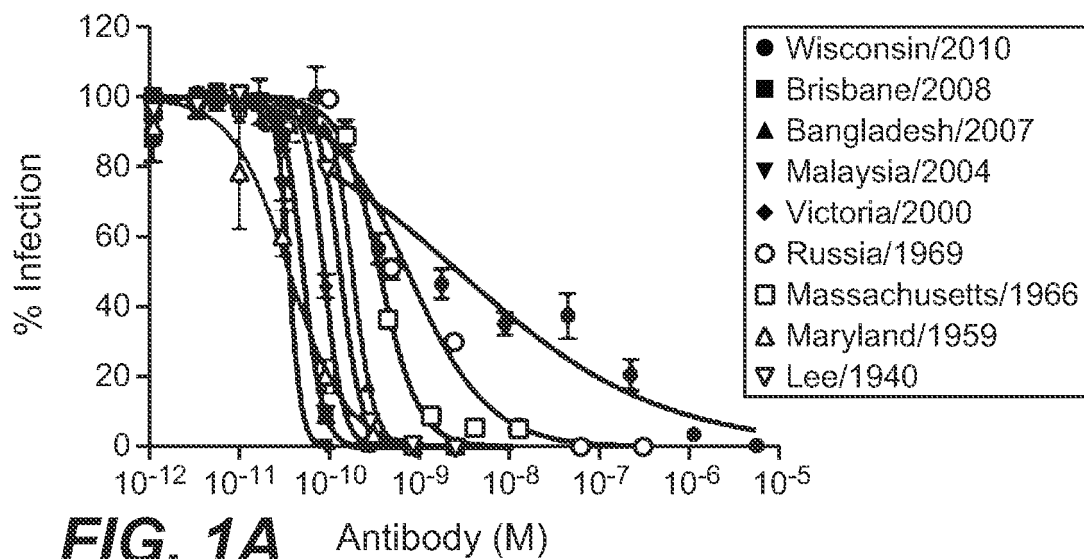
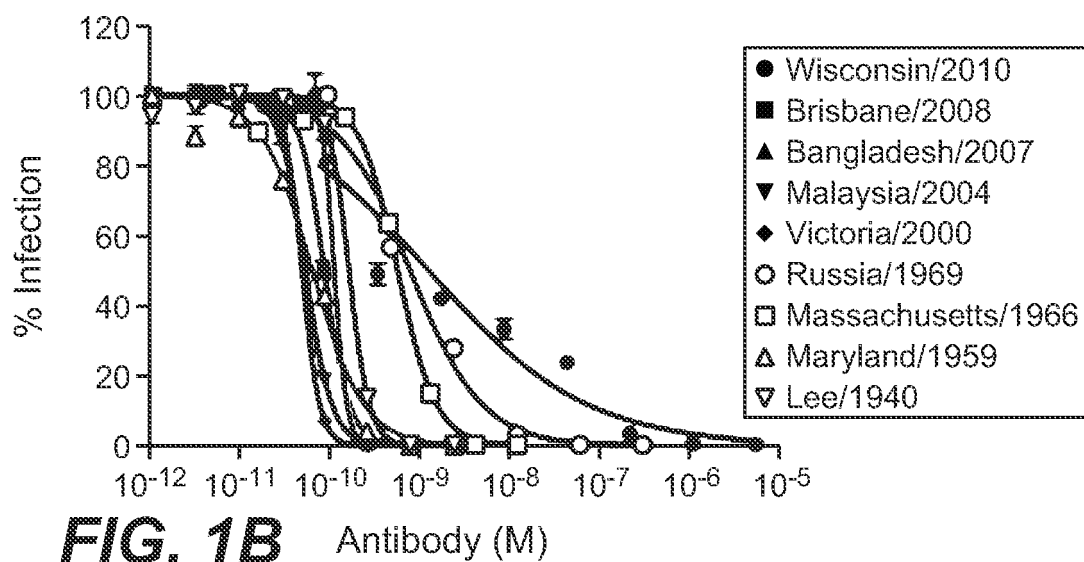
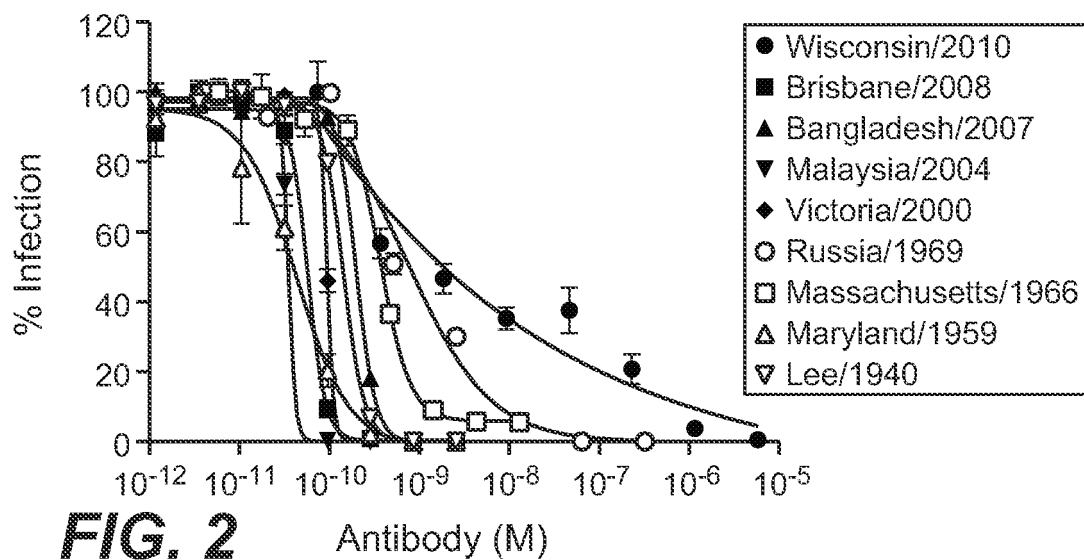
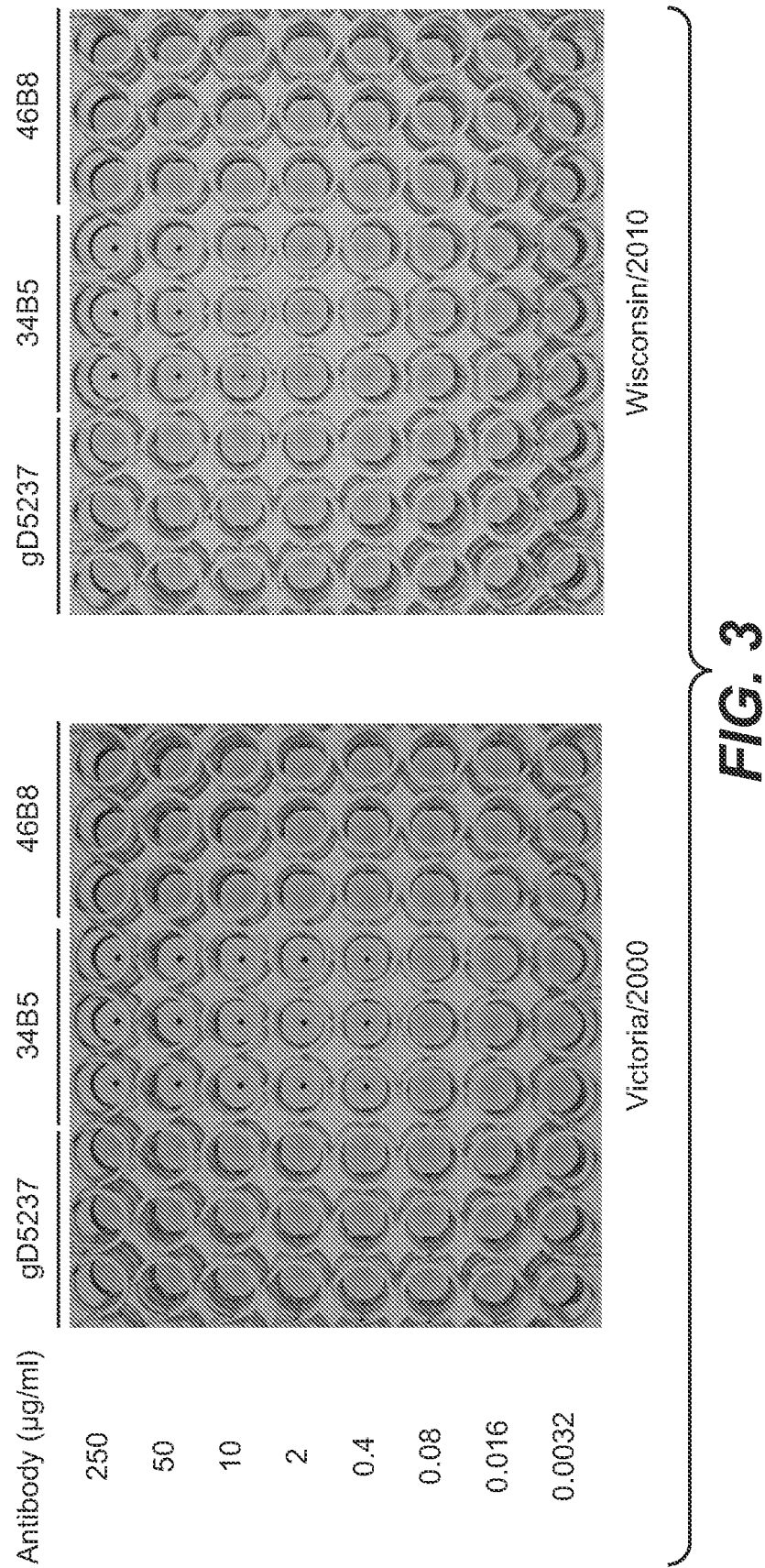
