

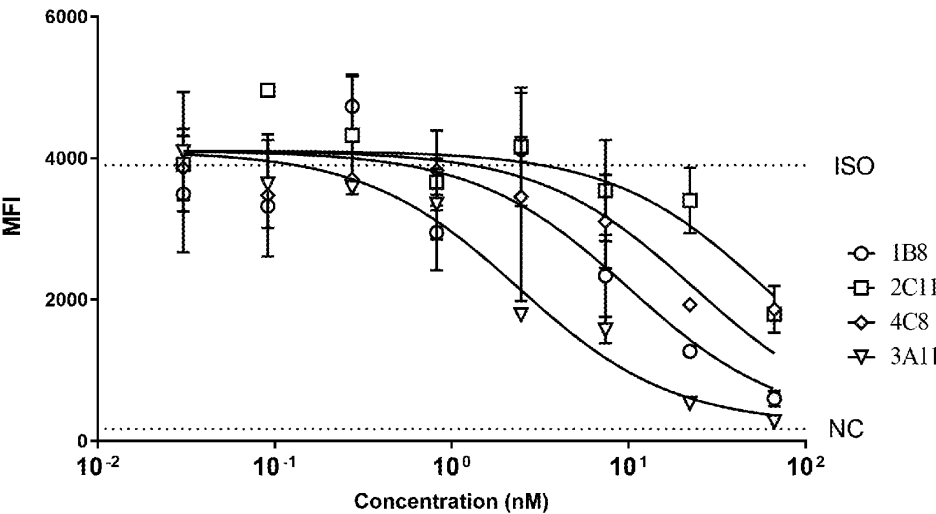


FIG. 1

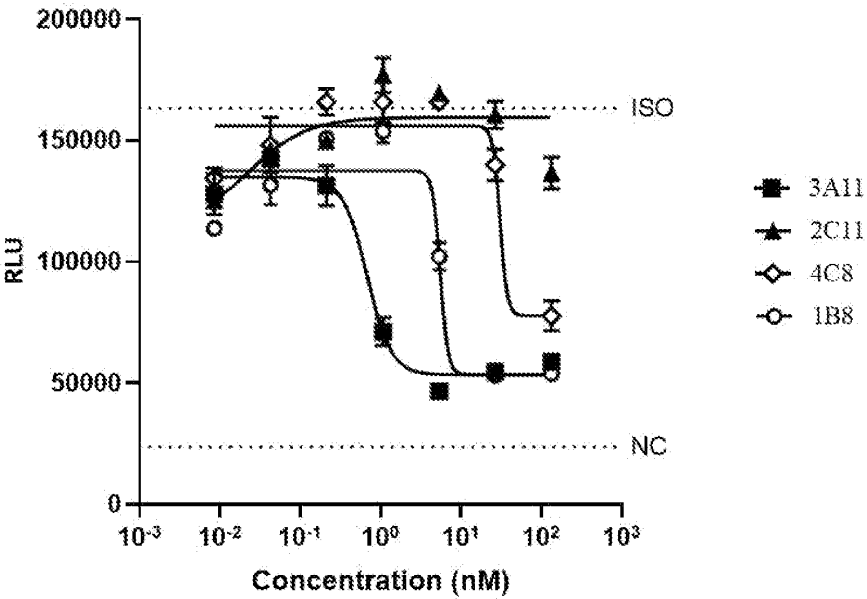


FIG. 2

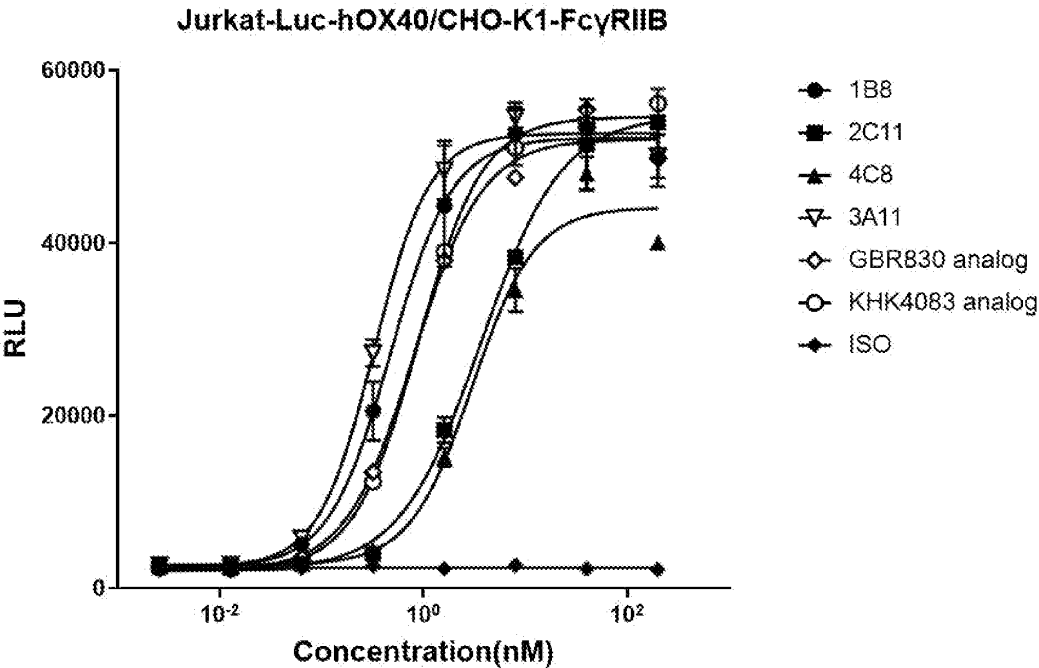


FIG. 3A

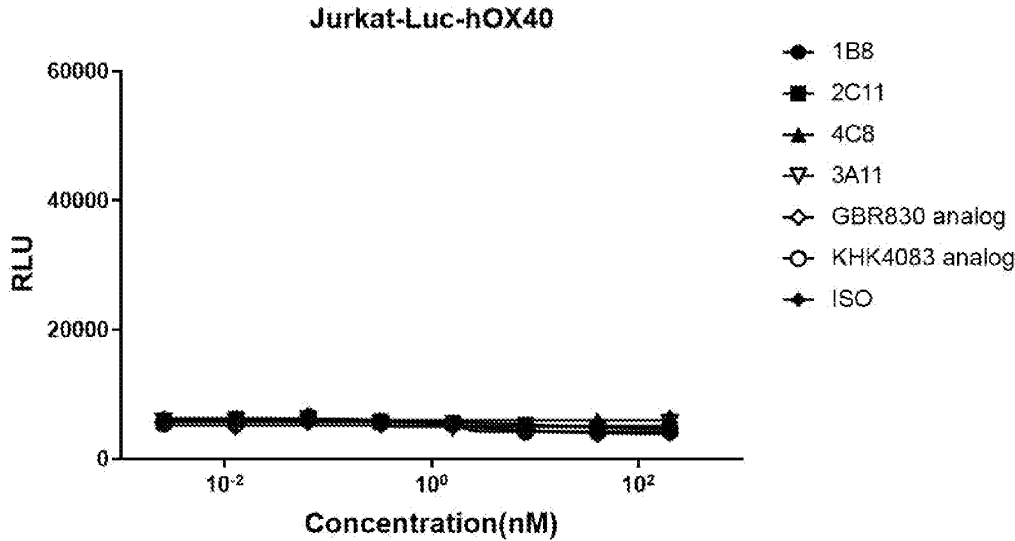


FIG. 3B

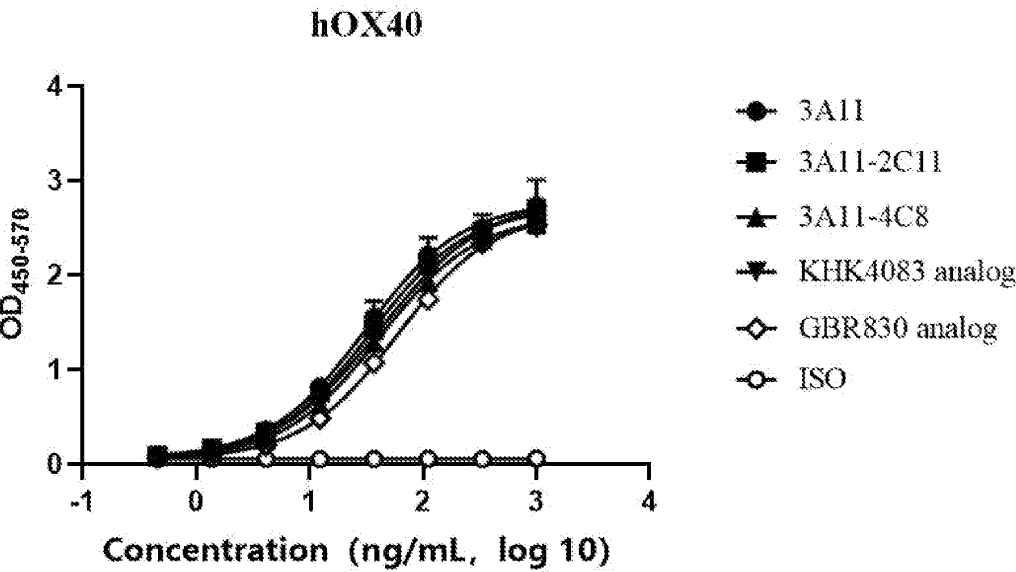


FIG. 4A

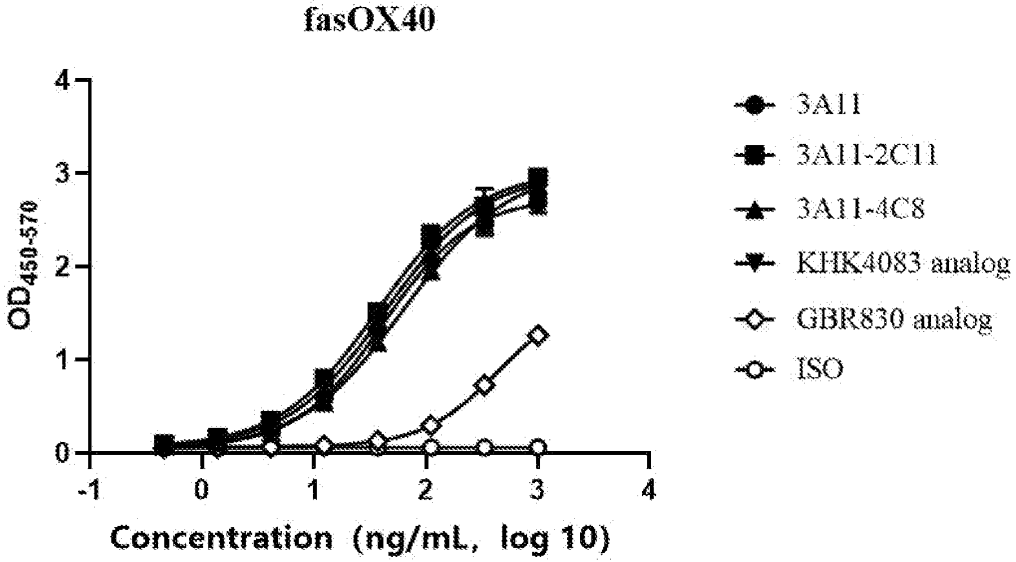


FIG. 4B

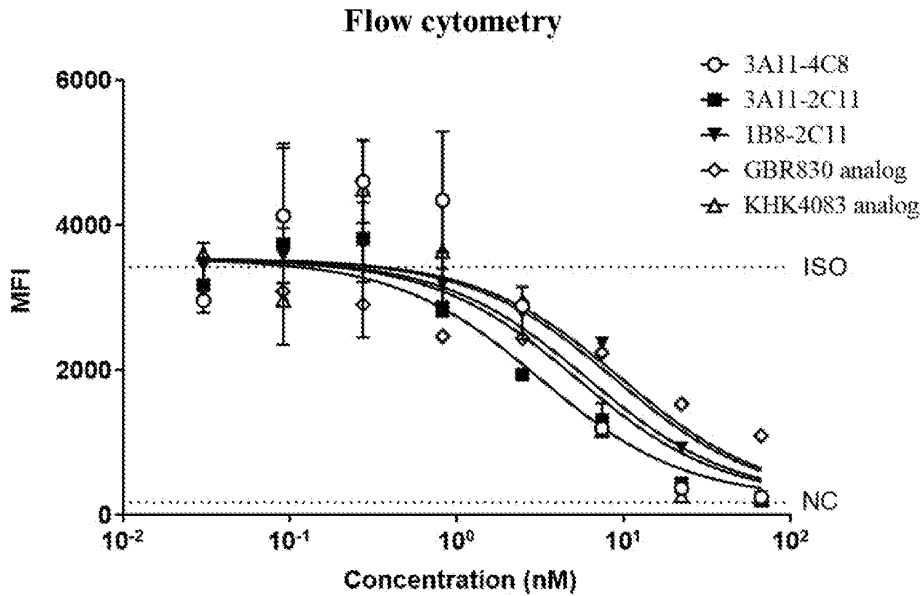


FIG. 5A

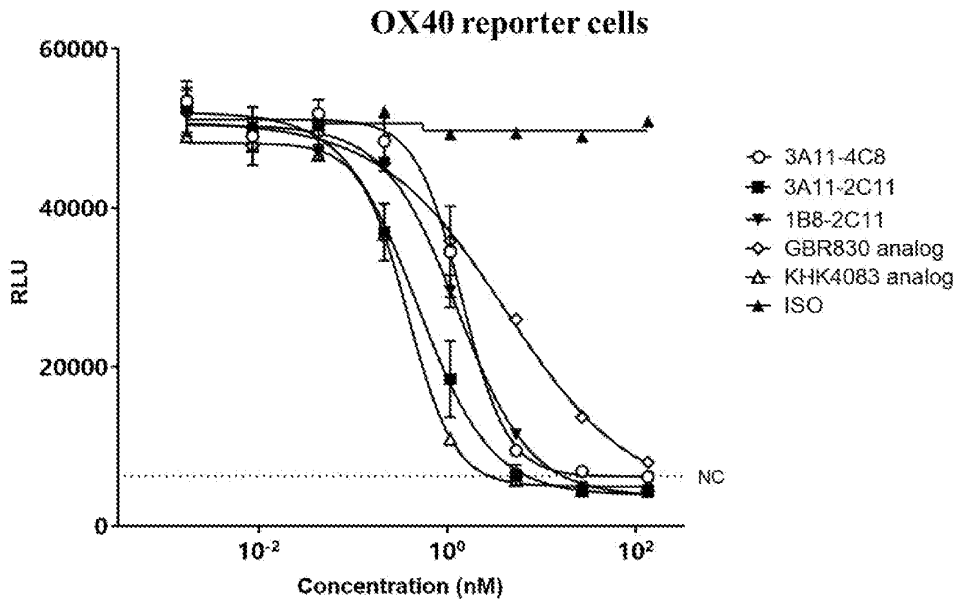


FIG. 5B

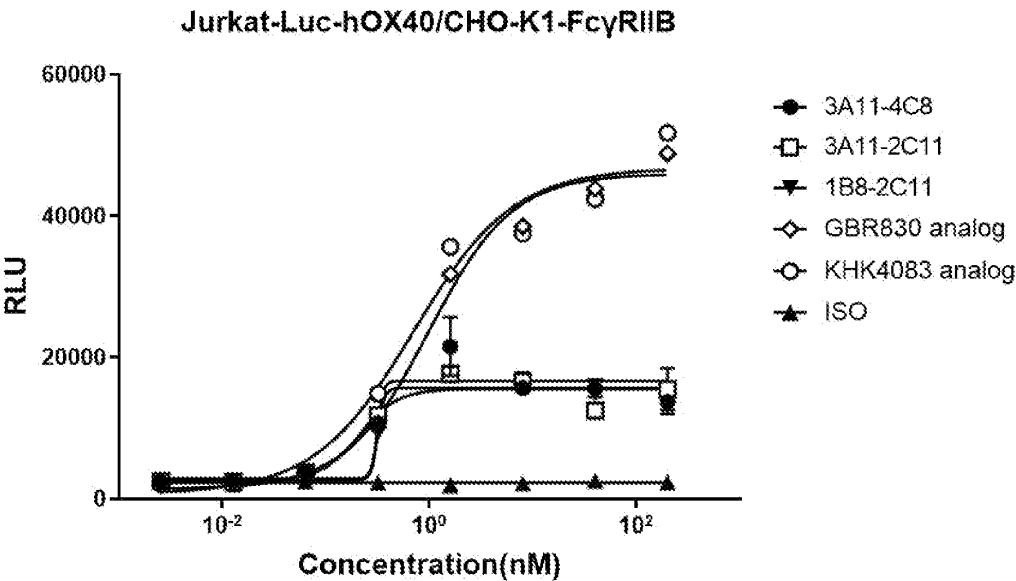


FIG. 6A

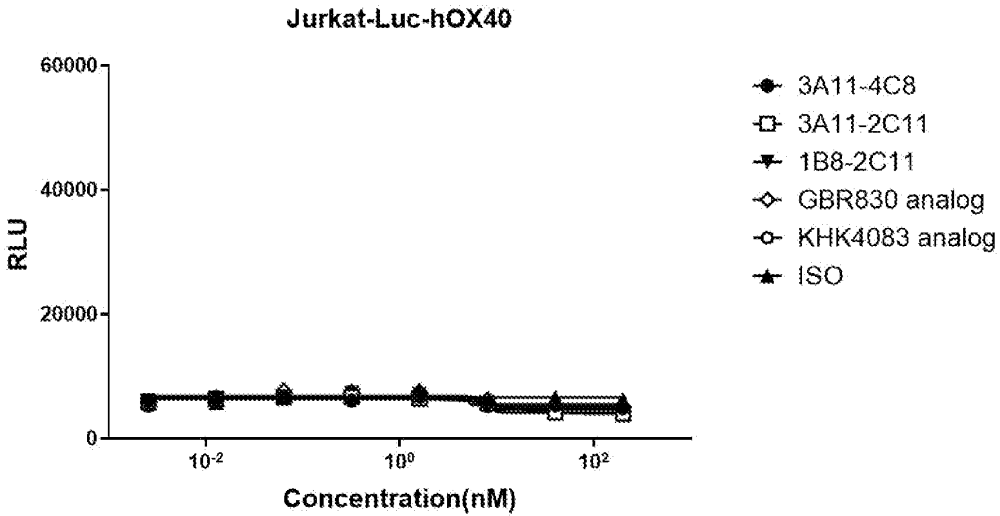


FIG. 6B

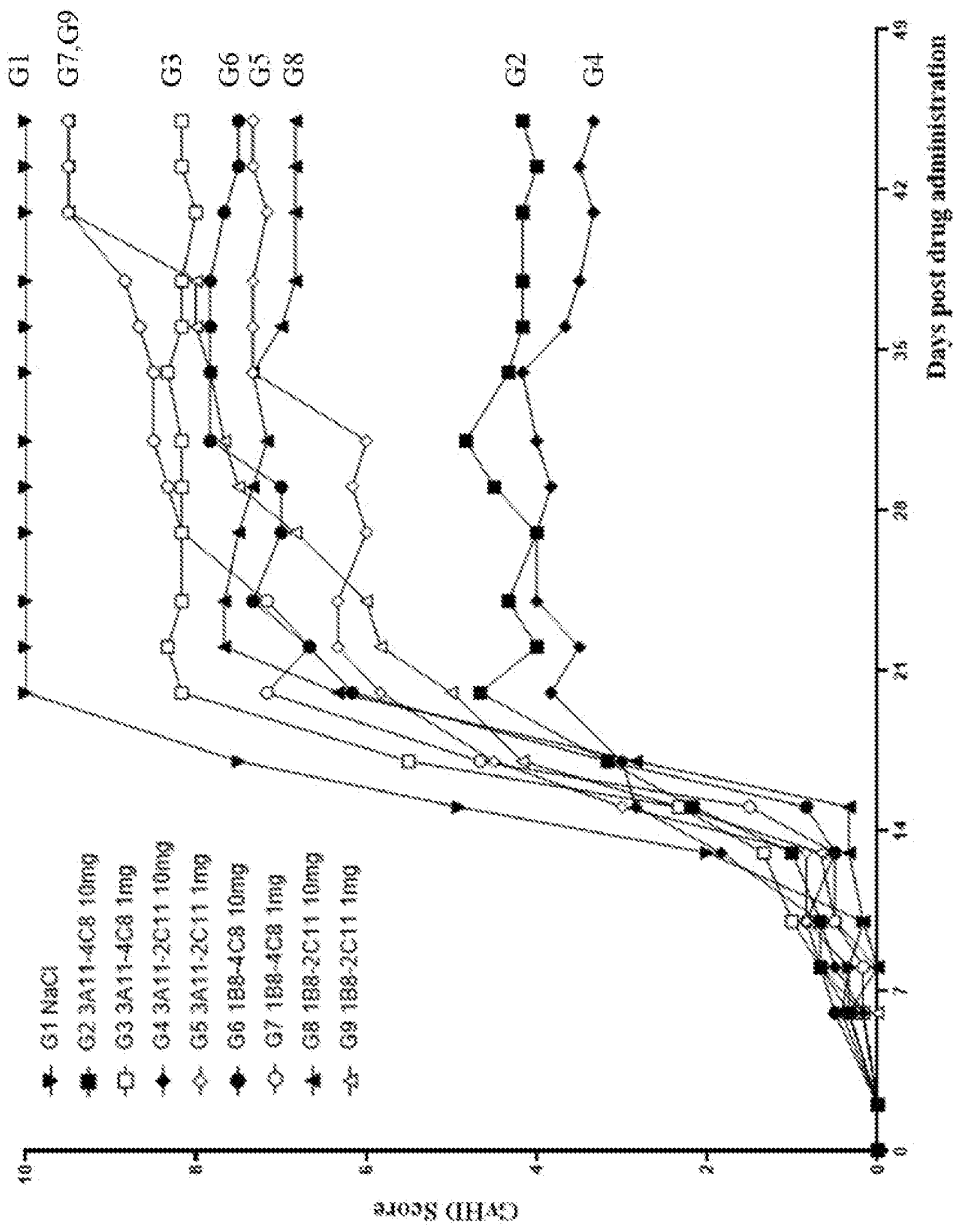


FIG. 7A

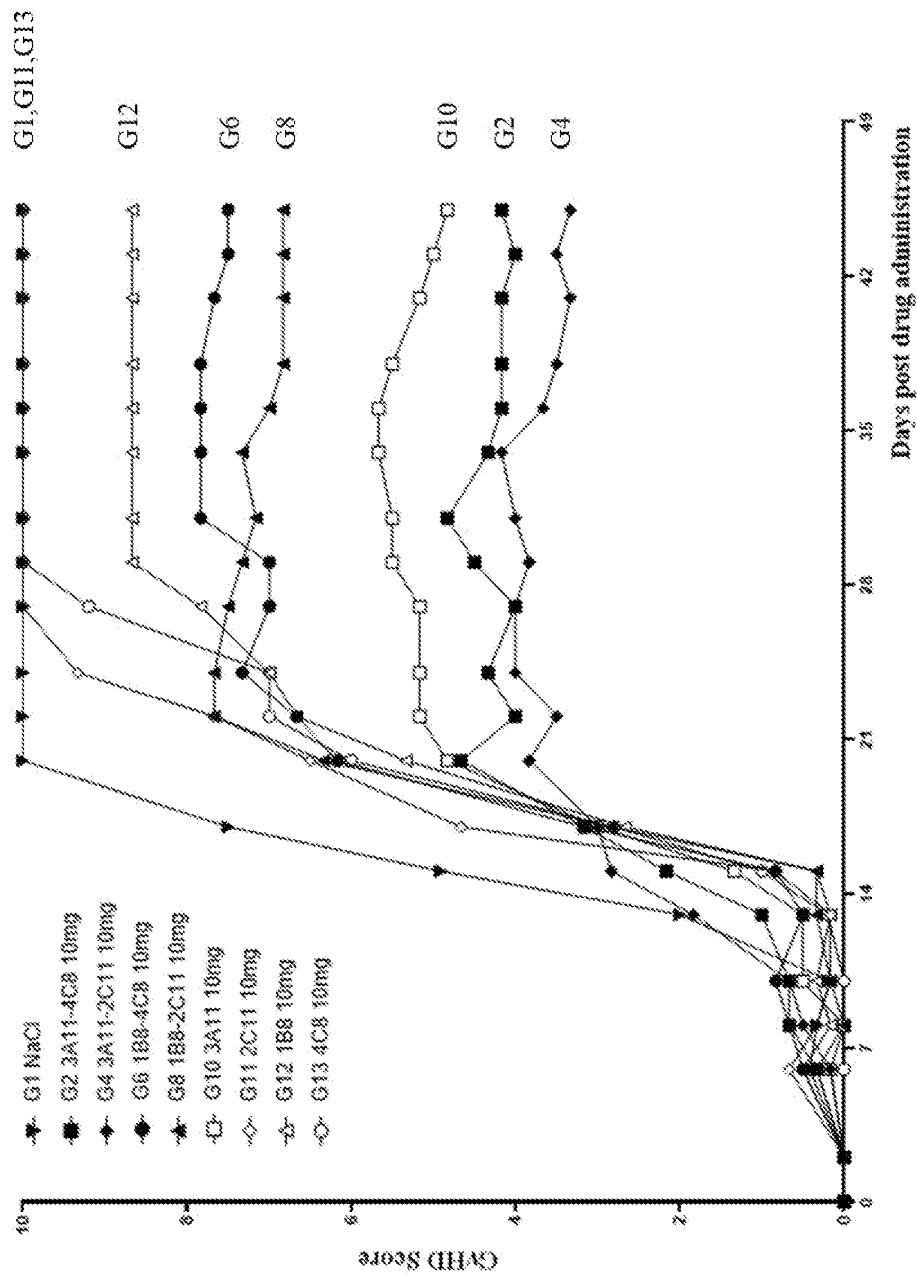


FIG. 7B

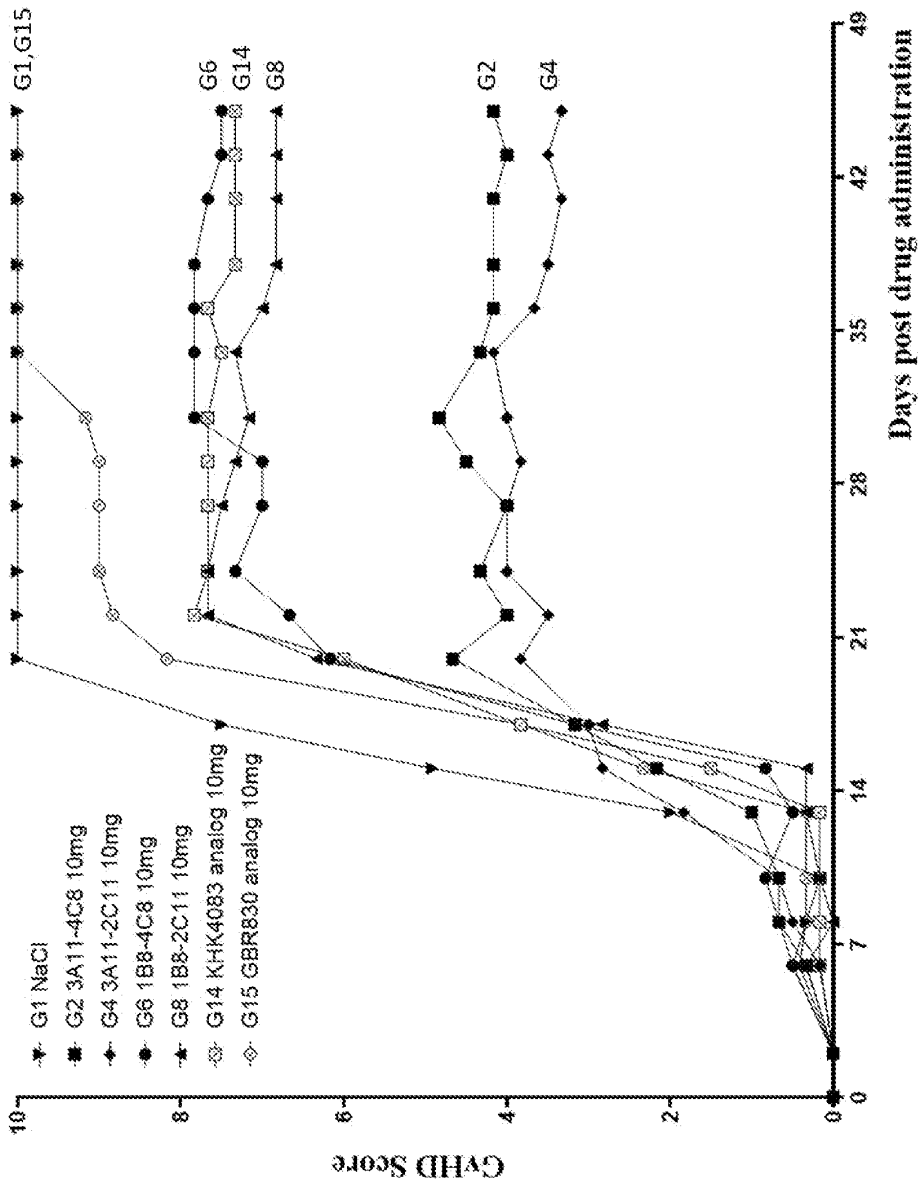


FIG. 7C

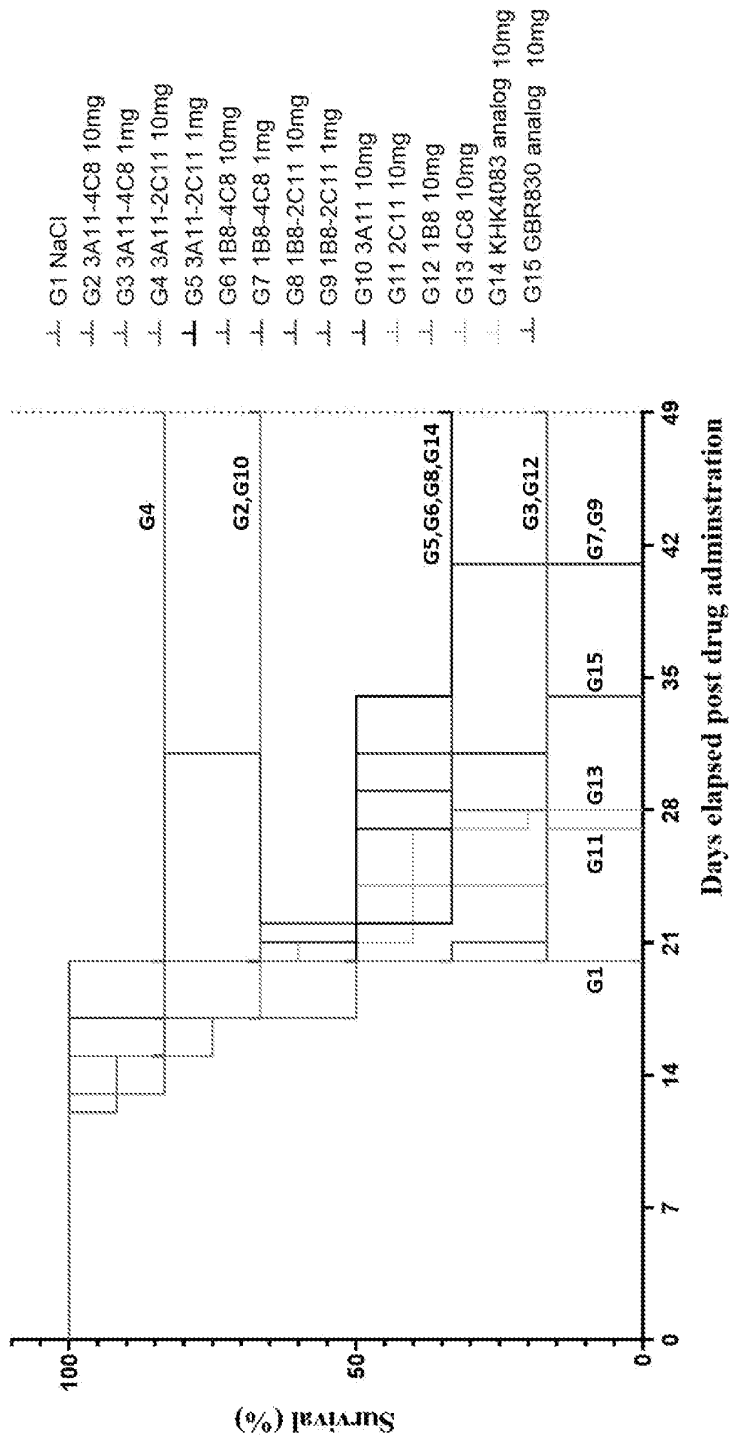


FIG. 8

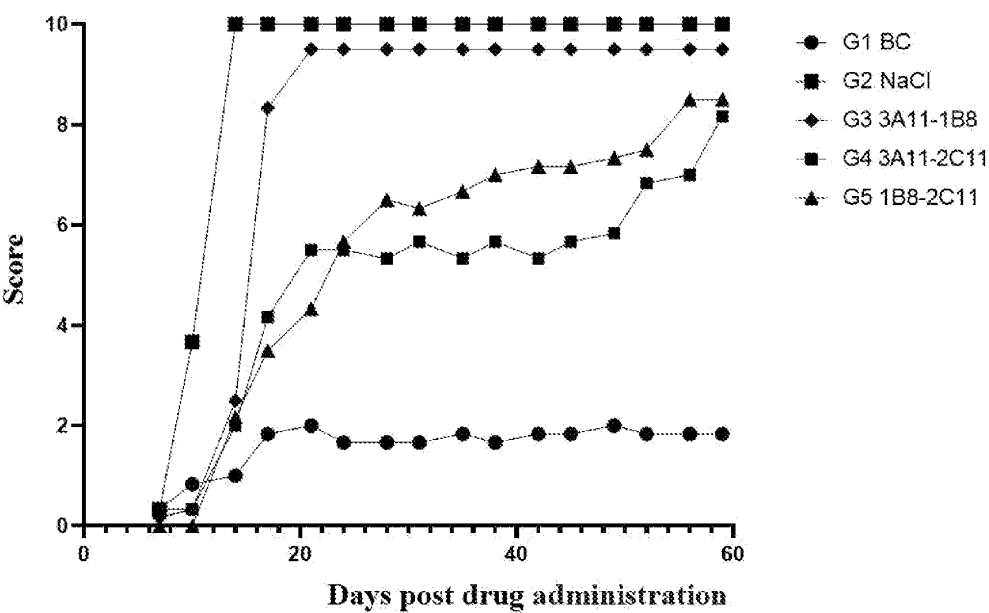


FIG. 9A

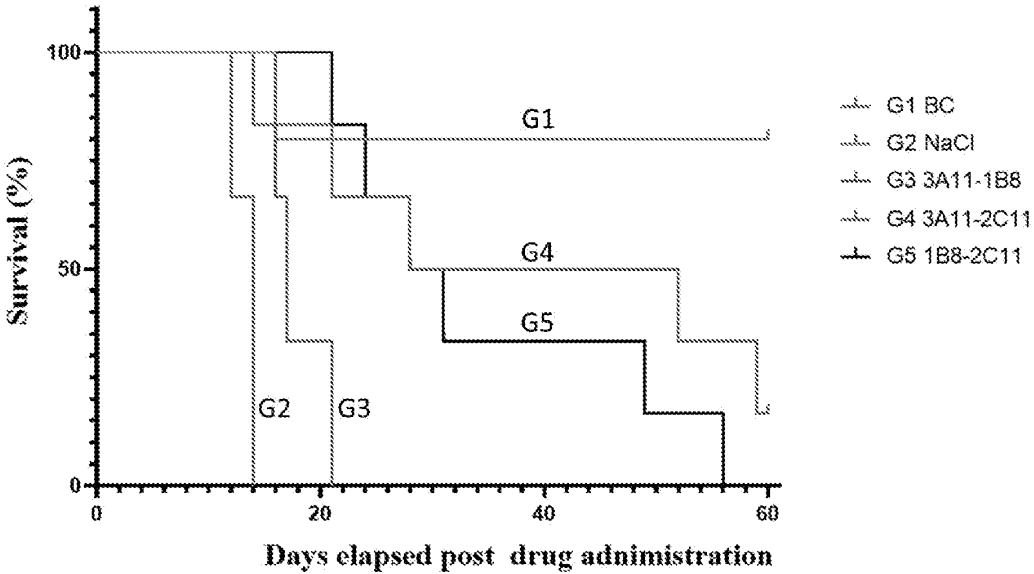


FIG. 9B

Kabat CDR

Ab	VH CDR1	SEQ ID:	VH CDR2	SEQ ID:	VH CDR3	SEQ ID:	VL CDR1	SEQ ID:	VL CDR2	SEQ ID:	VL CDR3	SEQ ID:
