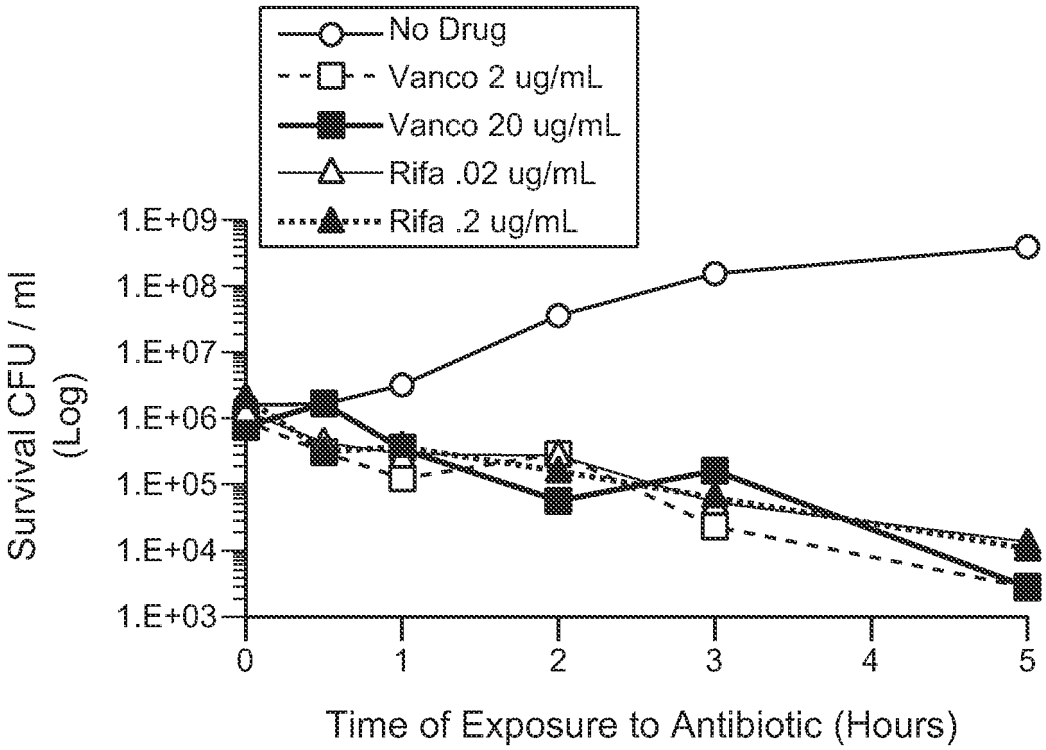

No Drug
Vanco 2 ug/mL
Vanco 20 ug/mL
Rifa .02 ug/mL
Rifa .2 ug/mL
Survival CFU / ml (Log)
1.E+09
1.E+08
1.E+07
1.E+06
1.E+05
1.E+04
1.E+03
0
1
2
3
4
5
Time of Exposure to Antibiotic (Hours)

FIG. 1

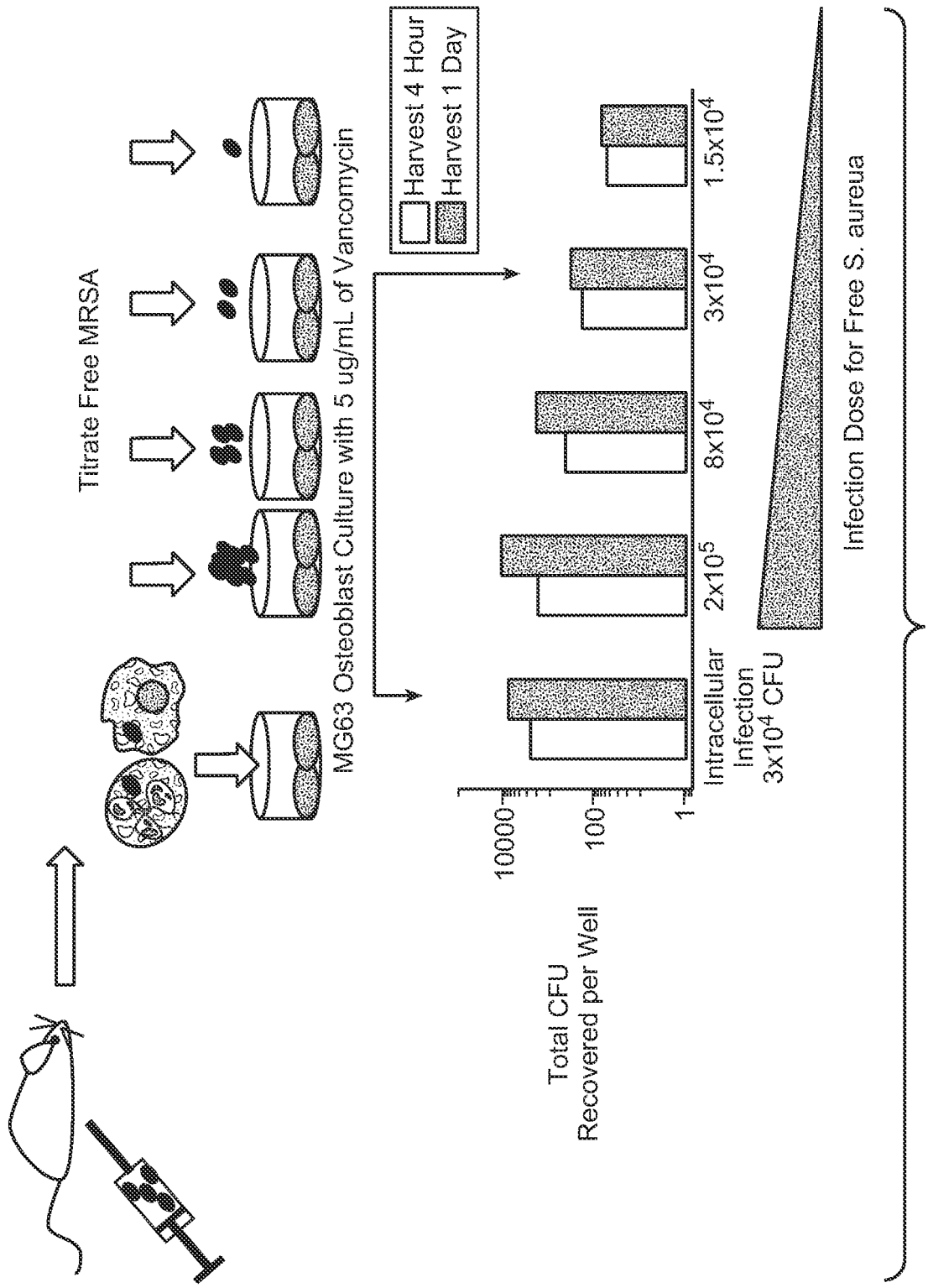

Titrate Free MRSA
MG63 Osteoblast Culture with 5 ug/mL of Vancomycin
Harvest 4 Hour
Harvest 1 Day
Total CFU Recovered per Well
10000
100
1
Intracellular Infection 3x10^4 CFU
2x10^5
8x10^4
3x10^4
1.5x10^4
Infection Dose for Free S. aureus

FIG. 2

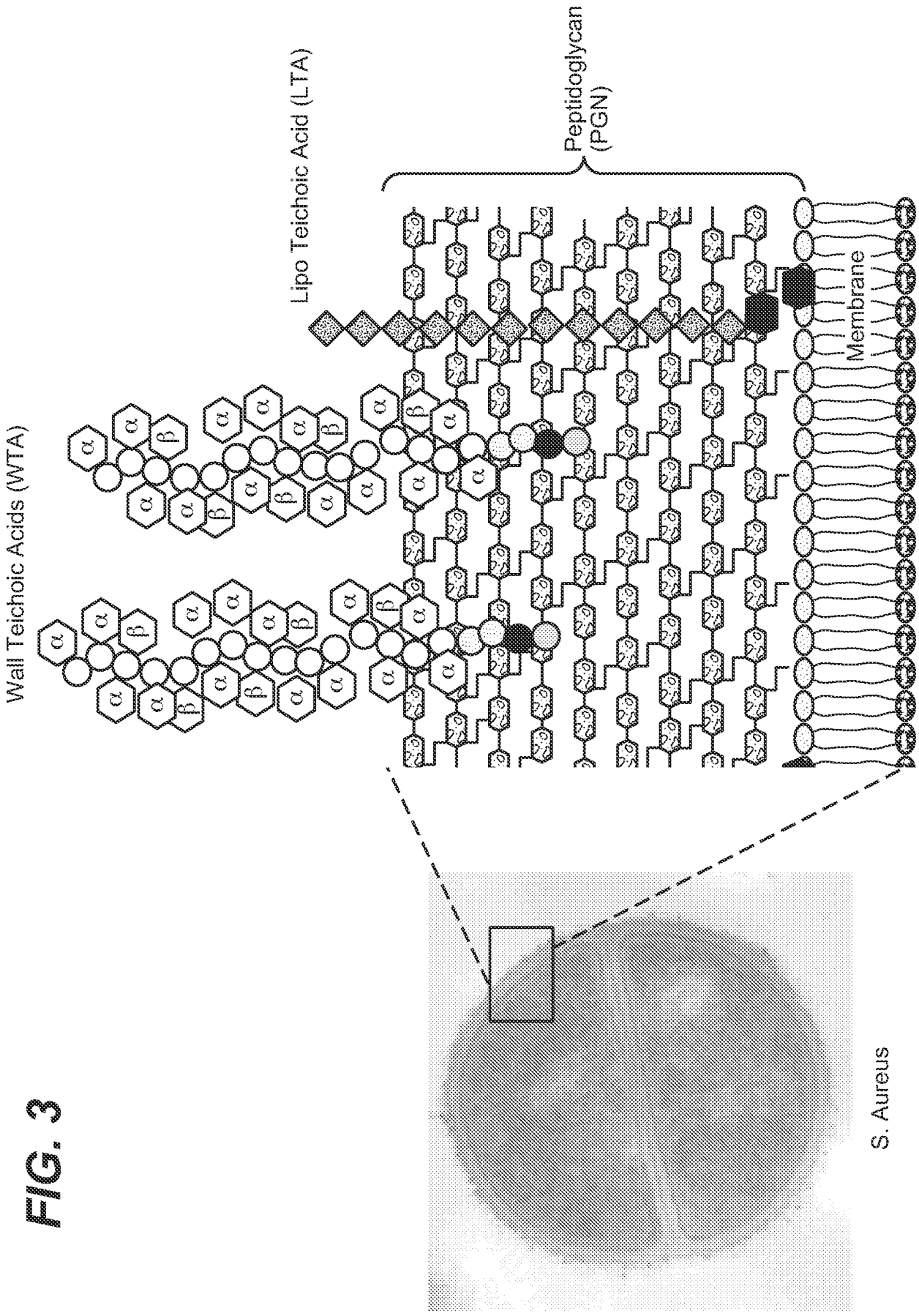

Wall Teichoic Acids (WTA)
Lipo Teichoic Acid (LTA)
Peptidoglycan (PGN)
Membrane
S. Aureus

FIG. 3

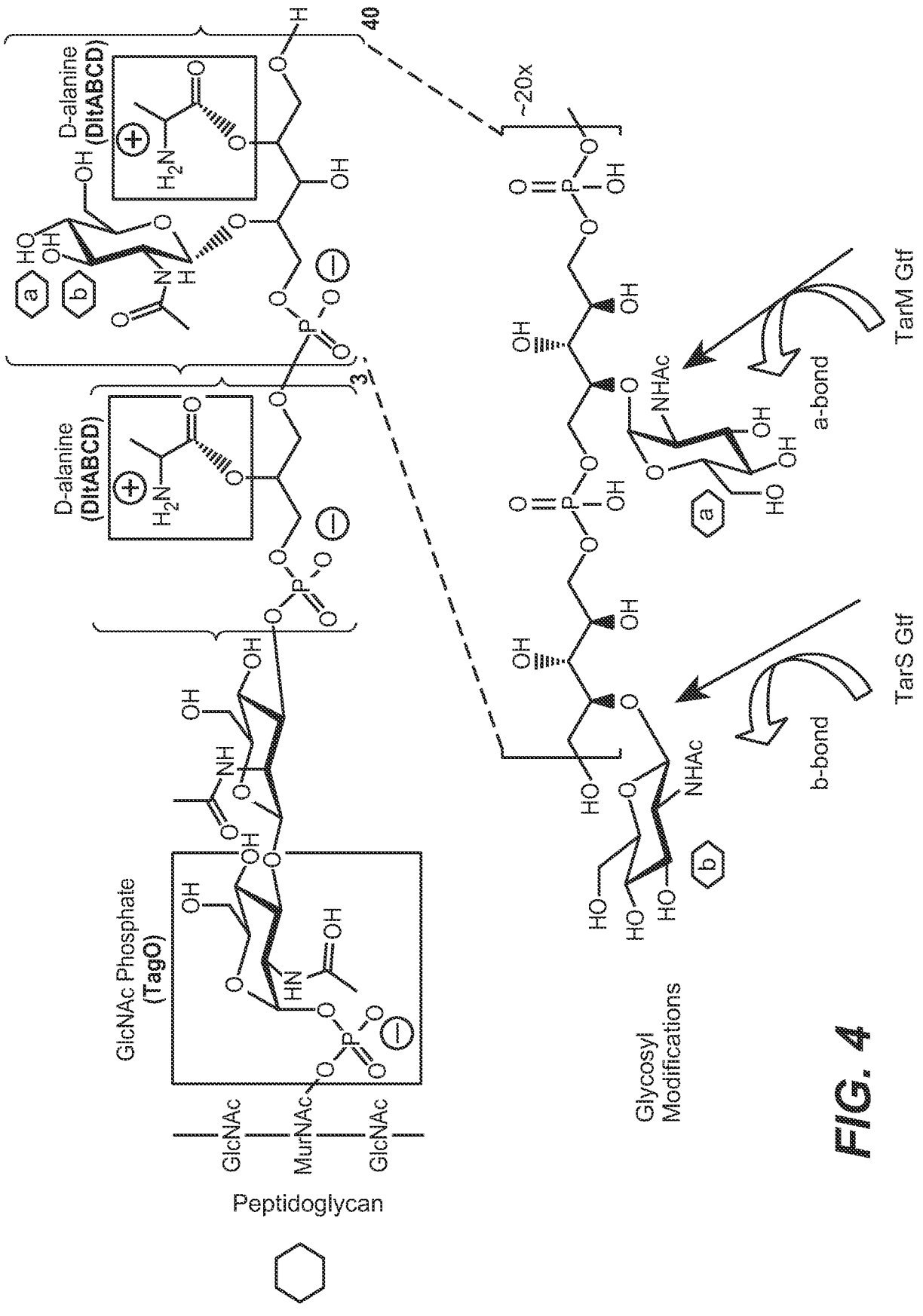

D-alanine
(DltABCD)
D-alanine
(DltABCD)
GlcNAc Phosphate
(TagO)
GlcNAc
MurNAc
GlcNAc
Peptidoglycan
40
~20x
3
Glycosyl
Modifications
a-bond
b-bond
TarM Gtf
TarS Gtf

FIG. 4

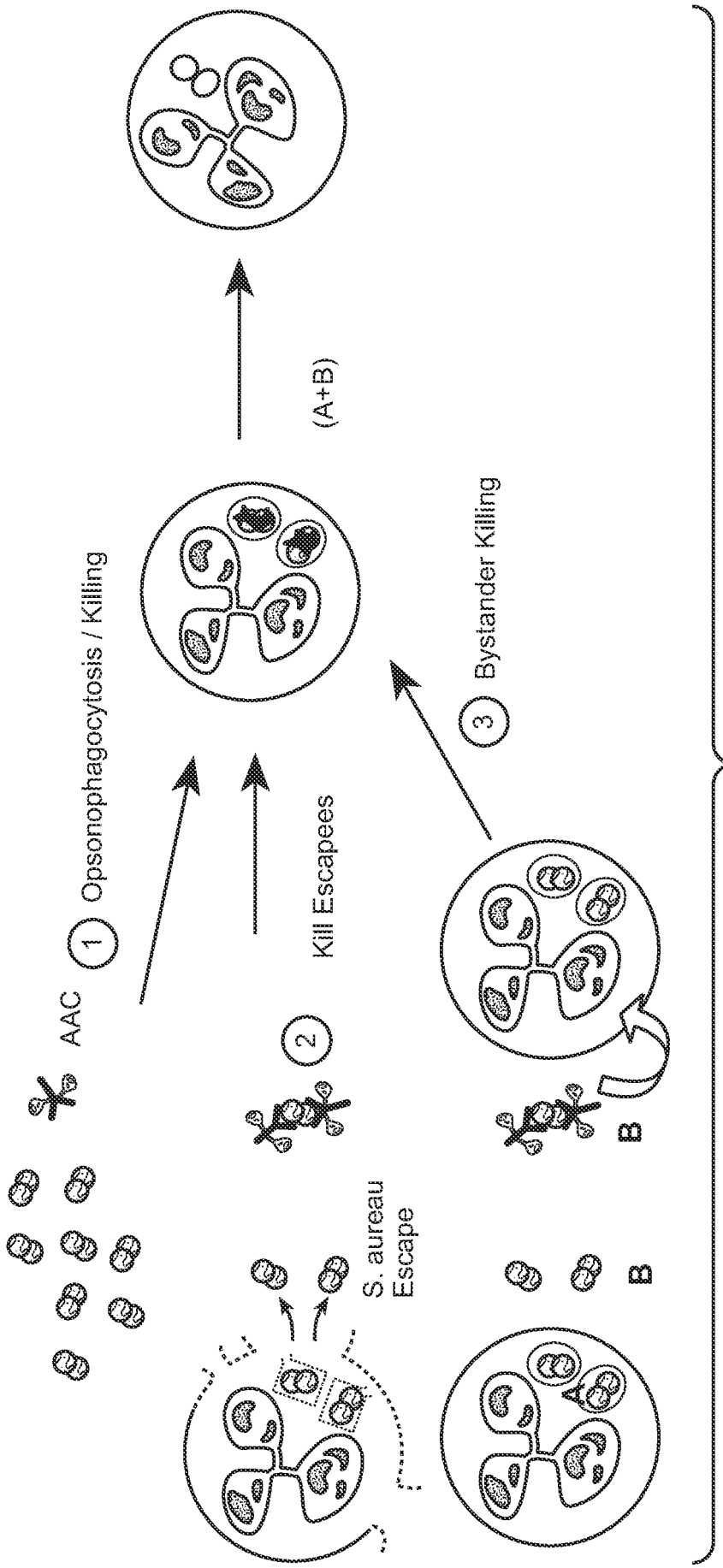

S. aureau
Escape
AAC
1 Opsonophagocytosis / Killing
2 Kill Escapees
3 Bystander Killing
(A+B)
B
B

FIG. 5

FIG. 6

FIG. 6A

FIG. 6B

FIG. 6A

Antibody	Antigen	GlcNAc	KD(nM)	Antigen Density Ave.Sites Bacterium	Donor	Source Cells	Binding to Coating(s) in Primary Screening Ag (ELISA)
4497	WTA	beta	2.5	50	327	PB/PC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)
4462	WTA	beta	3.1	43	326	sMBC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)
4460	WTA	beta			326	sMBC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)
4487	WTA	beta			327	PB/PC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)
6078	WTA	beta			349	sMBC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6263	WTA	beta	1.4	22,000	350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6297	WTA	beta	1.1	21,000	350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6239	WTA	beta			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6292	WTA	beta			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6232	WTA	beta			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6259	WTA	beta			350	PB/PC	CW USA300 stat (iron depl:TSB in 96:4 ratio)
6253	WTA	beta			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6265	WTA	beta			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)

4461(7574)	WTA	alpha			326	sMBC	CW USA300 stat (iron depl:TSB in 96:4 ratio)
4624(7578)	WTA	alpha	0.4	16	326	sMBC	CW USA300 stat (iron depl:TSB in 96:4 ratio)
4399	WTA	alpha			326	sMBC	CW USA300 stat (iron depl:TSB in 96:4 ratio)
6267	WTA	alpha			350	PB/PC	CW USA300 stat (iron depl:TSB in 96:4 ratio)
rF1	SDR-proteins	?	0.3	1600			
4516(7577)	SDR-proteins	?			327	PB/PC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)
6234	SDR-proteins	?			350	PB/PC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
6060	SDR-proteins	?			349	sMBC	PGN+WTA (1:1); CW USA300 stat (iron depl:TSB in 96:4 ratio)
4569	LTA	?			327	PB/PC	CW Wood46 stat TSB
4479	PGN				327	PB/PC	WTA; PGN; CW USA300 stat (iron depl:TSB in 96:4 ratio)

FIG. 6B

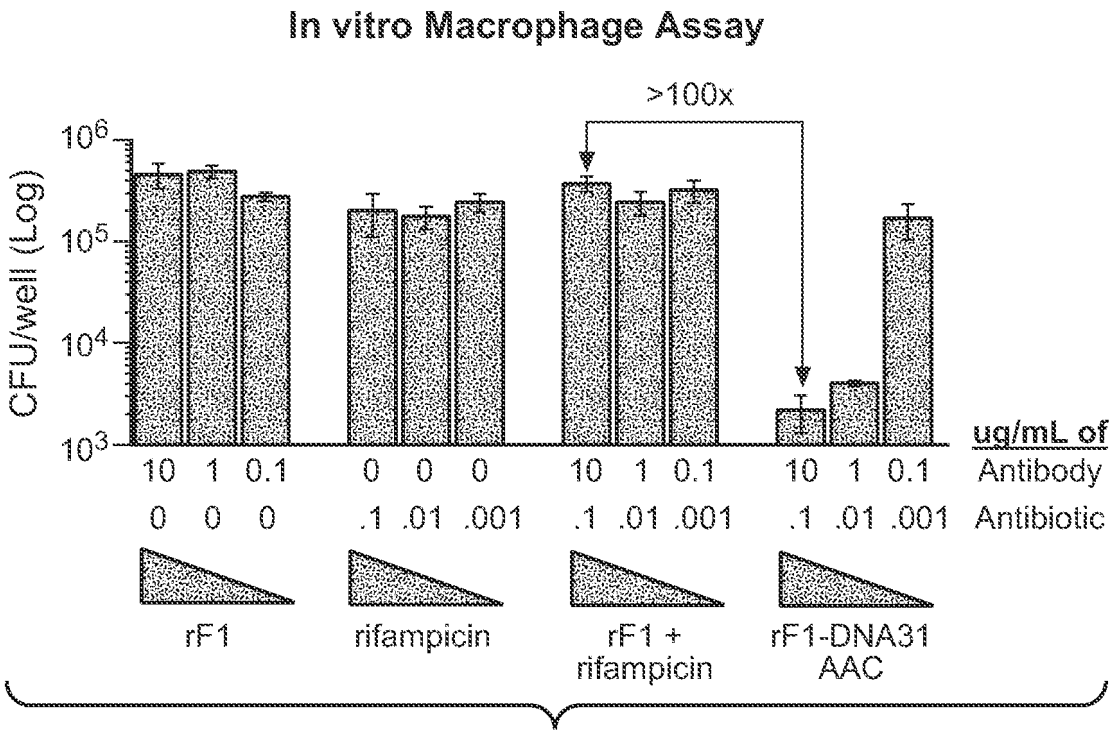

In vitro Macrophage Assay
>100x
CFU/well (Log)
10^6
10^5
10^4
10^3
ug/mL of
Antibody
Antibiotic
10 1 0.1 0 0 0 10 1 0.1 10 1 0.1
0 0 0 .1 .01 .001 .1 .01 .001 .1 .01 .001
rF1
rifampicin
rF1 + rifampicin
rF1-DNA31 AAC

FIG. 7A

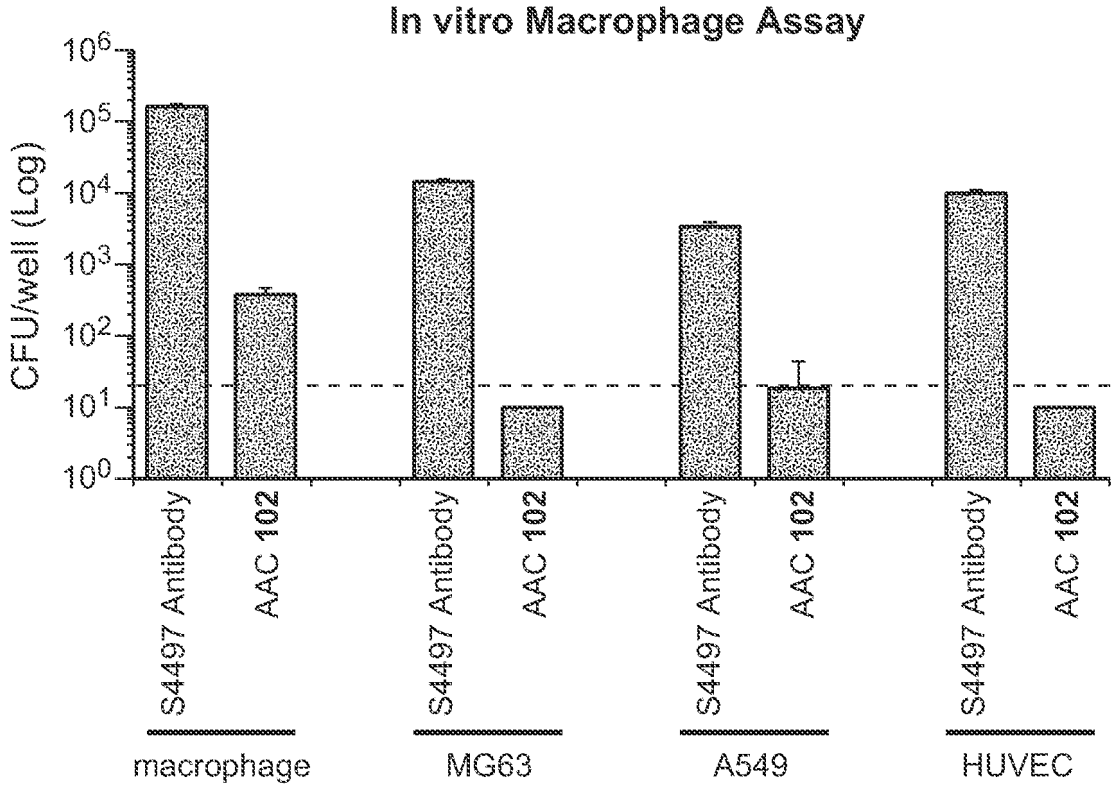

In vitro Macrophage Assay
CFU/well (Log)
10^6
10^5
10^4
10^3
10^2
10^1
10^0
S4497 Antibody
AAC 102
macrophage
MG63
A549
HUVEC

