

FIGURE 1A

```

1  NEPAGAPAGELGPLLCILLAAASCANSGVAGEEELQVQPKSVLVAAGETATLCTATSL      60
1  NEPAGAPAGRLGPLLCILLAAASCANSGVAGEEELQVQPKSVSVAAGESAILHCTVTSL      60
   *****
61  IPVGPIONFRGACGPRELIYNQKECHFPRAVTVSDELTKRNNMDFSIRIGNITADACTYY      120
61  IPVGPIONFRGACGAPARELIYNQKECHFPRAVTVSDELTKRNNMDFSISINITADACTYY      120
   *****
121 CVKFRKGSPPDDVEFKSCAGTEL SVRAKPSAPVVSQPAARATPQHTVSFTCESHGFSRDI      180
121 CVKFRKGSPP--TEFKSCAGTEL SVRAKPSAPVVSQPAARATPQHTVSFTCESHGFSRDI      179
   *****
181 TLKWFKNCNELSDFQTNVDPVGESVYSIHSTAKVLTREDVHSQVCEVAHVTLQCDPL      240
180 TLKWFKNCNELSDFQTNVDPVGESVYSIHSTAKVLTREDVHSQVCEVAHVTLQCDPL      239
   *****
241 RGTANLSETIRVPPTLEVTPQFVRAENQVNVTCQVRKFPORLQLTWLENCNVSTETAS      300
240 RGTANLSETIRVPPTLEVTPQFVRAENQVNVTCQVRKFPORLQLTWLENCNVSTETAS      299
   *****
301 TVTENKDGTYNMSWLLVNVSAHRDDVKLTQVEHDCQPAVSKSHDLKVSANHPKEQCSNT      360
300 TVTENKDGTYNMSWLLVNVSAHRDDVKLTQVEHDCQPAVSKSHDLKVSANHPKEQCSNT      359
   *****
361 AAENTGSNERNIYIVGWVCTLLVALLMAALYLVIRQKKAQCSSTSLHEPEKNAREI      420
360 AAENTGSNERNIYIVGWVCTLLVALLMAALYLVIRQKKAQCSSTSLHEPEKNAREI      419
   *****
421 TODTNDITYADINLPKCKKPAQAAEPNNHTEYASIQTSQPASEDTLYADIDMVHLNR      480
420 TODTNDITYADINLPKCKKPAQAAEPNNHTEYASIQTSQPASEDTLYADIDMVHLNR      479
   *****
481 TPKQAPAKPEPSFSEYASVQVPRK      504
480 TPKQAPAKPEPSFSEYASVQVPRK      503
   *****

```

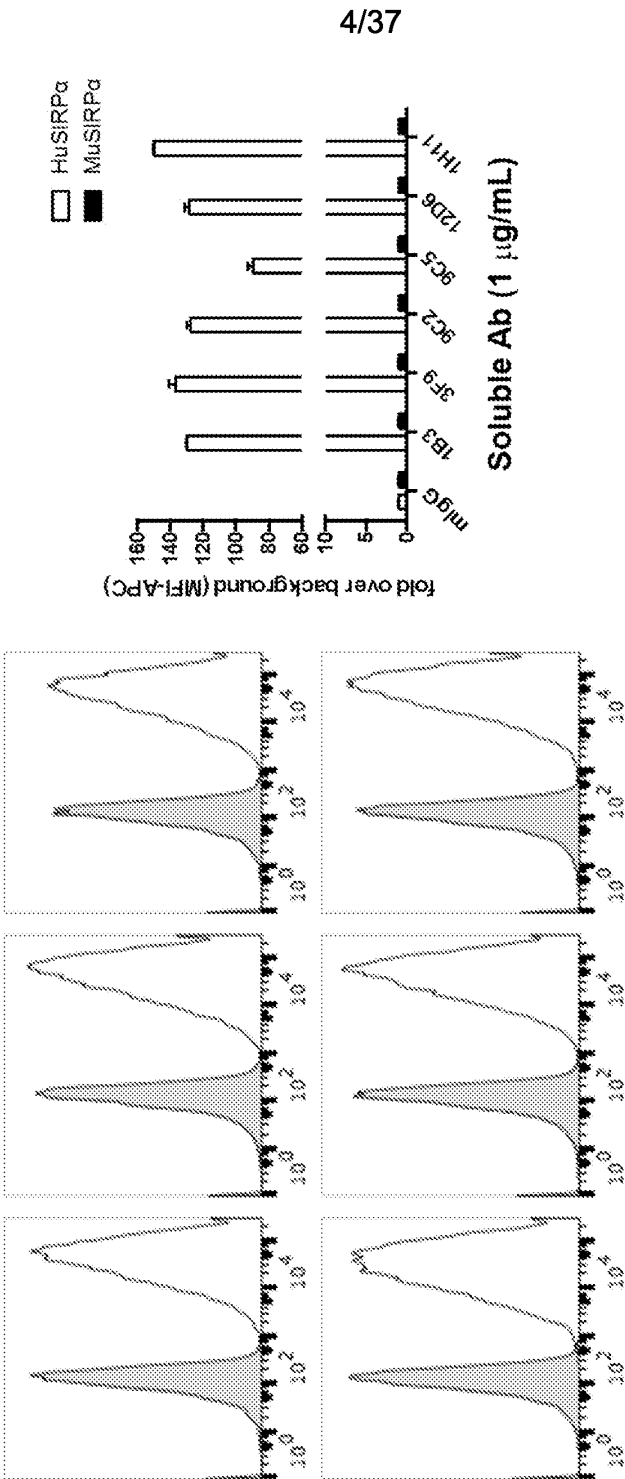


```

1 METAGPAPGRLGLPL-LCILLAAACANSGVAGEELQVIQOPKSVLVAACETATLRCTATS      59
1 METAGPAPGRLGLPLLCLLSASCFTCATG-KELNVTQPEKSVSVAACDSTVLNCILTS      59
***** ***** ;*.1* :** * **;*** ****;.1.*,** **
60 LIPVGPIOWTRGACPRELIYNQKECHFPRTYVYSDLTERNNMDESIEIGNITPADACTY      119
60 LLPVGPIRWINGCPESRLIYSPAGEWVRIRHNSDTTKRNNMDPSIRISNVTPADAGIY      119
*;****;*.**,**.*** ,.**: *** *****;*,;***** *
1120 YCVFKRKOSP-JDVFKSCAGTSLSVRAKPSAPVSGPAARATQONTVTFCESHCSFPR      178
1120 YCVKFQKSESDTEIOSGGTVYVLAKPSPPSFCPADRCIPDKOVNFTCKSHCSFPR      179
*****;*** *.**:**.**** * **** * **** * .*.1.*.***;*****
1179 DITLKWFKNCELSDFOTNWDPVGESVSYSIHSTAKVLTREDVHSQVICEVAHVTLQCD      338
1180 NITLKWFKDGBLEHTTVNPFCKNVSINISSRVVLNSMDVNSKVICEVAHITLDRS      239
;*****;*.:** :*.:** *,.***,* **,****. **.*****;***; *
239 PLRGIANLSETTHVPPTLEVTOQVHAENOVNVTCQVREFFYPQLTLTWLENONVERKET      298
240 PLRGIANLSNFTRVSTVKVTCQSPTSMNOVNLCRAERFYEPEDQLTWLENONVENDF      299
**** ****; **** **:;***** ; *****:;.,.;***; *** *****;, *
299 ASTVTENKDOTYNMWSLLVNWSAHRDDVKLTQVEHDGQPAVSKSHDLKVSAMHKQGS      358
300 FNLTRNTDGTNYTSLFLVNSSAHRDVDFTQVKHGQQPATRNHTVLOFAHSSDQGS      359
*.:;*,.*****; * :*** *****;* ;*****;** **;.1.*; * **;****
359 NT-AAGENTCSERNRIYIVGVVVCTLLIVALLMAALYLVRIOKKACGSTSSTRLHEPERNA      417
360 MOTTPONNATRNHNVFICGVACALLVLLMALVLLIRIOKKAKGSTSSTRLHEPERNA      419
;*.1.: *:* ****,.*****;***;*****;*****
418 REITO-----DTNDITYADLNLPCKKKPAPQAAREPNNHTEYASIQSPASEDTLYAD      472
420 REITOIQDNTDNIDITYADLNLEKKKPAPRAPRPNNNHTEYASIEFGKVRPEDILTAYAD      479
***** * ***** *****;* *****;*. * *****
473 LDWVHLNRTPKOPAKPEPSFSFVSASVOVPRK                                  504
480 LDWVHLSEA---QPAPKPEPSFSFVSASVOVQRK                              509
*****.*; *****

