

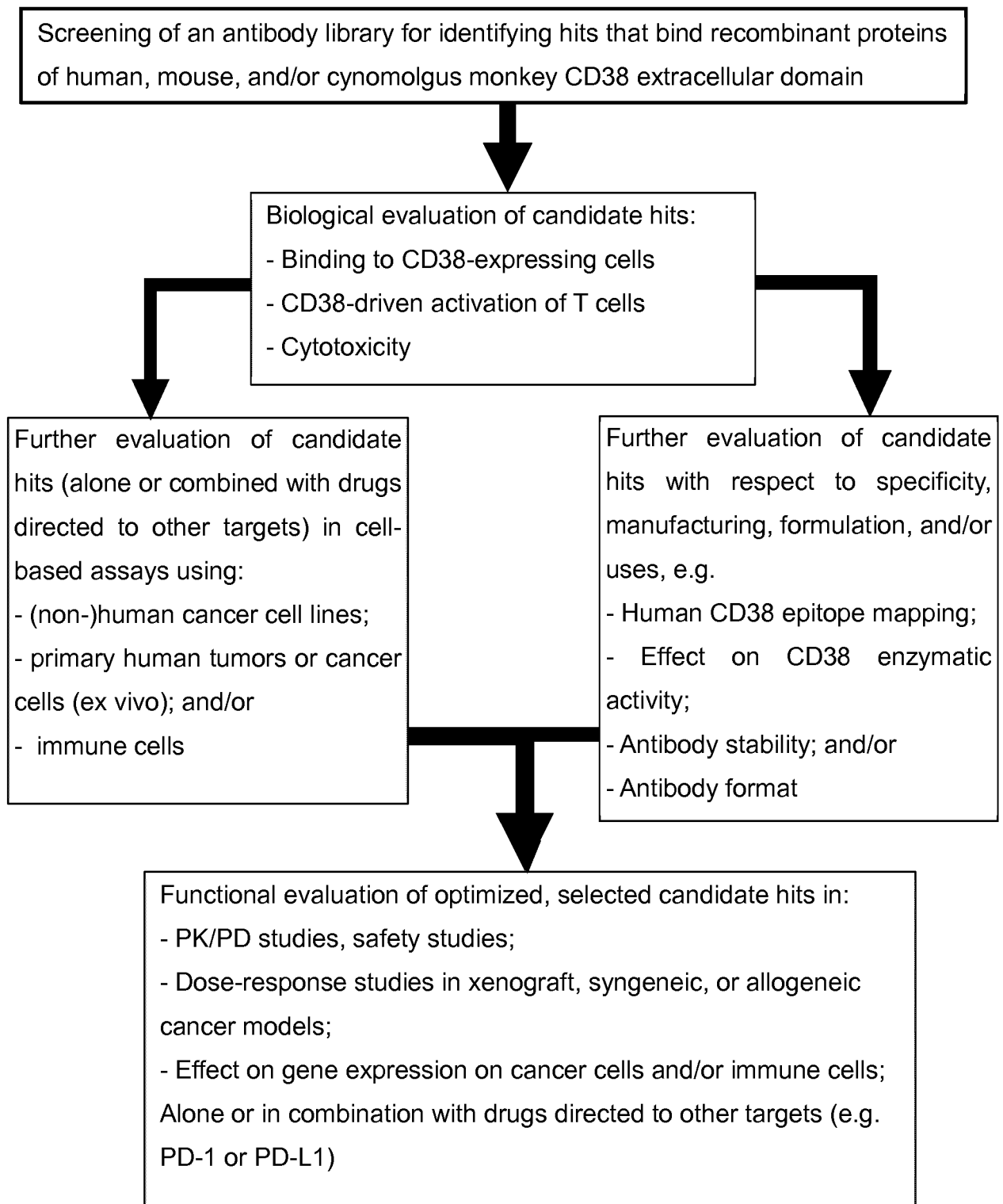
Figure 1

FIGURE 2

A)

aCD38-a-323-HCDR1

aCD38-a-323-HCDR2

aCD38-a-323-HCDR3

GSISSGSYYWS

YIYYSGSTYYNPSLKS

ARGSPYRWYNYYYMDV

aCD38-a-323-HCDR123

GSISSGSYYWSWIRQHPGKGLEWIGYIYYSGSTYYNPSLKSSRVTISVDTSKNQFSLKLS
SVTAADTAVYYCARGSPYRWYNYYYMDVWGKGTTTVSS

aCD38-a-323-LCDR1

aCD38-a-323-LCDR2

aCD38-a-323-LCDR3

RASQSISSWLA

DASSLES

QQHRSYPPT

aCD38-a-323-LCDR123

RASQSISSWLAWYQQKPGKAPKLLIYDASSLESGVPSRFSSGSGSGTEFTLTISLQPD
DFATYYCQQHRSYPPTFGGGTKVEIK

FIGURE 3

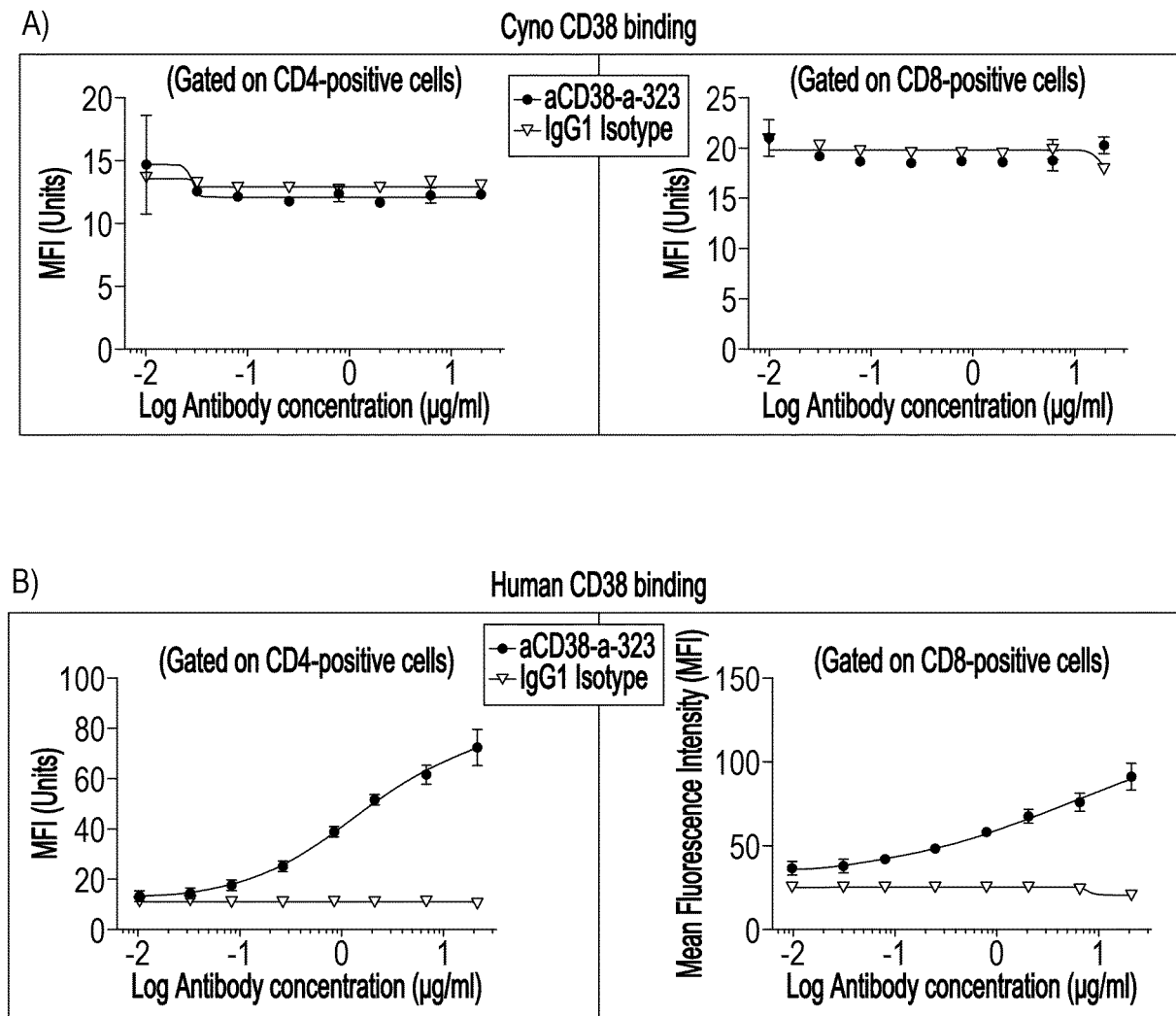
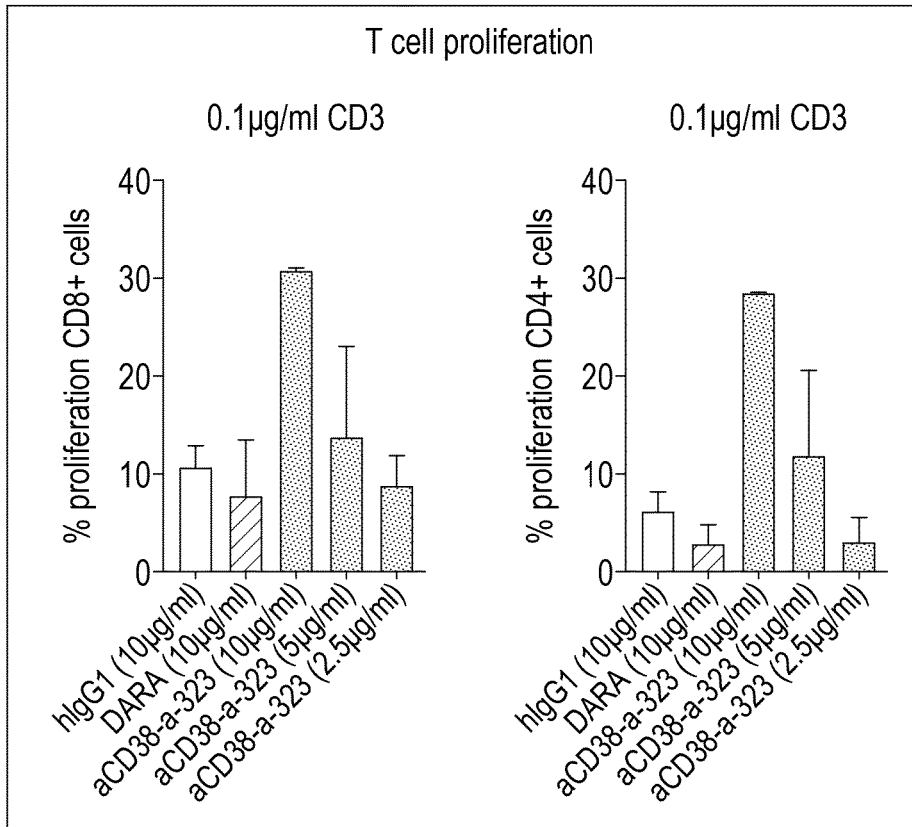


FIGURE 4

A)



B)

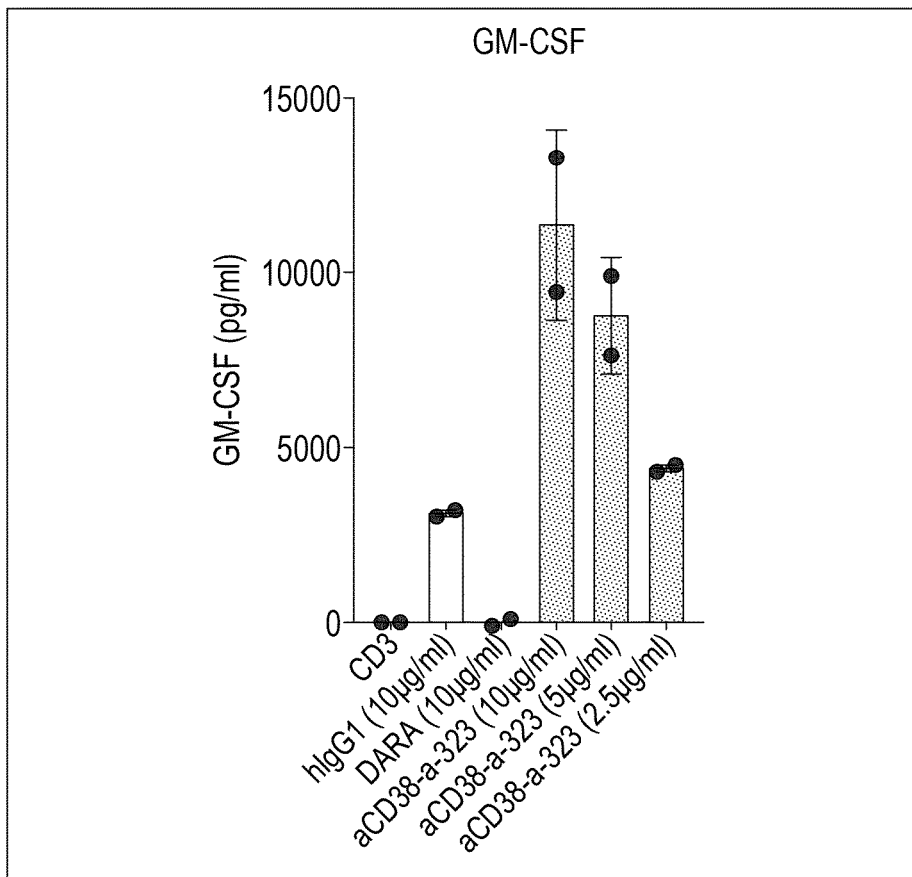
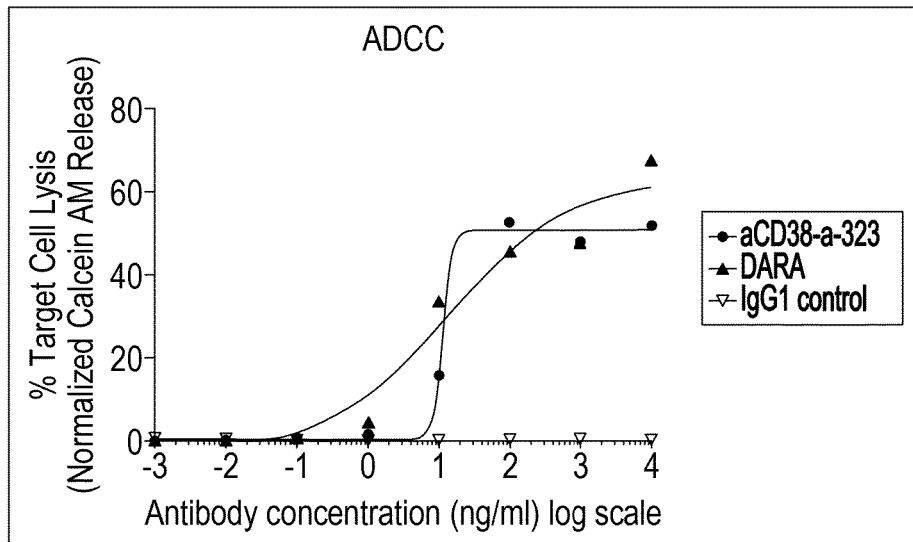


FIGURE 5

A)



B)

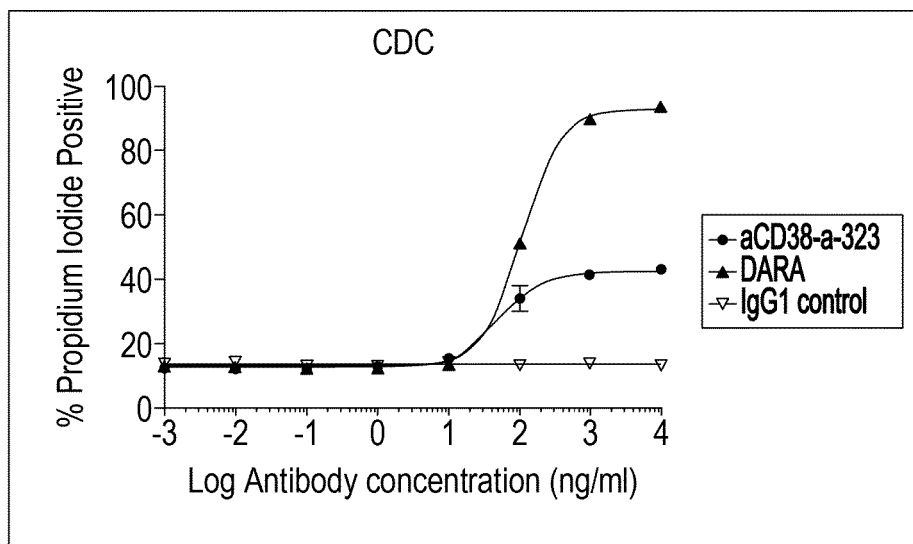
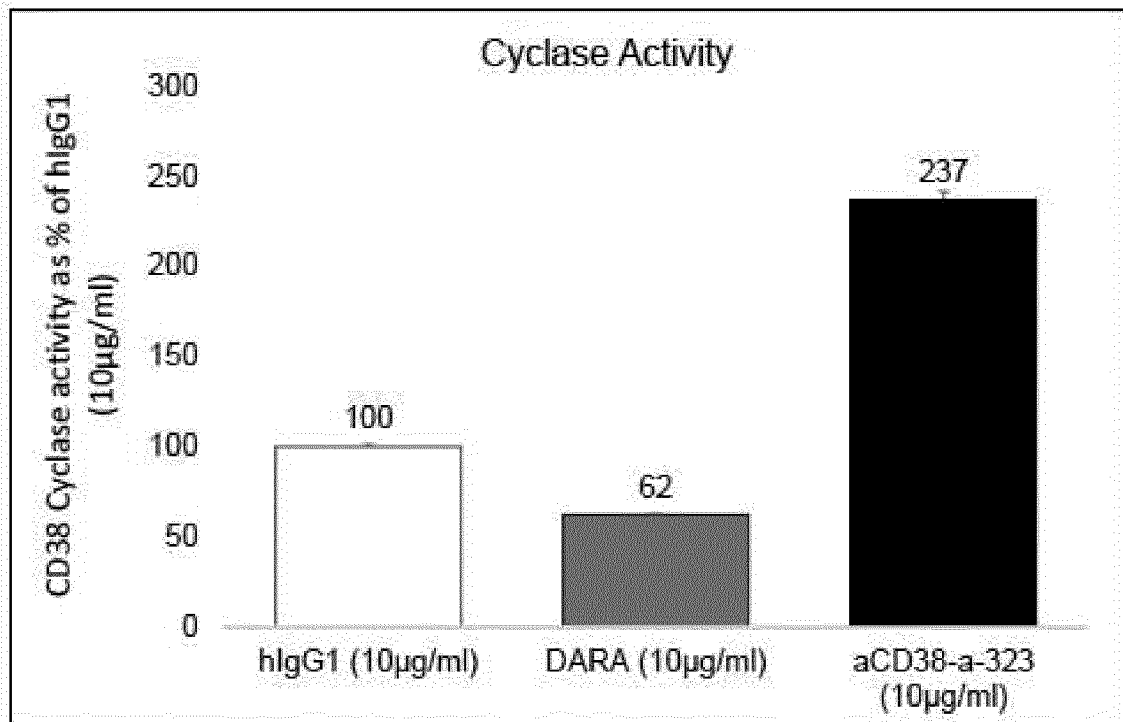


FIGURE 6

A)



B)

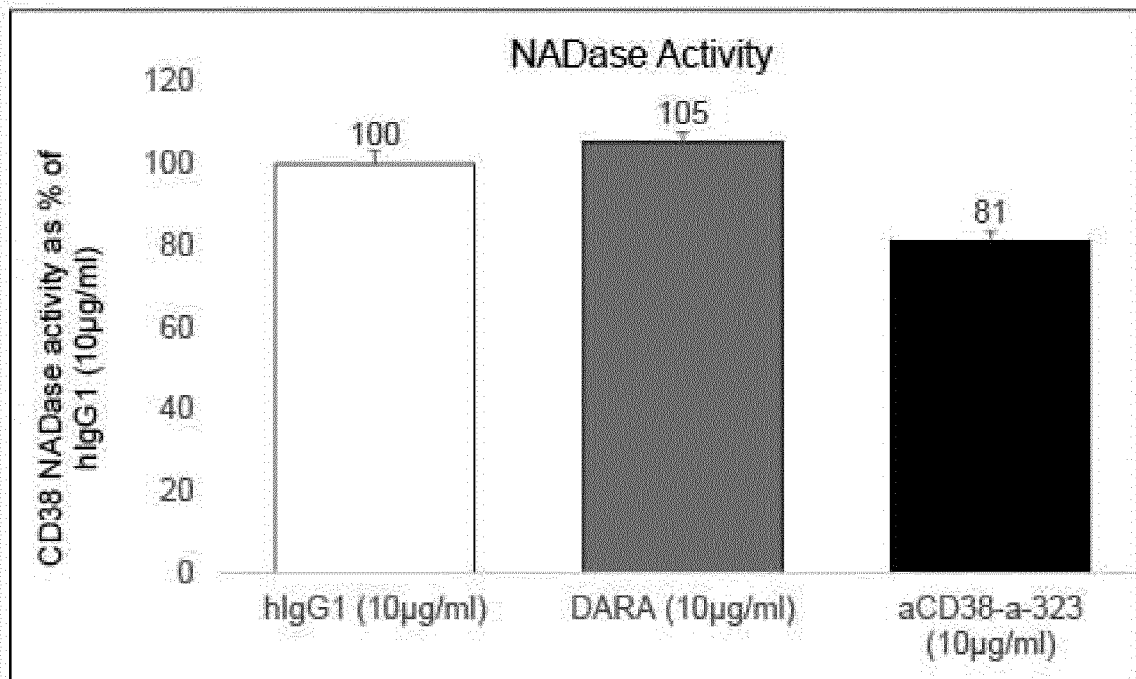


FIGURE 7

A)

