310 315 320

Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly Pro Cys Arg Lys Val
325 330 335

Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp Ser Leu Ser Ile Asn
340 345 350

Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr Ser Ile Ser Gly Asp
355 360 365

Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp Ser Phe Thr His Thr
370 375 380

Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu Lys Thr Val Lys Glu
385 390 395 400

Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro Glu Asn Arg Thr Asp
405 410 415

Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln
420 425 430

His Gly Gln Phe Ser Leu Ala Val Val Ser Leu Asn Ile Thr Ser Leu
435 440 445

Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser
450 455 460

Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu
465 470 475 480

Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile Ser Asn Arg Gly Glu
485 490 495

Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His Ala Leu Cys Ser Pro
500 505 510

Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Arg Asn
515 520 525

Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys Asn Leu Leu Glu Gly
530 535 540

Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro
545 550 555 560

Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro
565 570 575

Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val
580 585 590

Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn Asn Thr Leu Val Trp
595 600 605

Lys Tyr Ala Asp Ala Gly His Val Cys His Leu Cys His Pro Asn Cys
610 615 620

Thr Tyr Gly Cys Thr Gly Pro Gly Leu Glu Gly Cys Pro Thr Asn Gly
625 630 635 640

Pro Lys Ile Pro Ser Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr
645 650 655

Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr
660 665 670

Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg
675 680 685

Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys
690 695 700

Leu Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu
705 710 715 720

Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met
725 730 735

Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu
740 745 750

Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala
755 760 765

Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln
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770

775

780

Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser
785 790 795 800

Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr
805 810 815

Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly
820 825 830

Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
835 840 845

<210> 182

<211> 821

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 182

Leu Glu Glu Lys Lys Val Cys Gln Gly Thr Ser Asn Lys Leu Thr Gln
1 5 10 15

Leu Gly Thr Phe Glu Asp His Phe Leu Ser Leu Gln Arg Met Phe Asn
20 25 30

Asn Cys Glu Val Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg
35 40 45

Asn Tyr Asp Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr
50 55 60

Val Leu Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu
65 70 75 80

Gln Ile Ile Arg Gly Asn Met Tyr Tyr Glu Asn Ser Tyr Ala Leu Ala
85 90 95

Val Leu Ser Asn Tyr Asp Ala Asn Lys Thr Gly Leu Lys Glu Leu Pro
100 105 110

Met Arg Asn Leu Gln Glu Ile Leu His Gly Ala Val Arg Phe Ser Asn
115 120 125

Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln Trp Arg Asp Ile Val
130 135 140

Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe Gln Asn His Leu
145 150 155 160

Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp
165 170 175

Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala
180 185 190

Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser Pro Ser Asp Cys Cys
195 200 205

His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro Arg Glu Ser Asp Cys
210 215 220

Leu Val Cys Arg Lys Phe Arg Asp Glu Ala Thr Cys Lys Asp Thr Cys
225 230 235 240

Pro Pro Leu Met Leu Tyr Asn Pro Thr Thr Tyr Gln Met Asp Val Asn
245 250 255

Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro
260 265 270

Arg Asn Tyr Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly
275 280 285

Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys
290 295 300

Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu
305 310 315 320

Phe Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys
325 330 335

Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe
340 345 350

Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu
355 360 365

Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln
370 375 380

Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu
385 390 395 400

Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln Phe Ser Leu Ala Val
405 410 415

Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile
420 425 430

Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala
Page 238

435

440

445

Asn Thr Ile Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr
 450 455 460

Lys Ile Ile Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln
 465 470 475 480

Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro
 485 490 495

Arg Asp Cys Val Ser Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val
 500 505 510

Asp Lys Cys Asn Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn
 515 520 525

Ser Glu Cys Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn
 530 535 540

Ile Thr Cys Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His
 545 550 555 560

Tyr Ile Asp Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met
 565 570 575

Gly Glu Asn Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val
 580 585 590

Cys His Leu Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly Pro Gly
 595 600 605

Leu Glu Gly Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser Gly Cys Val
 610 615 620

Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala
 625 630 635 640

Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr
 645 650 655

Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp
 660 665 670

Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg
 675 680 685

Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu
 690 695 700

Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro
 705 710 715 720

Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val
725 730 735

Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe
740 745 750

Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly
755 760 765

Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr
770 775 780

Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu
785 790 795 800

Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala
805 810 815

Leu Trp Gln Leu Gln
820

<210> 183

<211> 622

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> THIOLEST

<222> (622)..(622)

<223> glycine-thioester

<400> 183

Leu Glu Glu Lys Lys Val Cys Gln Gly Thr Ser Asn Lys Leu Thr Gln
1 5 10 15

Leu Gly Thr Phe Glu Asp His Phe Leu Ser Leu Gln Arg Met Phe Asn
20 25 30

Asn Cys Glu Val Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg
35 40 45

Asn Tyr Asp Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr
50 55 60

Val Leu Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu
65 70 75 80

Gln Ile Ile Arg Gly Asn Met Tyr Tyr Glu Asn Ser Tyr Ala Leu Ala
85 90 95

Val Leu Ser Asn Tyr Asp Ala Asn Lys Thr Gly Leu Lys Glu Leu Pro
 100 105 110
 Met Arg Asn Leu Gln Glu Ile Leu His Gly Ala Val Arg Phe Ser Asn
 115 120 125
 Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln Trp Arg Asp Ile Val
 130 135 140
 Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe Gln Asn His Leu
 145 150 155 160
 Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp
 165 170 175
 Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala
 180 185 190
 Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser Pro Ser Asp Cys Cys
 195 200 205
 His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro Arg Glu Ser Asp Cys
 210 215 220
 Leu Val Cys Arg Lys Phe Arg Asp Glu Ala Thr Cys Lys Asp Thr Cys
 225 230 235 240
 Pro Pro Leu Met Leu Tyr Asn Pro Thr Thr Tyr Gln Met Asp Val Asn
 245 250 255
 Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro
 260 265 270
 Arg Asn Tyr Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly
 275 280 285
 Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys
 290 295 300
 Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu
 305 310 315 320
 Phe Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys
 325 330 335
 Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe
 340 345 350
 Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu
 355 360 365

Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln
370 375 380

Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu
385 390 395 400

Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln Phe Ser Leu Ala Val
405 410 415

Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile
420 425 430

Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala
435 440 445

Asn Thr Ile Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr
450 455 460

Lys Ile Ile Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln
465 470 475 480

Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro
485 490 495

Arg Asp Cys Val Ser Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val
500 505 510

Asp Lys Cys Asn Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn
515 520 525

Ser Glu Cys Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn
530 535 540

Ile Thr Cys Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His
545 550 555 560

Tyr Ile Asp Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met
565 570 575

Gly Glu Asn Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val
580 585 590

Cys His Leu Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly Pro Gly
595 600 605

Leu Glu Gly Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser Xaa
610 615 620

<210> 184

<211> 623

<212> PRT

<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (623)..(623)
<223> cysteine or selenocysteine

<400> 184

Leu Glu Glu Lys Lys Val Cys Gln Gly Thr Ser Asn Lys Leu Thr Gln
1 5 10 15

Leu Gly Thr Phe Glu Asp His Phe Leu Ser Leu Gln Arg Met Phe Asn
20 25 30

Asn Cys Glu Val Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg
35 40 45

Asn Tyr Asp Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr
50 55 60

Val Leu Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu
65 70 75 80

Gln Ile Ile Arg Gly Asn Met Tyr Tyr Glu Asn Ser Tyr Ala Leu Ala
85 90 95

Val Leu Ser Asn Tyr Asp Ala Asn Lys Thr Gly Leu Lys Glu Leu Pro
100 105 110

Met Arg Asn Leu Gln Glu Ile Leu His Gly Ala Val Arg Phe Ser Asn
115 120 125

Asn Pro Ala Leu Cys Asn Val Glu Ser Ile Gln Trp Arg Asp Ile Val
130 135 140

Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe Gln Asn His Leu
145 150 155 160

Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp
165 170 175

Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala
180 185 190

Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser Pro Ser Asp Cys Cys
195 200 205

His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro Arg Glu Ser Asp Cys
210 215 220

