

Ab ID	L/K chain	CDR1																alt. CDR1															
		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		
CDR301 human acceptor A	Ab1	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab2	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab3	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab4	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab5	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab6	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
CDR302 human acceptor B	Ab7	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab8	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab9	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab10	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab11	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab12	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
CDR303 human acceptor C	Ab13	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab14	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab15	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S
	Ab16	Q	V	Q	L	V	Q	S	G	A	S	G	S	V	L	K	S	C	K	A	S	G	S	C	K	A	S	G	S	C	K	A	S

FIG. 1A

Ab ID	L/H chains	CD832																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
cAb0301 human acceptor A	parental	S	L	E	R	I	G	D	I	R	P	Y	R	G	G	Y	F	N	Q	K	R
	Ab1	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab2	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab3	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab4	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab5	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
cAb0302 parental B	parental	Q	L	E	R	I	G	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab7	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab8	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab9	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab10	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab11	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
cAb 0311 human acceptor C	parental	S	L	E	R	I	G	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab12	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab13	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab14	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab15	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P
	Ab16	Q	L	E	R	M	Q	D	I	R	P	Y	R	G	G	T	P	R	Q	K	P

FIG. 1B

[illegible]

FIG. 1C

Ab ID	L/F chain	CDRL3																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Ab0101 parental	human acceptor D	N	I	V	L	T	Q	S	P	A	S	L	A	V	E	L	Q	R	A	T	L	S	C		
	Ab01	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	P	Q	R	A	T	L	S	C		
	Ab02	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab03	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab04	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab05	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
Ab0102 parental	human acceptor E	D	V	V	V	T	Q	T	P	A	S	L	A	V	S	L	Q	R	A	T	L	S	C		
	Ab07	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab08	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab09	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab10	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab11	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
Ab0103 parental	human acceptor F	D	I	V	L	T	Q	S	P	A	S	L	A	V	S	L	Q	R	A	T	L	S	C		
	Ab13	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab14	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab15	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab16	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C
	Ab17	E	I	V	L	T	Q	S	P	A	T	L	S	L	S	L	S	P	Q	R	A	T	L	S	C

FIG. 2A

Ab ID	L/R chains	CDRL3																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ab0301	parental	W	Y	Q	Q	K	F	Q	Q	F	Q	Q	F	K	L	L	L	L	L	L	L
human acceptor C		W	Y	Q	Q	K	F	Q	Q	A	Q	Q	A	R	L	L	L	L	L	L	L
Ab1	h0301-L0H0	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab2	h0301-L0H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab3	h0301-L0H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab4	h0301-L1H0	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab5	h0301-L1H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab6	h0301-L1H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	R	L	L	L	L	L	L	L
Ab0302	parental	W	F	Q	Q	K	F	Q	Q	Q	Q	Q	Q	P	K	L	L	L	L	L	L
human acceptor B		W	F	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab7	h0302-L0H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab8	h0302-L1H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab9	h0302-L2H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab10	h0302-L0H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab11	h0302-L1H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab12	h0302-L2H2	W	F	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab0311	parental	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	P	R	L	L	L	L	L	L
human acceptor F		W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab13	h0311-L0H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab14	h0311-L1H1	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab15	h0311-L0H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L
Ab16	h0311-L1H2	W	Y	Q	Q	K	F	Q	Q	Q	Q	Q	Q	A	P	R	L	L	L	L	L