aCD38-a-306-HCDR1

aCD38-a-306-HCDR2

aCD38-a-306-HCDR3

YTFTGYMH

WINPNSGGTNYAQKFQG

ARDQAHQRSSYD

aCD38-a-306-HCDR123

YTFTGYMHWVRQAPGQGLEWMGWINPNSGGTNYAQKFQGRVTMTRDTSISTAYM
 ELSRLRSDDTAVYYCARDQAHQRSSYDWGQGTLVTVSS

aCD38-a-306-LCDR1

aCD38-a-306-LCDR2

aCD38-a-306-LCDR3

RASQSISSYLN

GASSLQS

QQRSSTPIT

aCD38-a-306-LCDR123

RASQSISSYLNWYQQKPGKAPKLLIYGASSLQSGVPSRFSGSGSGTDFTLTISLQPE
 DFATYYCQQRSSTPITFGGGTKVEIK

FIGURE 8

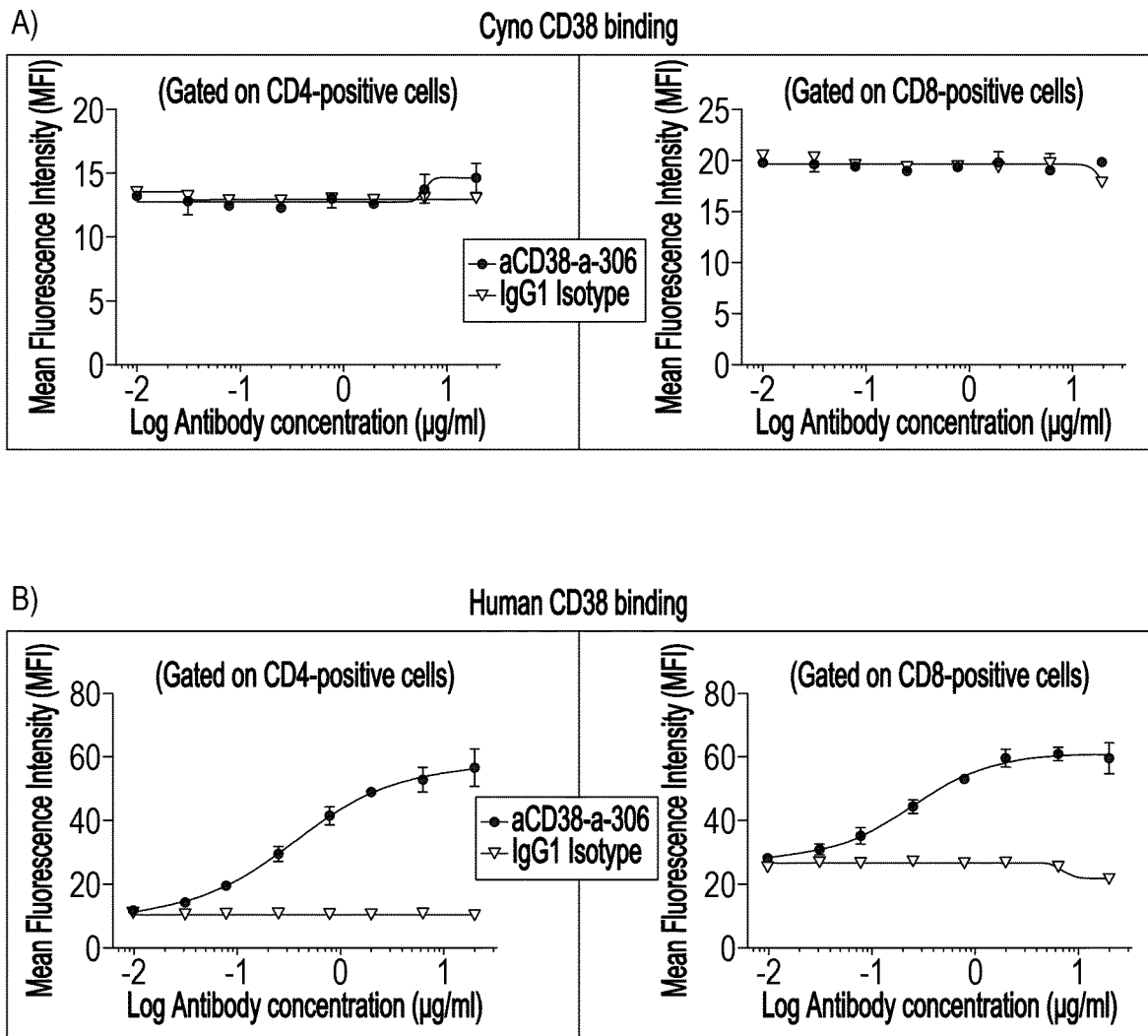


FIGURE 9

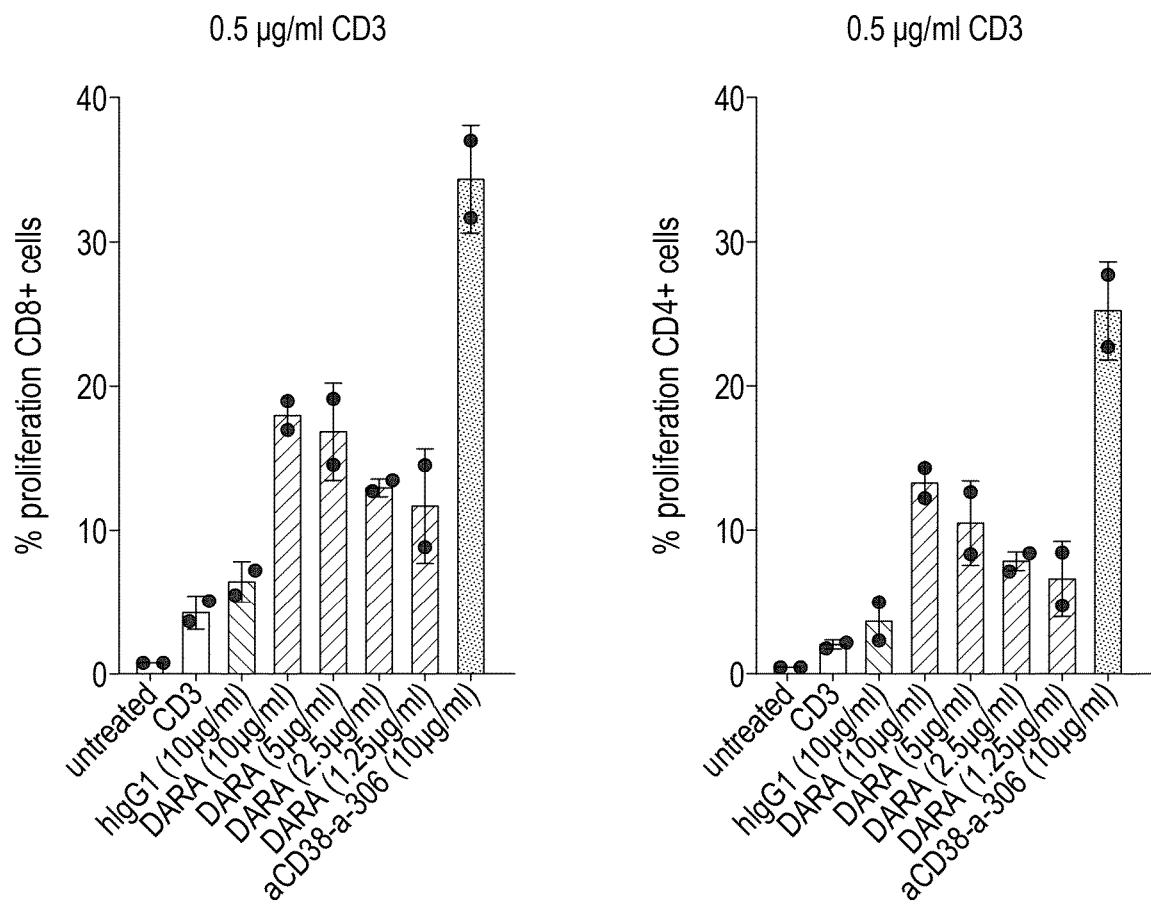


FIGURE 9 cont.

B)

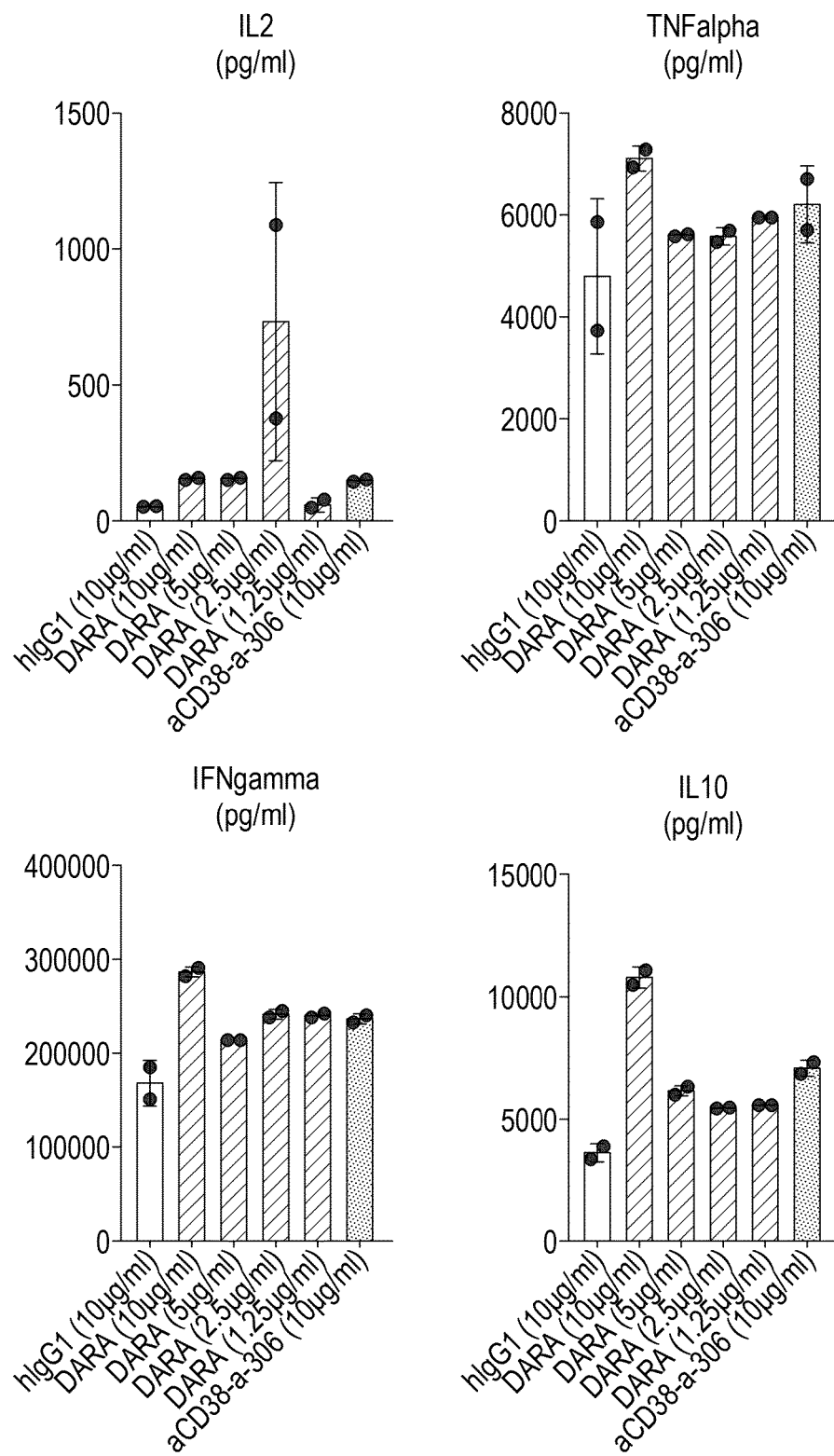
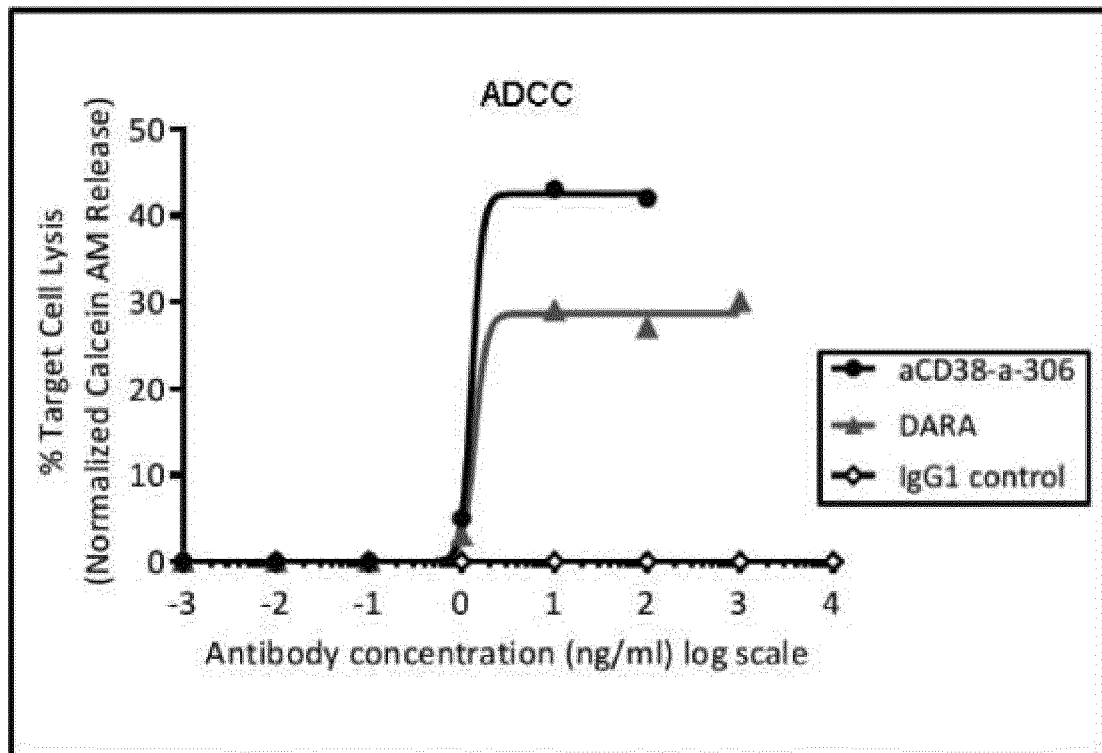


FIGURE 10

A)



B)

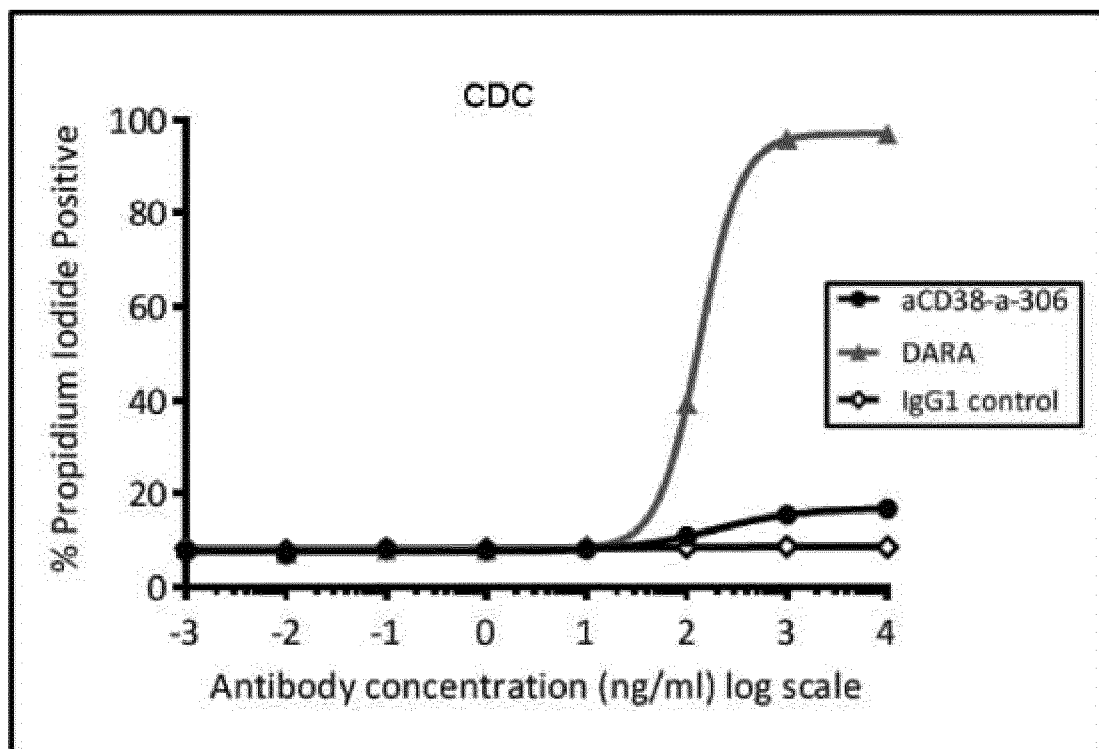


FIGURE 11

A)

CD38-b-329-HCDR1
GSISSSDYYWG

aCD38-b-329-HCDR2
SIYYSGSTYYNPSLKS

aCD38-b-329-HCDR3
ARGQYSSGWYAYPFDM

aCD38-b-329-HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKS
SRVTISVDTSKNQFSLKLS
SVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-329-LCDR1
RASQSVRSSYLA

aCD38-b-329-LCDR2
GASSRAT

aCD38-b-329-LCDR3
QQDGAVFT

aCD38-b-329-LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEP
EDFAVYYCQQDGAVFT

B)

Cytoplasmic		Transmembrane		
10	20	30	40	50
MANCEFSPVS	GDKPCCRLSR	RAQLCLGVSI	LVLILVVVLA	VVVPRWRQQW
60	70	80	90	100
SGPGTTKRFP	ETVILARCVKY	TEIHPEMRHV	DCQSVWDAFK	GAFISKHPCN
110	120	130	140	150
ITEEDYQPLM	KLGTQTVPCN	KILLWSRIKD	LAHQFTQVQR	DMFTLEDTL
160	170	180	190	200
GYLADDLTWC	GEFNTSKINY	QSCPDWRKDC	SNNPVSVEFWK	TVSRRFAEAA
210	220	230	240	250
CDVVHVMLNG	SRSKIFDKNS	TFGSVEVHNL	QPEKVTLEA	WVIHGGREDS
260	270	280	290	300
RDLCQDPTIK	ELESIIISKRN	IQFSCKNIYR	PDKFLQCVKN	PEDSSCTSEI

FIGURE 12

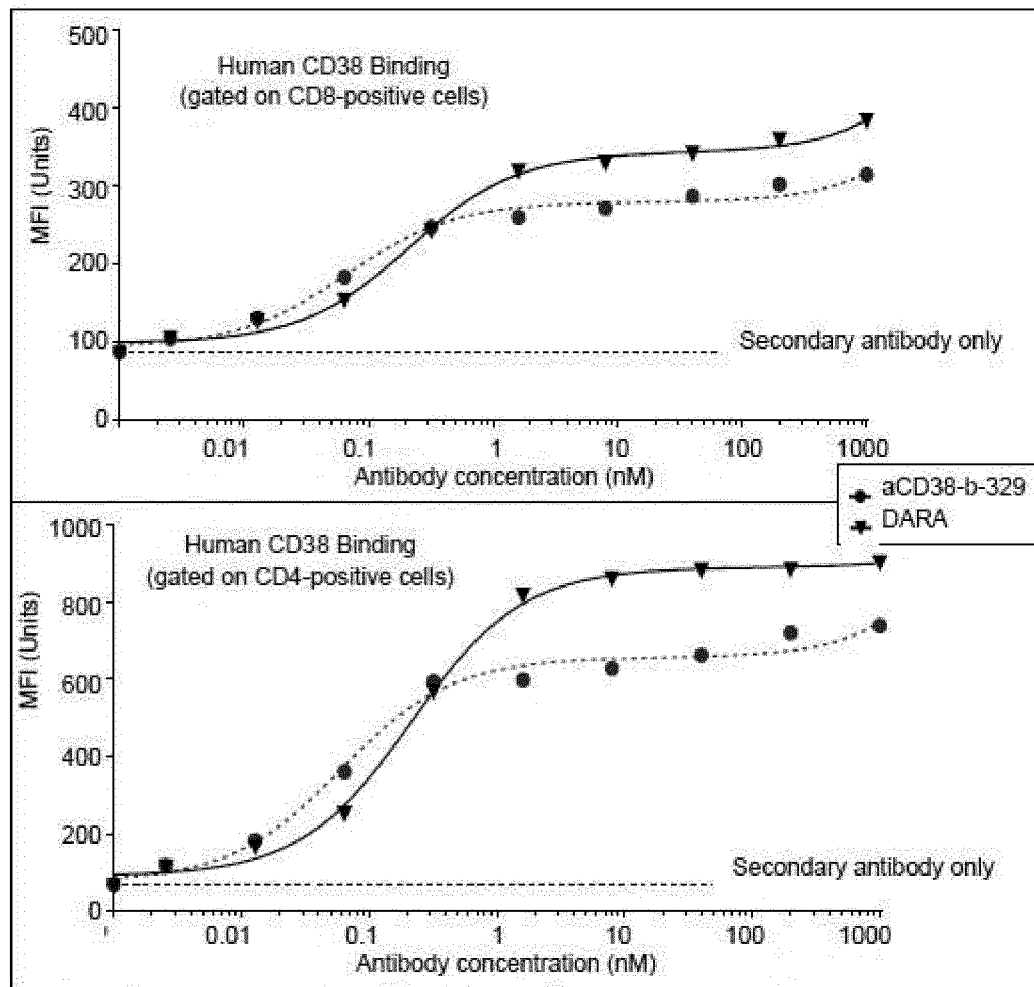
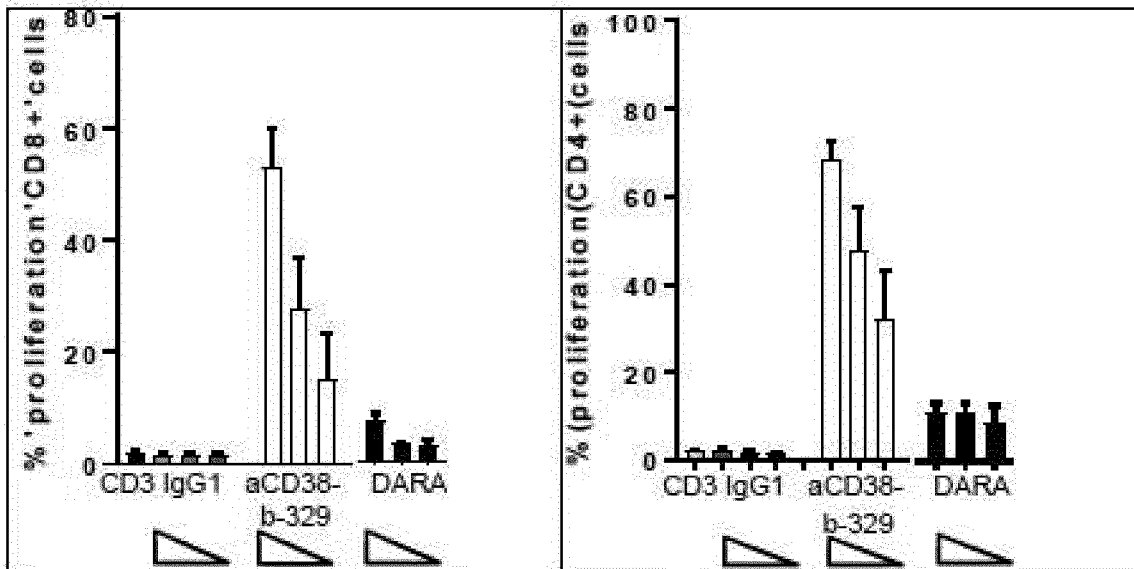


FIGURE 13

A)



B)

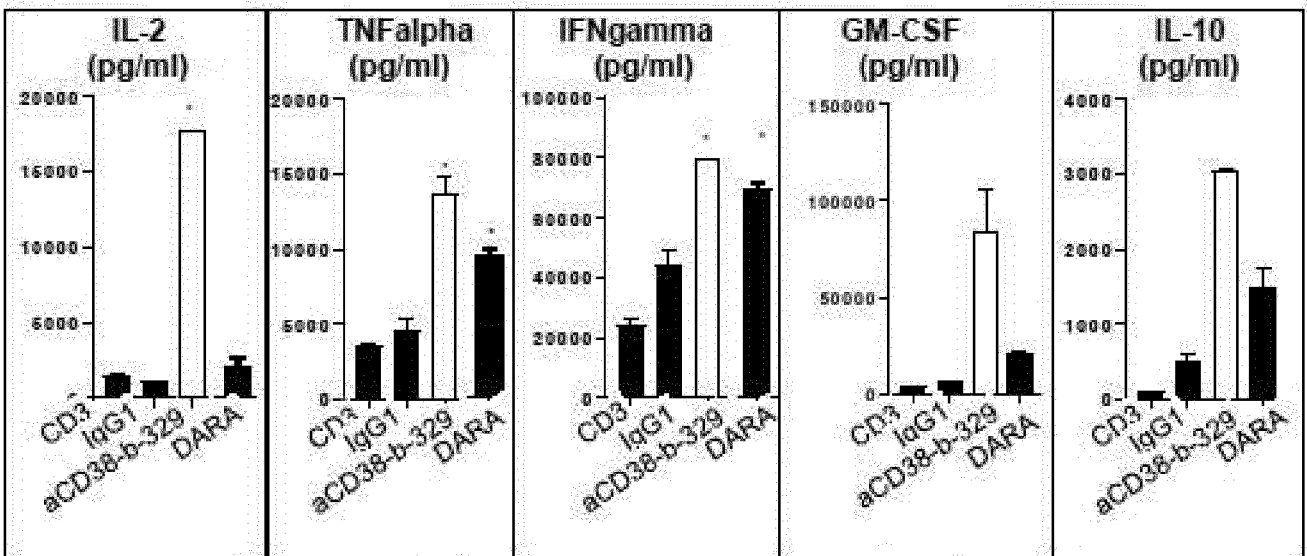
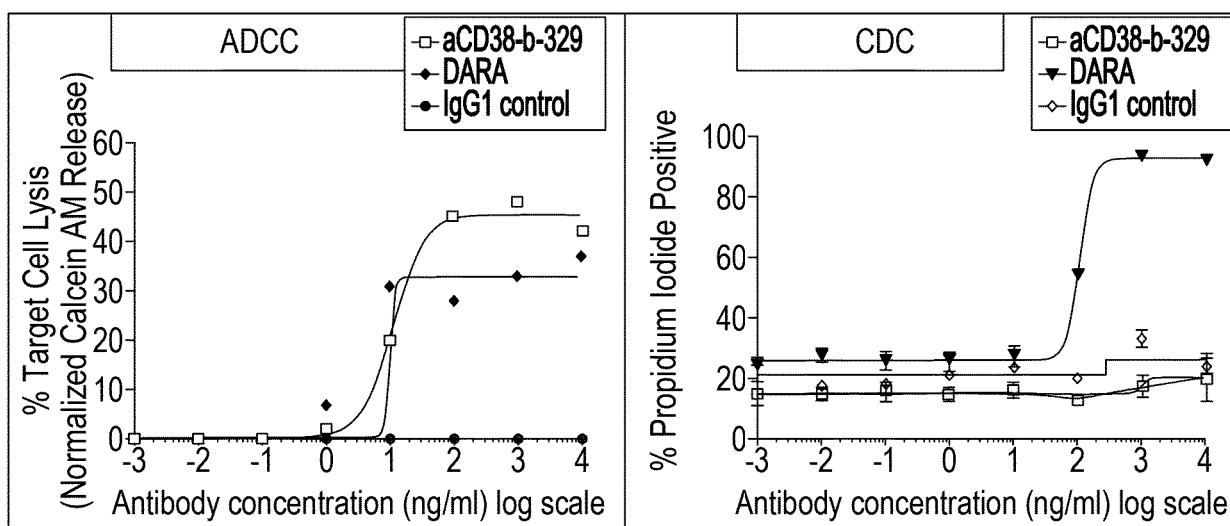