FIG. 7B

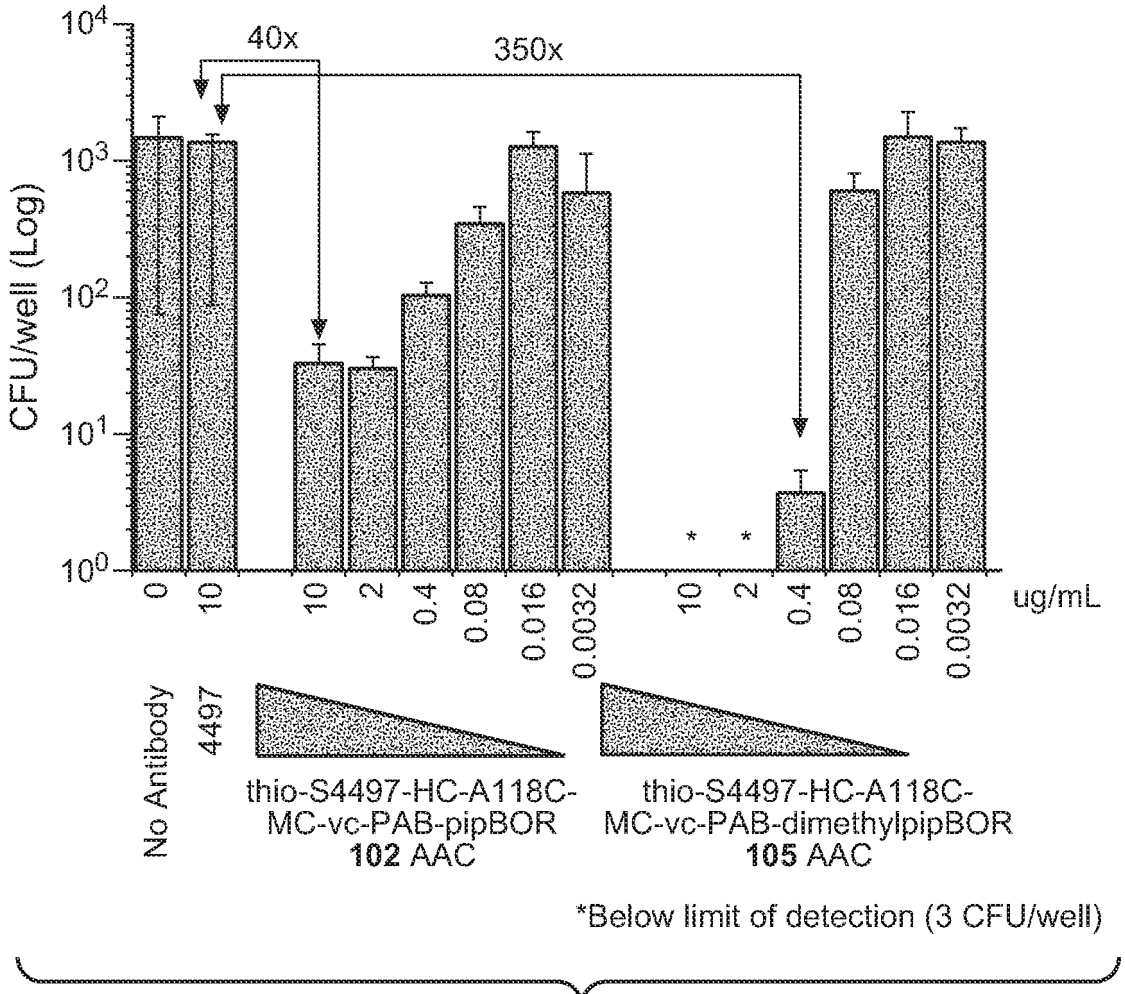

CFU/well (Log)
10^4
10^3
10^2
10^1
10^0
40x
350x
0
10
10
2
0.4
0.08
0.016
0.0032
10
2
0.4
0.08
0.016
0.0032
ug/mL
*
*
No Antibody
4497
thio-S4497-HC-A118C-MC-vc-PAB-pipBOR **102** AAC
thio-S4497-HC-A118C-MC-vc-PAB-dimethylpipBOR **105** AAC
*Below limit of detection (3 CFU/well)

FIG. 7C

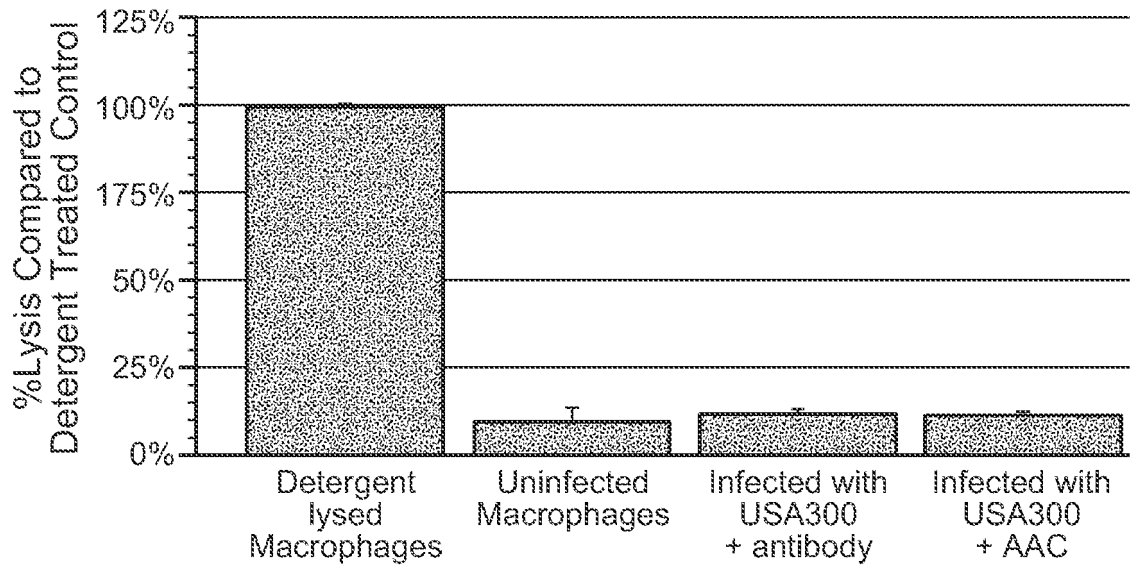

%Lysis Compared to Detergent Treated Control
125%
100%
175%
50%
25%
0%
Detergent lysed Macrophages
Uninfected Macrophages
Infected with USA300 + antibody
Infected with USA300 + AAC

FIG. 7D

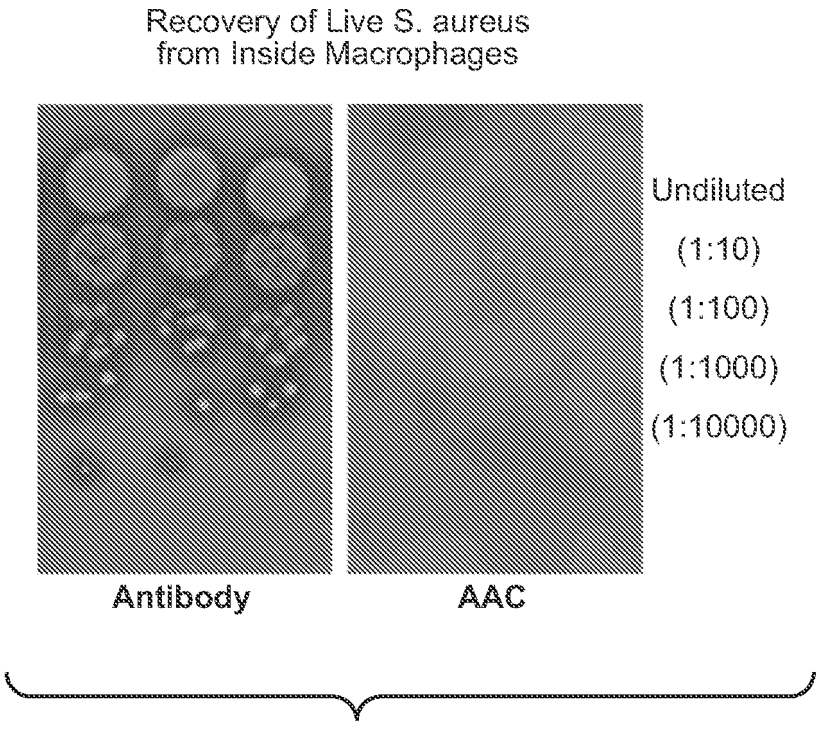

Recovery of Live S. aureus from Inside Macrophages
Undiluted
(1:10)
(1:100)
(1:1000)
(1:10000)
Antibody
AAC

FIG. 7E

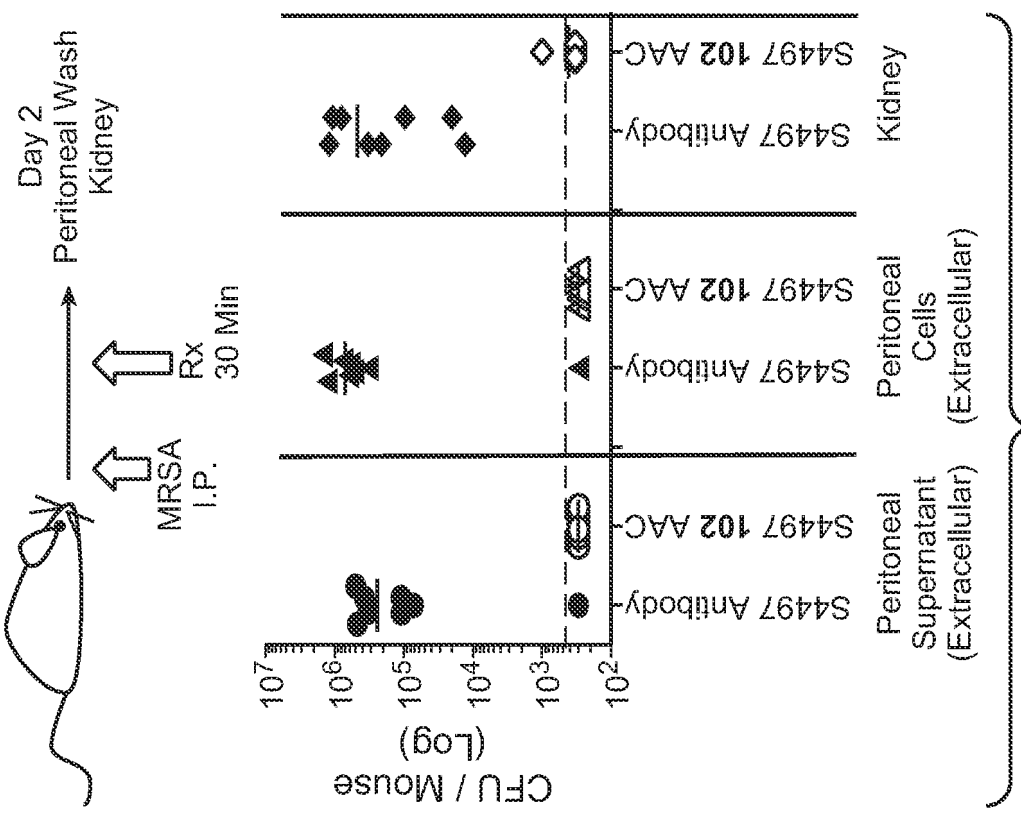

Day 2
Peritoneal Wash
Kidney
MRSA
I.P.
Rx
30 Min
CFU / Mouse
(Log)
S4497 Antibody
S4497 102 AAC
S4497 Antibody
S4497 102 AAC
S4497 Antibody
S4497 102 AAC
Peritoneal
Supernatant
(Extracellular)
Peritoneal
Cells
(Extracellular)
Kidney

FIG. 8A

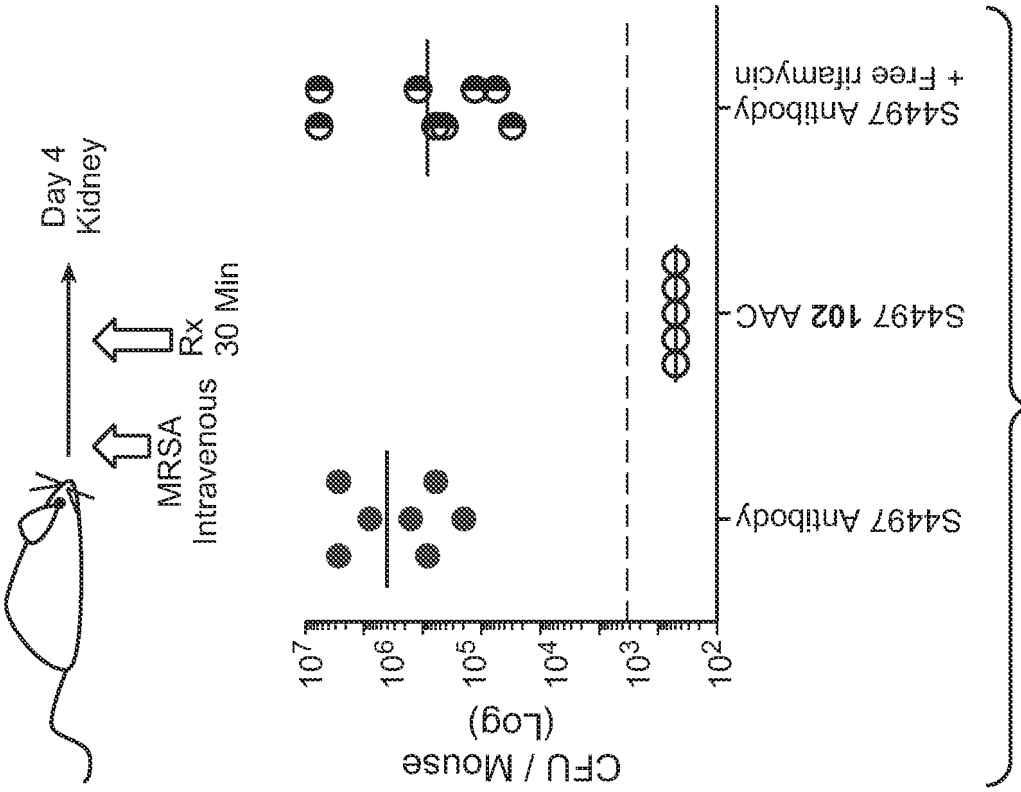

Day 4
Kidney
MRSA
Intravenous
Rx
30 Min
CFU / Mouse
(Log)
S4497 Antibody
S4497 102 AAC
S4497 Antibody
+ Free rifamycin

FIG. 8B

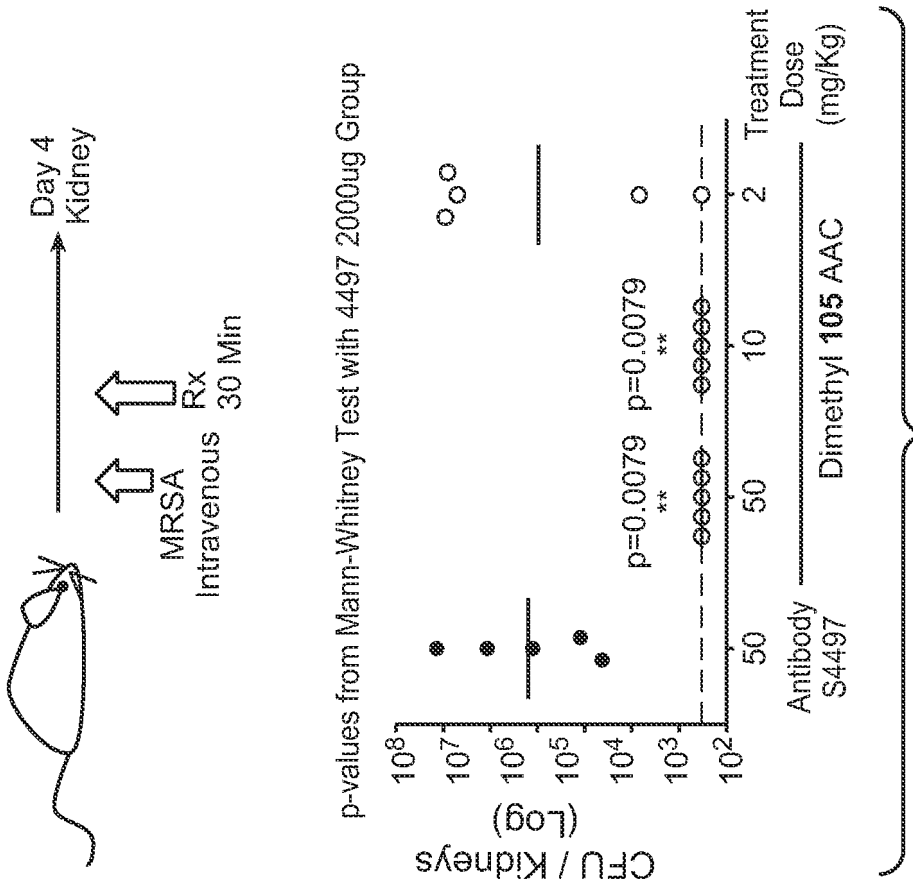

Day 4
Kidney
MRSA
Intravenous
Rx
30 Min
p-values from Mann-Whitney Test with 4497 2000ug Group
CFU / Kidneys
(Log)
p=0.0079
**
p=0.0079
**
Antibody
S4497
Dimethyl 105 AAC
Treatment
Dose
(mg/Kg)

FIG. 9B

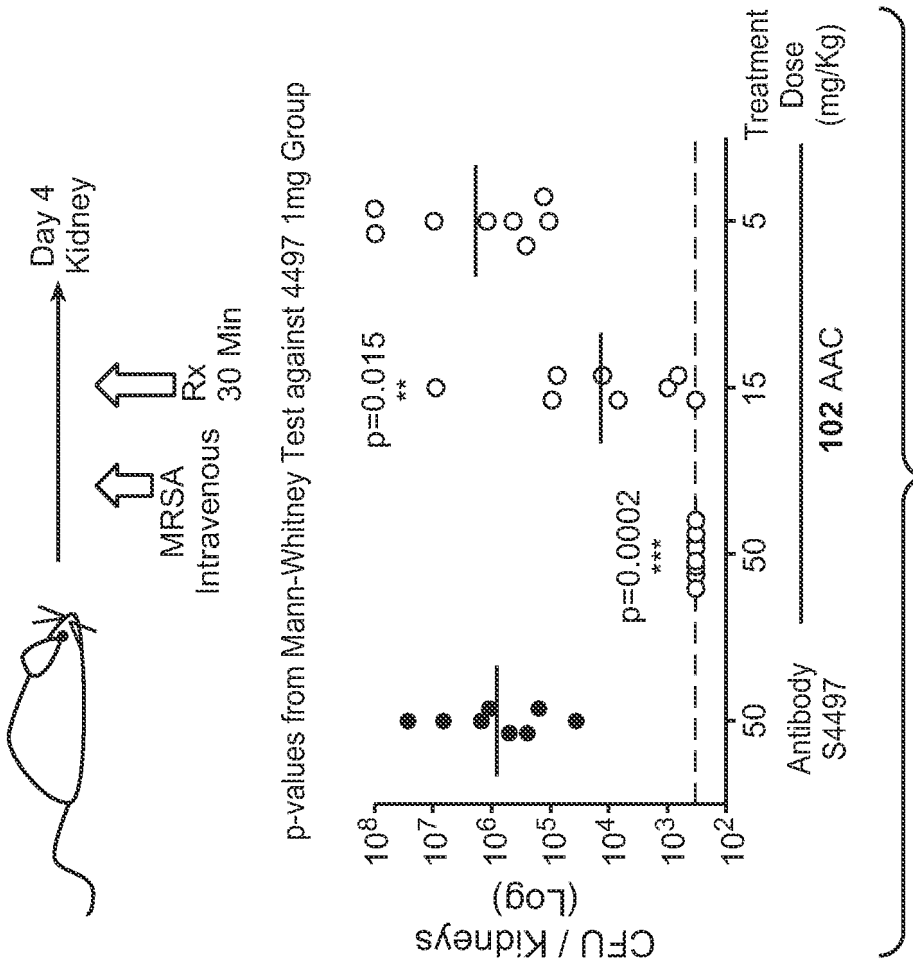

Day 4
Kidney
MRSA
Intravenous
Rx
30 Min
p-values from Mann-Whitney Test against 4497 1mg Group
CFU / Kidneys
(Log)
p=0.015
**
p=0.0002
***
Antibody
S4497
102 AAC
Treatment
Dose
(mg/Kg)

FIG. 9A

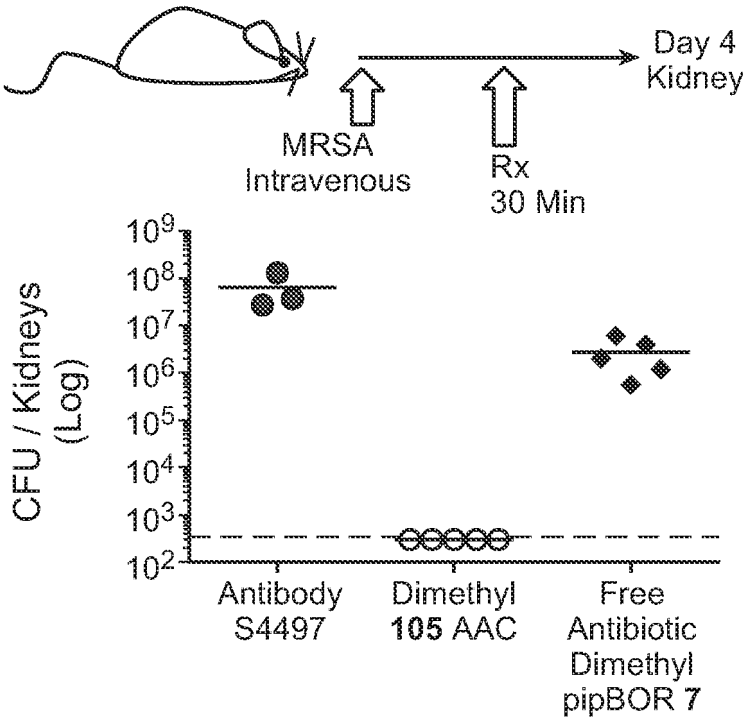


FIG. 9C

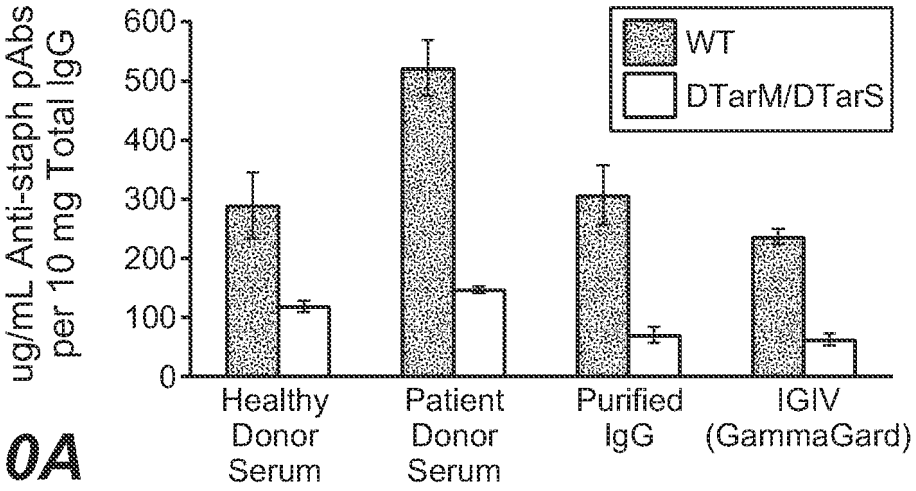


FIG. 10A

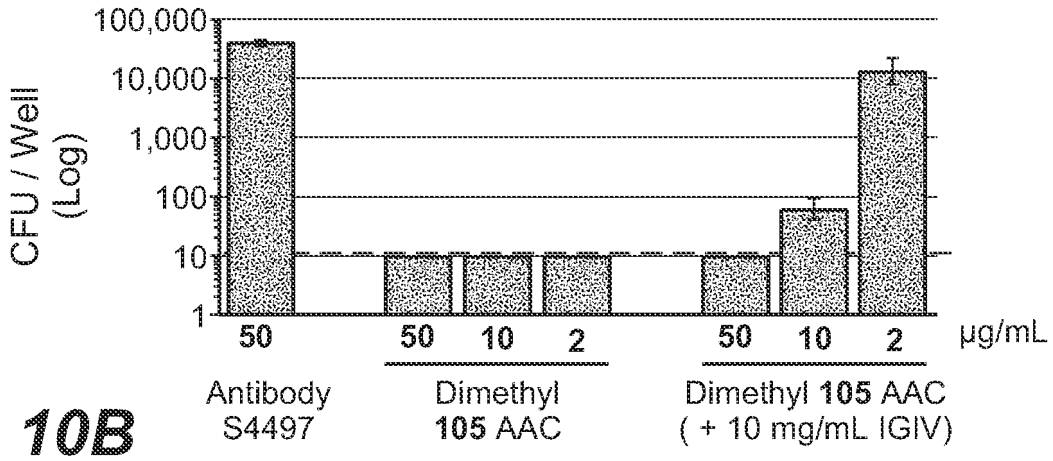
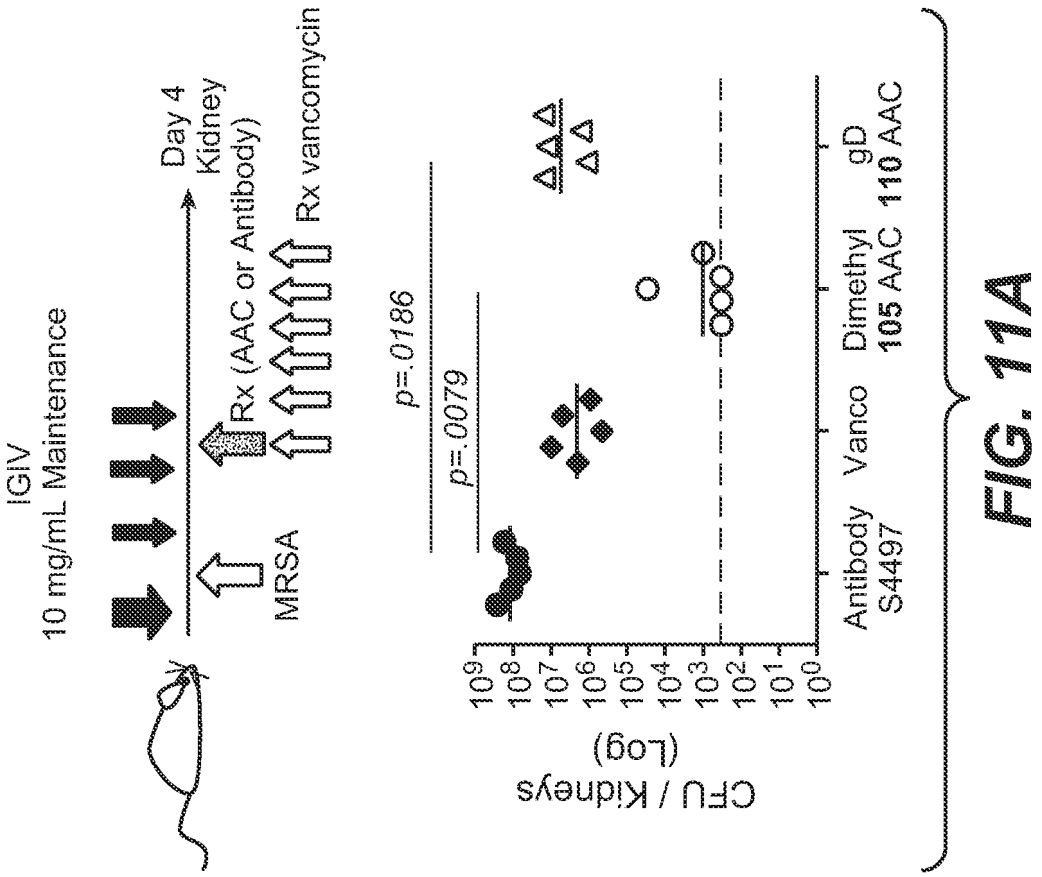


