SEQUENCE LISTING

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<120> ANTI-H7CR ANTIBODIES AND THEIR USES

<130> AMP h932 PCT

<150> US 61/745,296
<151> 2012-12-21

<150> US 61/745,312
<151> 2012-12-21

<150> US 61/827,269
<151> 2013-05-24

<150> US 61/827,279
<151> 2013-05-24

<160> 101

<170> PatentIn version 3.5

<210> 1
<211> 414
<212> PRT
<213> Homo sapiens

<400> 1

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Leu Ser Gly Ser Gln Gly Ile Phe Pro Leu Ala Phe Phe Ile Tyr Val
            20                  25                  30

Pro Met Asn Glu Gln Ile Val Ile Gly Arg Leu Asp Glu Asp Ile Ile
        35                  40                  45

Leu Pro Ser Ser Phe Glu Arg Gly Ser Glu Val Val Ile His Trp Lys
    50                  55                  60

Tyr Gln Asp Ser Tyr Lys Val His Ser Tyr Tyr Lys Gly Ser Asp His
65                  70                  75                  80

Leu Glu Ser Gln Asp Pro Arg Tyr Ala Asn Arg Thr Ser Leu Phe Tyr
                85                  90                  95

Asn Glu Ile Gln Asn Gly Asn Ala Ser Leu Phe Phe Arg Arg Val Ser
            100                 105                 110

Leu Leu Asp Glu Gly Ile Tyr Thr Cys Tyr Val Gly Thr Ala Ile Gln
        115                 120                 125

Val Ile Thr Asn Lys Val Val Leu Lys Val Gly Val Phe Leu Thr Pro
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130 135 140

Val Met Lys Tyr Glu Lys Arg Asn Thr Asn Ser Phe Leu Ile Cys Ser
145 150 155 160

Val Leu Ser Val Tyr Pro Arg Pro Ile Ile Thr Trp Lys Met Asp Asn
165 170 175

Thr Pro Ile Ser Glu Asn Asn Met Glu Glu Thr Gly Ser Leu Asp Ser
180 185 190

Phe Ser Ile Asn Ser Pro Leu Asn Ile Thr Gly Ser Asn Ser Ser Tyr
195 200 205

Glu Cys Thr Ile Glu Asn Ser Leu Leu Lys Gln Thr Trp Thr Gly Arg
210 215 220

Trp Thr Met Lys Asp Gly Leu His Lys Met Gln Ser Glu His Val Ser
225 230 235 240

Leu Ser Cys Gln Pro Val Asn Asp Tyr Phe Ser Pro Asn Gln Asp Phe
245 250 255

Lys Val Thr Trp Ser Arg Met Lys Ser Gly Thr Phe Ser Val Leu Ala
260 265 270

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Tyr Tyr Leu Ser Ser Ser Gln Asn Thr Ile Ile Asn Glu Ser Arg Phe
        275                 280                 285

Ser Trp Asn Lys Glu Leu Ile Asn Gln Ser Asp Phe Ser Met Asn Leu
    290                 295                 300

Met Asp Leu Asn Leu Ser Asp Ser Gly Glu Tyr Leu Cys Asn Ile Ser
305                 310                 315                 320

Ser Asp Glu Tyr Thr Leu Leu Thr Ile His Thr Val His Val Glu Pro
                325                 330                 335

Ser Gln Glu Thr Ala Ser His Asn Lys Gly Leu Trp Ile Leu Val Pro
            340                 345                 350

Ser Ala Ile Leu Ala Ala Phe Leu Leu Ile Trp Ser Val Lys Cys Cys
        355                 360                 365

Arg Ala Gln Leu Glu Ala Arg Arg Ser Arg His Pro Ala Asp Gly Ala
    370                 375                 380

Gln Gln Glu Arg Cys Cys Val Pro Pro Gly Glu Arg Cys Pro Ser Ala
385                 390                 395                 400

Pro Asp Asn Gly Glu Glu Asn Val Pro Leu Ser Gly Lys Val
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405 410

<210> 2

<211> 1242

<212> DNA

<213> Homo sapiens

<400> 2

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ttggaaagcc aagatcccag atatgcaaac aggacatccc ttttctataa tgagattcaa 300

aatgggaatg cgtcactatt tttcagaaga gtaagccttc tggacgaagg aatttacacc 360

tgctatgtag gaacagcaat tcaagtgatt acaaacaaag tggtgctaaa ggtgggagtt 420

tttctcacac ccgtgatgaa gtatgaaaag aggaacacaa acagcttctt aatatgcagc 480

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<211> 282
<212> PRT
<213> Homo sapiens