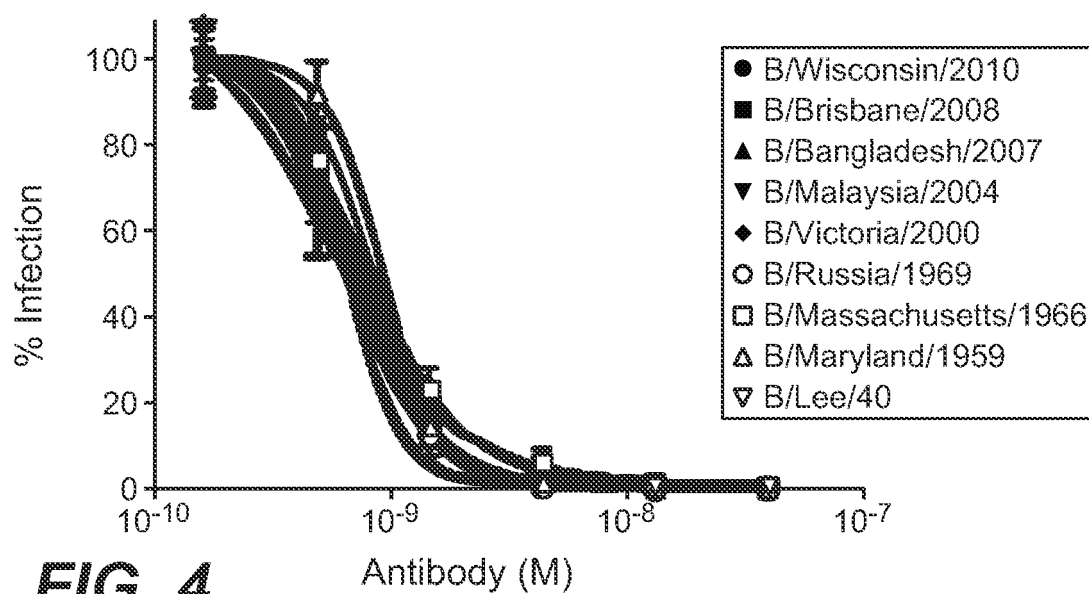
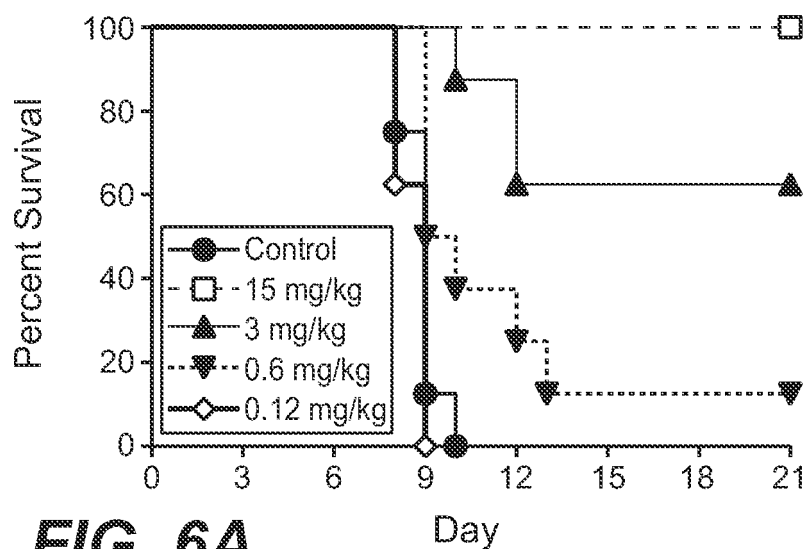
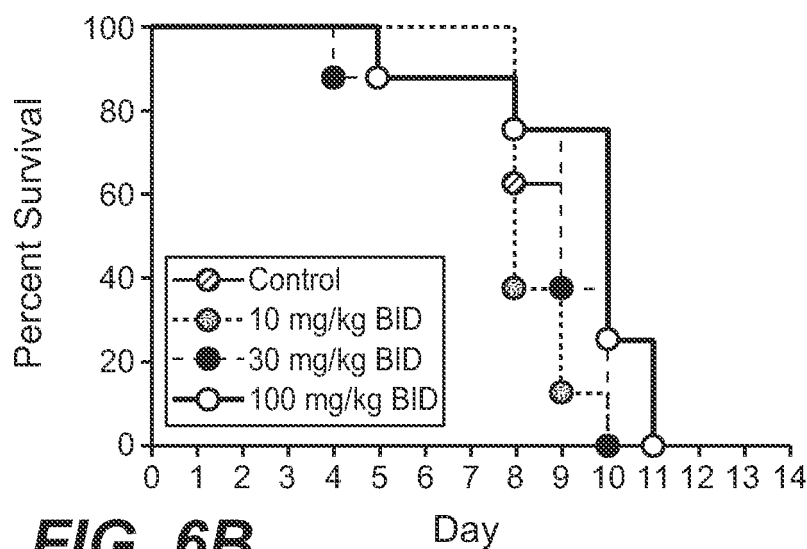