FIG. 10B


IGIV
10 mg/mL Maintenance
MRSA
Rx
1 Day
Day 4
Kidney
p=.0005
CFU / Kidneys
(Log)
Antibody
S4497
Dimethyl
105 AAC
FIG. 10C
IGIV
10 mg/mL Maintenance
MRSA
Rx (AAC or Antibody)
Rx vancomycin
Day 4
Kidney
p=.0186
p=.0079
CFU / Kidneys
(Log)
Antibody
S4497
Vanco
Dimethyl
105 AAC
gD
110 AAC
FIG. 11A

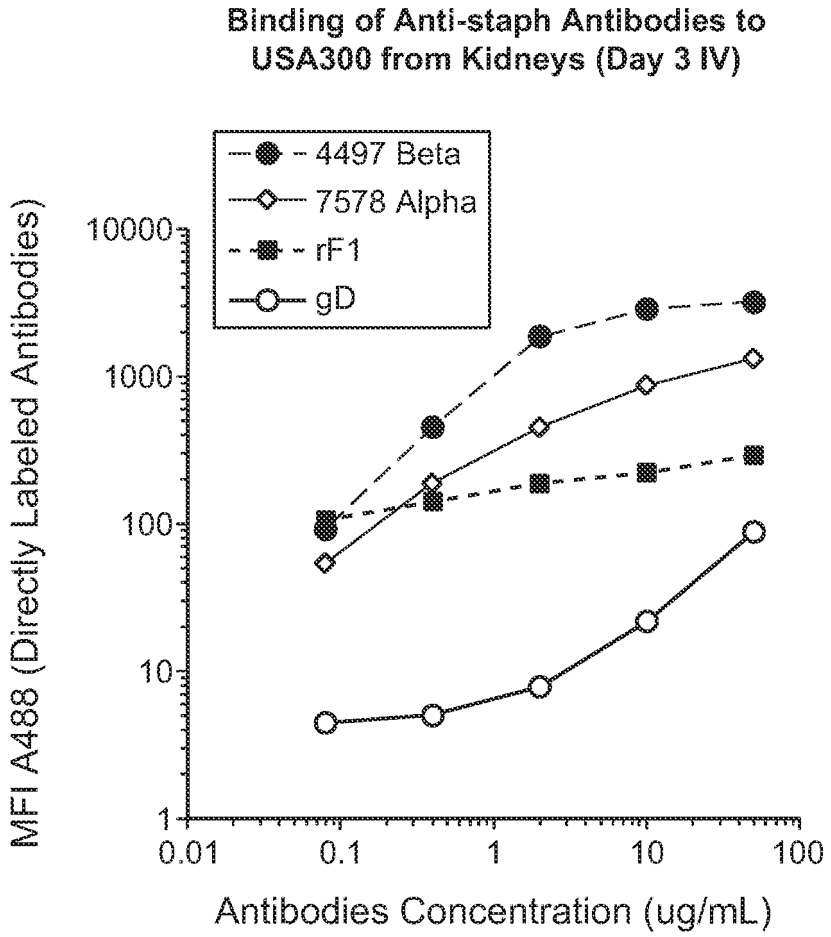

Binding of Anti-staph Antibodies to
USA300 from Kidneys (Day 3 IV)
4497 Beta
7578 Alpha
rF1
gD
MFI A488 (Directly Labeled Antibodies)
10000
1000
100
10
1
0.01
0.1
1
10
100
Antibodies Concentration (ug/mL)

FIG. 11B

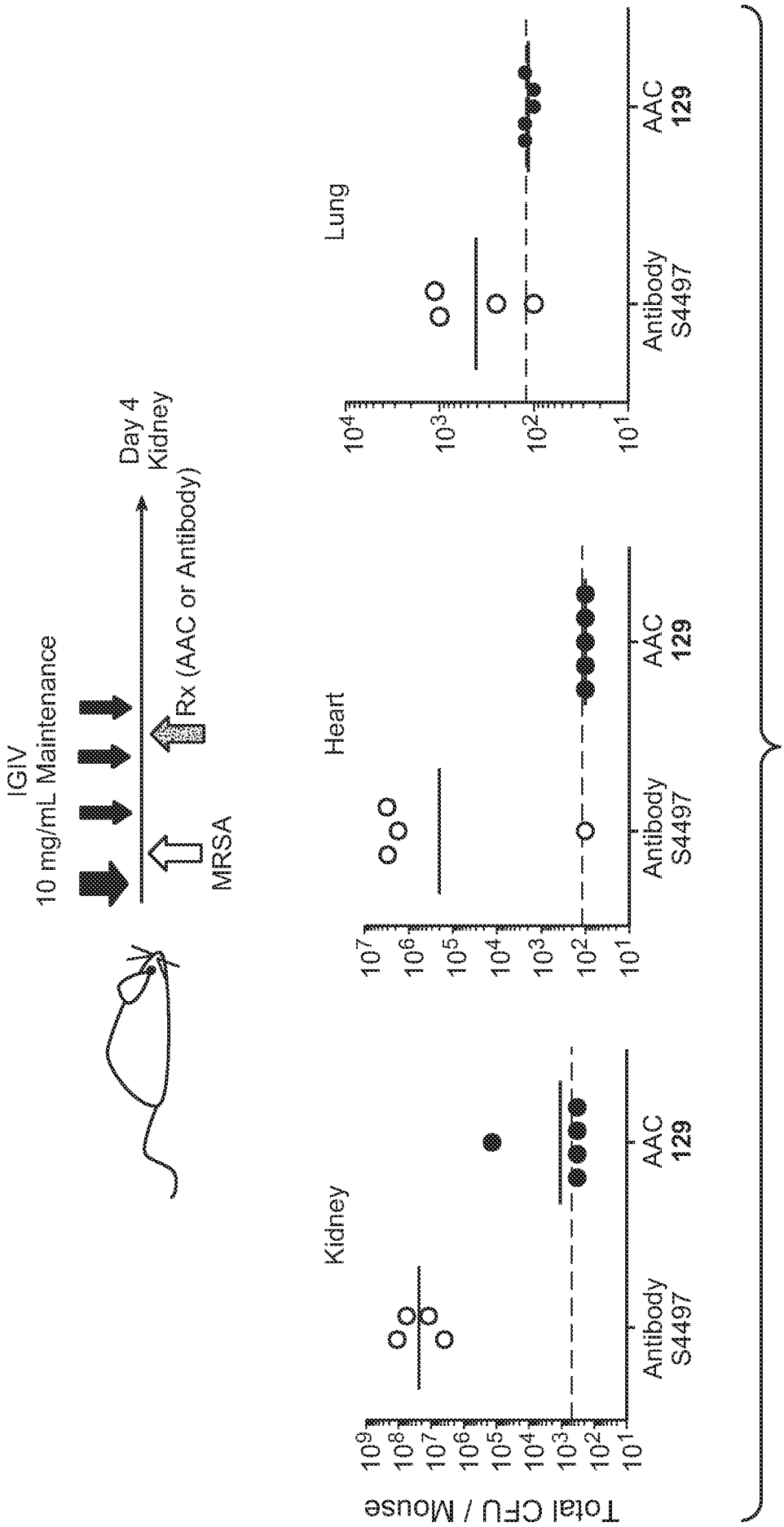

IGIV
10 mg/mL Maintenance
MRSA
Rx (AAC or Antibody)
Day 4
Kidney
Kidney
Heart
Lung
Total CFU / Mouse
Antibody S4497
AAC 129

FIG. 11C

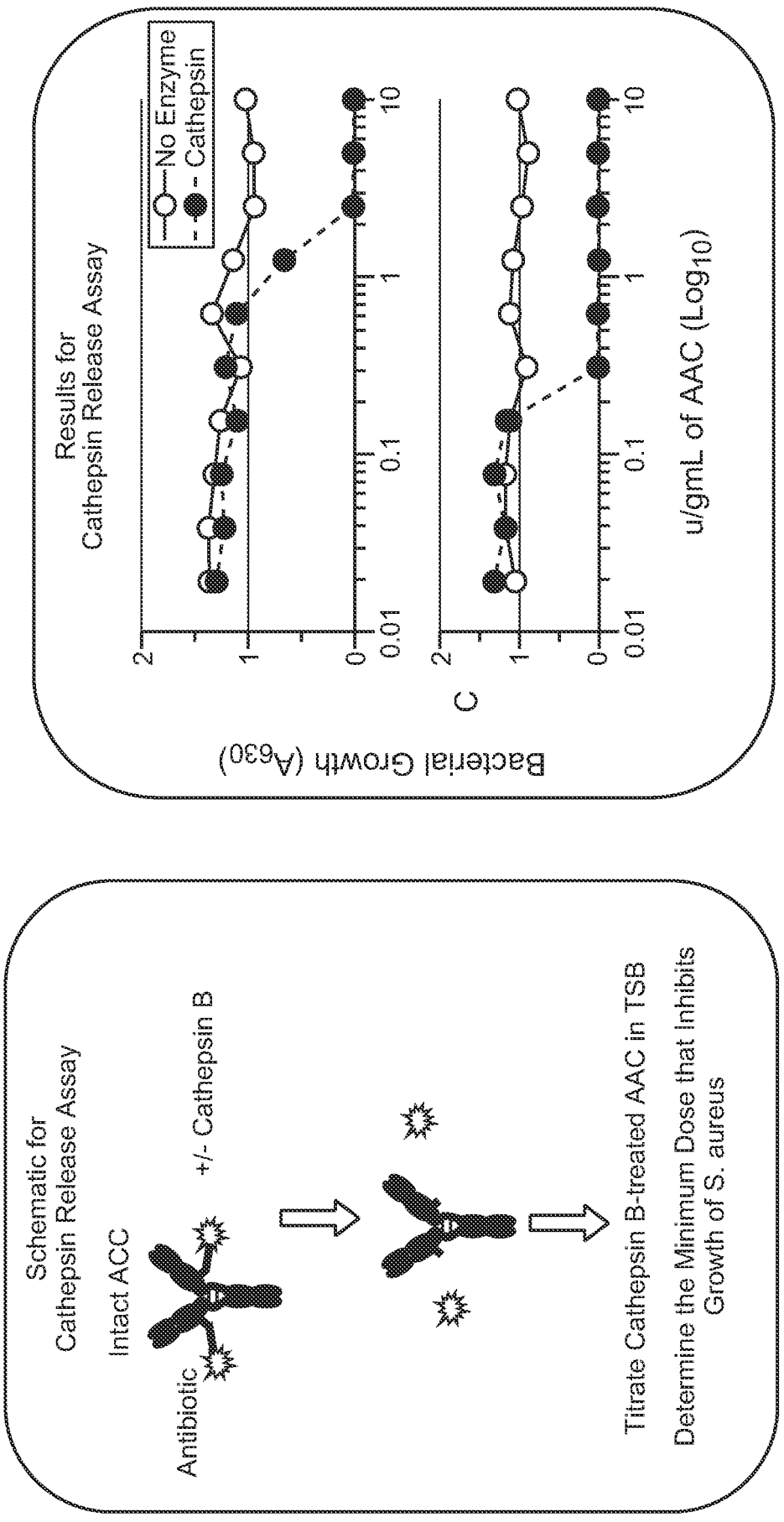

Schematic for
Cathepsin Release Assay
Intact ACC
Antibiotic
+/- Cathepsin B
Titrate Cathepsin B-treated AAC in TSB
Determine the Minimum Dose that Inhibits
Growth of S. aureus
Results for
Cathepsin Release Assay
No Enzyme
Cathepsin
Bacterial Growth (A630)
C
u/gmL of AAC (Log10)
2
1
0
0.01
0.1
1
10

FIG. 12

CDR Sequences According to Kabat Definition are Underlined

Light Chain Variable Region

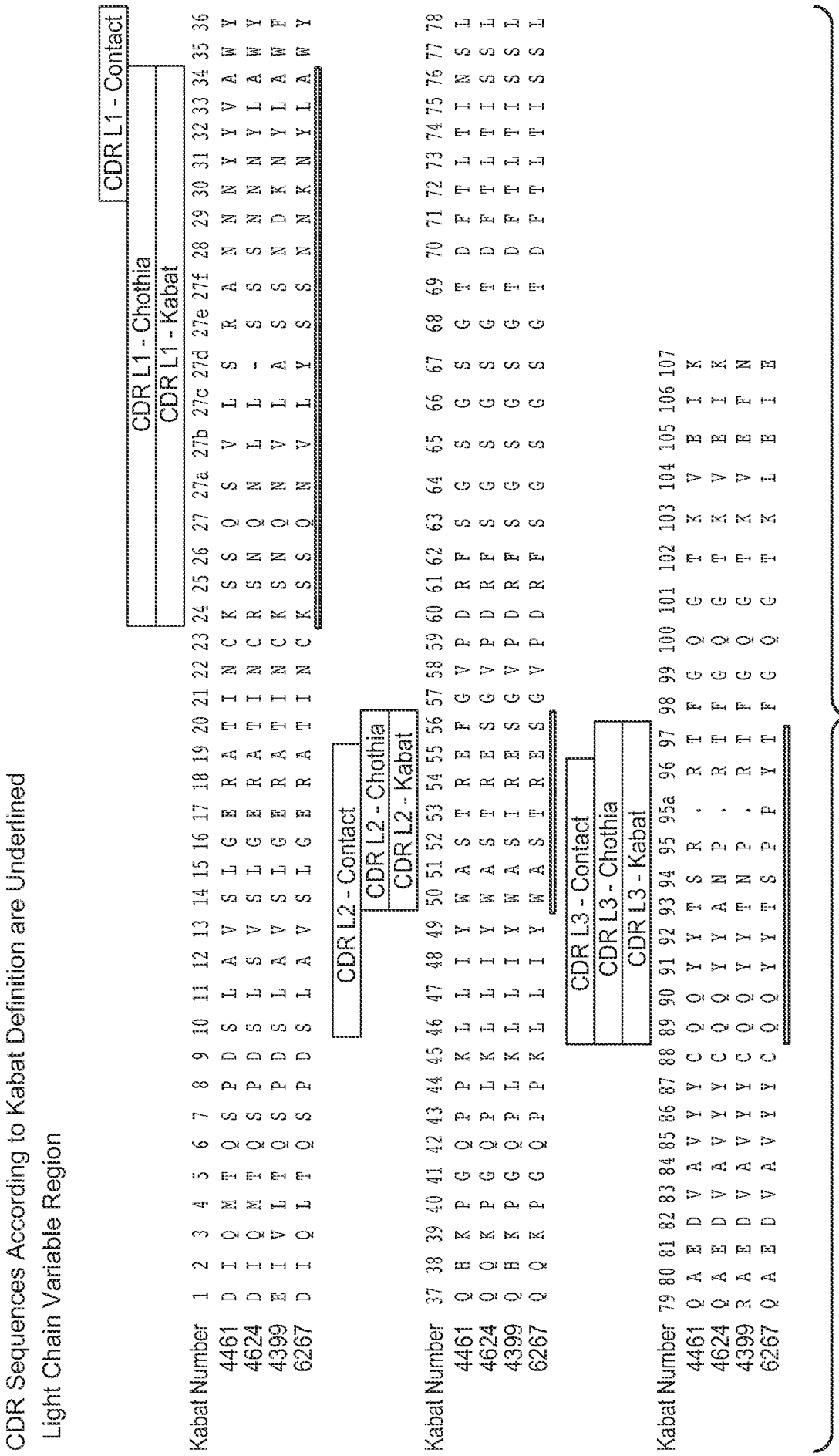


FIG. 13A

CDR Sequences According to Kabat Definition are Underlined

Heavy Chain Variable Region

CDR H1 - Contact
CDR H1 - Chothia
CDR H1 - Kabat

Kabat Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
4461	Q	V	Q	L	V	Q	S	G	A	E	V	R	K	P	G	A	S	V	K	V	S	C	K	A	S	G	Y	S	F	T	D	Y	Y	M	H	W	V	R	Q	A	P	G
4624	Q	V	Q	L	Q	Q	S	R	V	E	V	K	R	P	G	T	S	V	K	V	S	C	K	T	S	G	Y	T	F	S	D	Y	Y	I	H	W	V	R	L	A	P	G
4399	E	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	T	S	V	K	V	S	C	K	A	S	G	Y	T	F	T	D	Y	Y	I	H	W	V	R	L	A	P	G
6267	E	V	Q	L	V	Q	S	G	A	E	V	K	K	P	G	E	S	L	K	I	S	C	K	G	S	G	Y	S	F	T	S	Y	W	I	G	W	V	R	Q	M	P	G

CDR H2 - Contact
CDR H2 - Chothia
CDR H2 - Kabat

Kabat Number	43	44	45	46	47	48	49	50	51	52	52a	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	82a
4461	Q	G	L	E	W	M	G	W	I	N	P	K	S	G	G	T	N	Y	A	Q	R	F	Q	G	R	V	T	M	T	G	D	T	S	I	S	A	A	Y	M	D	L	A
4624	Q	G	L	E	L	M	G	W	I	N	P	N	T	G	G	T	Y	Y	A	Q	K	F	R	D	R	V	T	M	T	R	D	T	S	I	A	T	A	Y	L	E	M	S
4399	Q	G	L	E	L	M	G	W	I	N	P	N	T	G	G	T	N	Y	A	Q	K	F	Q	G	R	V	T	M	T	R	D	T	S	I	A	T	A	Y	M	E	L	S
6267	K	G	L	E	W	M	G	I	I	H	P	G	D	S	K	T	R	Y	S	P	S	F	Q	G	Q	V	T	I	S	A	D	K	S	I	S	T	A	Y	L	Q	W	N

CDR H3 - Contact
CDR H3 - Chothia
CDR H3 - Kabat

Kabat Number	82b	82c	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	100a	100b	100c	100d	100e	100f	100g	100h	100i	100j	100k	100l	100m	100n	100o	100p	100q	100r	100s	100t	100u	101
4461	S	L	T	S	D	D	T	A	V	Y	Y	C	V	K	D	C	G	S	G	G	L	R	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	D
4624	S	L	T	S	D	D	T	A	V	Y	Y	C	A	K	D	C	G	R	G	G	L	R	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	D
4399	S	L	T	S	D	D	T	A	V	Y	Y	C	A	K	D	C	G	N	A	G	L	R	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	D
6267	S	L	K	A	S	D	T	A	M	Y	Y	C	A	R	L	Y	C	S	G	G	S	C	Y	S	D	R	A	F	S	S	L	G	A	G	G	Y	Y	Y	Y	G	M	G

Kabat Number	102	103	104	105	106	107	108	109	110	111	112	113
4461	F	W	G	Q	G	T	T	V	T	V	S	S
4624	I	W	G	P	G	T	M	V	T	V	S	S
4399	I	W	G	Q	G	T	T	V	T	V	S	S
6267	V	W	G	Q	G	T	T	V	T	V	S	S

FIG. 13B

Antibody	CDR L1	CDR L2	CDR L3	CDR H1	CDR H2	CDR H3
6078	RASQTISGWLA (SEQ ID NO:33)	KASTLES (SEQ ID NO:34)	QQYKSYSFN (SEQ ID NO:35)	SYDIN (SEQ ID NO:36)	WMNANSGNTGYAQKFQG (SEQ ID NO:37)	SSILVRGALGRYFDL (SEQ ID NO:38)
6263	RASQTISGWLA (SEQ ID NO:39)	KASTLES (SEQ ID NO:40)	QQYKSYSFN (SEQ ID NO:41)	SYDIN (SEQ ID NO:42)	WMNANSGNTGYAQKFQG (SEQ ID NO:43)	SSILVRGALGRYFDL (SEQ ID NO:44)
4450	RASQFVSRTSLA (SEQ ID NO:45)	ETSSRAT (SEQ ID NO:46)	HKYGSGPRT (SEQ ID NO:47)	NYDFI (SEQ ID NO:48)	WMNPNSYNTGYGQKFQG (SEQ ID NO:49)	AVRGQLLSEY (SEQ ID NO:50)
6297	RASQSVSSSYLA (SEQ ID NO:51)	DASSRAT (SEQ ID NO:52)	QKYGSTPRP (SEQ ID NO:53)	SYDIN (SEQ ID NO:54)	WMNPNSGNTNYAQRFQG (SEQ ID NO:55)	ERWSKDTGHYYYYGMDV (SEQ ID NO:56)
6239	RASLDITNHLA (SEQ ID NO:57)	EASILQS (SEQ ID NO:58)	EKCNSTPRT (SEQ ID NO:59)	NYDIN (SEQ ID NO:60)	WMNPSSGRTGYAPKFRG (SEQ ID NO:61)	GGGYYDSSGNYHISGLDV (SEQ ID NO:62)
6232	RASQSVGAIYLA (SEQ ID NO:63)	GVSNRAT (SEQ ID NO:64)	QLYTSSRALT (SEQ ID NO:65)	AYAMN (SEQ ID NO:66)	SITKNSDSLYYADSVKG (SEQ ID NO:67)	LAARIMATDY (SEQ ID NO:68)
6259	RASQGIRNGLG (SEQ ID NO:69)	PASTLES (SEQ ID NO:70)	LQDHNYPPT (SEQ ID NO:71)	YYSMI (SEQ ID NO:72)	SIDSSSRYLYYADSVKG (SEQ ID NO:73)	DGDDILSVYRGSGRPFDY (SEQ ID NO:74)
6292	RASQGIRNGLG (SEQ ID NO:75)	PASTLES (SEQ ID NO:76)	LQDHNYPPS (SEQ ID NO:77)	YYSMI (SEQ ID NO:78)	SIDSSSRYRYYTDSVKG (SEQ ID NO:79)	DGDDILSVYQGSGRPFDY (SEQ ID NO:80)
4462	RASQSVRTNVA (SEQ ID NO:81)	GASTRAS (SEQ ID NO:82)	LQYNTWPRT (SEQ ID NO:83)	TNDMS (SEQ ID NO:84)	TIIGIDDTTHYADSVRG (SEQ ID NO:85)	NSGIYSF (SEQ ID NO:86)
6265	RASQDIGSSLA (SEQ ID NO:87)	ATSTLQS (SEQ ID NO:88)	QQLNNYVHS (SEQ ID NO:89)	DYAMG (SEQ ID NO:90)	VVTGHSYRTHYADSVKG (SEQ ID NO:91)	RIWSYGDDSFDV (SEQ ID NO:92)
6253	RASQSIGDRLA (SEQ ID NO:93)	WASNLEG (SEQ ID NO:94)	QQYKSQWS (SEQ ID NO:95)	SYAMN (SEQ ID NO:96)	YISSIETIYYADSVKG (SEQ ID NO:97)	DRLVDVPLSSPNS (SEQ ID NO:98)
4497	KSSQSIFRTSRNKNLLN (SEQ ID NO:99)	WASTRKS (SEQ ID NO:100)	QQYFSPPYT (SEQ ID NO:101)	SFWMH (SEQ ID NO:102)	FTNNEGTTTAYADSVRG (SEQ ID NO:103)	GDGGLDD (SEQ ID NO:104)
4487	RASQFTNHYLN (SEQ ID NO:105)	VASNLQS (SEQ ID NO:106)	QQSYRTPYT (SEQ ID NO:107)	SGYYN (SEQ ID NO:108)	YILSGAHTDIKASLGS (SEQ ID NO:109)	SGVYSKYSLDV (SEQ ID NO:110)

6263 has same CDR sequences as 6078.