<400> 3

Met Gly Ser Pro Gly Met Val Leu Gly Leu Leu Val Gln Ile Trp Ala
1 5 10 15

Leu Gln Glu Ala Ser Ser Leu Ser Val Gln Gln Gly Pro Asn Leu Leu
20 25 30

Gln Val Arg Gln Gly Ser Gln Ala Thr Leu Val Cys Gln Val Asp Gln

35 40 45

Ala Thr Ala Trp Glu Arg Leu Arg Val Lys Trp Thr Lys Asp Gly Ala
50 55 60

Ile Leu Cys Gln Pro Tyr Ile Thr Asn Gly Ser Leu Ser Leu Gly Val
65 70 75 80

Cys Gly Pro Gln Gly Arg Leu Ser Trp Gln Ala Pro Ser His Leu Thr
85 90 95

Leu Gln Leu Asp Pro Val Ser Leu Asn His Ser Gly Ala Tyr Val Cys
100 105 110

Trp Ala Ala Val Glu Ile Pro Glu Leu Glu Glu Ala Glu Gly Asn Ile
115 120 125

Thr Arg Leu Phe Val Asp Pro Asp Asp Pro Thr Gln Asn Arg Asn Arg
130 135 140

Ile Ala Ser Phe Pro Gly Phe Leu Phe Val Leu Leu Gly Val Gly Ser
145 150 155 160

Met Gly Val Ala Ala Ile Val Trp Gly Ala Trp Phe Trp Gly Arg Arg
165 170 175

Ser Cys Gln Gln Arg Asp Ser Gly Asn Ser Pro Gly Asn Ala Phe Tyr
180 185 190

Ser Asn Val Leu Tyr Arg Pro Arg Gly Ala Pro Lys Lys Ser Glu Asp
195 200 205

Cys Ser Gly Glu Gly Lys Asp Gln Arg Gly Gln Ser Ile Tyr Ser Thr
210 215 220

Ser Phe Pro Gln Pro Ala Pro Arg Gln Pro His Leu Ala Ser Arg Pro
225 230 235 240

Cys Pro Ser Pro Arg Pro Cys Pro Ser Pro Arg Pro Gly His Pro Val
245 250 255

Ser Met Val Arg Val Ser Pro Arg Pro Ser Pro Thr Gln Gln Pro Arg
260 265 270

Pro Lys Gly Phe Pro Lys Val Gly Glu Glu
275 280

<210> 4
<211> 846
<212> DNA
<213> Homo sapiens

<400> 4

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tcaagcctga gcgtgcagca ggggcccaac ttgctgcagg tgaggcaggg cagtcaggcg 120

accctggtct gccaggtgga ccaggccaca gcctgggaac ggctccgtgt taagtggaca 180

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aacagaaacc ggatcgcaag cttcccagga ttcctcttcg tgctgctggg ggtgggaagc 480

atgggtgtgg ctgcgatcgt gtggggtgcc tggttctggg gccgccgcag ctgccagcaa 540

agggactcag gtaacagccc aggaaatgca ttctacagca acgtcctata ccggccccgg 600

ggggccccaa agaagagtga ggactgctct ggagagggga aggaccagag gggccagagc 660

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tgccccagcc cgagaccctg ccccagcccc aggcccggcc accccgtctc tatggtcagg 780

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gaggag 846

<210> 5

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 5

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

Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Thr Gly Val
50 55 60

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

Ile Ser Ser Val Gln Ala Glu Asp Leu Gly Asp Tyr Tyr Cys Gln His
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 6
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 6

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

Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Thr Trp Ile Arg Gln Phe Pro Gly Lys Arg Leu Glu
35 40 45

Trp Met Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr Asn Pro Ser
50 55 60

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

Leu Leu His Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Cys
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Ile Gln Val Thr Val Ser Ser
115 120

<210> 7
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 7

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

Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Thr Gly Val
50 55 60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 8
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 8

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

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Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile Thr Thr Gly
            20                  25                  30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys Leu Glu
        35                  40                  45

Trp Met Gly Tyr Ile Tyr Thr Ser Gly Arg Thr Ser Tyr Asn Pro Ser
    50                  55                  60

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

Phe Leu Gln Leu Asn Ser Met Thr Thr Glu Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ser
        115                 120
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<210> 9
<211> 113
<212> PRT
<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 9

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

Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
            20                  25                  30

Asn Thr Asn Arg Asn Tyr Leu Ser Trp Tyr Leu Gln Arg Pro Gly Gln
        35                  40                  45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Thr Gly Val
    50                  55                  60

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

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

His Tyr Val Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
            100                 105                 110
```

Lys

<210> 10

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 10

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

Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile Thr Thr Gly
            20                  25                  30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys Leu Glu
        35                  40                  45

Trp Met Gly Tyr Ile Tyr Ser Ser Gly Arg Thr Ser Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80
```

Phe Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 11
<211> 465
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 11