```

FIGURE 3A



5/37

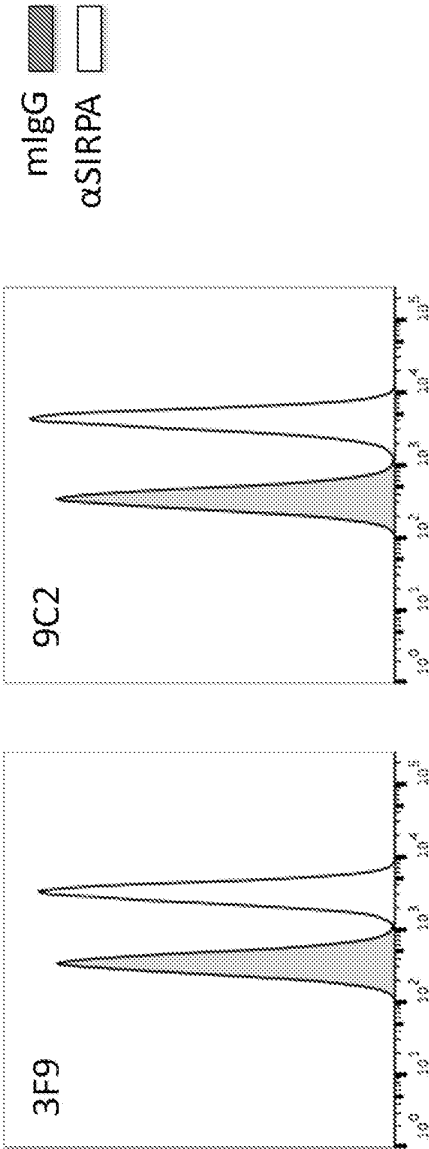


FIGURE 3B

FIGURE 3C

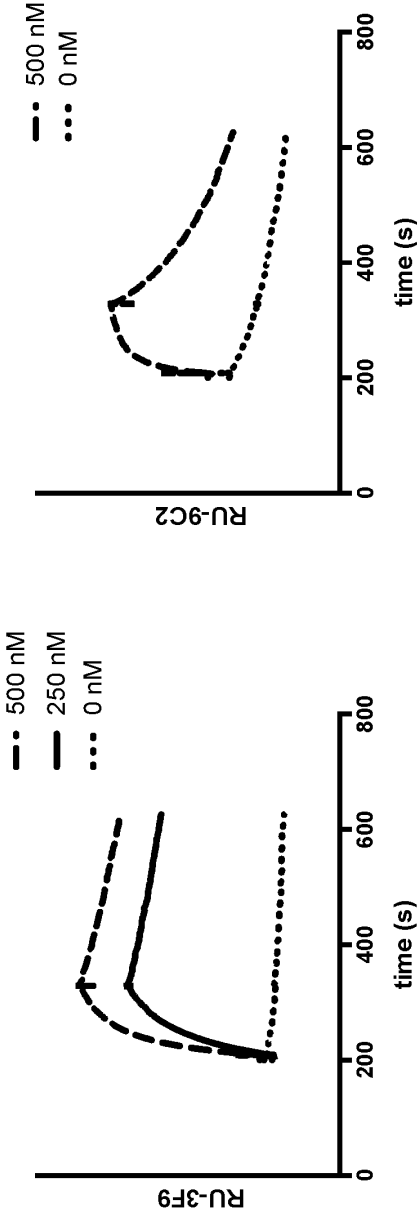


FIGURE 3D

