

SEQUENCE LISTING

<110> Fusion Pharmaceuticals, Inc.

<120> RADIOIMMUNOCONJUGATES AND DNA DAMAGE AND REPAIR INHIBITOR
COMBINATION THERAPY

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<151> 2018-12-03

<160> 24

<170> PatentIn version 3.5

<210> 1

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L1 of AVE1642

<400> 1

Arg	Ser	Ser	Gln	Ser	Ile	Val	His	Ser	Asn	Val	Asn	Thr	Tyr	Leu	Glu
1				5					10					15	

<210> 2

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L2 of AVE1642

<400> 2

Lys	Val	Ser	Asn	Arg	Phe	Ser
1				5		

<210> 3

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR-L3 of AVE1642

<400> 3

Phe Gln Gly Ser His Val Pro Pro Thr
1 5

<210> 4

<211> 150

<212> PRT

<213> Artificial Sequence

<220>

<223> Light chain variable region of AVE1642

<400> 4

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

Asp Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
20 25 30

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

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

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

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

Ser His Val Pro Pro Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu

115

120

125

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
130 135 140

Tyr Pro Arg Glu Ala Lys
145 150

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

<220>
<223> CDR-H1 of AVE1642

<400> 5

Ser Tyr Trp Met His
1 5

<210> 6
<211> 18
<212> PRT
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<220>
<223> CDR-H2 of AVE1642

<400> 6

Gly Glu Ile Asn Pro Ser Asn Gly Arg Thr Asn Tyr Asn Gln Lys Phe
1 5 10 15

Gln Gly

<210> 7
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H3 for AVE1642

<400> 7

Gly Arg Pro Asp Tyr Tyr Gly Ser Ser Lys Trp Tyr Phe Asp Val
1 5 10 15

<210> 8

<211> 150

<212> PRT

<213> Artificial Sequence

<220>

<223> Heavy chain variable region of AVE1642

<400> 8

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

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

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

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

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

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

Ala Arg Gly Arg Pro Asp Tyr Tyr Gly Ser Ser Lys Trp Tyr Phe Asp
100 105 110

Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Ala Ser Thr Lys
115 120 125

Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly

130

135

140

Gly Thr Ala Ala Leu Gly
145 150

<210> 9
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Epitope for endosialin antibody

<400> 9

Ser Arg Asp His Gln Ile Pro Val Ile Ala Ala Asn
1 5 10

<210> 10
<211> 5
<212> PRT
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<220>
<223> CDR-H1 for endosialin antibody

<400> 10

Gly Tyr Gly Val Asn
1 5

<210> 11
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-H1 for endosialin antibody

<400> 11

Gly Phe Ser Leu Thr Gly Tyr Gly Val Asn
1 5 10

<210> 12

<211> 16
<212> PRT
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<220>
<223> CDR-H2 for endosialin antibody

<400> 12

Met	Ile	Trp	Val	Asp	Gly	Ser	Thr	Asp	Tyr	Asn	Ser	Ala	Leu	Lys	Ser
1				5					10					15	

<210> 13
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<212> PRT
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<220>
<223> CDR-H3 for endosialin antibody

<400> 13

Gly	Gly	Tyr	Gly	Ala	Met	Asp	Tyr
1				5			

<210> 14
<211> 11
<212> PRT
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<220>
<223> CDR-L1 for endosialin antibody

<400> 14

His	Ala	Ser	Gln	Asn	Ile	Asn	Val	Trp	Leu	Thr
1				5					10	

<210> 15
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-L2 for endosialin antibody

<400> 15

Lys Ala Ser Asn Leu His Thr
1 5

<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR-L3 for endosialin antibody

<400> 16

Gln Gln Gly Gln Ser Tyr Pro Trp Thr
1 5

<210> 17
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized VH1 for endosialin antibody

<400> 17

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

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

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

Gly Met Ile Trp Val Asp Gly Ser Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

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

Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr Tyr Cys Ala

85

90

95

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

Thr Val Ser Ser
 115

<210> 18

<211> 116

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized VH2 for endosialin antibody

<400> 18

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

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

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

Gly Met Ile Trp Val Asp Gly Ser Thr Asp Tyr Asn Ser Ala Leu Lys
 50 55 60

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

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

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

Thr Val Ser Ser

115

<210> 19
<211> 116
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized VH3 for endosialin antibody

<400> 19

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

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

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

Gly Met Ile Trp Val Asp Gly Ser Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

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

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

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

Thr Val Ser Ser
115

<210> 20
<211> 116
<212> PRT
<213> Artificial Sequence

<220>

<223> Humanized VH4 for endosialin antibody

<400> 20

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

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

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

Gly Met Ile Trp Val Asp Gly Ser Thr Asp Tyr Asn Ser Ala Leu Lys
50 55 60

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

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

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

Thr Val Ser Ser
115

<210> 21

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized VL1 for endosialin antibody

<400> 21

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

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

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

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

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

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

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

<210> 22

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized VL2 for endosialin antibody

<400> 22

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

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

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

Tyr Lys Ala Ser Asn Leu His 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 Pro
65 70 75 80

Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Gln Ser Tyr Pro Trp
85 90 95

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

<210> 23
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized VL3 for endosialin antibody

<400> 23

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 His Ala Ser Gln Asn Ile Asn Val Trp
20 25 30

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

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

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

Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Gly Gln Ser Tyr Pro Trp
85 90 95

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

<210> 24
<211> 107
<212> PRT
<213> Artificial Sequence

<220>
<223> Humanized VL4 for endosialin antibody

<400> 24

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 His Ala Ser Gln Asn Ile Asn Val Trp
20 25 30

Leu Thr Trp Tyr Gln Gln Lys Pro Glu Lys Ala Pro Lys Ser Leu Ile
35 40 45

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

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

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

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