FIGURE 14

A)



B)

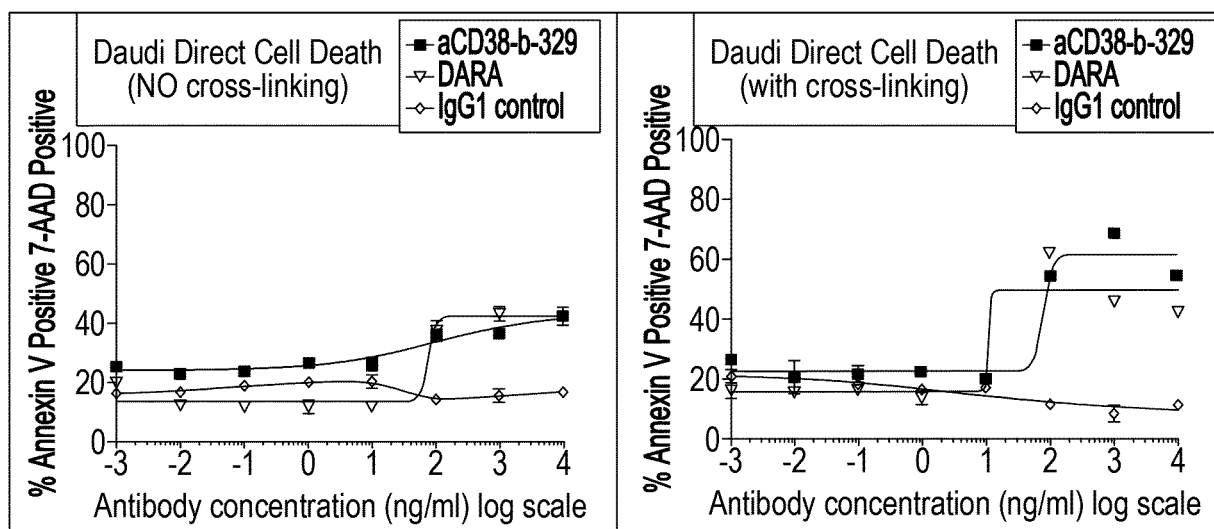
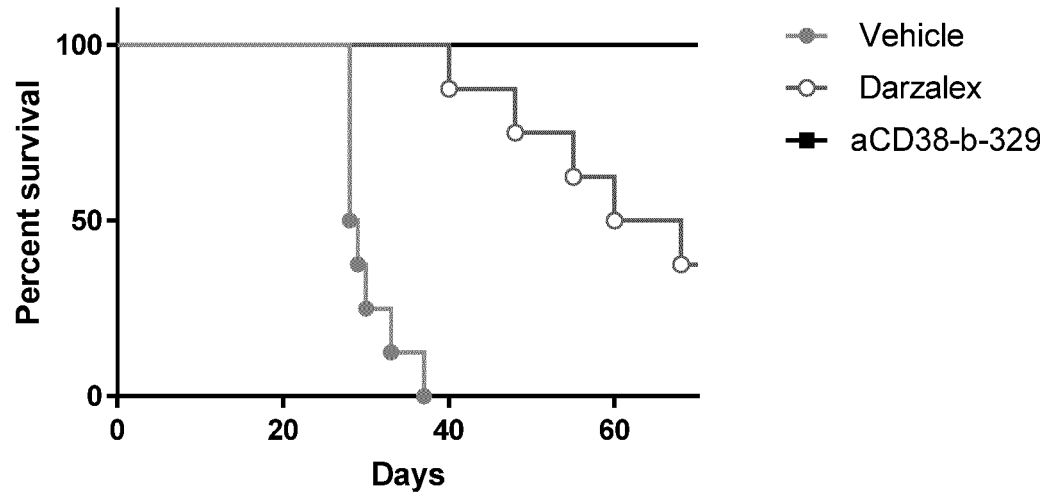


FIGURE 15

A)



B)

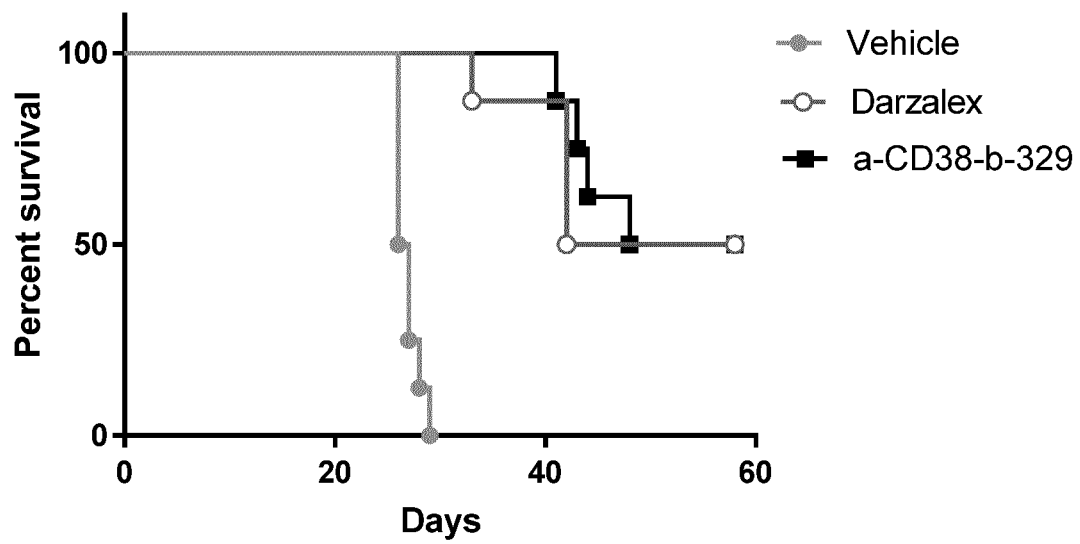


FIGURE 16

A)

CD38-b-348-HCDR1
 GSISSSDYYWG

aCD38-b-348-HCDR2
 SIYYSGSTYYNPSLKS

aCD38-b-348-HCDR3
 ARGQYSSGWYAYPFDM

aCD38-b-348-HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFSLKLS
SVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-348-LCDR1
 RASQSVRSSYLA

aCD38-b-348-LCDR2
 GASSRAT

aCD38-b-348-LCDR3
 QQDGNVYT

aCD38-b-348-LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEP
EDFAVYYCQQDGNVYT

B)

Cytoplasmic					Transmembrane				
10	20	30	40	50					
MANCEFSPVS	GDKPCCRLSR	RAOLCLGVSI	LVLILVVVLA	VVVPRWRQQW					
60	70	80	90	100					
SGPGTTKRFP	ETVILARCVKY	TEIHPEMRHV	DCQSVWDAFK	GAFISKHPCN					
110	120	130	140	150					
ITEEDYQPLM	KLGTQTVPCN	KILLWSRIKD	LAHQFTQVQR	DMFTLEDTL					
160	170	180	190	200					
GYLADDLTWC	GEFNTSKINY	QSCPDWRKDC	SNNPVSVFWK	TVSRRFAEAA					
210	220	230	240	250					
CDVVHVMLNG	SRSKIFDKNS	TFGSVEVHNL	QPEKVTLEA	WVIHGGREDS					
260	270	280	290	300					
RDLCQDPTIK	ELESII	SKRN IQFSCKNIYR	PDKFLQCVKN	PEDSSCTSEI					

FIGURE 17

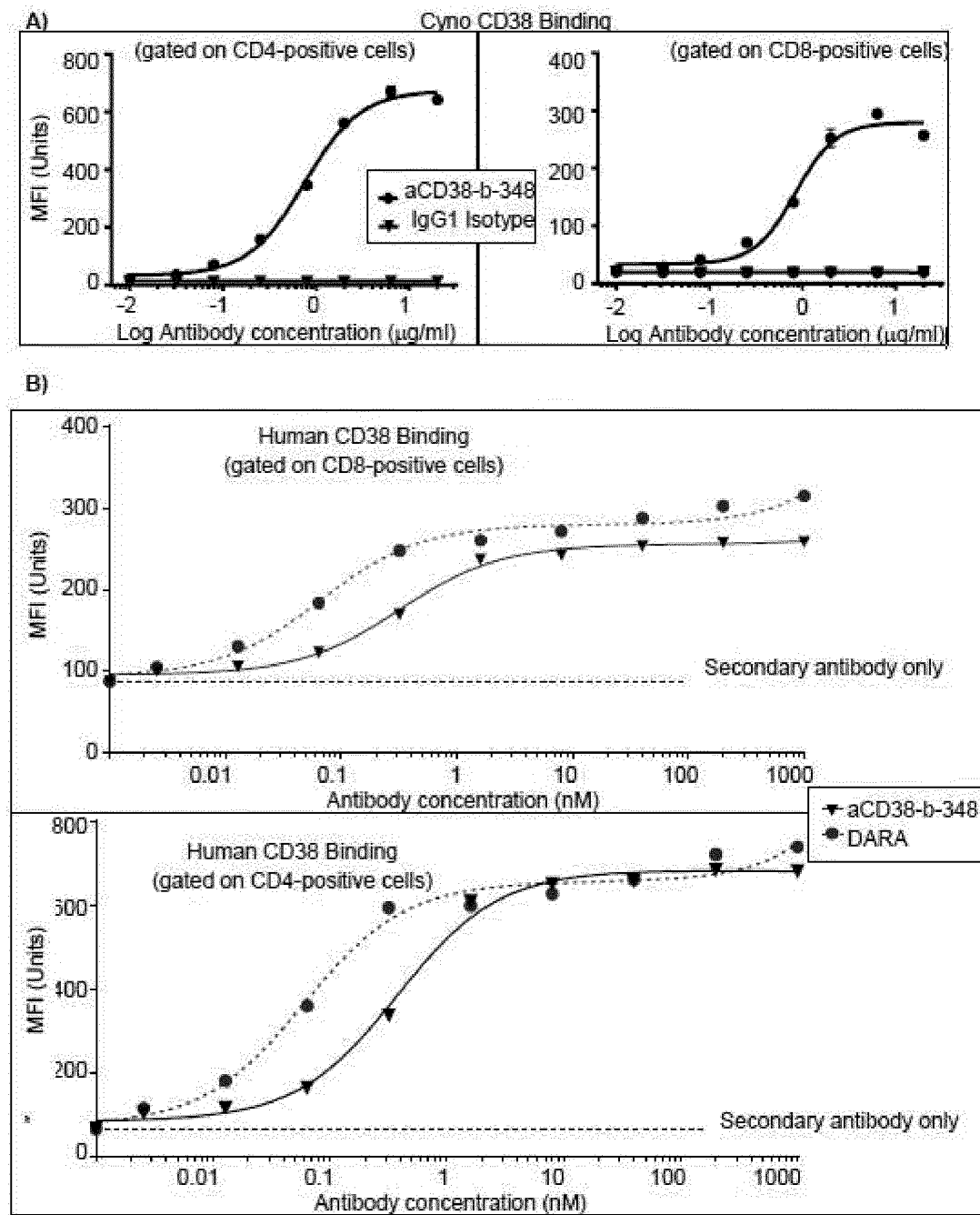


FIGURE 18

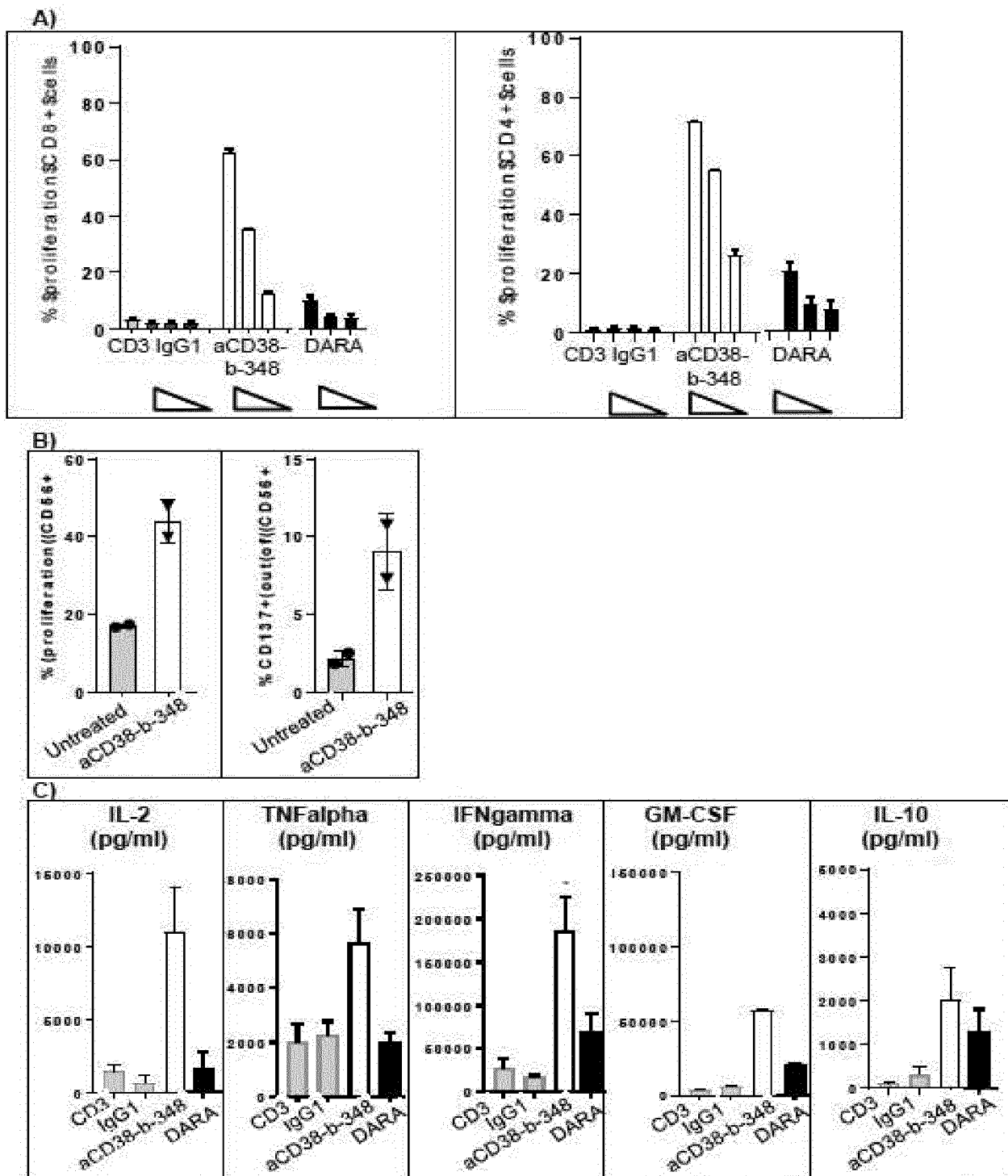
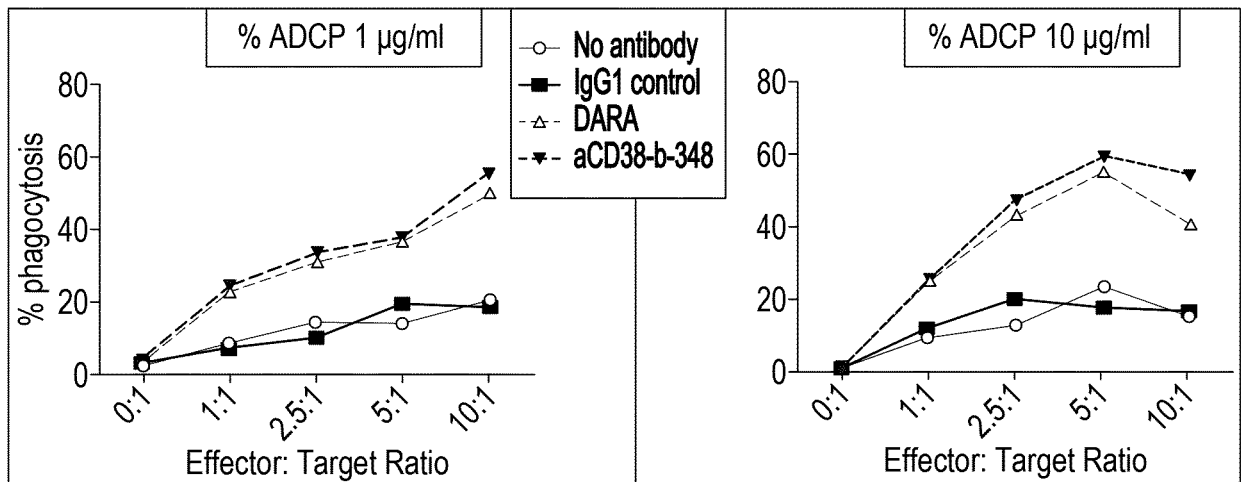
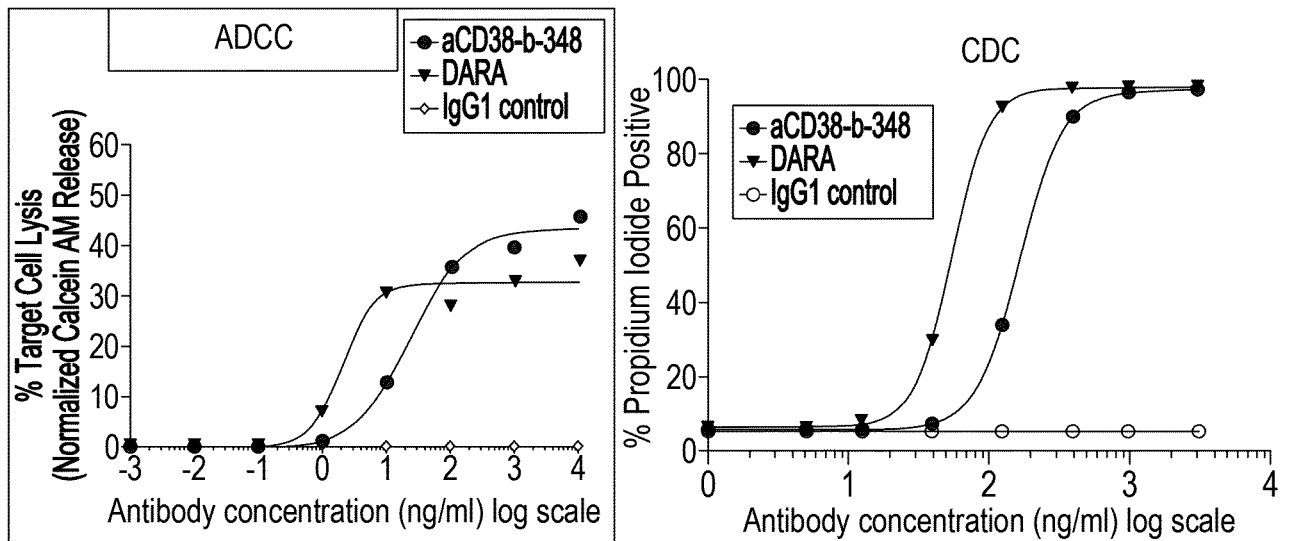


FIGURE 19

A)



B)



C)

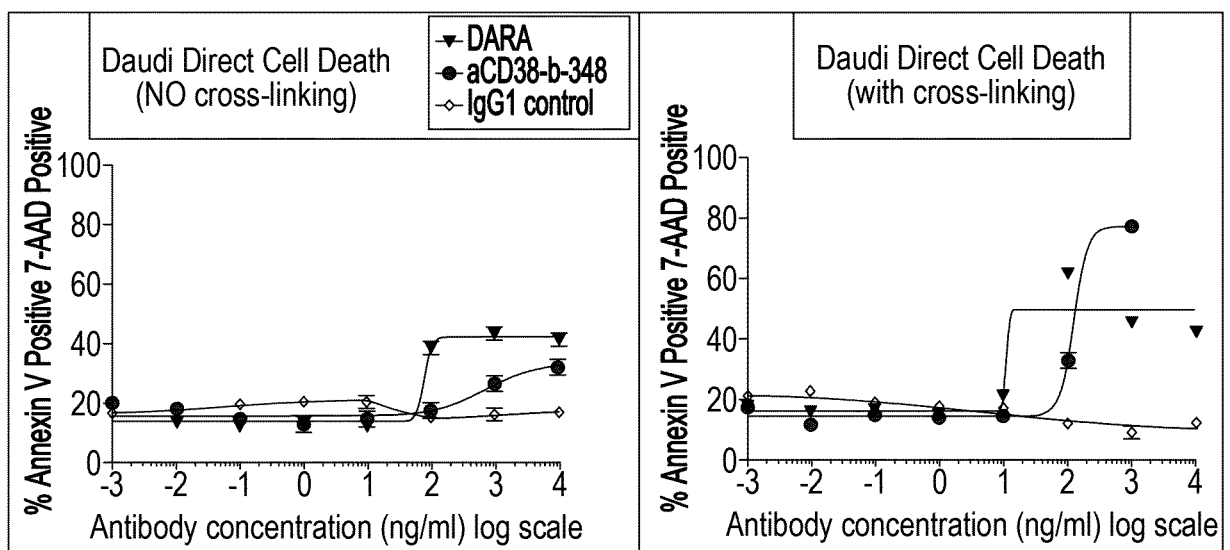


FIGURE 20

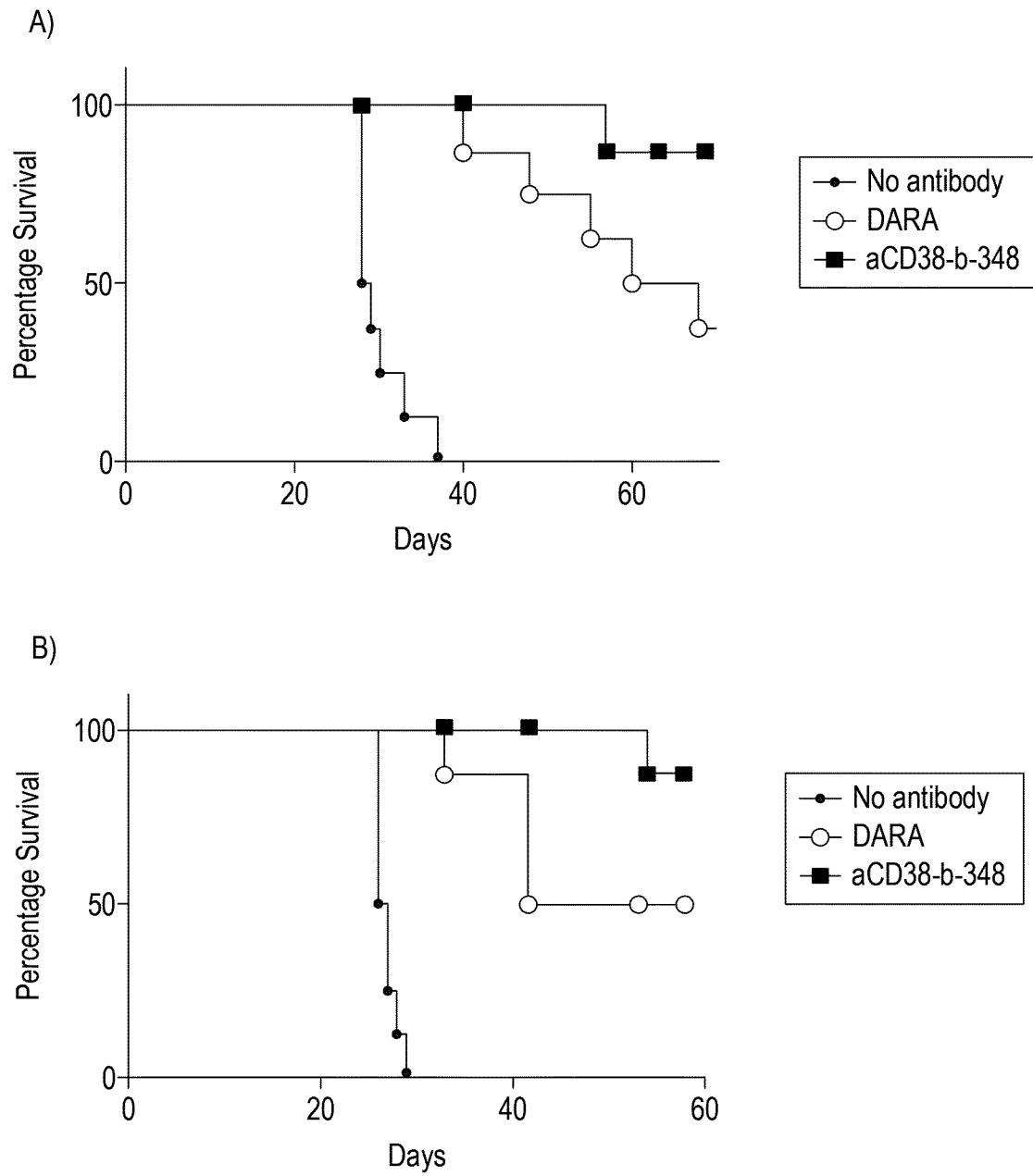


Figure 21**A)****aCD38-a-327-HCDR1**

GSISSGGYYWS

aCD38-a-327-HCDR2

YIYSGSTYYNPSLKS

aCD38-a-327-HCDR3

ARAKSELVLPYYYYMDV

aCD38-a-327-HCDR123

GSISSGGYYWSWIRQHPGKGLEWIGYIYSGSTYYNPSLKSRVTVISVDTSKNQFSLKLSSVTAADTAVYYCA
RAKSELVLPYYYYMDVWGKGTTVTVSS

aCD38-a-327-LCDR1

KSSQSVLFSSNNKNYLA

aCD38-a-327-LCDR2

WASTRES

aCD38-a-327-LCDR3

QQYYSLPPT

aCD38-a-327-LCDR123

KSSQSVLFSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY
CQQYYSLPPTFGGGTKVEIK