FIG. 14

CDR Sequences According to Kabat Definition are Underlined

Light Chain

CDR L1 - Contact
CDR L1 - Chothia
CDR L1 - Kabat

Kabat Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
6078	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v2HC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v2LC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v3HC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v3LC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v4HC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v4LC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E
6078.v4HCLC-Cys	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	T	I	S	G	W	L	A	W	Y	Q	Q	K	P	A	E

CDR L2 - Contact
CDR L2 - Chothia
CDR L2 - Kabat

Kabat Number	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
6078	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v2HC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v2LC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v3HC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v3LC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v4HC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v4LC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G
6078.v4HCLC-Cys	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L	Q	P	D	D	F	G

CDR L3 - Contact
CDR L3 - Chothia
CDR L3 - Kabat

Constant Region, Eu Number

Kabat Number	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126
6078	I	Y	Y	C	Q	Q	Y	K	S	Y	S	F	N	F	G	Q	G	T	K	V	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P	S	D	E	Q	L	K
6078.v2HC-Cys	I	Y	Y	C	Q	Q	Y	K	S	Y	S	F	N	F	G	Q	G	T	K	V	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P	S	D	E	Q	L	K
6078.v2LC-Cys	I	Y	Y	C	Q	Q	Y	K	S	Y	S	F	N	F	G	Q	G	T	K	V	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P	S	D	E	Q	L	K

FIG. 15A-1

FIG. 15A-2

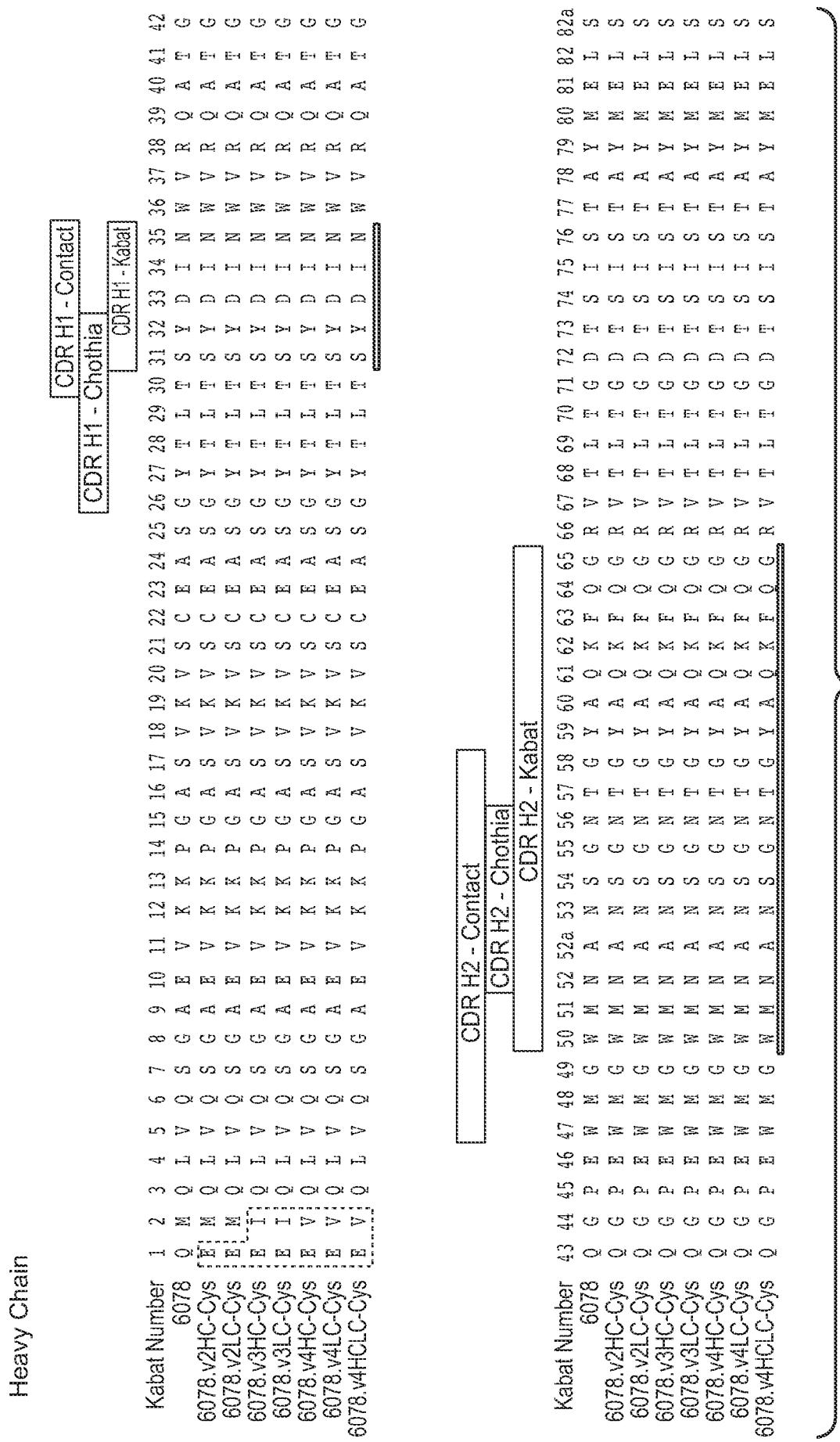

Heavy Chain
CDR H1 - Contact
CDR H1 - Chothia
CDR H1 - Kabat
CDR H2 - Contact
CDR H2 - Chothia
CDR H2 - Kabat
Kabat Number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42
6078 Q M Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v2HC-Cys E M Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v2LC-Cys E M Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v3HC-Cys E I Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v3LC-Cys E I Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v4HC-Cys E V Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v4LC-Cys E V Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
6078.v4HCLC-Cys E V Q L V Q S G A E V K K P G A S V K V S C E A S G Y T L T S Y D I N W V R Q A T G
Kabat Number 43 44 45 46 47 48 49 50 51 52 52a 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 82a
6078 Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v2HC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v2LC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v3HC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v3LC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v4HC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v4LC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S
6078.v4HCLC-Cys Q G P E W M G W M N A N S G N T G Y A Q K F Q G R V T L T G D T S I S T A Y M E L S

FIG. 15B-1

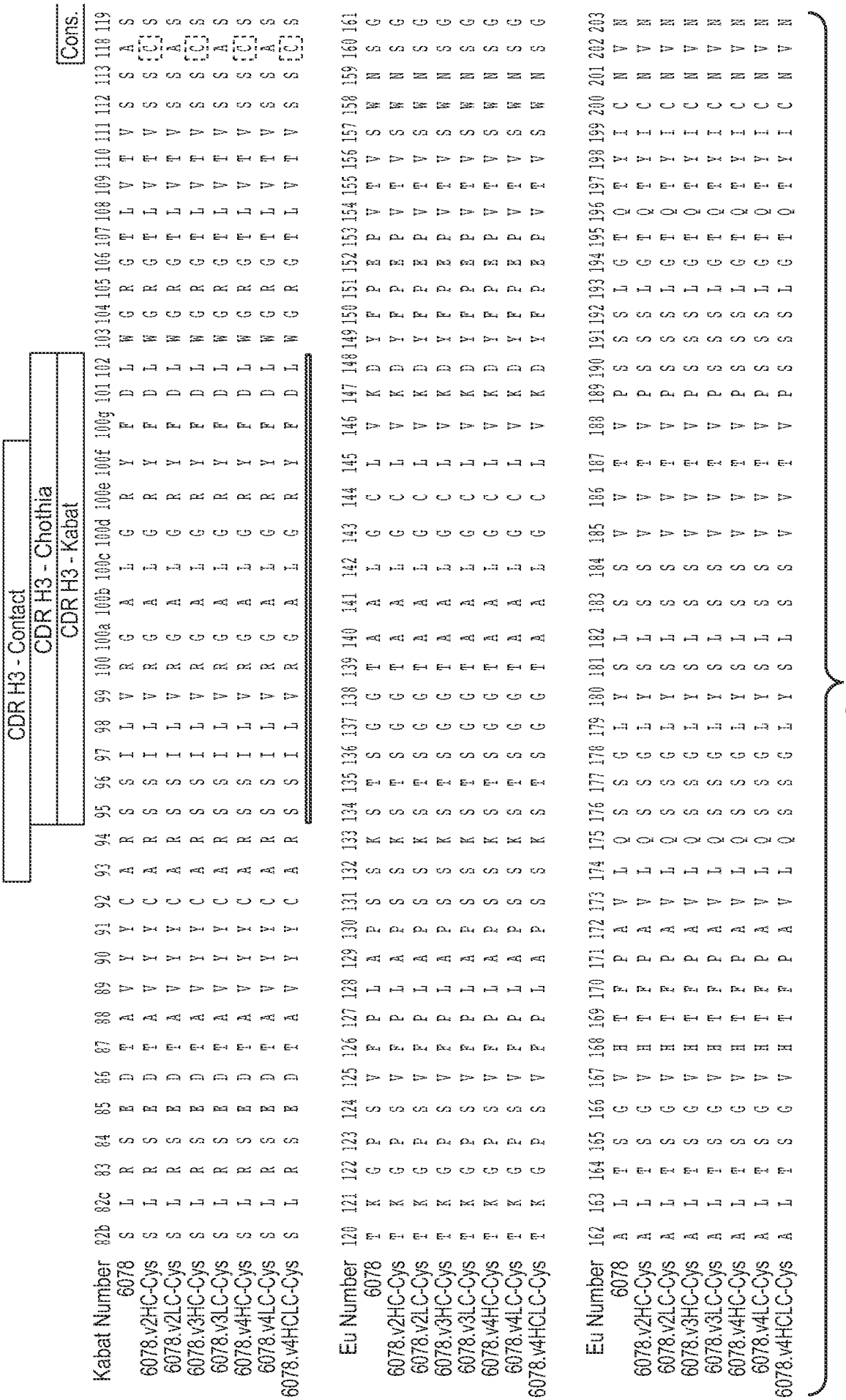

CDR H3 - Contact
CDR H3 - Chothia
CDR H3 - Kabat
Cons.
Kabat Number
6078
6078.v2HC-Cys
6078.v2LC-Cys
6078.v3HC-Cys
6078.v3LC-Cys
6078.v4HC-Cys
6078.v4LC-Cys
6078.v4HCLC-Cys
Eu Number
6078
6078.v2HC-Cys
6078.v2LC-Cys
6078.v3HC-Cys
6078.v3LC-Cys
6078.v4HC-Cys
6078.v4LC-Cys
6078.v4HCLC-Cys
Eu Number
6078
6078.v2HC-Cys
6078.v2LC-Cys
6078.v3HC-Cys
6078.v3LC-Cys
6078.v4HC-Cys
6078.v4LC-Cys
6078.v4HCLC-Cys

FIG. 15B-2


Eu Number 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245
6078 H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P
6078.v2HC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P P E L L G G P S V F L F P P
6078.v2LC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P
6078.v3HC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P
6078.v3LC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P P E L L G G P S V F L F P P
6078.v4HC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P
6078.v4LC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P
6078.v4HCLC-Cys H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L F P P

Eu Number 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287
6078 K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v2HC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v2LC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v3HC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v3LC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v4HC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v4LC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A
6078.v4HCLC-Cys K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V H N A

Eu Number 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329
6078 K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v2HC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v2LC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v3HC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v3LC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v4HC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v4LC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P
6078.v4HCLC-Cys K T K P R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K A L P

FIG. 15B-3

Eu Number	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371
6078	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v2HC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v2LC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v3HC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v3LC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v4HC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v4LC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G
6078.v4HCLC-Cys	A	P	I	E	K	T	I	S	K	A	K	G	Q	P	R	E	P	Q	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G

Eu Number	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413
6078	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v2HC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v2LC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v3HC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v3LC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v4HC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v4LC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D
6078.v4HCLC-Cys	F	Y	P	S	D	I	A	V	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D

Eu Number	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446
6078	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v2HC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v2LC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v3HC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v3LC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v4HC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v4LC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
6078.v4HCLC-Cys	K	S	R	W	Q	Q	G	N	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G

FIG. 15B-4

CDR Sequences According to Kabat Definition are Underlined

Light Chain

CDR H1 - Contact
CDR L1 - Chothia
CDR L1 - Kabat

Kabat Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	27a	27b	27c	27d	27e	27f	28	29	30	31	32	33	34	35	36
4497	D	I	Q	L	T	Q	S	P	D	S	L	A	V	S	L	G	E	R	A	T	I	N	C	K	S	S	Q	S	I	F	R	T	S	R	N	K	N	L	L	N	W	Y
4497.v8-HC-Cys	D	I	Q	L	T	Q	S	P	D	S	L	A	V	S	L	G	E	R	A	T	I	N	C	K	S	S	Q	S	I	F	R	T	S	R	N	K	N	L	L	N	W	Y
4497.v8-LC-Cys	D	I	Q	L	T	Q	S	P	D	S	L	A	V	S	L	G	E	R	A	T	I	N	C	K	S	S	Q	S	I	F	R	T	S	R	N	K	N	L	L	N	W	Y
4497.v8-HCLC-Cys	D	I	Q	L	T	Q	S	P	D	S	L	A	V	S	L	G	E	R	A	T	I	N	C	K	S	S	Q	S	I	F	R	T	S	R	N	K	N	L	L	N	W	Y

CDR L2 - Contact
CDR L2 - Chothia
CDR L2 - Kabat

Kabat Number	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
4497	Q	Q	R	P	G	Q	P	P	R	L	L	I	H	W	A	S	T	R	K	S	G	V	P	D	R	F	S	G	S	G	F	G	T	D	F	T	L	T	I	T	S	L
4497.v8-HC-Cys	Q	Q	R	P	G	Q	P	P	R	L	L	I	H	W	A	S	T	R	K	S	G	V	P	D	R	F	S	G	S	G	F	G	T	D	F	T	L	T	I	T	S	L
4497.v8-LC-Cys	Q	Q	R	P	G	Q	P	P	R	L	L	I	H	W	A	S	T	R	K	S	G	V	P	D	R	F	S	G	S	G	F	G	T	D	F	T	L	T	I	T	S	L
4497.v8-HCLC-Cys	Q	Q	R	P	G	Q	P	P	R	L	L	I	H	W	A	S	T	R	K	S	G	V	P	D	R	F	S	G	S	G	F	G	T	D	F	T	L	T	I	T	S	L

CDR L3 - Contact
CDR L3 - Chothia
CDR L3 - Kabat
Constant Region, Eu Number

Kabat Number	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
4497	Q	A	E	D	V	A	I	Y	Y	C	Q	Q	Y	F	S	P	P	Y	T	F	G	Q	G	T	K	L	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P
4497.v8-HC-Cys	Q	A	E	D	V	A	I	Y	Y	C	Q	Q	Y	F	S	P	P	Y	T	F	G	Q	G	T	K	L	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P
4497.v8-LC-Cys	Q	A	E	D	V	A	I	Y	Y	C	Q	Q	Y	F	S	P	P	Y	T	F	G	Q	G	T	K	L	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P
4497.v8-HCLC-Cys	Q	A	E	D	V	A	I	Y	Y	C	Q	Q	Y	F	S	P	P	Y	T	F	G	Q	G	T	K	L	E	I	K	R	T	V	A	A	P	S	V	F	I	F	P	P

FIG. 16A-1

Eu Number	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162
4497	S	D	E	Q	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P	R	E	A	K	V	Q	W	K	V	D	N	A	L	Q	S	G	N	S	Q	E	S
4497.v8-HC-Cys	S	D	E	Q	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P	R	E	A	K	V	Q	W	K	V	D	N	A	L	Q	S	G	N	S	Q	E	S
4497.v8-LC-Cys	S	D	E	Q	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P	R	E	A	K	V	Q	W	K	V	D	N	A	L	Q	S	G	N	S	Q	E	S
4497.v8-HCLC-Cys	S	D	E	Q	L	K	S	G	T	A	S	V	V	C	L	L	N	N	F	Y	P	R	E	A	K	V	Q	W	K	V	D	N	A	L	Q	S	G	N	S	Q	E	S

Eu Number	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204
4497	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	E	K	V	Y	A	C	E	V	T	E	Q	G	L	S	S	P
4497.v8-HC-Cys	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	E	K	V	Y	A	C	E	V	T	E	Q	G	L	S	S	P
4497.v8-LC-Cys	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	E	K	V	Y	A	C	E	V	T	E	Q	G	L	S	S	P
4497.v8-HCLC-Cys	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	E	K	V	Y	A	C	E	V	T	E	Q	G	L	S	S	P

Eu Number	205	206	207	208	209	210	211	212	213	214
4497	V	T	K	S	F	N	R	G	E	C
4497.v8-HC-Cys	V	T	K	S	F	N	R	G	E	C
4497.v8-LC-Cys	[illegible]									
4497.v8-HCLC-Cys	[illegible]									

FIG. 16A-2

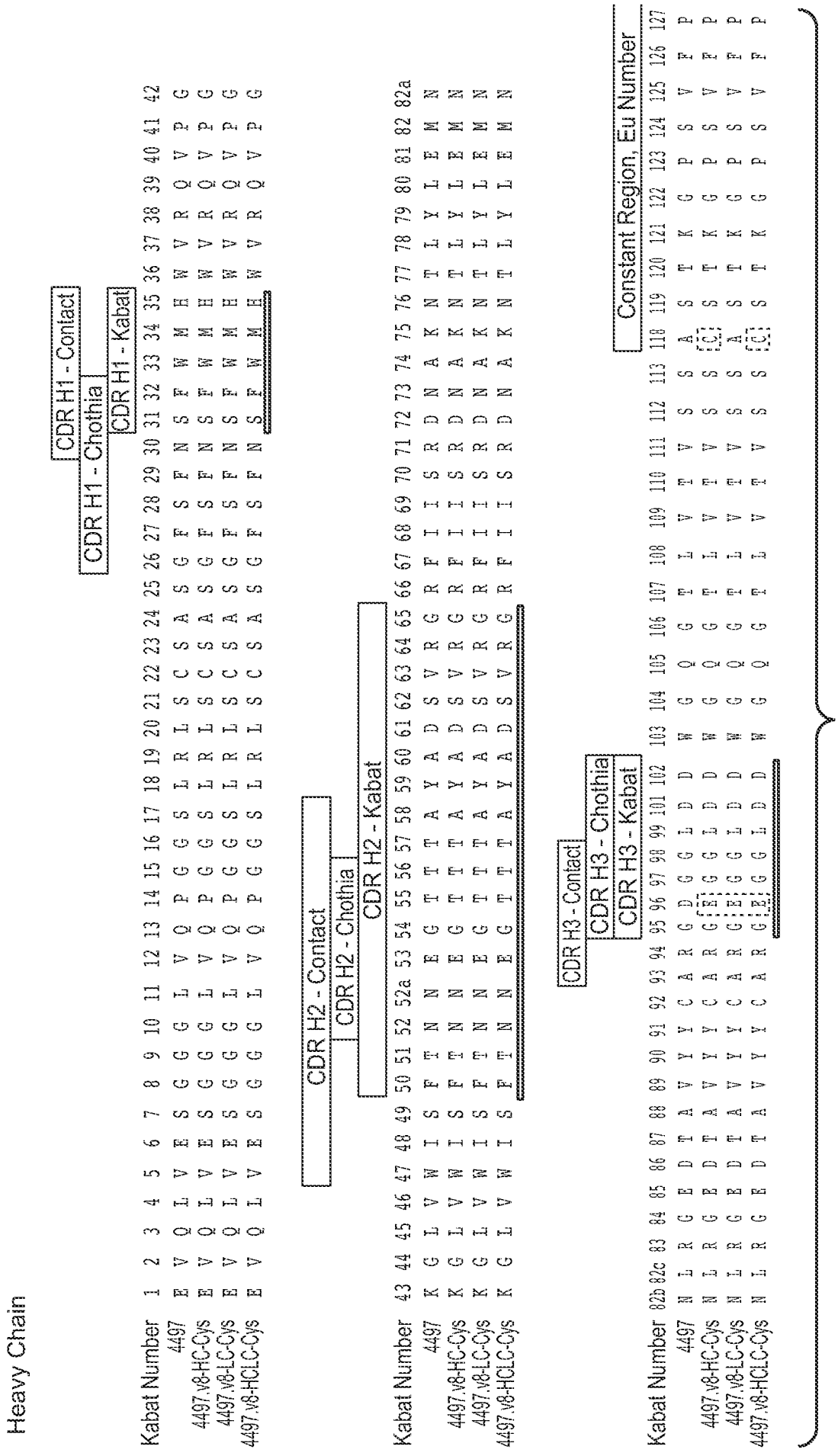

Heavy Chain
CDR H1 - Contact
CDR H1 - Chothia
CDR H1 - Kabat
CDR H2 - Contact
CDR H2 - Chothia
CDR H2 - Kabat
CDR H3 - Contact
CDR H3 - Chothia
CDR H3 - Kabat
Constant Region, Eu Number
Kabat Number
4497
4497.v8-HC-Cys
4497.v8-LC-Cys
4497.v8-HCLC-Cys

FIG. 16B-1

Eu Number	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169
4497	L	A	P	S	S	K	S	T	S	G	G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W	N	S	G	A	L	T	S	G	V	H	T
4497.v8-HC-Cys	L	A	P	S	S	K	S	T	S	G	G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W	N	S	G	A	L	T	S	G	V	H	T
4497.v8-LC-Cys	L	A	P	S	S	K	S	T	S	G	G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W	N	S	G	A	L	T	S	G	V	H	T
4497.v8-HCLC-Cys	L	A	P	S	S	K	S	T	S	G	G	T	A	A	L	G	C	L	V	K	D	Y	F	P	E	P	V	T	V	S	W	N	S	G	A	L	T	S	G	V	H	T

Eu Number	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211
4497	F	P	A	V	L	Q	S	S	G	L	Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T	Y	I	C	N	V	N	H	K	P	S	N	T	K	V
4497.v8-HC-Cys	F	P	A	V	L	Q	S	S	G	L	Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T	Y	I	C	N	V	N	H	K	P	S	N	T	K	V
4497.v8-LC-Cys	F	P	A	V	L	Q	S	S	G	L	Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T	Y	I	C	N	V	N	H	K	P	S	N	T	K	V
4497.v8-HCLC-Cys	F	P	A	V	L	Q	S	S	G	L	Y	S	L	S	S	V	V	T	V	P	S	S	S	L	G	T	Q	T	Y	I	C	N	V	N	H	K	P	S	N	T	K	V

Eu Number	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253
4497	D	K	K	V	E	P	K	S	C	D	K	T	H	T	C	P	P	C	P	A	P	P	E	L	L	G	G	P	S	V	F	L	F	P	P	K	P	K	D	T	L	M	I
4497.v8-HC-Cys	D	K	K	V	E	P	K	S	C	D	K	T	H	T	C	P	P	C	P	A	P	P	E	L	L	G	G	P	S	V	F	L	F	P	P	K	P	K	D	T	L	M	I
4497.v8-LC-Cys	D	K	K	V	E	P	K	S	C	D	K	T	H	T	C	P	P	C	P	A	P	P	E	L	L	G	G	P	S	V	F	L	F	P	P	K	P	K	D	T	L	M	I
4497.v8-HCLC-Cys	D	K	K	V	E	P	K	S	C	D	K	T	H	T	C	P	P	C	P	A	P	P	E	L	L	G	G	P	S	V	F	L	F	P	P	K	P	K	D	T	L	M	I

Eu Number	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295
4497	S	R	T	P	E	V	T	C	V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q
4497.v8-HC-Cys	S	R	T	P	E	V	T	C	V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q
4497.v8-LC-Cys	S	R	T	P	E	V	T	C	V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q
4497.v8-HCLC-Cys	S	R	T	P	E	V	T	C	V	V	V	D	V	S	H	E	D	P	E	V	K	F	N	W	Y	V	D	G	V	E	V	H	N	A	K	T	K	P	R	E	E	Q

Eu Number	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337
4497	Y	N	S	T	Y	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K	C	K	V	S	N	K	A	L	P	A	P	I	E	K	T	I	S
4497.v8-HC-Cys	Y	N	S	T	Y	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K	C	K	V	S	N	K	A	L	P	A	P	I	E	K	T	I	S
4497.v8-LC-Cys	Y	N	S	T	Y	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K	C	K	V	S	N	K	A	L	P	A	P	I	E	K	T	I	S
4497.v8-HCLC-Cys	Y	N	S	T	Y	R	V	V	S	V	L	T	V	L	H	Q	D	W	L	N	G	K	E	Y	K	C	K	V	S	N	K	A	L	P	A	P	I	E	K	T	I	S

Eu Number	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379
4497	K	A	K	G	Q	P	R	E	P	Q	V	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V
4497.v8-HC-Cys	K	A	K	G	Q	P	R	E	P	Q	V	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V
4497.v8-LC-Cys	K	A	K	G	Q	P	R	E	P	Q	V	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V
4497.v8-HCLC-Cys	K	A	K	G	Q	P	R	E	P	Q	V	V	Y	T	L	P	P	S	R	E	E	M	T	K	N	Q	V	S	L	T	C	L	V	K	G	F	Y	P	S	D	I	A	V

FIG. 16B-2

Eu Number	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421
4497	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G	N
4497.v8-HC-Cys	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	P	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G	N
4497.v8-LC-Cys	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G	N
4497.v8-HCLC-Cys	E	W	E	S	N	G	Q	P	E	N	N	Y	K	T	T	P	P	V	L	D	S	D	G	S	F	F	L	Y	S	K	L	T	V	D	K	S	R	W	Q	Q	G	N

Eu Number	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446
4497	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
4497.v8-HC-Cys	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
4497.v8-LC-Cys	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G
4497.v8-HCLC-Cys	V	F	S	C	S	V	M	H	E	A	L	H	N	H	Y	T	Q	K	S	L	S	L	S	P	G

FIG. 16B-3

CDR Sequences According to Kabat Definition are Underlined

Light Chain

CDR L1 - Contact
CDR L1 - Chothia
CDR L1 - Kabat

Kabat Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	27a	27b	27c	27d	27e	27f	28	29	30	31	32	33	34	35	36
6078	D	I	V	M	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	T	I	S	G	W	L	A	W	Y
6263	D	I	Q	L	T	Q	S	P	S	I	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	T	I	S	G	W	L	A	W	Y
4450	E	I	V	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T	L	S	C	R	A	S	Q	F	.	.	.	.	.	V	S	R	T	S	L	A	W	F
6297	E	T	T	L	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T	L	S	C	R	A	S	Q	S	.	.	.	.	.	V	S	S	S	Y	L	A	W	Y
6239	D	V	V	M	T	Q	S	S	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	L	.	.	.	.	.	.	D	I	T	N	H	L	A	W	Y
6232	E	I	V	M	T	Q	S	P	G	T	L	S	L	S	P	G	E	R	A	T	L	S	C	R	A	S	Q	S	.	.	.	.	.	V	G	A	I	Y	L	A	W	Y
6259	E	I	V	L	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	G	I	R	N	G	L	G	W	Y
6292	D	I	Q	M	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	G	I	R	N	G	L	G	W	Y
4462	D	I	Q	M	T	Q	S	P	A	T	L	S	V	S	P	G	E	T	V	T	L	S	C	R	A	S	Q	.	.	.	.	.	.	S	V	R	T	N	V	A	W	Y
6265	D	V	V	M	T	Q	S	P	S	F	L	S	A	S	V	G	D	R	V	T	L	T	C	R	A	S	Q	.	.	.	.	.	.	D	I	G	S	S	L	A	W	Y
6253	E	T	T	L	T	Q	S	P	S	T	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	S	I	G	D	R	L	A	W	Y
4497	D	I	Q	L	T	Q	S	P	D	S	L	A	V	S	L	G	E	R	A	T	I	N	C	K	S	S	Q	S	I	F	R	T	S	R	N	K	N	L	L	N	W	Y
4487	D	I	Q	L	T	Q	S	P	S	S	L	S	A	S	V	G	D	R	V	T	I	T	C	R	A	S	Q	.	.	.	.	.	.	F	T	N	H	Y	L	N	W	Y