3A11	SYAVS	1	AISGSGGNTY YADSVKG	2	GDISGYGAFDV	3	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
1B8	TSGVGVG	4	LIYWDDDKRY SPSLQS	5	RELFGSENY	6	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
2C11	DSYMS	7	YISSISYTKYA DSVKG	8	DYDSDGNYYYFDY	9	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
4C8	TTRVGVG	10	LIYWDDDKRY SPSLKN	11	FGSGTYYNVDY	12	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27

FIG. 10

Chothia CDR

Ab	VH CDR1	SEQ ID:	VH CDR2	SEQ ID:	VH CDR3	SEQ ID:	VL CDR1	SEQ ID:	VL CDR2	SEQ ID:	VL CDR3	SEQ ID:
3A11	GFTFSSY	13	SGSGGN	14	GDISGYGAFDV	15	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
1B8	GFSLSTSGV	16	YWDDD	17	RELFGSENY	18	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
2C11	GFTFSDS	19	SSSISY	20	DYDSDGNYYYFDY	21	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27
4C8	GFSLSTTRV	22	YWDDD	23	FGSGTYYNVDY	24	RASQSVSSYLA	25	DASNRAT	26	QQRSNW/PPT	27

FIG. 11

FIG. 12

Description	Amino acid sequence	SEQ ID NO:
3A11 VH	EVQLVQSGGGLVQPGGSLRLSCAIVSGFTFSSYAVSWVRQAPGKGLEWVSAISGGGNTYYADSVKGRFTISR DSSKNTLYLQMNSLRAEDTAVVYCANGDISGYGAFDVGQGTMTVSS	28
1B8 VH	QITLKESGPTLVKPTQTTLTCTFSGFSLSTSGVGWIRQPPGKALEWLALIYWDDDKRYPSPSLQSRLLTITKDT KNQVVLTMNMDPVDATYYCAHRELGFGENYWGGGTLTVSS	29
2C11 VH	EVQLVQSGGGLVKPGGSLRLSCAASGFTFSDSYM ¹ SWIRQAPGKGLEWISYISSSYTKYADSVKGRFTISRDN A ¹ KN ¹ SLYLEMINSLRAEDTAVVYCARYDDSGNYYFYFDYWGGGTLTVSS	30
4C8 VH	QVQLVESGPTLVKPTQTTLTCTFSGFSLSTRVGVGWIRQPPGKALEWLALIYWDDDKRYPSPSLKNRLTLTKD TSKNQVVLTMNMDPVDATYYCAHFGSGTYNVDYWGGGTLTVSS	31
Common light chain variable region	EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASN ¹ RATGIPARFSGSGSGTDFTLTIS SLEPEDFAVYQCQRSNW ¹ PPTFGQGTKEIKR	32

FIG. 13

Description	Amino acid sequence	SEQ ID NO:
Light chain constant region	RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC	33
IgG1 heavy chain constant region with knob	ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKHTCTPCCPAPELLGGPSVFLPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTV LHQDWLNGKEYCKVKSNKALPAP IEKTISKAKGQPREPQVYTLPPCREEMTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVVFSCSVMHEALHNHYTQKSLSLSPGK	34