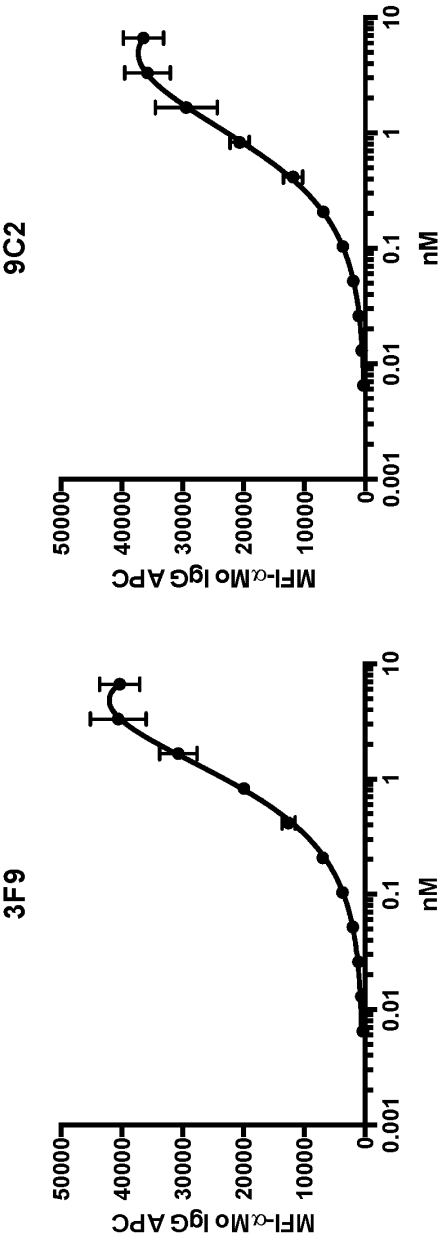


FIGURE 4A

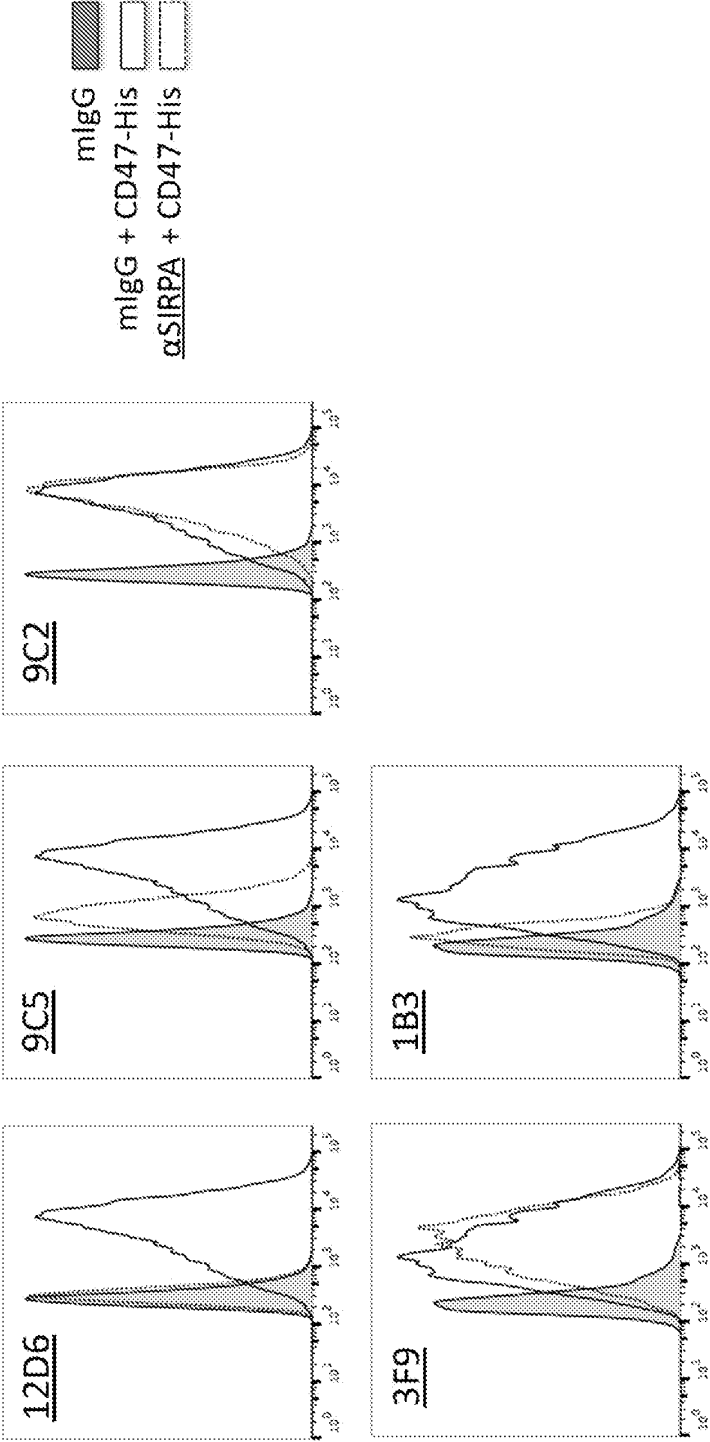
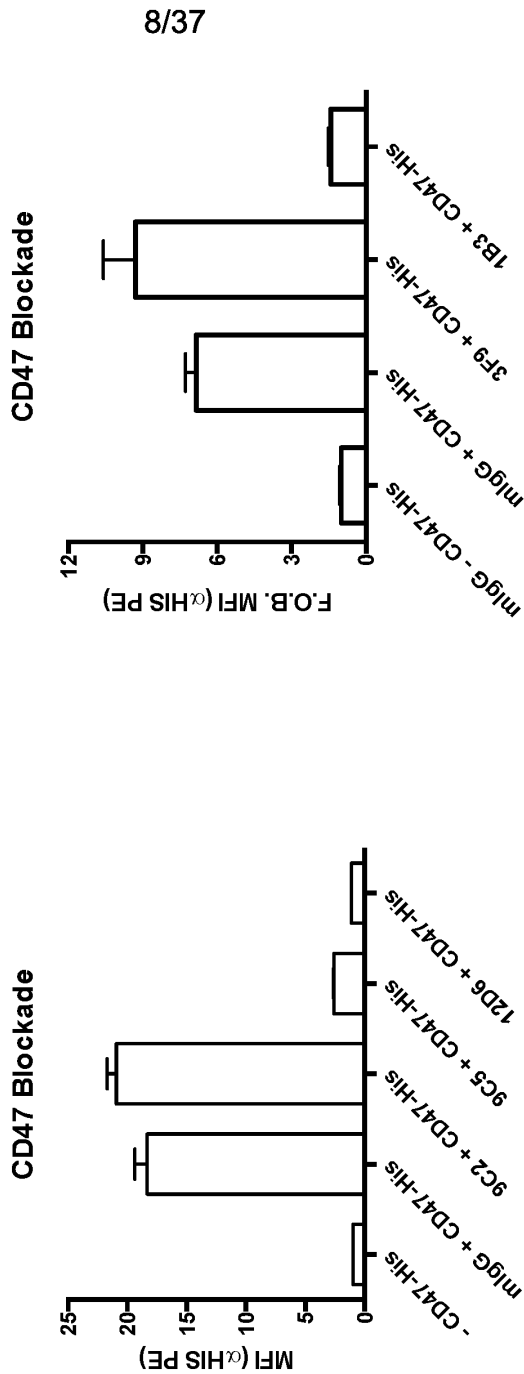
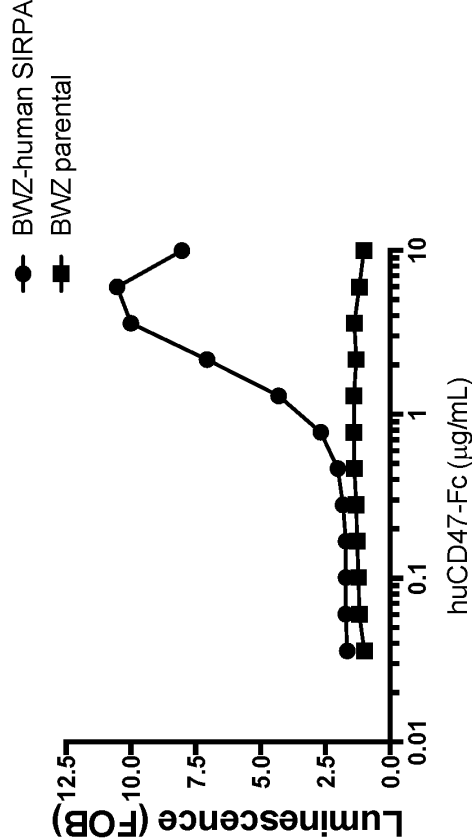