CDR L2 - Contact
CDR L2 - Chothia
CDR L2 - Kabat

Kabat Number	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
6078	Q	Q	K	P	A	E	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L
6263	Q	Q	K	P	A	E	A	P	K	L	L	I	Y	K	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	G	T	E	F	T	L	T	I	S	S	L
4450	Q	Q	K	P	G	Q	P	P	R	L	L	I	Y	E	T	S	S	R	A	T	G	I	P	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L
6297	Q	Q	K	P	G	Q	A	P	K	V	L	I	Y	D	A	S	S	R	A	T	G	I	P	D	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	R	L
6239	Q	Q	K	P	G	E	L	P	K	L	L	I	Y	E	A	S	I	L	Q	S	G	V	P	S	R	F	S	G	S	G	S	G	T	D	F	T	L	T	I	S	S	L
6232	Q	Q	E	P	G	R	A	P	T	L	L	F	Y	G	V	S	N	R	A	T	G	I	P	D	R	F	S	C	S	G	S	G	T	D	F	T	L	T	I	S	R	L
6259	Q	Q	T	P	G	K	A	P	K	L	L	I	Y	P	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	D	R	D	F	T	L	T	I	T	S	L
6292	Q	Q	I	P	G	K	A	P	K	L	L	I	Y	P	A	S	T	L	E	S	G	V	P	S	R	F	S	G	S	G	S	D	R	D	F	T	L	T	I	T	S	L
4462	R	H	K	A	G	Q	A	P	M	I	L	V	S	G	A	S	T	R	A	S	G	A	P	A	R	F	S	G	S	G	Y	G	T	E	F	T	L	T	I	T	S	L
6265	Q	Q	R	P	G	K	A	P	N	L	L	I	Y	A	T	S	T	L	Q	S	G	V	P	S	R	F	S	G	S	G	F	G	T	E	F	T	L	T	I	S	T	L
6253	Q	Q	K	P	G	K	A	P	K	V	L	I	Y	W	A	S	N	L	E	G	G	V	P	S	R	F	S	G	T	G	S	G	T	E	F	A	L	T	I	S	G	L
4497	Q	Q	R	P	G	Q	P	P	R	L	L	I	H	W	A	S	T	R	K	S	G	V	P	D	R	F	S	G	S	G	F	G	T	D	F	T	L	T	I	T	S	L
4487	Q	H	K	P	G	R	A	P	K	L	M	I	S	V	A	S	N	L	Q	S	G	V	P	S	R	F	T	G	S	E	S	G	T	D	F	T	L	T	I	S	G	L

FIG. 17A-1

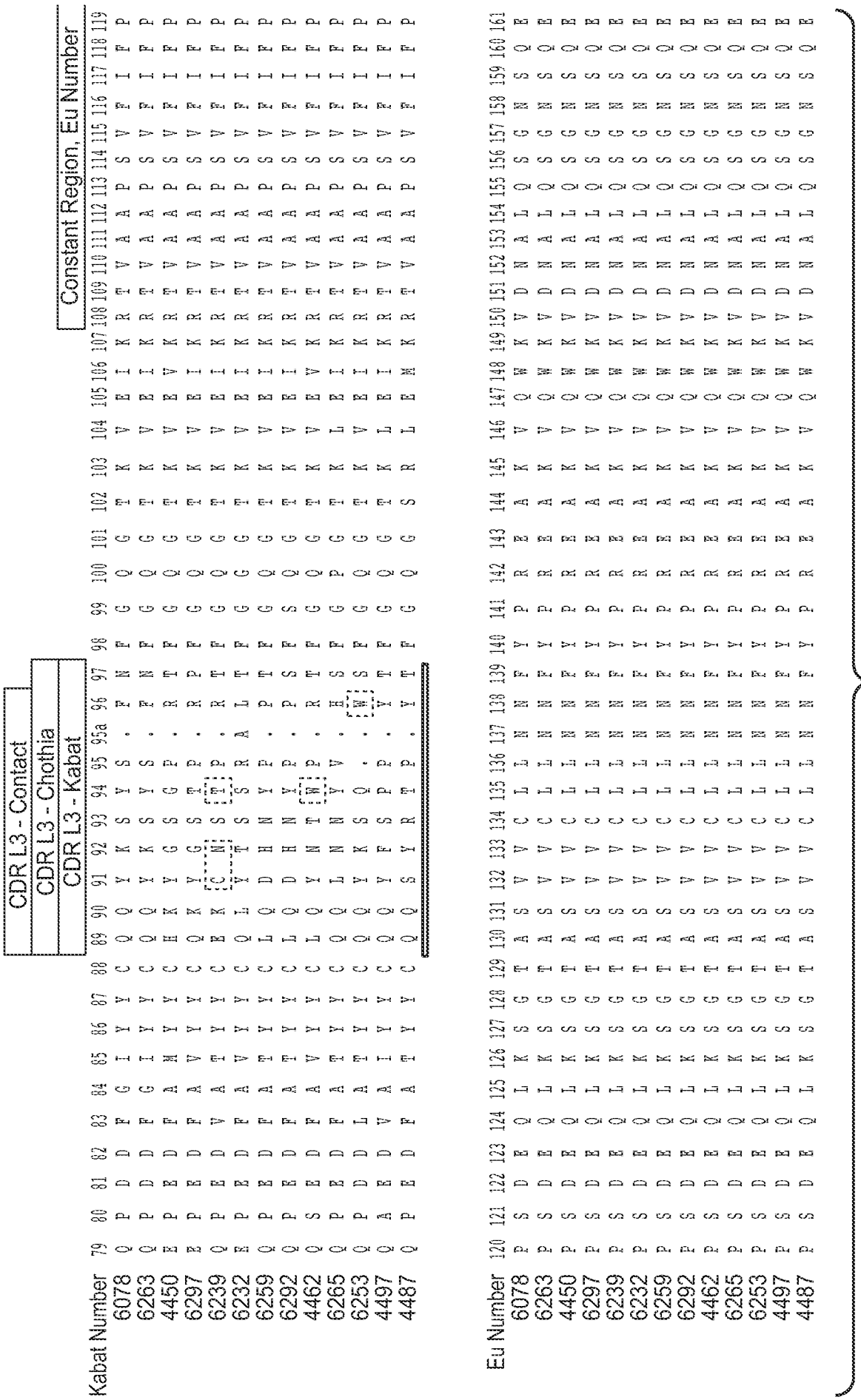

CDR L3 - Contact
CDR L3 - Chothia
CDR L3 - Kabat
Constant Region, Eu Number
Kabat Number
Eu Number

FIG. 17A-2

Eu Number	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203
6078	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6263	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
4450	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6297	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6239	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6232	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6259	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6292	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
4462	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6265	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
6253	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
4497	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S
4487	S	V	T	E	Q	D	S	K	D	S	T	Y	S	L	S	S	T	L	T	L	S	K	A	D	Y	E	K	H	K	V	Y	A	C	E	V	T	H	Q	G	L	S	S

Eu Number	204	205	206	207	208	209	210	211	212	213	214
6078	P	V	T	K	S	F	N	R	G	E	C
6263	P	V	T	K	S	F	N	R	G	E	C
4450	P	V	T	K	S	F	N	R	G	E	C
6297	P	V	T	K	S	F	N	R	G	E	C
6239	P	V	T	K	S	F	N	R	G	E	C
6232	P	V	T	K	S	F	N	R	G	E	C
6259	P	V	T	K	S	F	N	R	G	E	C
6292	P	V	T	K	S	F	N	R	G	E	C
4462	P	V	T	K	S	F	N	R	G	E	C
6265	P	V	T	K	S	F	N	R	G	E	C
6253	P	V	T	K	S	F	N	R	G	E	C
4497	P	V	T	K	S	F	N	R	G	E	C
4487	P	V	T	K	S	F	N	R	G	E	C

* Light chain Eu position 205 marked by asterisk can be changed to Cys for drug conjugation.

FIG. 17A-3

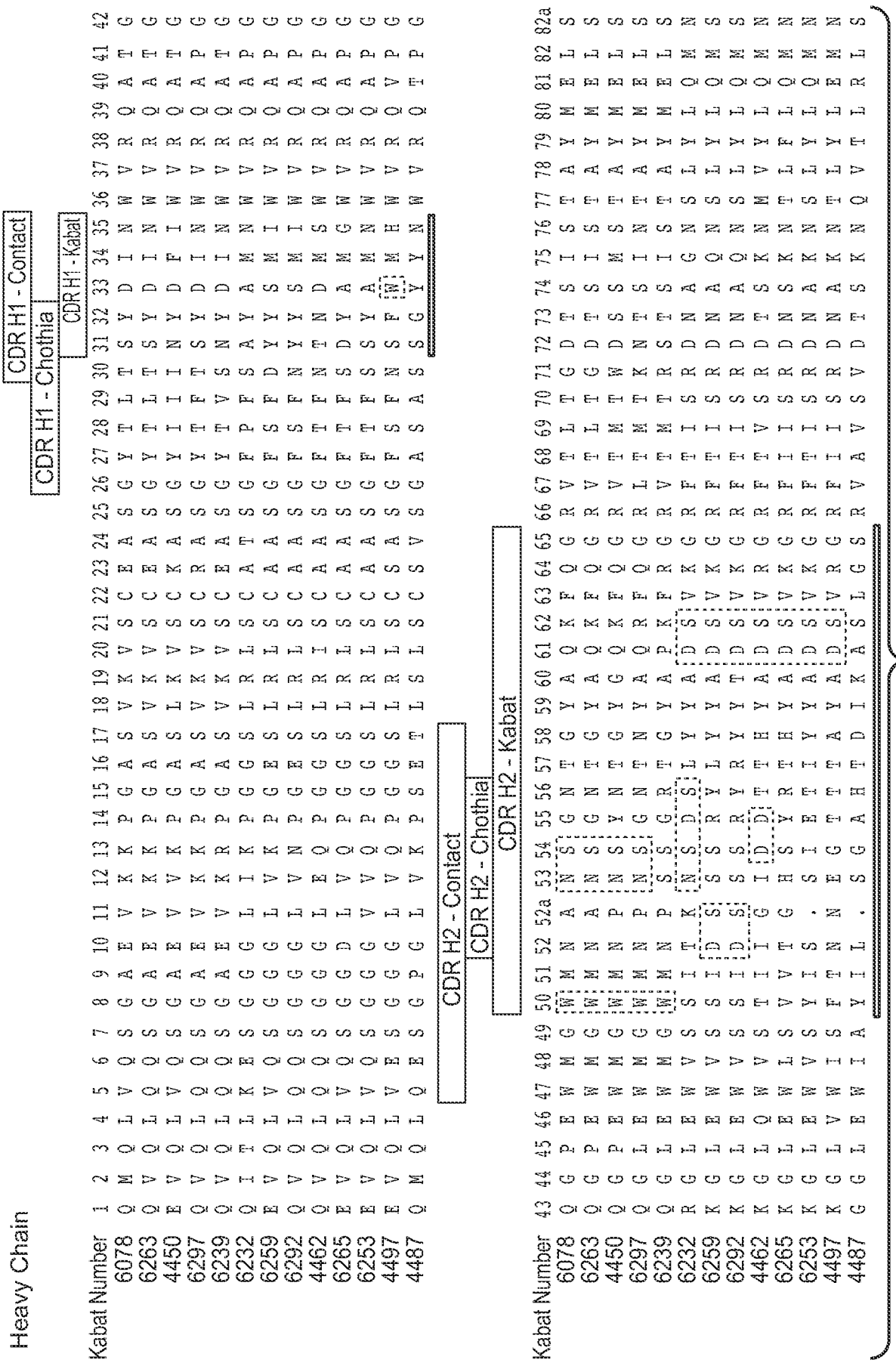

Heavy Chain
CDR H1 - Contact
CDR H1 - Chothia
CDR H1 - Kabat
CDR H2 - Contact
CDR H2 - Chothia
CDR H2 - Kabat
Kabat Number
6078
6263
4450
6297
6239
6232
6259
6292
4462
6265
6253
4497
4487

FIG. 17B-1

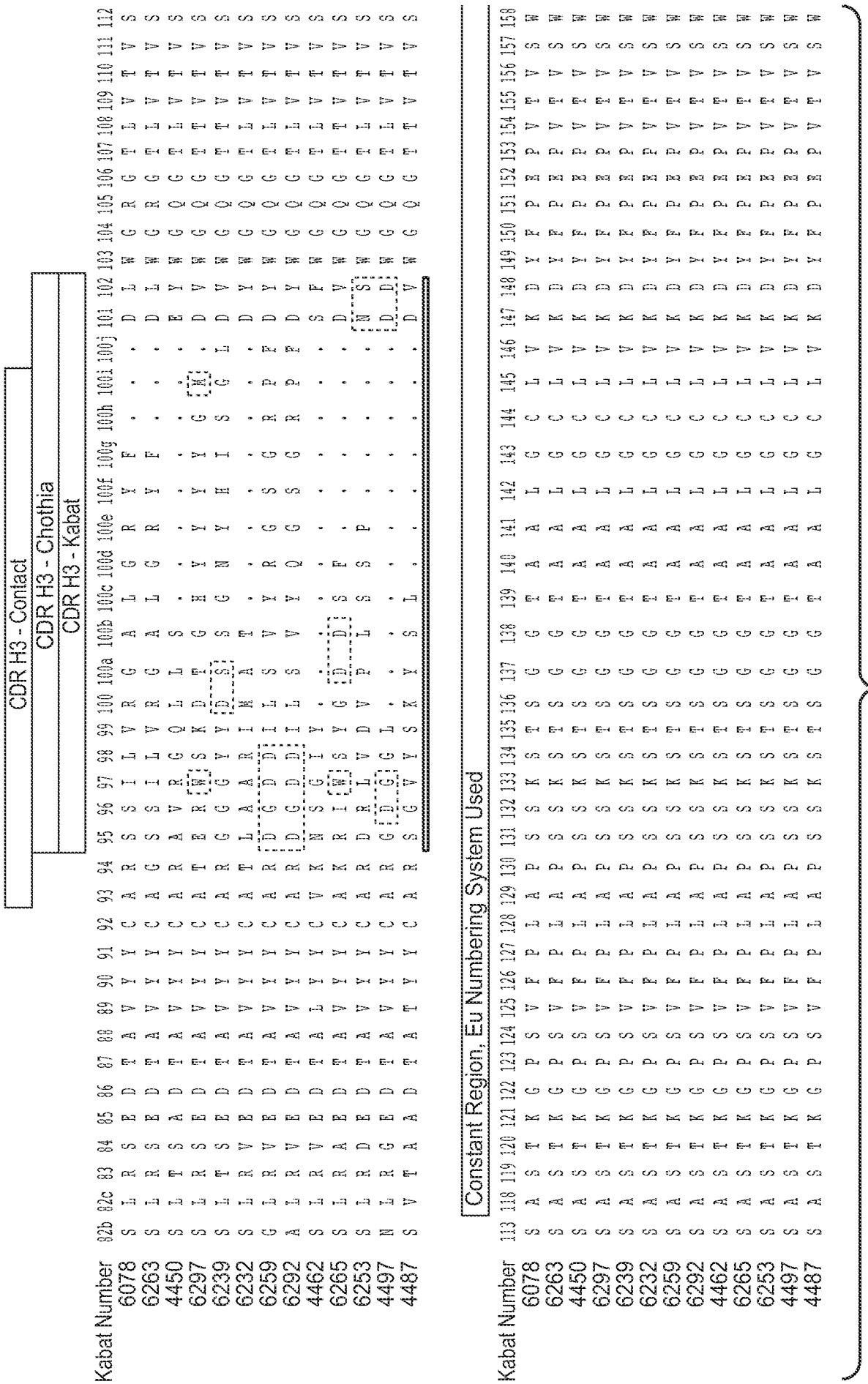

CDR H3 - Contact
CDR H3 - Chothia
CDR H3 - Kabat
Constant Region, Eu Numbering System Used
Kabat Number

FIG. 17B-2

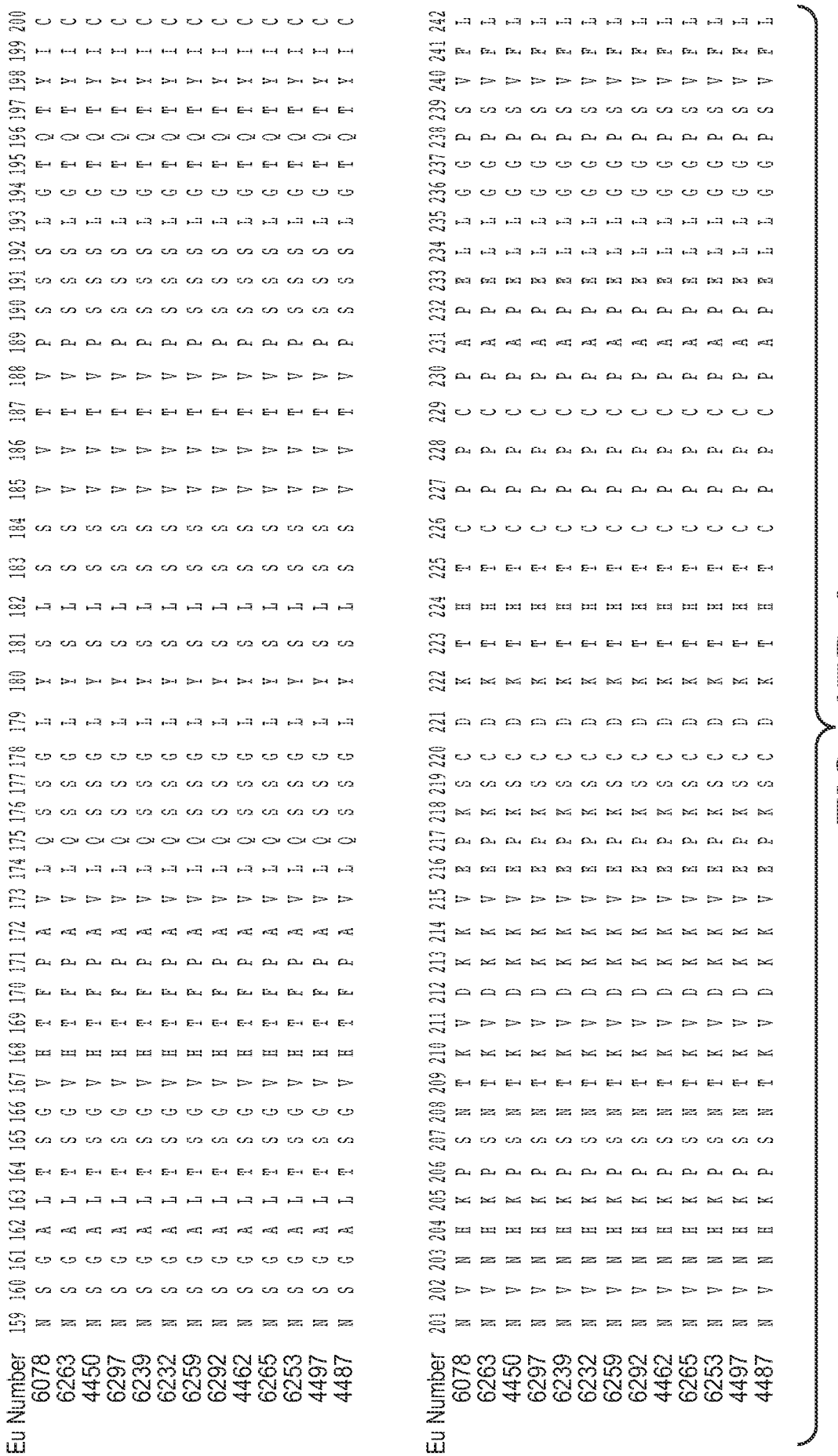
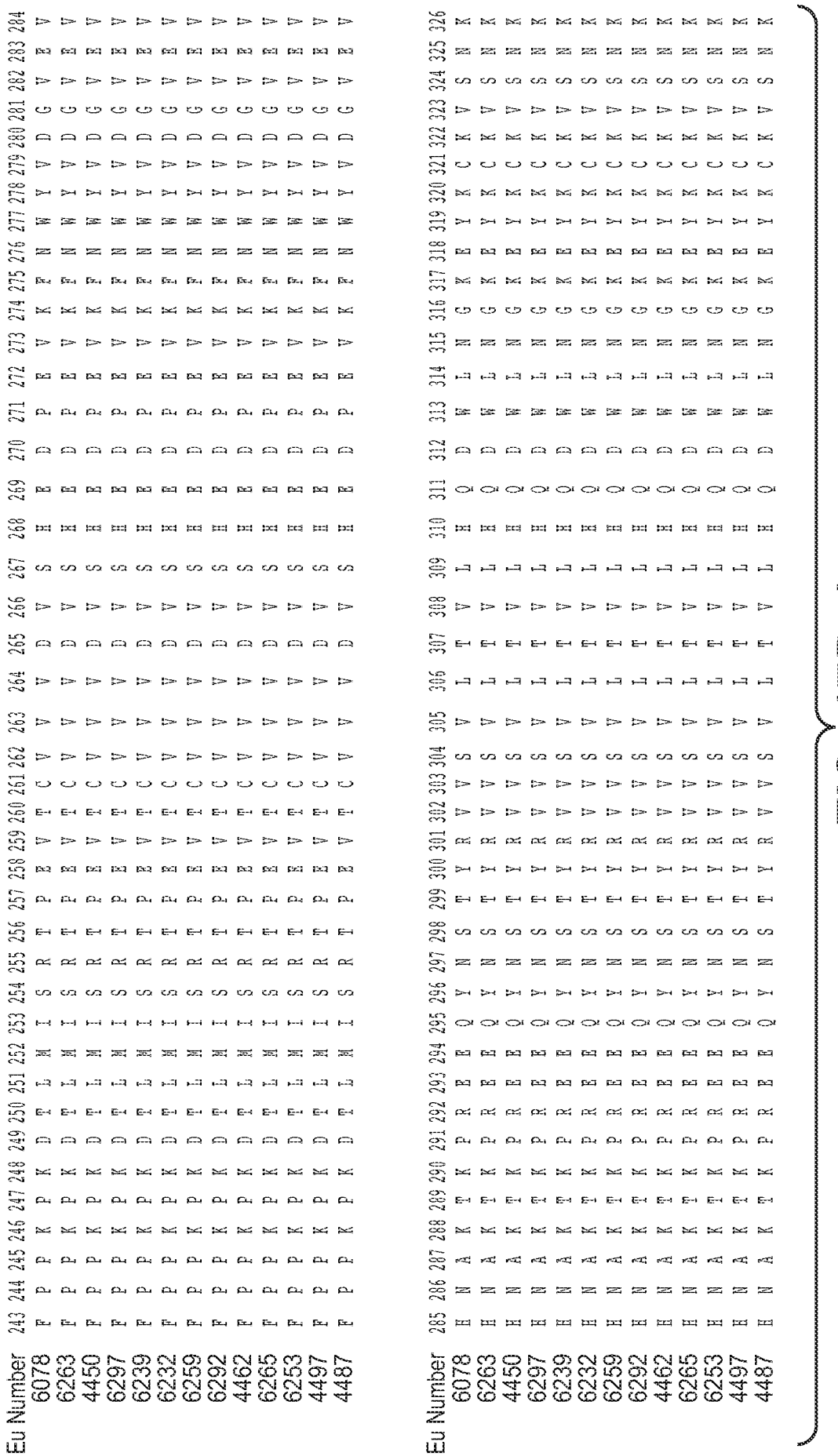
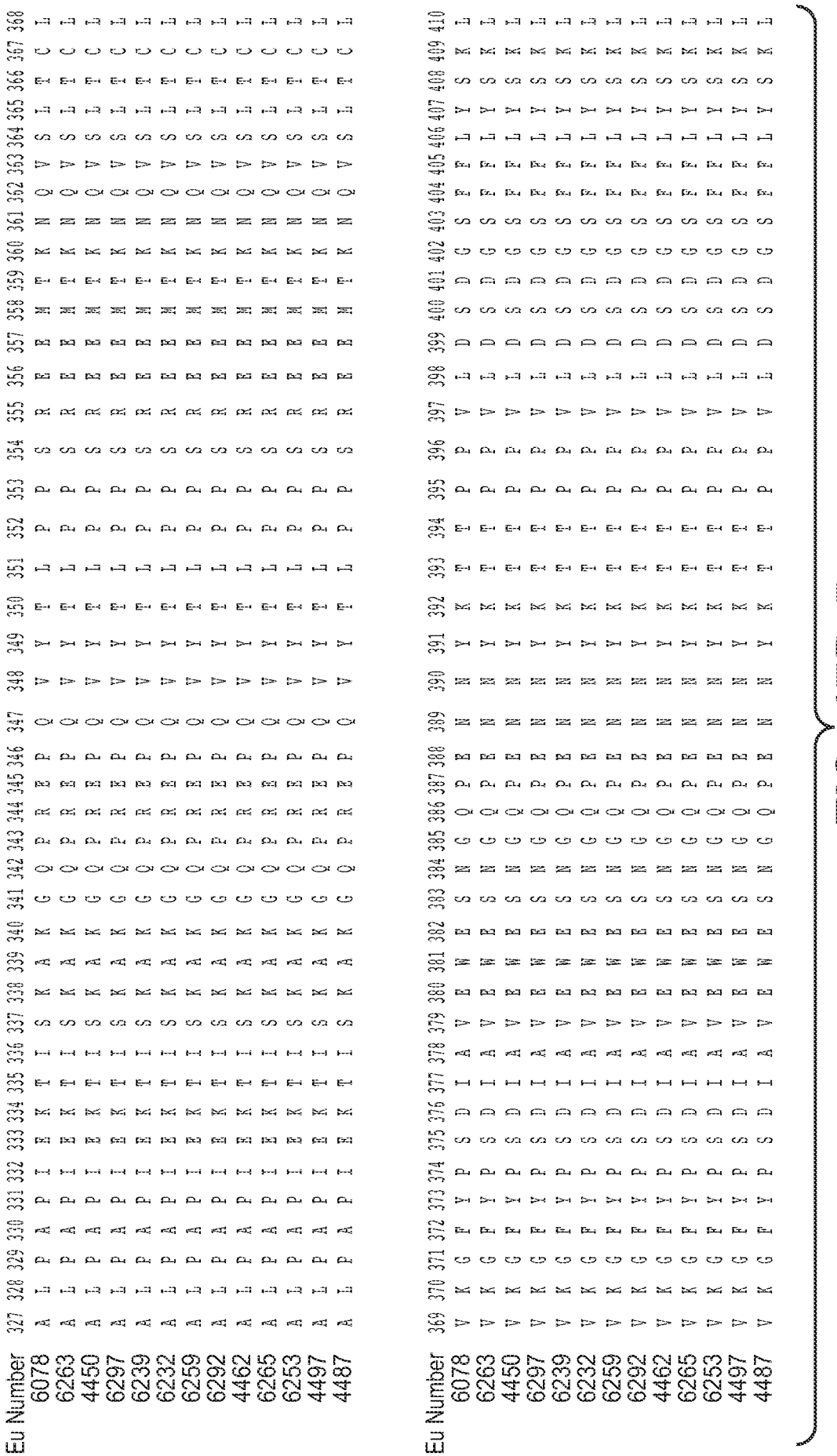