Leu Val Cys Arg Lys Phe Arg Asp Glu Ala Thr Cys Lys Asp Thr Cys
225 230 235 240

Pro Pro Leu Met Leu Tyr Asn Pro Thr Thr Tyr Gln Met Asp Val Asn
 245 250 255
 Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro
 260 265 270
 Arg Asn Tyr Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly
 275 280 285
 Ala Asp Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys
 290 295 300
 Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu
 305 310 315 320
 Phe Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys
 325 330 335
 Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe
 340 345 350
 Arg Gly Asp Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu
 355 360 365
 Asp Ile Leu Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln
 370 375 380
 Ala Trp Pro Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu
 385 390 395 400
 Ile Ile Arg Gly Arg Thr Lys Gln His Gly Gln Phe Ser Leu Ala Val
 405 410 415
 Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile
 420 425 430
 Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala
 435 440 445
 Asn Thr Ile Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr
 450 455 460
 Lys Ile Ile Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln
 465 470 475 480
 Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro
 485 490 495
 Arg Asp Cys Val Ser Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val
 500 505 510

Asp Lys Cys Asn Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn
515 520 525

Ser Glu Cys Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn
530 535 540

Ile Thr Cys Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His
545 550 555 560

Tyr Ile Asp Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met
565 570 575

Gly Glu Asn Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val
580 585 590

Cys His Leu Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly Pro Gly
595 600 605

Leu Glu Gly Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser Gly Xaa
610 615 620

<210> 185
<211> 2588
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 185
aagcttgaat tcccaccatg gagctggcgg ccttggtgccg ctgggggctc ctctcgccc 60
tcttgcccc cggagccgcg agcaccacaag tgtgcaccgg cacagacatg aagctgcggc 120
tccctgccag tcccgagacc cacctggaca tgctccgcca cctctaccag ggctgccagg 180
tggtgcaggg aaacctggaa ctacactacc tgcccaccaa tgccagcctg tccttcctgc 240
aggatatcca ggaggtgcag ggctacgtgc tcatcgctca caaccaagtg aggcagggtc 300
cactgcagag gctgcggatt gtgcgaggca cccagctctt tgaggacaac tatgccctgg 360
ccgtgctaga caatggagac ccgctgaaca ataccacccc tgtcacaggg gcctccccag 420
gaggcctgcg ggagctgcag cttcgaagcc tcacagagat cttgaaagga ggggtcttga 480
tccagcggaa cccccagctc tgctaccagg acacgatttt gtggaaggac atcttcaca 540
agaacaacca gctggctctc aactgatag acaccaaccg ctctcgggcc tgccaccct 600
gttctccgat gtgtaagggc tcccgctgct ggggagagag ttctgaggat tgcagagcc 660
tgacgcgcac tgtctgtgcc ggtggctgtg cccgctgcaa ggggccactg cccactgact 720
gctgccatga gcagtgtgct gccggctgca cgggtcccaa gcactctgac tgccctggcct 780
gcctccactt caaccacagt ggcattctgtg agctgcactg cccagccctg gtcacctaca 840
acacagacac gtttgagtcc atgcccaatc ccgagggccg gtatacatc gccgccagct 900
gtgtgactgc ctgtccctac aactaccttt ctacggacgt gggatcctgc accctcgtct 960

gccccctgca caaccgaagag gtgacagcag aggatggaaac acagcgggtgt gagaagtgcga 1020
gcaagccctgt tgcctcagtg tgcctatggc tgggcatagga gcaacttgca gaggtagagg 1080
cagttaccag tgcacaatc caggagtttg ctggctgcaa gaagatcttt gggagccctgg 1140
catttctgccc ggaagagcttt gatggggacc cagccctccaa cactgccccg ctccagccag 1200
agcagctcca agtgttttag actctggaa agatcacagg ttacctatac atctcagcat 1260
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tgcgctcac tggggaactg ggcagtggac tggccctcat ccaaccataac acccaacct 1440
gcttctgca caggtgccc tgggaaccag tctttcggaa ccgcaccaa gcttctgccc 1500
acactggcaa ccggccagag gacgagtgtg tggcggaagg cctggcctgc caccagctgt 1560
ggcccccagg gcactgctgg ggtccaggc ccacccagtg tgtcaactgc agccagttcc 1620
ttcggggcca ggaagtgcgt gaggaaatgc gagtactgca ggggtcccc agggagtatg 1680
tgaatgccag gcactgtttg ccgtgccacc ctgagtgtca gcccagaat ggtcagtga 1740
cctgttttg accggaggt gaccagtgtg tggcctgtgc ccaataaag gacccctcc 1800
tctgctggc ccgctgcccc agcgtgtgga aacctgacct ctctacatg cccatctgga 1860
agttccaga tgaaggaggc gcatggcagg ctggcccat caactgcaac cactcctgtg 1920
tggacctgga tgaacaaggc tgcctccggc agcagagagc cagccctctg acgggtgctg 1980
tatccggtga caccattgta atgactagt gcgggcccc cactgtggt gaaactggagg 2040
gcaaaacct caccgcactg atctgcggt ctgctacc atgccccca gtttctcc 2100
gcaactgga acgtgacgta tatgactgc gtacacgtga ggttcattgc ttacgttga 2160
cccatgata ccgtgttctg gtgatggatg gtggcctgga atggcgtgc gcggtgaaac 2220
tggaaacggc ggaacccctg gtgatggatg atgcagctgg cgaatttccg gcactggcaa 2280
ccttccgtgg cctgctggc gctggccgc aggatgttta tgaagctact gtttaggtg 2340
ctagccat cactgcta at ggttcattg tacacgcatg tggcgagcag ccggggaaccg 2400
gtctgaactc aggcctcacg acaaatcctg gtgtatcgc ttggcaggtc aacacagctt 2460
atactgcggg acaattgtc acatataacg gcaagacgta taaatgtttg cagccccaca 2520
ccttctggc aggatggaa ccatccaag ttctgtcctt gtggcagctt caatgactcg 2580
agcggccg 2588

<210> 186
<211> 852
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

1	5	10	15
Pro	Pro	Gly	Ala
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Ala	Ser	Thr	Gln
			25
Val	Cys	Thr	Gly
			30
Asp	Met	Lys	
Leu	Arg	Leu	Pro
	35		
Ala	Ser	Pro	Glu
			40
Thr	His	Leu	Asp
			45
Met	Leu	Arg	His
Leu	Tyr	Gln	Gly
	50		
Cys	Gln	Val	Val
			55
Gln	Gly	Asn	Leu
			60
Glu	Leu	Thr	Tyr
Leu	Pro	Thr	Asn
			65
Ala	Ser	Leu	Ser
			70
Phe	Leu	Gln	Asp
			75
Ile	Gln	Glu	Val
			80
Gln	Gly	Tyr	Val
			85
Leu	Ile	Ala	His
Asn	Gln	Val	Arg
			90
Gln	Val	Arg	Gln
			95
Pro	Leu		
Gln	Arg	Leu	Arg
			100
Ile	Val	Arg	Gly
			105
Thr	Gln	Leu	Phe
Glu	Asp	Asn	Tyr
			110
Ala	Leu	Ala	Val
			115
Leu	Asp	Asn	Gly
			120
Asp	Pro	Leu	Asn
			125
Thr	Thr	Pro	
Val	Thr	Gly	Ala
			130
Ser	Pro	Gly	Gly
			135
Leu	Arg	Glu	Leu
			140
Gln	Leu	Arg	Ser
Leu	Thr	Glu	Ile
			145
Leu	Lys	Gly	Gly
			150
Val	Leu	Ile	Gln
			155
Arg	Asn	Pro	Gln
			160
Leu	Cys	Tyr	Gln
			165
Asp	Thr	Ile	Leu
Trp	Lys	Asp	Ile
			170
Phe	His	Lys	Asn
			175
Asn	Gln	Leu	Ala
			180
Leu	Thr	Leu	Ile
Asp	Thr	Asn	Arg
			185
Ser	Arg	Ala	Cys
			190
His	Pro	Cys	Ser
			195
Pro	Met	Cys	Lys
			200
Gly	Ser	Arg	Cys
Trp	Gly	Glu	Ser
			205
Ser	Glu	Asp	Cys
			210
Gln	Ser	Leu	Thr
			215
Arg	Thr	Val	Cys
			220
Ala	Gly	Gly	Cys
Ala	Arg	Cys	Lys
			225
Gly	Pro	Leu	Pro
			230
Thr	Asp	Cys	Cys
			235
His	Glu	Gln	Cys
			240
Ala	Ala	Gly	Cys
			245
Thr	Gly	Pro	Lys
His	Ser	Gly	Ile
			250
Cys	Glu	Leu	His
Cys	Pro	Ala	Leu
			255
Val	His	Phe	Asn
			260
Ser	Gly	Ile	Cys
Glu	Leu	His	Cys
			265
Pro	Ala	Leu	Val
			270
Thr	Tyr	Asn	Thr
			275
Asp	Thr	Phe	Glu
			280
Ser	Met	Pro	Asn
Pro	Glu	Gly	Arg
			285

