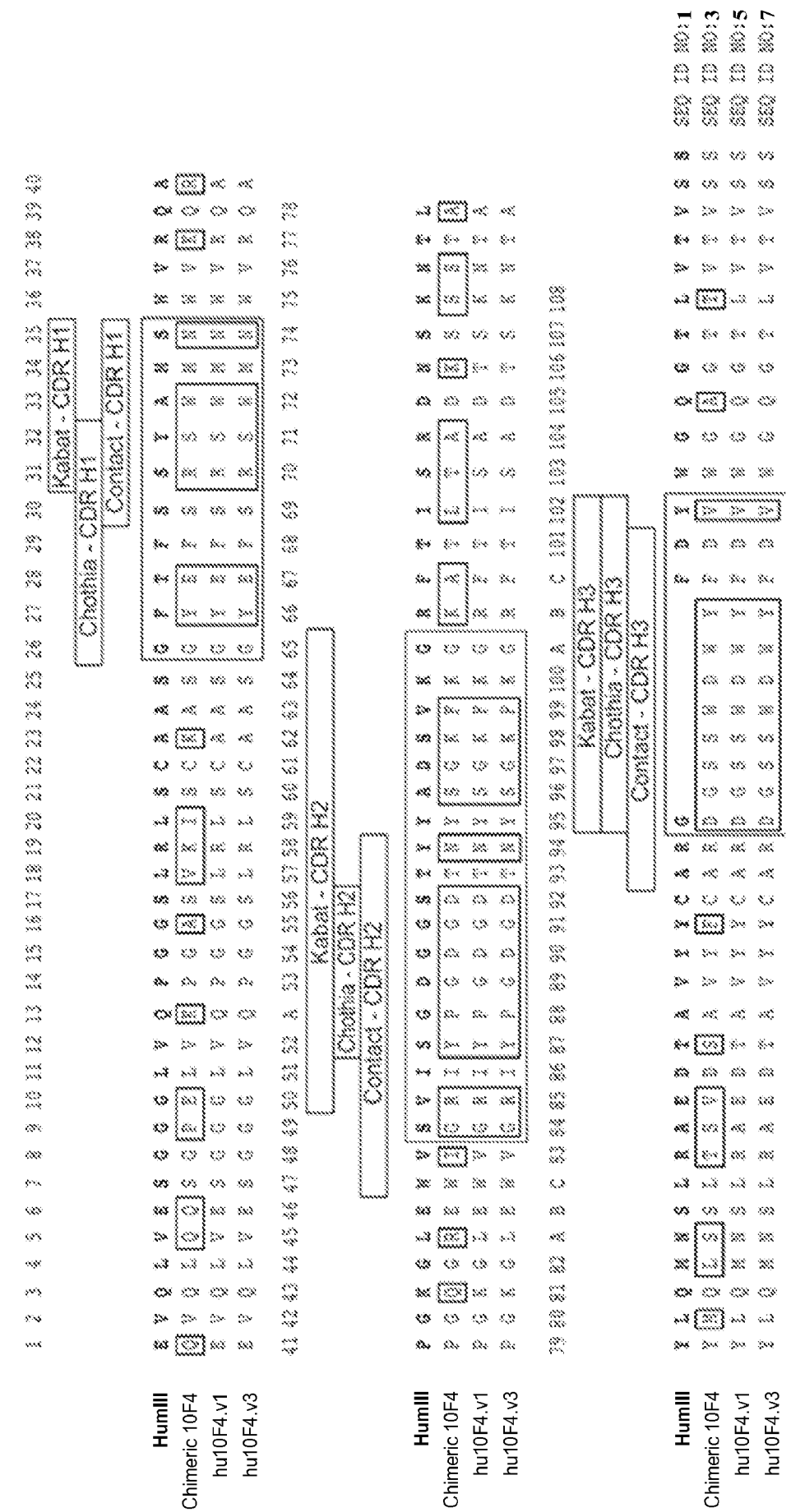

Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
HumIII
Chimeric 10F4
hu10F4.v1
hu10F4.v3
SEQ ID NO:1
SEQ ID NO:3
SEQ ID NO:5
SEQ ID NO:7