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**FIG. 4****FIG. 6A****FIG. 6B**

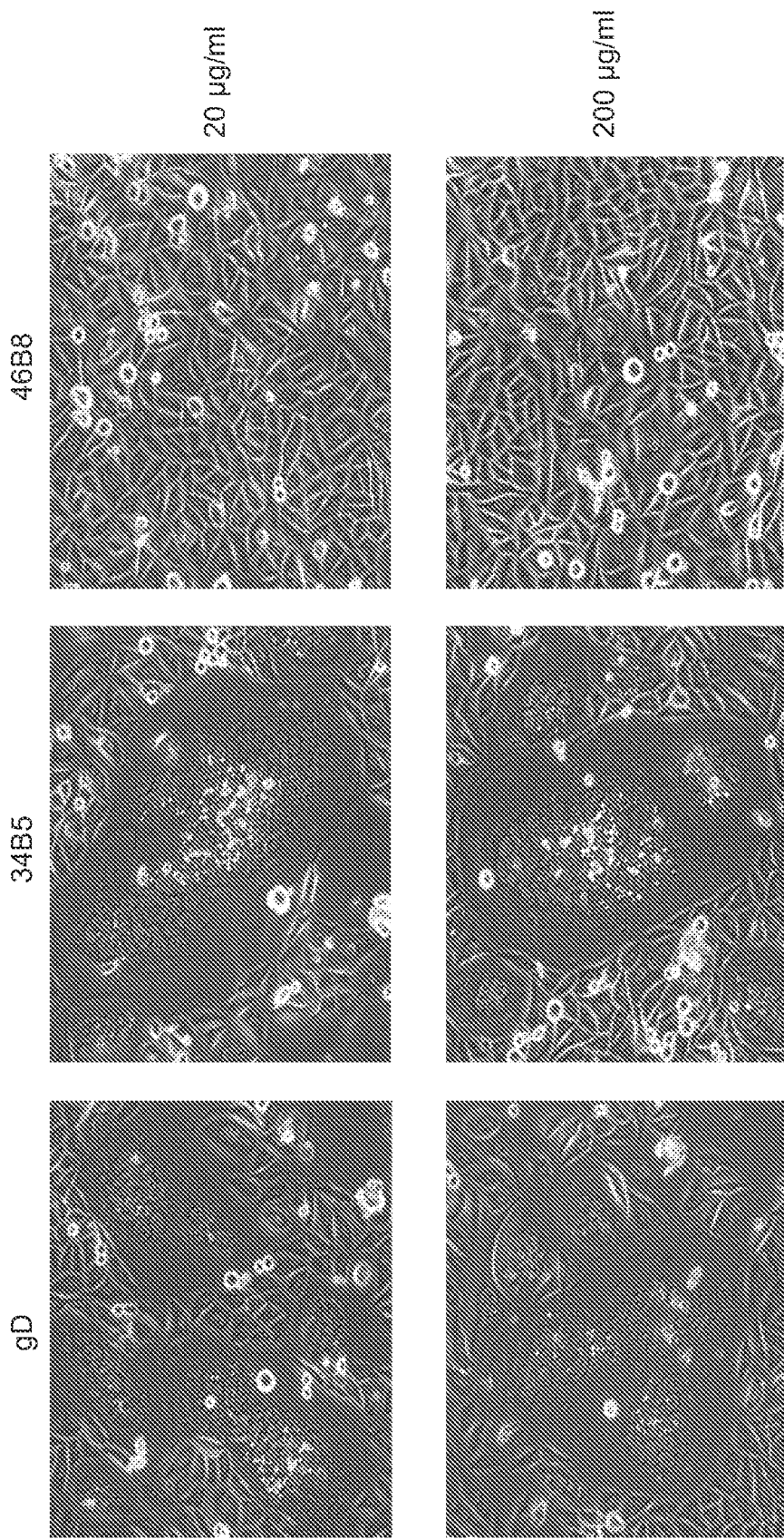
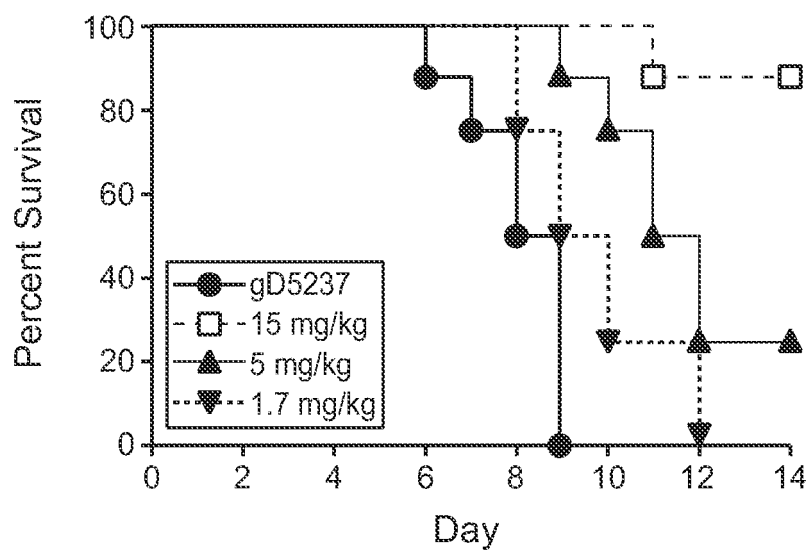
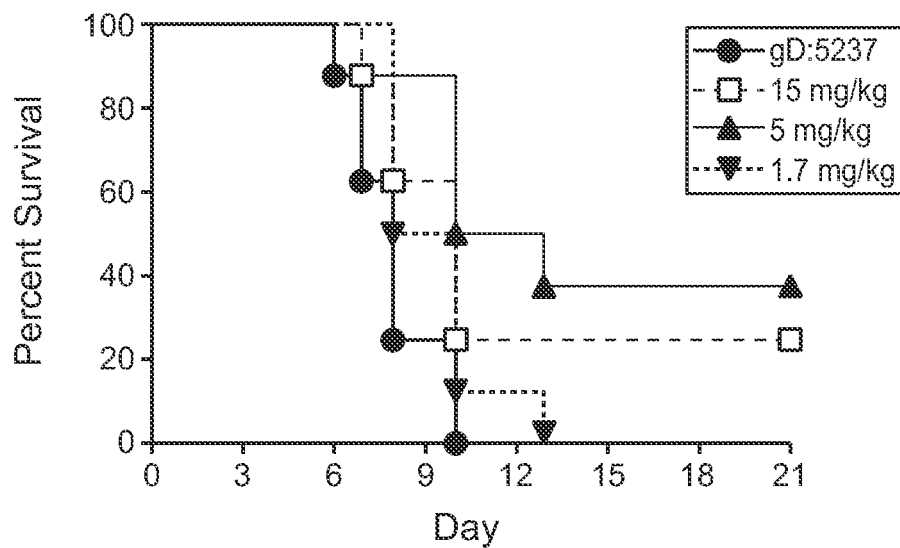
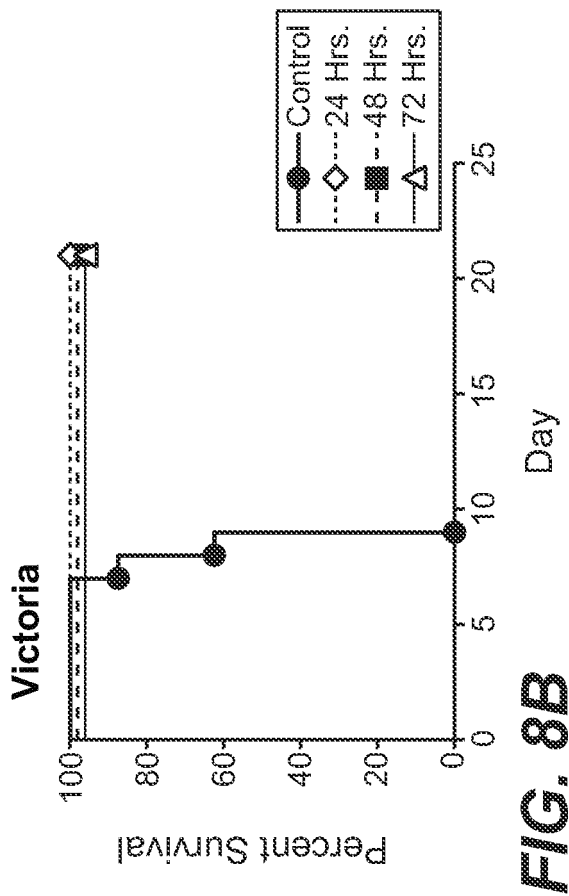