Tyr Thr Phe Gly Ala Ser Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu
290 295 300
Ser Thr Asp Val Gly Ser Cys Thr Leu Val Cys Pro Leu His Asn Gln
305 310 315 320
Glu Val Thr Ala Glu Asp Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys
325 330 335
Pro Cys Ala Arg Val Cys Tyr Gly Leu Gly Met Glu His Leu Arg Glu
340 345 350
Val Arg Ala Val Thr Ser Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys
355 360 365
Lys Ile Phe Gly Ser Leu Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp
370 375 380
Pro Ala Ser Asn Thr Ala Pro Leu Gln Pro Glu Gln Leu Gln Val Phe
385 390 395 400
Glu Thr Leu Glu Glu Ile Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro
405 410 415
Asp Ser Leu Pro Asp Leu Ser Val Phe Gln Asn Leu Gln Val Ile Arg
420 425 430
Gly Arg Ile Leu His Asn Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu
435 440 445
Gly Ile Ser Trp Leu Gly Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly
450 455 460
Leu Ala Leu Ile His His Asn Thr His Leu Cys Phe Val His Thr Val
465 470 475 480
Pro Trp Asp Gln Leu Phe Arg Asn Pro His Gln Ala Leu Leu His Thr
485 490 495
Ala Asn Arg Pro Glu Asp Glu Cys Val Gly Glu Gly Leu Ala Cys His
500 505 510
Gln Leu Cys Ala Arg Gly His Cys Trp Gly Pro Gly Pro Thr Gln Cys
515 520 525
Val Asn Cys Ser Gln Phe Leu Arg Gly Gln Glu Cys Val Glu Glu Cys
530 535 540
Arg Val Leu Gln Gly Leu Pro Arg Glu Tyr Val Asn Ala Arg His Cys
545 550 555 560

Leu Pro Cys His Pro Glu Cys Gln Pro Gln Asn Gly Ser Val Thr Cys
 565 570 575
 Phe Gly Pro Glu Ala Asp Gln Cys Val Ala Cys Ala His Tyr Lys Asp
 580 585 590
 Pro Pro Phe Cys Val Ala Arg Cys Pro Ser Gly Val Lys Pro Asp Leu
 595 600 605
 Ser Tyr Met Pro Ile Trp Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln
 610 615 620
 Pro Cys Pro Ile Asn Cys Thr His Ser Cys Val Asp Leu Asp Asp Lys
 625 630 635 640
 Gly Cys Pro Ala Glu Gln Arg Ala Ser Pro Leu Thr Gly Cys Val Ser
 645 650 655
 Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu
 660 665 670
 Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro
 675 680 685
 Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu
 690 695 700
 Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val
 705 710 715 720
 Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu
 725 730 735
 Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala
 740 745 750
 Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr
 755 760 765
 Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile
 770 775 780
 Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu
 785 790 795 800
 Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr
 805 810 815
 Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln
 820 825 830

Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu
835 840 845

Trp Gln Leu Gln
850

<210> 187
<211> 830
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin
<400> 187

Thr Gln Val Cys Thr Gly Thr Asp Met Lys Leu Arg Leu Pro Ala Ser
1 5 10 15

Pro Glu Thr His Leu Asp Met Leu Arg His Leu Tyr Gln Gly Cys Gln
20 25 30

Val Val Gln Gly Asn Leu Glu Leu Thr Tyr Leu Pro Thr Asn Ala Ser
35 40 45

Leu Ser Phe Leu Gln Asp Ile Gln Glu Val Gln Gly Tyr Val Leu Ile
50 55 60

Ala His Asn Gln Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile Val
65 70 75 80

Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr Ala Leu Ala Val Leu Asp
85 90 95

Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro Val Thr Gly Ala Ser Pro
100 105 110

Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser Leu Thr Glu Ile Leu Lys
115 120 125

Gly Gly Val Leu Ile Gln Arg Asn Pro Gln Leu Cys Tyr Gln Asp Thr
130 135 140

Ile Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala Leu Thr
145 150 155 160

Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys Ser Pro Met
165 170 175

Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu Asp Cys Gln Ser
180 185 190

Leu Thr Arg Thr Val Cys Ala Gly Gly Cys Ala Arg Cys Lys Gly Pro
195 200 205

Leu Pro Thr Asp Cys Cys His Glu Gln Cys Ala Ala Gly Cys Thr Gly
 210 215 220
 Pro Lys His Ser Asp Cys Leu Ala Cys Leu His Phe Asn His Ser Gly
 225 230 235 240
 Ile Cys Glu Leu His Cys Pro Ala Leu Val Thr Tyr Asn Thr Asp Thr
 245 250 255
 Phe Glu Ser Met Pro Asn Pro Glu Gly Arg Tyr Thr Phe Gly Ala Ser
 260 265 270
 Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu Ser Thr Asp Val Gly Ser
 275 280 285
 Cys Thr Leu Val Cys Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp
 290 295 300
 Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys Pro Cys Ala Arg Val Cys
 305 310 315 320
 Tyr Gly Leu Gly Met Glu His Leu Arg Glu Val Arg Ala Val Thr Ser
 325 330 335
 Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys Lys Ile Phe Gly Ser Leu
 340 345 350
 Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr Ala
 355 360 365
 Pro Leu Gln Pro Glu Gln Leu Gln Val Phe Glu Thr Leu Glu Glu Ile
 370 375 380
 Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro Asp Leu
 385 390 395 400
 Ser Val Phe Gln Asn Leu Gln Val Ile Arg Gly Arg Ile Leu His Asn
 405 410 415
 Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu Gly Ile Ser Trp Leu Gly
 420 425 430
 Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly Leu Ala Leu Ile His His
 435 440 445
 Asn Thr His Leu Cys Phe Val His Thr Val Pro Trp Asp Gln Leu Phe
 450 455 460
 Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro Glu Asp
 465 470 475 480

Glu Cys Val Gly Glu Gly Leu Ala Cys His Gln Leu Cys Ala Arg Gly
485 490 495

His Cys Trp Gly Pro Gly Pro Thr Gln Cys Val Asn Cys Ser Gln Phe
500 505 510

Leu Arg Gly Gln Glu Cys Val Glu Glu Cys Arg Val Leu Gln Gly Leu
515 520 525

Pro Arg Glu Tyr Val Asn Ala Arg His Cys Leu Pro Cys His Pro Glu
530 535 540

Cys Gln Pro Gln Asn Gly Ser Val Thr Cys Phe Gly Pro Glu Ala Asp
545 550 555 560

Gln Cys Val Ala Cys Ala His Tyr Lys Asp Pro Pro Phe Cys Val Ala
565 570 575

Arg Cys Pro Ser Gly Val Lys Pro Asp Leu Ser Tyr Met Pro Ile Trp
580 585 590

Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln Pro Cys Pro Ile Asn Cys
595 600 605

Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro Ala Glu Gln
610 615 620

Arg Ala Ser Pro Leu Thr Gly Cys Val Ser Gly Asp Thr Ile Val Met
625 630 635 640

Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe
645 650 655

Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe
660 665 670

Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His
675 680 685

Cys Leu Arg Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly
690 695 700

Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val
705 710 715 720

Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly
725 730 735

Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly
740 745 750

Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu
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755

760

765

Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val
 770 775 780

Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr
 785 790 795 800

Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala
 805 810 815

Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
 820 825 830

<210> 188

<211> 631

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> THIOLEST

<222> (631)..(631)

<223> glycine-thioester

<400> 188

Thr Gln Val Cys Thr Gly Thr Asp Met Lys Leu Arg Leu Pro Ala Ser
 1 5 10 15

Pro Glu Thr His Leu Asp Met Leu Arg His Leu Tyr Gln Gly Cys Gln
 20 25 30

Val Val Gln Gly Asn Leu Glu Leu Thr Tyr Leu Pro Thr Asn Ala Ser
 35 40 45

Leu Ser Phe Leu Gln Asp Ile Gln Glu Val Gln Gly Tyr Val Leu Ile
 50 55 60

Ala His Asn Gln Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile Val
 65 70 75 80