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
20 25 30

Pro Ser Gln Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile
35 40 45

```
Ser Thr Ser Gly Tyr Tyr Trp Thr Trp Ile Arg Gln Phe Pro Gly Lys
    50                  55                  60

Arg Leu Glu Trp Met Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr
65                  70                  75                  80

Asn Pro Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys
                85                  90                  95

Asn Gln Phe Leu Leu His Leu Asn Ser Val Thr Thr Glu Asp Thr Ala
            100                 105                 110

Thr Tyr Cys Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val
        115                 120                 125

Trp Gly Gln Gly Ile Gln Val Thr Val Ser Ser Ala Ser Thr Lys Gly
    130                 135                 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145                 150                 155                 160

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

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
            180                 185                 190
```

```
Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
        195                 200                 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
    210                 215                 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
225                 230                 235                 240

Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
                245                 250                 255

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
            260                 265                 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
        275                 280                 285

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
    290                 295                 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
305                 310                 315                 320
```

```
Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
                325                 330                 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
            340                 345                 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
        355                 360                 365

Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
    370                 375                 380

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
385                 390                 395                 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
                405                 410                 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
            420                 425                 430

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
        435                 440                 445

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
    450                 455                 460
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Gly
465

<210> 12
<211> 240
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 12

Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
1 5 10 15

Asp Ala Arg Cys Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala
20 25 30

Val Ser Ala Gly Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser
35 40 45

Leu Phe Ser Ser Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Leu Gln
50 55 60

Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg
65 70 75 80

```
Leu Thr Gly Val Pro Asp Arg Phe Ile Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Gly Asp Tyr
            100                 105                 110

Tyr Cys Gln His His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr
        115                 120                 125

Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
    130                 135                 140

Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
145                 150                 155                 160

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
                165                 170                 175

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
            180                 185                 190

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
        195                 200                 205
```

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
210 215 220

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235 240

<210> 13
<211> 1401
<212> DNA
<213> Artificial Sequence

<220>
<223> Chimeric antibody coding sequence

<400> 13
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atccagctgc aggaatctgg ccctggcctc gtgaagcctt cccagtccct gtccctgacc 120

tgcagcgtga ccggcttctc tatcacaacc ggcggctact actggaactg gatccggcag 180

ttccccggca agaaactgga atggatgggc tacatctata ccagcggccg gacctcctac 240

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ctgcagctga actccatgac caccgaggac accgccacct actactgcgc cgacatggcc 360

gataagggcg gatggttcgc ttactggggc cagggcacac tcgtgaccgt gtcctctgct 420

tccaccaagg gcccctccgt gtttcctctg gcccccttgct ccagatccac ctccgagtct 480

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acctgtaacg tggaccacaa gccctccaac accaaggtgg acaagcgggt ggaatctaag 720

tacggccctc cctgccctcc ttgcccagcc cctgaatttc tgggcggacc ttctgtgttt 780

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gtggaagtgc acaacgccaa gaccaagcct agagaggaac agttcaactc cacctaccgg 960

gtggtgtccg tgctgaccgt gctgcaccag gattggctga acggcaaaga gtacaagtgc 1020

aaggtgtcca acaagggcct gcccagctcc atcgaaaaga ccatctccaa ggctaagggc 1080

cagccccgcg agccccaggt gtacacactg cctccaagcc aggaagagat gaccaagaat 1140

caggtgtcac tgacctgtct cgtgaagggc ttctacccct ccgatatcgc cgtggaatgg 1200

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ggctccttct ttctgtactc tcgcctgacc gtggacaagt cccggtggca ggaaggcaac 1320

gtgttctcct gctctgtgat gcacgaggcc ctgcacaacc actacaccca gaagtccctg 1380

agcctgtccc ccggctgatg a 1401

<210> 14

<211> 726

<212> DNA

<213> Artificial Sequence

<220>

<223> Chimeric antibody coding sequence

<400> 14

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gacatcgtga tgacccagtc cccctcctcc ctggctgtgt ctgctggcga gaaagtgacc 120

atctcctgcc tgtcctccca gtccctgttc tccagcaaca ccaagcggaa ctacctgaac 180

tggtatctgc agaagcccgg ccagtccccc aagctgctga tctaccacgc ctccaccaga 240

ctgaccggcg tgcccggaag attcatcggc tctggctctg gcaccgactt caccctgacc 300

gtgtctaccg tgcaggccga ggacctgggc gactacttct gccagcagca ctacgagaca 360

cccctgacct ttggcgacgg cacccggctg gaaatcaaga gaaccgtggc cgctccctcc 420

gtgttcatct tcccaccttc cgacgagcag ctgaagtccg gcaccgcttc tgtcgtgtgc 480

ctgctgaaca acttctaccc ccgcgaggcc aaggtgcagt ggaaggtgga caacgccctg 540

cagtccggca actcccagga atccgtgacc gagcaggact ccaaggacag cacctactcc 600

ctgtcctcta ccctgaccct gagcaaggcc gactacgaga agcacaaggt gtacgcctgc 660

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tgatga 726

<210> 15

<211> 465

<212> PRT

<213> Artificial Sequence

<220>

<223> Chimeric antibody heavy chain sequence

<400> 15

Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser Val Thr Thr Gly
1 5 10 15

Val His Ser Gln Ile Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
20 25 30

Pro Ser Gln Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile
35 40 45

Thr Thr Gly Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys
50 55 60

Lys Leu Glu Trp Met Gly Tyr Ile Tyr Thr Ser Gly Arg Thr Ser Tyr
65 70 75 80

Asn Pro Ser Leu Lys Ser Arg Ile Ser Ile Thr Arg Asp Thr Ser Lys
85 90 95

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Asn Gln Phe Phe Leu Gln Leu Asn Ser Met Thr Thr Glu Asp Thr Ala
            100                 105                 110

Thr Tyr Tyr Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr
        115                 120                 125

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
    130                 135                 140

Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Glu Ser
145                 150                 155                 160

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

Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
            180                 185                 190

Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
        195                 200                 205

Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr Tyr Thr Cys Asn Val
    210                 215                 220

Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Ser Lys
225                 230                 235                 240
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Tyr Gly Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Phe Leu Gly Gly
                245                 250                 255

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
            260                 265                 270

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu
        275                 280                 285

Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
    290                 295                 300

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg
305                 310                 315                 320

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
                325                 330                 335

Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu
            340                 345                 350

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
        355                 360                 365
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Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu
370 375 380

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
385 390 395 400

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
405 410 415

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp
420 425 430

Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His
435 440 445

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
450 455 460

Gly
465

<210> 16
<211> 240
<212> PRT
<213> Artificial Sequence

<220>

<223> Chimeric antibiody light chain

<400> 16