FIG. 1A

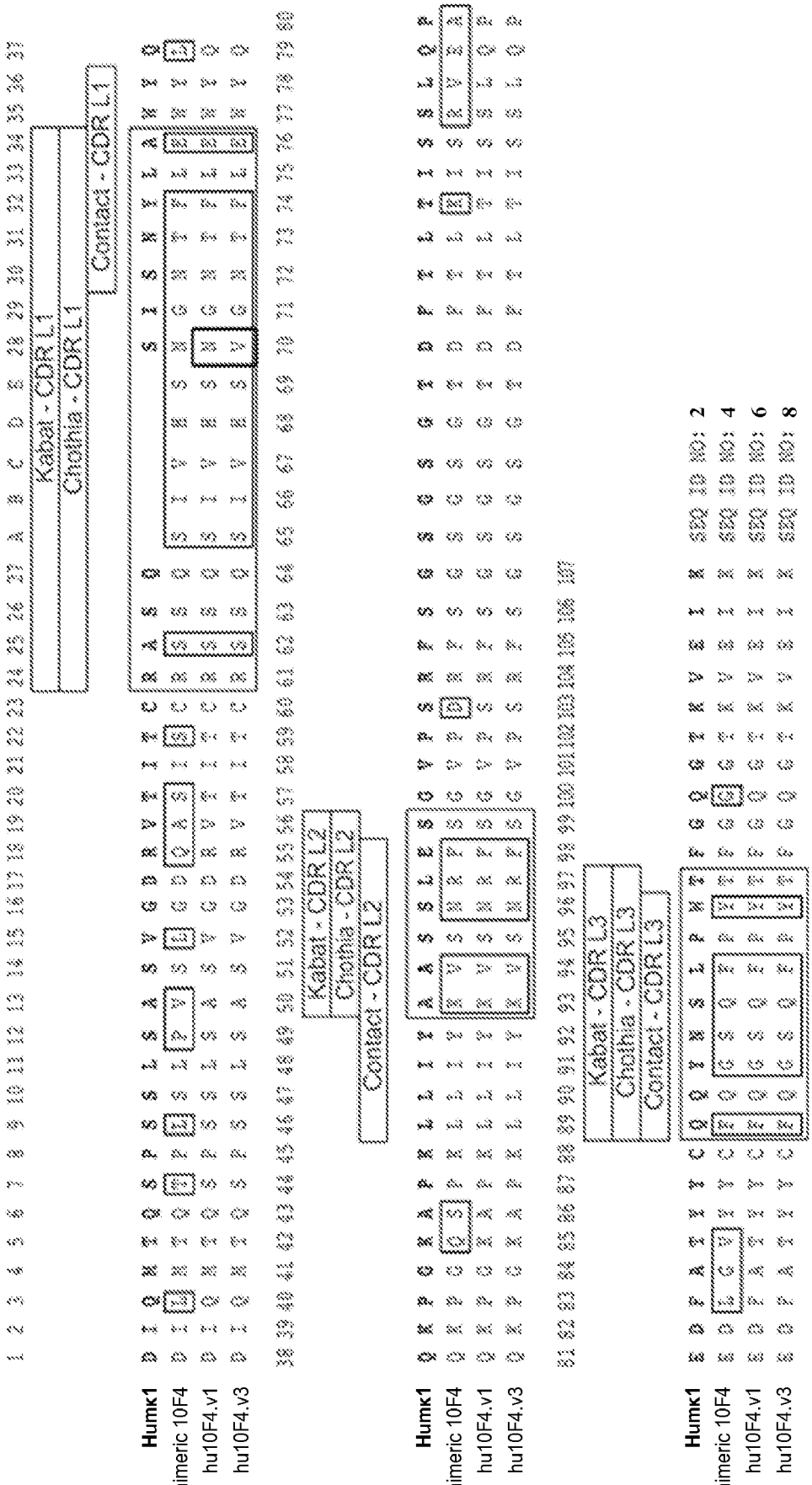

Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
Humκ1
Chimeric 10F4
hu10F4.v1
hu10F4.v3
SEQ ID NO: 2
SEQ ID NO: 4
SEQ ID NO: 6
SEQ ID NO: 8

FIG. 1B

Anti-CD22 hu10F4v3 Light Chain

DIQMTQSPSSLSASVGDRVTITCRSSQSIVHSVGNTFLEWYQQKPGKAPKLLI
YKVSNRFSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCFQGSQFPYTFGQG
TKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNAL
QSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTK
SFNRGEC **SEQ ID NO: 23**

Anti-CD22 hu10F4v3 Heavy Chain

EVQLVESGGGLVQPGGSLRLSCAASGYEFSRSWMNWVRQAPGKGLEWVGRIYP
GDGDTNYSGKFKGRFTISADTSKNTAYLQMNSLRAEDTAVYYCARDGSSWDWY
FDVWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTV
SWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNT
KVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN
GKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCL
VKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGN
VFSCSVMHEALHNHYTQKSLSLSPGK **SEQ ID NO: 24**

FIG. 2

Anti-CD22 V205C h10F4v3 Cysteine Engineered Light Chain

DIQMTQSPSSLSASVGDRVTITCRSSQSIVHSVGNTFLEWYQQKPGKAPKLLI
YKVSNRFSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCFQGSQFPYTFGQG
TKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNAL
QSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSP**C**TK
SFNRGEC **SEQ ID NO: 25**

