

SEQUENCE LISTING

<110> National Cancer Center Japan
Rin Institute Inc.

<120> Antibody that binds to fibrin and composition comprising the same

<130> PR15-9007WO

<150> JP2020-061975

<151> 2020-03-31

<160> 18

<170> PatentIn version 3.5

<210> 1

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> HCDR1 of humanized 1101 clone

<400> 1

Ser Tyr Trp Met His

1 5

<210> 2

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> HCDR2 of humanized 1101 clone

<400> 2

Ala Ile Tyr Pro Gly Asn Ser Asp Thr Arg Tyr Ser Pro Ser Phe Gln

1 5 10 15

Gly

<210> 3
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> HCDR3 of humanized 1101 clone

<400> 3

Lys Ala His Tyr Gly Asn Tyr Gly Phe Ala Tyr
1 5 10

<210> 4
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> LCDR1 of humanized 1101 clone

<400> 4

Arg Ala Ser Gln His Ile Asn Asn Trp Leu Ala
1 5 10

<210> 5
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> LCDR2 of humanized 1101 clone

<400> 5

Gly Ala Thr Ser Leu Gln Ser
1 5

<210> 6
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> LCDR3 of humanized 1101 clone

<400> 6

Gln Gln Tyr Trp Ser Thr Pro Leu Thr
1 5

<210> 7
<211> 242
<212> PRT
<213> Artificial Sequence

<220>
<223> Fab region of heavy chain of humanized 1101 clone

<400> 7

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

Val Cys Ala Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
20 25 30

Pro Gly Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Tyr Ser Phe
35 40 45

Thr Ser Tyr Trp Met His Trp Val Arg Gln Met Pro Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Arg Tyr Ser
65 70 75 80

Pro Ser Phe Gln Gly Gln Val Thr Ile Ser Ala Asp Lys Ser Ile Ser

85 90 95

Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp Thr Ala Met
100 105 110

Tyr Tyr Cys Thr Arg Lys Ala His Tyr Gly Asn Tyr Gly 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 Ser Ser Lys Ser Thr Ser Gly Gly
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 Gln Thr Tyr Ile Cys Asn Val
210 215 220

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

Ser Cys

<210> 8
<211> 236

<212> PRT

<213> Artificial Sequence

<220>

<223> Light chain of humanized 1101 clone

<400> 8

Met Asp Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp
1 5 10 15

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

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

Gln His Ile Asn Asn Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
50 55 60

Ala Pro Lys Leu Leu Ile Ser Gly Ala Thr Ser Leu Gln Ser Gly Val
65 70 75 80

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

Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
100 105 110

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

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

Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn

145 150 155 160

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

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

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

Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser
 210 215 220

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

<210> 9

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> HCDR1 of humanized 99 antibody

<400> 9

Asn Tyr Gly Met Asn

1 5

<210> 10

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> HCDR2 of humanized 99 antibody

<400> 10

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

Gly

<210> 11

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> HCDR3 of humanized 99 antibody

<400> 11

Leu Leu Asp Tyr
1

<210> 12

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> LCDR1 of humanized 99 antibody

<400> 12

Arg Ala Ser Gln Ser Val Leu Tyr Ser Ser Asn Gln Lys Asn Tyr Leu
1 5 10 15

Ala

<210> 13

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> LCDR2 of humanized 99 antibody

<400> 13

Trp Ala Ser Ser Leu Gln Ser
1 5

<210> 14

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> LCDR3 of humanized 99 antibody

<400> 14

His Gln Tyr Leu Ser Ser Tyr Thr
1 5

<210> 15

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Heavy chain variable region of humanized 99 antibody

<400> 15

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

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

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

Gln Gly Arg Val Thr Met Thr Arg Asp Lys Ser Ser 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

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

Ser

<210> 16
<211> 113
<212> PRT
<213> Artificial Sequence

<220>
<223> Light chain variable region of humanized 99 antibody

<400> 16

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 Arg Ala Ser Gln Ser Val Leu Tyr Ser
20 25 30

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

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ser Leu Gln Ser Gly Val

50 55 60

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

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

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

Arg

<210> 17
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Fibrinogen Bbeta 231-246

<400> 17

Cys Asn Ile Pro Val Val Ser Gly Lys Glu Cys Glu Glu Ile Ile Arg
1 5 10 15

<210> 18
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Fibrinogen gamma 232-246

<400> 18

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