FIGURE 4B



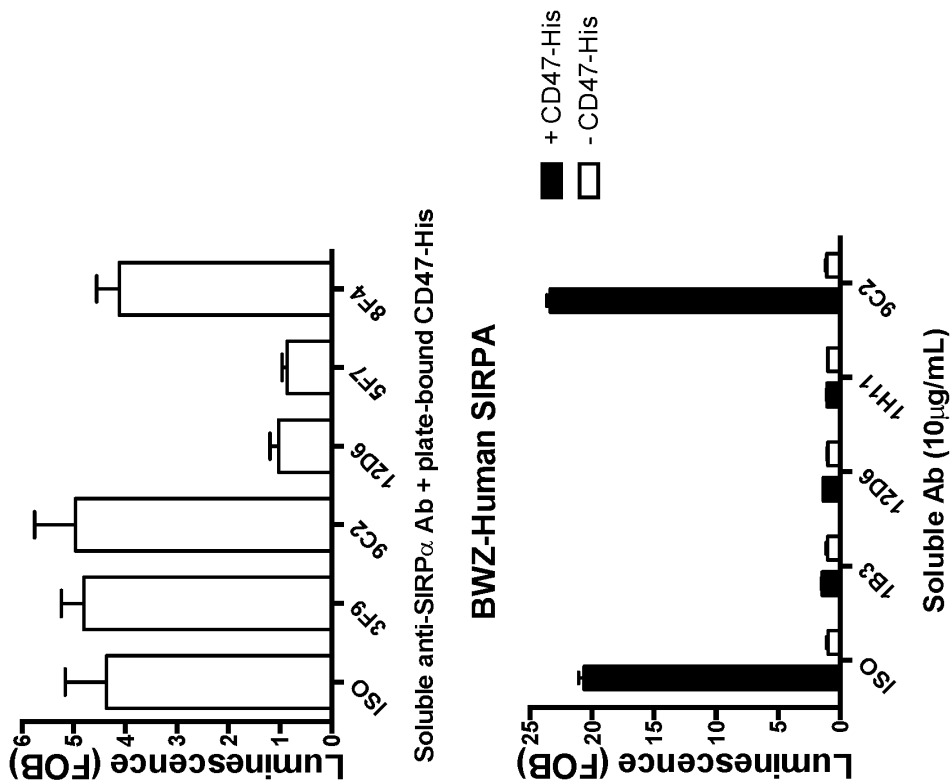
9/37

FIGURE 5A



10/37

FIGURE 5B



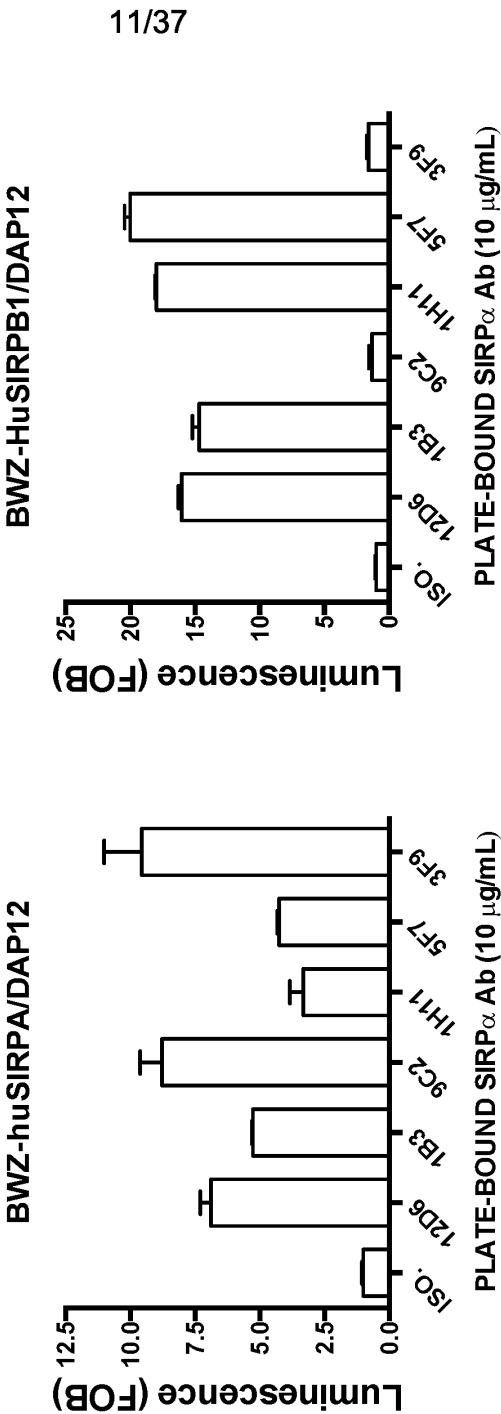


FIGURE 6A

FIGURE 6B

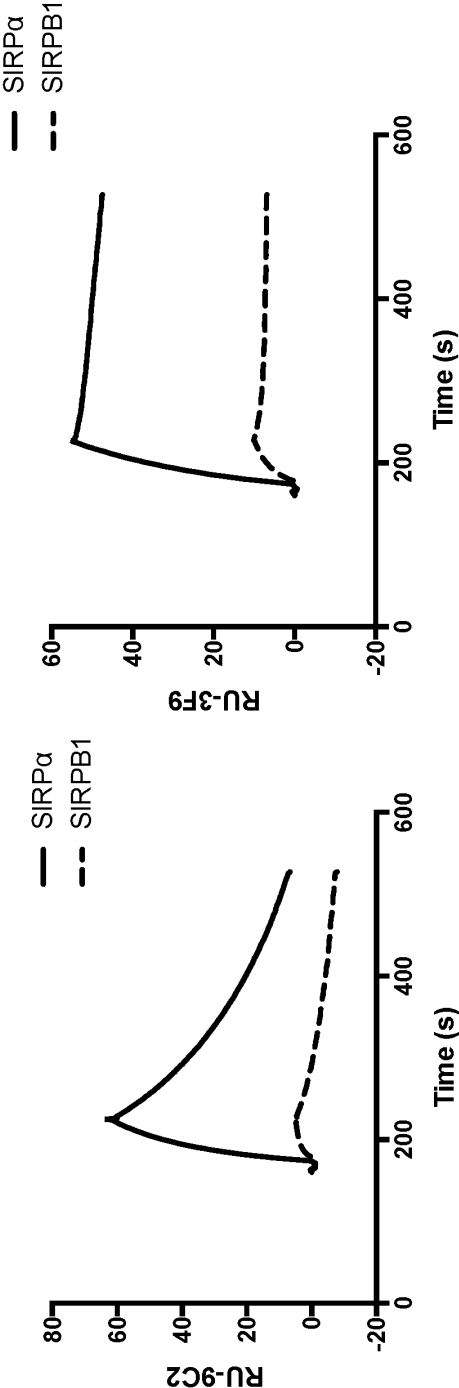


FIGURE 7A

