

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt
Sequence Listing

<110> NBE therapeutics

<120> RoR1 antibodies

<130> ND40470

<160> 55

<170> Excel Makro

<210> 1

<211> 8

<212> PRT

<213> artificial

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<223>CDR1 HC 2A2

<400> 1

Gly Tyr Thr Phe Ser Asp Tyr Glu
1 5

<210> 2

<211> 8

<212> PRT

<213> artificial

<220>

<223>CDR2 HC 2A2

<400> 2

Ile Asp Pro Glu Thr Gly Gly Thr
1 5

<210> 3

<211> 11

<212> PRT

<213> artificial

<220>

<223>CDR3 HC 2A2

<400> 3

Thr Gly Tyr Tyr Asp Tyr Asp Ser Phe Thr Tyr
1 5

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<210> 4
 <211> 6
 <212> PRT
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<400> 4
 Gln Asn Val Asp Ala Ala
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<210> 5
 <211> 3
 <212> PRT
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<220>
 <223>CDR2 LC 2A2

<400> 5
 Ser Ala Ser
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<210> 6
 <211> 9
 <212> PRT
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<220>
 <223>CDR3 LC 2A2

<400> 6
 Gln Gln Tyr Asp Ile Tyr Pro Tyr Thr
 1 5

<210> 7
 <211> 118
 <212> PRT
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<220>
 <223>VR HC chimeric mAb 2A2

<400> 7
 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala
 1 5 10 15

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

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

Glu Met His Trp Val Ile Gln Thr Pro Val His Gly Leu Glu Trp Ile
35 40 45

Gly Ala Ile Asp Pro Glu Thr Gly Gly Thr Ala Tyr Asn Gln Lys Phe
50 55 60

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

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Thr Gly Tyr Tyr Asp Tyr Asp Ser Phe Thr Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 8
<211> 107
<212> PRT
<213> artificial

<220>
<223>VR LC chimeric mAb 2A2

<400> 8
Asp Ile Val Met Thr Gln Ser Gln Lys Ile Met Ser Thr Thr Val Gly
1 5 10 15

Asp Arg Val Ser Ile Thr Cys Lys Ala Ser Gln Asn Val Asp Ala Ala
20 25 30

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

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

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Met Gln Ser
65 70 75 80

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

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<210> 9
 <211> 118
 <212> PRT
 <213> artificial

<220>
 <223>VR HC hu2A2b-Q11, humanized from 2A2

<400> 9
 Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp Tyr
 20 25 30
 Glu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Leu
 35 40 45
 Gly Ala Ile Asp Pro Glu Thr Gly Gly Thr Ala Tyr Asn Gln Lys Phe
 50 55 60
 Lys Gly Arg Val Thr Met Thr Gly Asp Thr Ser Ile Ser Thr Ala Tyr
 65 70 75 80
 Met Glu Leu Ser Arg Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Thr Gly Tyr Tyr Asp Tyr Asp Ser Phe Thr Tyr Trp Gly Gln Gly Thr
 100 105 110
 Leu Val Ser Val Ser Ser
 115

<210> 10
 <211> 107
 <212> PRT
 <213> artificial

<220>
 <223>VR LC hu2A2b-Q11, humanized from 2A2

<400> 10
 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Thr Ser Val Gly
 1 5 10 15
 Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Asp Ala Ala
 20 25 30

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

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

Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Ala Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 11
<211> 118
<212> PRT
<213> artificial

<220>
<223>VR HC hu2A2-D23, humanized from 2A2

<400> 11
Gln Val Gln Leu Val Glu Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

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

Glu Met His Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
35 40 45

Gly Ala Ile Asp Pro Glu Thr Gly Gly Thr Ala Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Ala Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Thr Gly Tyr Tyr Asp Tyr Asp Ser Phe Thr Tyr Trp Gly Pro Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 12
<211> 107