IgG1 heavy chain constant region with hole	ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKHTCTPCCPAPELLGGPSVFLPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVSVLTV LHQDWLNGKEYCKVKSNKALPAP IEKTISKAKGQPREPQVCTLPPSREEMTKNQVSLCAVKGFYPSDIAVEWESNGQPENNYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVVFSCSVMHEALHNHYTQKSLSLSPGK	35
GBR830 VH	QVTLKESGPALVKPTQTLTLTCSFGSFLSTSGMGVGIWIRQPPGKALEWIAHIIWWDDDKYYNTALKTRLTI SKDTSKNQVWLTMTNMDPVDATYYCARIDWDGFAVWGGQGLTVTVSS	36
GBR830 VL	EIVLTQSPATLSLSPGERATLSCRASSSVSYMHWWYQQKPGQAPRPWIYATSNRATGIPARFSGSGSGTDYTLTISILEPEDFAVYYCQQWSSNPWTFGGQGTKVEIKR	37
KHK4083 VH	QITLKESGPTLVKPKQTLTLTCTFSGFLSTSGMGVGIWIRQPPGKALEWIAVIWDDHQLYSPSLKSLRITIT KDTSKNQVWLTMTNMDPVDATYYCAHRRGAFQHWGGQGLTVTVSS	38
KHK4083 VL	EIVLTQSPGTLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYDSSLTFGGGTKVEIKR	39

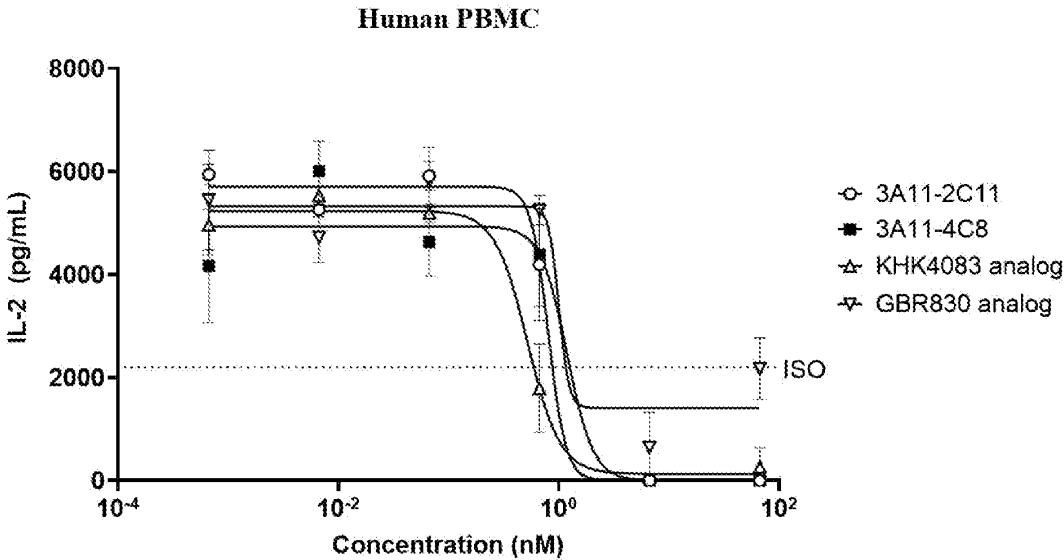


FIG. 14A

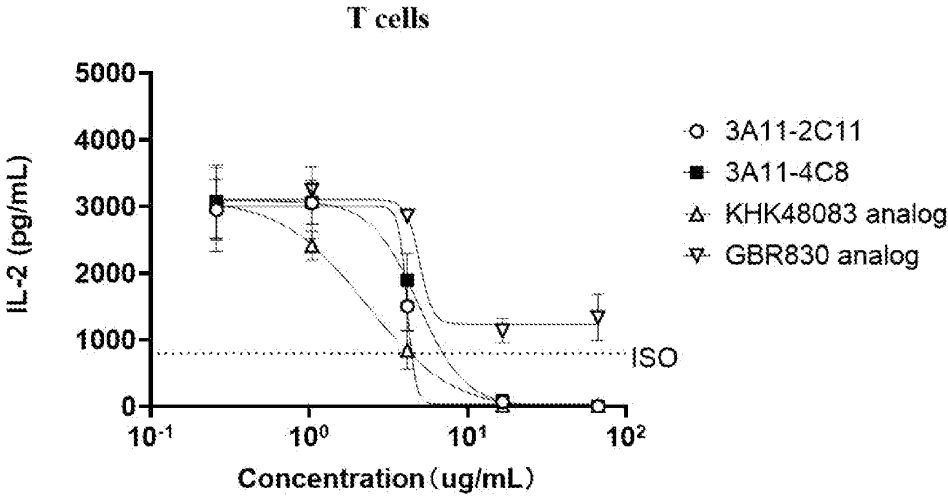


FIG. 14B

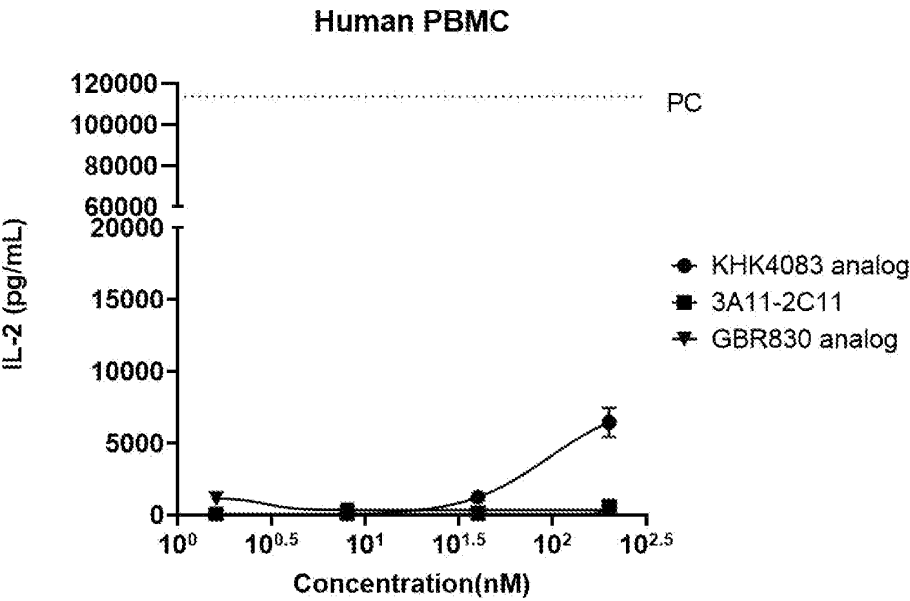


FIG. 15A

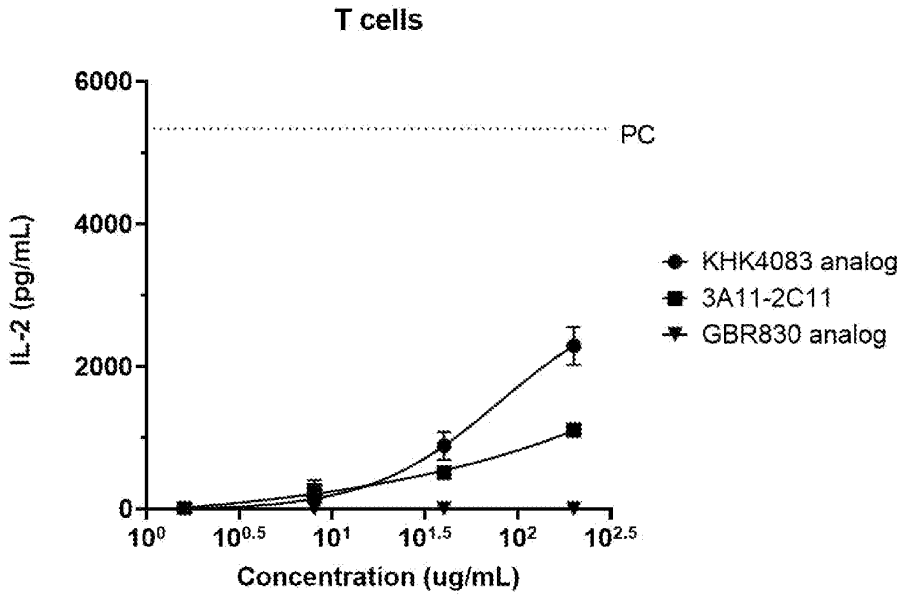


FIG. 15B

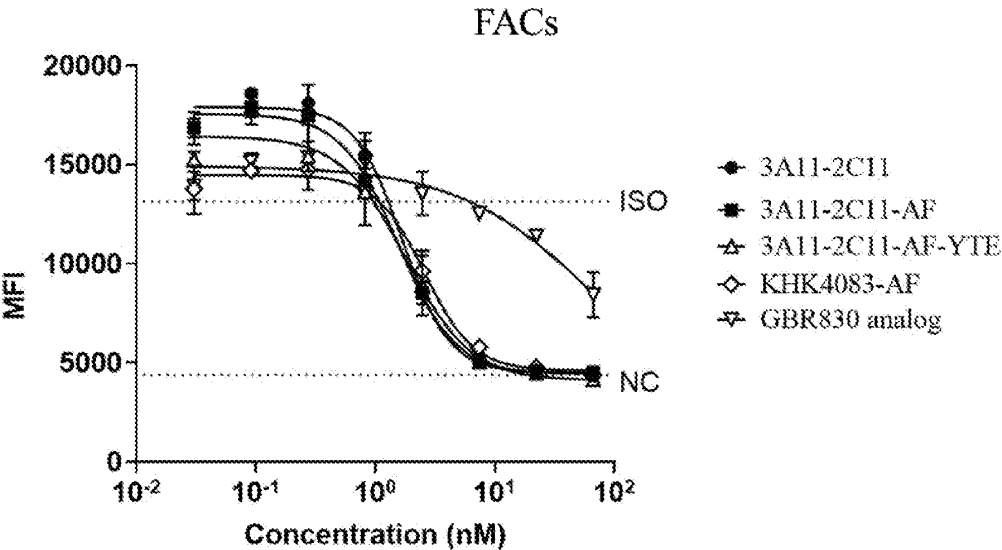


FIG. 16A

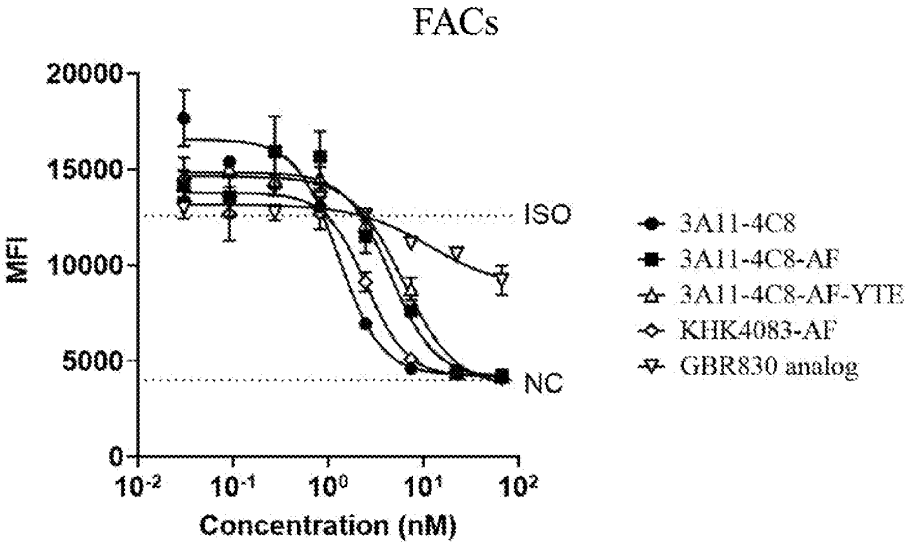


FIG. 16B