Arg Gly Thr Gln Leu Phe Glu Asp Asn Tyr Ala Leu Ala Val Leu Asp
 85 90 95

Asn Gly Asp Pro Leu Asn Asn Thr Thr Pro Val Thr Gly Ala Ser Pro
 100 105 110

Gly Gly Leu Arg Glu Leu Gln Leu Arg Ser Leu Thr Glu Ile Leu Lys
 115 120 125

Gly Gly Val Leu Ile Gln Arg Asn Pro Gln Leu Cys Tyr Gln Asp Thr
 130 135 140

Ile Leu Trp Lys Asp Ile Phe His Lys Asn Asn Gln Leu Ala Leu Thr
145 150 155 160

Leu Ile Asp Thr Asn Arg Ser Arg Ala Cys His Pro Cys Ser Pro Met
165 170 175

Cys Lys Gly Ser Arg Cys Trp Gly Glu Ser Ser Glu Asp Cys Gln Ser
180 185 190

Leu Thr Arg Thr Val Cys Ala Gly Gly Cys Ala Arg Cys Lys Gly Pro
195 200 205

Leu Pro Thr Asp Cys Cys His Glu Gln Cys Ala Ala Gly Cys Thr Gly
210 215 220

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

Ile Cys Glu Leu His Cys Pro Ala Leu Val Thr Tyr Asn Thr Asp Thr
245 250 255

Phe Glu Ser Met Pro Asn Pro Glu Gly Arg Tyr Thr Phe Gly Ala Ser
260 265 270

Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu Ser Thr Asp Val Gly Ser
275 280 285

Cys Thr Leu Val Cys Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp
290 295 300

Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys Pro Cys Ala Arg Val Cys
305 310 315 320

Tyr Gly Leu Gly Met Glu His Leu Arg Glu Val Arg Ala Val Thr Ser
325 330 335

Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys Lys Ile Phe Gly Ser Leu
340 345 350

Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr Ala
355 360 365

Pro Leu Gln Pro Glu Gln Leu Gln Val Phe Glu Thr Leu Glu Glu Ile
370 375 380

Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro Asp Leu
385 390 395 400

Ser Val Phe Gln Asn Leu Gln Val Ile Arg Gly Arg Ile Leu His Asn
405 410 415

Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu Gly Ile Ser Trp Leu Gly
420 425 430

Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly Leu Ala Leu Ile His His
435 440 445

Asn Thr His Leu Cys Phe Val His Thr Val Pro Trp Asp Gln Leu Phe
450 455 460

Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro Glu Asp
465 470 475 480

Glu Cys Val Gly Glu Gly Leu Ala Cys His Gln Leu Cys Ala Arg Gly
485 490 495

His Cys Trp Gly Pro Gly Pro Thr Gln Cys Val Asn Cys Ser Gln Phe
500 505 510

Leu Arg Gly Gln Glu Cys Val Glu Glu Cys Arg Val Leu Gln Gly Leu
515 520 525

Pro Arg Glu Tyr Val Asn Ala Arg His Cys Leu Pro Cys His Pro Glu
530 535 540

Cys Gln Pro Gln Asn Gly Ser Val Thr Cys Phe Gly Pro Glu Ala Asp
545 550 555 560

Gln Cys Val Ala Cys Ala His Tyr Lys Asp Pro Pro Phe Cys Val Ala
565 570 575

Arg Cys Pro Ser Gly Val Lys Pro Asp Leu Ser Tyr Met Pro Ile Trp
580 585 590

Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln Pro Cys Pro Ile Asn Cys
595 600 605

Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro Ala Glu Gln
610 615 620

Arg Ala Ser Pro Leu Thr Xaa
625 630

<210> 189

<211> 632

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (632)..(632)

<223> cysteine or selenocysteine

<400> 189

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

265

270

Cys Val Thr Ala Cys Pro Tyr Asn Tyr Leu Ser Thr Asp Val Gly Ser
 275 280 285

Cys Thr Leu Val Cys Pro Leu His Asn Gln Glu Val Thr Ala Glu Asp
 290 295 300

Gly Thr Gln Arg Cys Glu Lys Cys Ser Lys Pro Cys Ala Arg Val Cys
 305 310 315 320

Tyr Gly Leu Gly Met Glu His Leu Arg Glu Val Arg Ala Val Thr Ser
 325 330 335

Ala Asn Ile Gln Glu Phe Ala Gly Cys Lys Lys Ile Phe Gly Ser Leu
 340 345 350

Ala Phe Leu Pro Glu Ser Phe Asp Gly Asp Pro Ala Ser Asn Thr Ala
 355 360 365

Pro Leu Gln Pro Glu Gln Leu Gln Val Phe Glu Thr Leu Glu Glu Ile
 370 375 380

Thr Gly Tyr Leu Tyr Ile Ser Ala Trp Pro Asp Ser Leu Pro Asp Leu
 385 390 395 400

Ser Val Phe Gln Asn Leu Gln Val Ile Arg Gly Arg Ile Leu His Asn
 405 410 415

Gly Ala Tyr Ser Leu Thr Leu Gln Gly Leu Gly Ile Ser Trp Leu Gly
 420 425 430

Leu Arg Ser Leu Arg Glu Leu Gly Ser Gly Leu Ala Leu Ile His His
 435 440 445

Asn Thr His Leu Cys Phe Val His Thr Val Pro Trp Asp Gln Leu Phe
 450 455 460

Arg Asn Pro His Gln Ala Leu Leu His Thr Ala Asn Arg Pro Glu Asp
 465 470 475 480

Glu Cys Val Gly Glu Gly Leu Ala Cys His Gln Leu Cys Ala Arg Gly
 485 490 495

His Cys Trp Gly Pro Gly Pro Thr Gln Cys Val Asn Cys Ser Gln Phe
 500 505 510

Leu Arg Gly Gln Glu Cys Val Glu Glu Cys Arg Val Leu Gln Gly Leu
 515 520 525

Pro Arg Glu Tyr Val Asn Ala Arg His Cys Leu Pro Cys His Pro Glu
 530 535 540

Cys Gln Pro Gln Asn Gly Ser Val Thr Cys Phe Gly Pro Glu Ala Asp
545 550 555 560

Gln Cys Val Ala Cys Ala His Tyr Lys Asp Pro Pro Phe Cys Val Ala
565 570 575

Arg Cys Pro Ser Gly Val Lys Pro Asp Leu Ser Tyr Met Pro Ile Trp
580 585 590

Lys Phe Pro Asp Glu Glu Gly Ala Cys Gln Pro Cys Pro Ile Asn Cys
595 600 605

Thr His Ser Cys Val Asp Leu Asp Asp Lys Gly Cys Pro Ala Glu Gln
610 615 620

Arg Ala Ser Pro Leu Thr Gly Xaa
625 630

<210> 190

<211> 2561

<212> DNA

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 190

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gcctgagtgt gaccggcgat gctgagaacc aataccagac actgtacaag ctctacgaga      180
ggtgtgaggt ggtgatgggg aaccttgaga ttgtgtcac gggacacaat gccgacctct      240
ccttcctgca gtggattcga gaagtgcag gctatgtcct cgtggccatg aatgaatttt      300
ctactctacc attgcccac ctccgcgtgg tgcgagggac ccaggcttac gatgggaagt      360
ttgccatctt cgctatgttg aactataaca ccaactccag ccacgctctg cgccagctcc      420
gcttgactca gtcaccgag attctgtcag ggggtgttta tattgagaag aacgataagc      480
tctgtcacat ggacacaatt gactggaggg acatcgtgag ggaccgagat gctgagatag      540
tggtgaagga caatggcaga agctgtcccc cctgtcatga ggtttgcaag gggcgatgct      600
ggggtcctgg atcagaagac tgccagacat tgaccaagac catctgtgct cctcagtgtg      660
atggtcactg ctttgggtccc aacccaacc agtgctgcc tgaatgagtgt gccgggggct      720
gctcaggccc tcaggacaca gactgctttg cctgccggca cttcaatgac agtggagcct      780
gtgtacctcg ctgtccacag cctcttgtct acaacaagct aactttccag ctggaaccca      840
atccccacac caagtatcag tatggaggag tttgtgtagc cagctgtccc cataactttg      900
tggtggatca aacatcctgt gtcagggcct gtcctcctga caagatggaa gtagataaaa      960
atgggctcaa gatgtgtgag ccttgtgggg gactatgtcc caaagcctgt gagggaacag     1020