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<212> PRT

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<220>

<223>VR LC hu2A2-D23, humanized from 2A2

<400> 12

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

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Asp Ala Ala
20 25 30

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

Tyr Ser Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

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

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 13

<211> 118

<212> PRT

<213> artificial

<220>

<223>VR HC hu2A2-D16, humanized from 2A2

<400> 13

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

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp Tyr
20 25 30

Glu Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Ala Ile Asp Pro Glu Thr Gly Gly Thr Ala Tyr Asn Gln Lys Phe
50 55 60

Lys Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr
65 70 75 80

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Thr Gly Tyr Tyr Asp Tyr Asp Ser Phe Thr Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 14
<211> 107
<212> PRT
<213> artificial

<220>
<223>VR LC hu2A2-D16, humanized from 2A2

<400> 14
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asn Val Asp Ala Ala
20 25 30

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

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

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ser
65 70 75 80

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

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 15
<211> 8
<212> PRT
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<220>
<223>CDR1 HC R11

<400> 15
Gly Ser Asp Ile Asn Asp Tyr Pro

1

5

<210> 16
 <211> 7
 <212> PRT
 <213> artificial

<220>
 <223>CDR2 HC R11

<400> 16
 Ile Asn Ser Gly Gly Ser Thr
 1 5

<210> 17
 <211> 11
 <212> PRT
 <213> artificial

<220>
 <223>CDR3 HC R11

<400> 17
 Gly Tyr Ser Thr Tyr Tyr Gly Asp Phe Asn Ile
 1 5 10

<210> 18
 <211> 6
 <212> PRT
 <213> artificial

<220>
 <223>CDR1 LC R11

<400> 18
 Gln Ser Ile Asp Ser Asn
 1 5

<210> 19
 <211> 3
 <212> PRT
 <213> artificial

<220>
 <223>CDR2 LC R11

<400> 19

Arg Ala Ser

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<210> 20
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 <212> PRT
 <213> artificial

<220>
 <223>CDR3 LC R11

<400> 20
 Leu Gly Gly Val Gly Asn Val Ser Tyr Arg Thr Ser
 1 5 10

<210> 21
 <211> 116
 <212> PRT
 <213> artificial

<220>
 <223>VR HC chimeric mAb R11

<400> 21
 Gln Ser Val Lys Glu Ser Glu Gly Asp Leu Val Thr Pro Ala Gly Asn
 1 5 10 15

Leu Thr Leu Thr Cys Thr Ala Ser Gly Ser Asp Ile Asn Asp Tyr Pro
 20 25 30

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

Phe Ile Asn Ser Gly Gly Ser Thr Trp Tyr Ala Ser Trp Val Lys Gly
 50 55 60

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

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

Ser Thr Tyr Tyr Gly Asp Phe Asn Ile Trp Gly Pro Gly Thr Leu Val
 100 105 110

Thr Ile Ser Ser
 115

<210> 22

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<211> 110
<212> PRT
<213> artificial

<220>
<223>VR LC chimeric mAb R11

<400> 22
Glu Leu Val Met Thr Gln Thr Pro Ser Ser Thr Ser Gly Ala Val Gly
1 5 10 15
Gly Thr Val Thr Ile Asn Cys Gln Ala Ser Gln Ser Ile Asp Ser Asn
20 25 30
Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Pro Pro Thr Leu Leu Ile
35 40 45
Tyr Arg Ala Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60
Ser Arg Ser Gly Thr Glu Tyr Thr Leu Thr Ile Ser Gly Val Gln Arg
65 70 75 80
Glu Asp Ala Ala Thr Tyr Tyr Cys Leu Gly Gly Val Gly Asn Val Ser
85 90 95
Tyr Arg Thr Ser Phe Gly Gly Gly Thr Glu Val Val Val Lys
100 105 110