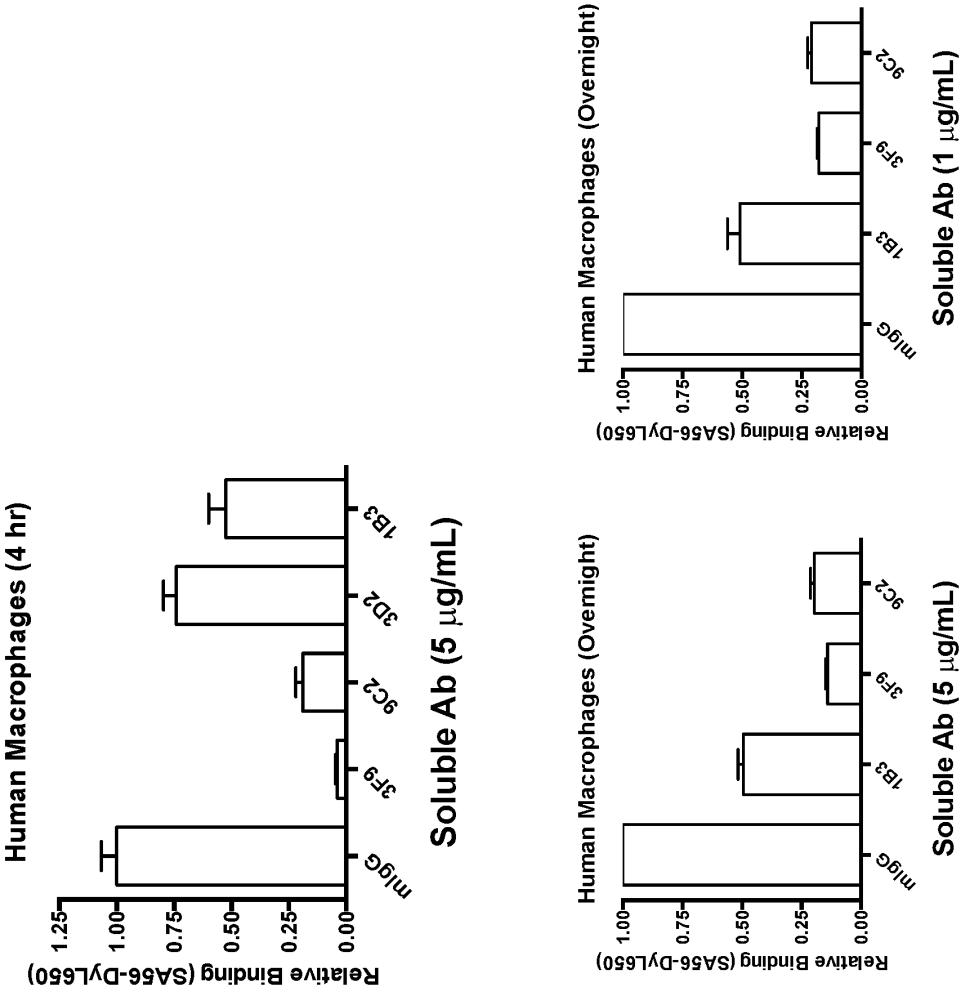


FIGURE 7B

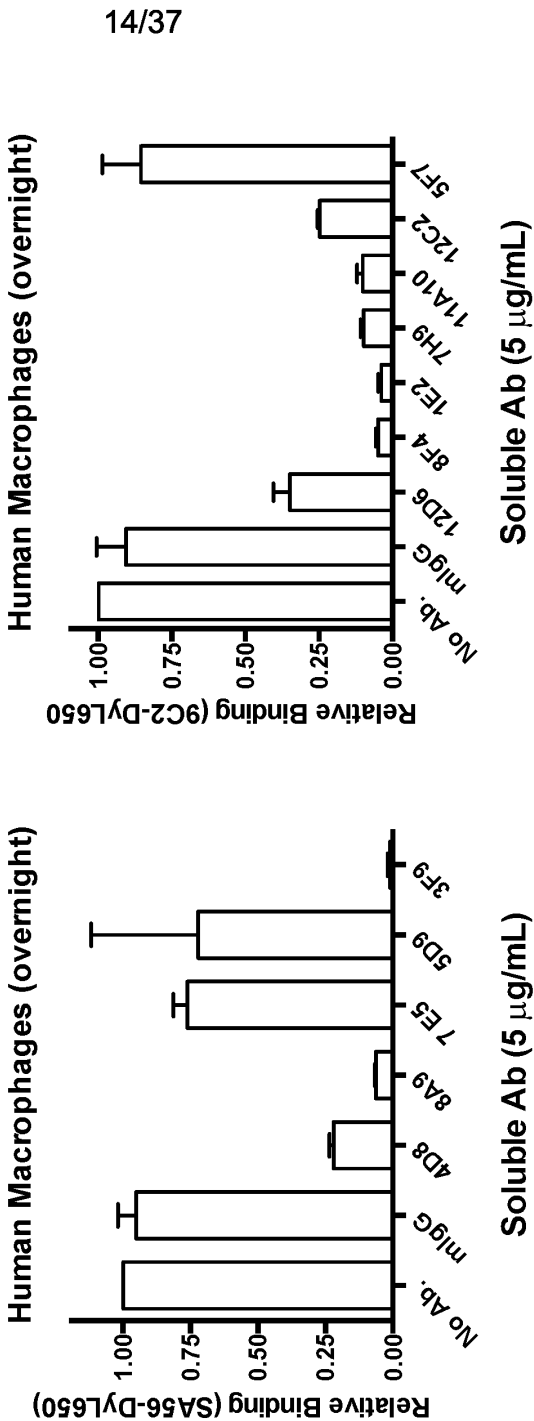


FIGURE 8A

Enhanced phagocytosis of phodo-labeled Raji cells with CD20

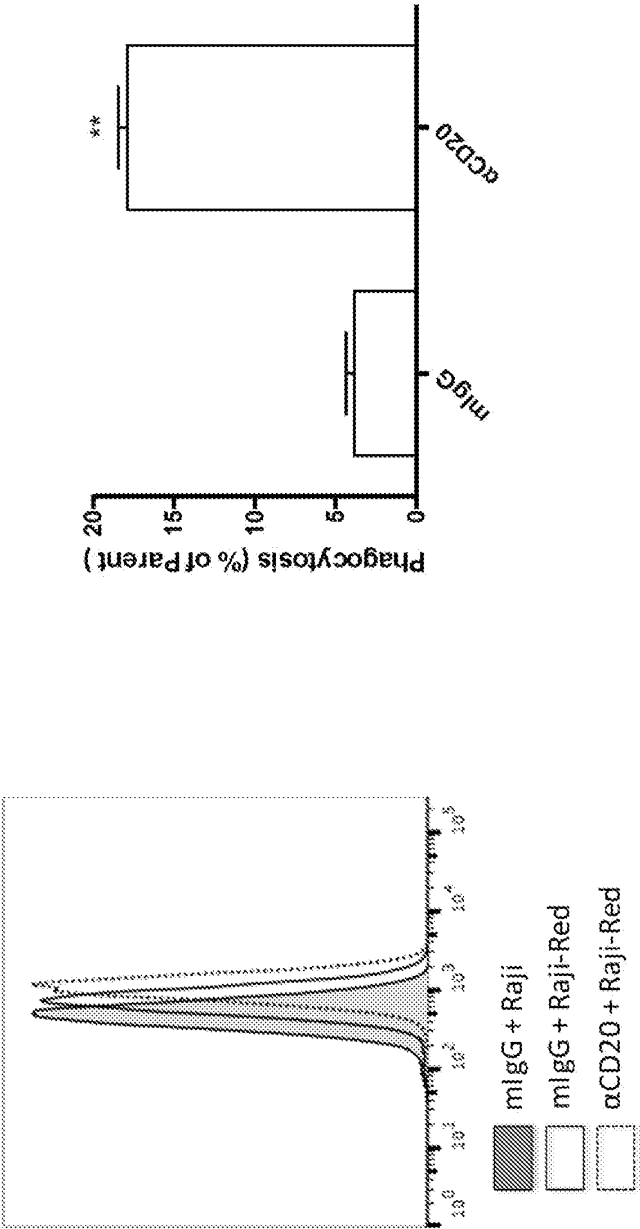
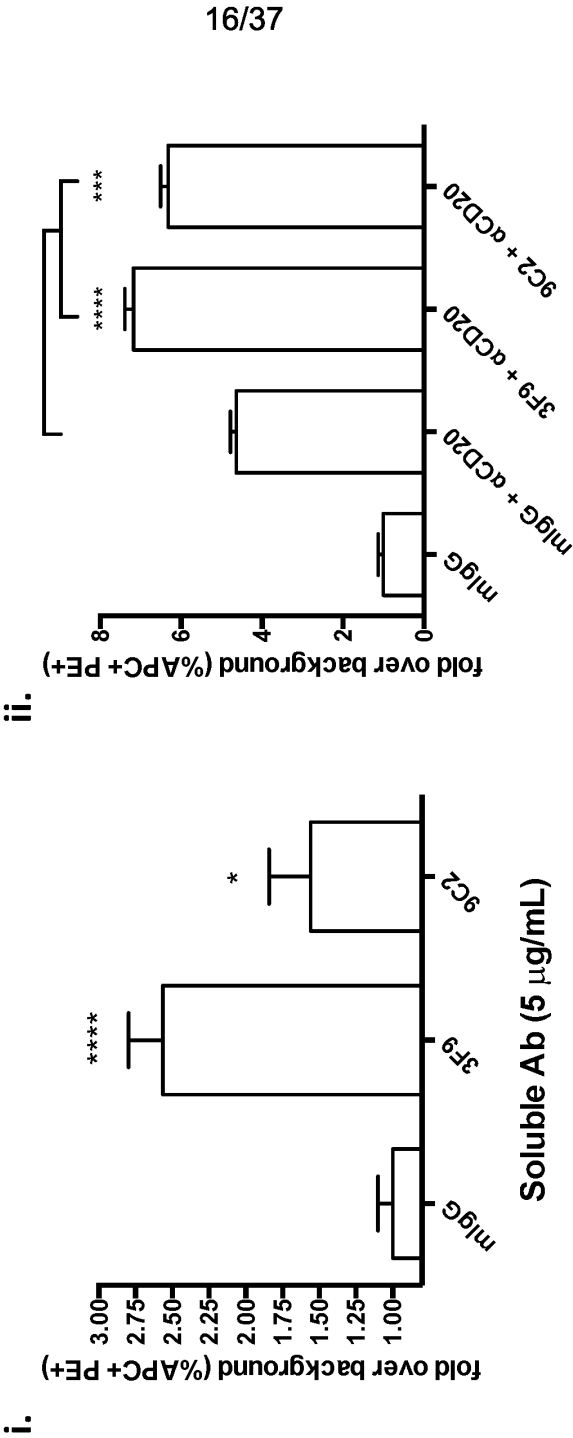