Anti-CD22 A118C h10F4v3 Cysteine Engineered Heavy Chain

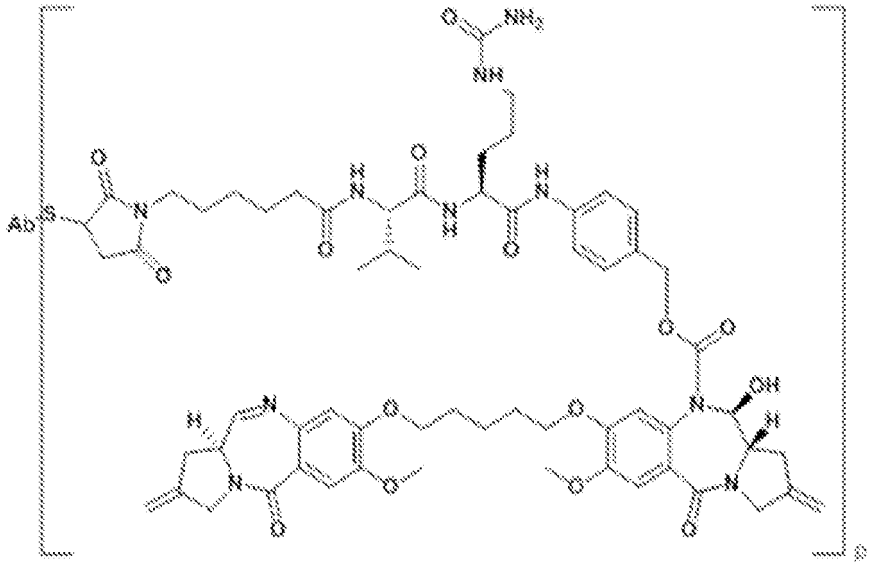
EVQLVESGGGLVQPGGSLRLSCAASGYEFSRSWMNWVRQAPGKGLEWVGRIYP
GDGDTNYSGKFKGRFTISADTSKNTAYLQMNSLRAEDTAVYYCARDGSSWDWY
FDVWGQGTLVTVSS**C**STKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTV
SWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNT
KVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN
GKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCL
VKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGN
VFSCSVMHEALHNHYTQKSLSLSPGK **SEQ ID NO: 26**

Anti-CD22 S400C h10F4v3 Cysteine Engineered Fc Region

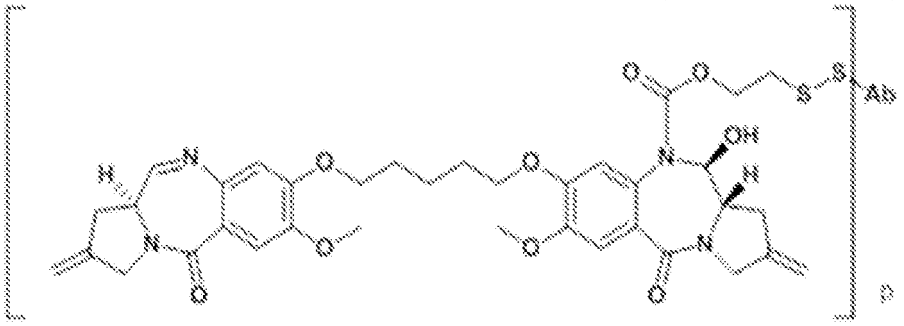
EVQLVESGGGLVQPGGSLRLSCAASGYEFSRSWMNWVRQAPGKGLEWVGRIYP
GDGDTNYSGKFKGRFTISADTSKNTAYLQMNSLRAEDTAVYYCARDGSSWDWY
FDVWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTV
SWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNT
KVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN
GKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCL
VKGFYPSDIAVEWESNGQPENNYKTTPPVLD**C**DGSFFLYSKLTVDKSRWQQGN
VFSCSVMHEALHNHYTQKSLSLSPGK **SEQ ID NO: 27**

FIG. 3

A Thio Hu anti-CD22 10F4v3 HC A118C-MC-val-cit-PAB-PBD ("10F4v3-PBD")



B Thio Hu anti-CD22 10F4v3 HC A118C-disulfide-PBD ("10F4v3-SS-PBD")



C Thio Hu anti-CD22 10F4v3 HC A118C-disulfide methyl-PBD ("10F4v3-SSMe-PBD")