```
Met Ser Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr
1               5                  10                  15

Asp Ala Arg Cys Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala
            20                  25                  30

Val Ser Ala Gly Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser
        35                  40                  45

Leu Phe Ser Ser Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Leu Gln
    50                  55                  60

Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg
65                  70                  75                  80

Leu Thr Gly Val Pro Gly Arg Phe Ile Gly Ser Gly Ser Gly Thr Asp
                85                  90                  95

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

Phe Cys Gln Gln His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr
        115                 120                 125
```

Arg Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe
130 135 140

Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys
145 150 155 160

Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val
165 170 175

Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln
180 185 190

Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser
195 200 205

Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His
210 215 220

Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
225 230 235 240

<210> 17
<211> 113
<212> PRT
<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 17

```
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1               5                  10                  15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Phe Ser Ser
            20                  25                  30

Asn Thr Asn Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35                  40                  45

Pro Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60

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

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln His
                85                  90                  95

His Tyr Glu Thr Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile
            100                 105                 110
```

Lys

<210> 18

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 18

```
Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
1               5                  10                  15

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Phe Ser Ser
            20                  25                  30

Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln
        35                  40                  45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
    50                  55                  60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80
```

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Asp Tyr Tyr Cys Gln His
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 19
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 19

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

Glu Arg Ala Thr Ile Asn Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
50 55 60

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

Ile Ser Ser Leu Gln Ala Glu Asp Val Gly Asp Tyr Tyr Cys Gln His
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 20
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 20

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

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

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

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

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln His
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 21
<211> 113
<212> PRT
<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 21

```
Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                  10                  15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Phe Ser Ser
            20                  25                  30

Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
        35                  40                  45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Ala Ser Gly Val
    50                  55                  60

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

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln His
                85                  90                  95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
            100                 105                 110

Lys
```

<210> 22
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 22

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Asn Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
50 55 60

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

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Asp Tyr Tyr Cys Gln His
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
100 105 110

Lys

<210> 23
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 23

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 24
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 24

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Arg Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Cys
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 25
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 25

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
            20                  25                  30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Phe Pro Gly Lys Arg Leu Glu
        35                  40                  45

Trp Met Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe
65                  70                  75                  80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Thr Tyr Cys
                85                  90                  95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
            100                 105                 110

Gly Thr Met Val Thr Val Ser Ser
        115                 120
```

<210> 26

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 26

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Tyr Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr His
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 27
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 27

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Tyr Pro Gly Lys Arg Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Thr Tyr Cys
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 28
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 28

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln Phe Pro Gly Lys Arg Leu Glu
35 40 45

Trp Met Gly Tyr Ile Asn Tyr Gly Gly Gly Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Thr Tyr Cys
85 90 95

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
100 105 110

Gly Thr Met Val Thr Val Ser Ser
115 120

<210> 29
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 29

Gln Ser Leu Phe Ser Ser Asn Thr Asn Arg Asn Tyr
1 5 10

<210> 30
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 30

Gln Ser Leu Phe Ser Ser Asn Thr Lys Arg Asn Tyr
1 5 10

<210> 31
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> LC CDR1 Consensus sequence