Eu Number 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200
6078 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6263 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
4450 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6297 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6239 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6232 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6259 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6292 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
4462 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6265 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
6253 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
4497 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
4487 N S G A L T S G V H T F P A V L Q S S G L V Y S L S S V V T V P S S S S L G T Q T Y I C
Eu Number 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242
6078 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6263 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
4450 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6297 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6239 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6232 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6259 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6292 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
4462 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6265 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
6253 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
4497 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L
4487 N V N H K P S N T K V D K K V E P K S C D K T H T C P P C P A P E L L G G P S V F L

FIG. 17B-3


Eu Number 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284
6078 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6263 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
4450 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6297 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6239 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6232 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6259 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6292 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
4462 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6265 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
6253 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
4497 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V
4487 F P P P K P K D T L M I S R T P E V T C V V V D V S H E D P E V K F N W Y V D G V E V

Eu Number 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326
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6263 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
4450 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6297 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6239 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6232 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6259 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6292 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
4462 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
6265 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
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4497 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K
4487 H N A K T K P R R E E Q Y N S T Y R V V S V L T V L H Q D W L N G K E Y K C K V S N K

FIG. 17B-4


Eu Number 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368
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6263 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
4450 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
6297 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
6239 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
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6259 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
6292 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
4462 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
6265 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
6253 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
4497 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L
4487 A L P A P P I E K T I S K A K G Q P R E P Q V Y T L P P S R E E E M T K N Q V S L T C L

Eu Number 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410
6078 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6263 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
4450 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6297 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6239 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6232 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6259 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6292 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
4462 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6265 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
6253 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
4497 V K G F Y P S D I A V E W E S N G Q P E N N Y K T T P P V L D S D G S F F L Y S K L
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FIG. 17B-5

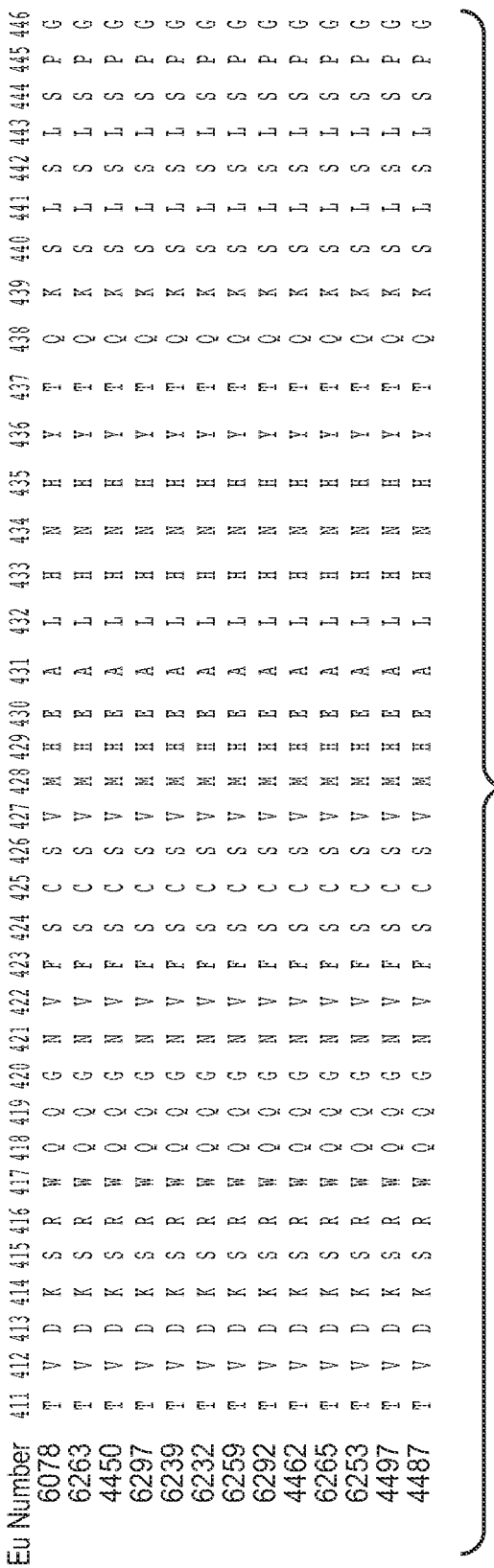

Eu Number 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446
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6263 T V D K S R W Q Q G N V P S C S V M H E E A L H N H Y T Q K S L S S P G
4450 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
6297 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
6239 T V D K S R W Q Q G N V P S C S V M H E E A L H N H Y T Q K S L S S P G
6232 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
6259 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
6292 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
4462 T V D K S R W Q Q G N V P S C S V M H E E A L H N H Y T Q K S L S S P G
6265 T V D K S R W Q Q G N V P S C S V M H E E A L H N H Y T Q K S L S S P G
6253 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
4497 T V D K S R W Q Q G N V F S C S V M H E E A L H N H Y T Q K S L S S P G
4487 T V D K S R W Q Q G N V P S C S V M H E E A L H N H Y T Q K S L S S P G

FIG. 17B-6

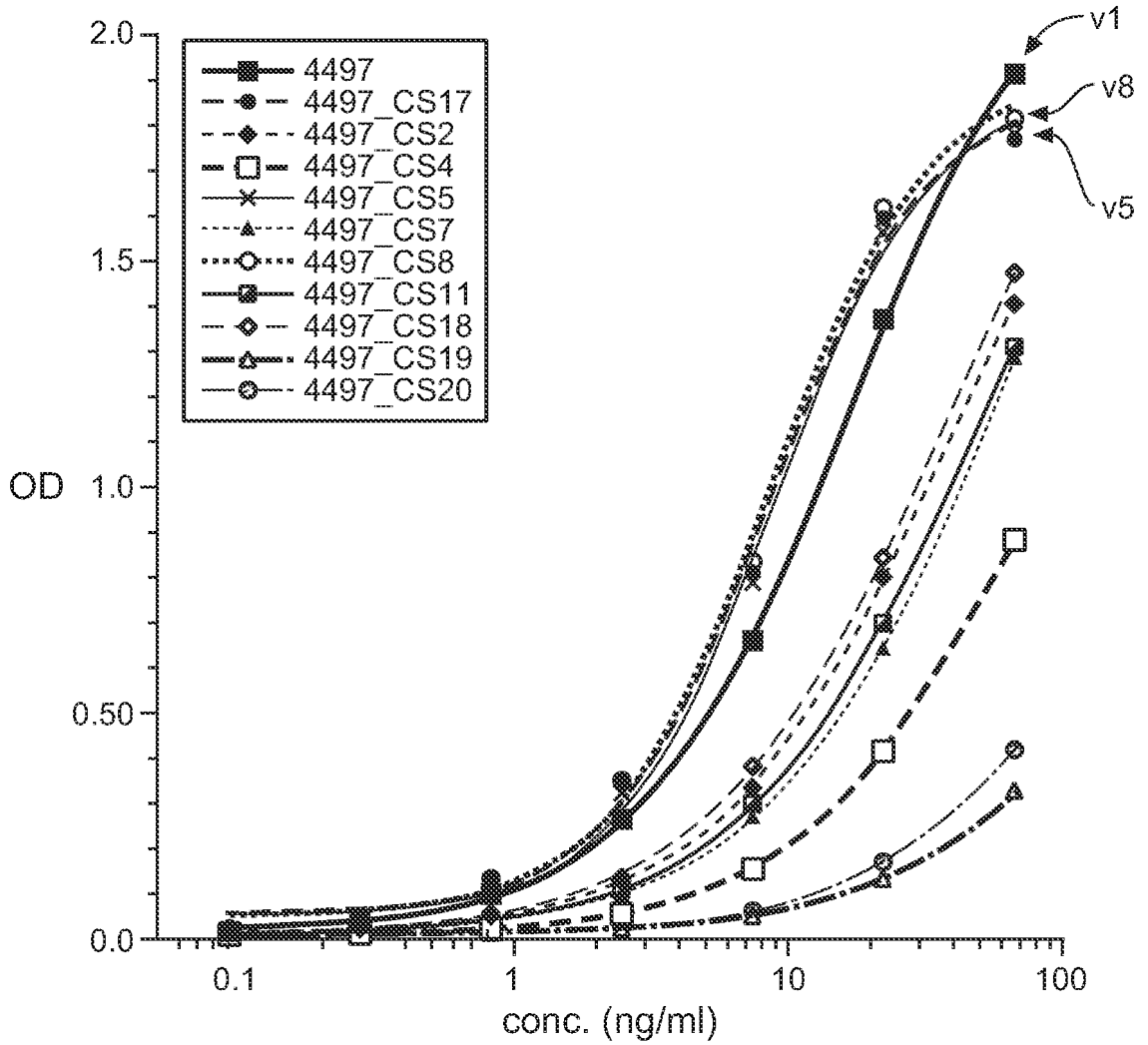


FIG. 18A

	93	94	95	96	97	98	99	101	102	ELISA
WT (v1)	A	R	G	D	G	G	L	D	D	+++
v7				D	G				E	+
v2				D	G				Y	+
v4				D	A				D	+
v19				D	A				E	+/-
v8				E	G				D	+++
v20				E	G				E	+/-
v5				A	G				D	++
v11				A	G				E	+
v18				A	G				Y	+

FIG. 18B

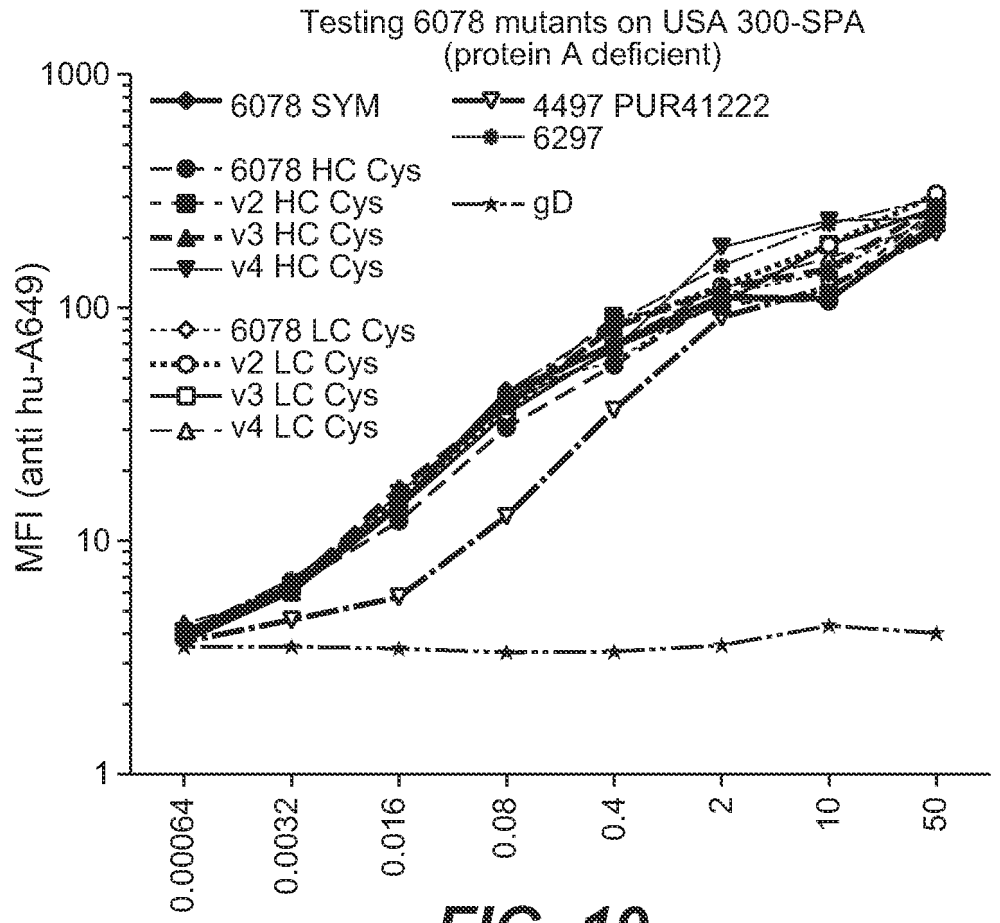

Testing 6078 mutants on USA 300-SPA
(protein A deficient)
MFI (anti hu-A649)
1000
100
10
1
6078 SYM
4497 PUR41222
6297
6078 HC Cys
v2 HC Cys
v3 HC Cys
v4 HC Cys
gD
6078 LC Cys
v2 LC Cys
v3 LC Cys
v4 LC Cys
0.00064
0.0032
0.016
0.08
0.4
2
10
50

FIG. 19

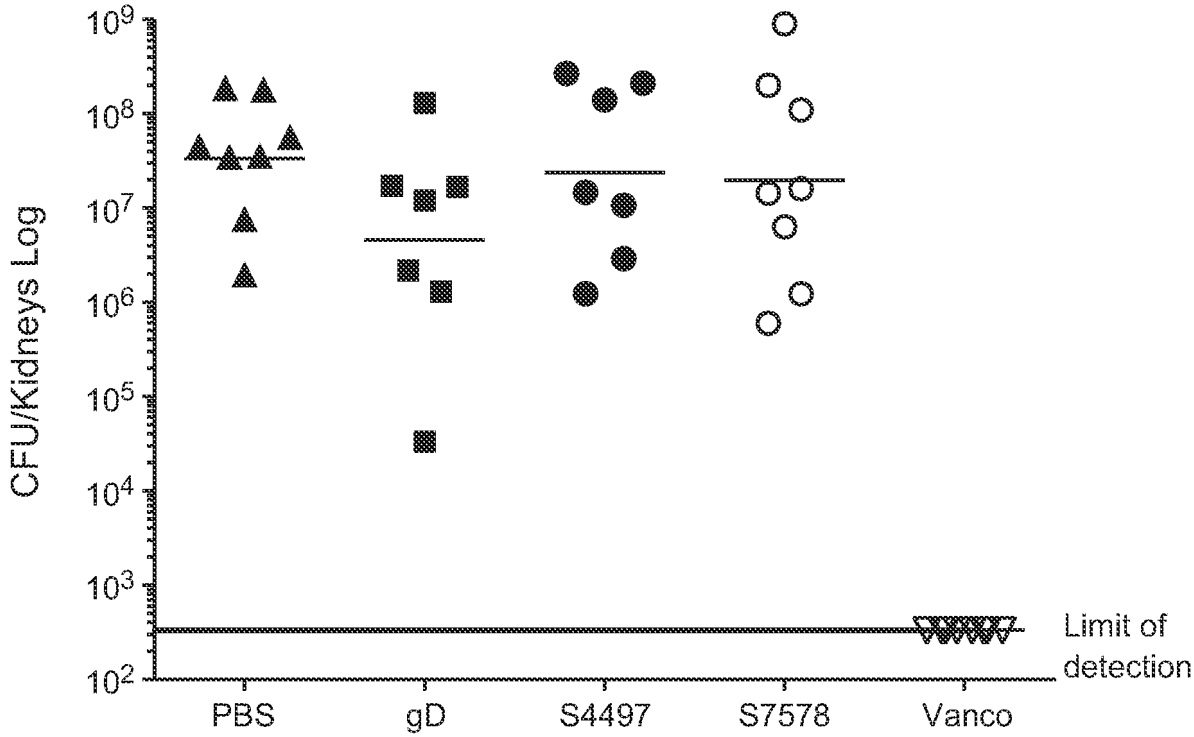

CFU/Kidneys Log
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
Limit of detection
PBS
gD
S4497
S7578
Vanco

FIG. 20

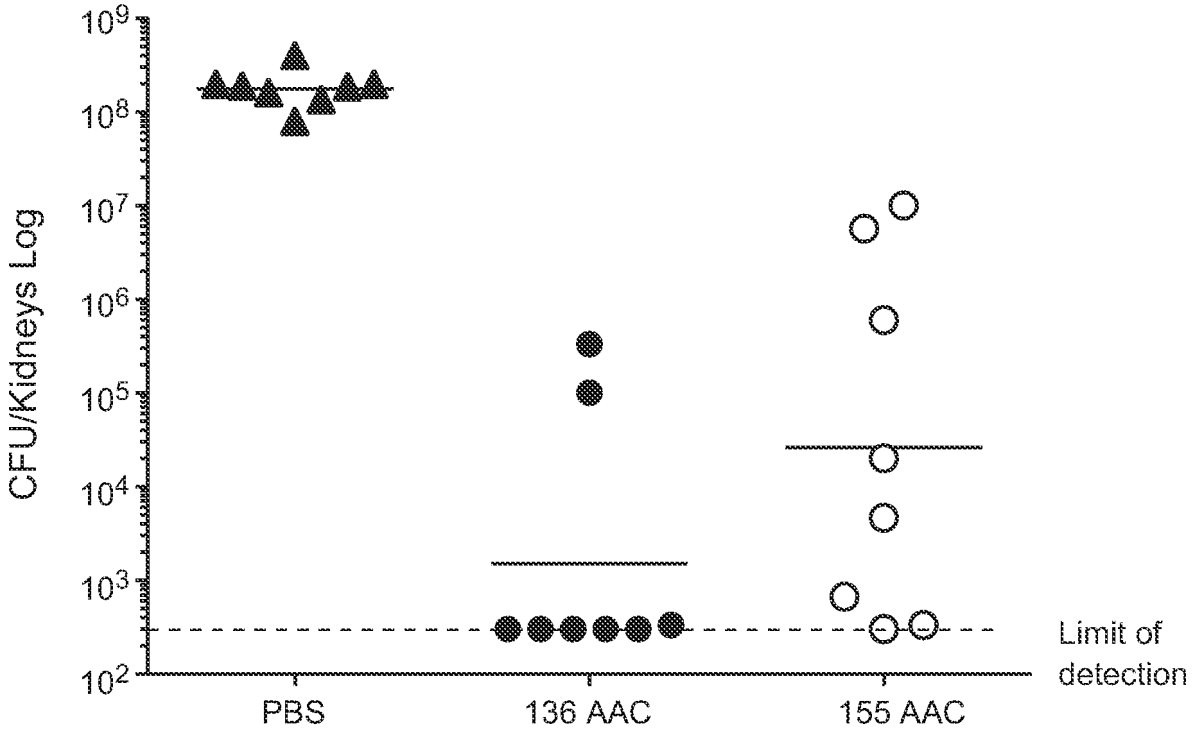

CFU/Kidneys Log
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
PBS
136 AAC
155 AAC
Limit of detection