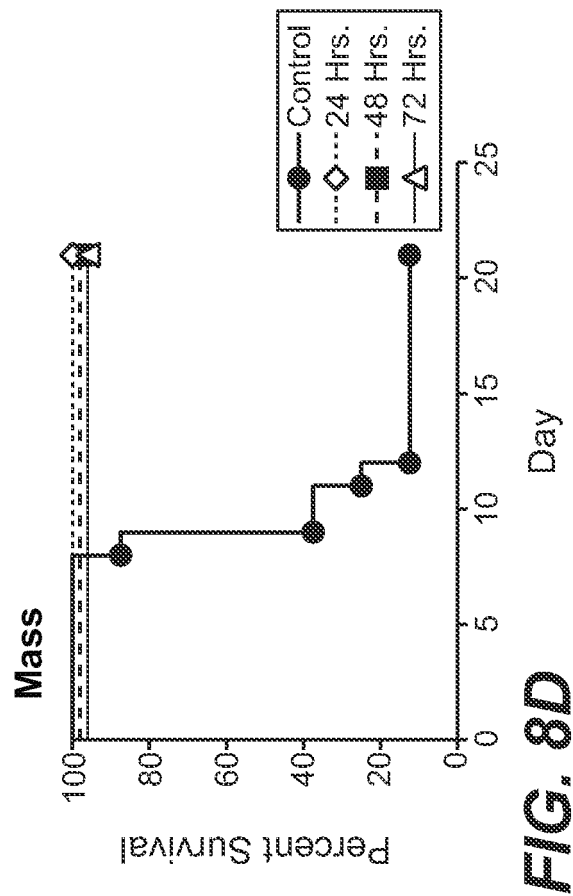
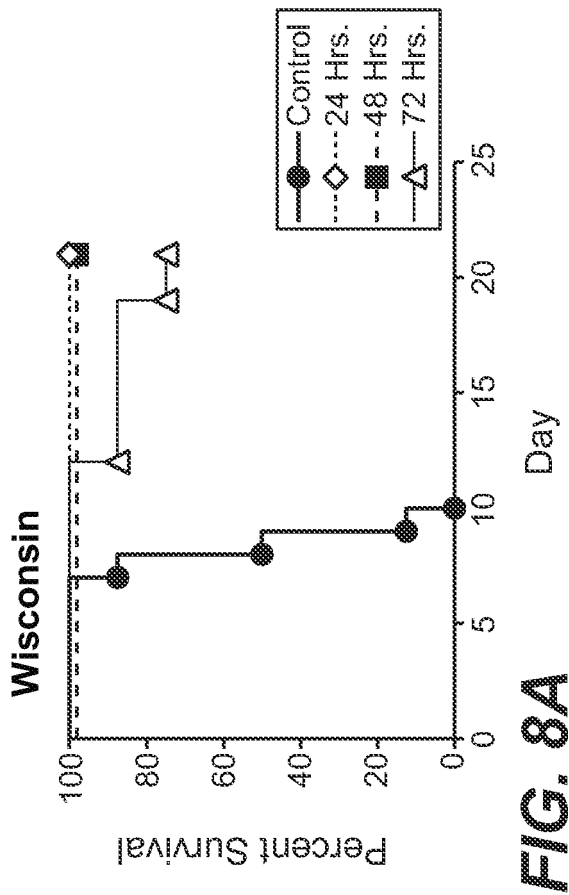
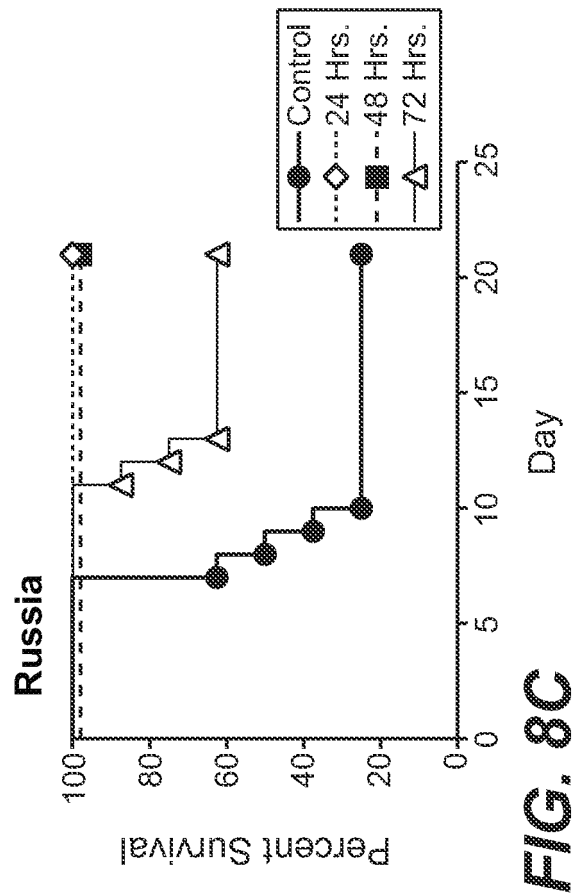
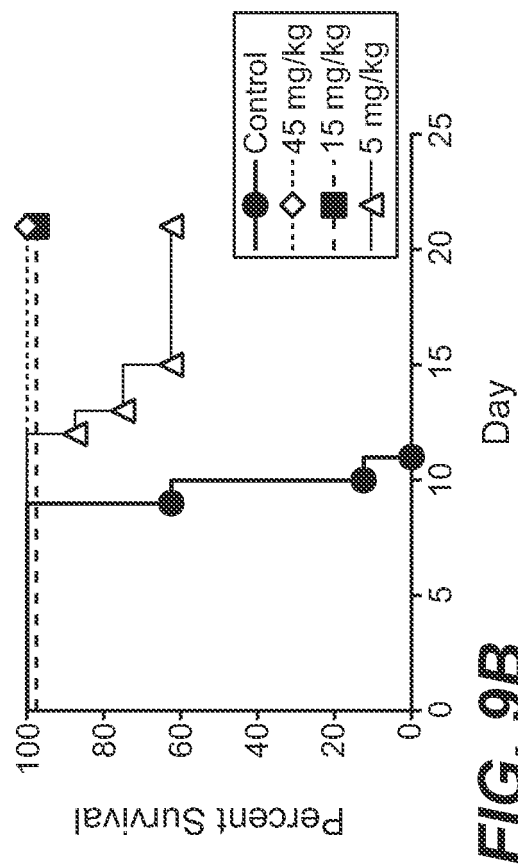
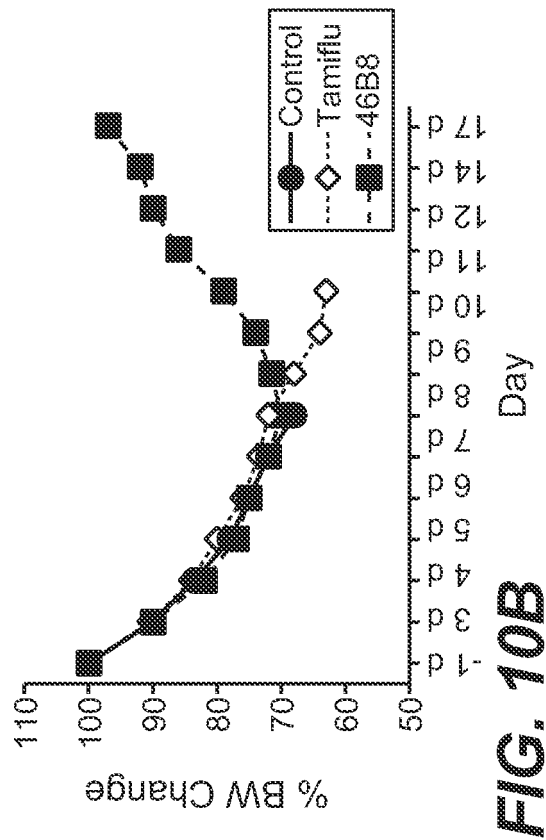
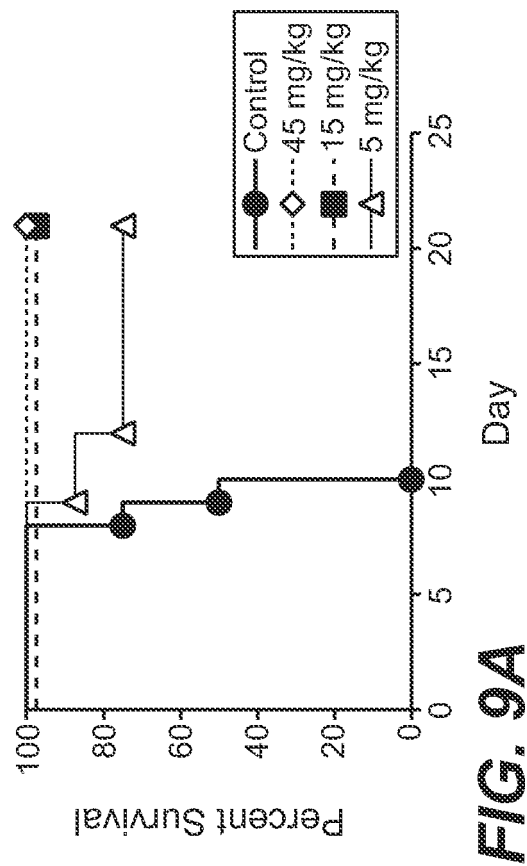
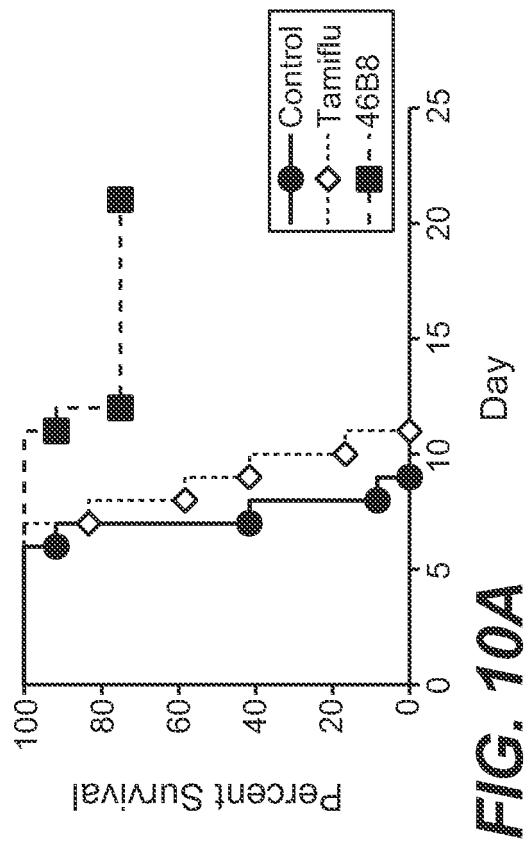