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa = N or K or a substitution having an equal or greater substitution score

<400> 31

Gln Ser Leu Phe Ser Ser Asn Thr Xaa Arg Asn Tyr
1 5 10

<210> 32
<211> 3
<212> PRT
<213> Artificial Sequence

<220>
<223> LC CDR2 Consensus Sequence:

<400> 32

His Ala Ser
1

<210> 33
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 33

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Phe Ser Ser

20 25 30

Asn Thr Lys Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Pro Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

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

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

His Tyr Glu Thr Pro Leu Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 34
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 34

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Pro Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
50 55 60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 35

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 35

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

Glu Arg Ala Thr Ile Asn Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
50 55 60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 36
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 36

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

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

Ser Pro Gln Leu Leu Ile Tyr His Ala Ser Tyr Arg Ala Ser Gly Val
50 55 60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 37
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 37

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
50 55 60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
100 105 110

Lys

<210> 38
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 38

```
Asp Ile Val Met Thr Gln Thr Pro Ser Ser Leu Pro Val Thr Pro Gly
1               5                  10                  15

Glu Pro Ala Ser Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
            20                  25                  30

Asn Thr Lys Arg Asn Tyr Leu Asn Trp Tyr Leu Gln Lys Pro Gly Gln
        35                  40                  45

Ser Pro Lys Leu Leu Ile Tyr His Ala Ser Thr Arg Leu Ser Gly Val
    50                  55                  60

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

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

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile
            100                 105                 110

Lys
```

<210> 39

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 39

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Thr Thr Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg Gln His Pro Gly Lys Gly Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Thr Ser Gly Arg Thr Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln

100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 40
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 40

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Thr Thr Gly
20 25 30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln His Pro Gly Lys Lys Leu Glu
35 40 45

Trp Ile Gly Tyr Ile Tyr Thr Ser Gly Arg Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe

65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 41
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 41

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Thr Thr Gly
20 25 30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Phe Pro Gly Lys Lys Leu Glu

35 40 45

Trp Met Gly Tyr Ile Tyr Thr Ser Gly Arg Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Val Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Phe
65 70 75 80

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 42
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 42

Gln Ile Thr Leu Lys Glu Ser Gly Pro Thr Leu Val Lys Pro Thr Gln

1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Ile Thr Thr Gly
20 25 30

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

Trp Leu Ala Leu Ile Tyr Thr Ser Gly Arg Thr Arg Tyr Ser Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 43
<211> 120
<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 43

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

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Thr Thr Gly
            20                  25                  30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Lys Leu Glu
        35                  40                  45