FIG. 21

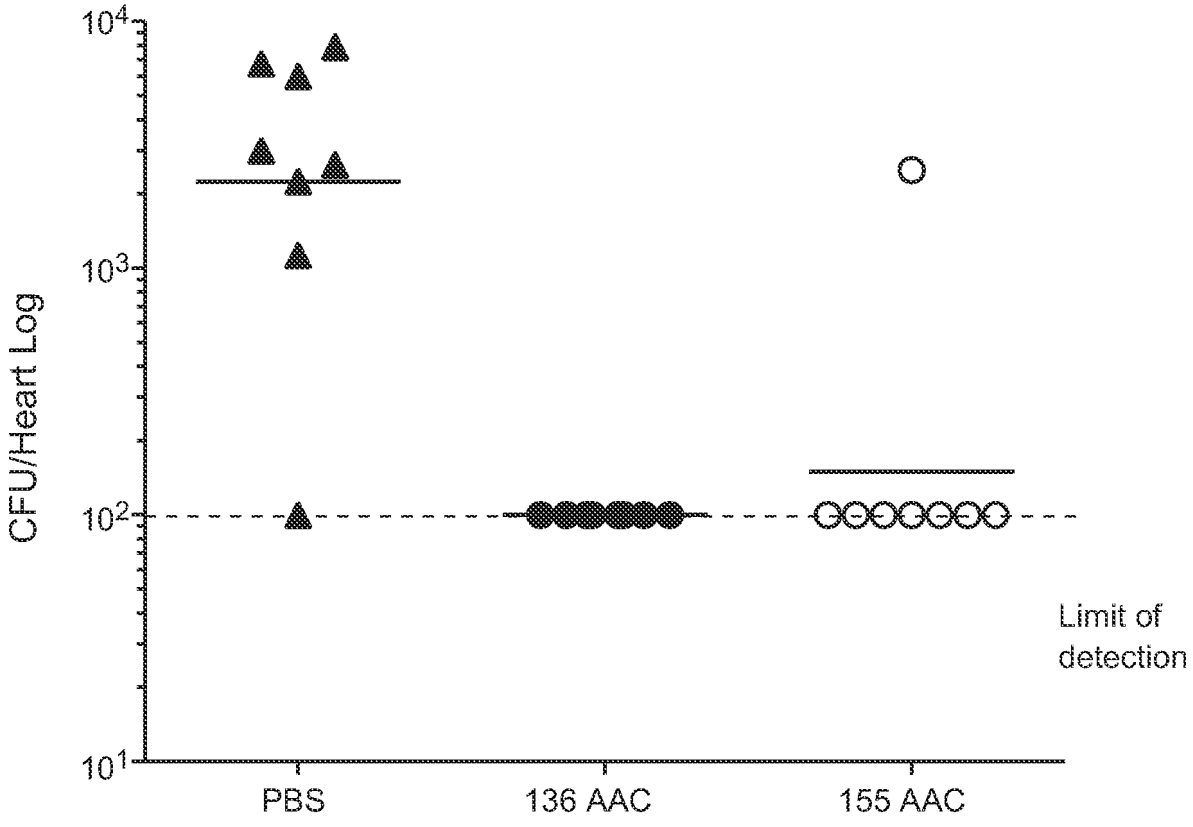

CFU/Heart Log
10^4
10^3
10^2
10^1
PBS
136 AAC
155 AAC
Limit of detection

FIG. 22

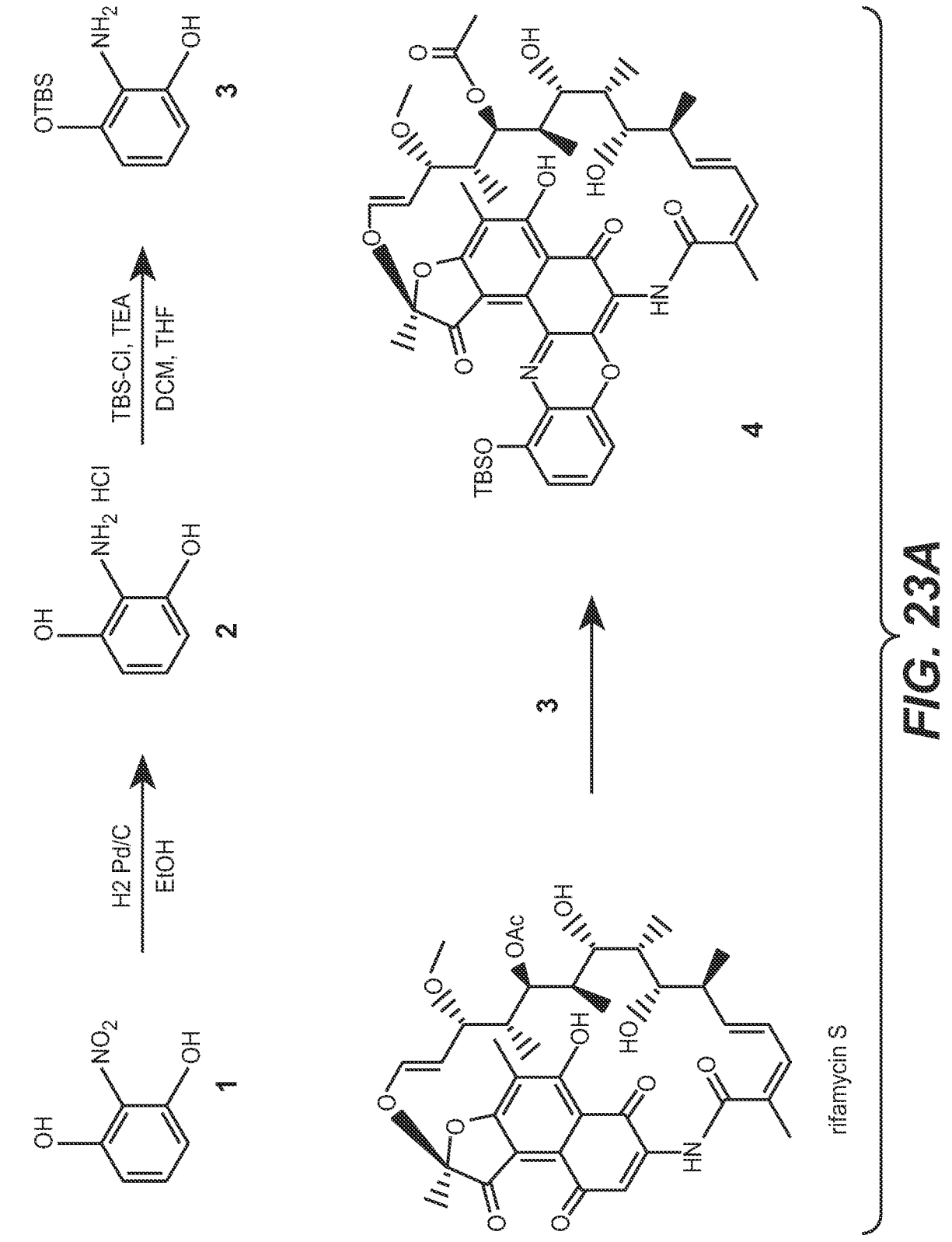


FIG. 23A

FIG. 23A
FIG. 23B

FIG. 23

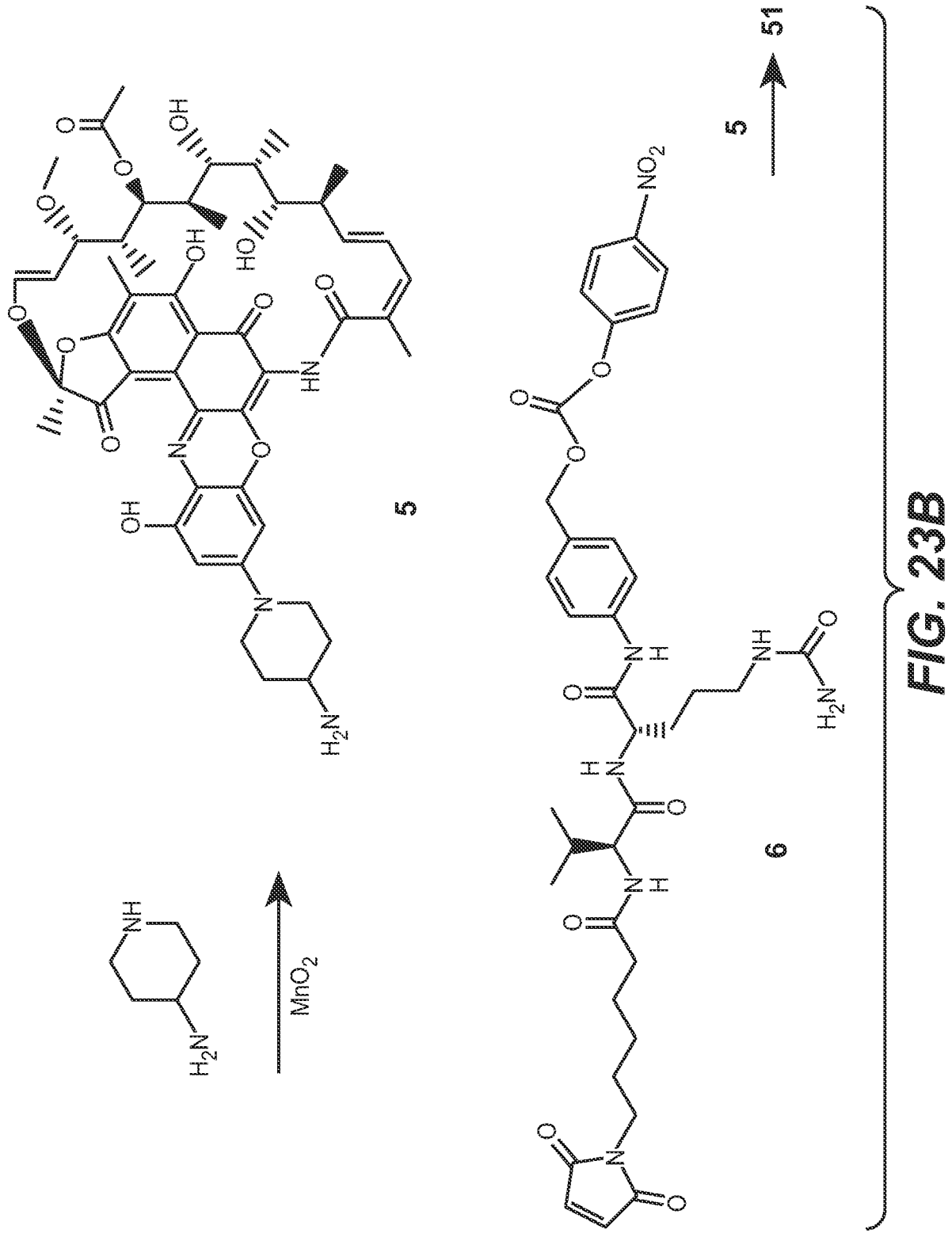


FIG. 23B

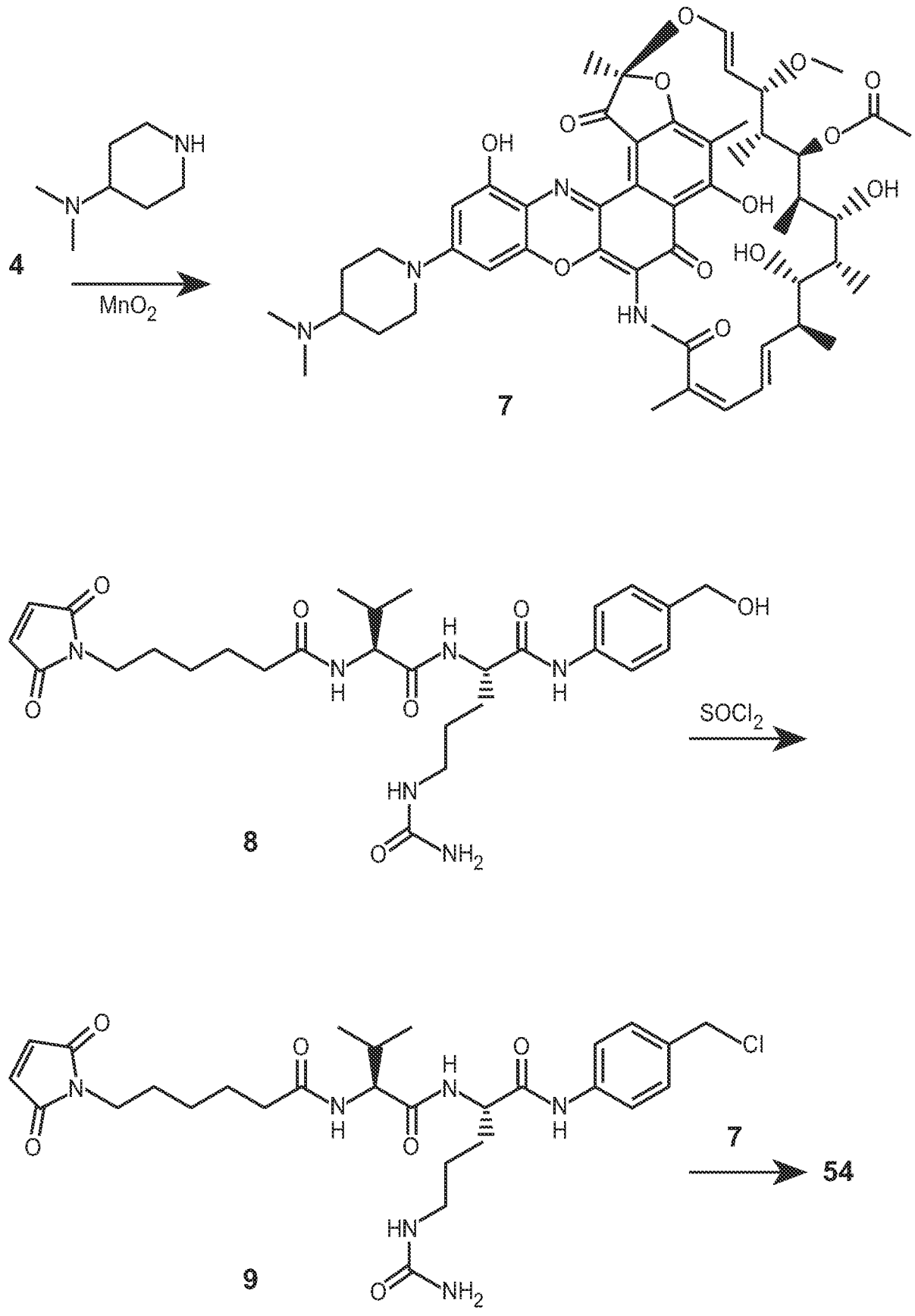


FIG. 24

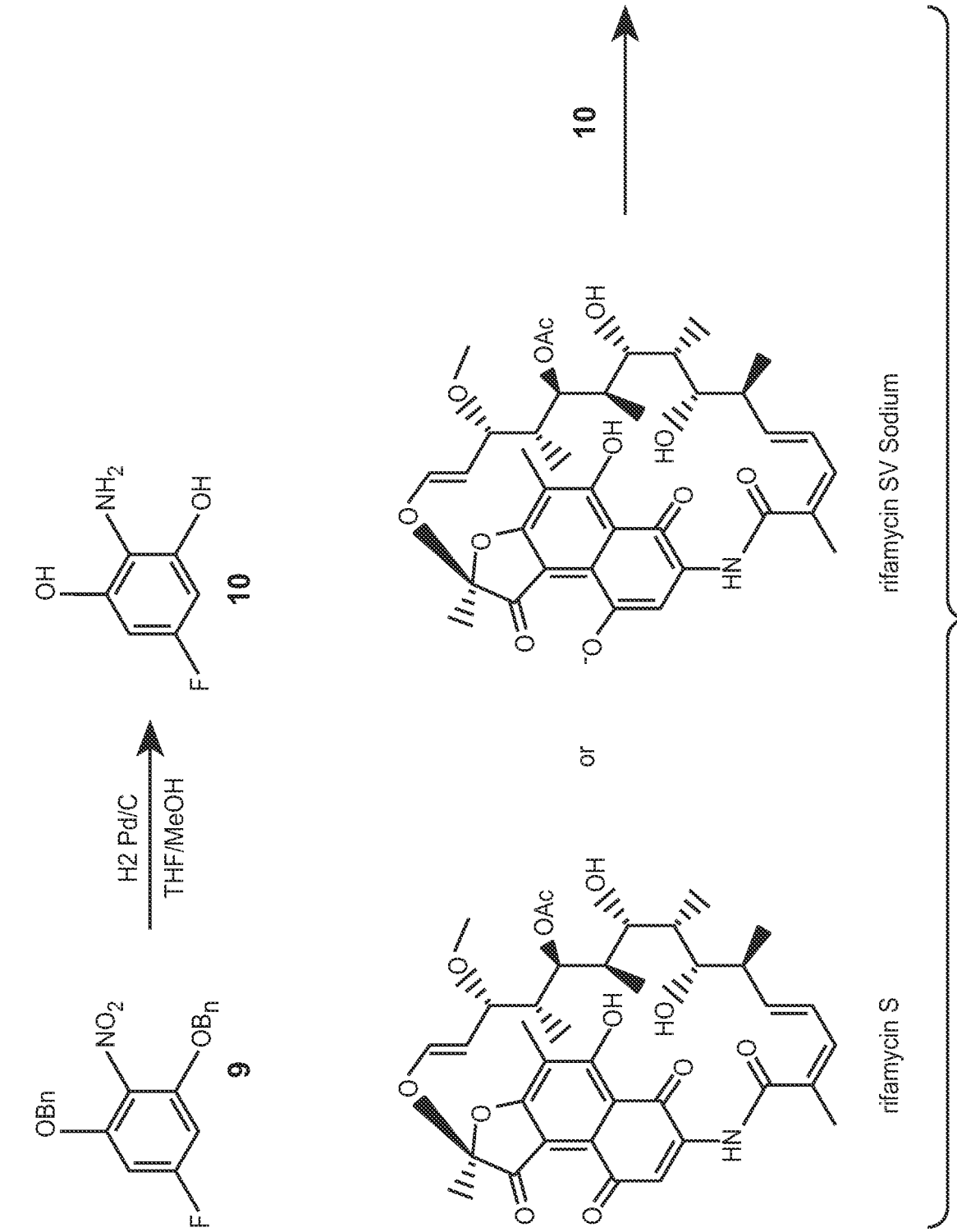


FIG. 25A

FIG. 25

FIG. 25A

FIG. 25B

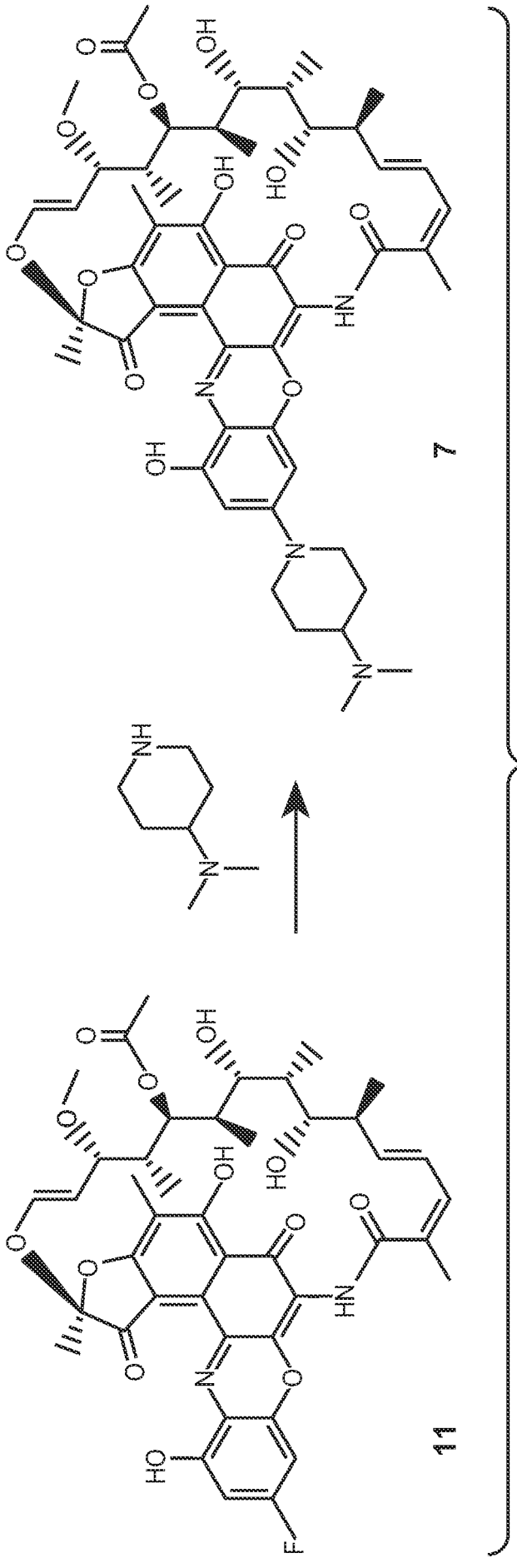


FIG. 25B

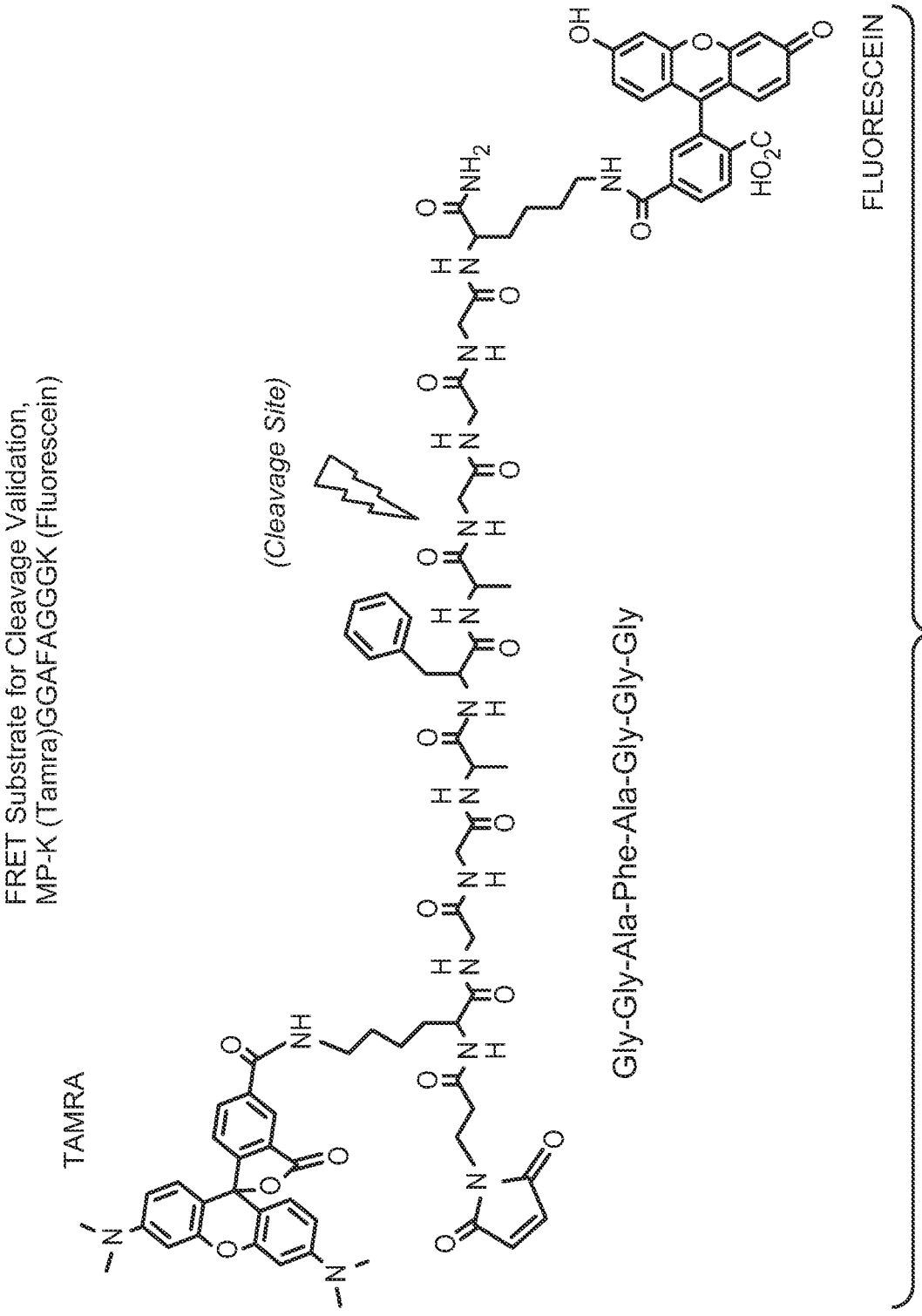

FRET Substrate for Cleavage Validation,
MP-K (Tamra)GGAFAGGGK (Fluorescein)
TAMRA
(Cleavage Site)
Gly-Gly-Ala-Phe-Ala-Gly-Gly-Gly
FLUORESCEIN

FIG. 26

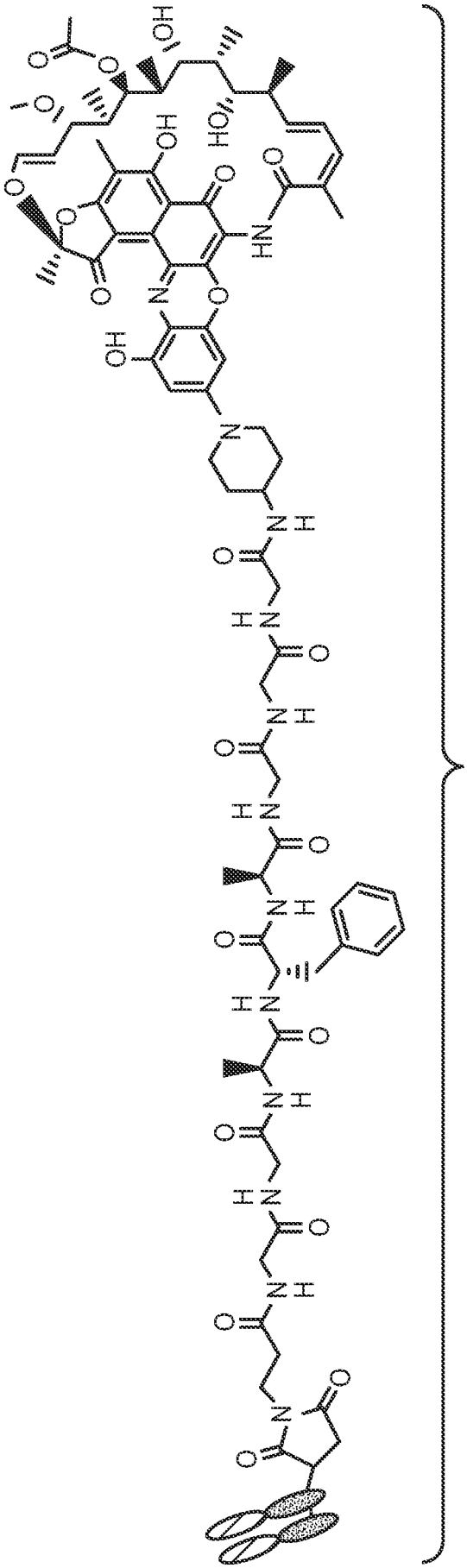


FIG. 27

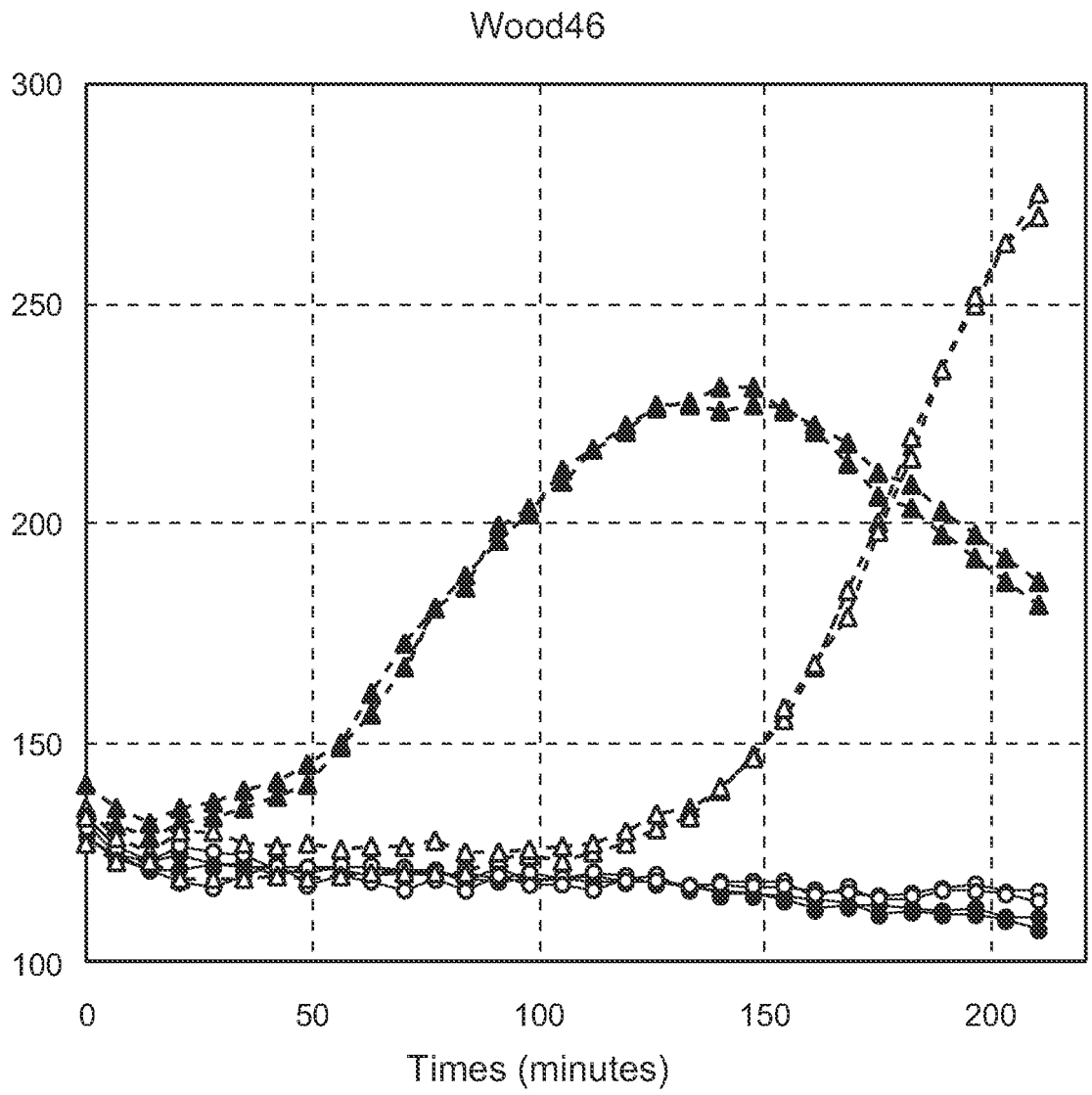

Wood46
300
250
200
150
100
0
50
100
150
200
Times (minutes)
thio-S4497-MP-K(Tamra)GGAFAGGGK(Fluorescein)
FRET peptide, 10^8 cells/ml
thio-S4497-MP-K(Tamra)GGAFAGGGK(Fluorescein)
FRET peptide, 10^7 cells/ml

FIG. 28

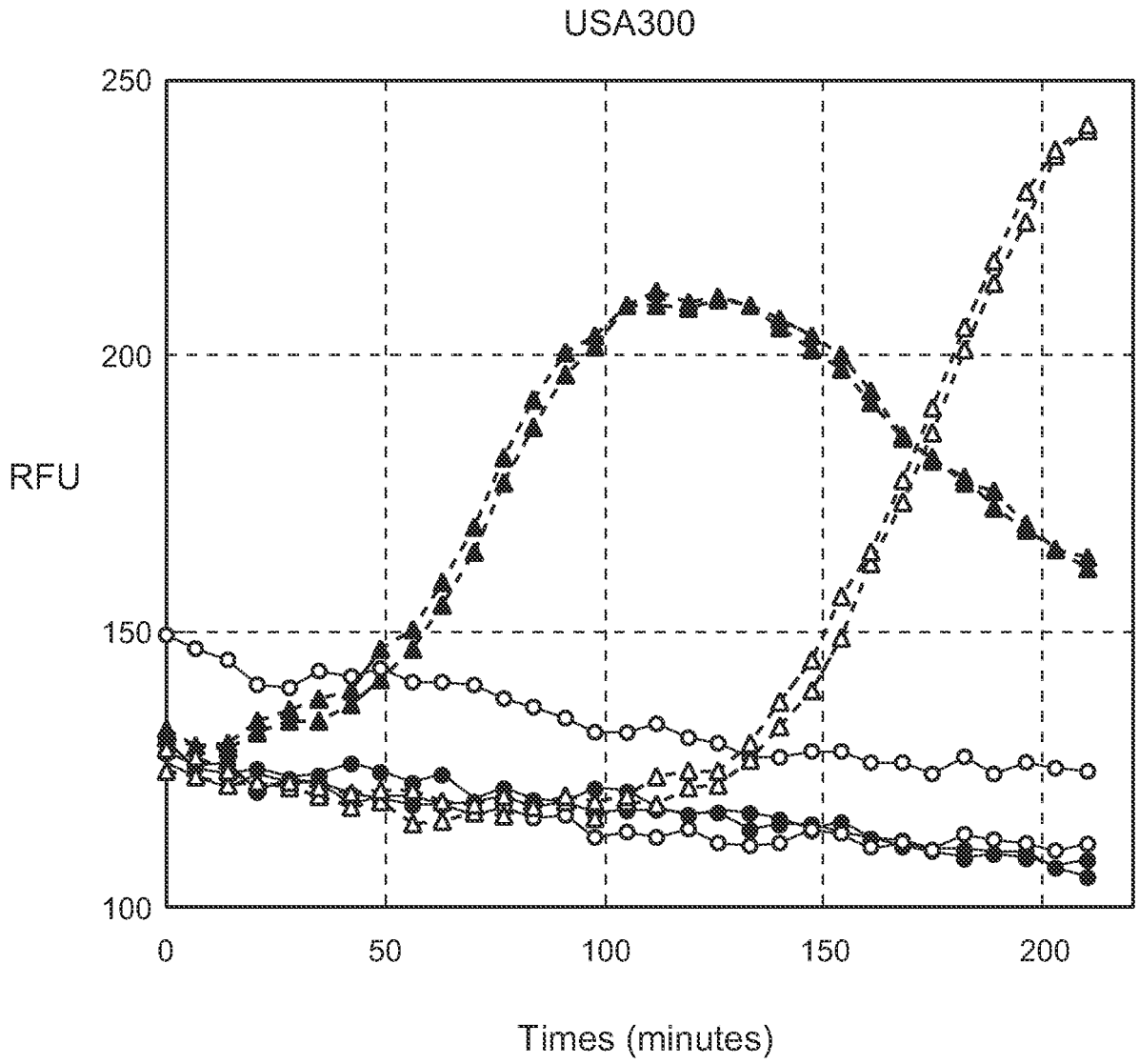

USA300
250
200
150
100
RFU
0
50
100
150
200
Times (minutes)
thio-trastuzumab-MP-K(Tamra)GGAFAGGGK(Fluorescein)
FRET peptide, 10^8 cells/ml
thio-trastuzumab-MP-K(Tamra)GGAFAGGGK(Fluorescein)
FRET peptide, 10^7 cells/ml