<210> 23
<211> 138
<212> PRT
<213> artificial

<220>
<223>VR HC rbQ11, humanized from R11

<400> 23
Met Asn Phe Gly Leu Arg Leu Ile Phe Leu Val Leu Thr Leu Lys Gly
1 5 10 15
Val Gln Cys Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Gln
20 25 30
Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Asp Ile
35 40 45
Asn Asp Tyr Pro Ile Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

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Glu Trp Val Ser Phe Ile Asn Ser Gly Gly Ser Thr Trp Tyr Ala Ser
65 70 75 80

Trp Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser
85 90 95

Leu Tyr Leu Gln Met Asn Ser Leu Arg Asp Asp Asp Thr Ala Thr Tyr
100 105 110

Phe Cys Ala Arg Gly Tyr Ser Thr Tyr Tyr Gly Asp Phe Asn Ile Trp
115 120 125

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
130 135

<210> 24
<211> 129
<212> PRT
<213> artificial

<220>
<223>VR LC rbQ11, humanized from R11

<400> 24
Met Asn Phe Gly Leu Arg Leu Ile Phe Leu Val Leu Thr Leu Lys Gly
1 5 10 15

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

Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Ser Ile
35 40 45

Asp Ser Asn Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys
50 55 60

Ser Leu Ile Tyr Arg Ala Ser Asn Leu Ala Ser Gly Val Pro Ser Lys
65 70 75 80

Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser
85 90 95

Leu Gln Arg Glu Asp Ala Ala Thr Tyr Tyr Cys Leu Gly Gly Val Gly
100 105 110

Asn Val Ser Tyr Arg Thr Ser Phe Gly Gly Gly Thr Lys Val Glu Ile
115 120 125

Lys

<210> 25

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<211> 119
<212> PRT
<213> artificial

<220>

<223>VR HC rbD4, humanized from R11

<400> 25

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

Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Ser Asp Ile Asn Asp Tyr
20 25 30

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

Gly Phe Ile Asn Ser Gly Gly Ser Thr Trp Tyr Ala Ser Trp Val Lys
50 55 60

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

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

Arg Gly Tyr Ser Thr Tyr Tyr Gly Asp Phe Asn Ile Trp Gly Gln Gly
100 105 110

Thr Thr Val Thr Val Ser Ser
115

<210> 26
<211> 110
<212> PRT
<213> artificial

<220>

<223>VR LC rbD4, humanized from R11

<400> 26

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

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Ser Ile Asp Ser Asn
20 25 30

Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
35 40 45

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

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Arg
65 70 75 80

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

Tyr Arg Thr Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 27
<211> 119
<212> PRT
<213> artificial

<220>
<223>VR HC rbQ12, humanized from R11

<400> 27
Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Ser Asp Ile Asn Asp Tyr
20 25 30

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

Ser Phe Ile Asn Ser Gly Gly Ser Thr Trp Tyr Ala Ser Trp Val Lys
50 55 60

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

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

Arg Gly Tyr Ser Thr Tyr Tyr Gly Asp Phe Asn Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser
115

<210> 28
<211> 110
<212> PRT
<213> artificial

<220>
<223>VR LC rbQ12, humanized from R11

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

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<400>    28
Glu Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1          5          10          15

Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Ser Ile Asp Ser Asn
          20          25          30

Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
          35          40          45

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

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Arg
65          70          75          80

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

Tyr Arg Thr Ser Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
          100          105          110

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<210>    29
<211>     8
<212>    PRT
<213>   artificial

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```

<220>
<223>CDR1 HC R12

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<400>    29
Gly Phe Asp Phe Ser Ala Tyr Tyr
1          5

```

```

<210>    30
<211>     8
<212>    PRT
<213>   artificial

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```

<220>
<223>CDR2 HC R12

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<400>    30
Ile Tyr Pro Ser Ser Gly Lys Thr
1          5

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<210>    31

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134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<211> 14
 <212> PRT
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<220>
 <223>CDR3 HC R12