Trp Leu Ala Leu Ile Tyr Thr Ser Gly Arg Thr Ser Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
            100                 105                 110
```

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 44
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 44

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

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Ile Thr Thr Gly
20 25 30

Gly Tyr Tyr Trp Asn Trp Ile Arg Gln Pro Pro Gly Lys Lys Leu Glu
35 40 45

Trp Met Ala Leu Ile Tyr Thr Ser Gly Arg Thr Ser Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Thr Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 45
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 45

Gln His His Tyr Glu Thr Pro Leu Thr
1 5

<210> 46
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 46

Gln Gln His Tyr Glu Thr Pro Leu Thr
1 5

<210> 47
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 47

Gln Gln His Tyr Val Thr Pro Leu Thr
1 5

<210> 48
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> LC CDR3 Consensus Sequence

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is H or Q or a substitution having an equal or greater

substitution score (i.e., greater than or equal 0): R, N, Q, E, or H

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is E or V or a substitution having an equal or greater substitution score (i.e., greater than or equal to -2): A, Q, E, K, M, P, S, T, Y, or V

<400> 48

Gln Xaa His Tyr Xaa Thr Pro Leu Thr
1 5

<210> 49
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 49

Gly Phe Ser Ile Ser Thr Ser Gly
1 5

<210> 50
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 50

Gly Phe Ser Ile Thr Thr Gly Gly
1 5

<210> 51
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Heavy chain CDR1 consensus sequence

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa is S or T or a substitution having an equal or greater substitution score (i.e., greater than/equal to +1): S or T

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is S or G or a substitution having an equal or greater substitution score (i.e., greater than/equal to 0): A, N, G, or S

<400> 51

Gly Phe Asp Ile Xaa Thr Xaa Gly

1 5

<210> 52
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 52

Ile Asn Tyr Gly Gly Gly Thr
1 5

<210> 53
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Anti-Human H7CR Antibody

<400> 53

Ile Tyr Thr Ser Gly Arg Thr
1 5

<210> 54
<211> 7
<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 54

Ile Tyr Ser Ser Gly Arg Thr
1 5

<210> 55

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Heavy chain CDR2 Consensus Sequence

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> Xaa is N or Y or a substitution having an equal or greater substitution score (i.e., greater than/equal to -2): A, R, N, Q, E, H, K, M, S, T, Y

<220>

<221> MISC_FEATURE

<222> (3)..(3)

<223> Xaa is Y, T or S or a substitution having an equal or greater substitution score (i.e., greater than/equal to -2): A, R, N, C, Q, E, H, I, L, K, M, F, S, T, Y, or V

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa is S or G or a substitution having an equal or greater substitution score (i.e., greater than/equal to 0): A, N, G, or S

<220>

<221> MISC_FEATURE

<222> (6)..(6)

<223> Xaa is G or R or a substitution having an equal or greater substitution score (i.e., greater than/equal to -2): A, R, N, D, Q, E, G, H, K, P, S, or T

<400> 55

Ile Xaa Xaa Xaa Gly Xaa Thr
1 5

<210> 56

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 56

Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val
1 5 10

<210> 57

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 57

Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr
1 5 10

<210> 58

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Anti-Human H7CR Antibody

<400> 58

Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Asp Tyr
1 5 10

<210> 59

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Heavy chain CDR3 Consensus Sequence:

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa is T or D or a substitution having an equal or greater substitution score (i.e., greater than/equal to -1): N, D, Q, E, K, P, S, or T

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa is R or K or a substitution having an equal or greater substitution score (i.e., greater than/equal to +2): R, or K

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa is F or G or a substitution having an equal or greater substitution score (i.e., greater than/equal to -3): A, R, N, D, C, Q, E, G, H, K, M, F, S, T, W, Y, or V

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa is A or G or a substitution having an equal or greater substitution score (i.e., greater than/equal to 0): A, G, or S

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa is F or W or a substitution having an equal or greater substitution score (i.e., greater than/equal to +1): F, W, or Y

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is A or D or a substitution having an equal or greater substitution score (i.e., greater than/equal to): A, R, N, D, C, Q, E, G, H, I, L, K, M, F, P, S, T, W, Y, or V

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa is A or D or a substitution having an equal or greater substitution score : A, R, N, D, C, Q, E, G, H, I, L, K, M, F, P, S, T, W, Y, or V

<220>
<221> MISC_FEATURE
<222> (12)..(12)
<223> Xaa is V or Y or a substitution having an equal or greater substitution score (i.e., greater than/equal to -2): A, R, N, D, C, Q, E, G, H, I, L, K, M, F, P, S, T, W, Y, or V

<400> 59

Ala Xaa Met Ala Asp Xaa Xaa Xaa Xaa Phe Xaa Xaa
1 5 10

<210> 60
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<223> Humanized Antibody

<400> 60

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

Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Asn Arg Asn Tyr Leu Asn
35 40

<210> 61
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 61

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala
35 40

<210> 62
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 62

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His Ser
20 25 30

Asn Gly Tyr Asn Tyr Leu Asp
35

<210> 63
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 63

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr His
1 5 10 15

Ala Ser Thr Arg Leu Thr Gly Val Pro Asp Arg Phe Ile Gly Ser Gly
20 25 30

Ser Gly Thr Asp Phe Thr Leu Thr
35 40

<210> 64
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 64

Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp
1 5 10 15

Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
20 25 30

Ser Gly Thr Asp Phe Thr Leu Thr
35 40

<210> 65
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 65

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu
1 5 10 15

Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
20 25 30

Ser Gly Thr Asp Phe Thr Leu Lys
35 40

<210> 66
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 66

Ile Ser Ser Val Gln Ala Glu Asp Leu Gly Asp Tyr Tyr Cys Gln His
1 5 10 15

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Lys Leu Glu Ile
20 25 30

Lys

<210> 67
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 67

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
1 5 10 15

Tyr Tyr Ser Thr Pro Tyr Thr
20

<210> 68
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 68

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
1 5 10 15

Ala Leu Gln Thr Pro Tyr Thr
20

<210> 69
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 69

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 70
<211> 40
<212> PRT
<213> Artificial Sequence

<220>

<223> Humanized antibody

<400> 70

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

Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile Ser Thr Ser
20 25 30

Gly Tyr Tyr Trp Thr Trp Ile Arg
35 40

<210> 71
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 71

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg
35 40

<210> 72
<211> 40
<212> PRT
<213> Homo sapiens

<400> 72

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Val
20 25 30

Asn Tyr Tyr Trp Ser Trp Ile Arg
35 40

<210> 73
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 73

Gln Phe Pro Gly Lys Arg Leu Glu Trp Met Gly Tyr Ile Asn Tyr Gly

1 5 10 15

Gly Gly Thr Ser Tyr Asn Pro Ser Leu Lys Ser Arg Ile Ser Ile Thr
20 25 30

Arg Asp Thr Ser Lys Asn Gln Phe
35 40

<210> 74
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 74

Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser
1 5 10 15

Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser
20 25 30

Val Asp Thr Ser Lys Asn Gln Phe
35 40

<210> 75

<211> 40

<212> PRT

<213> Homo sapiens

<400> 75

Gln Tyr Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Arg
1 5 10 15

Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser
20 25 30

Val Asp Thr Ser Lys Asn Gln Phe
35 40

<210> 76

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized antibody

<400> 76

Leu Leu His Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Cys
1 5 10 15

Cys Ala Thr Met Ala Asp Arg Phe Ala Phe Phe Asp Val Trp Gly Gln
20 25 30

Gly Ile Gln Val Thr Val Ser Ser
35 40

<210> 77
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 77

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
1 5 10 15

Cys Ala Arg

<210> 78
<211> 40
<212> PRT
<213> Homo sapiens

<400> 78

Ser Leu Lys Leu Thr Ser Val Thr Ala Ala Asp Thr Ala Val Tyr His
1 5 10 15

Cys Ala Arg Glu Arg Thr Met Thr Gly Ala Phe Asp Ile Trp Gly Gln
20 25 30

Gly Thr Met Val Thr Val Ser Ser
35 40

<210> 79
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 79

Asp Ala Phe Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser
1 5 10 15

<210> 80
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 80

Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly

1 5 10 15

Glu Lys Val Thr Ile Ser Cys Leu Ser Ser Gln Ser Leu Phe Ser Ser
20 25 30

Asn Thr Lys Arg Asn Tyr Leu Asn
35 40

<210> 81
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 81

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

Glu Arg Ala Thr Ile Asn Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala
35 40

<210> 82

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 82

Asp Ile Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asp Ser
20 25 30

Asp Asp Gly Asn Thr Tyr Leu Asp
35 40

<210> 83

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized antibody

<400> 83

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr His
1 5 10 15

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Ala Ser Thr Arg Leu Thr Gly Val Pro Gly Arg Phe Ile Gly Ser Gly
            20                  25                  30

Ser Gly Thr Asp Phe Thr Leu Thr
        35                  40
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<210> 84
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 84

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Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp
1               5                   10                  15

Ala Ser Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
            20                  25                  30

Ser Gly Thr Asp Phe Thr Leu Thr
        35                  40
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<210> 85
<211> 40
<212> PRT

<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 85

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Thr
1 5 10 15

Leu Ser Tyr Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
20 25 30

Ser Gly Thr Asp Phe Thr Leu Lys
35 40

<210> 86