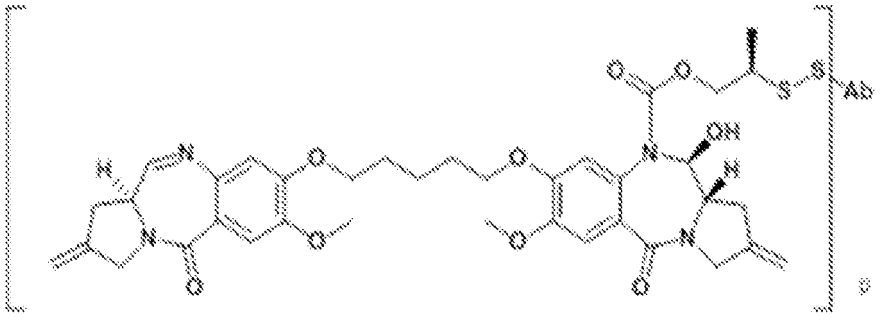


FIG. 4

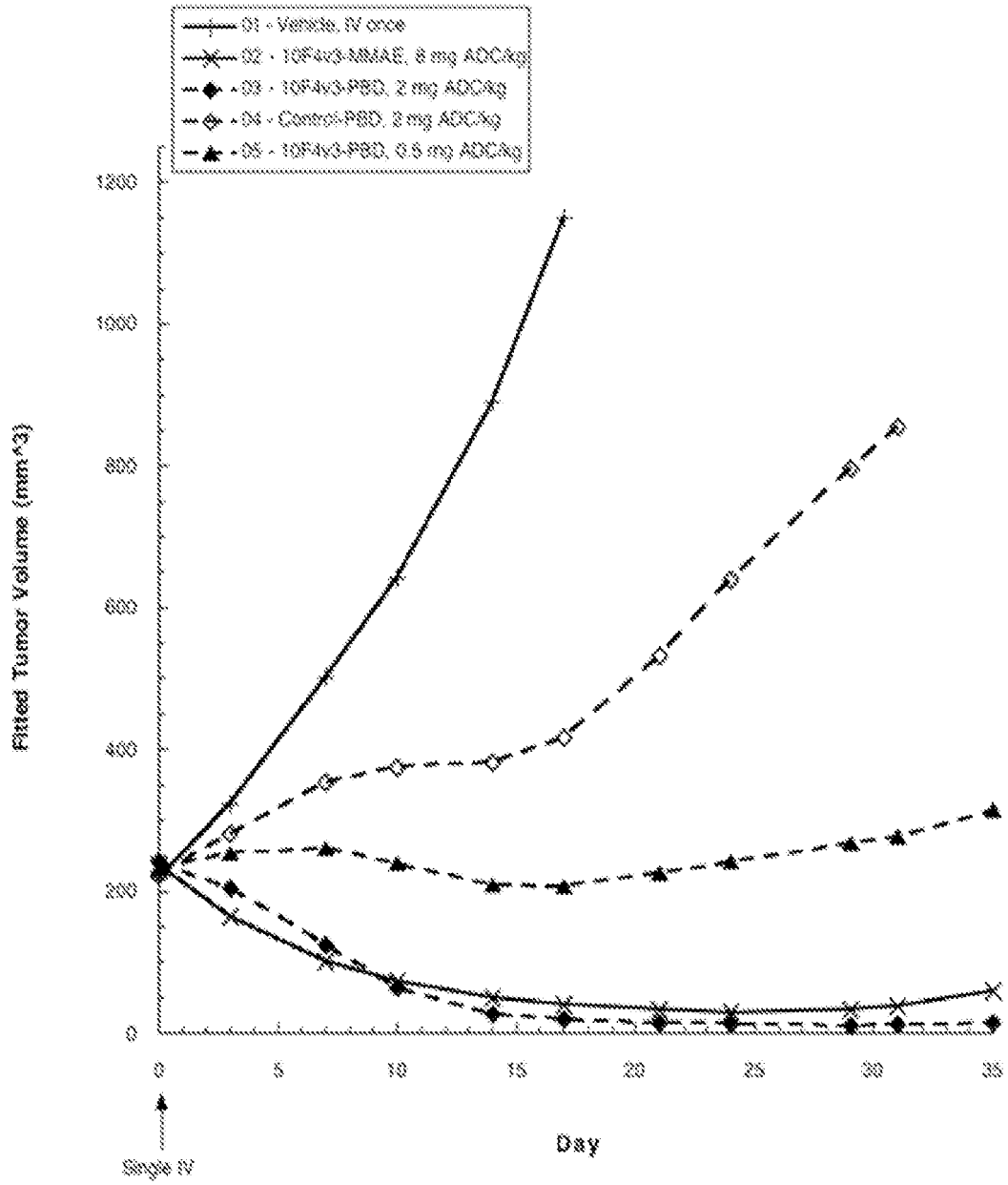

01 - Vehicle, IV once
02 - 10F4v3-MMAE, 8 mg ADC/kg
03 - 10F4v3-PBD, 2 mg ADC/kg
04 - Control-PBD, 2 mg ADC/kg
05 - 10F4v3-PBD, 0.5 mg ADC/kg
Fitted Tumor Volume (mm^3)
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
35
Day
Single IV