FIGURE 8B



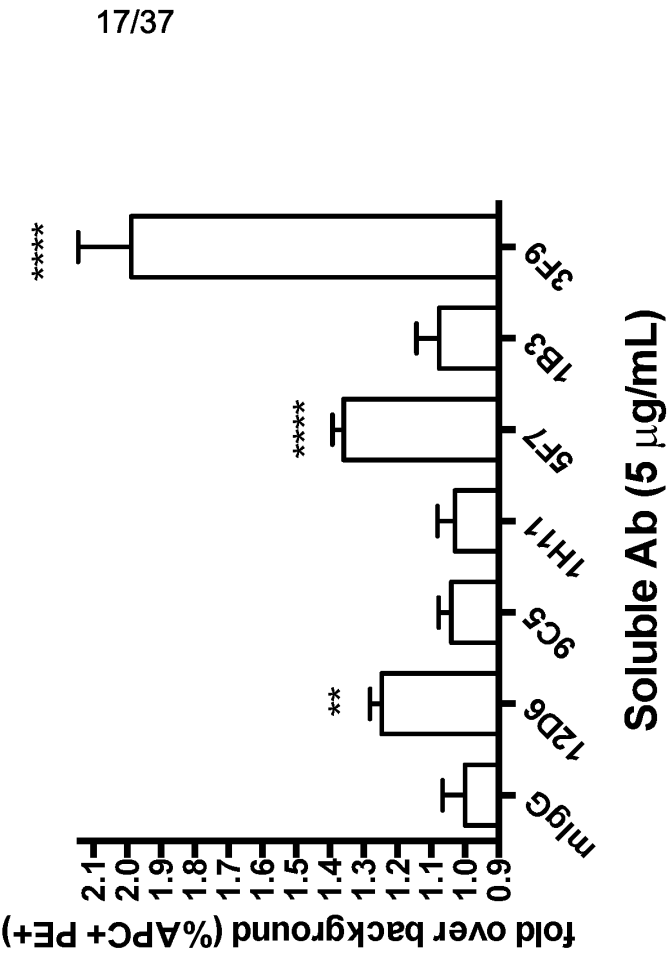


FIGURE 8C

18/37

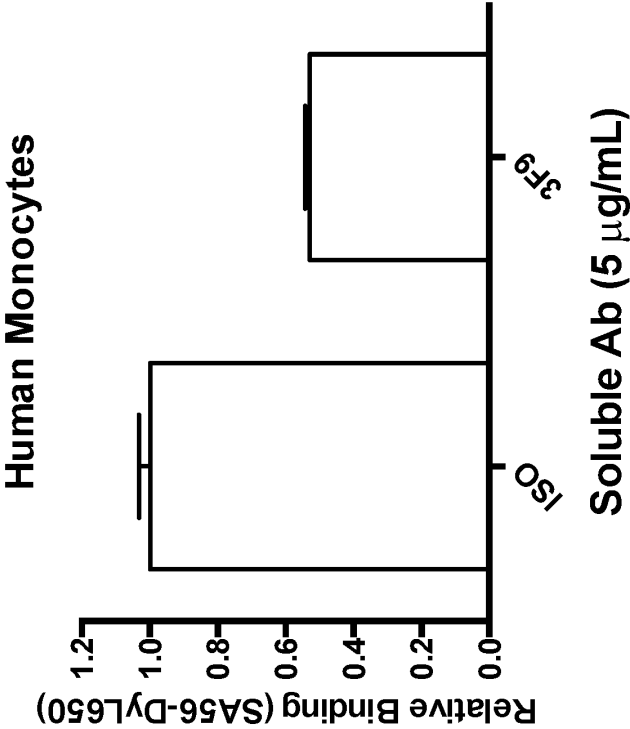
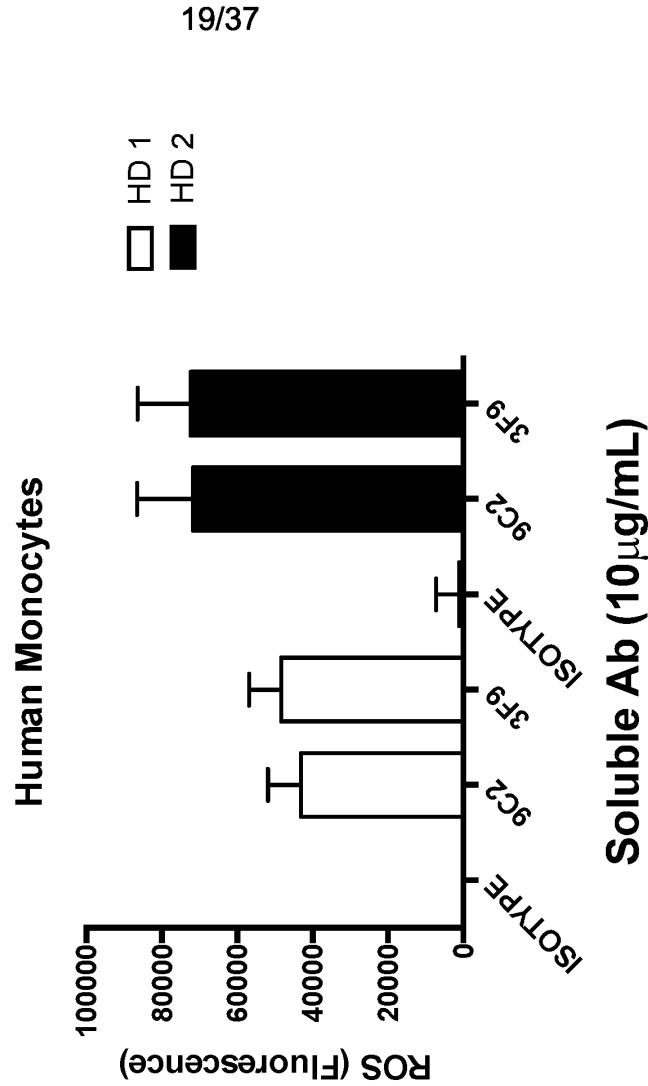