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1080 gctctggag ccgtccag acttgat cgaacaacat tgaatgattt gtaactgca
 1140 ccaagatcct gggaacactt gactttctga tcaaccggct caatggagac ccttgacaca
 1200 agatccctgc ccttgagccca gagaagctca atgtcttcgg gacagtacgg gagatcacag
 1260 gttaccctgaa catccagtc tggccggccc acatgcacaa cticagtgt ttttccaatt
 1320 tgaacaaccat tggaggcaga agcctctaca accggggtt ctcatgttg atcatgaaga
 1380 actggaatgt cacatctctt ggcttccgat cctgaagga aatagtgct gggcgatatc
 1440 atataatgtc caataggcag ctctgtacc accactcttt gaactggacc aaggtgcttc
 1500 gggggcctac ggaagagcga ctagaatca agcataatcg gccgcgcaga gactgcgttg
 1560 cagagggcga agtgttgtac ccaatgtgt cctctggggg atgtctggtc ccaaggccctg
 1620 gtcatgtgtt gtcctgtcga aatlatagcc gaggaagtgt ctgttgtacc cactgcaact
 1680 ttcgaatgg ggaagccgga gaatttgccc atgaggccga atgtctctcc tgcaccccg
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 1800 aatgtgcca ttttcgagat ggtccccaat ggtgtagcag ctgcccccat ggaatcctag
 1860 gtgccaaggg tccaatctac aagtaaccag atgttcagaa tgaatgtcg ccctgccaatg
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 2460 ctgtgtatc cgttggcag gtcaacacag ctatactgc gggaactg gtacatatata
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 <211> 843
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 191

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 5
 10
 15

20 Ala Arg Gly Ser Gln Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr
 25
 30

Leu Asn Gly Leu Ser val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr
 35 40 45
 Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu
 50 55 60
 Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile
 65 70 75 80
 Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr
 85 90 95
 Leu Pro Leu Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp
 100 105 110
 Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser
 115 120 125
 His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser
 130 135 140
 Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr
 145 150 155 160
 Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val
 165 170 175
 Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly
 180 185 190
 Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr
 195 200 205
 Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn
 210 215 220
 Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp
 225 230 235 240
 Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val
 245 250 255
 Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu
 260 265 270
 Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala
 275 280 285
 Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala
 290 295 300

Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys
 305 310 315 320
 Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser
 325 330 335
 Gly Ser Arg Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val
 340 345 350
 Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu
 355 360 365
 Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu
 370 375 380
 Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln
 385 390 395 400
 Ser Trp Pro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr
 405 410 415
 Thr Ile Gly Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile
 420 425 430
 Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu
 435 440 445
 Ile Ser Ala Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr
 450 455 460
 His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu
 465 470 475 480
 Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu
 485 490 495
 Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro
 500 505 510
 Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val
 515 520 525
 Cys Val Thr His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala
 530 535 540
 His Glu Ala Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu
 545 550 555 560
 Gly Thr Ala Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys
 565 570 575

Ala His Phe Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly
 580 585 590

Val Leu Gly Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn
 595 600 605

Glu Cys Arg Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro
 610 615 620

Glu Leu Gln Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr
 625 630 635 640

His Leu Thr Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly
 645 650 655

Gly Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu
 660 665 670

Ile Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys
 675 680 685

Glu Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg
 690 695 700

Leu Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp
 705 710 715 720

Arg Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp
 725 730 735

Ala Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly
 740 745 750

Ala Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala
 755 760 765

Phe Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly
 770 775 780

Thr Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp
 785 790 795 800

Gln Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly
 805 810 815

Lys Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu
 820 825 830

Pro Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
 835 840

<211> 824
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo Sapiens immunoglobulin
 <400> 192

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Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr Leu Asn Gly
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Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr Leu Tyr Lys
      20      25      30

Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu Ile Val Leu
      35      40      45

Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile Arg Glu Val
      50      55      60

Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr Leu Pro Leu
      65      70      75      80

Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp Gly Lys Phe
      85      90      95

Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser His Ala Leu
      100     105     110

Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser Gly Gly Val
      115     120     125

Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr Ile Asp Trp
      130     135     140

Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val Lys Asp Asn
      145     150     155     160

Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly Arg Cys Trp
      165     170     175

Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr Ile Cys Ala
      180     185     190

Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn Gln Cys Cys
      195     200     205

His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp Thr Asp Cys
      210     215     220

Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val Pro Arg Cys
      225     230     235     240
  
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Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu Glu Pro Asn
245 250 255

Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala Ser Cys Pro
260 265 270

His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala Cys Pro Pro
275 280 285

Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys Glu Pro Cys
290 295 300

Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser Gly Ser Arg
305 310 315 320

Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val Asn Cys Thr
325 330 335

Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu Asn Gly Asp
340 345 350

Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu Asn Val Phe
355 360 365

Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln Ser Trp Pro
370 375 380

Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr Thr Ile Gly
385 390 395 400

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

Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu Ile Ser Ala
420 425 430

Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr His His Ser
435 440 445

Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu Arg Leu Asp
450 455 460

Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu Gly Lys Val
465 470 475 480

Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro Gly Pro Gly
485 490 495

Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val Cys Val Thr
500 505 510

His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala His Glu Ala
Page 264

515

520

525

Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu Gly Thr Ala
 530 535 540

Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys Ala His Phe
 545 550 555 560

Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly Val Leu Gly
 565 570 575

Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn Glu Cys Arg
 580 585 590

Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro Glu Leu Gln
 595 600 605

Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr His Leu Thr
 610 615 620

Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg
 625 630 635 640

Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly
 645 650 655

Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp
 660 665 670

Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu Thr His
 675 680 685

Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala
 690 695 700

Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly
 710 715 720

Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg
 725 730 735

Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala
 740 745 750

Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu
 755 760 765

Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn
 770 775 780

Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr
 785 790 795 800

Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn
805 810 815

Val Pro Ala Leu Trp Gln Leu Gln
820

<210> 193
<211> 625
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo sapiens immunoglobulin

<220>
<221> THIOLEST
<222> (625)..(625)
<223> glycine-thioester

<400> 193

Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr Leu Asn Gly
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20 25 30

Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu Ile Val Leu
35 40 45

Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile Arg Glu Val
50 55 60

Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr Leu Pro Leu
65 70 75 80

Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp Gly Lys Phe
85 90 95

Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser His Ala Leu
100 105 110

Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser Gly Gly Val
115 120 125

Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr Ile Asp Trp
130 135 140

Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val Lys Asp Asn
145 150 155 160

Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly Arg Cys Trp
165 170 175

Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr Ile Cys Ala
 180 185 190
 Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn Gln Cys Cys
 195 200 205
 His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp Thr Asp Cys
 210 215 220
 Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val Pro Arg Cys
 225 230 235 240
 Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu Glu Pro Asn
 245 250 255
 Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala Ser Cys Pro
 260 265 270
 His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala Cys Pro Pro
 275 280 285
 Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys Glu Pro Cys
 290 295 300
 Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser Gly Ser Arg
 305 310 315 320
 Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val Asn Cys Thr
 325 330 335
 Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu Asn Gly Asp
 340 345 350
 Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu Asn Val Phe
 355 360 365
 Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln Ser Trp Pro
 370 375 380
 Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr Thr Ile Gly
 385 390 395 400
 Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile Met Lys Asn
 405 410 415
 Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu Ile Ser Ala
 420 425 430
 Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr His His Ser
 435 440 445

Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu Arg Leu Asp
450 455 460

Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu Gly Lys Val
465 470 475 480

Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro Gly Pro Gly
485 490 495

Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val Cys Val Thr
500 505 510

His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala His Glu Ala
515 520 525

Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu Gly Thr Ala
530 535 540

Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys Ala His Phe
545 550 555 560

Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly Val Leu Gly
565 570 575

Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn Glu Cys Arg
580 585 590

Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro Glu Leu Gln
595 600 605

Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr His Leu Thr
610 615 620

Xaa
625

<210> 194
<211> 626
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> MOD_RES
<222> (626)..(626)
<223> cysteine or selenocysteine

<400> 194

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

Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr Leu Tyr Lys
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20

25

30

Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu Ile Val Leu
35 40 45

Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile Arg Glu Val
50 55 60

Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr Leu Pro Leu
65 70 75 80

Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp Gly Lys Phe
85 90 95

Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser His Ala Leu
100 105 110

Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser Gly Gly Val
115 120 125

Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr Ile Asp Trp
130 135 140

Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val Lys Asp Asn
145 150 155 160

Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly Arg Cys Trp
165 170 175

Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr Ile Cys Ala
180 185 190

Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn Gln Cys Cys
195 200 205

His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp Thr Asp Cys
210 215 220

Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val Pro Arg Cys
225 230 235 240

Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu Glu Pro Asn
245 250 255

Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala Ser Cys Pro
260 265 270

His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala Cys Pro Pro
275 280 285

Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys Glu Pro Cys
290 295 300

Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser Gly Ser Arg
 305 310 315 320
 Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val Asn Cys Thr
 325 330 335
 Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu Asn Gly Asp
 340 345 350
 Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu Asn Val Phe
 355 360 365
 Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln Ser Trp Pro
 370 375 380
 Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr Thr Ile Gly
 385 390 395 400
 Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile Met Lys Asn
 405 410 415
 Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu Ile Ser Ala
 420 425 430
 Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr His His Ser
 435 440 445
 Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu Arg Leu Asp
 450 455 460
 Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu Gly Lys Val
 465 470 475 480
 Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro Gly Pro Gly
 485 490 495
 Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val Cys Val Thr
 500 505 510
 His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala His Glu Ala
 515 520 525
 Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu Gly Thr Ala
 530 535 540
 Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys Ala His Phe
 545 550 555 560
 Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly Val Leu Gly
 565 570 575

Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn Glu Cys Arg
580 585 590

Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro Glu Leu Gln
595 600 605

Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr His Leu Thr
610 615 620

Gly Xaa
625

<210> 195
<211> 2585
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 195
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tggcggcggg gaccgtccag cccagcgatt ctcagtcagt gtgtgcagga acggagaata 120
aactgagctc tctctctgac ctggaacagc agtaccgagc cttgcgcaag tactatgaaa 180
actgtgaggt tgtcatgggc aacctggaga taaccagcat tgagcacaac cgggacctct 240
ccttcctgcg gtctgttcga gaagtcacag gctacgtgtt agtggctctt aatcagtttc 300
gttacctgcc tctggagaat ttacgcatta ttcgtgggac aaaactttat gaggatcgat 360
atgccttggc aatattttta aactacagaa aagatggaaa ctttggactt caagaacttg 420
gattaaagaa cttgacagaa atcctaaatg gtggagtcta ttagaccag aacaaattcc 480
tttgttatgc agacaccatt cattggcaag atattgttcg gaacccatgg ctttccaact 540
tgactcttgt gtcaacaaat ggtagttcag gatgtggacg ttgccataag tcctgtactg 600
gccgttgctg gggaccaca gaaaatcatt gccagacttt gacaaggacg gtgtgtgcag 660
aacaatgtga cggcagatgc tacggacctt acgtcagtga ctgctgccat cgagaatgtg 720
ctggaggctg ctcaggacct aaggacacag actgctttgc ctgcatgaat ttcaatgaca 780
gtggagcatg tgttactcag tgtcccaaaa cctttgtcta caatccaacc acctttcaac 840
tggagcacia tttcaatgca aagtacacat atggagcatt ctgtgtcaag aaatgtccac 900
ataactttgt ggtagattcc agttcttgtg tgcgtgcctg ccctagttcc aagatggaag 960
tagaagaaaa tgggattaaa atgtgtaaac cttgcactga catttgccca aaggcttgtg 1020
atggcattgg cacaggatca ttgatgtcag ctcagactgt ggattccagt aacattgaca 1080
aattcataaa ctgtaccaag atcaatggga atttgatctt tctagtcact ggtattcatg 1140
gggaccctta caatgcaatt gaagccatag acccagagaa actgaacgtc tttcggacag 1200
tcagagagat aacaggtttc ctgaacatac agtcatggcc accaaacatg actgacttca 1260
gtgttttttc taacctggtg accattggtg gaagagtact ctatagtggc ctgtccttgc 1320

1380 ttatccitcaa gcaacagggc atcacctctc tacagtcca gtccctgaag gaatacagc
 1440 caggaacaat ctatatct gacaacagca accgtgta ttatcatac attaactgga
 1500 caacactct cagcacatc aaccagaga tagtaatccg ggaacaaga aagctgaa
 1560 attgactgc tgaaggaaat gttggaacc atctgtgtc cagtgtgac tgttgggac
 1620 ctggccaga ccaatgtct tctgtgtc gcttcagtag aggaagatc tgcataagat
 1680 ctgttaacct ctatgtgt gaatttcgg agtttgaga tggctccatc tgtgtgagt
 1740 gtgaccccca gtgtgagaag atggaagat gcttccatc atgccatga ccgggtctg
 1800 acaactgtac aagtgctct cattttaag atgcccga ctgttgaa aatgtccag
 1860 atgcttaca ggggcaaac agttcatc tcaagtatc tgaatcagat cggagtgcc
 1920 accatgcca tccaactgc acccaagggt gtaacggtcc cactagcat gactgattt
 1980 actaaccatg gaaggccat tccacttac caacaatgc tagaactccc ggtgtcgtat
 2040 ccgttgacac catgtaatg actagtgcg ggcctccag tgtgctga ctggaaggca
 2100 aacgttcaac cgcactgat cgggctctg gtaaccatg cccctcaggt ttcctccga
 2160 ccttgaaag tgaagtatat gatctgcga cagtgaagg tcatgtcta cgttgaccc
 2220 atgatcaacg tgttctgtgt atgatatgt gcttgaaat gctgcccgt gttgaactg
 2280 aacggcgga cggctgtgt atgatatg cagctgcga gttccgga ctgcaacct
 2340 tccgtgacct gctgacct ggcgcag atgttata cgtactgt tacgtgtcta
 2400 gcgcattac tgaatgtc ttcatgtac acgcatgtg cgaagccc ggaaccgtc
 2460 tgaactcag cctcacga aatcctgtg taccgctg gaggccaac acagctata
 2520 ctgcygaca atgttcaca tatacgcga agactata atgttgca ccccaacct
 2580 ccttgagc atggaacca tccaacct ctgctgtg gcaactcaa tgactcagc

<210> 196
 <211> 851
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificial construct relating to Homo sapiens immunoglobulin

1 Met Lys Pro Ala Thr Gly Leu Trp Val Ser Leu Val Ala
 5
 20 Ala Gly Thr Val Gln Pro Ser Asp Ser Gln Ser Val Cys Ala Gly Thr
 25
 30
 35 Gln Asn Lys Leu Ser Ser Leu Ser Asp Leu Gln Tyr Arg Ala
 40
 45

50

55

60

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

Arg Glu Val Thr Gly Tyr Val Leu Val Ala Leu Asn Gln Phe Arg Tyr
85 90 95

Leu Pro Leu Glu Asn Leu Arg Ile Ile Arg Gly Thr Lys Leu Tyr Glu
100 105 110

Asp Arg Tyr Ala Leu Ala Ile Phe Leu Asn Tyr Arg Lys Asp Gly Asn
115 120 125

Phe Gly Leu Gln Glu Leu Gly Leu Lys Asn Leu Thr Glu Ile Leu Asn
130 135 140

Gly Gly Val Tyr Val Asp Gln Asn Lys Phe Leu Cys Tyr Ala Asp Thr
145 150 155 160

Ile His Trp Gln Asp Ile Val Arg Asn Pro Trp Pro Ser Asn Leu Thr
165 170 175

Leu Val Ser Thr Asn Gly Ser Ser Gly Cys Gly Arg Cys His Lys Ser
180 185 190

Cys Thr Gly Arg Cys Trp Gly Pro Thr Glu Asn His Cys Gln Thr Leu
195 200 205

Thr Arg Thr Val Cys Ala Glu Gln Cys Asp Gly Arg Cys Tyr Gly Pro
210 215 220

Tyr Val Ser Asp Cys Cys His Arg Glu Cys Ala Gly Gly Cys Ser Gly
225 230 235 240

Pro Lys Asp Thr Asp Cys Phe Ala Cys Met Asn Phe Asn Asp Ser Gly
245 250 255

Ala Cys Val Thr Gln Cys Pro Gln Thr Phe Val Tyr Asn Pro Thr Thr
260 265 270

Phe Gln Leu Glu His Asn Phe Asn Ala Lys Tyr Thr Tyr Gly Ala Phe
275 280 285

Cys Val Lys Lys Cys Pro His Asn Phe Val Val Asp Ser Ser Ser Cys
290 295 300

Val Arg Ala Cys Pro Ser Ser Lys Met Glu Val Glu Glu Asn Gly Ile
305 310 315 320

Lys Met Cys Lys Pro Cys Thr Asp Ile Cys Pro Lys Ala Cys Asp Gly
325 330 335

Ile Gly Thr Gly Ser Leu Met Ser Ala Gln Thr Val Asp Ser Ser Asn
340 345 350

Ile Asp Lys Phe Ile Asn Cys Thr Lys Ile Asn Gly Asn Leu Ile Phe
355 360 365

Leu Val Thr Gly Ile His Gly Asp Pro Tyr Asn Ala Ile Glu Ala Ile
370 375 380

Asp Pro Glu Lys Leu Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly
385 390 395 400