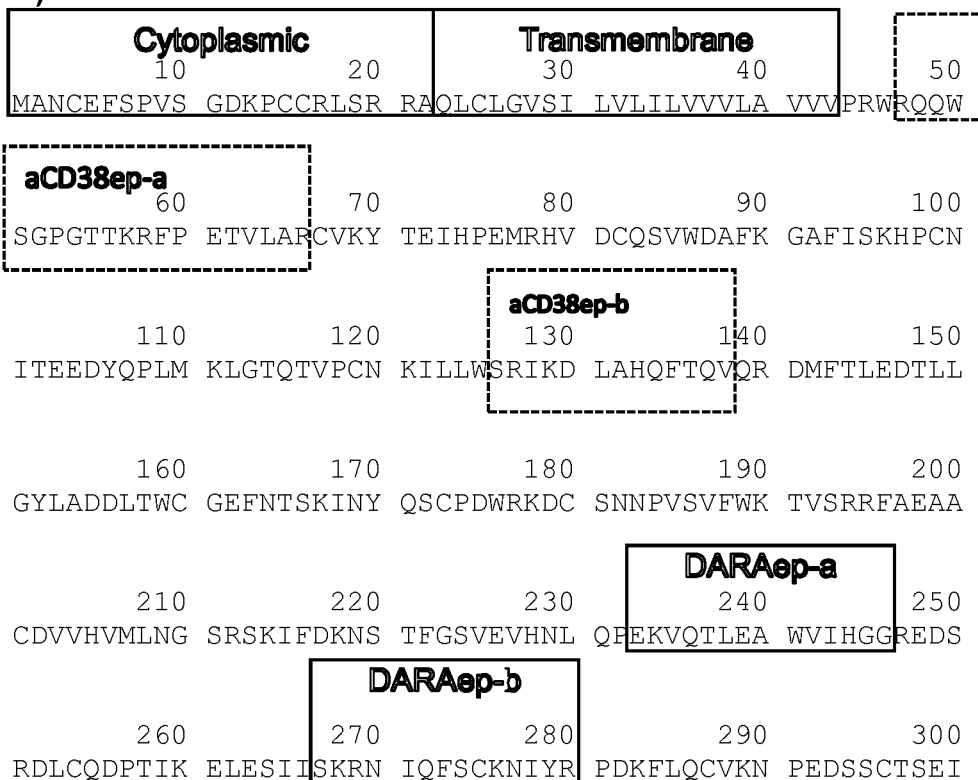
B)

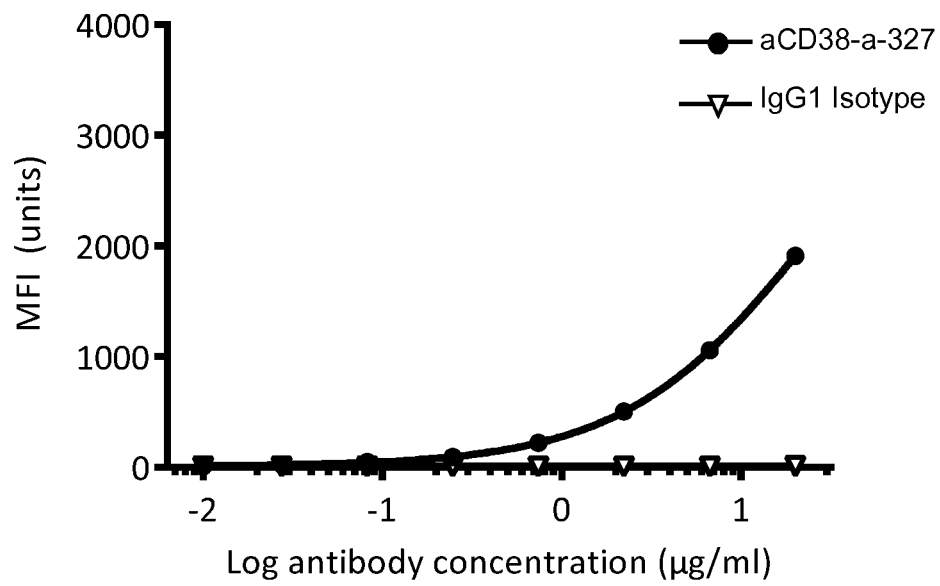
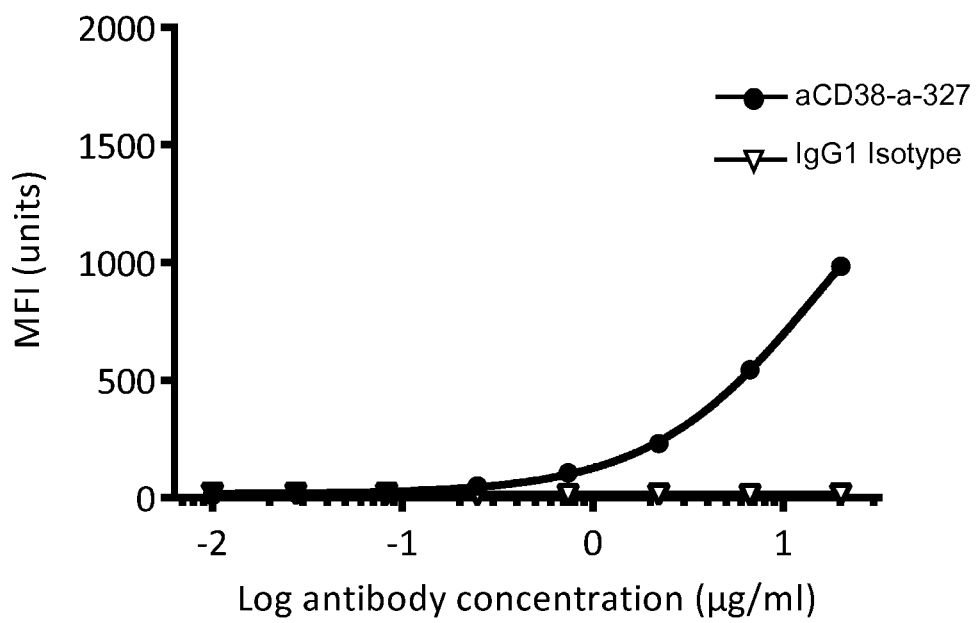
FIGURE 22**Daudi Binding****Raji Binding**

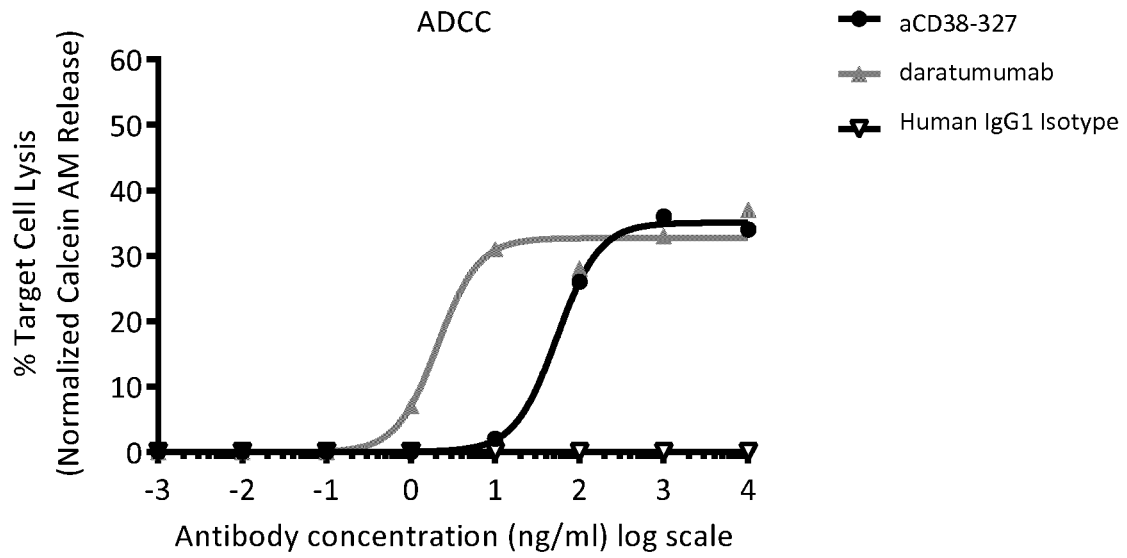
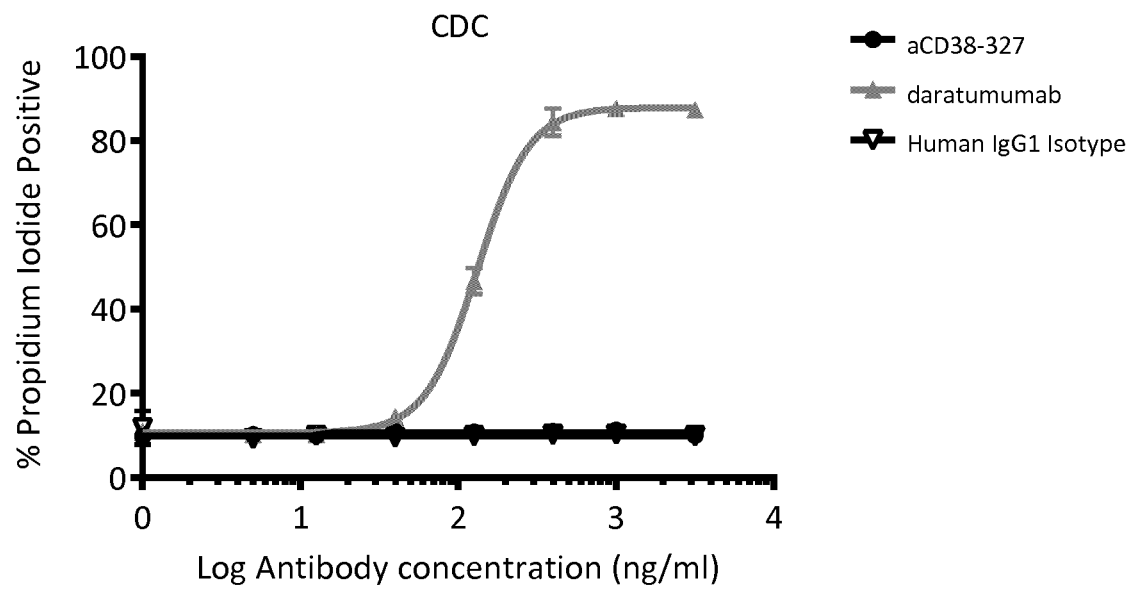
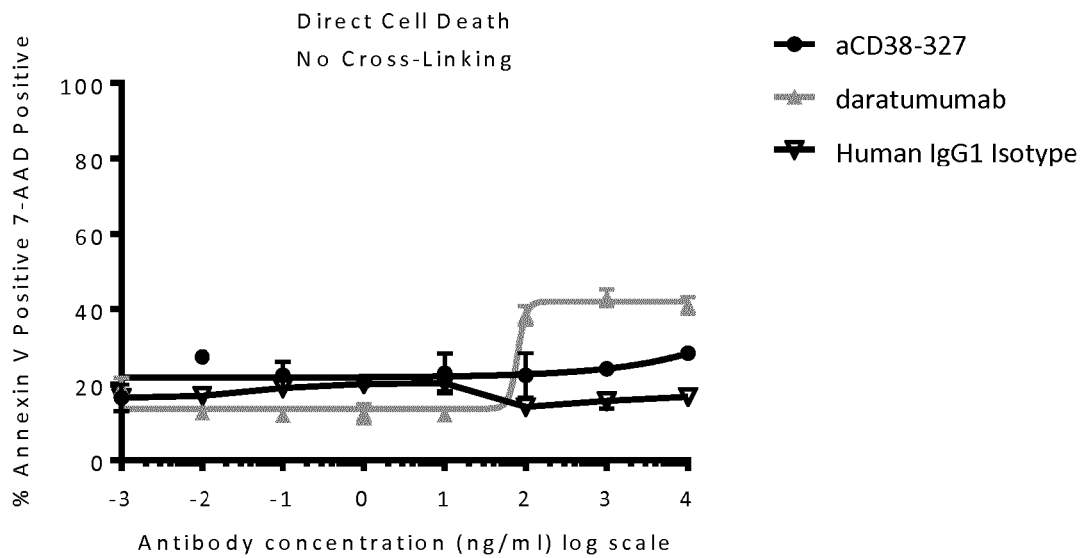
FIGURE 23**A)****B)**

FIGURE 23 (Cont.)

C)



D)

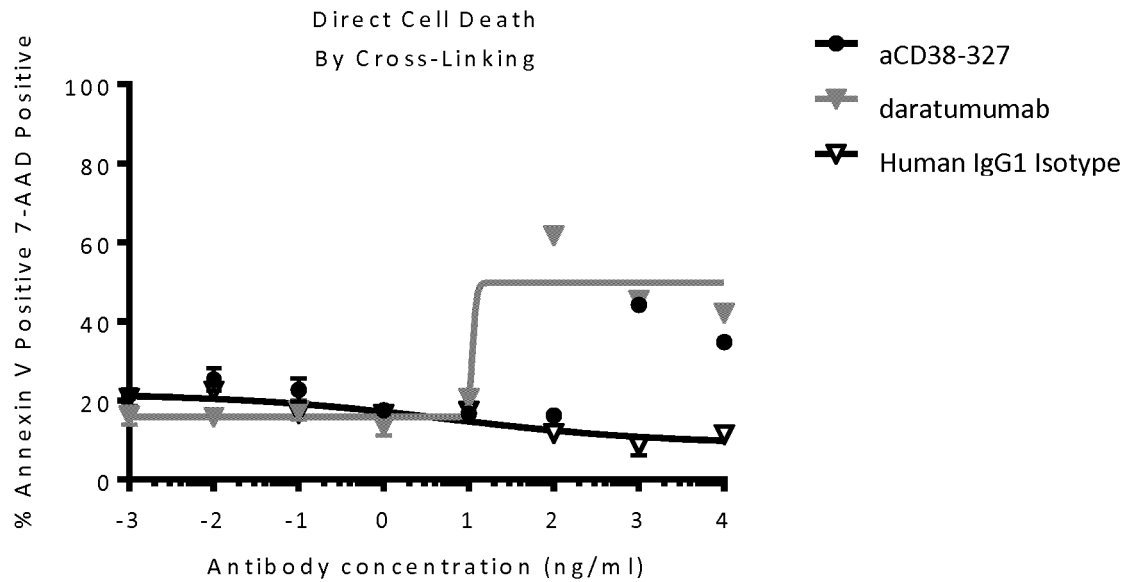


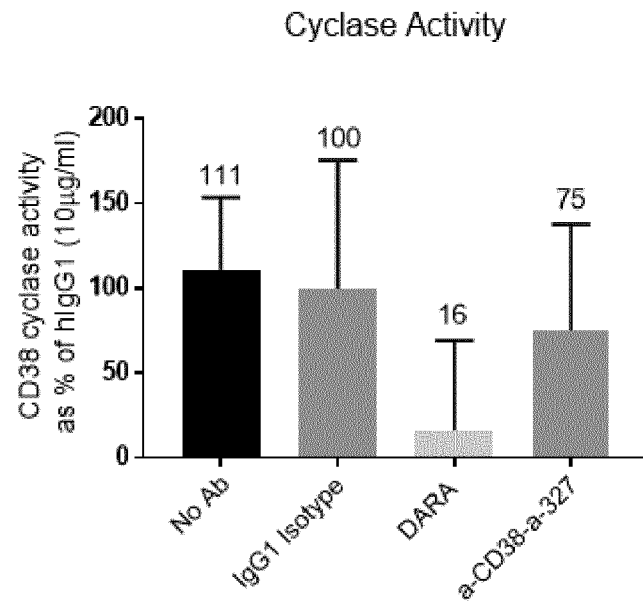
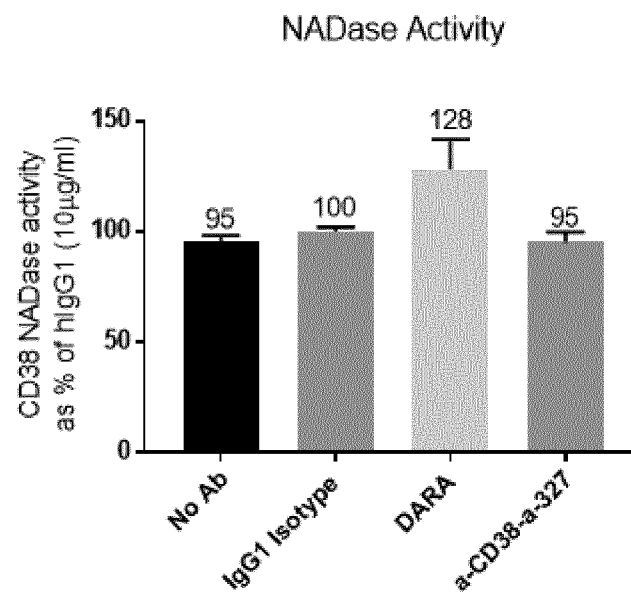
FIGURE 24**A)****B)**

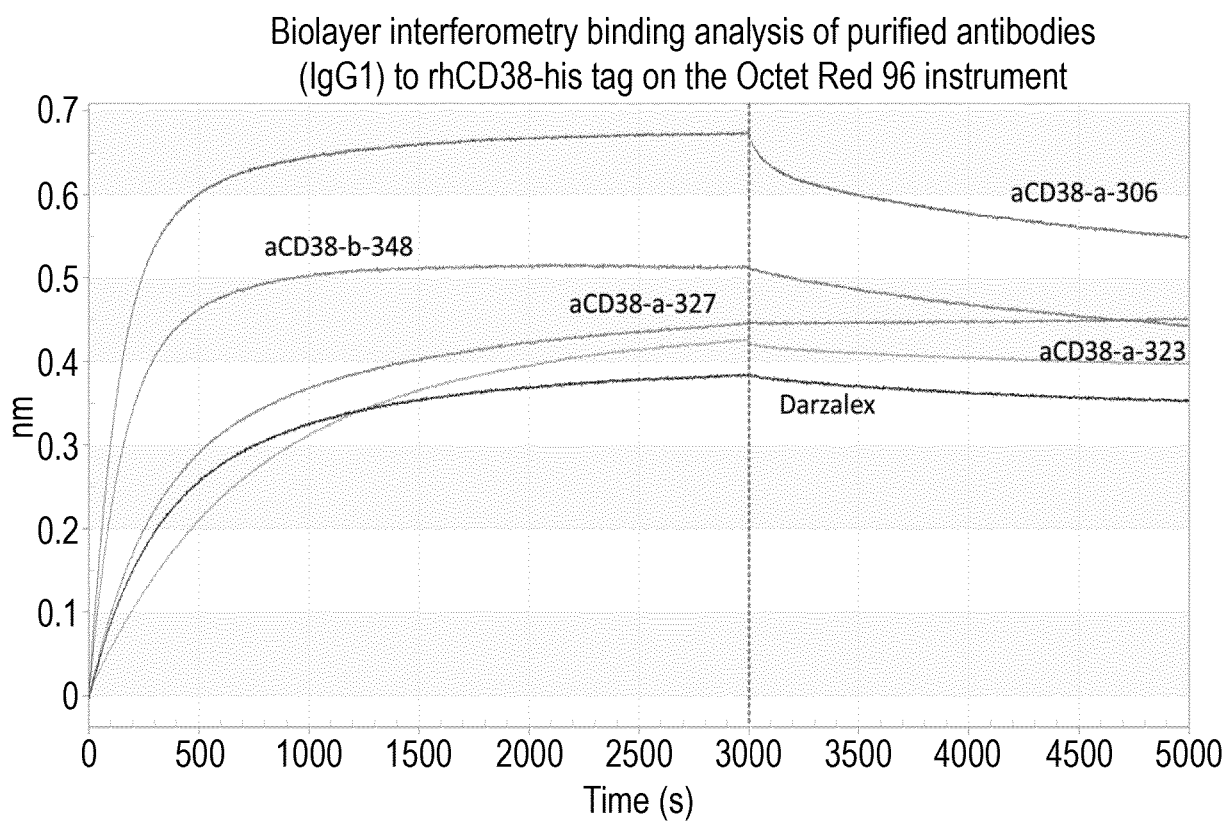
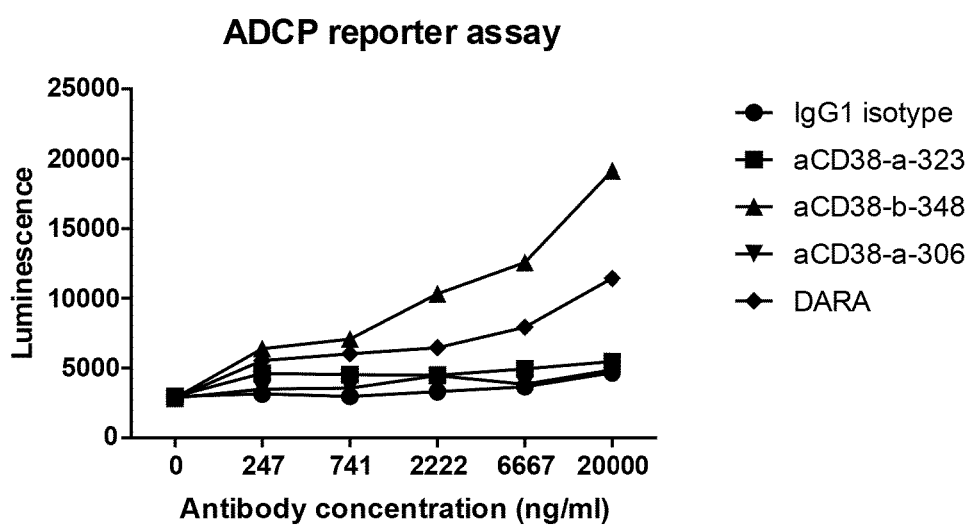
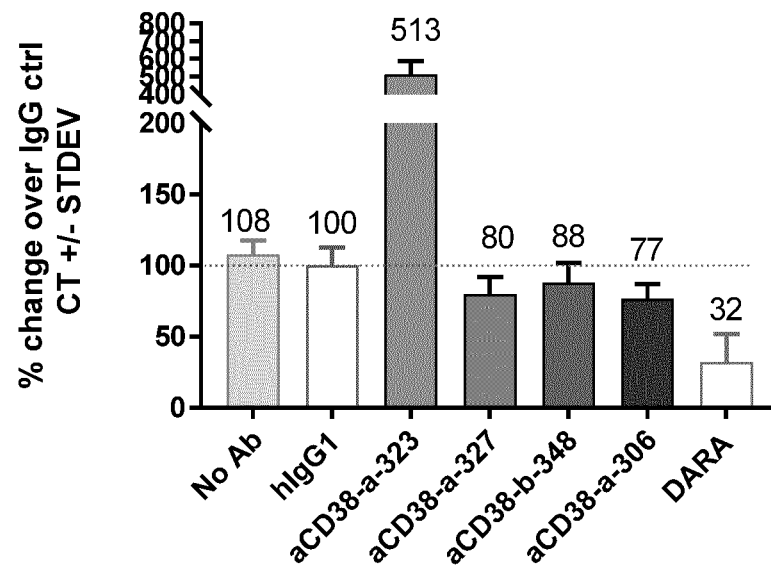
FIGURE 25**FIGURE 26**

Figure 27

A)



B)