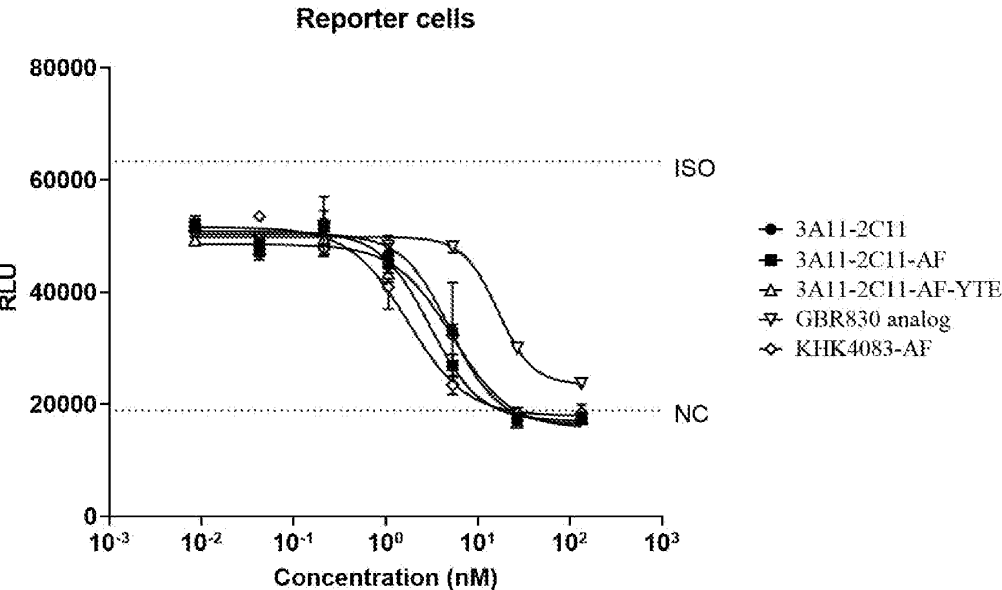


FIG. 16C

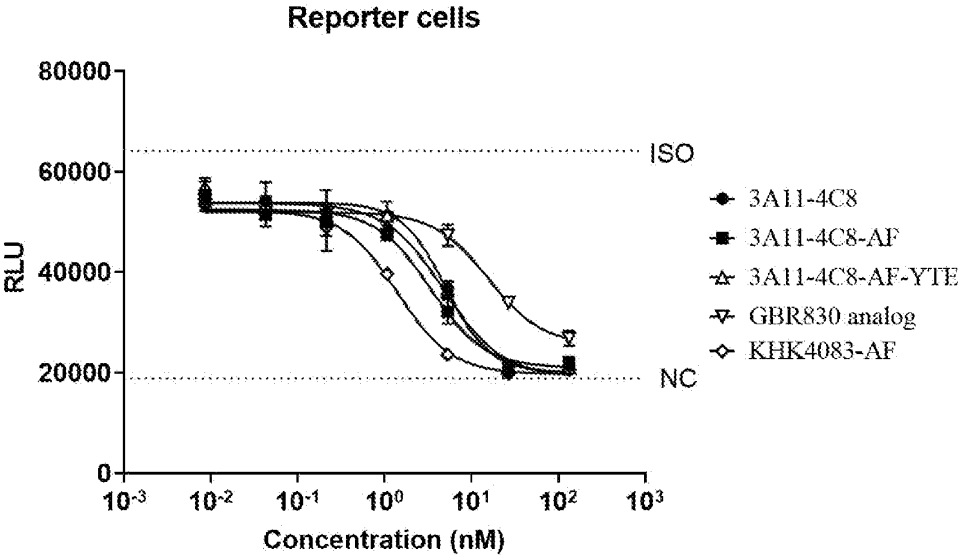


FIG. 16D

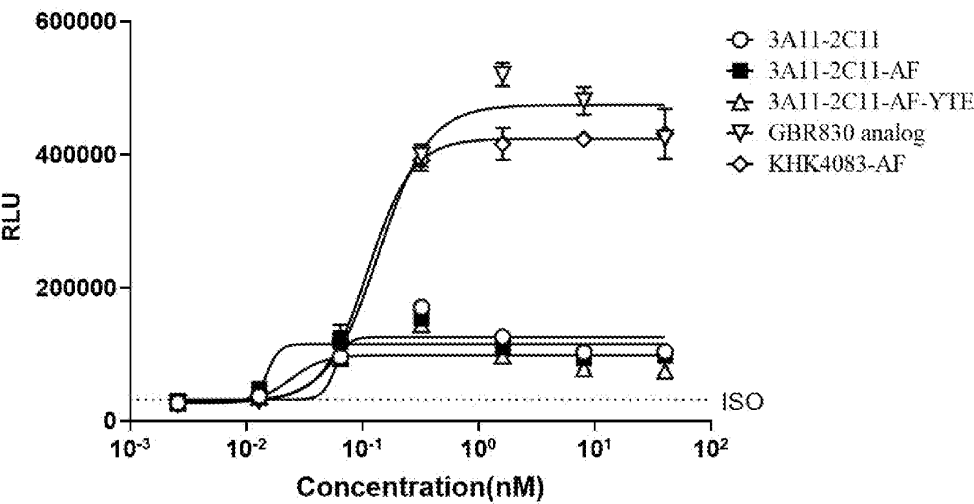


FIG. 17A

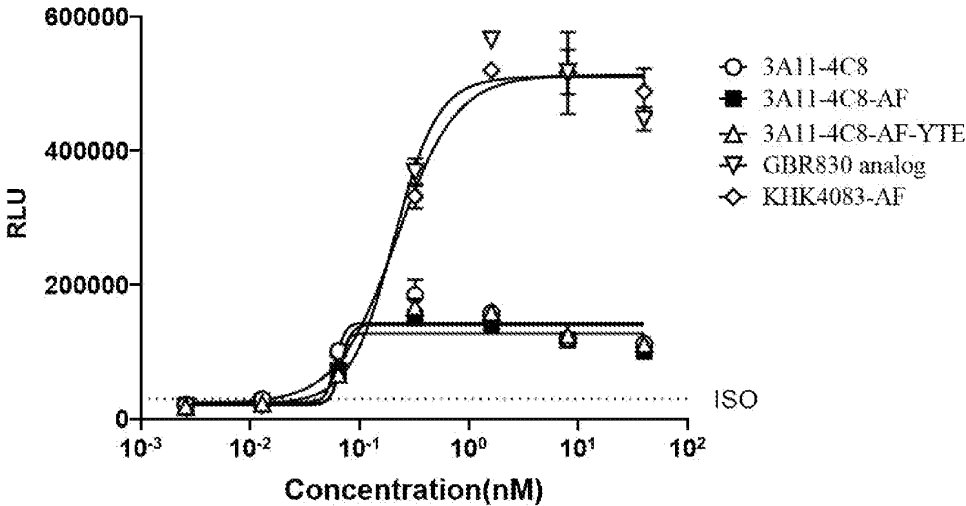


FIG. 17B

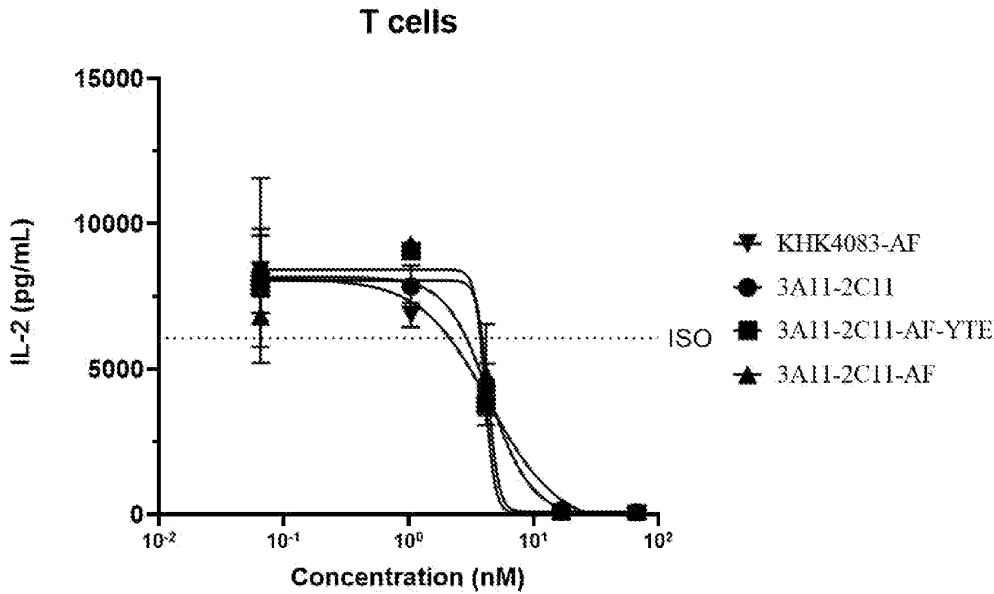


FIG. 18

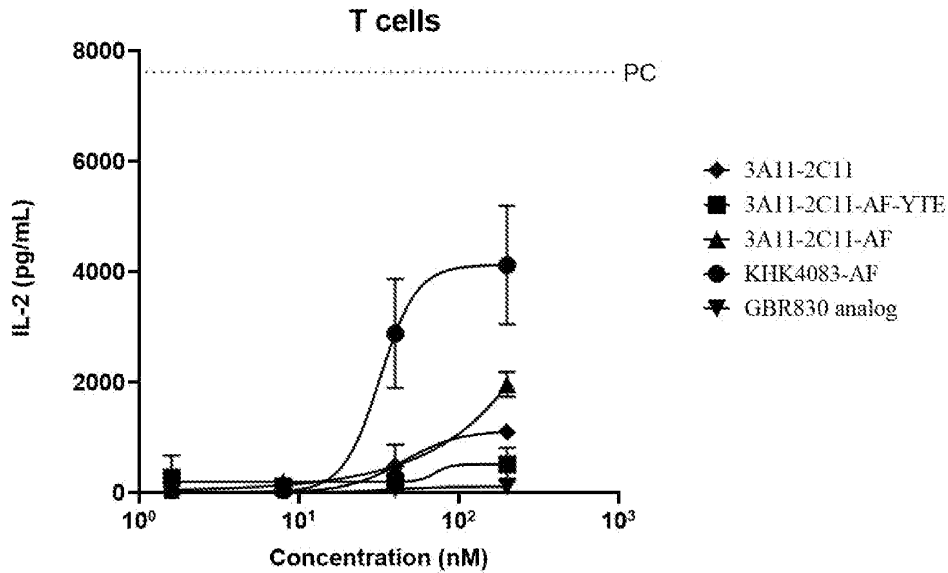


FIG. 19

