

OPA17181 Sequence Listing

<110> Dong-A University Research Foundation For Industry-Academy Cooperation
Prestige BioPharma Pte. Ltd.

<120> Antibody specifically binding to PAUF and use thereof

<130> OPA17181

<150> 10-2017-0096370

<151> 2017-07-28

<160> 38

<170> KoPatentIn 3.0

<210> 1

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> VH-CDR1 of 2H2, 20C5 and hPMab22

<400> 1

Gly Phe Asn Ile Lys Asp Tyr Tyr
1 5

<210> 2

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> VH-CDR2 of 2H2, 20C5 and hPMab22

<400> 2

Ile Asp Pro Glu Asn Gly Asn Thr
1 5

<210> 3

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> VH-CDR3 of 2H2 and hPMab22

<400> 3

Ala Arg Arg Ala Ile Thr Thr Ala Thr Ala Trp Phe Ala
1 5 10

<210> 4

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> VH-CDR3 of 2H2 and hPMab22

<400> 4

Ala Arg Arg Ala Ile Thr Thr Ala Thr Ala Trp Phe Ala Tyr
1 5 10

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<210> 5
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-CDR1 of 2H2, 20C5 and hPMab22

<400> 5
 Gln Ser Leu Leu Asn Ser Arg Thr Arg Lys Asn Tyr
 1 5 10

<210> 6
 <211> 3
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-CDR2 of 2H2, 20C5 and hPMab22

<400> 6
 Trp Ala Ser
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<210> 7
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-CDR3 of 2H2 and hPMab22

<400> 7
 Lys Gln Ser Tyr Asn Leu Tyr
 1 5

<210> 8
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR1 of 2H2

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

Leu Val Lys Leu Ser Cys Lys Ala Ser
 20 25

<210> 9
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR2 of 2H2 and 20C5

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<400> 9
Met His Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile Gly
1 5 10 15

Trp

<210> 10
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR3 of 2H2

<400> 10
Ile Tyr Asp Pro Lys Phe Gln Gly Lys Ala Ser Ile Thr Ala Asp Thr
1 5 10 15

Ser Ser Asn Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp
20 25 30

Thr Ala Val Tyr Tyr Cys
35

<210> 11
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR4 of 2H2

<400> 11
Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
1 5 10

<210> 12
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR4 of 2H2

<400> 12
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
1 5 10

<210> 13
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR1 of 2H2

<400> 13

OPA17181 Sequence Listing

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

Glu Lys Val Thr Met Ser Cys Lys Ser Ser
20 25

<210> 14
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR2 of 2H2 and 20C5

<400> 14
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
1 5 10 15

Tyr

<210> 15
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR3 of 2H2 and 20C5

<400> 15
Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly
1 5 10 15

Thr Asp Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala
20 25 30

Val Tyr Tyr Cys
35

<210> 16
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR4 of 2H2

<400> 16
Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
1 5 10

<210> 17
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> VH of 2H2

<400> 17

OPA17181 Sequence Listing

Gln Val Gln Leu Lys₅ Gln Ser Gly Ala Glu₁₀ Leu Val Arg Pro Gly₁₅ Ala
 Leu Val Lys₂₀ Leu Ser Cys Lys Ala Ser₂₅ Gly Phe Asn Ile Lys₃₀ Asp Tyr
 Tyr Met His₃₅ Trp Val Lys Gln Arg₄₀ Pro Glu Gln Gly₄₅ Leu Glu Trp Ile
 Gly Trp₅₀ Ile Asp Pro Glu Asn₅₅ Gly Asn Thr Ile Tyr₆₀ Asp Pro Lys Phe
 Gln Gly Lys Ala Ser Ile₇₀ Thr Ala Asp Thr Ser₇₅ Ser Asn Thr Ala Tyr₈₀
 Leu Gln Leu Ser Ser₈₅ Leu Thr Ser Glu Asp₉₀ Thr Ala Val Tyr Tyr₉₅ Cys
 Ala Arg Arg₁₀₀ Ala Ile Thr Thr Ala Thr₁₀₅ Ala Trp Phe Ala Tyr₁₁₀ Trp Gly
 Gln Gly Thr₁₁₅ Leu Val Thr Val Ser₁₂₀ Ala