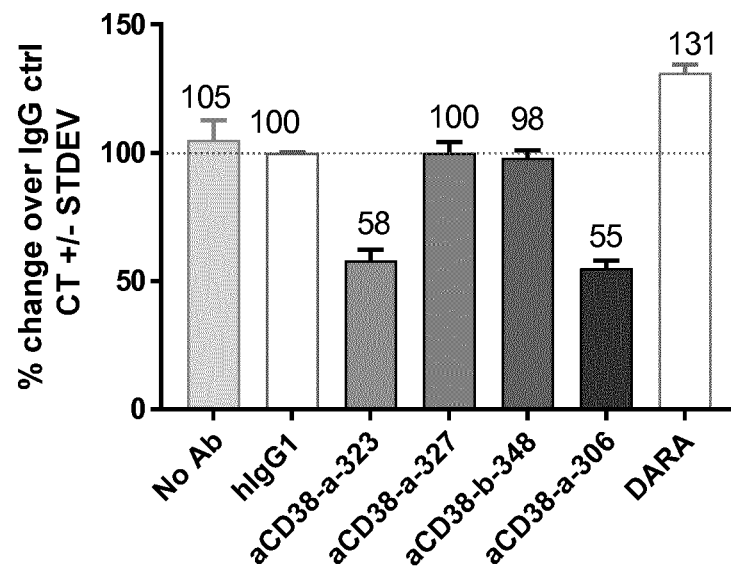


FIGURE 28

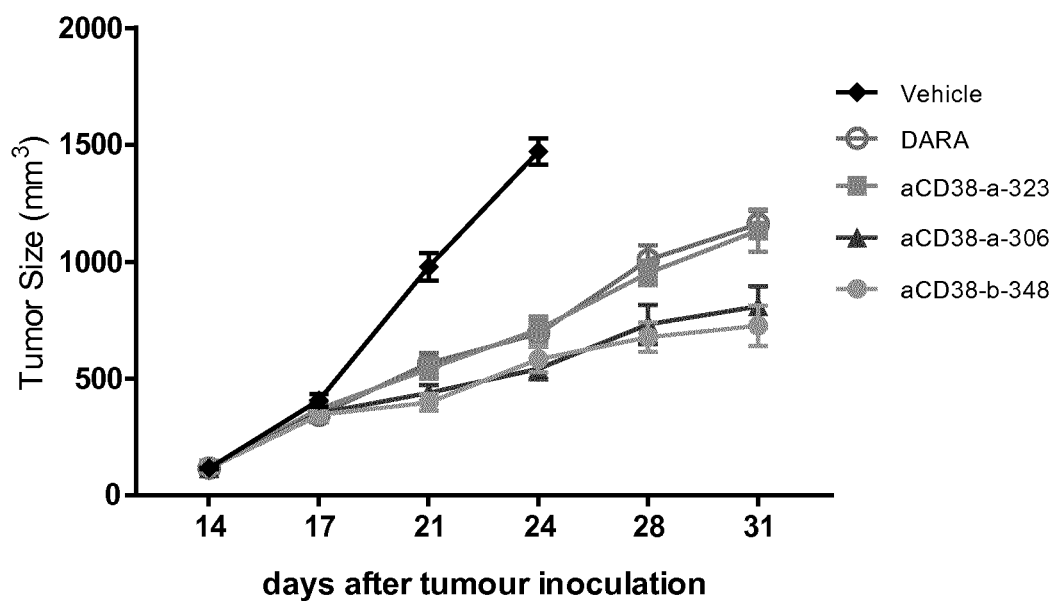


FIGURE 29

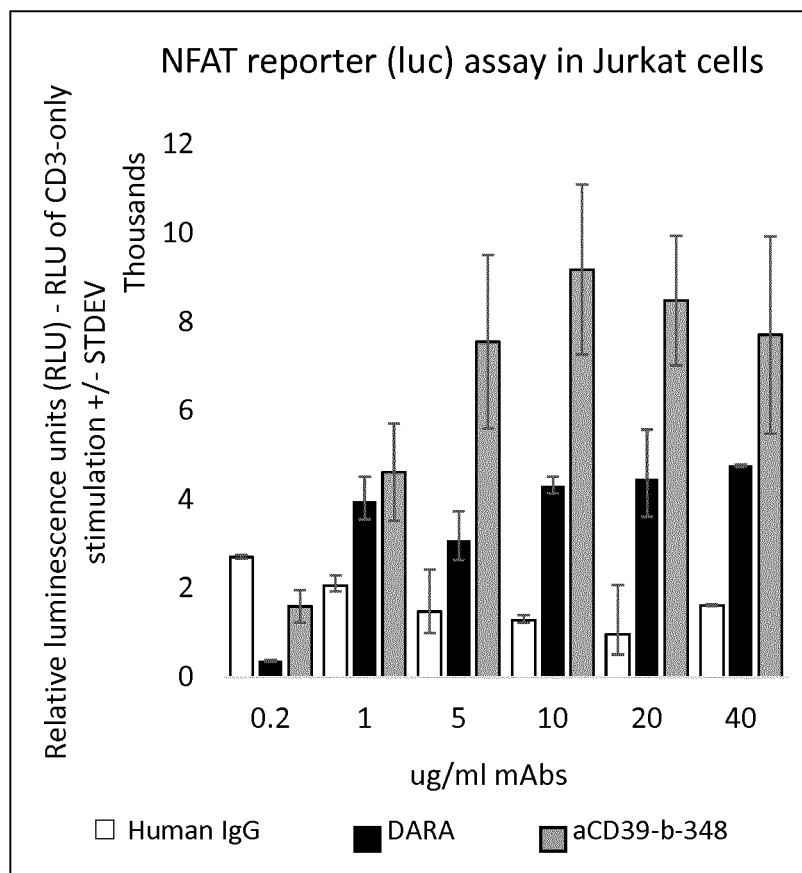


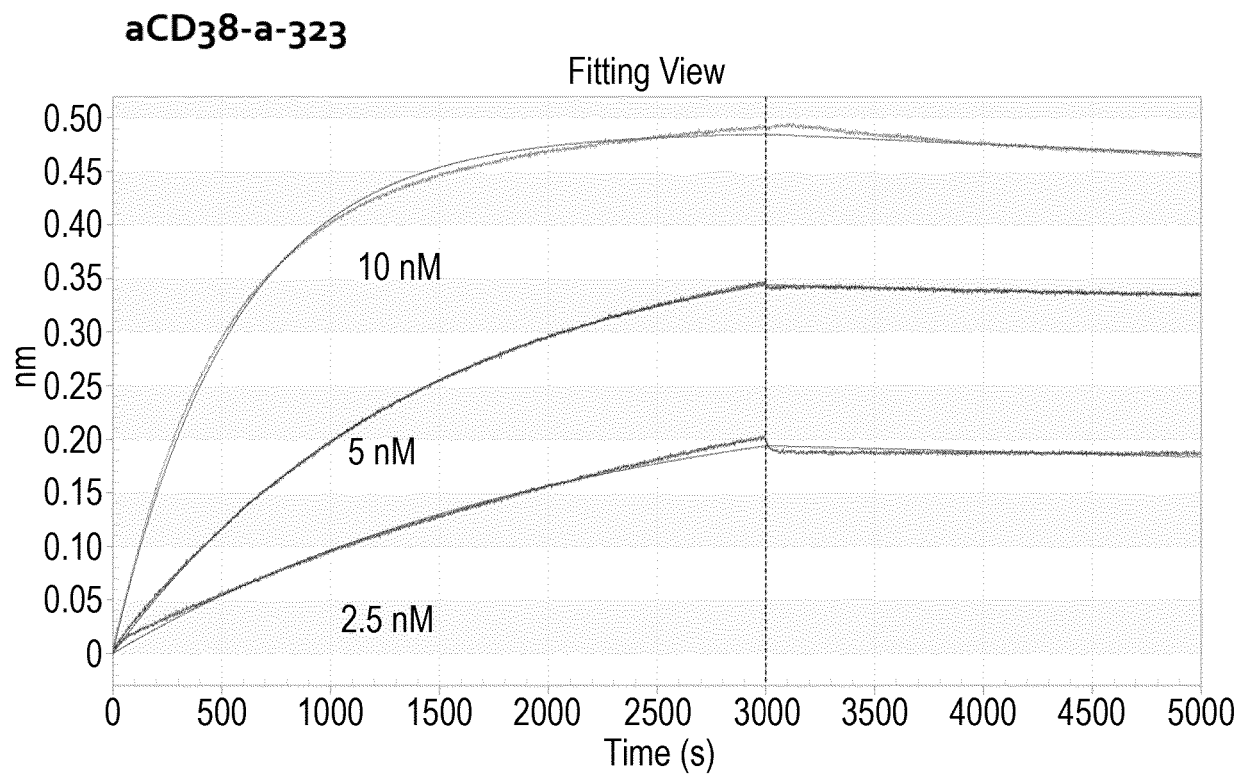
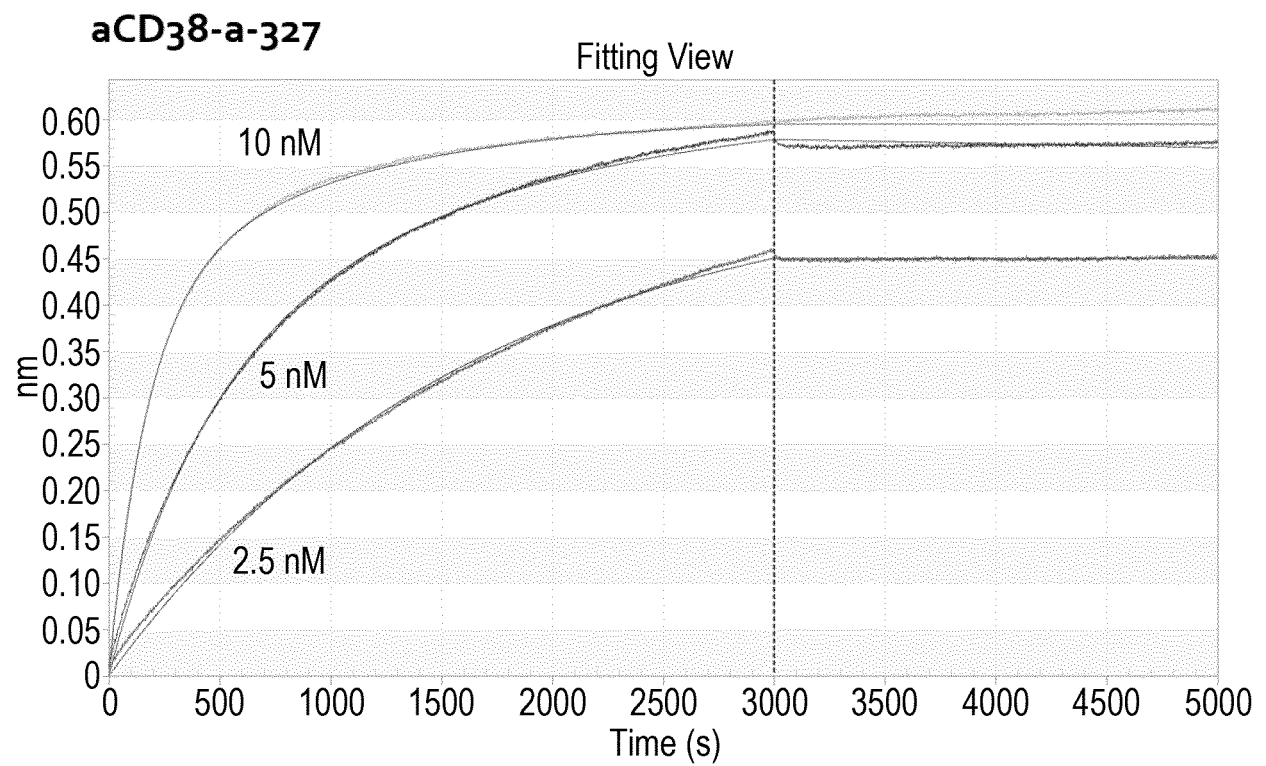
Figure 30A**Figure 30B**

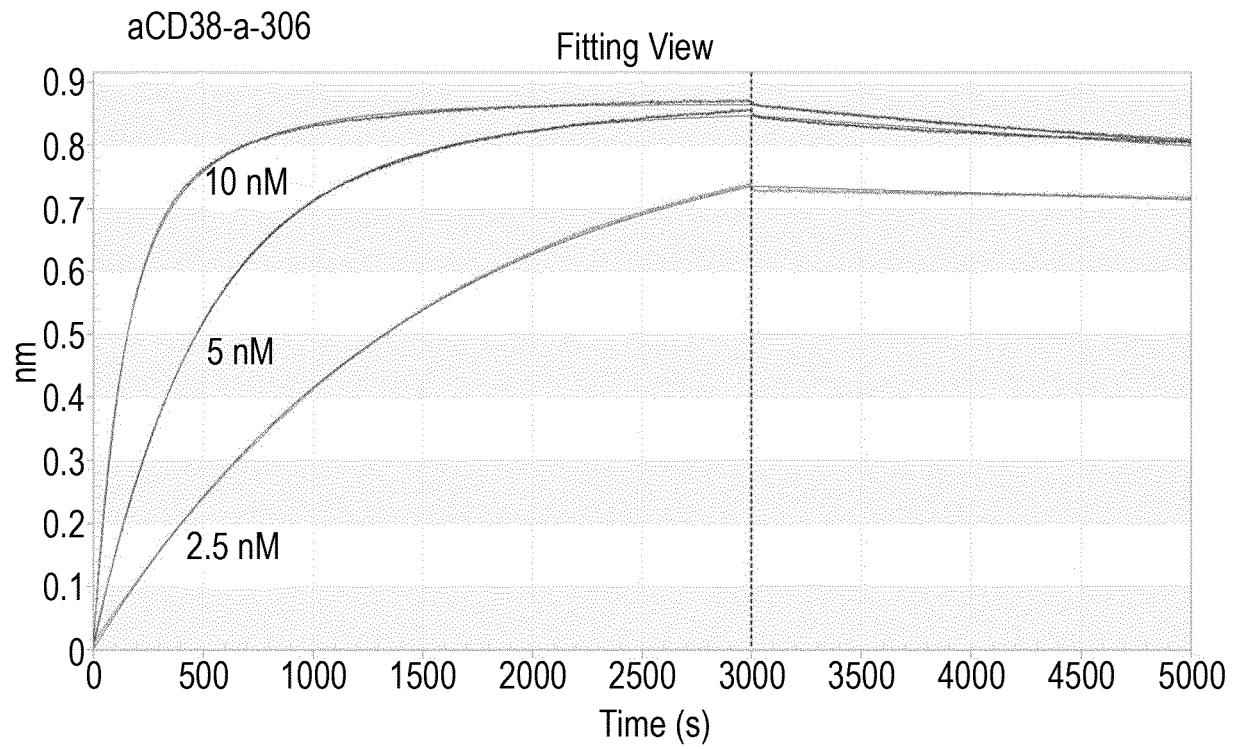
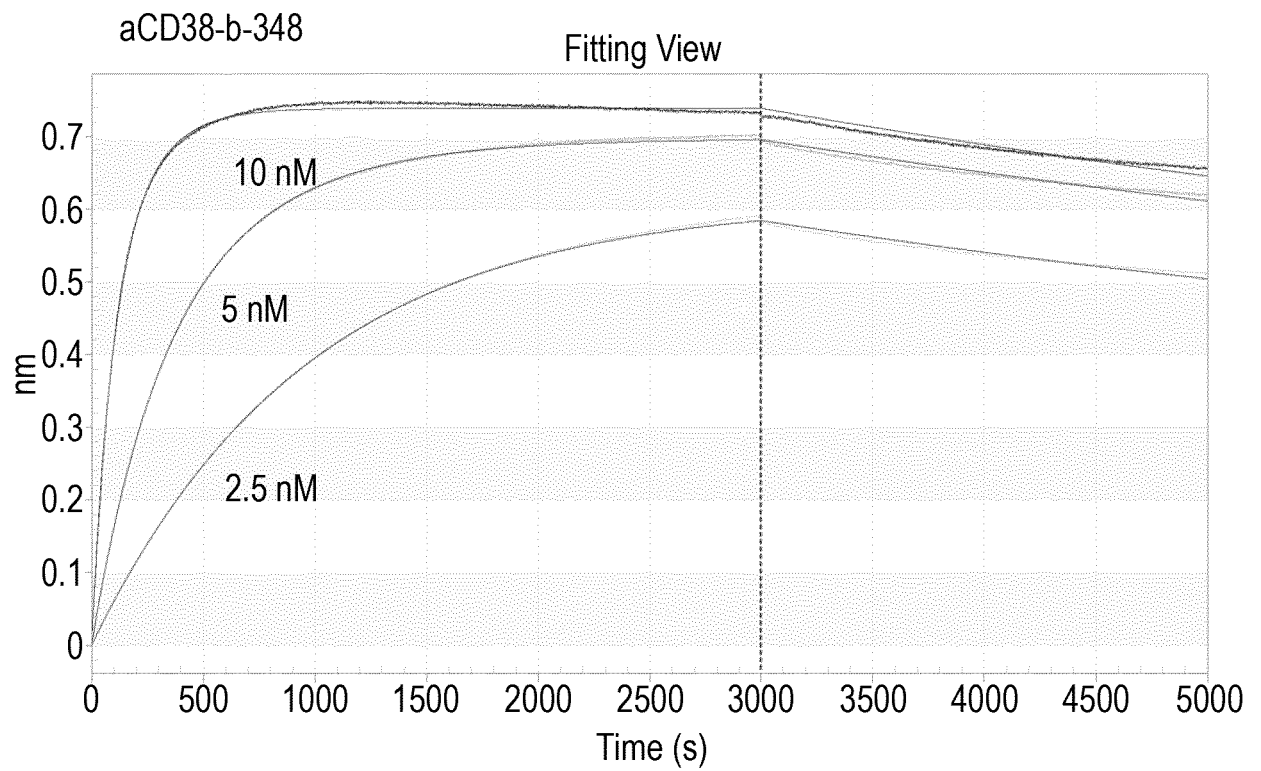
Figure 30C**Figure 30D**

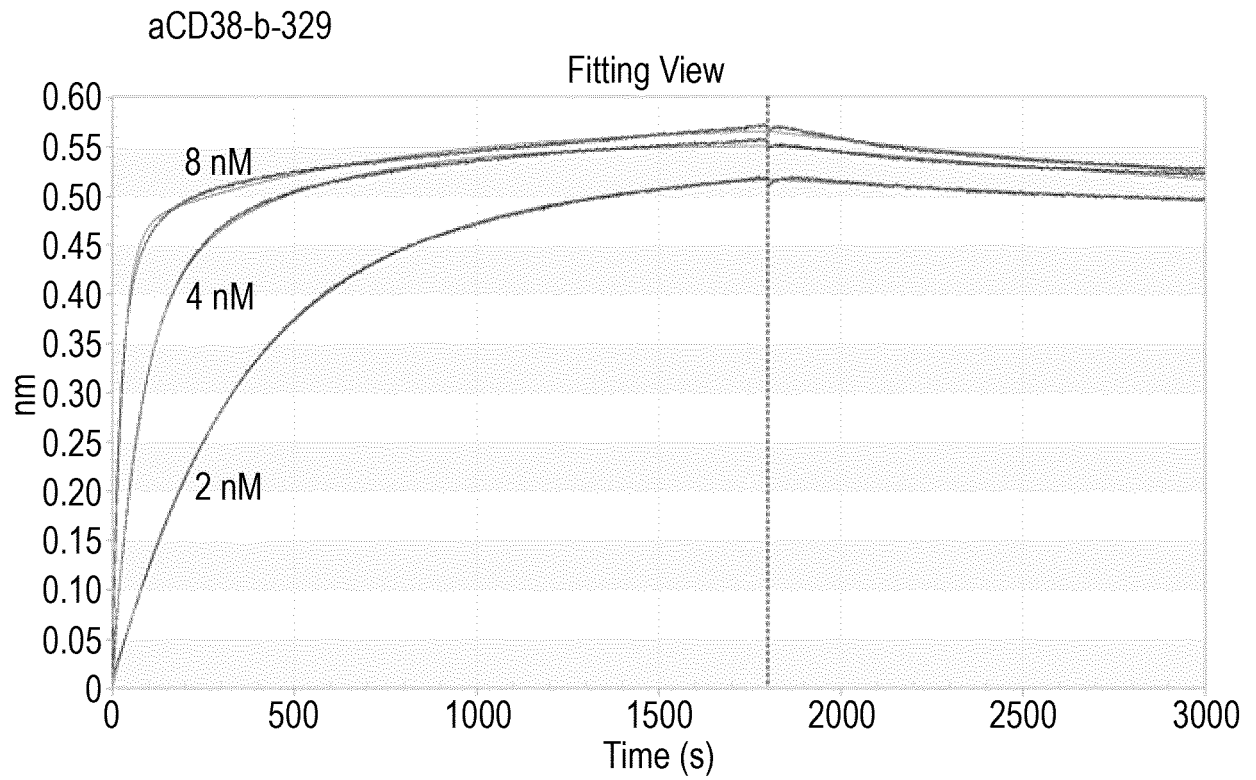
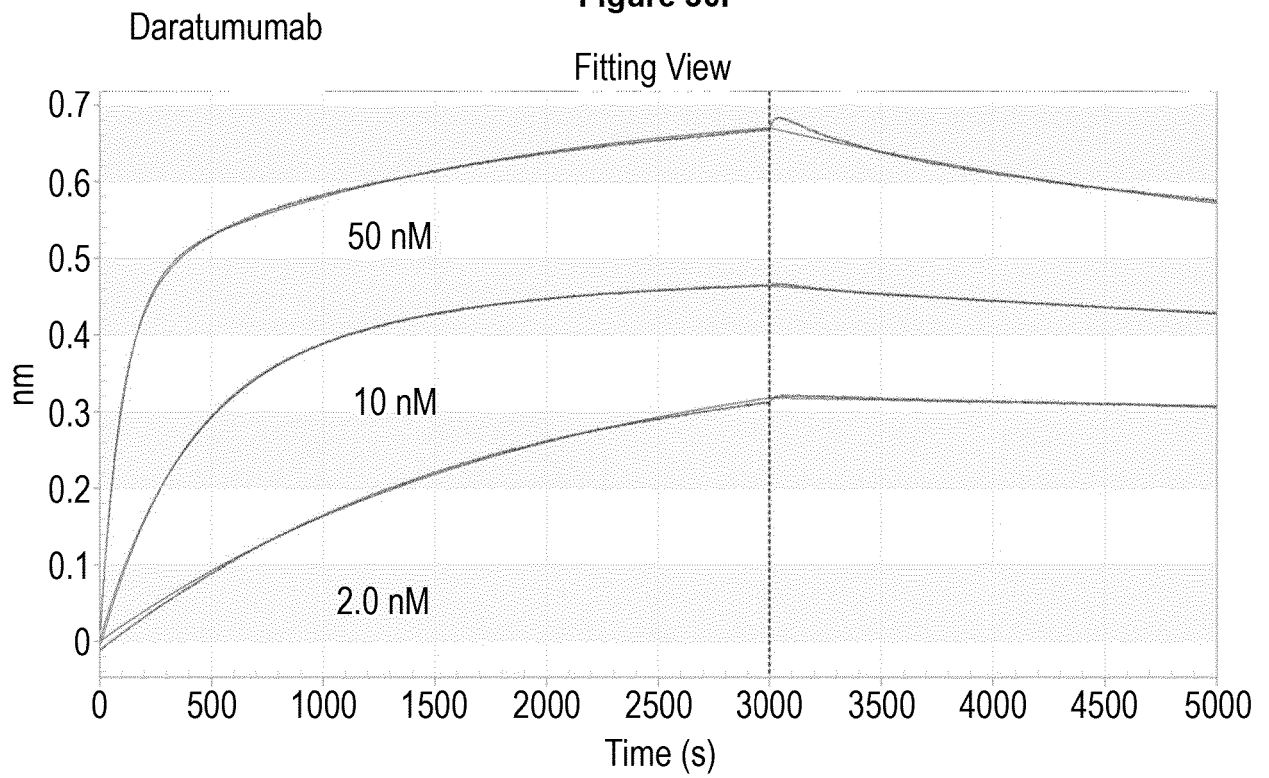
Figure 30E**Figure 30F**