FIG. 5

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**FIG. 7A****FIG. 7B**





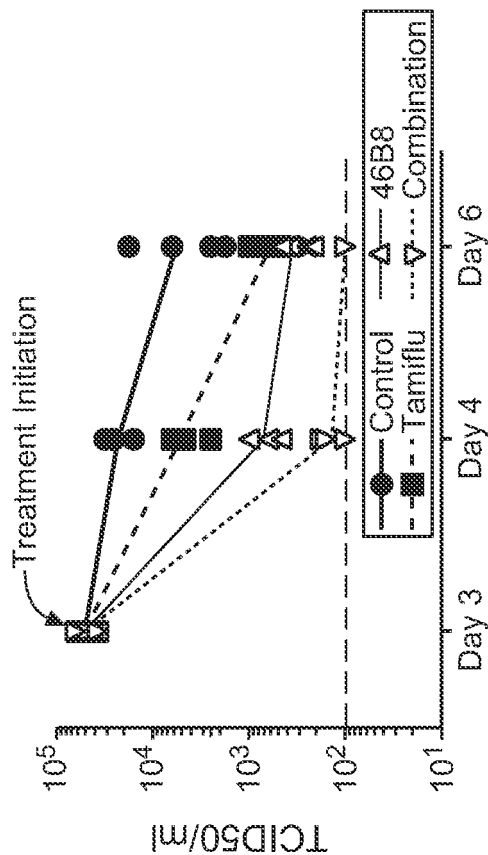


FIG. 11B Days Post Infection

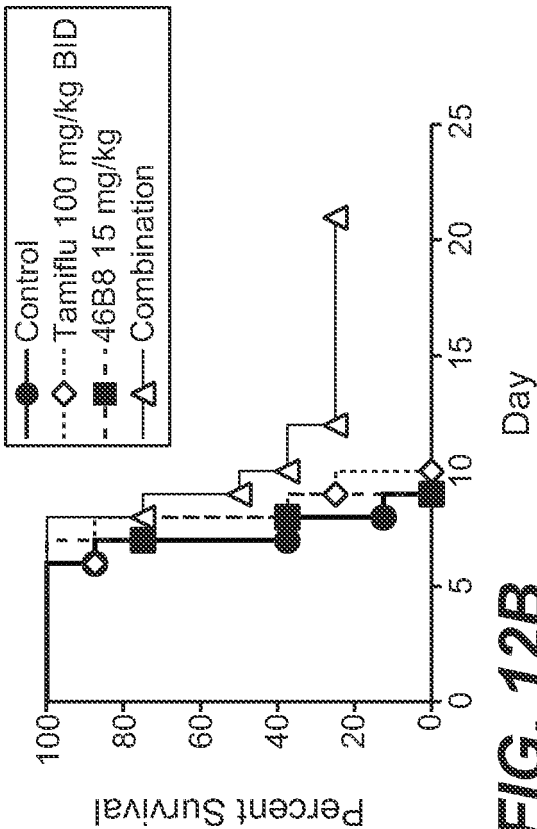


FIG. 12B

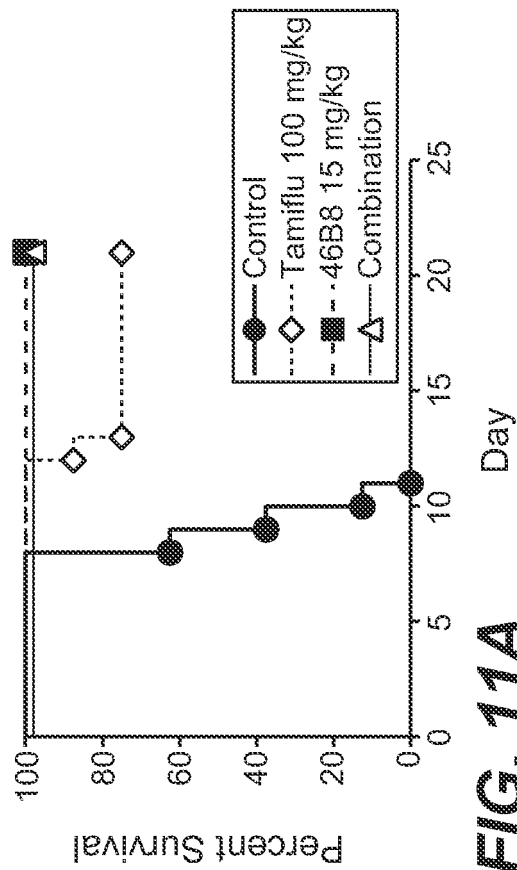


FIG. 11A

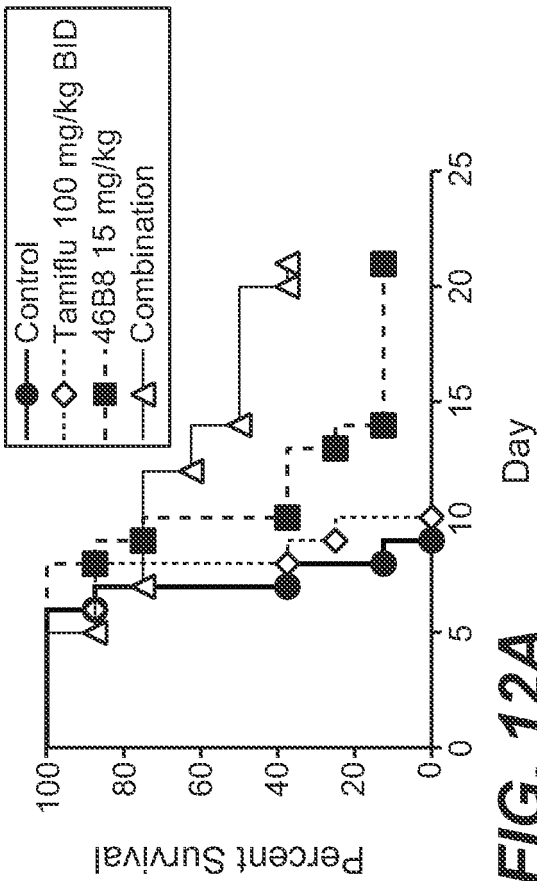


FIG. 12A

mAb	CDR L1	CDR L2	CDR L3	CDR H1	CDR H2	CDR H3
34B5A	TGSTSDIGSYNYVS (SEQ ID NO: 55)	EVSQRPS (SEQ ID NO: 57)	ASYAGNNIYV (SEQ ID NO: 59)	GYIHH (SEQ ID NO: 61)	RIDPNGSGTTIAQKFQG (SEQ ID NO: 64)	WDWNFDLVLGWFD (SEQ ID NO: 75)
34B5B	TGSTSDIGSYNYVS (SEQ ID NO: 55)	EVSQRPS (SEQ ID NO: 57)	ASYAGNNIYV (SEQ ID NO: 59)	GYIHH (SEQ ID NO: 61)	RIDPNGAGTTIAQKFQG (SEQ ID NO: 65)	WDWNFDLVLGWFD (SEQ ID NO: 75)
34B5C	TGSTSDIGSYNYVS (SEQ ID NO: 55)	EVSQRPS (SEQ ID NO: 57)	ASYAGNNIYV (SEQ ID NO: 59)	GYIHH (SEQ ID NO: 61)	RIDPNGAGTTIAQKFQG (SEQ ID NO: 65)	WDWNFDLVLGWFD (SEQ ID NO: 75)
33F8	TGSTSDIGSYNYVS (SEQ ID NO: 55)	EVSQRPS (SEQ ID NO: 57)	ASYAGNNIYV (SEQ ID NO: 59)	AHHMH (SEQ ID NO: 62)	WIDPNNDGTIYAQKFQG (SEQ ID NO: 66)	WAWNFDFFLGLWFD (SEQ ID NO: 76)
46B8A	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGSDTIYSPSFQG (SEQ ID NO: 67)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8B	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGDADAIYSPSFQG (SEQ ID NO: 68)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8C	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGESETIYSPSFQG (SEQ ID NO: 69)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8D	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGDADTIYSPSFQG (SEQ ID NO: 70)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8E	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGSSDTIYSPSFQG (SEQ ID NO: 71)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8F	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGSDAIYSPSFQG (SEQ ID NO: 72)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8G	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGDTDTIYSPSFQG (SEQ ID NO: 73)	GPYSGYHYHGWFD (SEQ ID NO: 77)
46B8H	RSSQSLIRSNNGYNYLD (SEQ ID NO: 56)	LGSNRAS (SEQ ID NO: 58)	MQALQTPYT (SEQ ID NO: 60)	SQWIG (SEQ ID NO: 63)	MMYPGESDTIYSPSFQG (SEQ ID NO: 74)	GPYSGYHYHGWFD (SEQ ID NO: 77)

FIG. 13

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mAb 34B5ALight Chain Variable Region

QSVLTQPPSASGSRGQSIITISCTGSTSDIGSYNYVSWYQQHPGTAPKVILYEVSRPSGVDPDRFSGSKSGNTAFLTVSGLQTDDEADYY
CASYAGNNIYVFGSGTKVT (SEQ ID NO: 78)

Heavy Chain Variable Region

QVQLVQSGAEVKKPGASVKVCKASGYIFTGYIHWVRQAPGQGLEWMGRIDPNGSGTTYAQKFQGRVTLTMDTSITTAYMELSRLLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGPVTVAS (SEQ ID NO: 79)

Light Chain

QSVLTQPPSASGSRGQSIITISCTGSTSDIGSYNYVSWYQQHPGTAPKVILYEVSRPSGVDPDRFSGSKSGNTAFLTVSGLQTDDEADYY
CASYAGNNIYVFGSGTKVTVLGQPKANPTVTLFPPSSEELQANKATLVCLISDFYPGAVTVAWKADSSPVKAGVETTPPSKQSNKKYAA
SSYLSLTPEQWKSHKSYSCQVTHEGSTVEKTVAPTECS (SEQ ID NO: 80)

Heavy Chain

QVQLVQSGAEVKKPGASVKVCKASGYIFTGYIHWVRQAPGQGLEWMGRIDPNGSGTTYAQKFQGRVTLTMDTSITTAYMELSRLLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGPVTVASASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSVTVPPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTC
VVVDVSHEDPEVKFNWVVDGVEVHNAKTKPREEQYNSTYRVSVLTVHLQDNLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQVYV
LPDSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDSGDSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQK
SLSLSPGK (SEQ ID NO: 81)

FIG. 14

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mAb 34B5BLight Chain Variable Region

SVLTQPPSASGSRGQSITISCTGSTSDIGSYNYVSWYQQHPGTAPKVILYEVSQRPSGVPDRFSGSKSGNTAFLTVSGLQAEDEADYYC
ASYAGNNIYVFGSGTKVT (SEQ ID NO: 82)

Heavy Chain Variable Region

EVQLVQSGAEVKKPGASVKVCKASGYIFTGYIHWVRQAPGQGLEWMGRIDPENGAGTTYAQKFQGRVTLTMDTSLTTAYMELSRLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGTPTVAS (SEQ ID NO: 83)

Light Chain

SVLTQPPSASGSRGQSITISCTGSTSDIGSYNYVSWYQQHPGTAPKVILYEVSQRPSGVPDRFSGSKSGNTAFLTVSGLQAEDEADYYC
ASYAGNNIYVFGSGTKVTVLGQPKANPTVTLFPPSSEELQANKATLVCLISDFYPGAVTVAWKADSSPVKAGVETTPPSKQSNKYYAAS
SYLSLTPEQWKKSHKSYSCQVTHEGSTVEKTVAPTECS (SEQ ID NO: 84)

Heavy Chain

EVQLVQSGAEVKKPGASVKVCKASGYIFTGYIHWVRQAPGQGLEWMGRIDPENGAGTTYAQKFQGRVTLTMDTSLTTAYMELSRLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGTPTVASASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGPPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDK
SRWQQGNVFSCVMHEALHNHYTQKSLSLSPGK (SEQ ID NO: 85)

FIG. 15

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mAb 34B5CLight Chain Variable Region

SALTQPPSASGSRGQSITISCTGSTDIGSYNYVSWYQQHPGTAPKVIILYEVSRPSPGVPDRFSGSKSGNTAFLTVSGLQAEDEADYYC
ASYAGNNIYVFGSGTKVT (SEQ ID NO: 86)

Heavy Chain Variable Region

EVQLVQSGAEVKKPGASVKVCKASGYIFTGYYIHWVRQAPGQGLEWMGRIDPNEGAGTTYAQKFQGRVTLTMDTSTITAYMELSRLLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGPVTVAS (SEQ ID NO: 83)

Light Chain

SALTQPPSASGSRGQSITISCTGSTDIGSYNYVSWYQQHPGTAPKVIILYEVSRPSPGVPDRFSGSKSGNTAFLTVSGLQAEDEADYYC
ASYAGNNIYVFGSGTKVTVLGQPKANPTVTLFPPSSSEELQANKATLVCLISDFYPGAVTVAWKADSSPVKAGVETTTPSKQSNKKYAAAS
SYLSLTPEQWKSHKSYSCQVTHEGSTVEKTVAPTECS (SEQ ID NO: 87)

Heavy Chain

EVQLVQSGAEVKKPGASVKVCKASGYIFTGYYIHWVRQAPGQGLEWMGRIDPNEGAGTTYAQKFQGRVTLTMDTSTITAYMELSRLLRFD
DTAIYYCARWDWNFDLYLGWFDPWGQGPVTVASASTKGPSVFPPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSVTVPSSSLGTQTYICNVNHPKSN TKVDKKVEPKSCDKTHTCPPCPAPELGGPSVFLFPPKPKDTILMISRTPEVTC
VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTVHLQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPDSREEMTKNQVSLTCLVKGFYPSDIAVENESNGQPENNYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQK
SLSLSPGK (SEQ ID NO: 88)

FIG. 16

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mAb 33F8Light Chain Variable Region

QSVLTQPPSASGSRGQSITISCTGSTSDIGSYNYVSWYQQHPGTAPKVIYEVSRPSGVPDRFSGSKSGNTAFLTVSGLQTDDEADYY
 CASYAGNNIYVFGSGTKVT (SEQ ID NO: 78)

Heavy Chain Variable Region

QVQLVQSGAEVKKPGASVKVSCKASGYTFNAHHMHVVRQAPGQGLGWMGWIDPNNNDGTIYAQKFQGRVTLTMDTSHIHTAYMELSGLRYD
 DTAIYYCVRWAWNFDFFLGWFDPWGQTLVTVAS (SEQ ID NO: 89)

Light Chain

QSVLTQPPSASGSRGQSITISCTGSTSDIGSYNYVSWYQQHPGTAPKVIYEVSRPSGVPDRFSGSKSGNTAFLTVSGLQTDDEADYY
 CASYAGNNIYVFGSGTKVTVLGQPKANPTVFLPPSSEELQANKATLVCLISDFYPGAVTVAWKADSSPVKAGVETTPPSKQSNKKYAA
 SSYLSLTPEQWKSHKSYSCQVTHEGSTVEKTVAPTECS (SEQ ID NO: 80)