Phe Leu Asn Ile Gln Ser Trp Pro Pro Asn Met Thr Asp Phe Ser Val
405 410 415

Phe Ser Asn Leu Val Thr Ile Gly Gly Arg Val Leu Tyr Ser Gly Leu
420 425 430

Ser Leu Leu Ile Leu Lys Gln Gln Gly Ile Thr Ser Leu Gln Phe Gln
435 440 445

Ser Leu Lys Glu Ile Ser Ala Gly Asn Ile Tyr Ile Thr Asp Asn Ser
450 455 460

Asn Leu Cys Tyr Tyr His Thr Ile Asn Trp Thr Thr Leu Phe Ser Thr
465 470 475 480

Ile Asn Gln Arg Ile Val Ile Arg Asp Asn Arg Lys Ala Glu Asn Cys
485 490 495

Thr Ala Glu Gly Met Val Cys Asn His Leu Cys Ser Ser Asp Gly Cys
500 505 510

Trp Gly Pro Gly Pro Asp Gln Cys Leu Ser Cys Arg Arg Phe Ser Arg
515 520 525

Gly Arg Ile Cys Ile Glu Ser Cys Asn Leu Tyr Asp Gly Glu Phe Arg
530 535 540

Glu Phe Glu Asn Gly Ser Ile Cys Val Glu Cys Asp Pro Gln Cys Glu
545 550 555 560

Lys Met Glu Asp Gly Leu Leu Thr Cys His Gly Pro Gly Pro Asp Asn
565 570 575

Cys Thr Lys Cys Ser His Phe Lys Asp Gly Pro Asn Cys Val Glu Lys
580 585 590

Cys Pro Asp Gly Leu Gln Gly Ala Asn Ser Phe Ile Phe Lys Tyr Ala
595 600 605

Asp Pro Asp Arg Glu Cys His Pro Cys His Pro Asn Cys Thr Gln Gly
610 615 620

Cys Asn Gly Pro Thr Ser His Asp Cys Ile Tyr Tyr Pro Trp Thr Gly
625 630 635 640

His Ser Thr Leu Pro Gln His Ala Arg Thr Pro Gly Cys Val Ser Gly
645 650 655

Asp Thr Ile Val Met Thr Ser Gly Gly Pro Arg Thr Val Ala Glu Leu
660 665 670

Glu Gly Lys Pro Phe Thr Ala Leu Ile Arg Gly Ser Gly Tyr Pro Cys
675 680 685

Pro Ser Gly Phe Phe Arg Thr Cys Glu Arg Asp Val Tyr Asp Leu Arg
690 695 700

Thr Arg Glu Gly His Cys Leu Arg Leu Thr His Asp His Arg Val Leu
705 710 715 720

Val Met Asp Gly Gly Leu Glu Trp Arg Ala Ala Gly Glu Leu Glu Arg
725 730 735

Gly Asp Arg Leu Val Met Asp Asp Ala Ala Gly Glu Phe Pro Ala Leu
740 745 750

Ala Thr Phe Arg Gly Leu Arg Gly Ala Gly Arg Gln Asp Val Tyr Asp
755 760 765

Ala Thr Val Tyr Gly Ala Ser Ala Phe Thr Ala Asn Gly Phe Ile Val
770 775 780

His Ala Cys Gly Glu Gln Pro Gly Thr Gly Leu Asn Ser Gly Leu Thr
785 790 795 800

Thr Asn Pro Gly Val Ser Ala Trp Gln Val Asn Thr Ala Tyr Thr Ala
805 810 815

Gly Gln Leu Val Thr Tyr Asn Gly Lys Thr Tyr Lys Cys Leu Gln Pro
820 825 830

His Thr Ser Leu Ala Gly Trp Glu Pro Ser Asn Val Pro Ala Leu Trp
835 840 845

Gln Leu Gln
850

<210> 197
<211> 826
<212> PRT
<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<400> 197

Gln Ser Val Cys Ala Gly Thr Glu Asn Lys Leu Ser Ser Leu Ser Asp
1 5 10 15

Leu Glu Gln Gln Tyr Arg Ala Leu Arg Lys Tyr Tyr Glu Asn Cys Glu
20 25 30

Val Val Met Gly Asn Leu Glu Ile Thr Ser Ile Glu His Asn Arg Asp
35 40 45

Leu Ser Phe Leu Arg Ser Val Arg Glu Val Thr Gly Tyr Val Leu Val
50 55 60

Ala Leu Asn Gln Phe Arg Tyr Leu Pro Leu Glu Asn Leu Arg Ile Ile
65 70 75 80

Arg Gly Thr Lys Leu Tyr Glu Asp Arg Tyr Ala Leu Ala Ile Phe Leu
85 90 95

Asn Tyr Arg Lys Asp Gly Asn Phe Gly Leu Gln Glu Leu Gly Leu Lys
100 105 110

Asn Leu Thr Glu Ile Leu Asn Gly Gly Val Tyr Val Asp Gln Asn Lys
115 120 125

Phe Leu Cys Tyr Ala Asp Thr Ile His Trp Gln Asp Ile Val Arg Asn
130 135 140

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

Cys Gly Arg Cys His Lys Ser Cys Thr Gly Arg Cys Trp Gly Pro Thr
165 170 175

Glu Asn His Cys Gln Thr Leu Thr Arg Thr Val Cys Ala Glu Gln Cys
180 185 190

Asp Gly Arg Cys Tyr Gly Pro Tyr Val Ser Asp Cys Cys His Arg Glu
195 200 205

Cys Ala Gly Gly Cys Ser Gly Pro Lys Asp Thr Asp Cys Phe Ala Cys
210 215 220

Met Asn Phe Asn Asp Ser Gly Ala Cys Val Thr Gln Cys Pro Gln Thr
225 230 235 240

Phe Val Tyr Asn Pro Thr Thr Phe Gln Leu Glu His Asn Phe Asn Ala
245 250 255

Lys Tyr Thr Tyr Gly Ala Phe Cys Val Lys Lys Cys Pro His Asn Phe
 260 265 270
 Val Val Asp Ser Ser Ser Cys Val Arg Ala Cys Pro Ser Ser Lys Met
 275 280 285
 Glu Val Glu Glu Asn Gly Ile Lys Met Cys Lys Pro Cys Thr Asp Ile
 290 295 300
 Cys Pro Lys Ala Cys Asp Gly Ile Gly Thr Gly Ser Leu Met Ser Ala
 305 310 315 320
 Gln Thr Val Asp Ser Ser Asn Ile Asp Lys Phe Ile Asn Cys Thr Lys
 325 330 335
 Ile Asn Gly Asn Leu Ile Phe Leu Val Thr Gly Ile His Gly Asp Pro
 340 345 350
 Tyr Asn Ala Ile Glu Ala Ile Asp Pro Glu Lys Leu Asn Val Phe Arg
 355 360 365
 Thr Val Arg Glu Ile Thr Gly Phe Leu Asn Ile Gln Ser Trp Pro Pro
 370 375 380
 Asn Met Thr Asp Phe Ser Val Phe Ser Asn Leu Val Thr Ile Gly Gly
 385 390 395 400
 Arg Val Leu Tyr Ser Gly Leu Ser Leu Leu Ile Leu Lys Gln Gln Gly
 405 410 415
 Ile Thr Ser Leu Gln Phe Gln Ser Leu Lys Glu Ile Ser Ala Gly Asn
 420 425 430
 Ile Tyr Ile Thr Asp Asn Ser Asn Leu Cys Tyr Tyr His Thr Ile Asn
 435 440 445
 Trp Thr Thr Leu Phe Ser Thr Ile Asn Gln Arg Ile Val Ile Arg Asp
 450 455 460
 Asn Arg Lys Ala Glu Asn Cys Thr Ala Glu Gly Met Val Cys Asn His
 465 470 475 480
 Leu Cys Ser Ser Asp Gly Cys Trp Gly Pro Gly Pro Asp Gln Cys Leu
 485 490 495
 Ser Cys Arg Arg Phe Ser Arg Gly Arg Ile Cys Ile Glu Ser Cys Asn
 500 505 510
 Leu Tyr Asp Gly Glu Phe Arg Glu Phe Glu Asn Gly Ser Ile Cys Val
 515 520 525