FIGURE 9A

FIGURE 9B



20/37

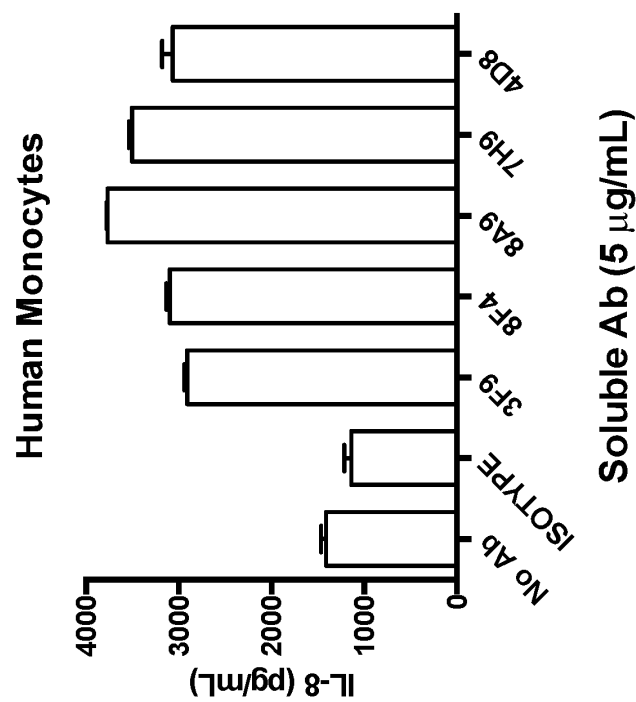


FIGURE 9C

FIGURE 10A

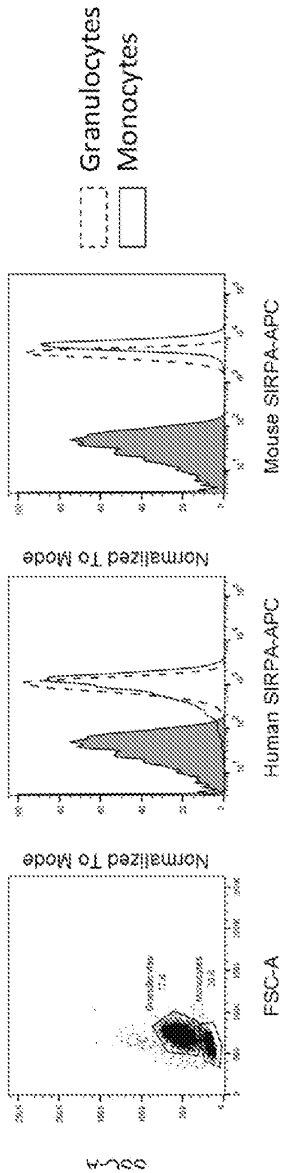


FIGURE 10B

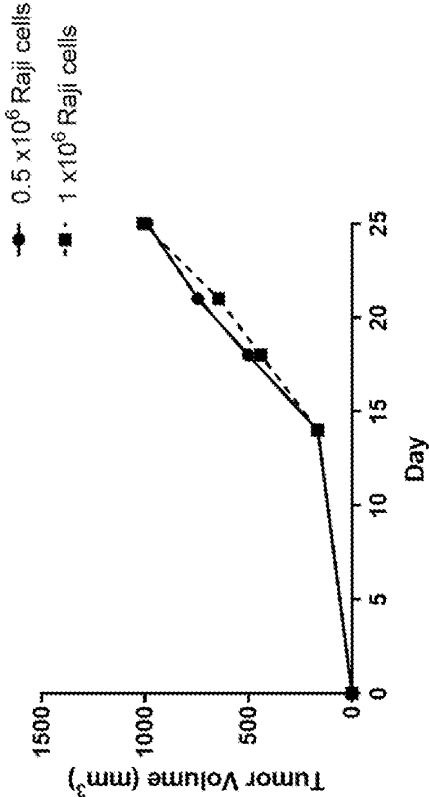


FIGURE 10C

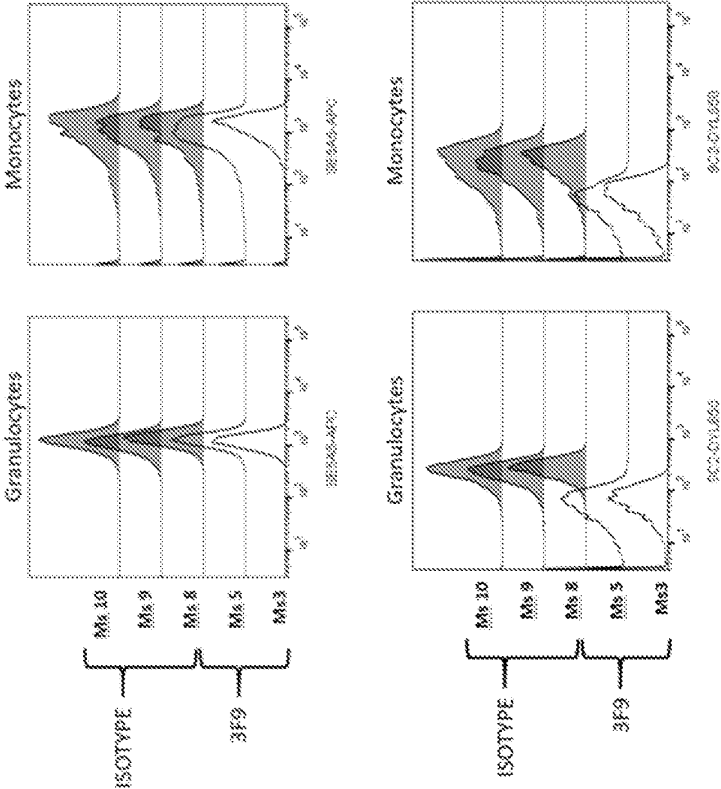


FIGURE 10D

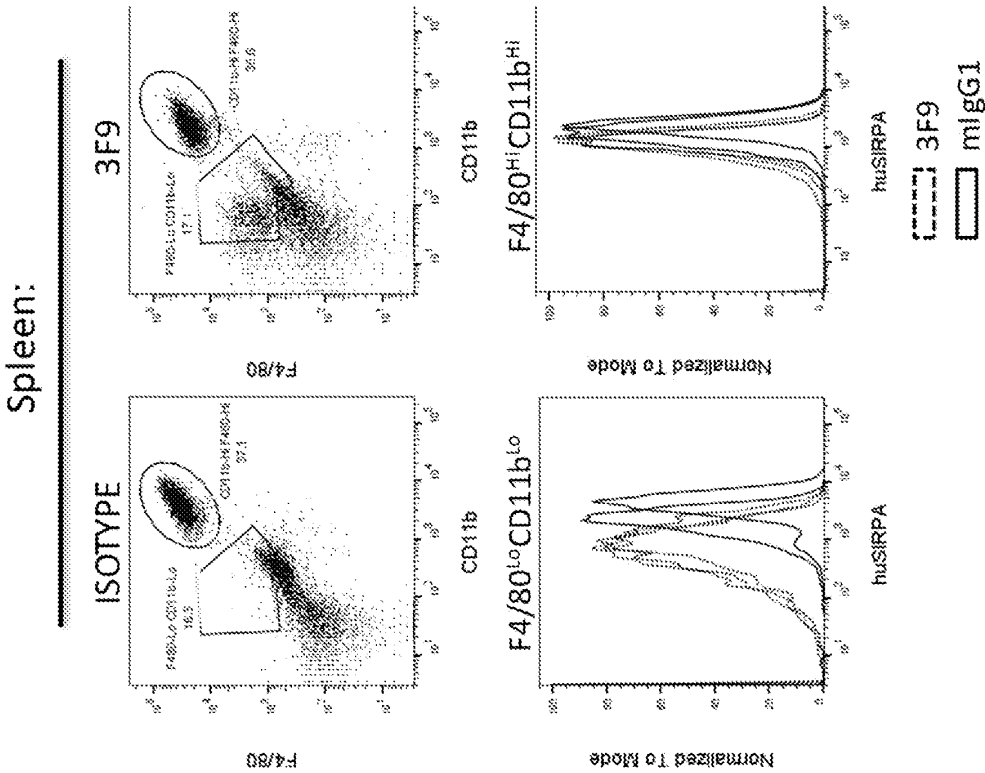