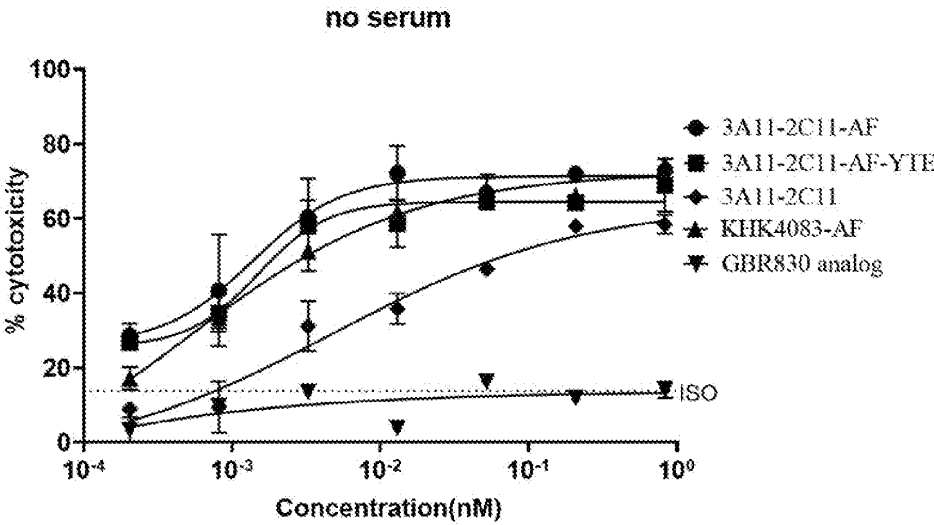


FIG. 20A

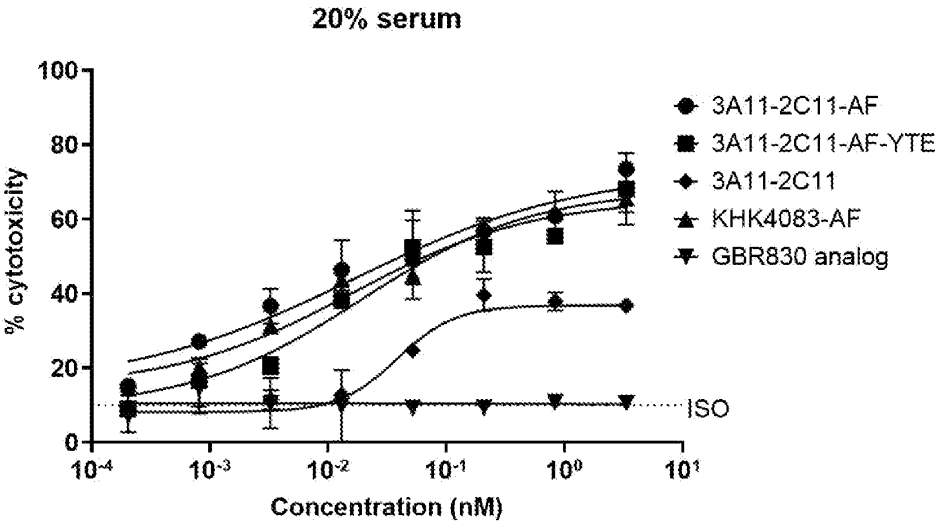


FIG. 20B

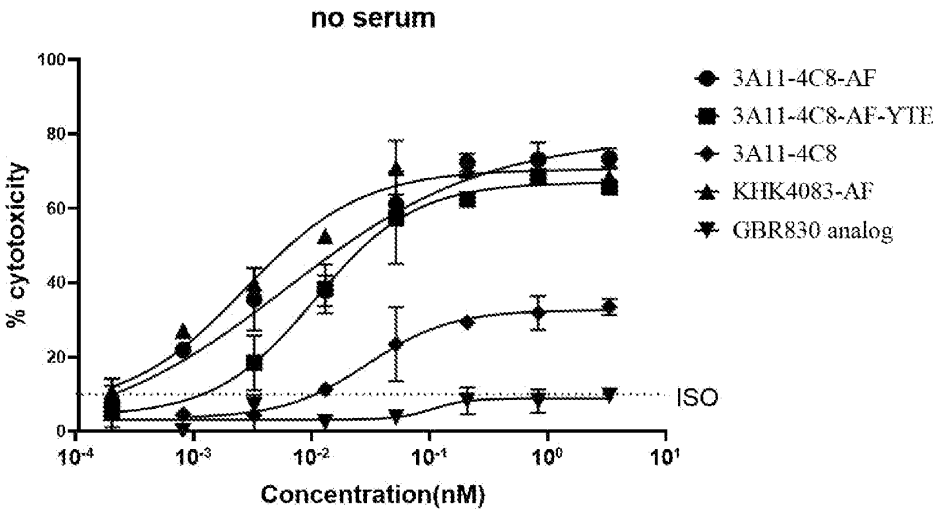


FIG. 20C

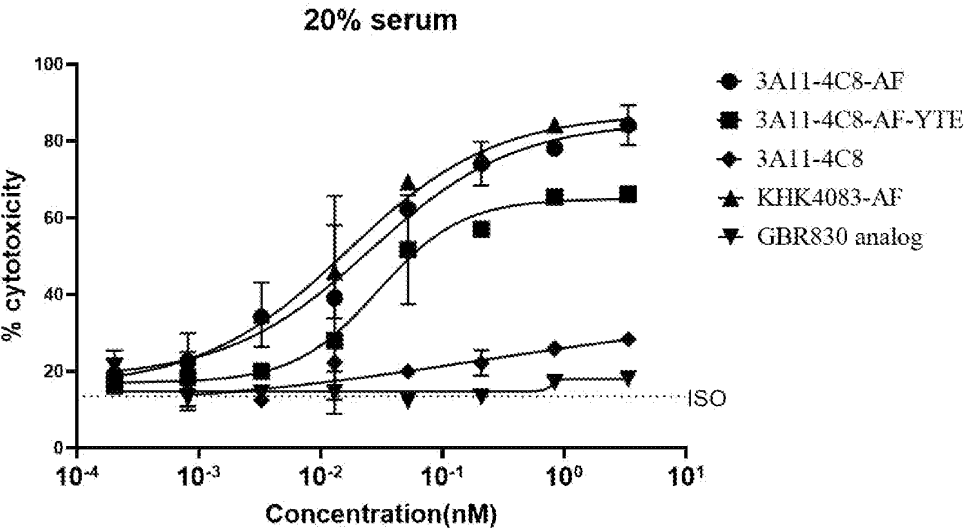


FIG. 20D

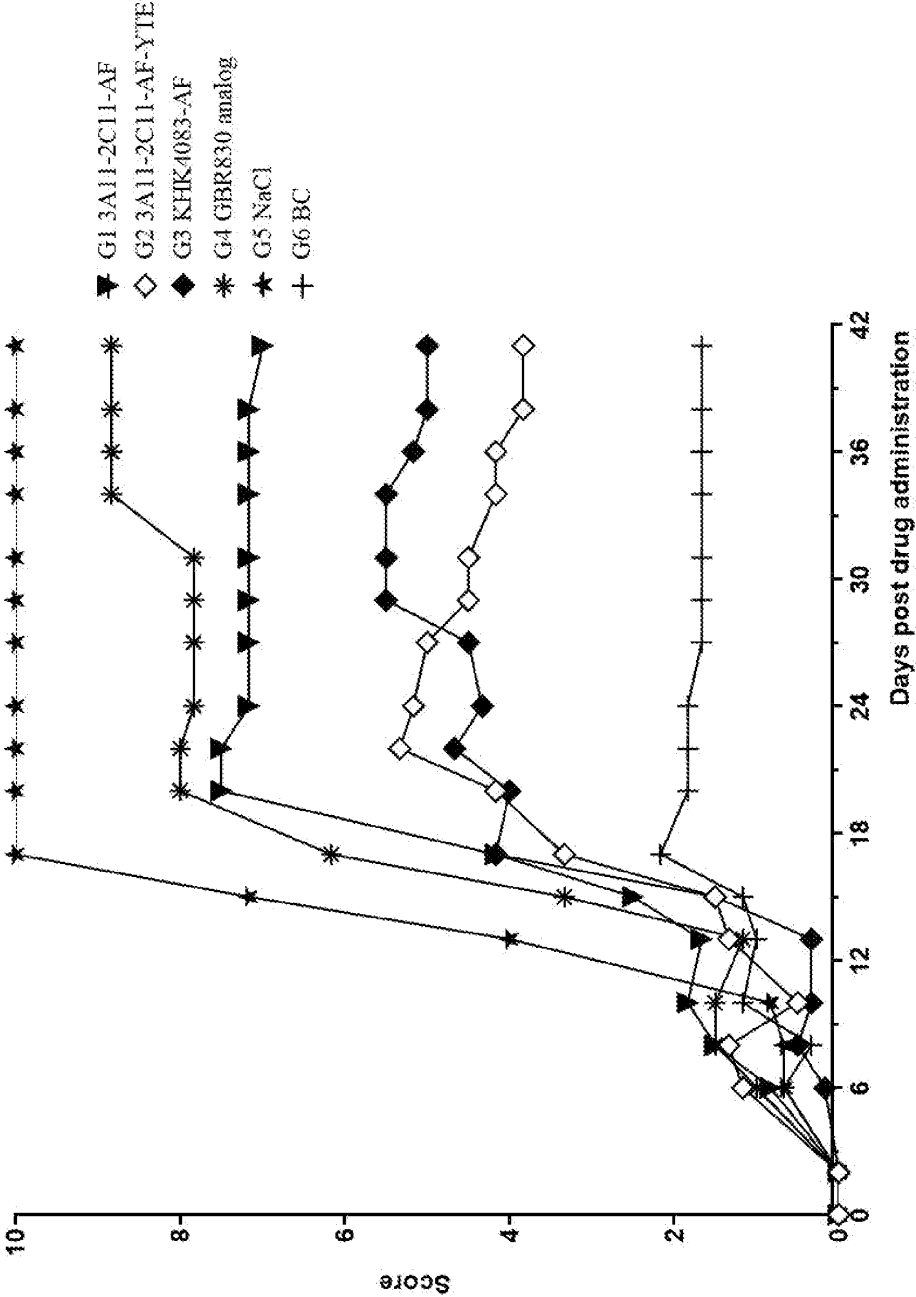


FIG. 21A

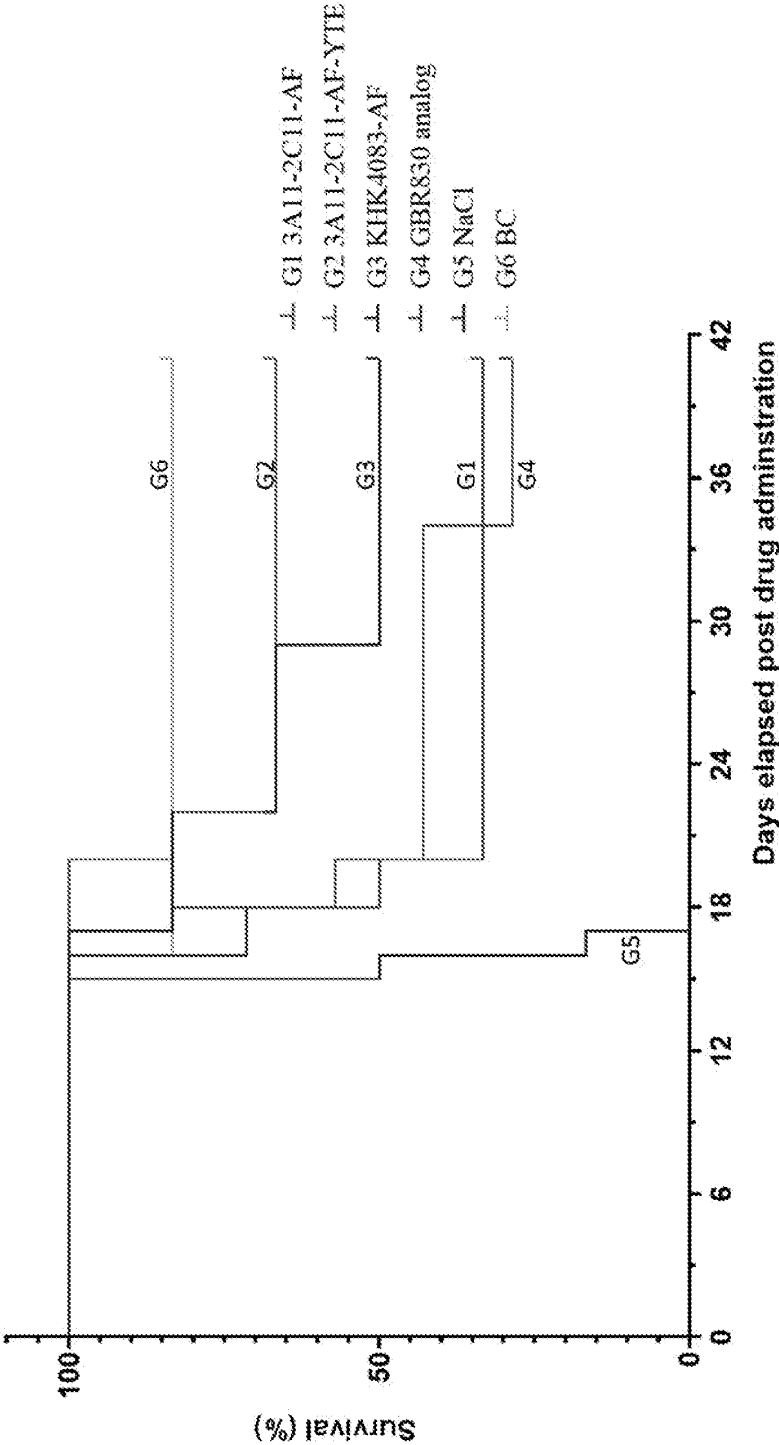


FIG. 21B