FIG. 2B

Ab ID	L/H chains	71	72	73	74	75	76	77	78	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			
CA0301	parental	F	T	L	N	T	I	S	L	E	S	S	D	A	A	T	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	31-84	
Ab1	human acceptor	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	46	
Ab2	h0301-L0H1	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	46	
Ab3	h0301-L0H2	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	46	
Ab4	h0301-L1H0	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	47	
Ab5	h0301-L1H1	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	47	
Ab6	h0301-L1H2	F	T	L	T	I	S	S	L	E	P	E	F	A	A	V	Y	Y	C	H	L	S	N	E	D	S	L	S	T	F	G	G	G	T	K	V	E	I	K	47	
CA0302	parental	F	T	L	T	I	D	F	V	E	A	D	D	A	A	T	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	65-68		
human acceptor	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	48	
Ab7	h0302-L0H1	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	48
Ab8	h0302-L1H1	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	49
Ab9	h0302-L2H1	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	50
Ab10	h0302-L0H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	48
Ab11	h0302-L1H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	49
Ab12	h0302-L2H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	S	K	E	B	L	P	M	T	F	G	G	G	T	K	V	E	I	K	50
CA0311	parental	F	T	L	T	I	N	P	V	E	E	D	A	A	T	Y	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	G	T	R	L	E	I	K	14		
human acceptor	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	G	T	K	V	E	I	K	29-52	
Ab13	h0311-L0H1	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	T	K	V	E	I	K	51	
Ab14	h0311-L1H1	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	T	K	V	E	I	K	51	
Ab15	h0311-L0H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	T	K	V	E	I	K	51	
Ab16	h0311-L1H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	T	K	V	E	I	K	51	
Ab17	h0311-L1H2	F	T	L	T	I	S	S	L	E	P	E	P	E	F	A	A	V	Y	Y	C	Q	G	N	E	D	P	M	T	F	G	G	G	T	K	V	E	I	K	51	

FIG. 2C

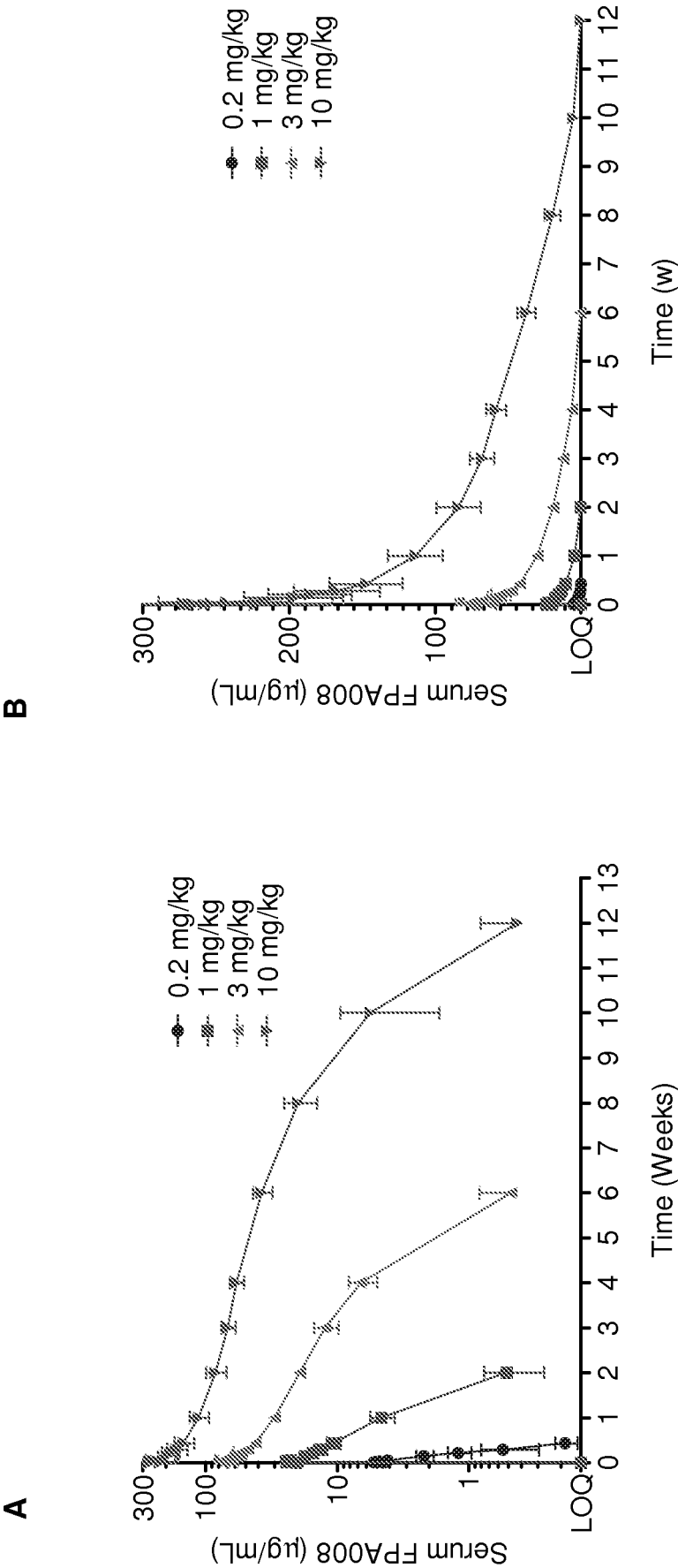
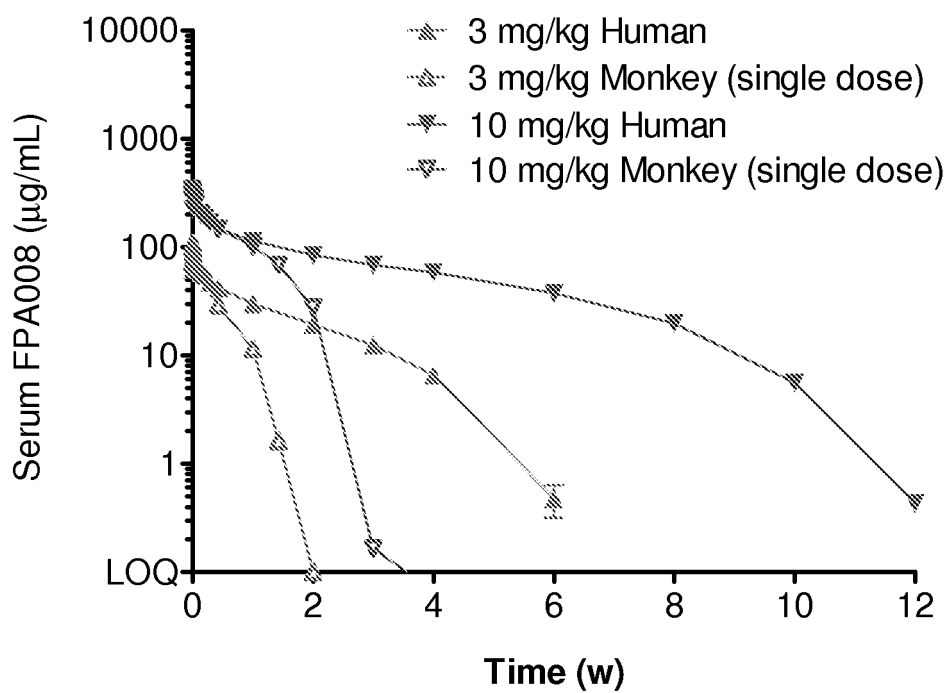