FIGURE 31

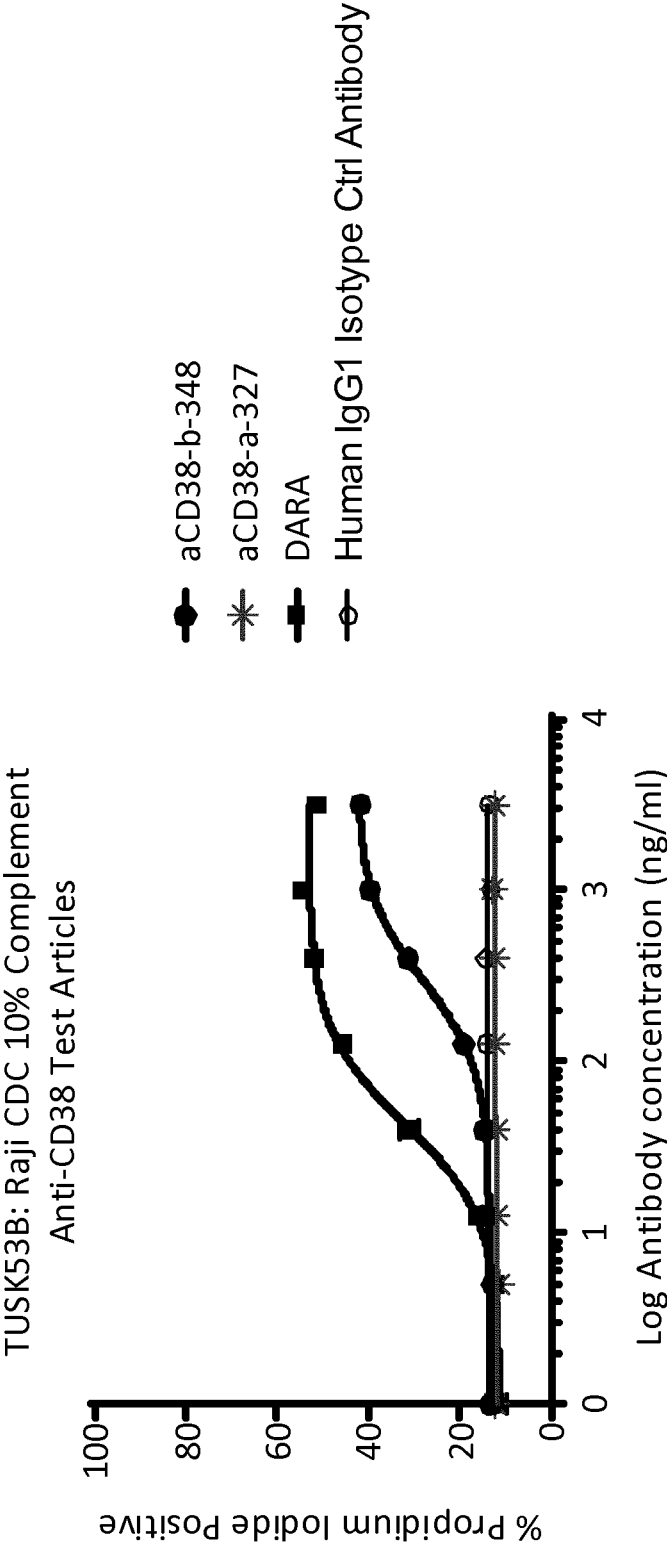
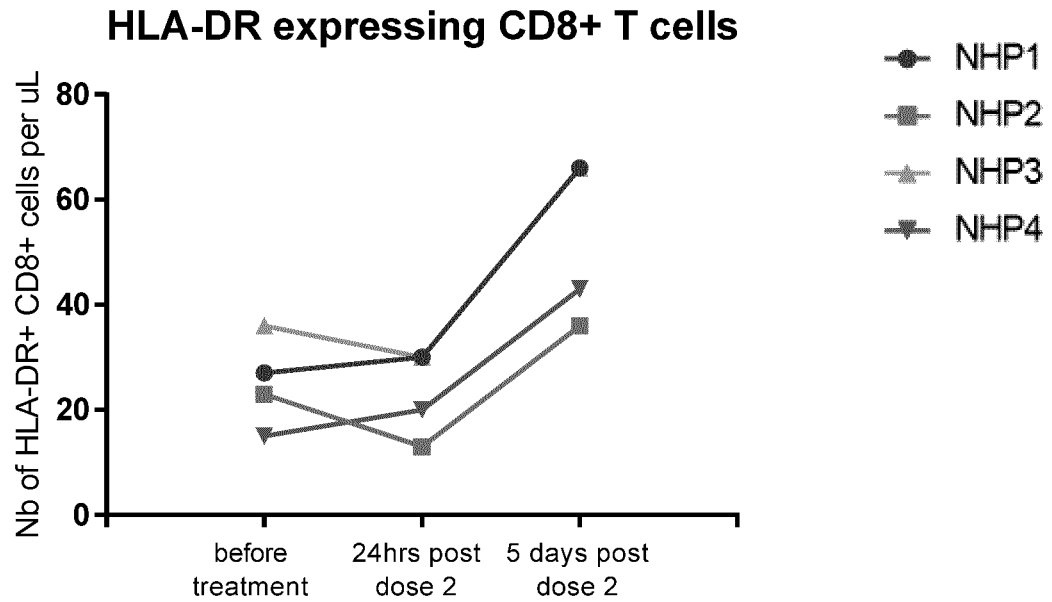


FIGURE 32

A)



B)

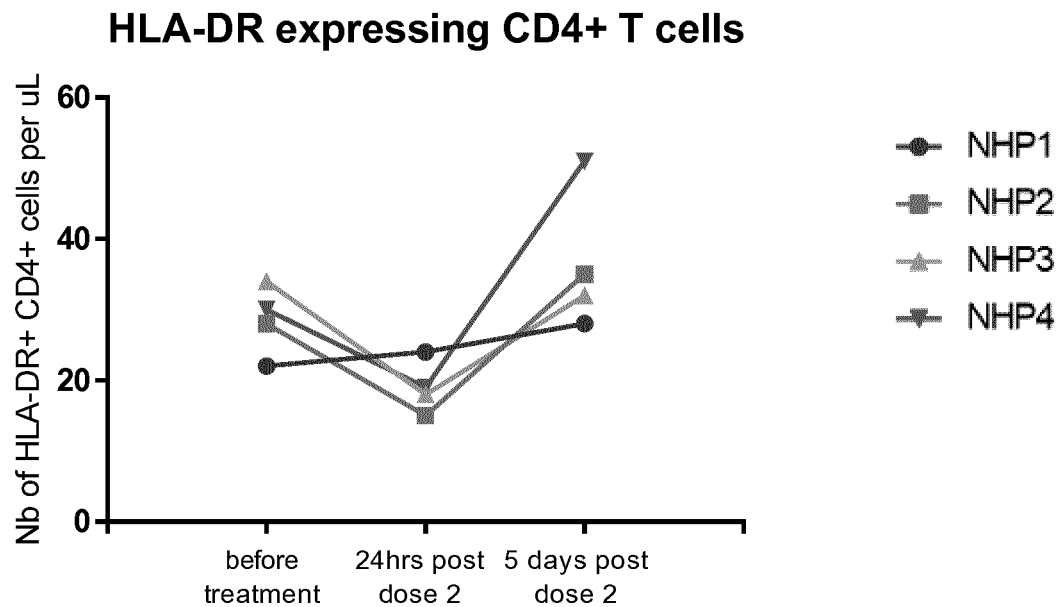
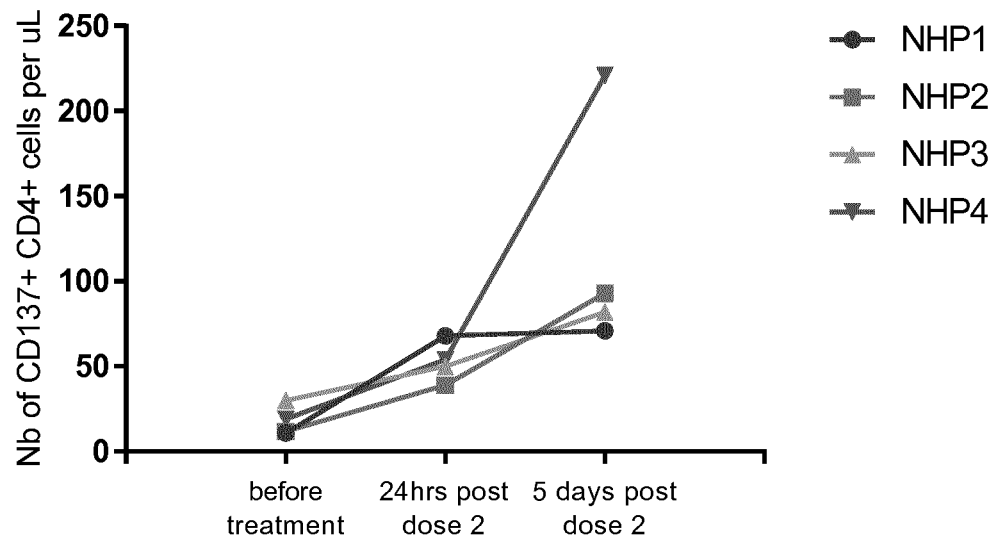


FIGURE 32 cont.

C)

CD137 expressing CD4+ T cells

D)

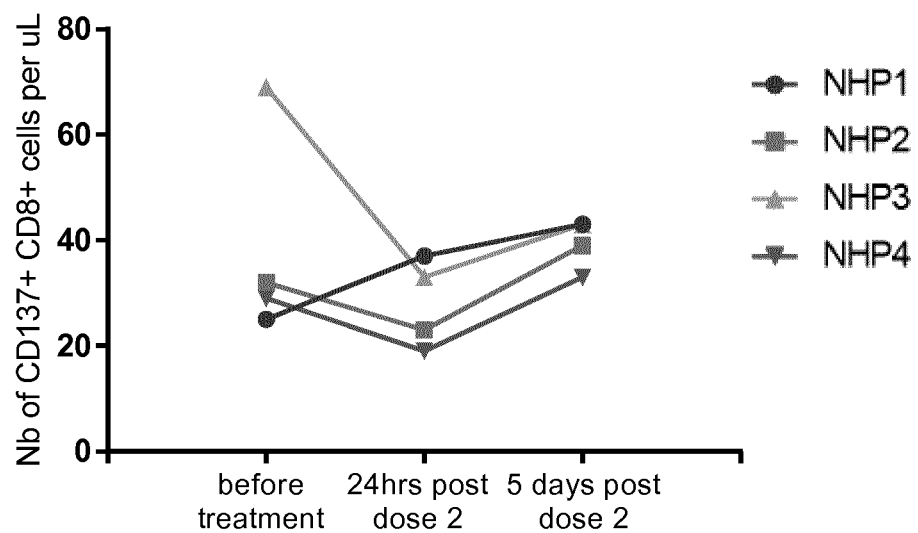
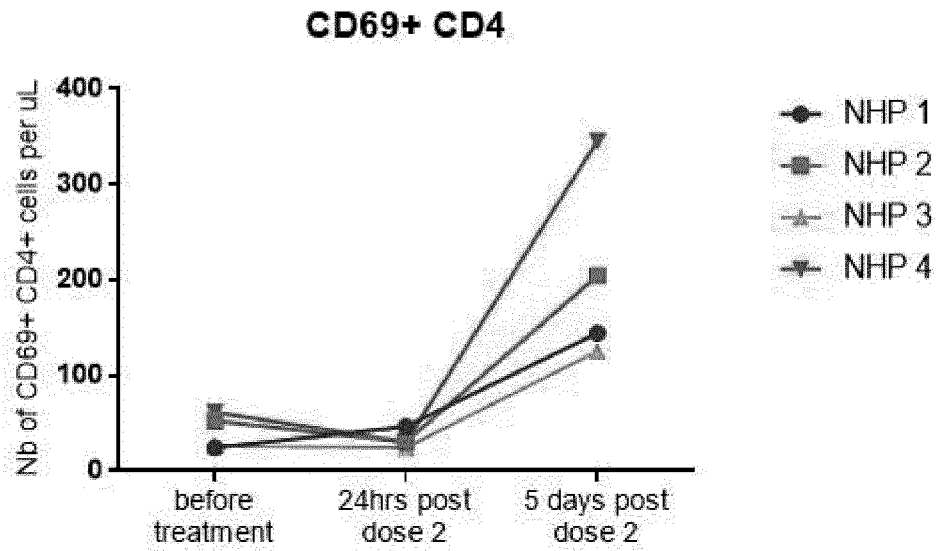
CD137 expressing CD8+ T cells

FIGURE 32 cont.

E)



F)

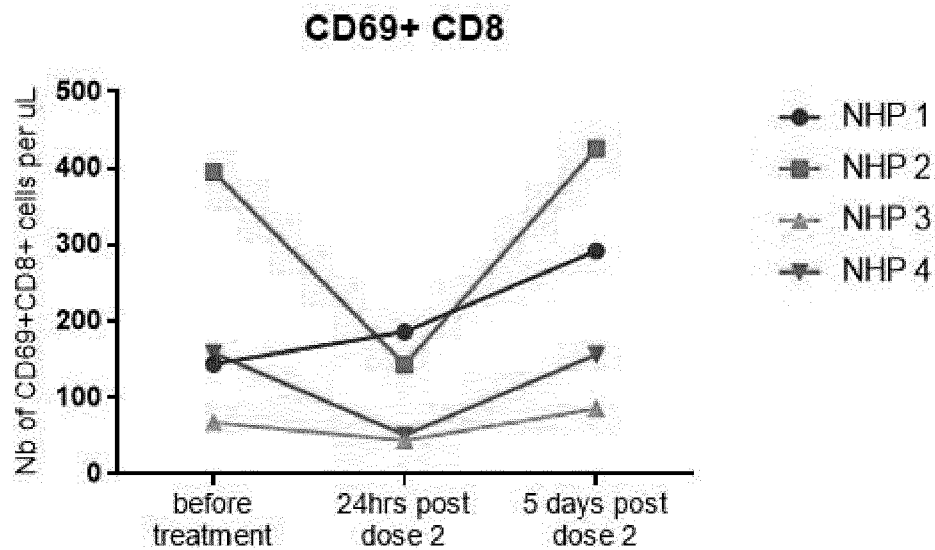


FIGURE 33**A)****aCD38-b-329-m6-HCDR123**

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFSLK
LSSVTAADTAVYYCARGQYSSGWAYYPFDM

aCD38-b-329-m6-LCDR123

RASQSVRSSLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRL
EPEDFAVYYCQQDEAVFT

B)**aCD38-b-329-m7-HCDR123**

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFSLK
LSSVTAADTAVYYCARGQYSSGWAYYPFDM

aCD38-b-329-m7-LCDR123

RASQSVRSSLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRL
EPEDFAVYYCQQDSAVFT

FIGURE 34

Daudi Binding

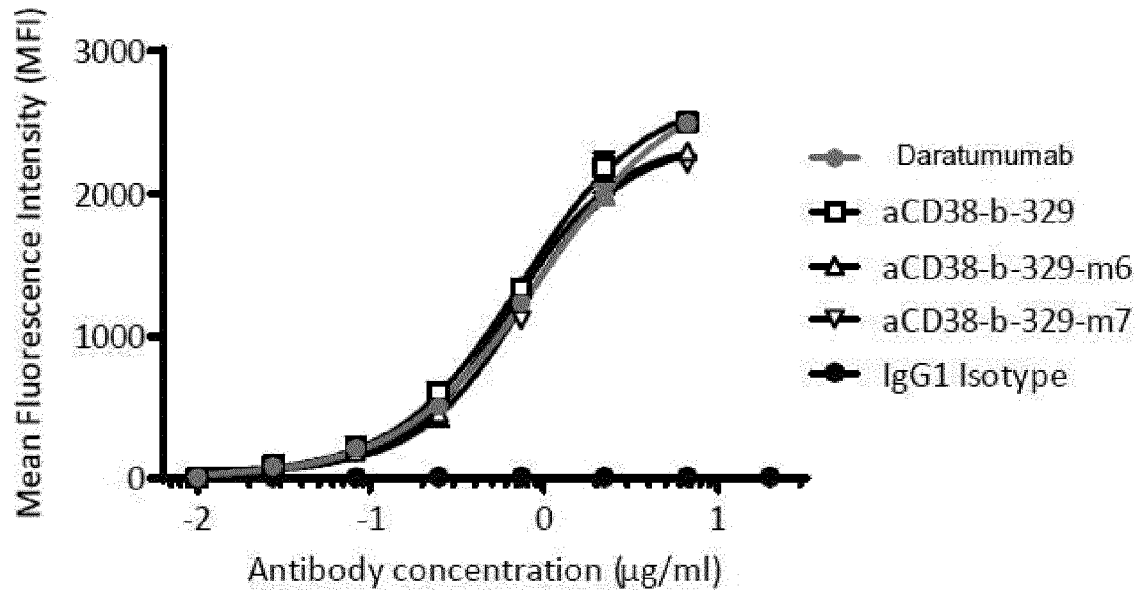
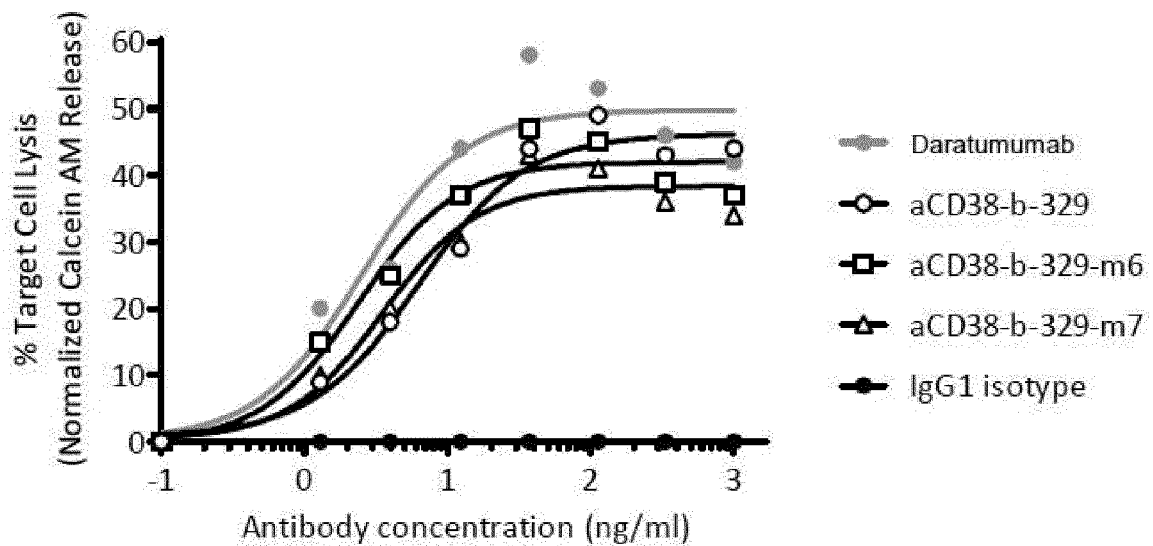
**FIGURE 35**Daudi ADCC 4 hours Calcein AM Release
Donor 3627

FIGURE 36

A)

aCD38-b-348-m1-HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFS
LKLSSVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-348-m1-LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTIS
RLEPEDFAVYYCQQEANVYT

B)

aCD38-b-348-m2-HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFS
LKLSSVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-348-m2 LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTIS
RLEPEDFAVYYCQQDSNVYT

C)

aCD38-b-348-m3 HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFS
LKLSSVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-348-m3-LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTIS
RLEPEDFAVYYCQQDANVYT

D)

aCD38-b-348-m4-HCDR123

GSISSSDYYWGWIRQPPGKGLEWIGSIYYSGSTYYNPSLKSRVTISVDTSKNQFS
LKLSSVTAADTAVYYCARGQYSSGWYAYPFDM

aCD38-b-348-m4-LCDR123

RASQSVRSSYLAWYQQKPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTIS
RLEPEDFAVYYCQQEGNVYT

FIGURE 37

: Daudi Binding

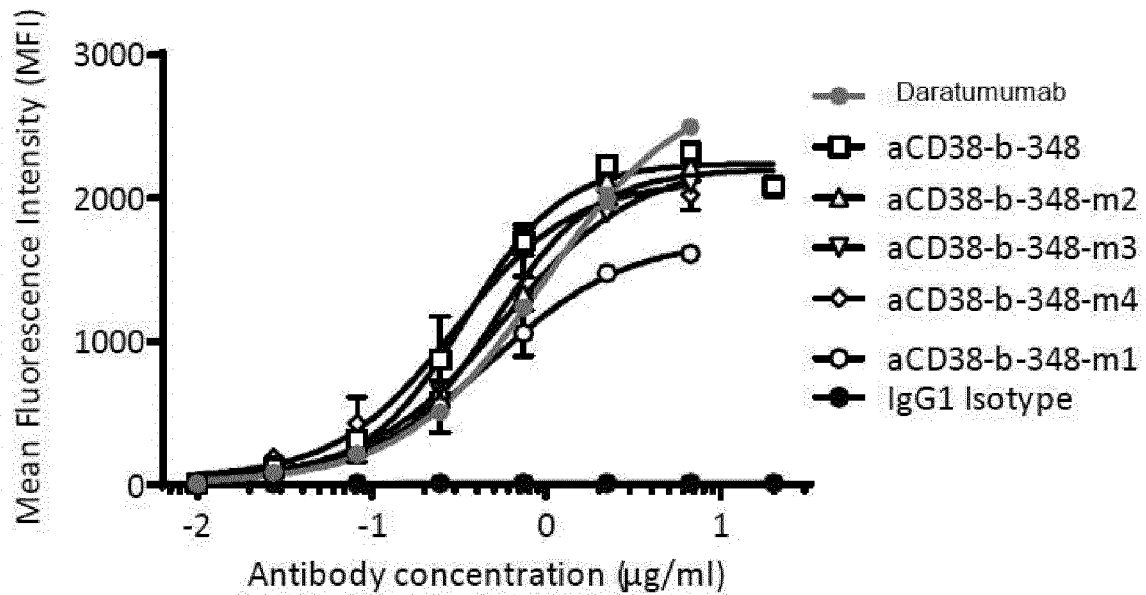
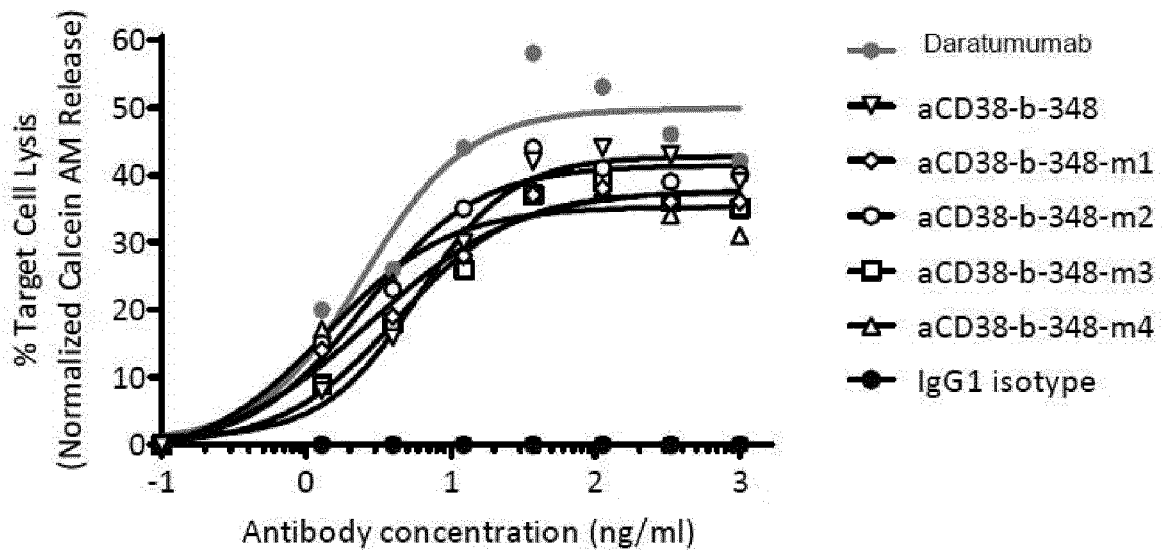
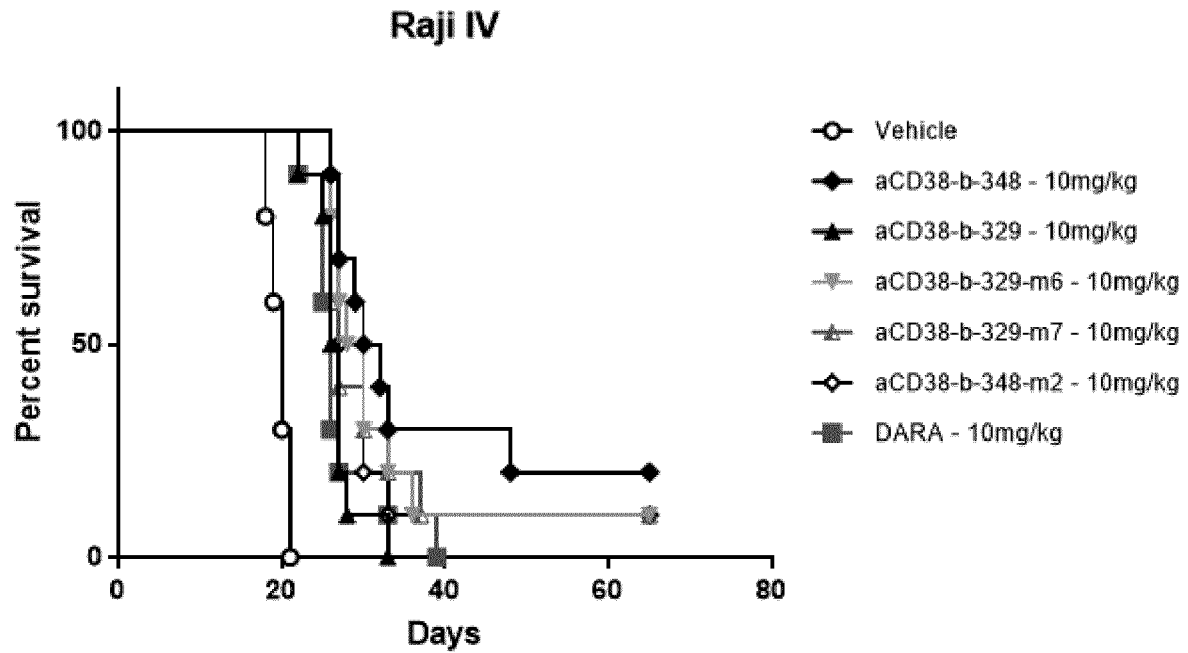
**FIGURE 38**Daudi ADCC 4 hours Calcein AM Release
Donor 3627

FIGURE 39

A)



B)