FIG. 29

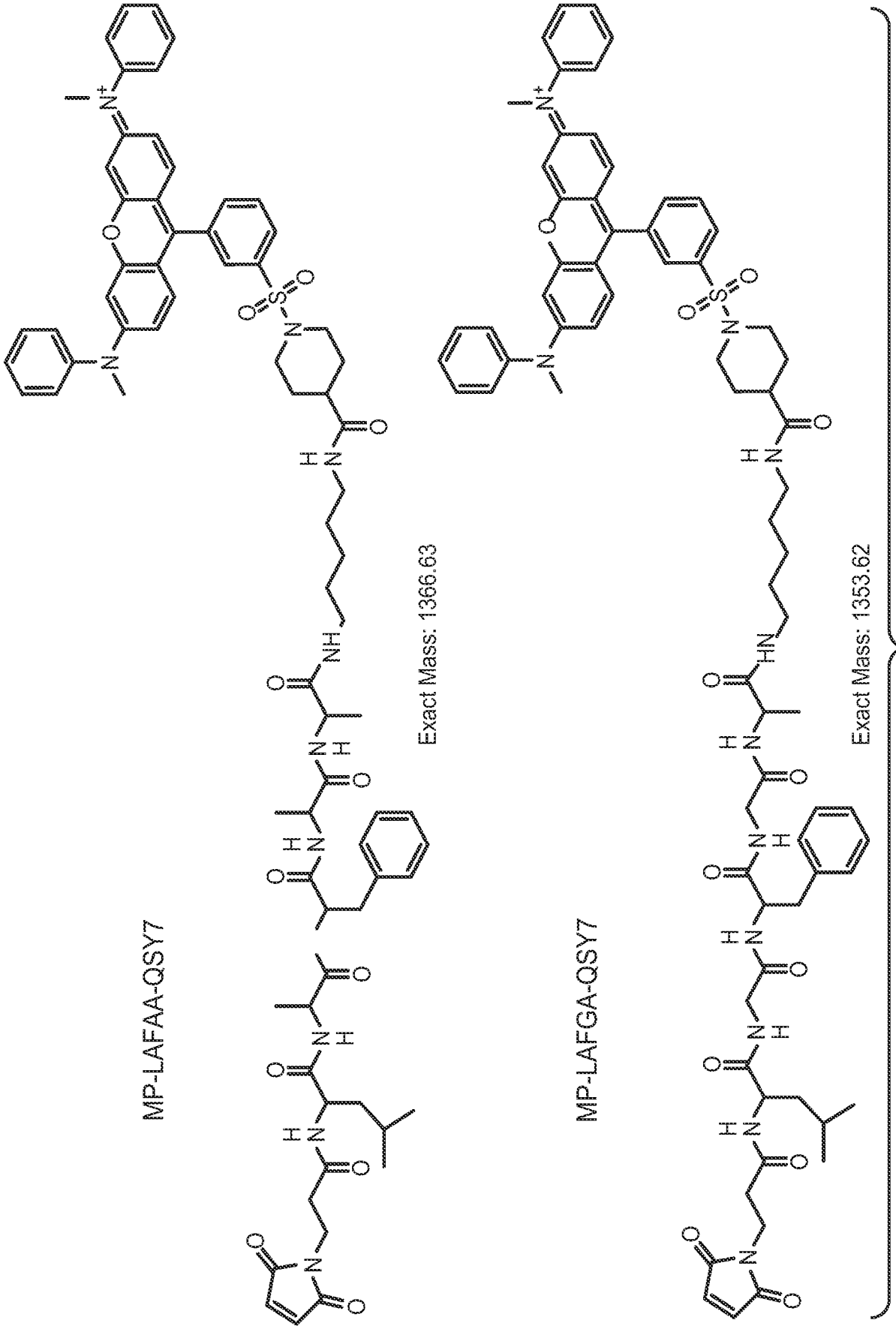

MP-LAFAA-QSY7
Exact Mass: 1366.63
MP-LAFGA-QSY7
Exact Mass: 1353.62

FIG. 30

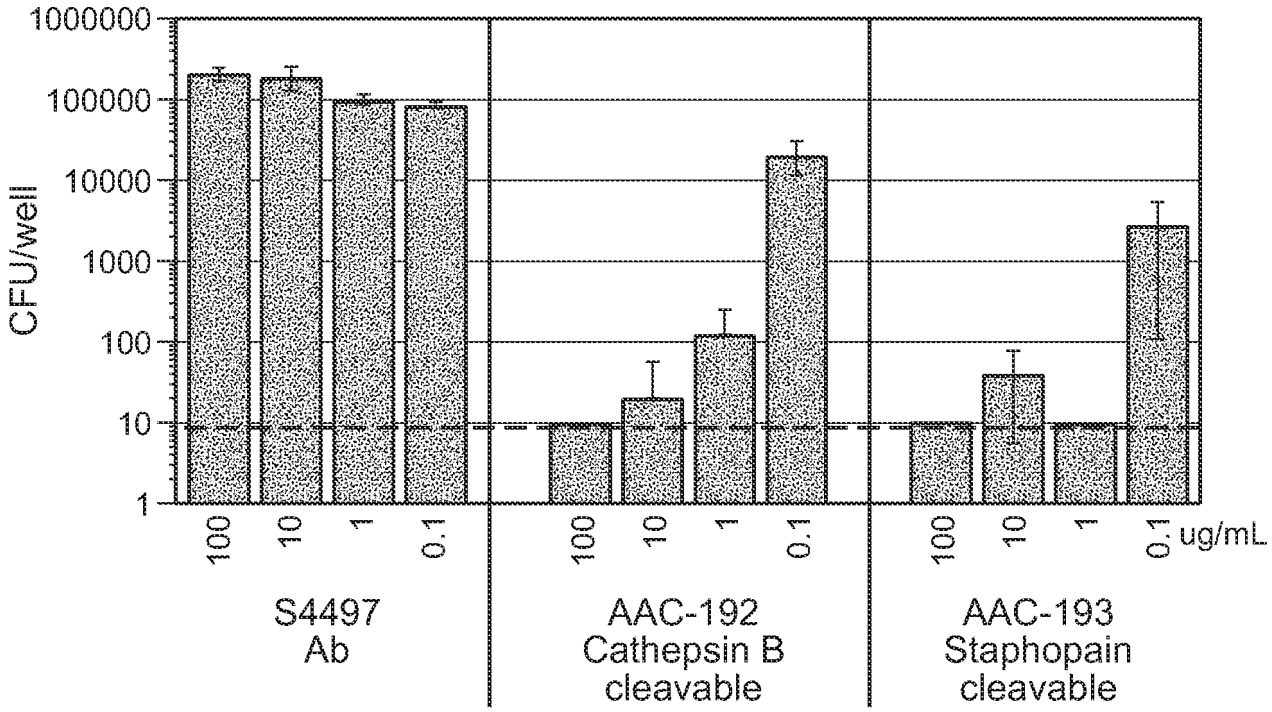

1000000
100000
10000
1000
100
10
1
CFU/well
100
10
1
0.1
ug/mL
S4497
Ab
AAC-192
Cathepsin B
cleavable
AAC-193
Staphopain
cleavable

FIG. 31

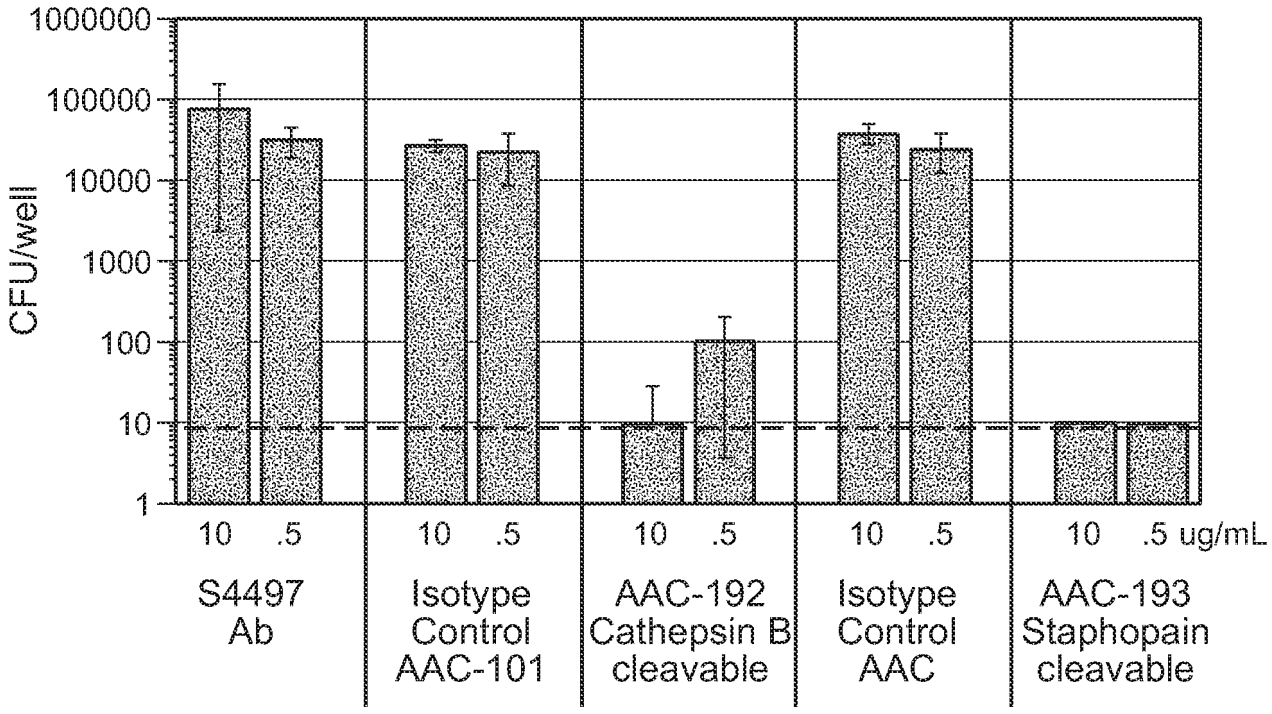

1000000
100000
10000
1000
100
10
1
CFU/well
10
.5
ug/mL
S4497
Ab
Isotype
Control
AAC-101
AAC-192
Cathepsin B
cleavable
Isotype
Control
AAC
AAC-193
Staphopain
cleavable

FIG. 32

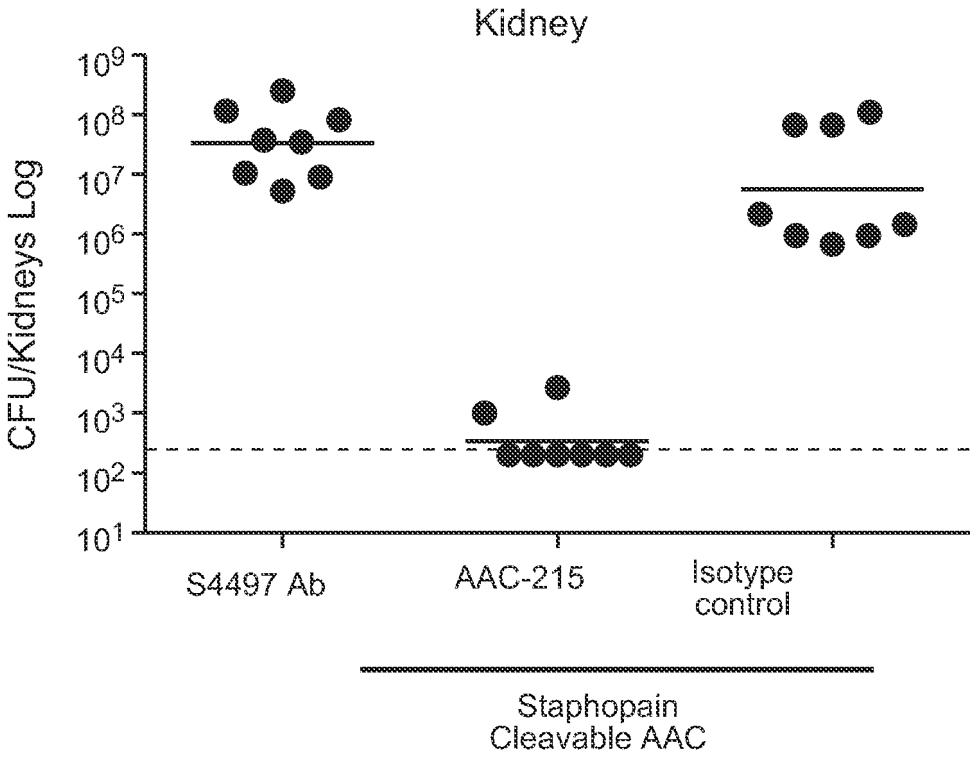

Kidney
CFU/Kidneys Log
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
10^1
S4497 Ab
AAC-215
Isotype control
Staphopain Cleavable AAC

FIG. 33

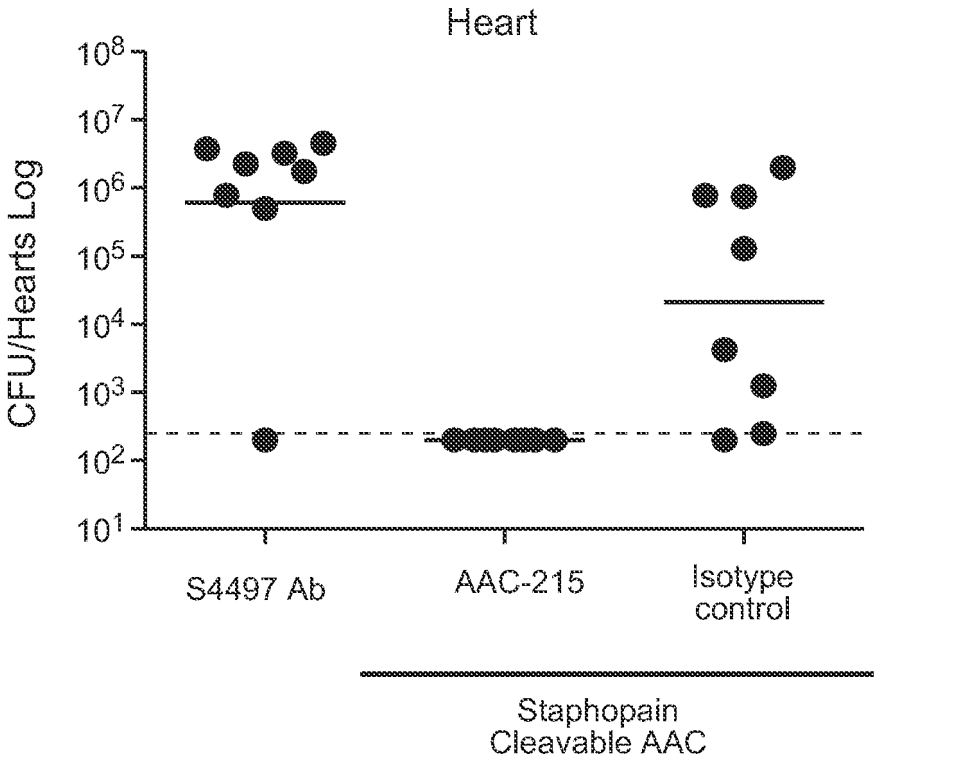

Heart
CFU/Hearts Log
10^8
10^7
10^6
10^5
10^4
10^3
10^2
10^1
S4497 Ab
AAC-215
Isotype control
Staphopain Cleavable AAC

FIG. 34

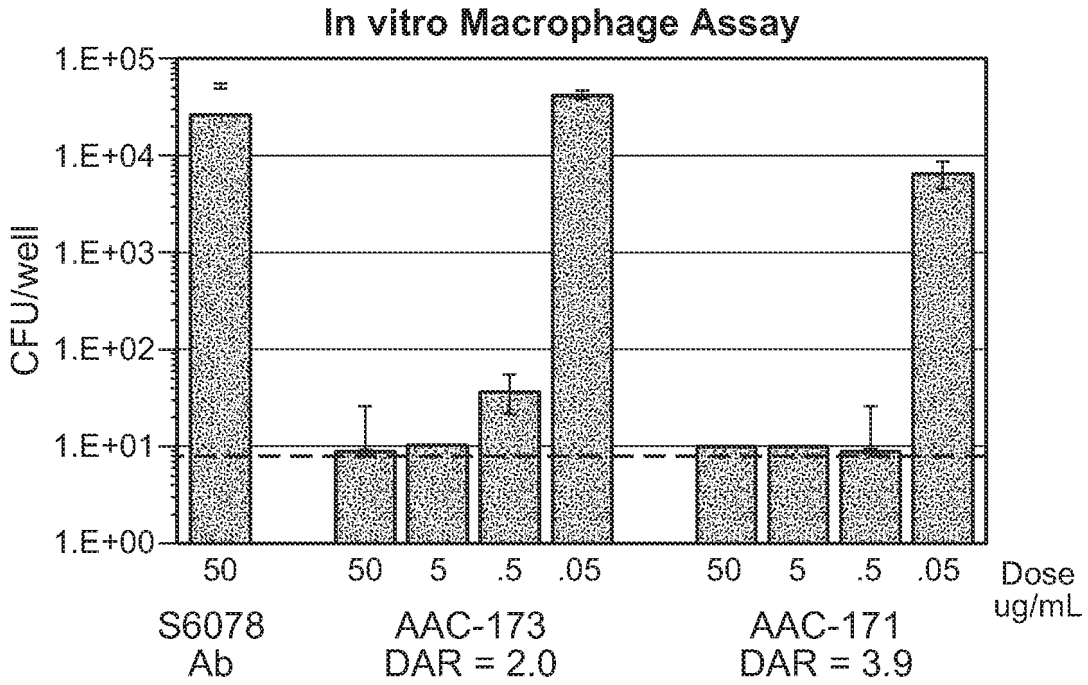

In vitro Macrophage Assay
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
CFU/well
50
50 5 .5 .05
50 5 .5 .05
Dose ug/mL
S6078 Ab
AAC-173 DAR = 2.0
AAC-171 DAR = 3.9

FIG. 35

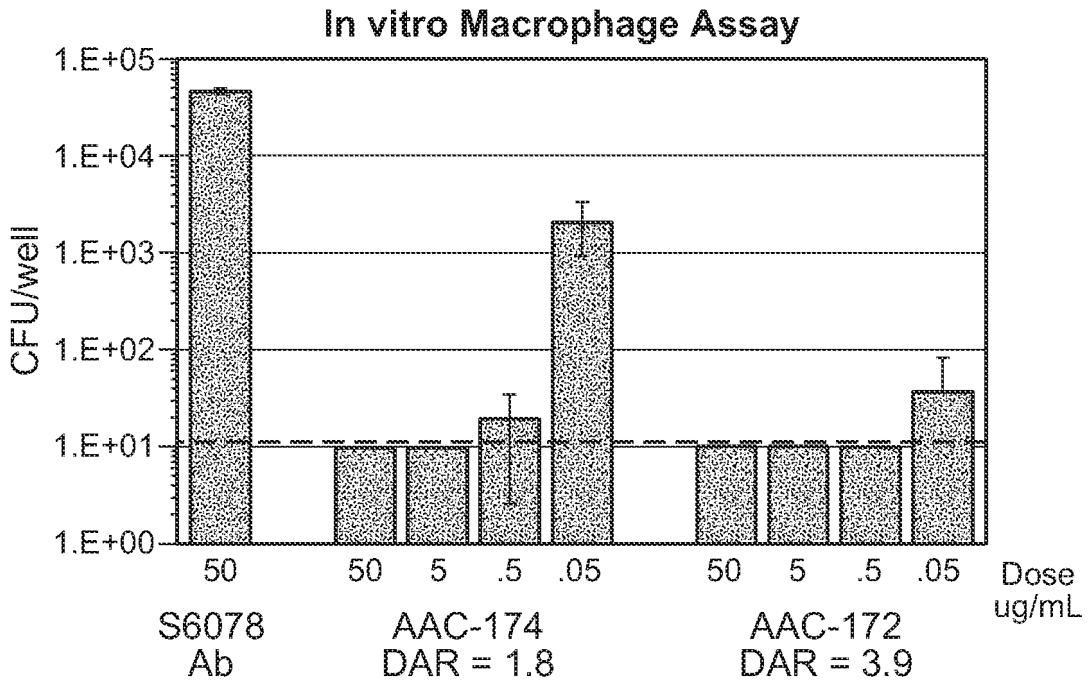

In vitro Macrophage Assay
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
CFU/well
50
50 5 .5 .05
50 5 .5 .05
Dose ug/mL
S6078 Ab
AAC-174 DAR = 1.8
AAC-172 DAR = 3.9

FIG. 36

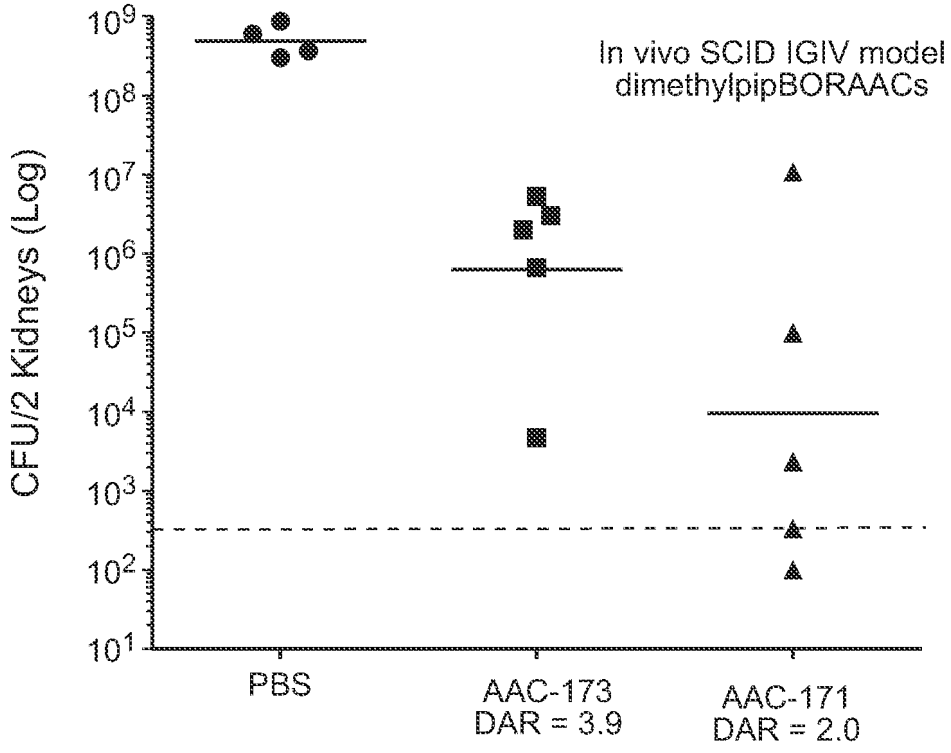

In vivo SCID IGIV model
dimethylpipBORAACs
CFU/2 Kidneys (Log)
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
10^1
PBS
AAC-173
DAR = 3.9
AAC-171
DAR = 2.0

FIG. 37

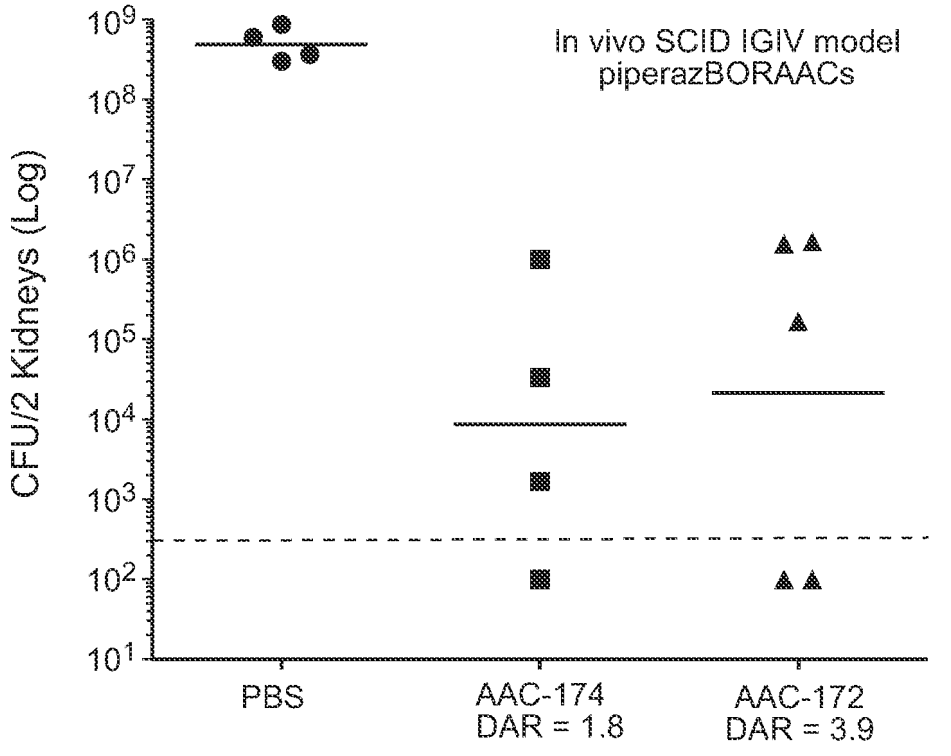

In vivo SCID IGIV model
piperazBORAACs
CFU/2 Kidneys (Log)
10^9
10^8
10^7
10^6
10^5
10^4
10^3
10^2
10^1
PBS
AAC-174
DAR = 1.8
AAC-172
DAR = 3.9

FIG. 38