FIG. 5

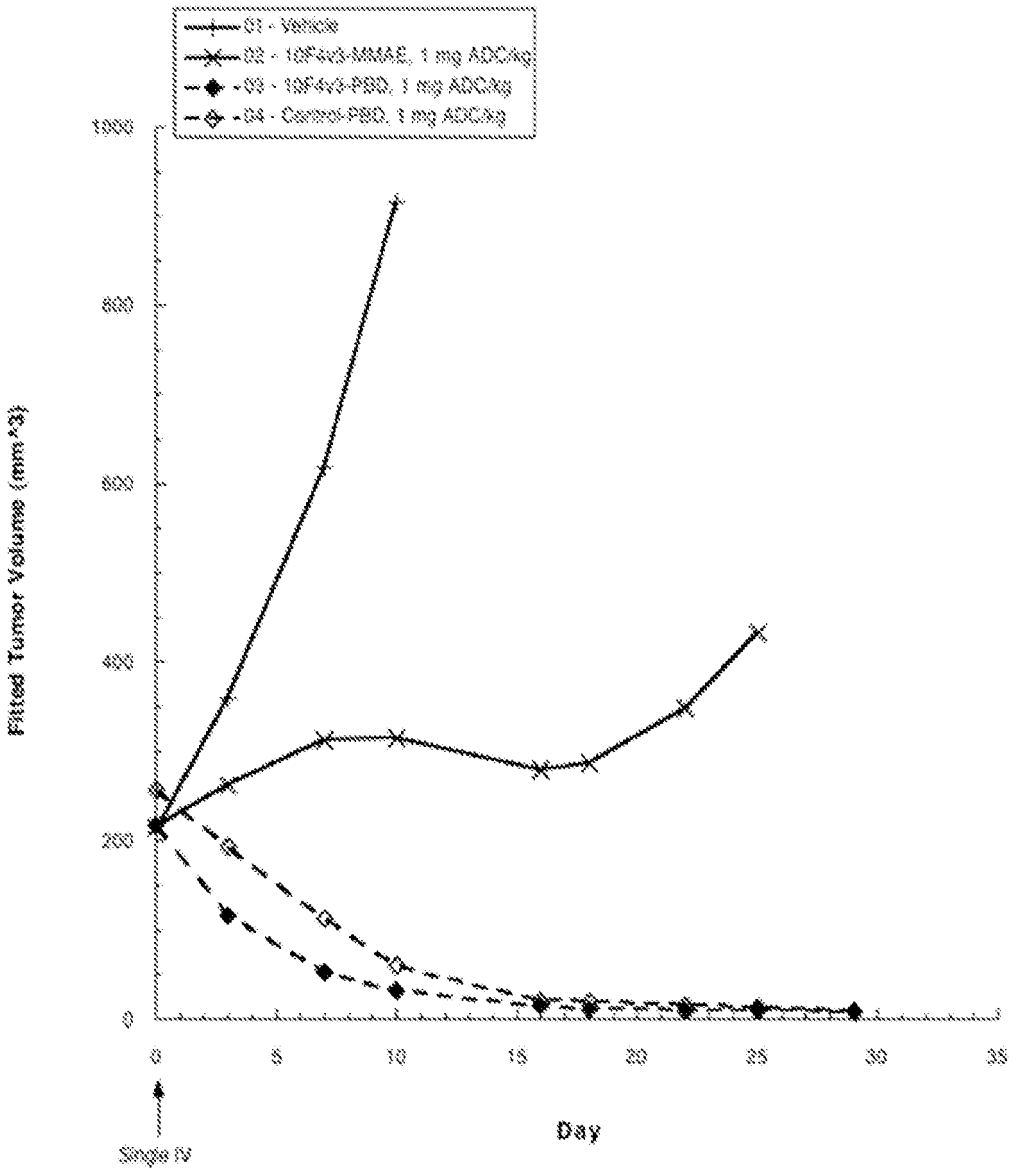

01 - Vehicle
02 - 10F4v3-MMAE, 1 mg ADC/kg
03 - 10F4v3-PBD, 1 mg ADC/kg
04 - Control-PBD, 1 mg ADC/kg
Fitted Tumor Volume (mm^3)
1000
800
600
400
200
0
0
5
10
15
20
25
30
35
Day
Single IV