FIG. 3

**FIG. 4**

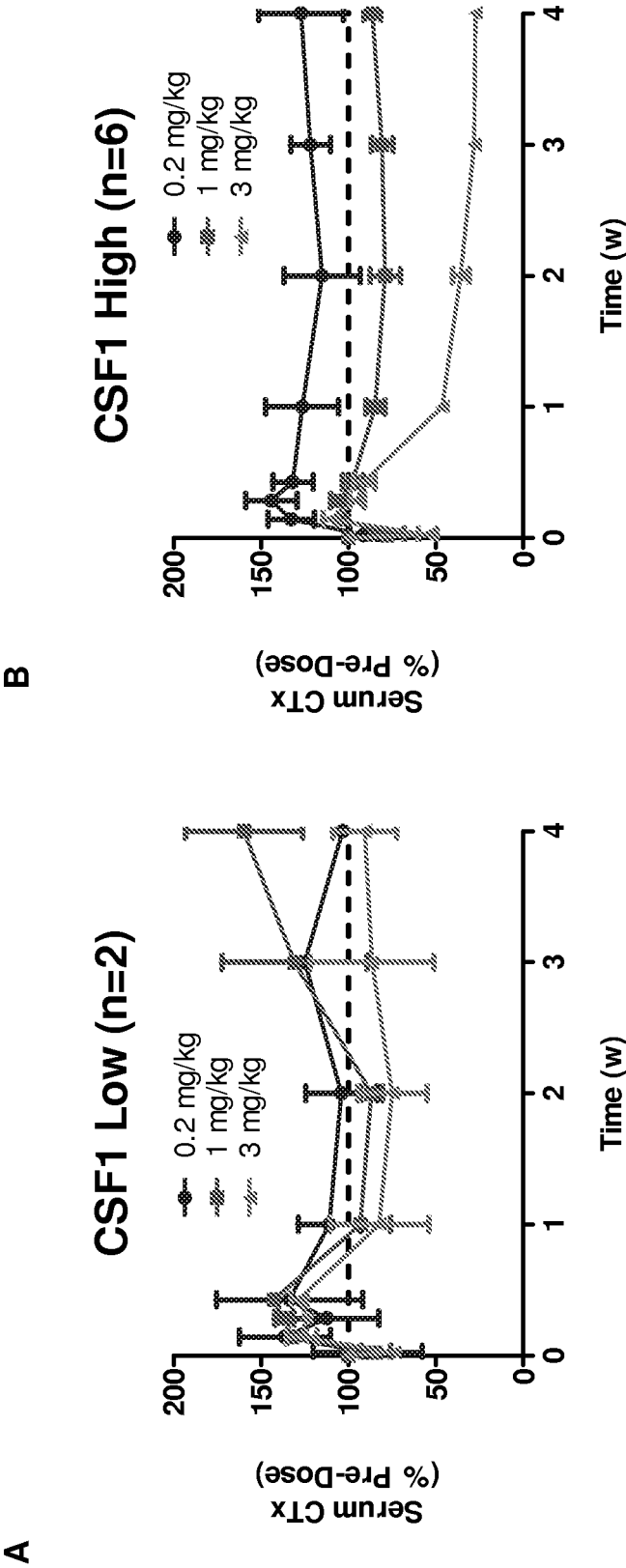


FIG. 5

