

311SG499-seq1-000001
SEQUENCE LISTING

<110> Agency for Science, Technology and Research

<120> PRL3 Antibody

<130> FJS/FP7283633

<150> SG10201604834P

<151> 2016-06-14

<160> 39

<170> PatentIn version 3.5

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<223> HC-CDR1

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Gly Tyr Thr Phe Thr Asn Tyr Tyr Met His
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Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe Arg
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Gly

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Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr
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 <223> LC-CDR1

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Ala Ala Ser Asn Leu Glu Ser
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Gln Gln Ser Asn Glu Asp Pro Phe Thr
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<223> Humanized light chain protein HZD_K1

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

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

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
35 40 45

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

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

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

Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
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<223> Humanized light chain protein HZD_K2

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

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

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
35 40 45

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

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

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

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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Asp Thr Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Cys Lys Ala Ser Gln Ser Val Glu Asp Asp Gly
20 25 30

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
35 40 45

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

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

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

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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<223> Humanized light chain protein HZD_K4

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

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

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
35 40 45

Leu Ile Tyr Ala Ala Ser Asn Leu Glu Ser Gly Ile Pro Ser Arg Phe

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

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

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

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<223> Humanized light chain protein HZD_K5

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

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

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
35 40 45

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

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

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

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

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

Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Ser Pro Lys Leu
 35 40 45

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

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

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

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
 100 105

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<223> Humanized light chain protein K

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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 Ser Cys Lys Ala Ser Gln Ser Val Glu Asp Asp
20 25 30

Gly Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ser Pro
35 40 45

Lys Leu Leu Ile Tyr Ala Ala Ser Asn Leu Glu Ser Gly Ile Pro Ala
50 55 60

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

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

Glu Asp Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg
100 105 110

Thr

<210> 14

<211> 113

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<223> Humanized light chain protein L1

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

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

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Thr

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 <223> Humanized light chain protein L2

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Asp Thr Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
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Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Ser Val Glu Asp Asp
      20             25             30

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Gly Glu Asn Tyr Met Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro
 35 40 45

Lys Leu Leu Ile Tyr Ala Ala Ser Asn Leu Glu Ser Gly Ile Pro Ser
 50 55 60

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

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

Glu Asp Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
 100 105 110

Thr

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<400> 16

Gln 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 Thr Asn Tyr
 20 25 30

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

Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe Arg

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Ser
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<223> Humanized heavy chain protein HZD_H2

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Gln 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 Thr Asn Tyr
20 25 30

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

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

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Ser
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Gln 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 Thr Asn Tyr
20 25 30

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

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

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu

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Val Thr Ser
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Gln 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 Thr Asn Tyr
20 25 30

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

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

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Ser
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Gln 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 Thr Asn Tyr
 20 25 30

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

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

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
 100 105 110

Val Thr Ser
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<210> 21
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<223> Humanized heavy chain protein HZD_H6

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Gln 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 Thr Asn Tyr
20 25 30

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

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

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

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

Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Ser
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<223> Humanized heavy chain protein HZD_H7

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

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1 5 10 15

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

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

Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe
 50 55 60

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

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

Ala Ser Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Ser
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Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30

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

Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe
 50 55 60

Arg Gly Lys Ala Thr Ile Thr Ala 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 Phe Cys
 85 90 95

Ala Ser Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser Ala Ser
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 <212> PRT
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 <223> Humanized heavy chain protein H2

<400> 24

Gln 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 Thr Asn Tyr
 20 25 30

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

Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe

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

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

Ala Ser Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser Ala Ser
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<223> Humanized heavy chain protein H3

<400> 25

Gln 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 Thr Asn Tyr
20 25 30

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

Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe
50 55 60

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

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

Ala Ser Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser Ala Ser
115 120

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<223> Important light chain domain sequence

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Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr
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<223> Important light chain domain sequence

<400> 27

Lys Ala Ser Gln Ser Val Glu Asp Asp Gly Glu Asn Tyr Met Asn Trp
1 5 10 15

Tyr Gln Gln Lys
20

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<211> 35
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<213> Artificial Sequence

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<223> Important light chain domain sequence

<400> 28

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu
1 5 10 15

Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Glu Asp
20 25 30

Pro Phe Thr
35

<210> 29

<211> 33

<212> PRT

<213> Artificial Sequence

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<223> Important heavy chain domain sequence

<400> 29

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

Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Tyr Met His Trp
20 25 30

Val

<210> 30

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<212> PRT

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<223> Important heavy chain domain sequence

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<400> 30

Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr Tyr Asn Glu Lys Phe Arg
1 5 10 15

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<223> Important heavy chain domain sequence

<400> 31

Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
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<210> 32

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<212> PRT

<213> Artificial Sequence

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<223> Important heavy chain domain sequence

<400> 32

Ala Ser Glu Glu Lys Asn Tyr Pro Trp Phe Ala Tyr Trp Gly Gln Gly
1 5 10 15

Thr Leu Val Thr
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<213> Artificial Sequence