<400> 31
 Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile
 1 5 10

<210> 32
 <211> 7
 <212> PRT
 <213> artificial

<220>
 <223>CDR1 LC R12

<400> 32
 Ser Ala His Lys Thr Asp Thr
 1 5

<210> 33
 <211> 7
 <212> PRT
 <213> artificial

<220>
 <223>CDR2 LC R12

<400> 33
 Val Gln Ser Asp Gly Ser Tyr
 1 5

<210> 34
 <211> 9
 <212> PRT
 <213> artificial

<220>
 <223>CDR3 LC R12

<400> 34
 Gly Ala Asp Tyr Ile Gly Gly Tyr Val
 1 5

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<210> 35
 <211> 121
 <212> PRT
 <213> artificial

<220>
 <223>VR HC Chimeric mAb R12

<400> 35
 Gln Glu Gln Leu Val Glu Ser Gly Gly Arg Leu Val Thr Pro Gly Gly
 1 5 10 15
 Ser Leu Thr Leu Ser Cys Lys Ala Ser Gly Phe Asp Phe Ser Ala Tyr
 20 25 30
 Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
 35 40 45
 Ala Thr Ile Tyr Pro Ser Ser Gly Lys Thr Tyr Tyr Ala Thr Trp Val
 50 55 60
 Asn Gly Arg Phe Thr Ile Ser Ser Asp Asn Ala Gln Asn Thr Val Asp
 65 70 75 80
 Leu Gln Met Asn Ser Leu Thr Ala Ala Asp Arg Ala Thr Tyr Phe Cys
 85 90 95
 Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile Trp Gly
 100 105 110
 Pro Gly Thr Leu Val Thr Ile Ser Ser
 115 120

<210> 36
 <211> 111
 <212> PRT
 <213> artificial

<220>
 <223>VR LC Chimeric mAb R12

<400> 36
 Glu Leu Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ser
 1 5 10 15
 Pro Ala Lys Ile Thr Cys Thr Leu Ser Ser Ala His Lys Thr Asp Thr
 20 25 30
 Ile Asp Trp Tyr Gln Gln Leu Gln Gly Glu Ala Pro Arg Tyr Leu Met
 35 40 45

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Gln Val Gln Ser Asp Gly Ser Tyr Thr Lys Arg Pro Gly Val Pro Asp
50 55 60

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

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

Ile Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Thr
100 105 110

<210> 37
<211> 121
<212> PRT
<213> artificial

<220>
<223>VR HC huR12_4, humanized from R12

<400> 37
Gln Val Gln Leu Val Glu Ser Gly Gly Glu Leu Val Gln Pro Gly Gly
1 5 10 15

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

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

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

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

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

Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile Trp Gly
100 105 110

Lys Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 38
<211> 112
<212> PRT
<213> artificial

134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

<220>

<223>VR LC huR12_4, humanized from R12

<400> 38

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

Ser Ala Lys Ile Thr Cys Thr Leu Ser Ser Ala His Lys Thr Asp Thr
20 25 30

Ile Asp Trp Tyr Gln Gln Leu Ala Gly Gln Ala Pro Arg Tyr Leu Met
35 40 45

Tyr Val Gln Ser Asp Gly Ser Tyr Glu Lys Arg Ser Gly Val Pro Asp
50 55 60

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

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

Ile Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Leu Gly
100 105 110

<210> 39

<211> 121

<212> PRT

<213> artificial

<220>

<223>VR HC huR12_7, humanized from R12

<400> 39

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

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

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

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

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

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

Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile Trp Gly
100 105 110

Lys Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 40
<211> 112
<212> PRT
<213> artificial

<220>
<223>VR LC huR12_7, humanized from R12

<400> 40
Gln Leu Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ser
1 5 10 15