Glu Cys Asp Pro Gln Cys Glu Lys Met Glu Asp Gly Leu Leu Thr Cys
530 535 540

His Gly Pro Gly Pro Asp Asn Cys Thr Lys Cys Ser His Phe Lys Asp
545 550 555 560

Gly Pro Asn Cys Val Glu Lys Cys Pro Asp Gly Leu Gln Gly Ala Asn
565 570 575

Ser Phe Ile Phe Lys Tyr Ala Asp Pro Asp Arg Glu Cys His Pro Cys
580 585 590

His Pro Asn Cys Thr Gln Gly Cys Asn Gly Pro Thr Ser His Asp Cys
595 600 605

Ile Tyr Tyr Pro Trp Thr Gly His Ser Thr Leu Pro Gln His Ala Arg
610 615 620

Thr Pro Gly Cys Val Ser Gly Asp Thr Ile Val Met Thr Ser Gly Gly
625 630 635 640

Pro Arg Thr Val Ala Glu Leu Glu Gly Lys Pro Phe Thr Ala Leu Ile
645 650 655

Arg Gly Ser Gly Tyr Pro Cys Pro Ser Gly Phe Phe Arg Thr Cys Glu
660 665 670

Arg Asp Val Tyr Asp Leu Arg Thr Arg Glu Gly His Cys Leu Arg Leu
675 680 685

Thr His Asp His Arg Val Leu Val Met Asp Gly Gly Leu Glu Trp Arg
690 695 700

Ala Ala Gly Glu Leu Glu Arg Gly Asp Arg Leu Val Met Asp Asp Ala
705 710 715 720

Ala Gly Glu Phe Pro Ala Leu Ala Thr Phe Arg Gly Leu Arg Gly Ala
725 730 735

Gly Arg Gln Asp Val Tyr Asp Ala Thr Val Tyr Gly Ala Ser Ala Phe
740 745 750

Thr Ala Asn Gly Phe Ile Val His Ala Cys Gly Glu Gln Pro Gly Thr
755 760 765

Gly Leu Asn Ser Gly Leu Thr Thr Asn Pro Gly Val Ser Ala Trp Gln
770 775 780

Val Asn Thr Ala Tyr Thr Ala Gly Gln Leu Val Thr Tyr Asn Gly Lys
785 790 795 800

Thr Tyr Lys Cys Leu Gln Pro His Thr Ser Leu Ala Gly Trp Glu Pro
Page 278

805

810

815

Ser Asn Val Pro Ala Leu Trp Gln Leu Gln
820 825

<210> 198
<211> 627
<212> PRT
<213> Artificial Sequence

<220>
<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>
<221> THIOLEST
<222> (627)..(627)
<223> glycine-thioester

<400> 198

Gln Ser Val Cys Ala Gly Thr Glu Asn Lys Leu Ser Ser Leu Ser Asp
1 5 10 15

Leu Glu Gln Gln Tyr Arg Ala Leu Arg Lys Tyr Tyr Glu Asn Cys Glu
20 25 30

Val Val Met Gly Asn Leu Glu Ile Thr Ser Ile Glu His Asn Arg Asp
35 40 45

Leu Ser Phe Leu Arg Ser Val Arg Glu Val Thr Gly Tyr Val Leu Val
50 55 60

Ala Leu Asn Gln Phe Arg Tyr Leu Pro Leu Glu Asn Leu Arg Ile Ile
65 70 75 80

Arg Gly Thr Lys Leu Tyr Glu Asp Arg Tyr Ala Leu Ala Ile Phe Leu
85 90 95

Asn Tyr Arg Lys Asp Gly Asn Phe Gly Leu Gln Glu Leu Gly Leu Lys
100 105 110

Asn Leu Thr Glu Ile Leu Asn Gly Gly Val Tyr Val Asp Gln Asn Lys
115 120 125

Phe Leu Cys Tyr Ala Asp Thr Ile His Trp Gln Asp Ile Val Arg Asn
130 135 140

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

Cys Gly Arg Cys His Lys Ser Cys Thr Gly Arg Cys Trp Gly Pro Thr
165 170 175

Glu Asn His Cys Gln Thr Leu Thr Arg Thr Val Cys Ala Glu Gln Cys
180 185 190

Asp Gly Arg Cys Tyr Gly Pro Tyr Val Ser Asp Cys Cys His Arg Glu
 195 200 205
 Cys Ala Gly Gly Cys Ser Gly Pro Lys Asp Thr Asp Cys Phe Ala Cys
 210 215 220
 Met Asn Phe Asn Asp Ser Gly Ala Cys Val Thr Gln Cys Pro Gln Thr
 225 230 235 240
 Phe Val Tyr Asn Pro Thr Thr Phe Gln Leu Glu His Asn Phe Asn Ala
 245 250 255
 Lys Tyr Thr Tyr Gly Ala Phe Cys Val Lys Lys Cys Pro His Asn Phe
 260 265 270
 Val Val Asp Ser Ser Ser Cys Val Arg Ala Cys Pro Ser Ser Lys Met
 275 280 285
 Glu Val Glu Glu Asn Gly Ile Lys Met Cys Lys Pro Cys Thr Asp Ile
 290 295 300
 Cys Pro Lys Ala Cys Asp Gly Ile Gly Thr Gly Ser Leu Met Ser Ala
 305 310 315 320
 Gln Thr Val Asp Ser Ser Asn Ile Asp Lys Phe Ile Asn Cys Thr Lys
 325 330 335
 Ile Asn Gly Asn Leu Ile Phe Leu Val Thr Gly Ile His Gly Asp Pro
 340 345 350
 Tyr Asn Ala Ile Glu Ala Ile Asp Pro Glu Lys Leu Asn Val Phe Arg
 355 360 365
 Thr Val Arg Glu Ile Thr Gly Phe Leu Asn Ile Gln Ser Trp Pro Pro
 370 375 380
 Asn Met Thr Asp Phe Ser Val Phe Ser Asn Leu Val Thr Ile Gly Gly
 385 390 395 400
 Arg Val Leu Tyr Ser Gly Leu Ser Leu Leu Ile Leu Lys Gln Gln Gly
 405 410 415
 Ile Thr Ser Leu Gln Phe Gln Ser Leu Lys Glu Ile Ser Ala Gly Asn
 420 425 430
 Ile Tyr Ile Thr Asp Asn Ser Asn Leu Cys Tyr Tyr His Thr Ile Asn
 435 440 445
 Trp Thr Thr Leu Phe Ser Thr Ile Asn Gln Arg Ile Val Ile Arg Asp
 450 455 460

Asn Arg Lys Ala Glu Asn Cys Thr Ala Glu Gly Met Val Cys Asn His
465 470 475 480

Leu Cys Ser Ser Asp Gly Cys Trp Gly Pro Gly Pro Asp Gln Cys Leu
485 490 495

Ser Cys Arg Arg Phe Ser Arg Gly Arg Ile Cys Ile Glu Ser Cys Asn
500 505 510

Leu Tyr Asp Gly Glu Phe Arg Glu Phe Glu Asn Gly Ser Ile Cys Val
515 520 525

Glu Cys Asp Pro Gln Cys Glu Lys Met Glu Asp Gly Leu Leu Thr Cys
530 535 540

His Gly Pro Gly Pro Asp Asn Cys Thr Lys Cys Ser His Phe Lys Asp
545 550 555 560

Gly Pro Asn Cys Val Glu Lys Cys Pro Asp Gly Leu Gln Gly Ala Asn
565 570 575

Ser Phe Ile Phe Lys Tyr Ala Asp Pro Asp Arg Glu Cys His Pro Cys
580 585 590

His Pro Asn Cys Thr Gln Gly Cys Asn Gly Pro Thr Ser His Asp Cys
595 600 605

Ile Tyr Tyr Pro Trp Thr Gly His Ser Thr Leu Pro Gln His Ala Arg
610 615 620

Thr Pro Xaa
625

<210> 199

<211> 628

<212> PRT

<213> Artificial Sequence

<220>

<223> artificial construct relating to Homo Sapiens immunoglobulin

<220>

<221> MOD_RES

<222> (628)..(628)

<223> cysteine or selenocysteine

<400> 199

Gln Ser Val Cys Ala Gly Thr Glu Asn Lys Leu Ser Ser Leu Ser Asp
1 5 10 15

Leu Glu Gln Gln Tyr Arg Ala Leu Arg Lys Tyr Tyr Glu Asn Cys Glu
20 25 30

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

His Pro Asn Cys Thr Gln Gly Cys Asn Gly Pro Thr Ser His Asp Cys
595 600 605

Ile Tyr Tyr Pro Trp Thr Gly His Ser Thr Leu Pro Gln His Ala Arg
610 615 620

Thr Pro Gly Xaa
625