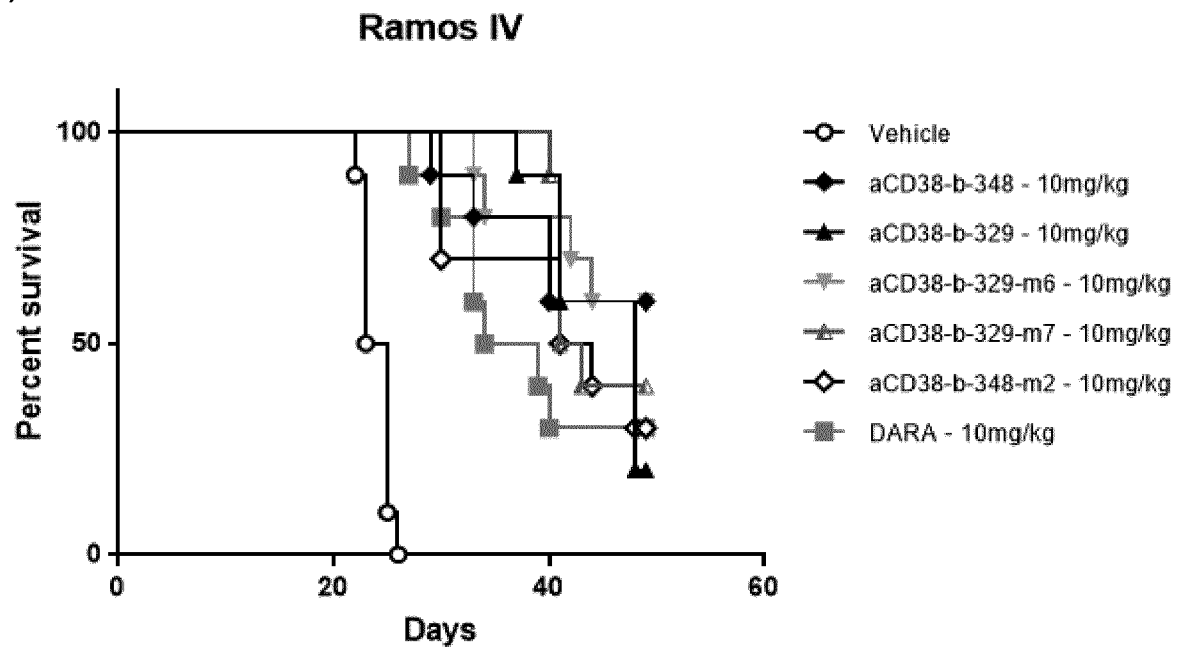


FIGURE 40

Degranulation (CD107a)

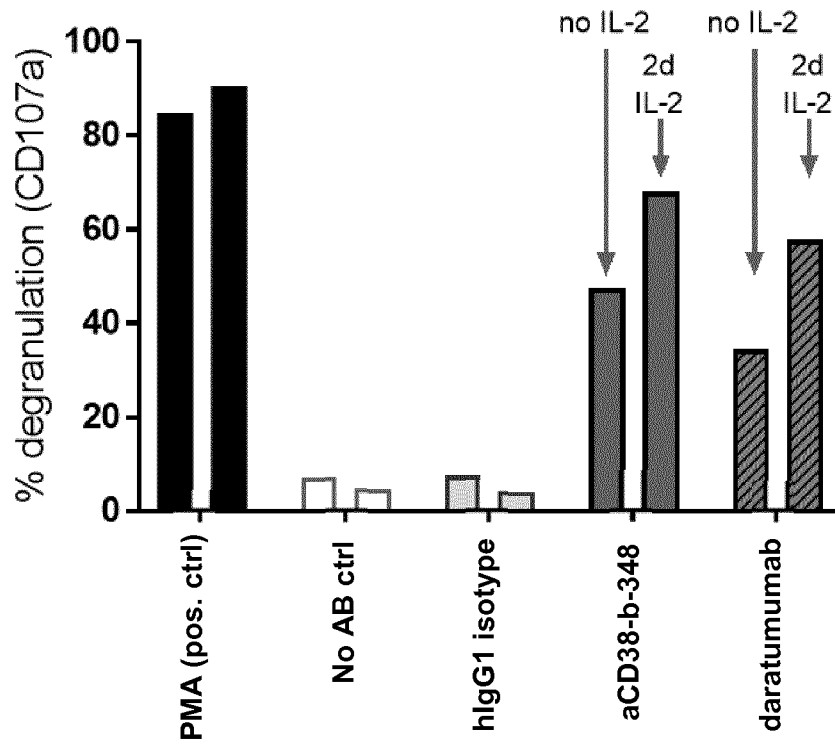
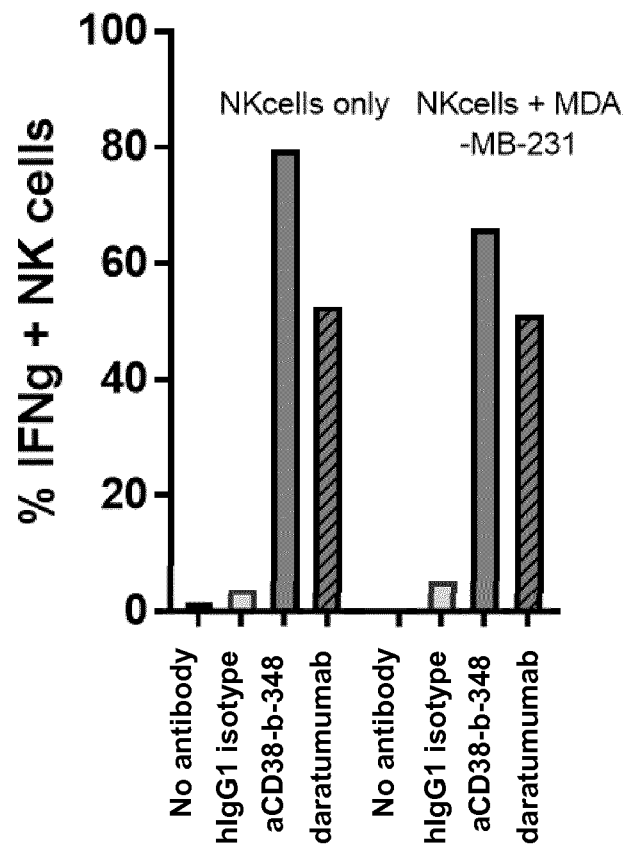
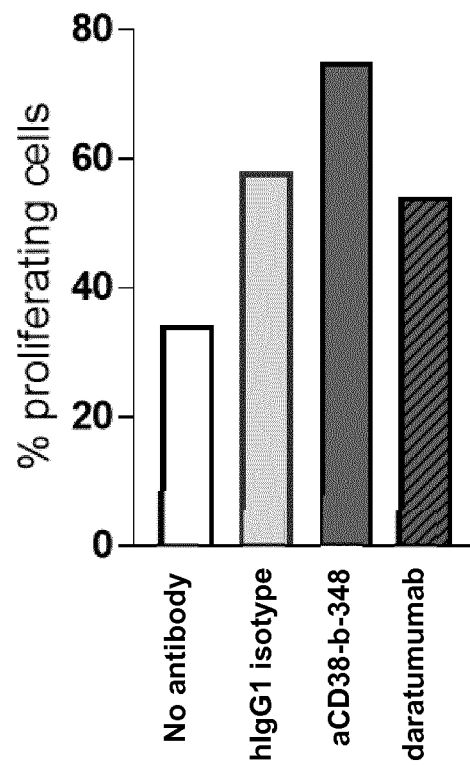
**FIGURE 41**IFN γ production (i.c. staining)

FIGURE 42

A)



B)

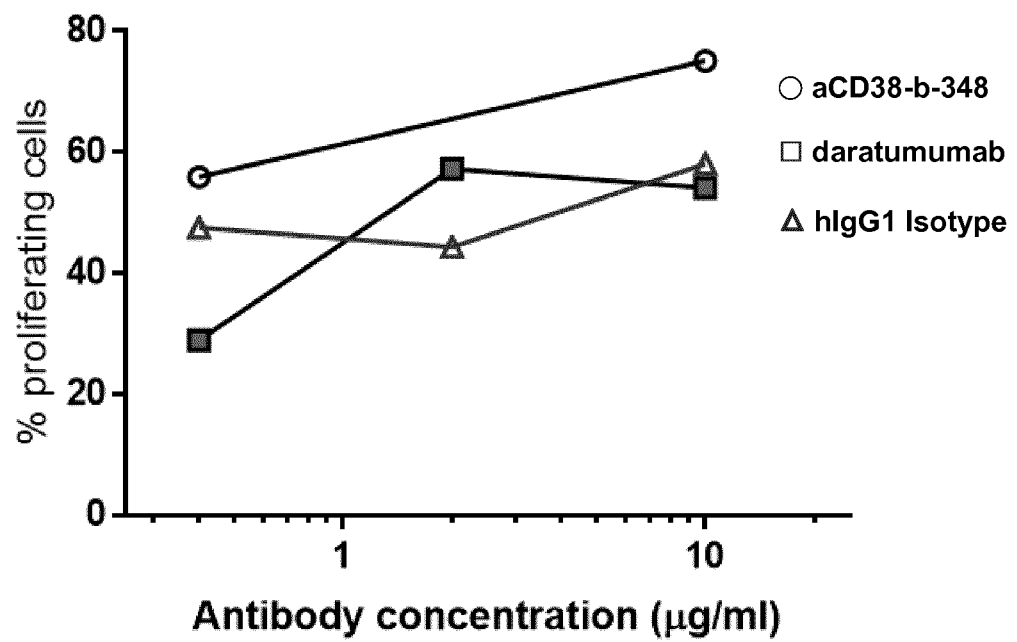
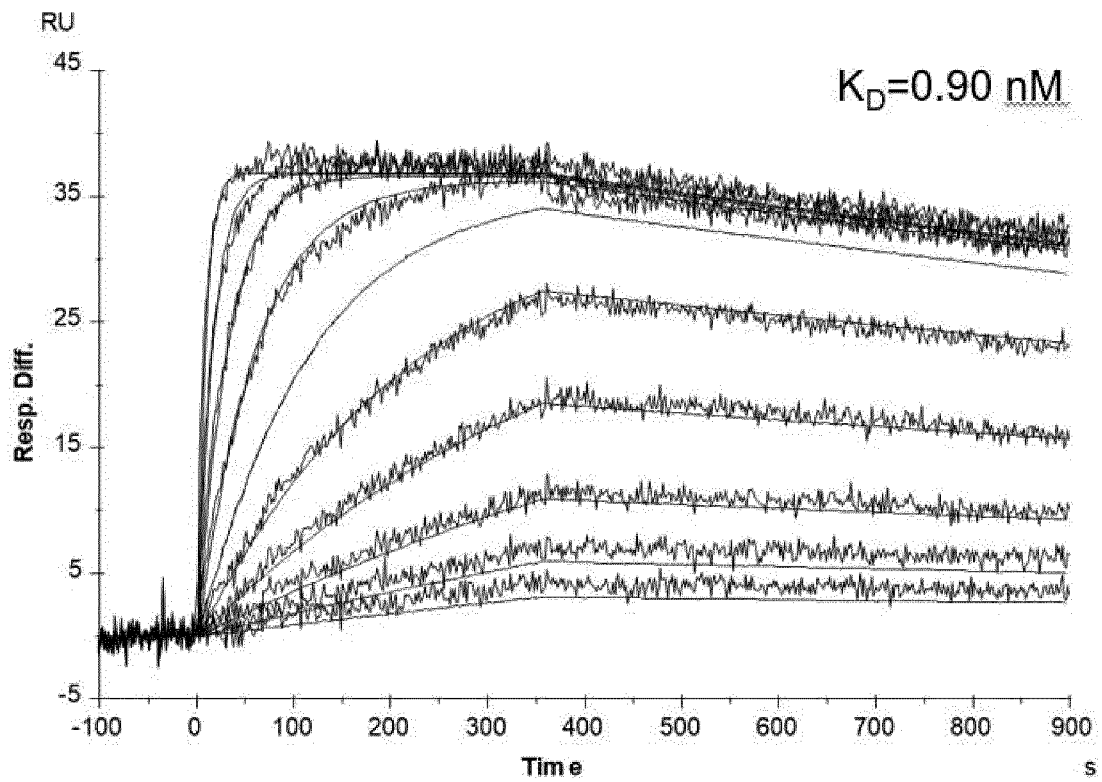


FIGURE 43

A)



B)

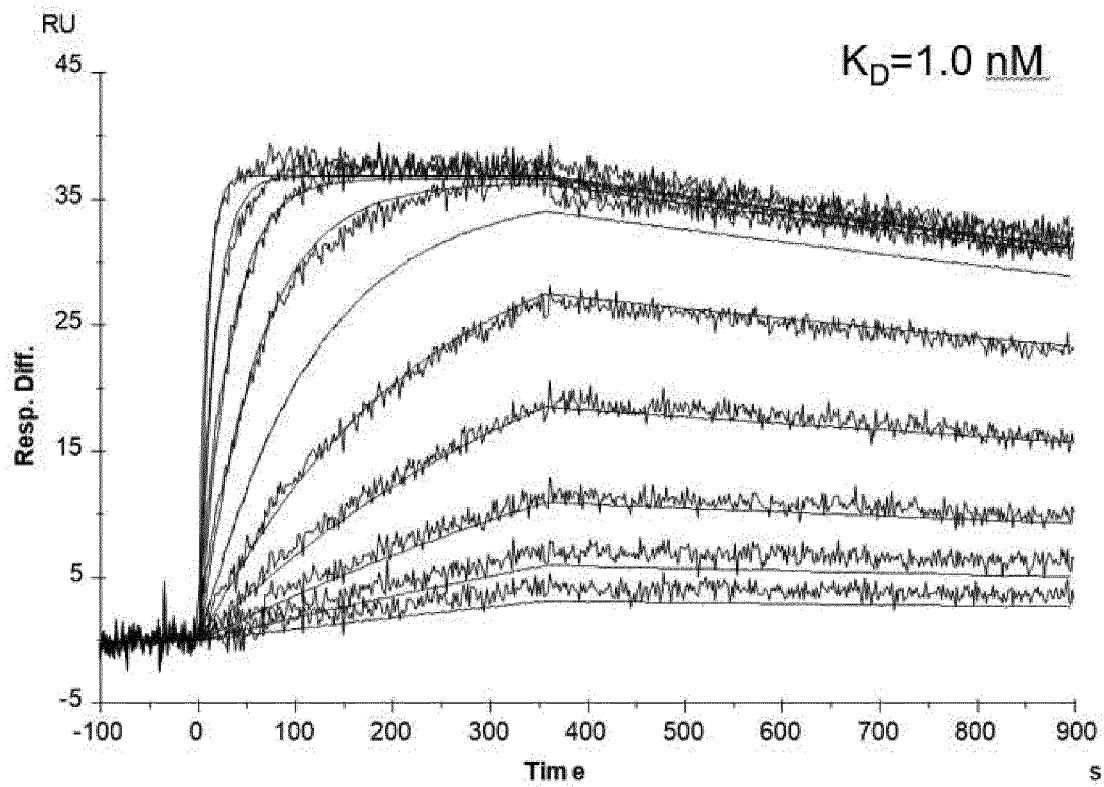
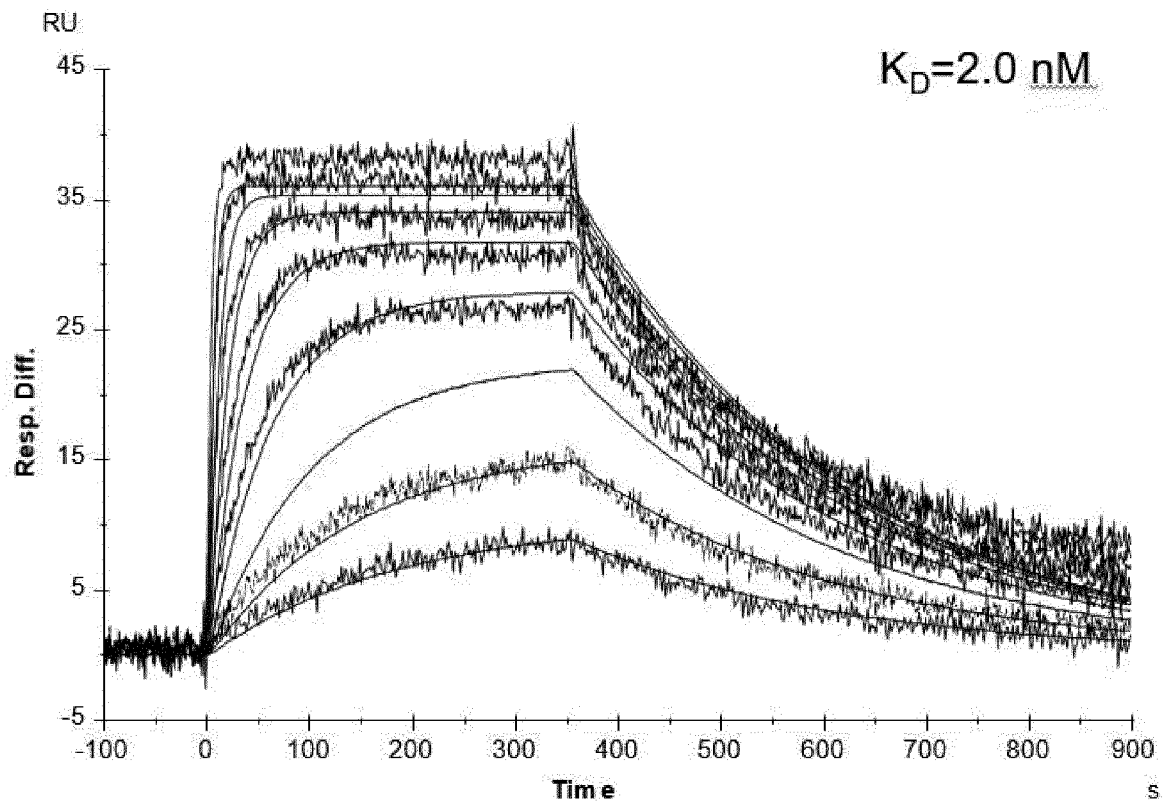


FIGURE 43 cont.

C)



D)

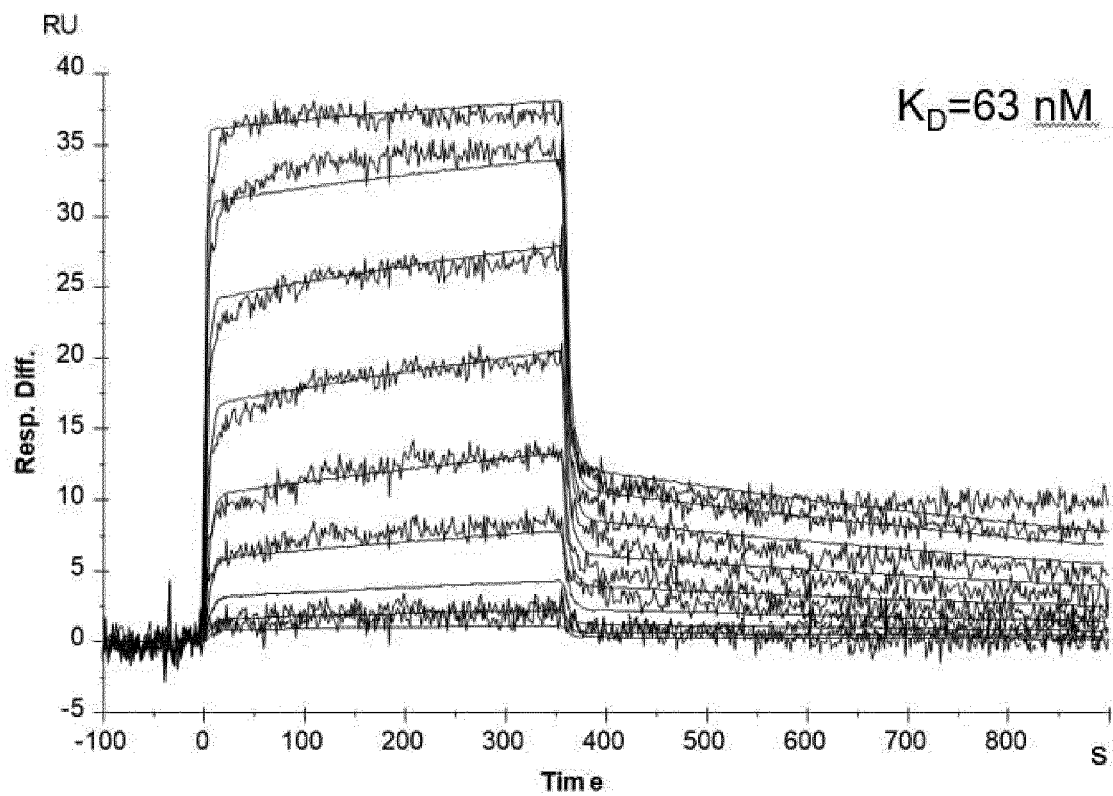
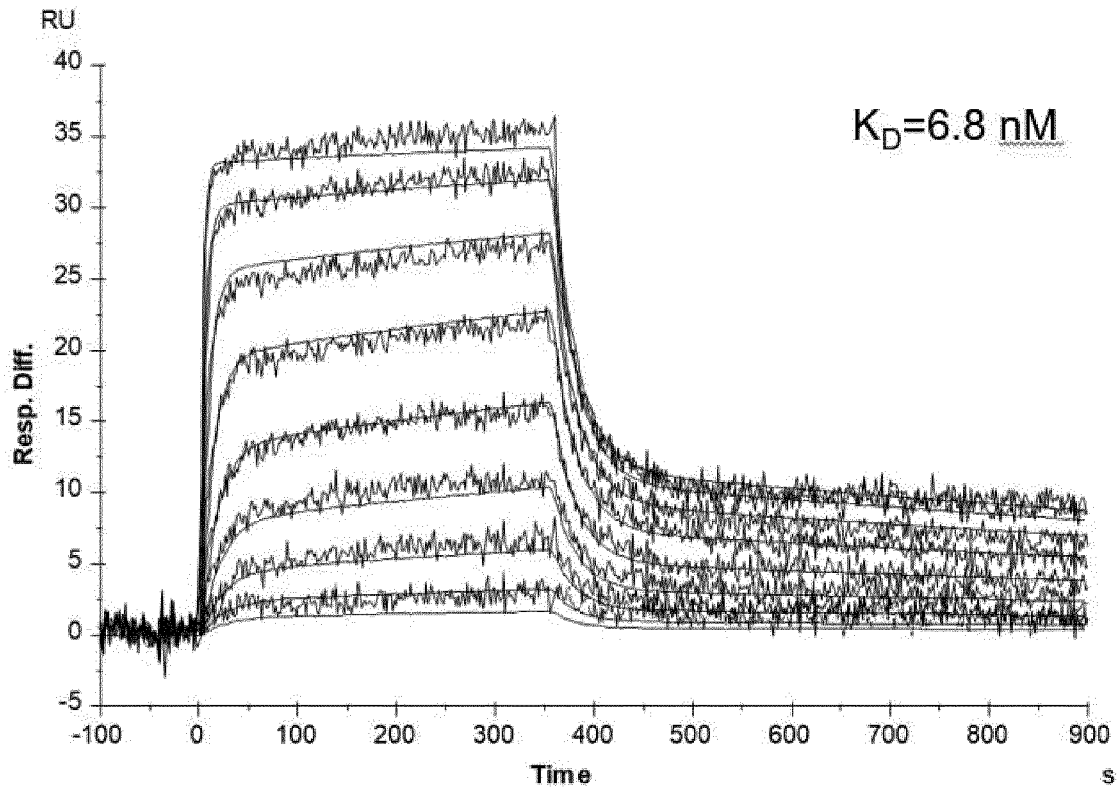


FIGURE 43 cont.