Ser Ala Lys Ile Thr Cys Thr Leu Ser Ser Ala His Lys Thr Asp Thr
20 25 30

Ile Asp Trp Tyr Gln Gln Leu Ala Gly Gln Ala Pro Arg Tyr Leu Met
35 40 45

Tyr Val Gln Ser Asp Gly Ser Tyr Glu Lys Arg Ser Gly Val Pro Asp
50 55 60

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

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

Ile Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Leu Gly
100 105 110

<210> 41
<211> 121
<212> PRT
<213> artificial

<220>
<223>VR HC huR12_11, humanized from R12

<400> 41
Gln Val Gln Leu Val Glu Ser Gly Gly Ala Leu Val Gln Pro Gly Gly

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```

1           5           10           15
Ser Leu Thr Leu Ser Cys Lys Ala Ser Gly Phe Asp Phe Ser Ala Tyr
          20           25           30
Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
          35           40           45
Ala Thr Ile Tyr Pro Ser Ser Gly Lys Thr Tyr Tyr Ala Ala Ser Val
          50           55           60
Gln Gly Arg Phe Thr Ile Ser Ala Asp Asn Ala Lys Asn Thr Val Tyr
65           70           75           80
Leu Gln Met Asn Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys
          85           90           95
Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile Trp Gly
          100          105          110
Gln Gly Thr Leu Val Thr Val Ser Ser
          115          120

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<210> 42
 <211> 112
 <212> PRT
 <213> artificial

<220>
 <223>VR LC huR12_11, humanized from R12

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<400> 42
Gln Leu Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ser
1           5           10           15
Ser Ala Lys Ile Thr Cys Thr Leu Ser Ser Ala His Lys Thr Asp Thr
          20           25           30
Ile Asp Trp Tyr Gln Gln Leu Ala Gly Gln Ala Pro Arg Tyr Leu Met
          35           40           45
Tyr Val Gln Ser Asp Gly Ser Tyr Glu Lys Arg Ser Gly Val Pro Asp
          50           55           60
Arg Phe Ser Gly Ser Ser Ser Gly Ala Asp Arg Tyr Leu Ile Ile Ser
65           70           75           80
Ser Val Gln Ala Asp Asp Glu Ala Asp Tyr Tyr Cys Gly Ala Asp Tyr
          85           90           95
Ile Gly Gly Tyr Val Phe Gly Gly Gly Thr Gln Leu Thr Val Gly Phe

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<210> 43
<211> 121
<212> PRT
<213> artificial

<220>
<223>VR HC huR12_16, humanized from R12

<400> 43
Gln Val Gln Leu Val Glu Ser Gly Gly Glu Leu Val Thr Pro Gly Gly
1 5 10 15
Ser Leu Thr Leu Ser Cys Lys Ala Ser Gly Phe Asp Phe Ser Ala Tyr
20 25 30
Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45
Ala Ser Ile Tyr Pro Ser Ser Gly Lys Thr Tyr Tyr Ala Ala Ala Val
50 55 60
Gln Gly Arg Phe Thr Ile Ser Ala Asp Asn Ala Lys Asn Thr Val Tyr
65 70 75 80
Leu Gln Met Asn Ser Leu Thr Ala Ala Asp Thr Ala Thr Tyr Phe Cys
85 90 95
Ala Arg Asp Ser Tyr Ala Asp Asp Gly Ala Leu Phe Asn Ile Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 44
<212> PRT
<211> 112
<213> artificial

<220>
<223>VR LC huR12_16, humanized from R12

<400> 44
Gln Leu Val Leu Thr Gln Ser Pro Ser Val Ser Ala Ala Leu Gly Ser
1 5 10 15
Ser Ala Lys Ile Thr Cys Thr Leu Ser Ser Ala His Lys Thr Asp Thr
20 25 30

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Ile	Asp	Trp	Tyr	Gln	Gln	Leu	Ala	Gly	Gln	Ala	Pro	Arg	Tyr	Leu	Met
	35						40					45			
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Ser	Val	Gln	Ala	Asp	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gly	Ala	Asp	Tyr
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134NBE 011 PCT SG-Sequence listing ND40470 corrected.txt

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