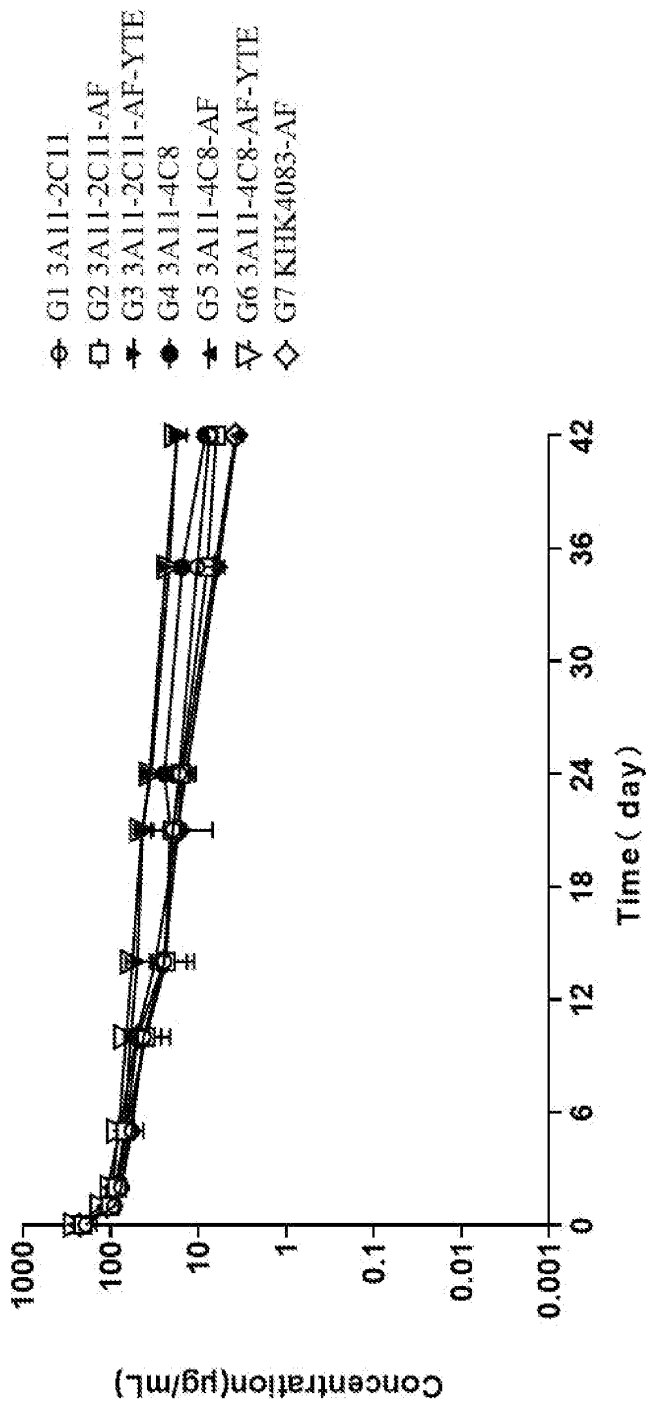


FIG. 22

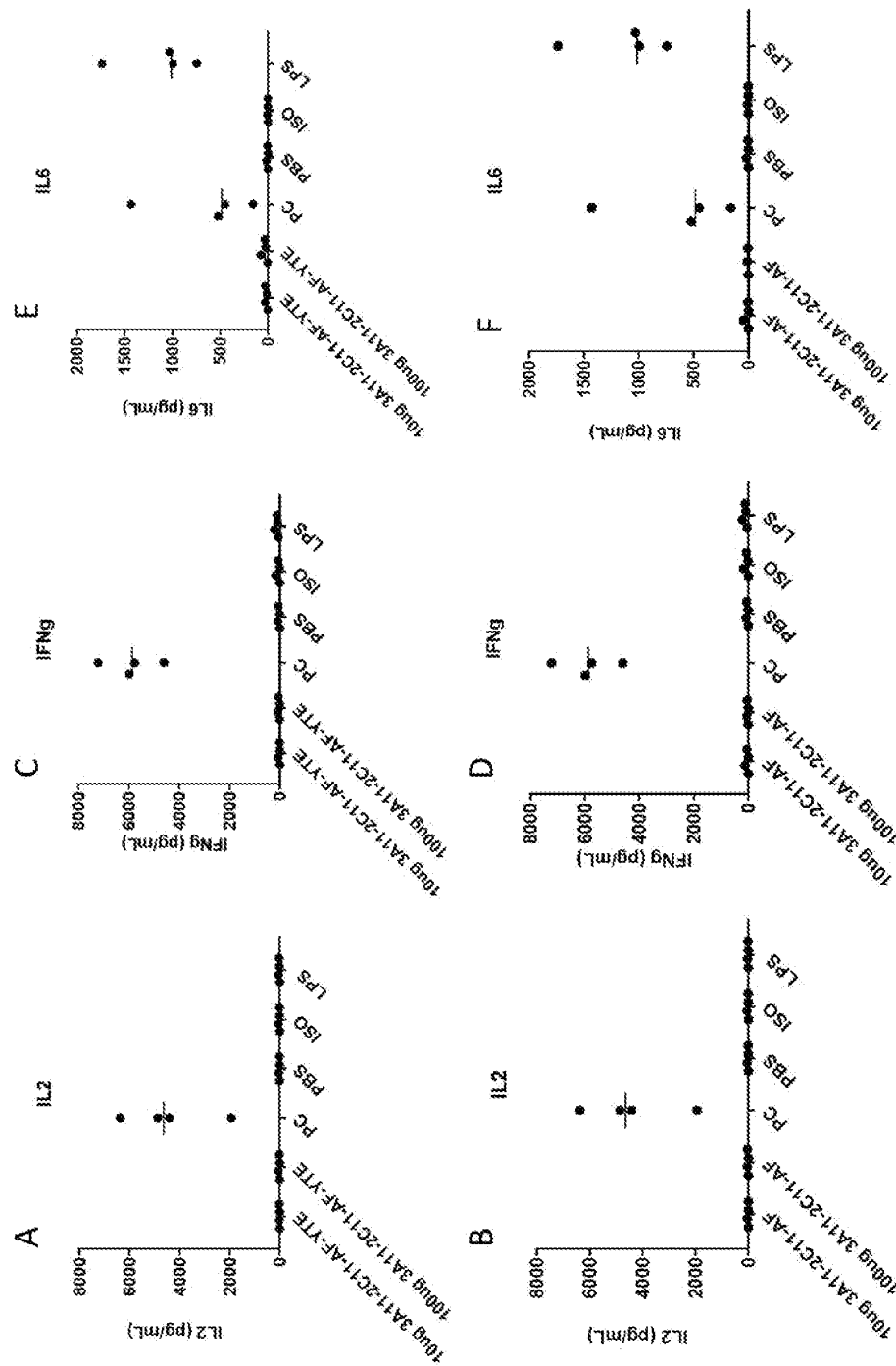


FIG. 23

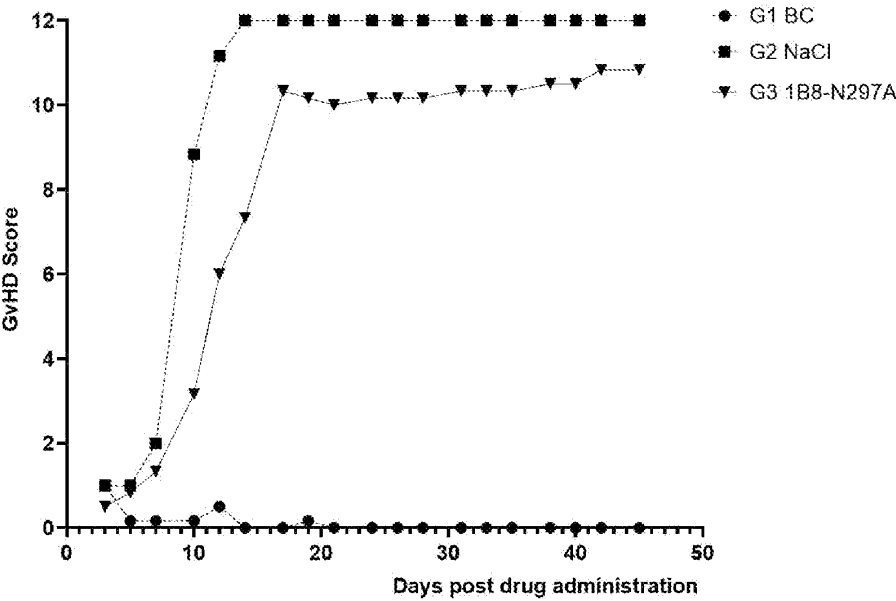


FIG. 24A

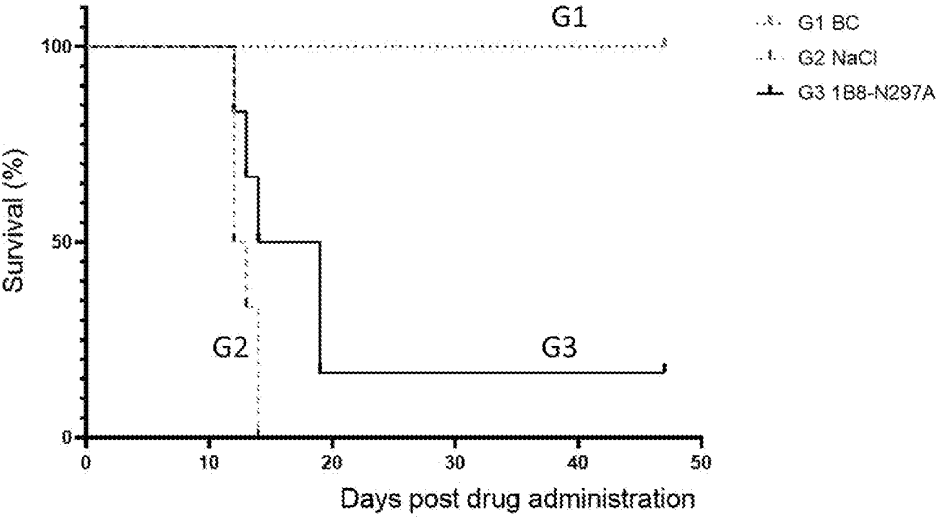


FIG. 24B

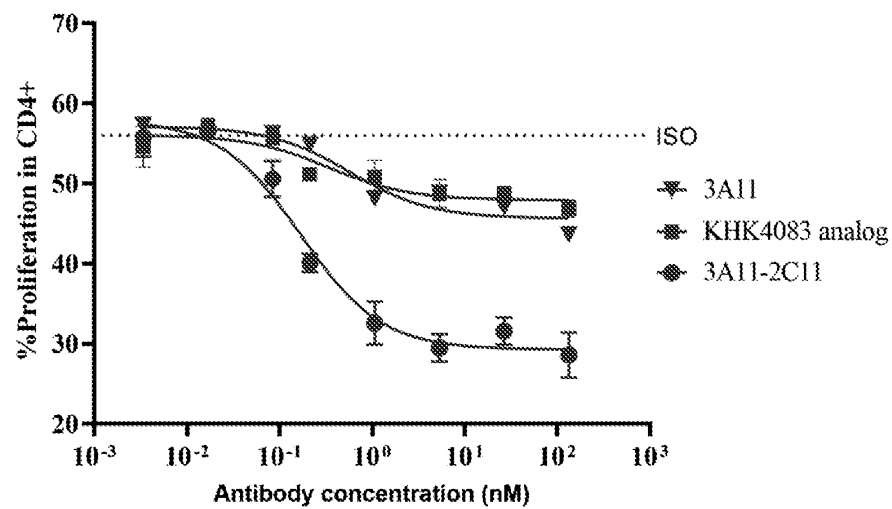


FIG. 25

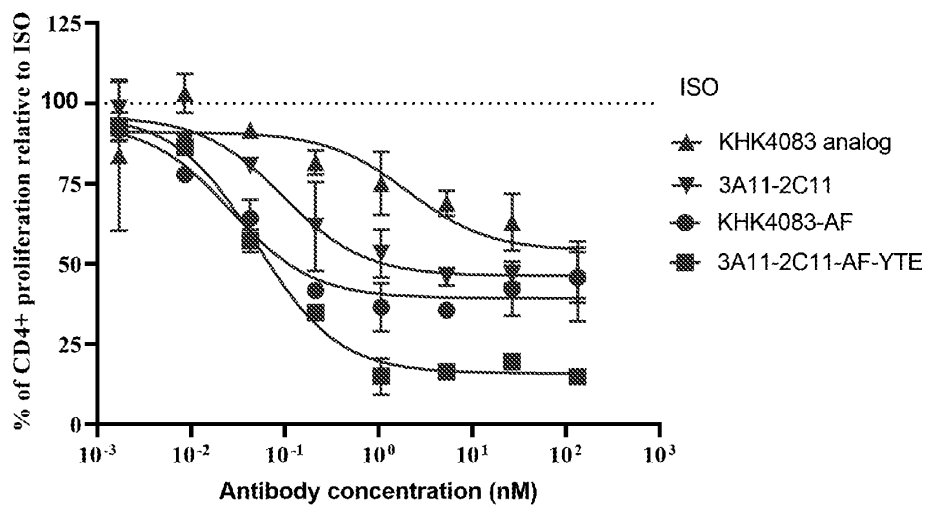


FIG. 26