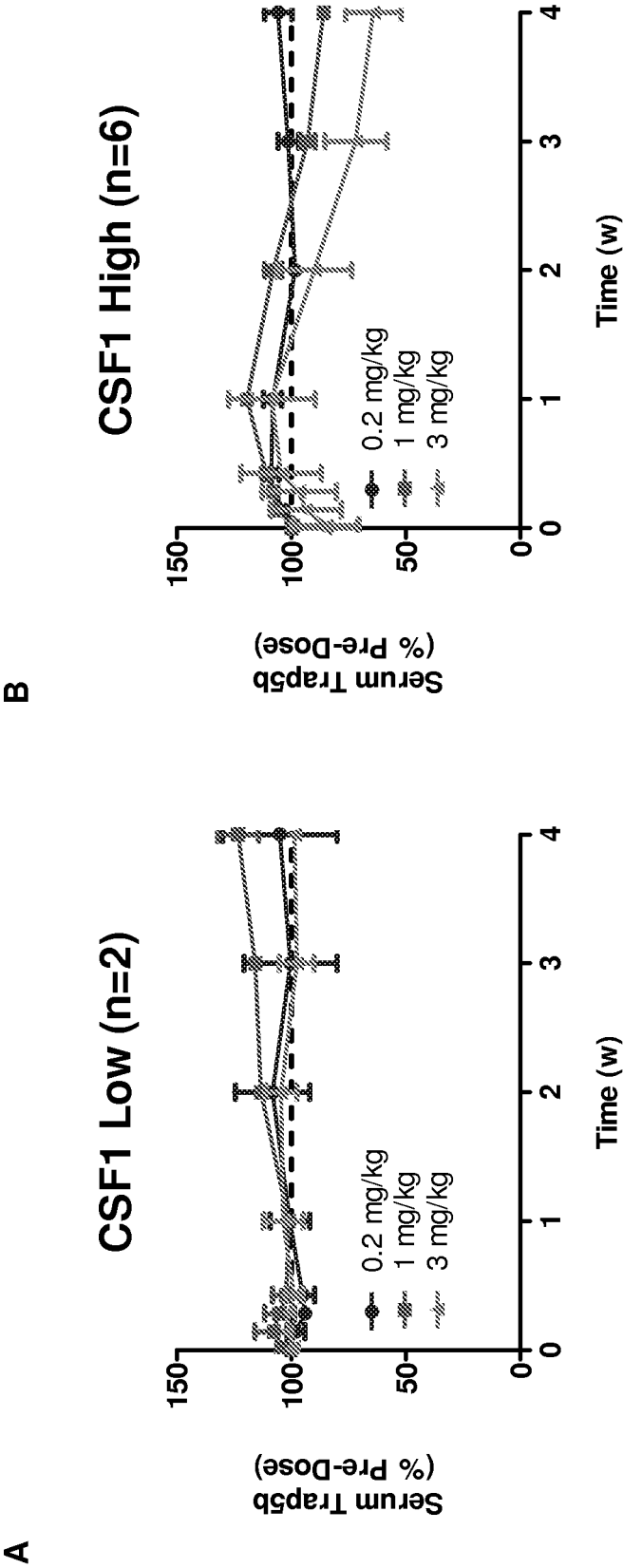


FIG. 6

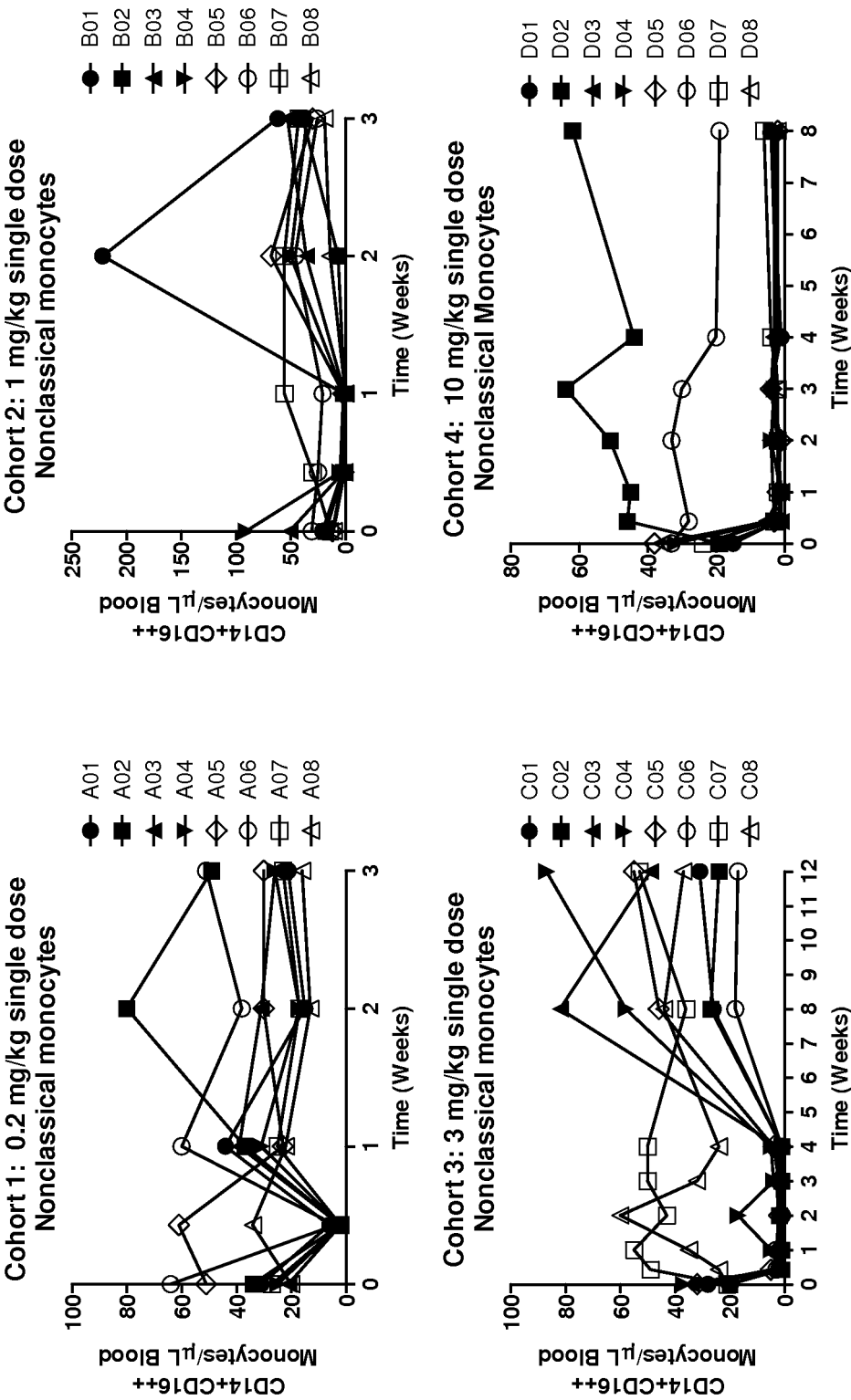


FIG. 7