FIG. 6

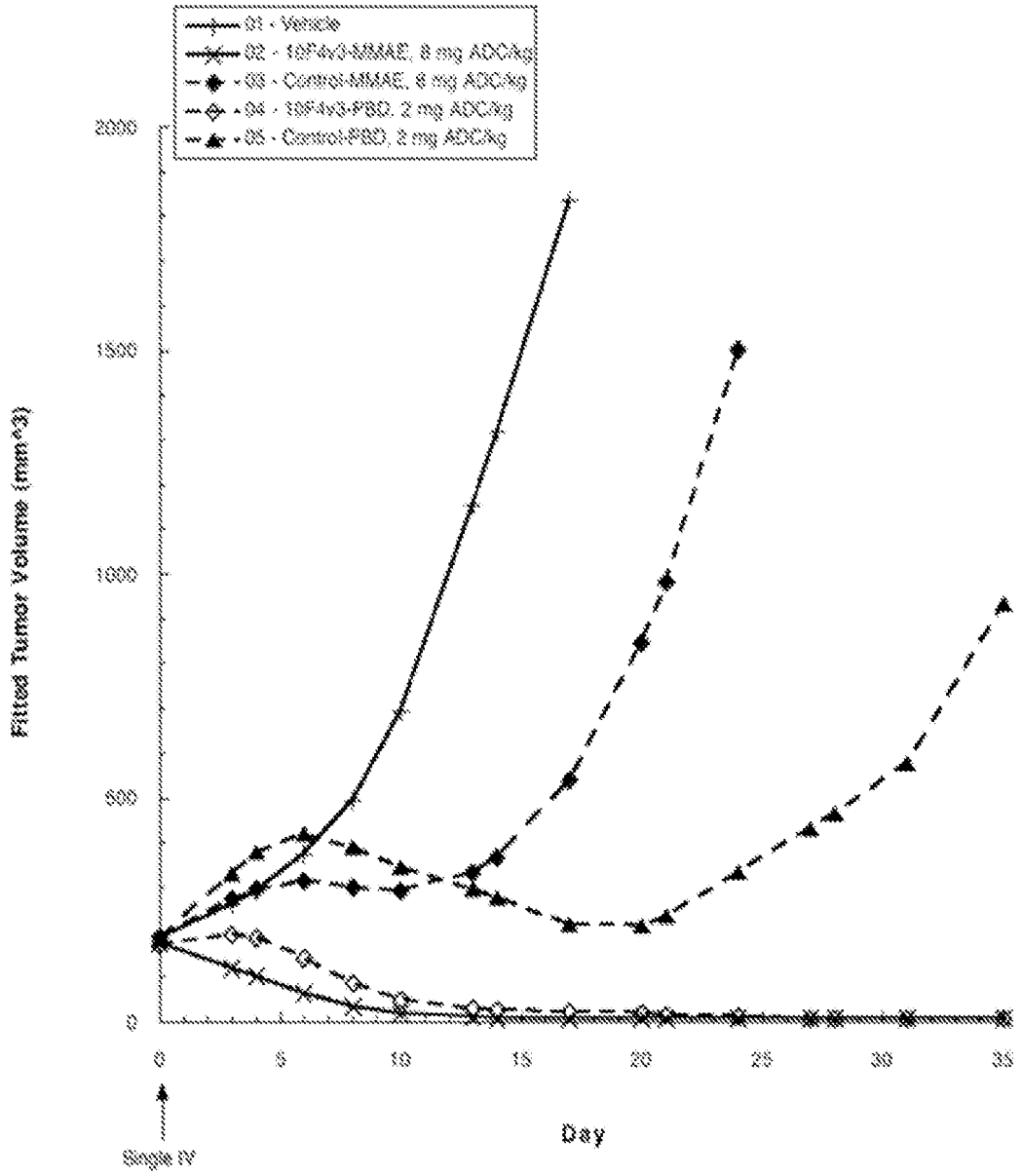

01 - Vehicle
02 - 10F4v3-MMAE, 8 mg ADC/kg
03 - Control-MMAE, 8 mg ADC/kg
04 - 10F4v3-PBD, 2 mg ADC/kg
05 - Control-PBD, 2 mg ADC/kg
Fitted Tumor Volume (mm^3)
2000
1500
1000
500
0
0
5
10
15
20
25
30
35
Day
Single IV