<210> 18
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL of 2H2

<400> 18
 Asp Ile Val Met Thr₅ Gln Ser Pro Ser Ser₁₀ Leu Ala Val Ser₁₅ Ala Gly
 Glu Lys Val Thr₂₀ Met Ser Cys Lys Ser₂₅ Ser Gln Ser Leu Leu Asn Ser
 Arg Thr Arg₃₅ Lys Asn Tyr Leu Ala₄₀ Trp Tyr Gln Gln Lys₄₅ Pro Gly Gln
 Ser Pro₅₀ Lys Leu Leu Ile Tyr₅₅ Trp Ala Ser Thr Arg₆₀ Glu Ser Gly Val
 Pro Asp Arg Phe Thr Gly₇₀ Ser Gly Ser Gly Thr₇₅ Asp Phe Thr Leu Thr₈₀
 Ile Ser Ser Val Gln₈₅ Ala Glu Asp Leu Ala₉₀ Val Tyr Tyr Cys Lys₉₅ Gln
 Ser Tyr Asn₁₀₀ Leu Tyr Thr Phe Gly Ala₁₀₅ Gly Thr Lys Leu Glu₁₁₀ Leu Lys

<210> 19
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR1 of hPMAb22

OPA17181 Sequence Listing

<400> 19
 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
 20 25

<210> 20
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR2 of hPMAb22

<400> 20
 Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met Gly
 1 5 10 15
 Trp

<210> 21
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR3 of hPMAb22

<400> 21
 Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Arg Asp Thr
 1 5 10 15
 Ser Ile Ser Thr Ala Tyr Met Glu Leu Ser Arg Leu Arg Ser Asp Asp
 20 25 30
 Thr Ala Val Tyr Tyr Cys
 35

<210> 22
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR4 of hPMAb22

<400> 22
 Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 1 5 10

<210> 23
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VH-FR4 of hPMAb22

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<400> 23
 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 1 5 10

<210> 24
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-FR1 of hPMab22

<400> 24
 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
 20 25

<210> 25
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-FR2 of hPMab22

<400> 25
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile
 1 5 10 15
 Tyr

<210> 26
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-FR3 of hPMab22

<400> 26
 Thr Arg Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly
 1 5 10 15
 Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala
 20 25 30
 Val Tyr Tyr Cys
 35

<210> 27
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL-FR4 of hPMab22

OPA17181 Sequence Listing

<400> 27
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
1 5 10

<210> 28
<211> 121
<212> PRT
<213> Artificial Sequence

<220>
<223> VH of hPMab22

<400> 28
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 Phe Asn Ile Lys Asp Tyr
20 25 30
Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Trp Ile Asp Pro Glu Asn Gly Asn Thr Asn Tyr Ala Gln Lys Phe
50 55 60
Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80
Met Glu Leu Ser Arg Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Arg Ala Ile Thr Thr Ala Thr Ala Trp Phe Ala Tyr Trp Gly
100 105 110
Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 29
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> VL of hPMab22

<400> 29
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 Leu Asn Ser
20 25 30
Arg Thr Arg Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45
Pro Pro Lys Leu Leu Ile Tyr Trp 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 Lys Gln
85 90 95

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

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

<220>
<223> VH-CDR3 of 20C5

<400> 30
Ala Arg Arg Gly Trp Leu Pro Ala Trp Phe Ala Tyr
1 5 10

<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-CDR3 of 20C5

<400> 31
Lys Gln Ser Tyr Asn Leu Tyr Thr
1 5

<210> 32
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR1 of 20C5

<400> 32
Gln Val Gln Leu Lys Glu Ser Gly Ala Glu Leu Val Arg Pro Gly Ala
1 5 10 15

Leu Val Lys Leu Ser Cys Lys Ala Ser
20 25

<210> 33
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR3 of 20C5

<400> 33
Ile Tyr Asp Pro Lys Phe Gln Gly Lys Ala Ser Leu Thr Ala Asp Thr
1 5 10 15

Ser Ser Asn Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp
20 25 30

Thr Ala Val Tyr Tyr Cys

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<210> 34
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> VH-FR4 of 20C5

<400> 34
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
1 5 10

<210> 35
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR1 of 20C5

<400> 35
Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1 5 10 15
Glu Lys Val Thr Leu Ser Cys Lys Ser Ser
20 25

<210> 36
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> VL-FR4 of 20C5

<400> 36
Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 37
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> VH of 20C5

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

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

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

Gly Trp Ile Asp Pro Glu His Gly Asn Thr Ile Tyr Asp Pro Lys Phe
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50 55 60
 Gln Gly Lys Ala Ser Leu Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
 65 70 75 80
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Arg Gly Trp Leu Pro Ala Trp Phe Ala Tyr Trp Gly Gln Gly
 100 105 110
 Thr Leu Val Thr Val Ser Ala
 115

<210> 38
 <211> 112
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> VL of 20C5

<400> 38
 Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
 1 5 10 15
 Glu Lys Val Thr Leu Ser Cys Lys Ser Ser Gln Ser Leu Leu Asn Ser
 20 25 30
 Arg Thr Arg Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45
 Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
 50 55 60
 Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
 65 70 75 80
 Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Lys Gln
 85 90 95
 Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 100 105 110