E)



F)

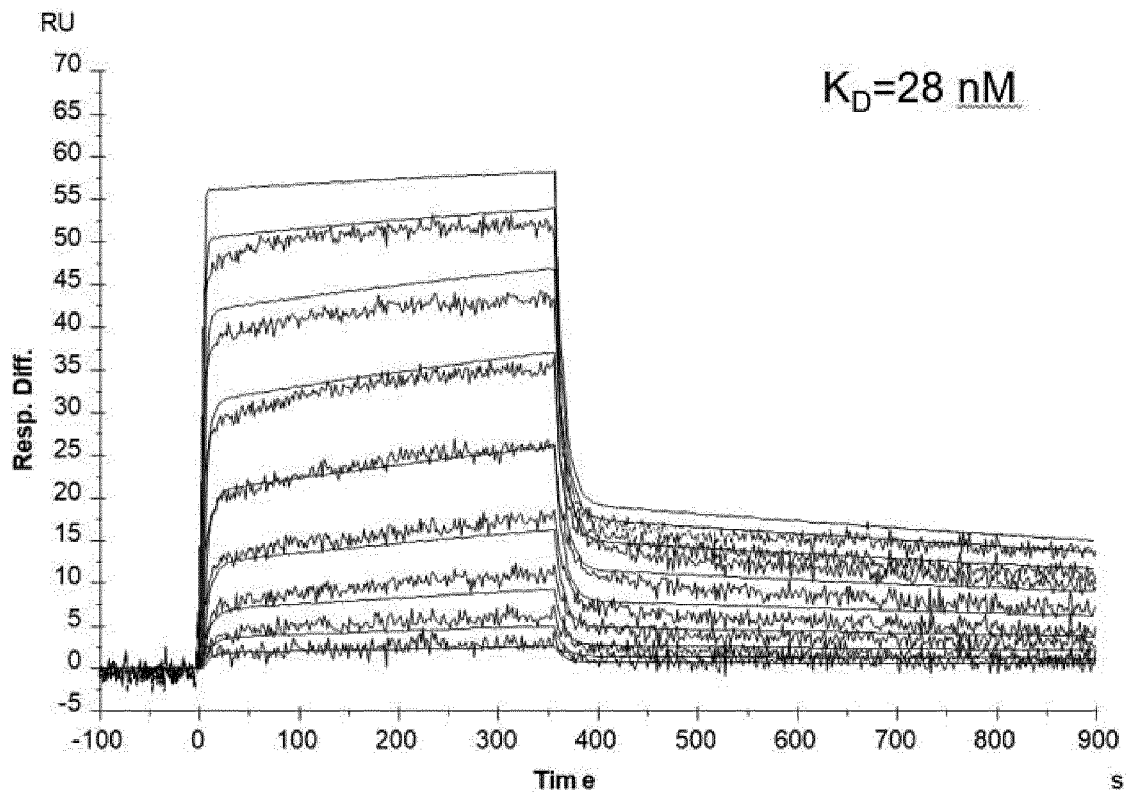
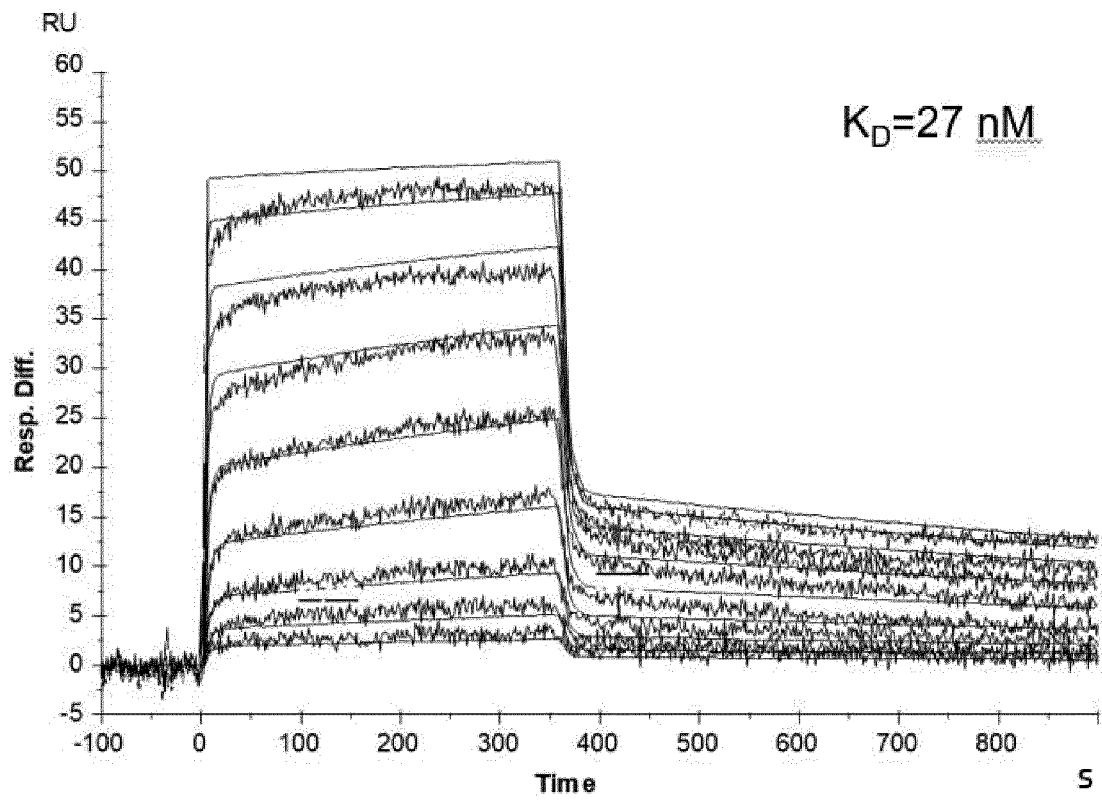


FIGURE 43 cont.

G)



H)

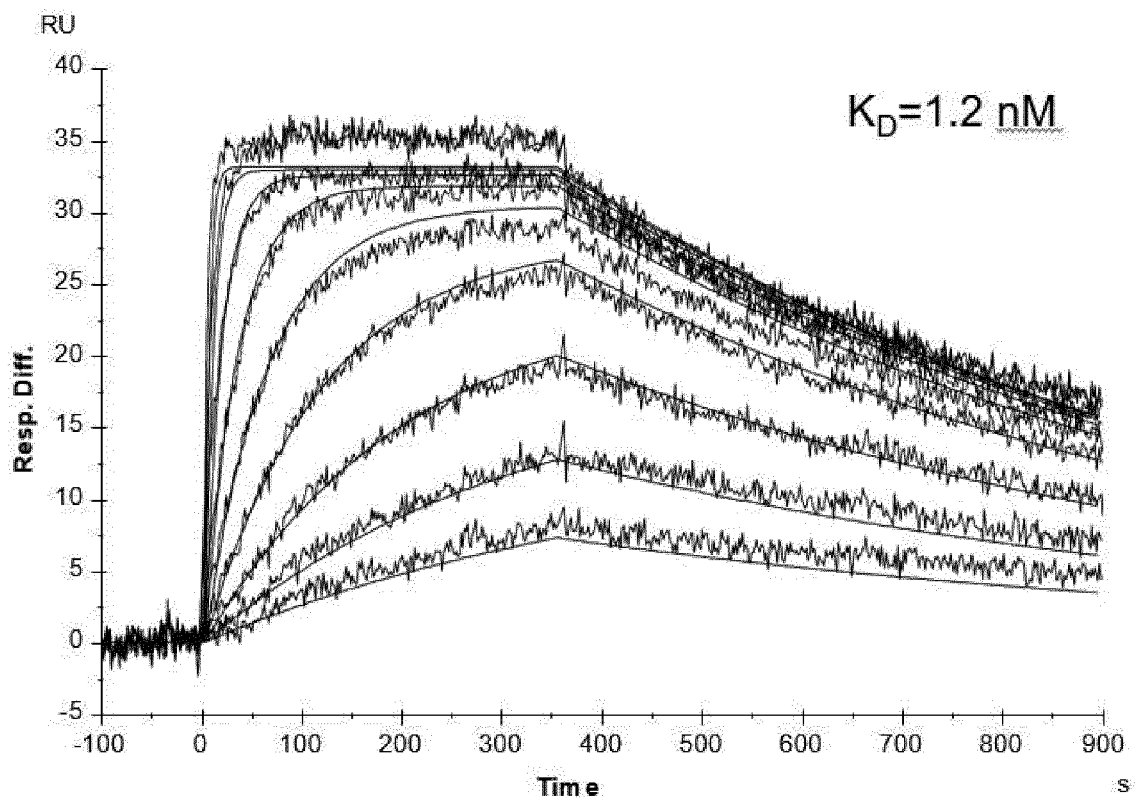
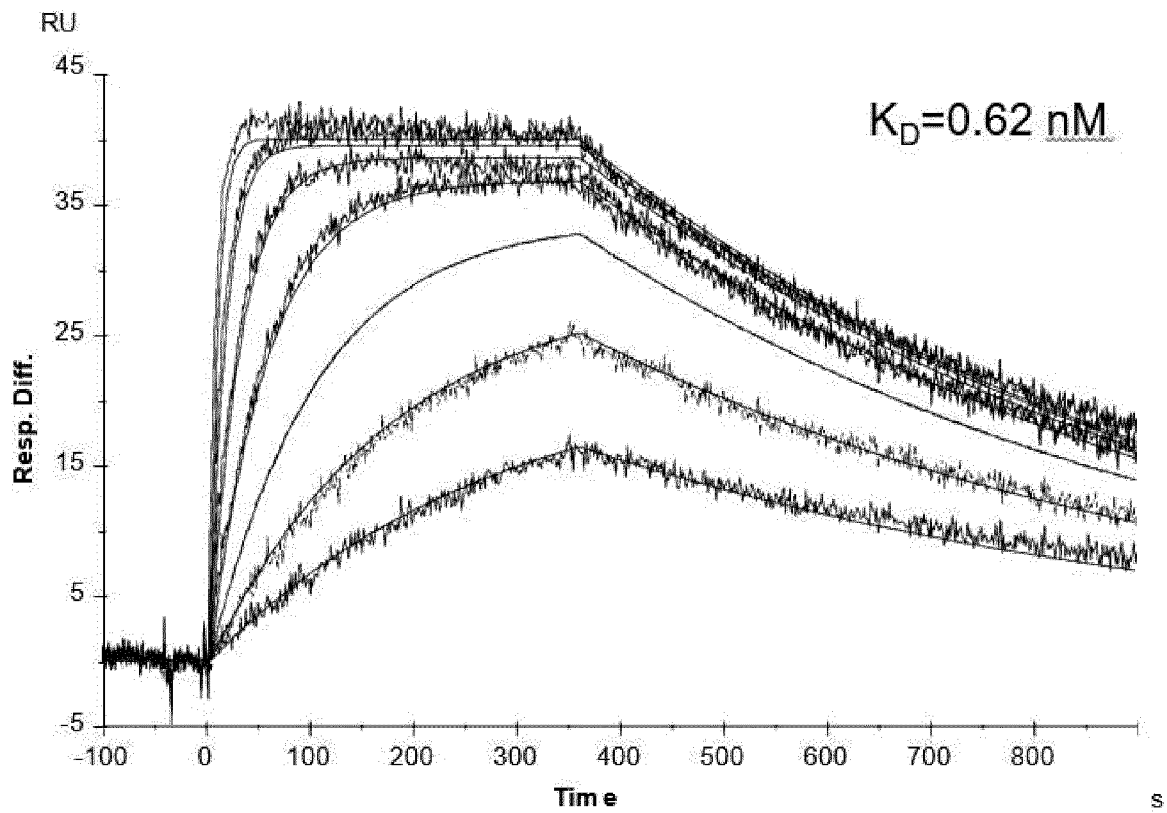


FIGURE 43 cont.

I)



J)

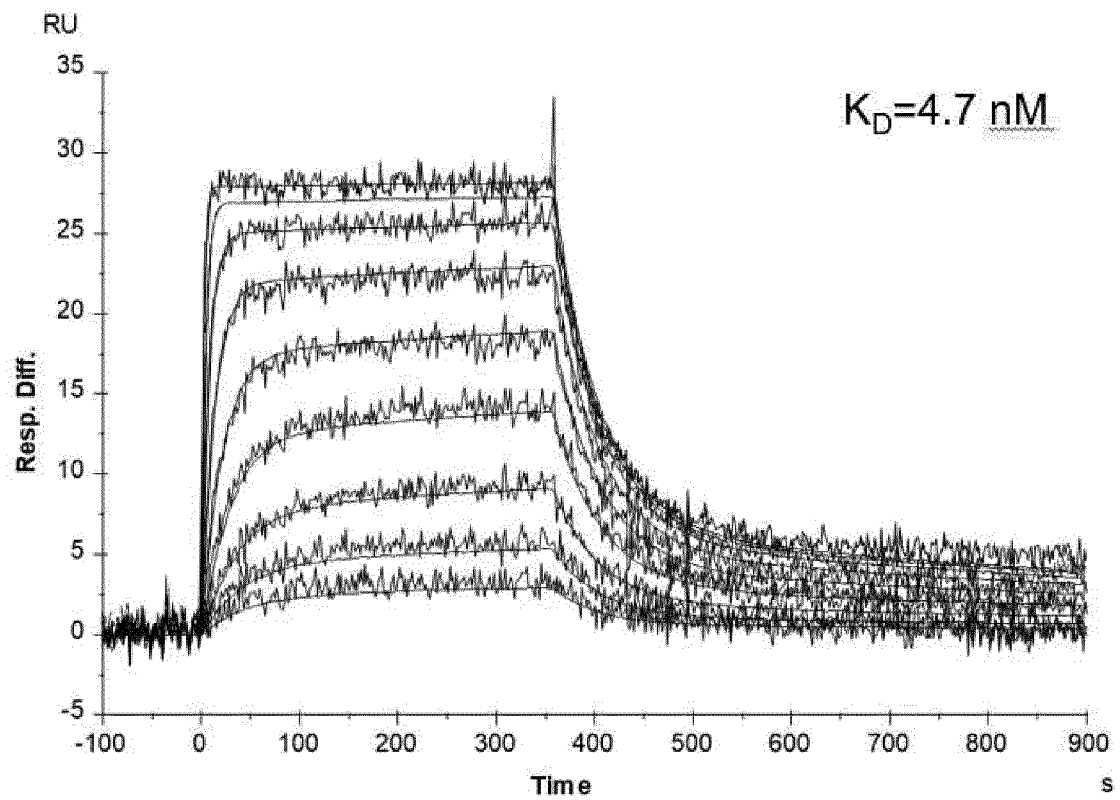


FIGURE 43 cont.

K)

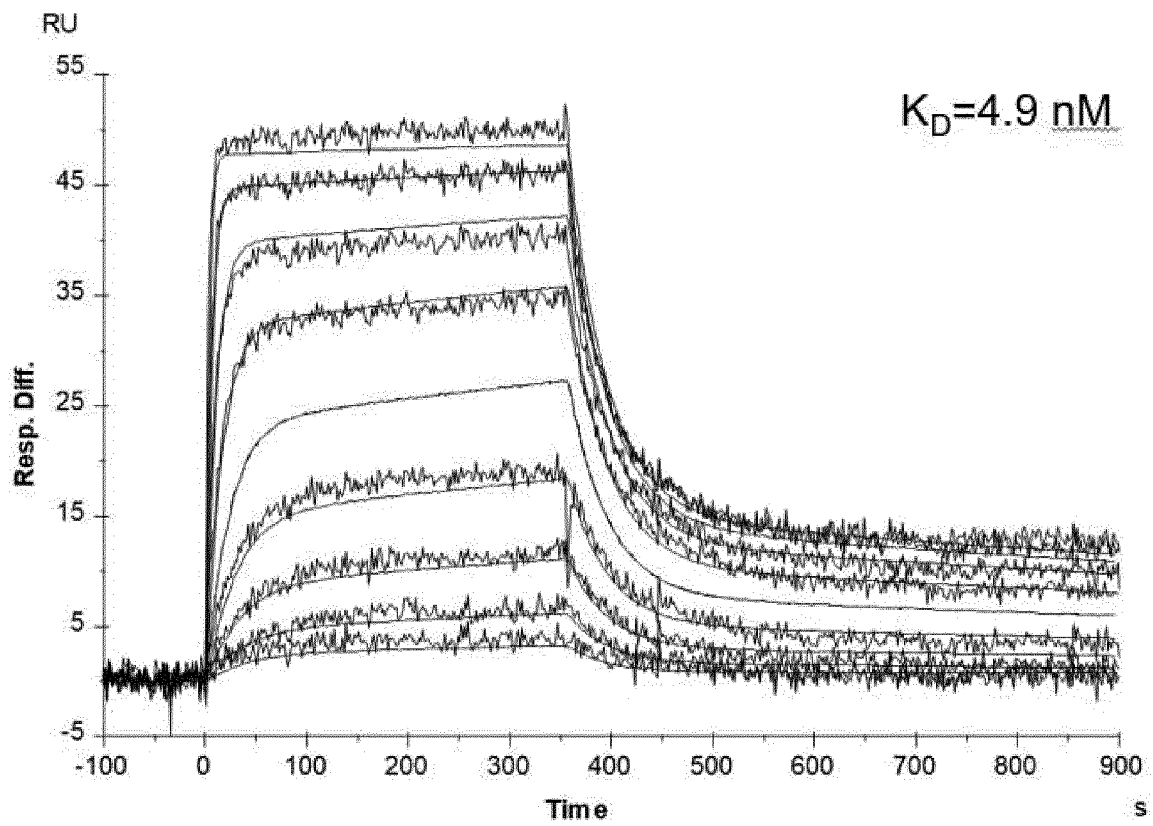


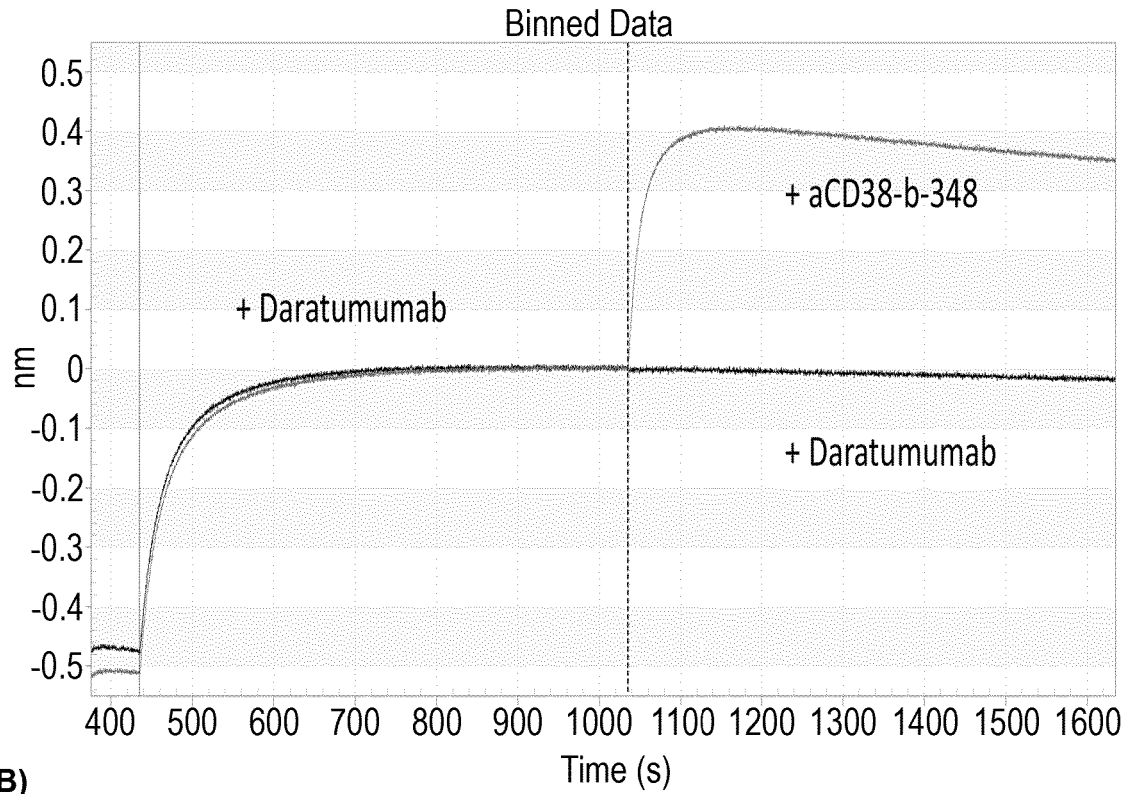
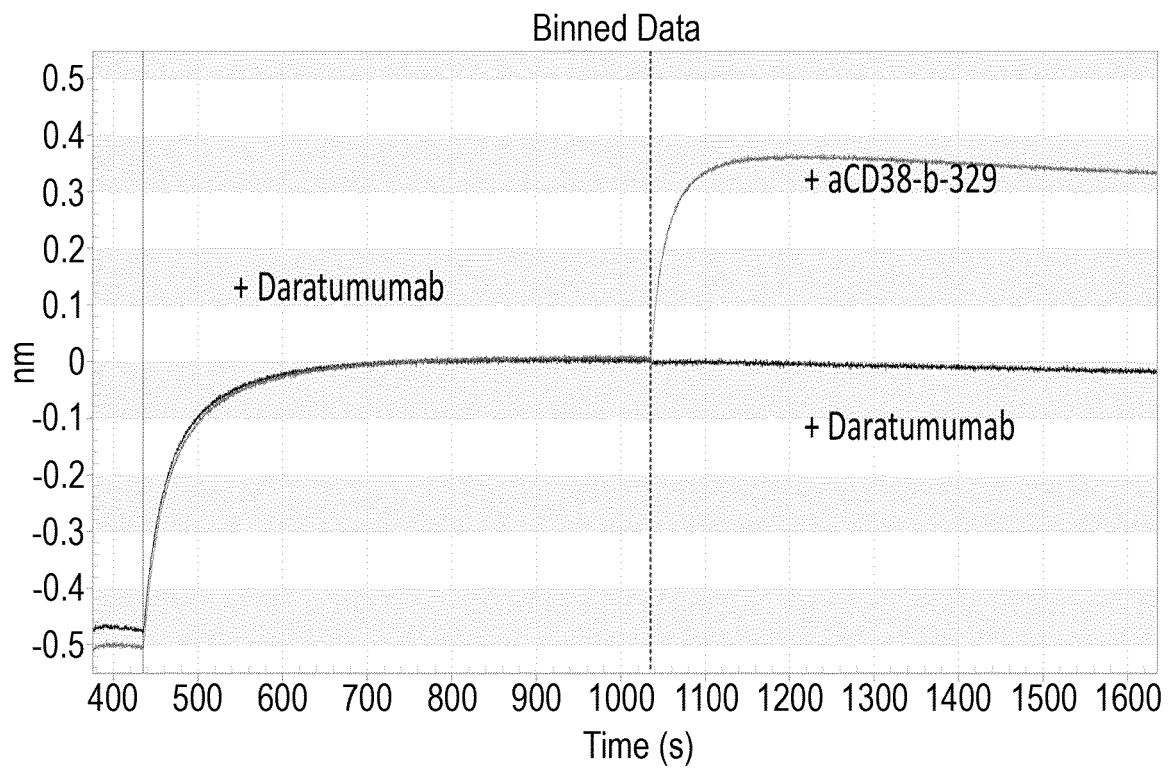
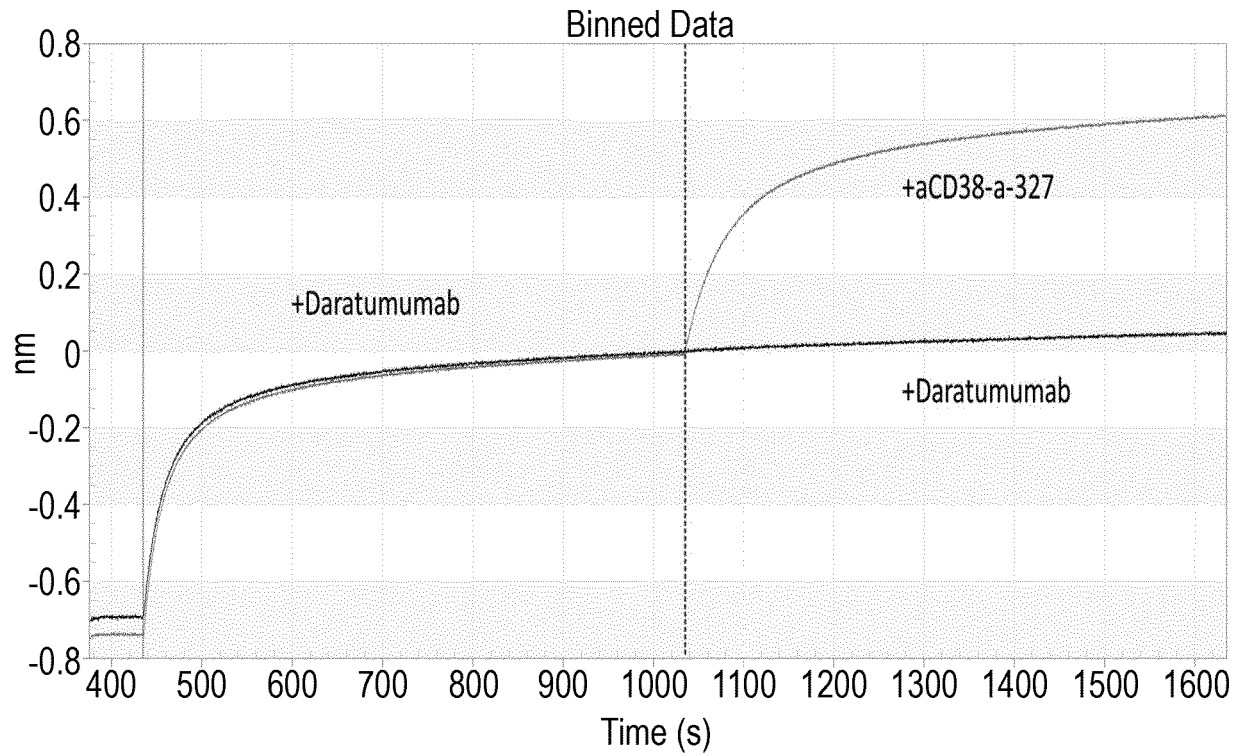
FIGURE 44**A)****B)**

FIGURE 44 cont.**C)****D)**