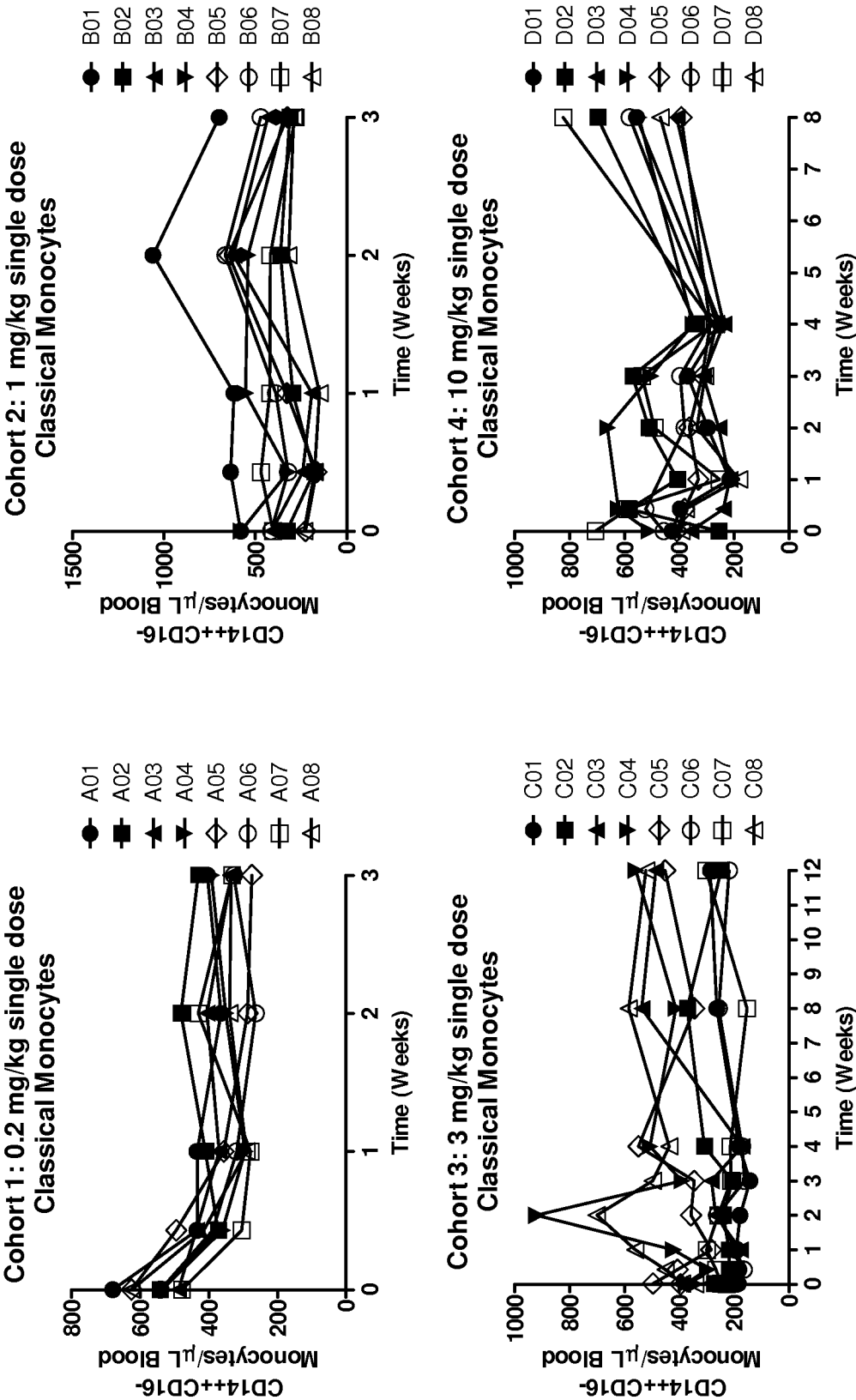


FIG. 8

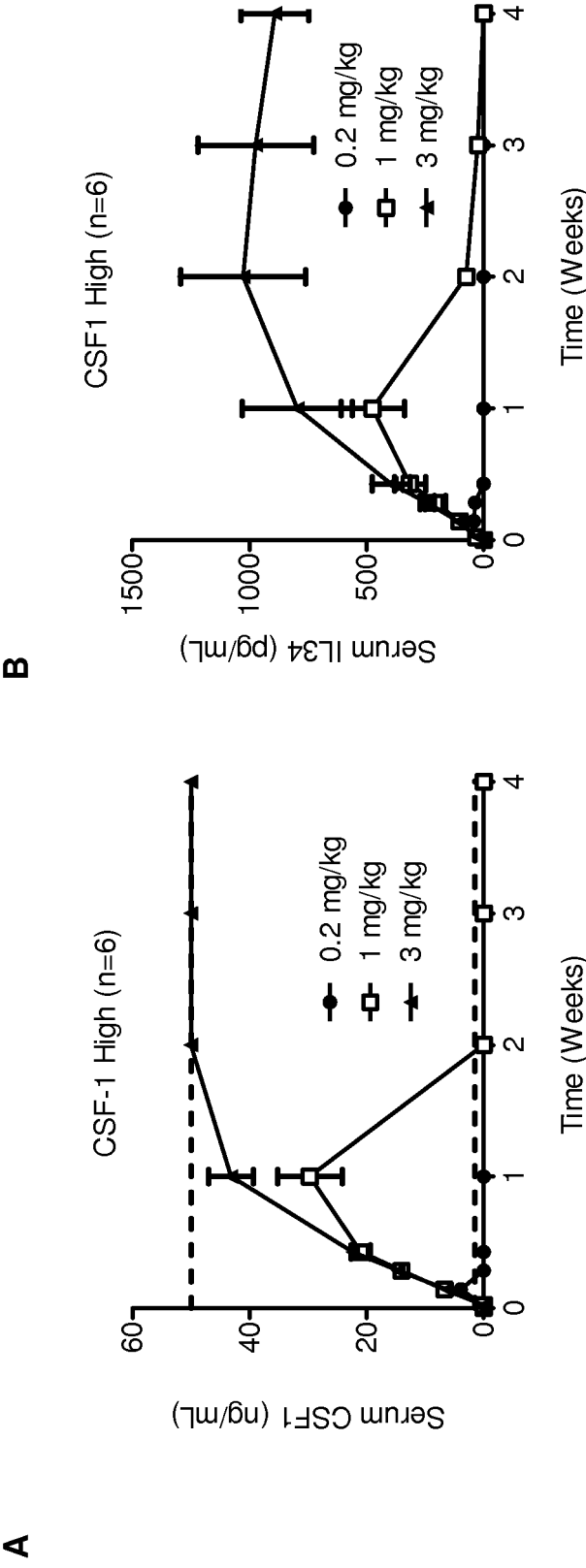