<220>

<223> Monoclonal antibody 223 heavy chain variable region

<400> 33

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Glu Phe Met Glu Trp Ser Trp Val Ile Leu Phe Leu Leu Ser Ile Ile
1 5 10 15

Ala Gly Val His Cys Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu
20 25 30

Val Lys Pro Gly Ala Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Tyr
35 40 45

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

Gly Leu Glu Trp Ile Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Glu
65 70 75 80

Tyr Asn Glu Lys Phe Arg Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser
85 90 95

Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser
100 105 110

Ala Val Tyr Phe Cys Ala Ser Glu Glu Arg Asn Tyr Pro Trp Phe Ala
115 120 125

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

Pro Pro Pro Val Tyr Pro Leu Val Pro Gly Ser Leu Gly
145 150 155

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<223> Monoclonal antibody 223 light chain variable region

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<400> 34

Trp Glu Phe Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu
1 5 10 15

Trp Val Pro Gly Ser Thr Gly Asp Ile Val Leu Thr Gln Ser Pro Ala
20 25 30

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

Ser Gln Ser Val Glu Asp Asp Gly Glu Asn Tyr Met Asn Trp Tyr Gln
50 55 60

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

Leu Glu Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr
85 90 95

Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr
100 105 110

Tyr Tyr Cys Gln Gln Ser Asn Glu Asp Pro Phe Thr Phe Gly Ser Gly
115 120 125

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

Phe Pro Pro Ser Ser Lys Leu Gly
145 150

<210> 35

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<220>

<223> Monoclonal antibody 318 heavy chain variable region

<400> 35

Glu Phe Met Glu Trp Ser Trp Val Phe Leu Phe Leu Leu Ser Ile Ile
1 5 10 15

Ala Gly Val His Cys Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu
20 25 30

Val Lys Pro Gly Ala Ser Val Arg Ile Ser Cys Lys Ala Ser Gly Tyr
35 40 45

Thr Phe Thr Asn Tyr Tyr Met His Trp Val Lys Gln Arg Pro Gly Gln
50 55 60

Gly Leu Glu Trp Ile Gly Trp Ile Tyr Pro Gly Asn Val Asn Thr Tyr
65 70 75 80

Tyr Asn Glu Lys Phe Arg Ala Arg Pro His Leu Gln Thr Asn Pro Pro
85 90 95

Ala Gln Pro Thr Cys Ser Ser Ala Ala Pro Leu Arg Thr Leu Arg Ser
100 105 110

Ile Ser Val Gln Val Arg Arg Glu Leu Pro Leu Val Cys Leu Leu Gly
115 120 125

Pro Arg Asp Ser Gly His Cys Leu Cys Ser Gln Asn Asp Thr Pro Ile
130 135 140

Arg Leu Ser Pro Gly Pro Trp Lys Leu Gly
145 150

<210> 36

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<220>

<223> Monoclonal antibody 318 light chain variable region

<400> 36

Leu Val Asp Met Glu Ser Asp Thr Leu Leu Leu Trp Val Leu Leu Leu
1 5 10 15

Trp Val Pro Gly Ser Thr Gly Asp Ile Val Leu Thr Gln Ser Pro Ala
20 25 30

Ser Leu Ala Val Ser Leu Gly Gln Arg Ala Thr Ile Ser Tyr Arg Ala
35 40 45

Ser Lys Ser Val Ser Thr Ser Gly Tyr Ser Tyr Met His Trp Asn Gln
50 55 60

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

Leu Glu Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr
85 90 95

Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr
100 105 110

Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro
115 120 125

Ser Trp Lys
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<400> 37

Met Ala Arg Met Asn Arg Pro Ala Pro Val Glu Val Ser Tyr Lys His
1 5 10 15

Met Arg Phe Leu Ile Thr His Asn Pro Thr Asn Ala Thr Leu Ser Thr
20 25 30

Phe Ile Glu Asp Leu Lys Lys Tyr Gly Ala Thr Thr Val Val Arg Val
35 40 45

Cys Glu Val Thr Tyr Asp Lys Thr Pro Leu Glu Lys Asp Gly Ile Thr
50 55 60

Val Val Asp Trp Pro Phe Asp Asp Gly Ala Pro Pro Pro Gly Lys Val
65 70 75 80

Val Glu Asp Trp Leu Ser Leu Val Lys Ala Lys Phe Cys Glu Ala Pro
85 90 95

Gly Ser Cys Val Ala Val His Cys Val Ala Gly Leu Gly Arg Ala Pro
100 105 110

Val Leu Val Ala Leu Ala Leu Ile Glu Ser Gly Met Lys Tyr Glu Asp
115 120 125

Ala Ile Gln Phe Ile Arg Gln Lys Arg Arg Gly Ala Ile Asn Ser Lys
130 135 140

Gln Leu Thr Tyr Leu Glu Lys Tyr Arg Pro Lys Gln Arg Leu Arg Phe
145 150 155 160

Lys Asp Pro His Thr His Lys Thr Arg Cys Cys Val Met
165 170

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<400> 38

Lys Ala Lys Phe Tyr Asn
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<212> PRT
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<400> 39

His Thr His Lys Thr Arg
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