FIG. 7

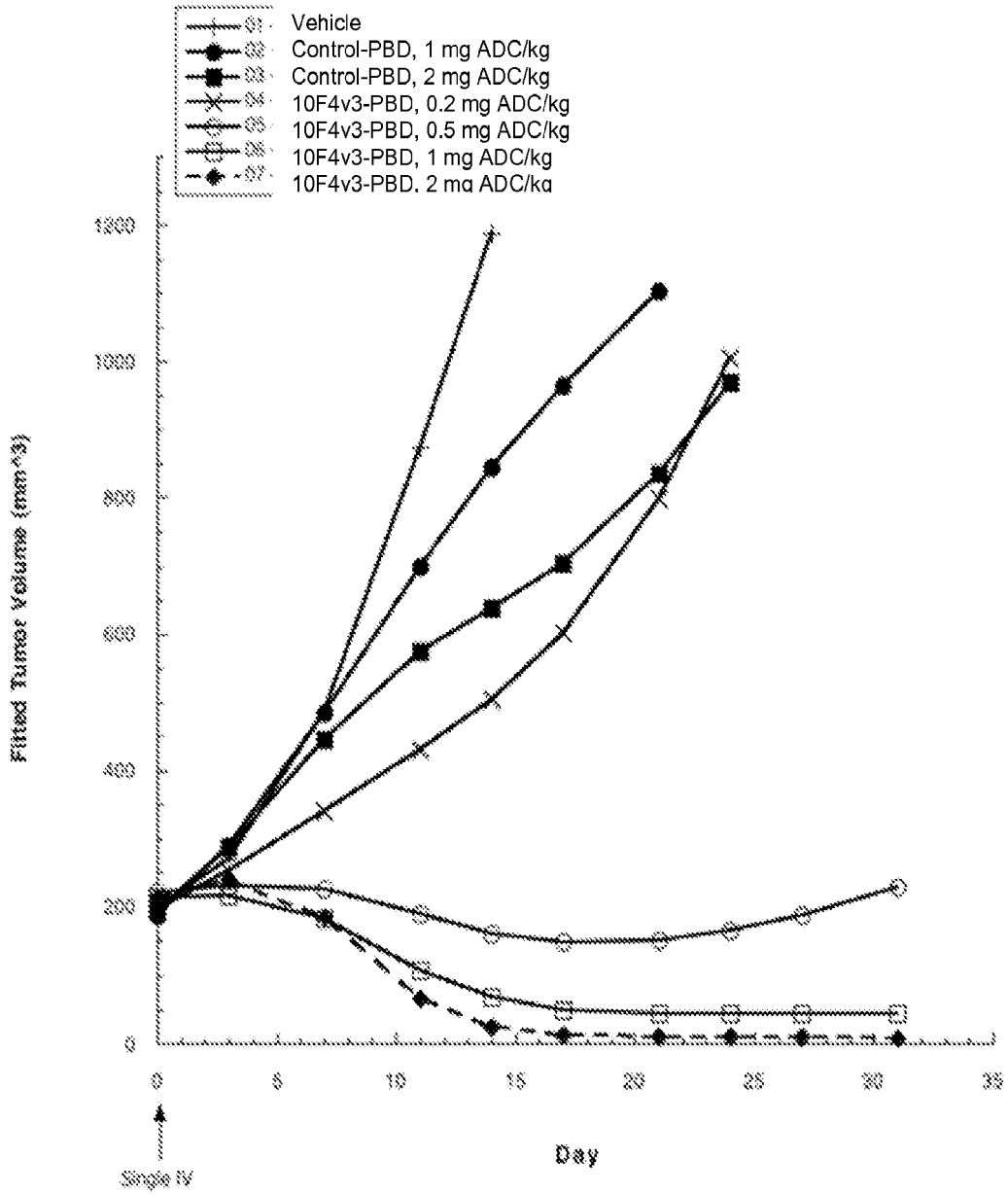

01 Vehicle
02 Control-PBD, 1 mg ADC/kg
03 Control-PBD, 2 mg ADC/kg
04 10F4v3-PBD, 0.2 mg ADC/kg
05 10F4v3-PBD, 0.5 mg ADC/kg
06 10F4v3-PBD, 1 mg ADC/kg
07 10F4v3-PBD, 2 mg ADC/kg
Fitted Tumor Volume (mm^3)
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
35
Day
Single IV

FIG. 8

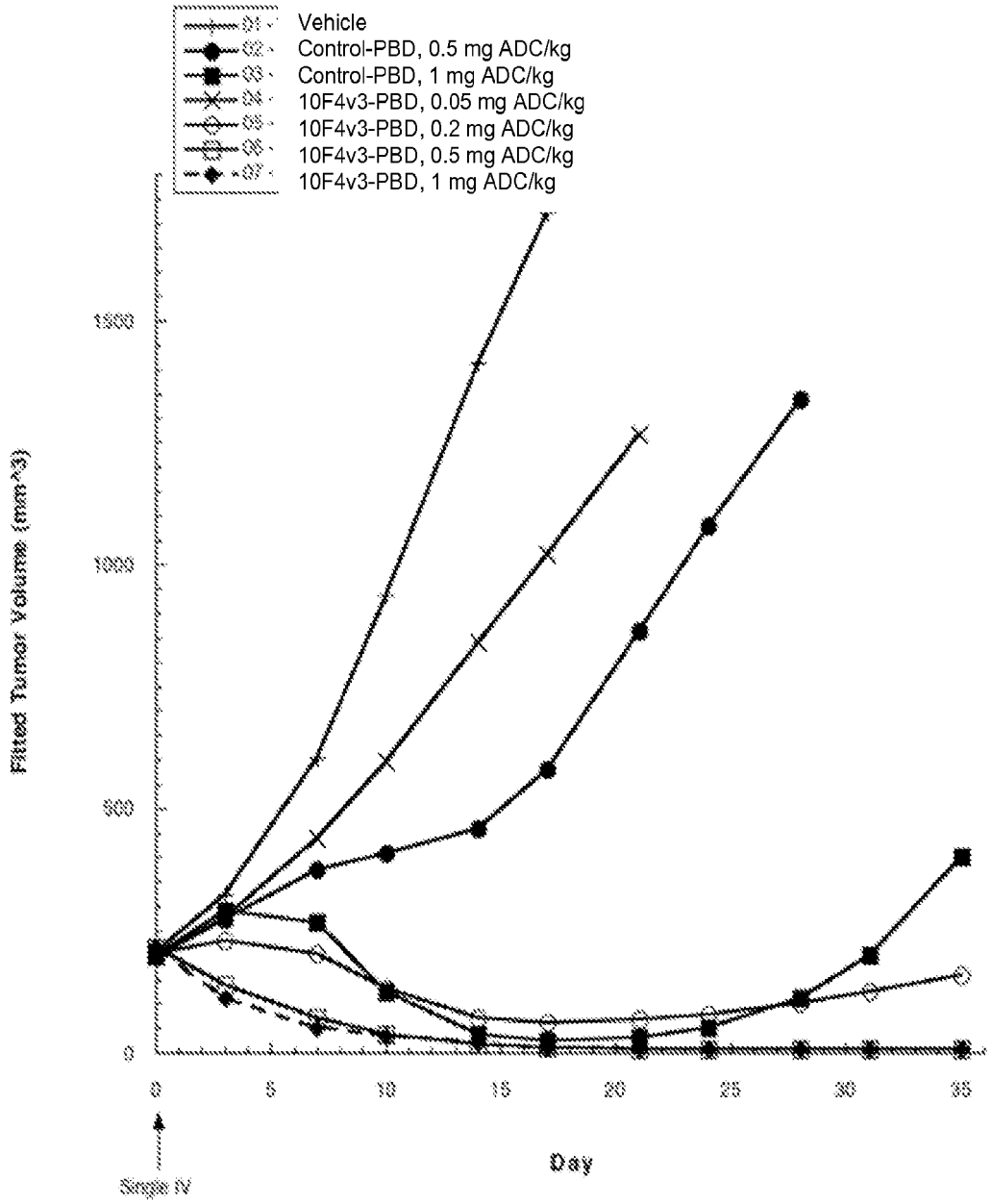

01 Vehicle
02 Control-PBD, 0.5 mg ADC/kg
03 Control-PBD, 1 mg ADC/kg
04 10F4v3-PBD, 0.05 mg ADC/kg
05 10F4v3-PBD, 0.2 mg ADC/kg
06 10F4v3-PBD, 0.5 mg ADC/kg
07 10F4v3-PBD, 1 mg ADC/kg
Fitted Tumor Volume (mm^3)
1500
1000
500
0
0
5
10
15
20
25
30
35
Day
Single IV