Heavy Chain

QVQLVQSGAEVKKPGASVKVSCKASGYTFNAHHMHVVRQAPGQGLGWMGWIDPNNNDGTIYAQKFQGRVTLTMDTSHIHTAYMELSGLRYD
 DTAIYYCVRWAWNFDFFLGWFDPWGQTLVTVASASTKGPSVFPPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVKDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTILMISRTPEVTC
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTVHLQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQVYT
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVENESNGQPENNYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVSCVMHEALHNHYTQK
 SLSLSPGK (SEQ ID NO: 90)

FIG. 17

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mAb 46B8ALight Chain Variable Region

DIVMTQSP₁SLPVT₂PGEPASIS₃CRSSQ₄LLRSNGYN₅LDWYLQ₆KPGQSP₇QLLIYLG₈SNRASGVP₉DRFSGSGSGTD₁₀FTLKISR₁₁VEAEDV₁₂G
VYYCMQALQ₁₃TPYTFGQ₁₄GTKLEIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEV₁KKPGESLKIS₂CKVSGYSFT₃QWIGWVRQMPGK₄GLEWIGMMYPGDS₅DTIYSPSFQ₆GQVTISADNSISTAYLQ₇WSSLKAS₈
DTAIYYCASGPGYSGYHYGWFDTW₉GQTLVTVSS (SEQ ID NO: 92)

Light Chain

DIVMTQSP₁SLPVT₂PGEPASIS₃CRSSQ₄LLRSNGYN₅LDWYLQ₆KPGQSP₇QLLIYLG₈SNRASGVP₉DRFSGSGSGTD₁₀FTLKISR₁₁VEAEDV₁₂G
VYYCMQALQ₁₃TPYTFGQ₁₄GTKLEIKRTVAAPSV₁₅FI₁₆PPSDEQLKSGTASV₁₇VCLLN₁₈NFYPREAKVQ₁₉WKVDNALQ₂₀SGNSQ₂₁ESVTEQ₂₂DSKDS₂₃TY
SLSSTLTLSKADYE₂₄KKH₂₅KVYACEV₂₆THQGLSPVTK₂₇SFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEV₁KKPGESLKIS₂CKVSGYSFT₃QWIGWVRQMPGK₄GLEWIGMMYPGDS₅DTIYSPSFQ₆GQVTISADNSISTAYLQ₇WSSLKAS₈
DTAIYYCASGPGYSGYHYGWFDTW₉GQTLVTVSSASTK₁₀GPSVFP₁₁PLAPSSKSTSGGTAA₁₂LGCLVKDY₁₃FP₁₄EPVTVSWNSGALTSGVHT₁₅FP₁₆A
VLQSSGLYSLSSV₁₇TPSSSLGT₁₈QTYICNVN₁₉HKPSNTK₂₀VDKKVEPKSCDK₂₁TH₂₂CTCP₂₃CPAPELLG₂₄GPSV₂₅FLFP₂₆PKPKD₂₇TL₂₈MI₂₉SRTPEV₃₀TC
VVVDVSHEDPE₃₁VKFNWYVDGVEV₃₂HNAKTKPREEQ₃₃YNSTYRV₃₄SVLT₃₅VLH₃₆QDWLN₃₇GKEYCK₃₈VS₃₉NKALPAPIE₄₀KTISKAKG₄₁QPREP₄₂QV₄₃YT
LP₄₄PSREEMTKNQ₄₅SLTCLV₄₆KGFYP₄₇PSDIAVEWESNG₄₈QPEN₄₉NYKTT₅₀PPVLDSDG₅₁SFFLYSK₅₂LTVDKSRW₅₃Q₅₄GNV₅₅FS₅₆CS₅₇VMHEAL₅₈HNHY₅₉TQ₆₀K
SLSLSPGK (SEQ ID NO: 94)

FIG. 18

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mAb 46B8BLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKP_{GES}SLKISCKVSGYFTSQWIGWVRQMPGKGLEWIGMMYPGDADAIYSPSFQGGQVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGP_{GY}SGYHYGWFDTWGQGT_{LV}TVSS (SEQ ID NO: 95)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIKRTVAAPSVFIFPPSDEQLKSGTASV_VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS_{TY}
 SLSSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKP_{GES}SLKISCKVSGYFTSQWIGWVRQMPGKGLEWIGMMYPGDADAIYSPSFQGGQVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGP_{GY}SGYHYGWFDTWGQGT_{LV}TVSSASTKGPSVFPLAPSSKSTSGGTAA_{LG}CLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSSV_{TV}PPSSSLGTQ_{TY}ICNVN_{HK}PSNTKVDKKVEPKSCDK_{TH}TCPPCPAPELLGGPSVFLFPPKPKDTILMISRTPEV_{TC}
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQ_{YN}STYRVSVLT_{VL}HQDWLN_{GE}YKCKVSNKALPAPIEK_{TI}SKAKGQPREPQ_{VYT}
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYK_{TT}PPVLDSDGSFFLYSKLTVD_{KSR}WQQGNV_{FS}CSVMHEALHNHY_{TQK}
 SLSLSPGK (SEQ ID NO: 96)

FIG. 19

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mAb 46B8CLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKP_{GES}SLKISCKVSGYFTSQWIGWVRQMPGKGLEWIGMMYPGESE_{TI}YSPSFQGGV_{TI}SA_{DN}SI_{ST}AYLQWSS_{LL}KA_S
 DTAIYYCASGPGYSGYHYGWFD_{TW}GQGT_{LV}TVSS (SEQ ID NO: 97)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIKRTVAAPSVFIFPPSDEQLKSGTASV_VCLLNNFY_PREAKVQWKVDNALQSGNSQESVTEQDSK_{DS}TY
 SLSSTLTLSKADYEKKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKP_{GES}SLKISCKVSGYFTSQWIGWVRQMPGKGLEWIGMMYPGESE_{TI}YSPSFQGGV_{TI}SA_{DN}SI_{ST}AYLQWSS_{LL}KA_S
 DTAIYYCASGPGYSGYHYGWFD_{TW}GQGT_{LV}TVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYS_{LV}TPSPSS_{LG}TQTYICNVNHKPSNTKVDKKVEPKSCDK_{TH}TCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEV_{TC}
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLT_{VL}HQDWLN_{GE}YKCKVSNKALPAPIEK_{TI}SKAKGQPREPQV_{YT}
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYK_{TT}PPVLDSDGSFFLYSKLTVDKSRWQQGNV_{FS}CSVMHEALHNHY_{TQ}K
 SLSLSPGK (SEQ ID NO: 98)

FIG. 20

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mAb 46B8DLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKPGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDADTIYSPSFQGGQVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSS (SEQ ID NO: 99)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS_{TY}
 SLSSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKPGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDADTIYSPSFQGGQVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSVTVTPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCTPCPAPPELLGGPSVFLFPPKPKDTLMISRTPEVTC
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTV_LHQDWLN_GKEYCKVSNKALPAPIEK_TISKAKGQPREPQVY_T
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDSDGSEFFLYSKLTVDKSRWQQGNV_FSCSV_MHEALHNHYTQ_K
 SLSLSPGK (SEQ ID NO: 100)

FIG. 21

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mAb 46B8ELight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
VYYCMQALQTPYTFGQGTKLEIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGSSD_{TI}YSPSFQGGQ_{VT}ISADNSIS_TAYLQWSSLKAS
DTAIYYCASGPGYSGYHYGWFD_TWGQGLTV_{TS} (SEQ ID NO: 101)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
VYYCMQALQTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV_VCLLNNFY_PREAKVQ_WKVDNALQSGNSQESVTEQDSKDS_{TY}
SLSSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGSSD_{TI}YSPSFQGGQ_{VT}ISADNSIS_TAYLQWSSLKAS
DTAIYYCASGPGYSGYHYGWFD_TWGQGLTV_{TS}SSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSV_{TV}PPSSSLGTQ_{TY}ICNVN_{HK}PSNTKVDKKVEPKSCDK_{TH}TCPPCPAPELLGGPSVFLFPPKPKDTILMISRTPEV_{TC}
VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLT_{VL}HQDWLN_GKEYCKVSNKALPAPIEK_{TI}SKAKGQPREPQ_{VT}
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYK_{TT}PPVLDSDGSEFFLYSKLTVD_KSRWQ_QGNVFSCSVMHEALHNHY_{TQ}
SLSLSPGK (SEQ ID NO: 102)