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 86

Val Ser Thr Val Gln Ala Glu Asp Leu Gly Asp Tyr Phe Cys Gln Gln
1 5 10 15

His Tyr Glu Thr Pro Leu Thr Phe Gly Asp Gly Thr Arg Leu Glu Ile

20 25 30

Lys

<210> 87

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 87

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
1 5 10 15

Tyr Tyr Ser Thr Pro Tyr Thr
20

<210> 88

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 88

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
1 5 10 15

Arg Ile Glu Phe Pro
20

<210> 89
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 89

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
1 5 10

<210> 90
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 90

Gln Ile Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln

1 5 10 15

Ser Leu Ser Leu Thr Cys Ser Val Thr Gly Phe Ser Ile Thr Thr Gly
20 25 30

Gly Tyr Tyr Trp Asn Trp Ile Arg
35 40

<210> 91
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 91

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

Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser Ser Gly
20 25 30

Gly Tyr Tyr Trp Ser Trp Ile Arg
35 40

<210> 92

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Variant of humanized anti-human H7CR Antibody

<400> 92

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

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Val Gly Val Gly Trp Ile Arg
35 40

<210> 93

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized antibody

<400> 93

Gln Phe Pro Gly Lys Lys Leu Glu Trp Met Gly Tyr Ile Tyr Thr Ser
1 5 10 15

Gly Arg Thr Ser Tyr Asn Pro Ser Leu Lys Ser Arg Ile Ser Ile Thr
20 25 30

Arg Asp Thr Ser Lys Asn Gln Phe
35 40

<210> 94
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 94

Gln His Pro Gly Lys Gly Leu Glu Trp Ile Gly Tyr Ile Tyr Tyr Ser
1 5 10 15

Gly Ser Thr Tyr Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser
20 25 30

Val Asp Thr Ser Lys Asn Gln Phe
35 40

<210> 95
<211> 40
<212> PRT

<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<400> 95

Gln Pro Pro Gly Lys Ala Leu Glu Trp Leu Ala Leu Ile Tyr Trp Asn
1 5 10 15

Asp Asp Lys Arg Tyr Ser Pro Ser Leu Lys Ser Arg Leu Thr Ile Thr
20 25 30

Lys Asp Thr Ser Lys Asn Gln Val
35 40

<210> 96
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 96

Phe Leu Gln Leu Asn Ser Met Thr Thr Glu Asp Thr Ala Thr Tyr Tyr
1 5 10 15

Cys Ala Asp Met Ala Asp Lys Gly Gly Trp Phe Ala Tyr Trp Gly Gln

20 25 30

Gly Thr Leu Val Thr Val Ser Ser
35 40

<210> 97
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<220>
<221> UNSURE
<222> (19)..(22)

<400> 97

Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr
1 5 10 15

Cys Ala Xaa Xaa Xaa Xaa Arg
20

<210> 98
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Variant of humanized anti-human H7CR Antibody

<220>
<221> UNSURE
<222> (19)..(22)

<400> 98

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
1 5 10 15

Cys Ala Xaa Xaa Xaa Xaa His Arg
20

<210> 99
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized antibody

<400> 99

Asn Trp Phe Asp Ser Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10 15

<210> 100

<211> 1401

<212> DNA

<213> Artificial Sequence

<220>

<223> Chimeric antibody chain coding sequence

<400> 100

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atccagctgc aggaatctgg ccctggcctc gtgaagcctt cccagtccct gtccctgacc 120

tgcagcgtga ccggcttctc catctccacc tccggctact actggacctg gatccggcag 180

ttccctggca agcggctgga atggatgggc tacatcaact acggcggagg cacctcctac 240

aaccccagcc tgaagtcccg gatctccatc acccgggata cctccaagaa ccagttcctg 300

ctgcacctga actccgtgac aaccgaggac accgccacct actgctgcgc taccatggcc 360

gacagattcg ccttcttcga cgtgtggggc cagggcatcc aagtgaccgt gtcctccgct 420

tccaccaagg gcccctctgt gtttcctctg gcccccttgct cccggtccac ctctgagtct 480

acagccgctc tgggctgcct cgtgaaagac tacttccccg agcccgtgac agtgtcctgg 540

aactctggcg ctctgacctc tggcgtgcac accttccctg ctgtgctgca gtctagcggc 600

ctgtactccc tgtcctccgt cgtgaccgtg ccttccagct ctctgggcac caagacctac 660

acctgtaacg tggaccacaa gccctccaac accaaggtgg acaagagagt ggaatctaag 720

tacggccctc cctgcccccc ttgtcctgcc cctgaatttc tgggcggacc ctccgtgttt 780

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gtggaagtgc acaacgccaa gaccaagcct agagaggaac agttcaactc cacctaccgg 960

gtggtgtccg tgctgaccgt gctgcaccag gattggctga acggcaaaga gtacaagtgc 1020

aaggtgtcca acaagggcct gccctccagc atcgaaaaga ccatctccaa ggctaagggc 1080

cagccccgcg agccccaggt gtacacactg cctccaagcc aggaagagat gaccaagaat 1140

caggtgtcac tgacctgtct cgtgaagggc ttctaccct ccgatatcgc cgtggaatgg 1200

gagtccaacg gccagcccga gaacaactac aagaccaccc cccctgtgct ggactccgac 1260

ggctccttct ttctgtactc tcgcctgacc gtggacaagt cccggtggca ggaaggcaac 1320

gtgttctcct gctctgtgat gcacgaggcc ctgcacaacc actacaccca gaagtccctg 1380

agcctgtccc ccggctgatg a 1401

<210> 101
<211> 726
<212> DNA
<213> Artificial Sequence

<220>
<223> Chimeric antibody chain coding sequence

<400> 101
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gacatcgtga tgacccagtc cccctcctcc ctggctgtgt ctgctggcga gaaagtgacc 120

atctcctgcc tgtcctccca gtccctgttc tcctccaaca ccaaccggaa ctacctgaac 180

tggtatctgc agaagcccgg ccagtcccct aagctgctga tctaccacgc ctccaccaga 240

ctgaccggcg tgcccgatag attcatcggc tctggctccg gcaccgactt taccctgacc 300

atcagctccg tgcaggccga ggacctgggc gactactact gccagcacca ctacgagaca 360

cccctgacct ttggcgacgg caccaagctg gaaatcaagc ggaccgtggc cgctccctcc 420

gtgttcatct tcccaccttc cgacgagcag ctgaagtctg gcaccgcctc tgtcgtgtgc 480

ctgctgaaca acttctaccc ccgcgaggcc aaggtgcagt ggaaggtgga caacgccctg 540

cagtccggca actcccagga atccgtgacc gagcaggact ccaaggacag cacctactcc 600

ctgtccagca ccctgaccct gtccaaggcc gactacgaga agcacaaggt gtacgcctgc 660

gaagtgaccc accagggcct gtctagcccc gtgaccaagt ctttcaaccg gggcgagtgc 720

tgatga 726