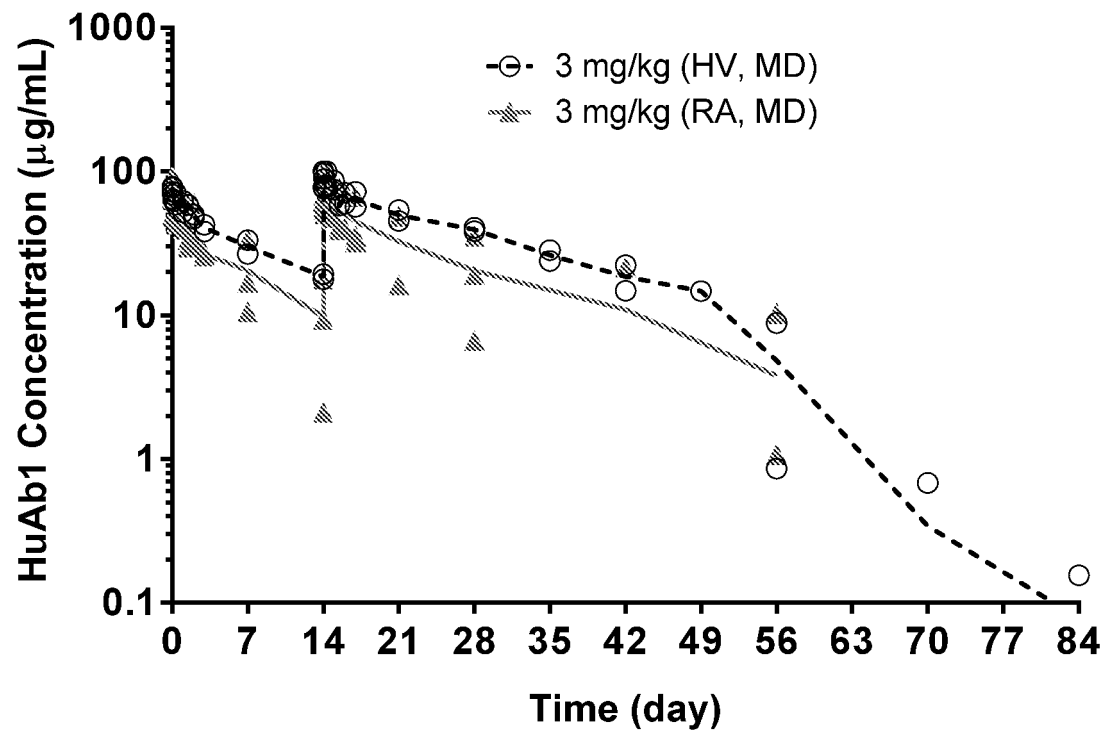
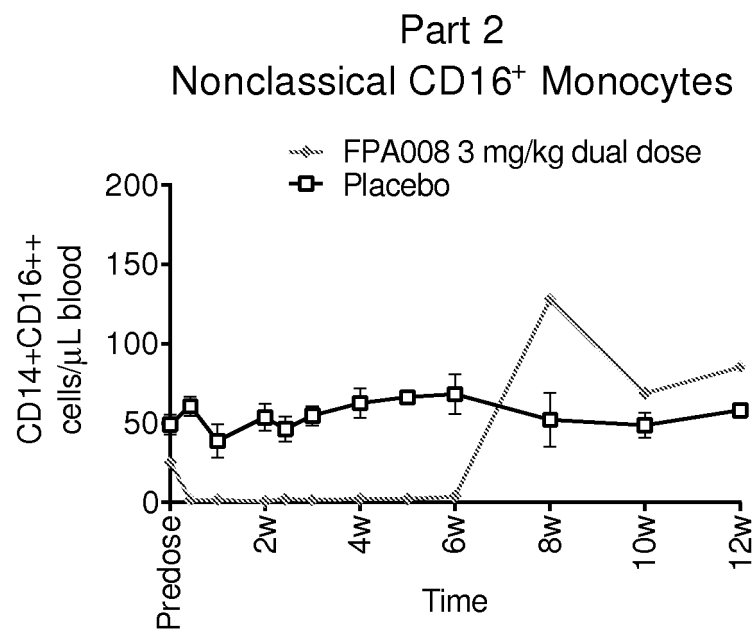