FIG. 22

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mAb 46B8FLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDSDAIYSPSFQGGVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSS (SEQ ID NO: 103)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS_{TY}
 SLSSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDSDAIYSPSFQGGVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSVTVTPSSSLGTQTYICNVNHKPSNTKVKDKKVEPKSCDKTHTCPPCPAPELGGPSVFLFPPKPKDTILMISRTPEVTC
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLT_{VL}HQDWLN_{GE}YKCKVSNKALPAPIEK_{TI}SKAKGQPREPQVY_T
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDSGSEFFLYSKLTVDKSRWQQGNV_{FS}CSVMHEALHNHYTQ_K
 SLSLSPGK (SEQ ID NO: 104)

FIG. 23

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mAb 46B8GLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDDTIYSPSFQGGVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSS (SEQ ID NO: 105)

Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS_{TY}
 SLSSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKPQGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGDDTIYSPSFQGGVTISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSVTVTPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELGGPSVFLFPPKPKDTILMISRTPEVTC
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTV_LHQDWLN_GKEYCKVSNKALPAPIEK_TISKAKGQPREPQVY_T
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDS_DSGSFFLYSKLTVDKSRWQQGNV_FSCSV_MHEALHNHYTQ_K
 SLSLSPGK (SEQ ID NO: 106)

FIG. 24

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mAb 46B8HLight Chain Variable Region

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIK (SEQ ID NO: 91)

Heavy Chain Variable Region

EVQLVQSGAEVKKPGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGESD_{TI}YSPSFQGGV_{TI}ISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLVTVSS (SEQ ID NO: 107)

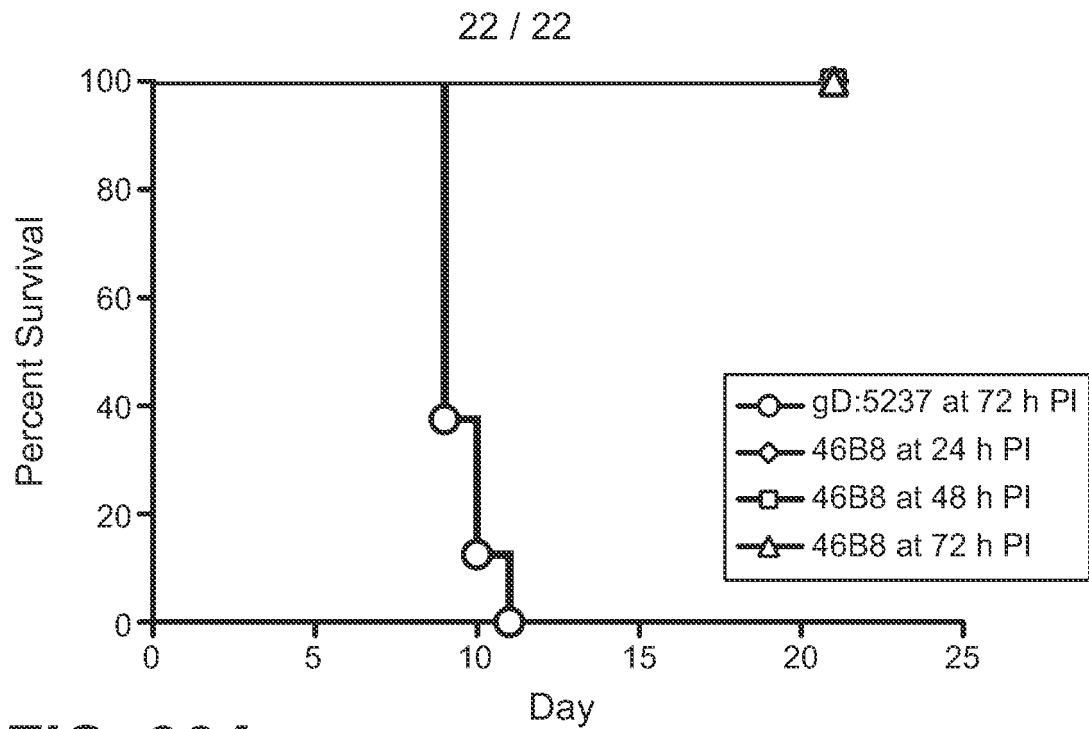
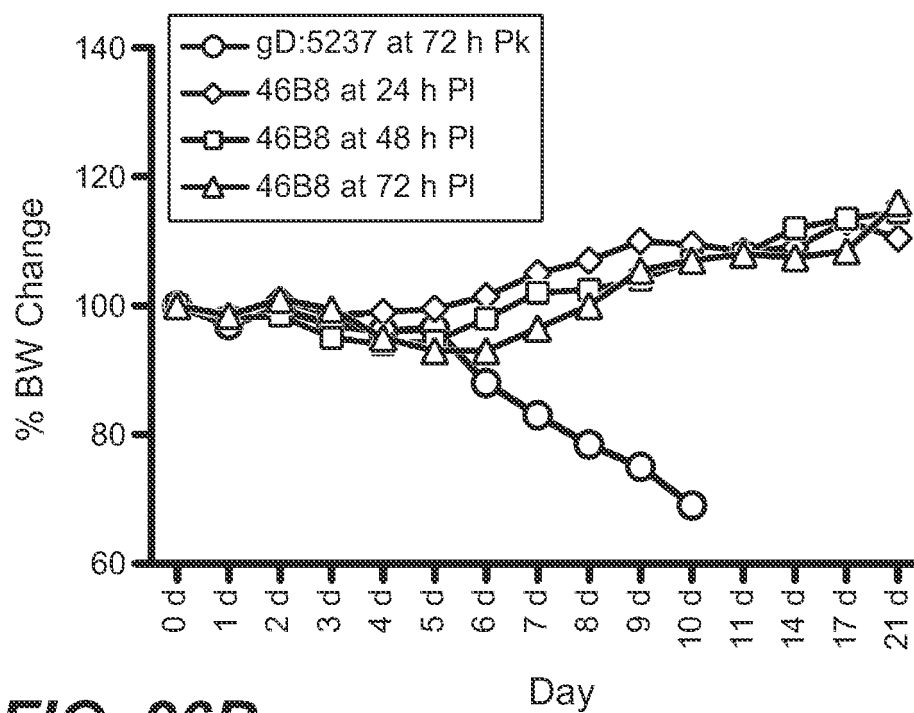
Light Chain

DIVMTQSP_{LS}LPVTPGEPASISCRSSQ_{SL}LRNGYN_YLDWYLQKPGQSP_{QL}LIYLG_{SN}RASGVPDRFSGSGSGTDFTLKISRVEAEDV_G
 VYYCMQALQTPYTFGQGT_{KL}EIKRTVAAPSVFIFPPSDEQLKSGTASV_VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS_{TY}
 SLSSTLTLSKADYEKKHKVYACEVTHQGLSPVTKSFNRGEC (SEQ ID NO: 93)

Heavy Chain

EVQLVQSGAEVKKPGESLKISCKVSGYSTSQWIGWVRQMPGKGLEWIGMMYPGESD_{TI}YSPSFQGGV_{TI}ISADNSISTAYLQWSSLKAS
 DTAIYYCASGPGYSGYHYGWFDTWGQGLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
 VLQSSGLYSLSVTVTPSSSLGTQ_{TY}ICNVN_{HK}PSNTKVDKKVEPKSCDK_{TH}TCPPCPAPELLGGPSVFLFPPKPKDTILMISRTPEV_{TC}
 VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLT_{VL}HQDWLN_{GE}YCKVSNKALPAPIEK_{TI}SKAKGQPREPQ_{VYT}
 LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYK_{TT}PPVLDSDGSEFFLYSKLTVD_{KSR}WQQGNV_{FS}CSVMHEALHNHY_{TQK}
 SLSLSPGK (SEQ ID NO: 108)

FIG. 25

**FIG. 26A****FIG. 26B**