FIG. 9

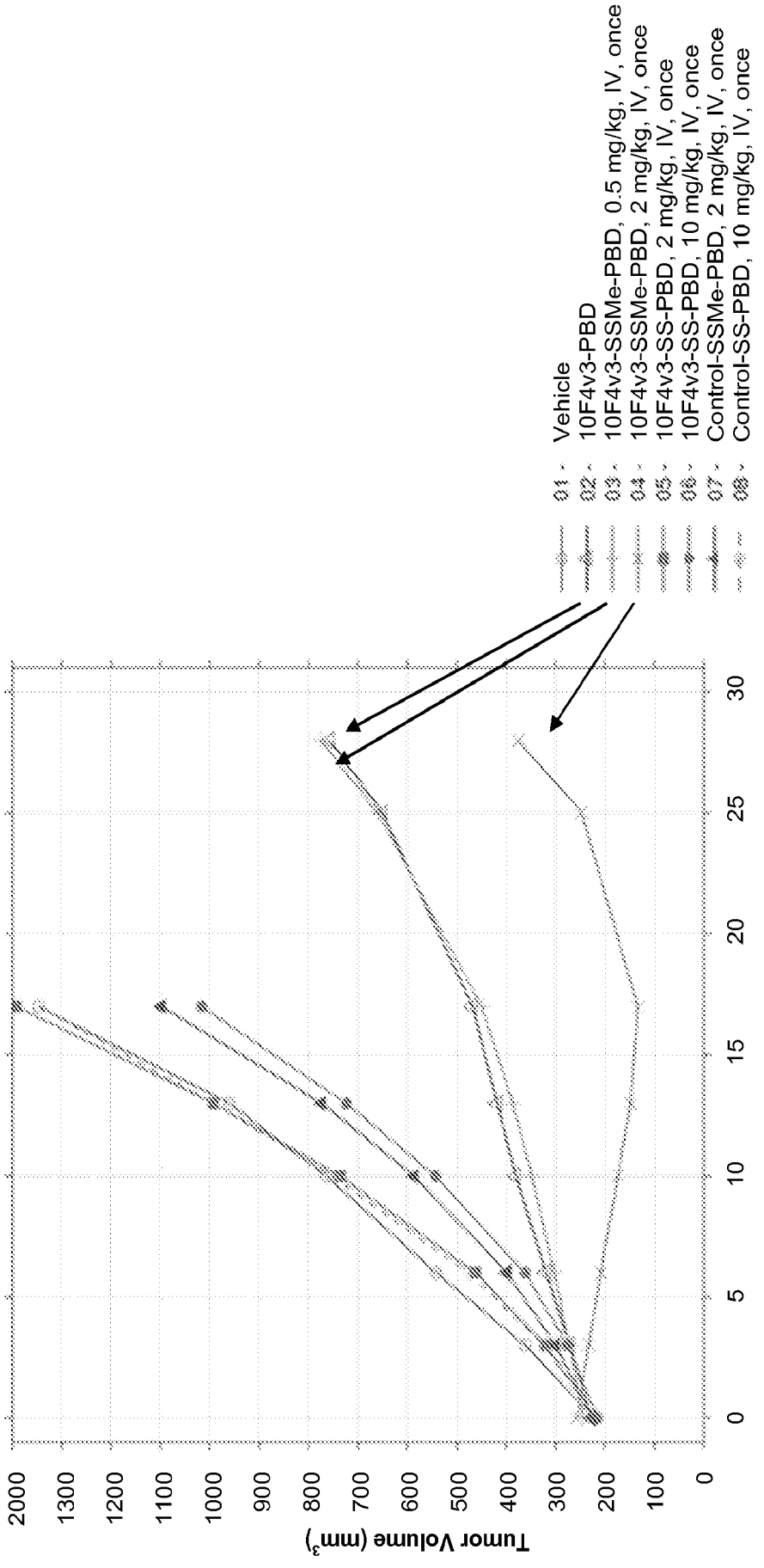

Tumor Volume (mm³)
2000
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
0
5
10
15
20
25
30
Day
01 - Vehicle
02 - 10F4v3-PBD
03 - 10F4v3-SSMe-PBD, 0.5 mg/kg, IV, once
04 - 10F4v3-SSMe-PBD, 2 mg/kg, IV, once
05 - 10F4v3-SS-PBD, 2 mg/kg, IV, once
06 - 10F4v3-SS-PBD, 10 mg/kg, IV, once
07 - Control-SSMe-PBD, 2 mg/kg, IV, once
08 - Control-SS-PBD, 10 mg/kg, IV, once

FIG. 10