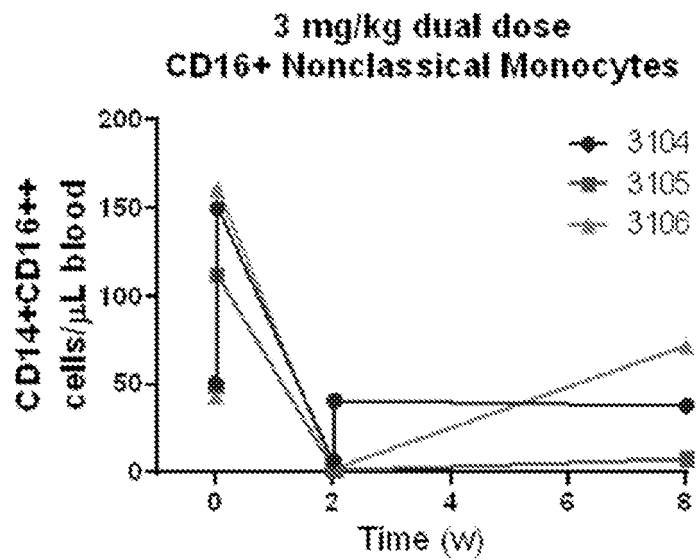


FIG. 9

**FIG. 10**

**FIG. 11****FIG. 12**