

<110> SAMSUNG LIFE PUBLIC WELFARE FOUNDATION
 <120> Antibodies Against Epidermal Growth Factor Receptor Variant III
 and Uses Thereof
 <130> PP-B1849
 <150> KR 10-2016-0017118
 <151> 2016-02-15
 <160> 20
 <170> KopatentIn 2.0
 <210> 1
 <211> 14
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> EGFRVIII epitope

<400> 1
 Leu Glu Glu Lys Lys Gly Asn Tyr Val Val Thr Asp His Cys
 1 5 10

<210> 2
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> CDRH1 of B4A3

<400> 2
 Gly Phe Thr Phe Ser Asn Tyr Tyr
 1 5

<210> 3
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> CDRH2 of B4A3

<400> 3
 Thr Ser Pro Asn Gly Gly Ser Lys
 1 5

<210> 4
 <211> 14
 <212> PRT
 <213> Artificial Sequence
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 <223> CDRH3 of B4A3

<400> 4
 Ala Lys Gly Arg Arg Lys Leu Arg Ala Thr Arg Phe Asp Tyr
 1 5 10

<210> 5
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDRL1 of B4A3

<400> 5
 Ser Ser Asn Ile Gly Asn Asn Tyr
 1 5

<210> 6
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 <212> PRT
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<220>
 <223> CDRL2 of B4A3

<400> 6
 Ser Asp Ser
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<210> 7
 <211> 11
 <212> PRT
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<220>
 <223> CDRL3 of B4A3

<400> 7
 Ala Thr Trp Asp Ala Ser Leu Ser Ala Tyr Val
 1 5 10

<210> 8
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 <212> PRT
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<220>
 <223> Hv FR1 of B4A3

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

Ser Leu Arg Leu Ser Cys Ala Ala Ser
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<210> 9
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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Hv FR2 of B4A3

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

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

<220>
<223> HV FR3 of B4A3

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

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<220>
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<400> 11
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

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<220>
<223> LV FR1 of B4A3

<400> 12
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15
Arg Val Thr Ile Ser Cys Thr Gly Ser
20 25

<210> 13
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> LV FR2 of B4A3

<400> 13
Val Ser Trp Tyr Gln Gln His Pro Gly Thr Ala Pro Lys Leu Leu Ile
1 5 10 15

Tyr

<210> 14
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> LV FR3 of B4A3

<400> 14
Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly
1 5 10 15

Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala
20 25 30

Asp Tyr Tyr Cys
35

<210> 15
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> LV FR4 of B4A3

<400> 15
Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
1 5 10

<210> 16
<211> 121
<212> PRT
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<220>
<223> Hv of B4A3

<400> 16
Glu Val Gln Leu Leu 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 Phe Thr Phe Ser Asn Tyr
20 25 30

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

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

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

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Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Lys Gly Arg Arg Lys Leu Arg Ala Thr Arg Phe Asp Tyr Trp Gly
 100 105 110
 Gln Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 17
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 <212> PRT
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<220>
 <223> LV of B4A3

<400> 17
 Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
 1 5 10 15
 Arg Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile Gly Asn Asn
 20 25 30
 Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Thr Ala Pro Lys Leu Leu
 35 40 45
 Ile Tyr Ser Asp Ser Asn Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
 50 55 60
 Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg
 65 70 75 80
 Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Thr Trp Asp Ala Ser Leu
 85 90 95
 Ser Ala Tyr Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
 100 105 110

<210> 18
 <211> 363
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Hv of B4A3

<400> 18
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 tcctgtgcag cctctggatt caccttttagc aattattata tgagctgggt ccgccaggct 120
 ccaggggaagg ggctggagtg ggtctcaggg acctctccta atggtggtag taaatattac 180
 gctgattctg taaaaggctg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaataa acagcctgag agccgaggac acggccgtgt attactgtgc gaaaggctcg 300
 cgtaagctgc gggctactcg gttcgactac tggggccagg gtacactggc caccgtgagc 360
 tca 363

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<210> 19
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> LV of B4A3

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 tcttgtagctg gctcttcacg taatattggc aataattatg tctcctggta ccagcagcac 120
 ccaggaacgg cccccaact cctcatctat tctgatagta atcggccaaag cggggctccct 180
 gaccgattct ctgggtccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
 tccgaggatg aggctgatta ttactgtgct acttgggatg ctacgctgag tgcttatgtc 300
 ttcggcggag gcaccaagct tacggctccta 330

<210> 20
 <211> 615
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Recombinant EGFR EGFRVIII

<400> 20
 Met Arg Pro Ser Gly Thr Ala Gly Ala Ala Leu Leu Ala Leu Leu Ala
 1 5 10 15
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 20 25 30
 Val Val Thr Asp His Gly Ser Cys Val Arg Ala Cys Gly Ala Asp Ser
 35 40 45
 Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Lys Lys Cys Glu Gly
 50 55 60
 Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp
 65 70 75 80
 Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys Asn Cys Thr
 85 90 95
 Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe Arg Gly Asp
 100 105 110
 Ser Phe Thr His Thr Pro Pro Leu Asp Pro Gln Glu Leu Asp Ile Leu
 115 120 125
 Lys Thr Val Lys Glu Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro
 130 135 140
 Glu Asn Arg Thr Asp Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg
 145 150 155 160
 Gly Arg Thr Lys Gln His Gly Gln Phe Ser Leu Ala Val Val Ser Leu
 165 170 175
 Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly
 180 185 190

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Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala Asn Thr Ile
 195 200 205
 Asn Trp Lys Lys Leu Phe Gly Thr Ser Gly Gln Lys Thr Lys Ile Ile
 210 215 220
 Ser Asn Arg Gly Glu Asn Ser Cys Lys Ala Thr Gly Gln Val Cys His
 225 230 235 240
 Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys
 245 250 255
 Val Ser Cys Arg Asn Val Ser Arg Gly Arg Glu Cys Val Asp Lys Cys
 260 265 270
 Lys Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys
 275 280 285
 Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys
 290 295 300
 Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp
 305 310 315 320
 Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met Gly Glu Asn
 325 330 335
 Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val Cys His Leu
 340 345 350
 Cys His Pro Asn Cys Thr Tyr Gly Cys Thr Gly Pro Gly Leu Glu Gly
 355 360 365
 Cys Pro Thr Asn Gly Pro Lys Ile Pro Ser Ile Glu Gly Arg Met Asp
 370 375 380
 Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
 385 390 395 400
 Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 405 410 415
 Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 420 425 430
 Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 435 440 445
 Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 450 455 460
 Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 465 470 475 480
 Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 485 490 495
 Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 500 505 510
 Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys
 515 520 525
 Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 530 535 540
 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys

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