FIGURE 11A

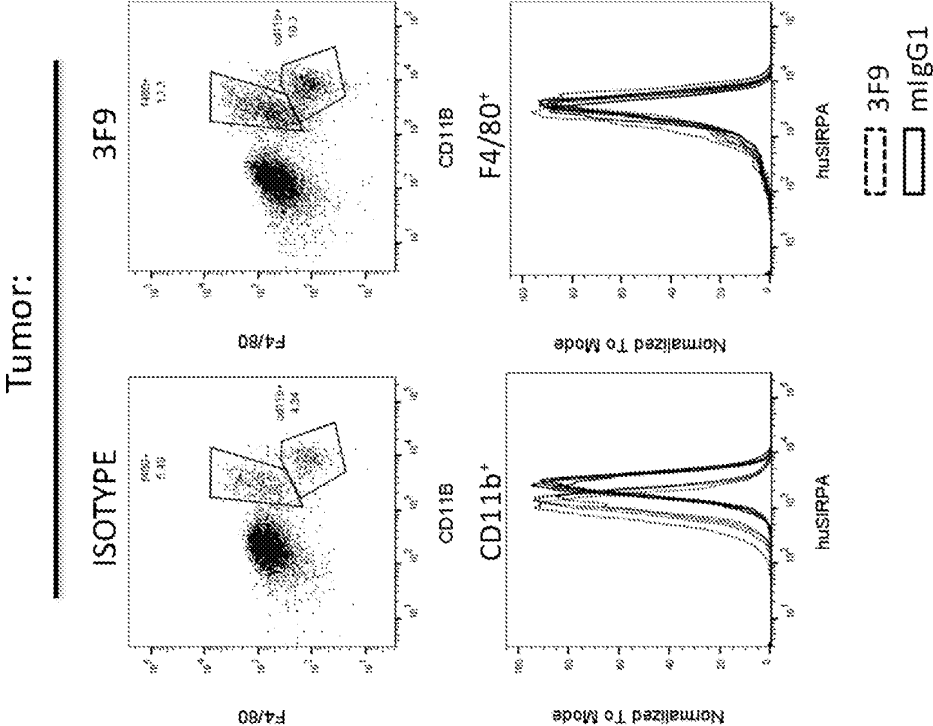


FIGURE 11B

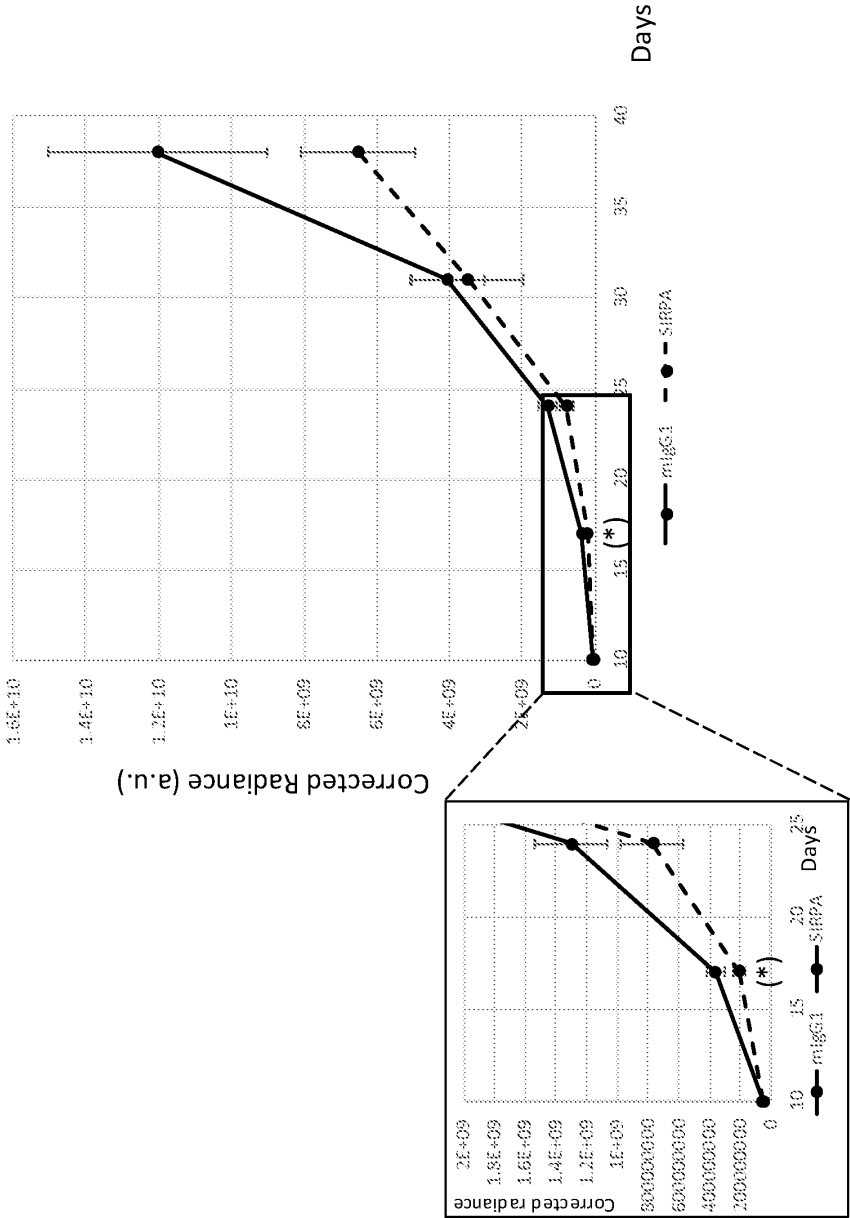


FIGURE 12B

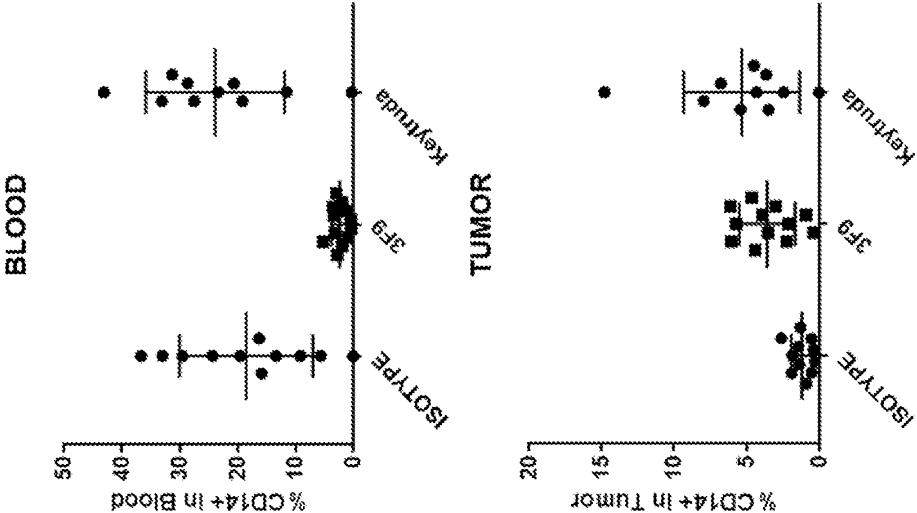
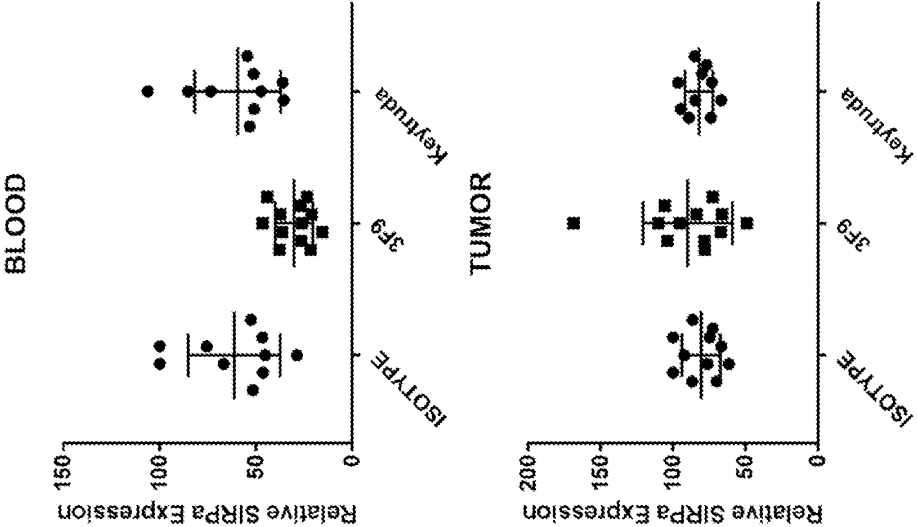


FIGURE 12A



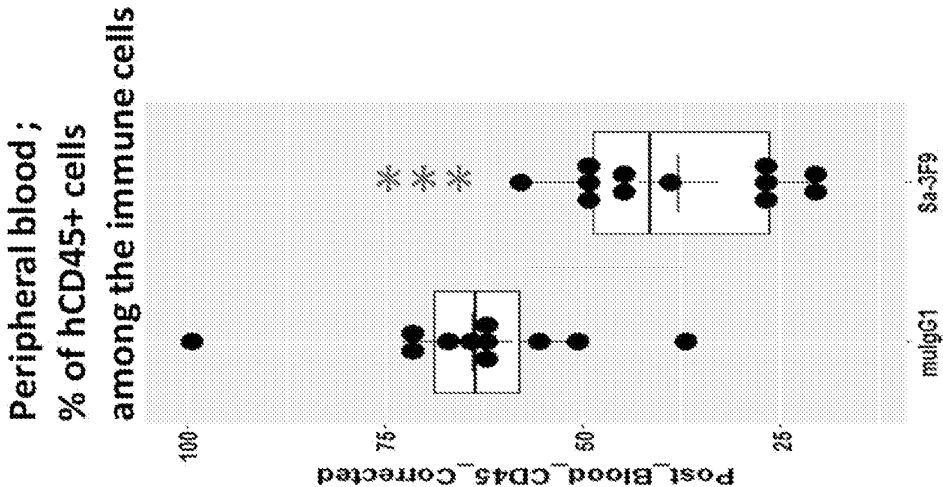


Figure 12C

28/37

FIGURE 13A

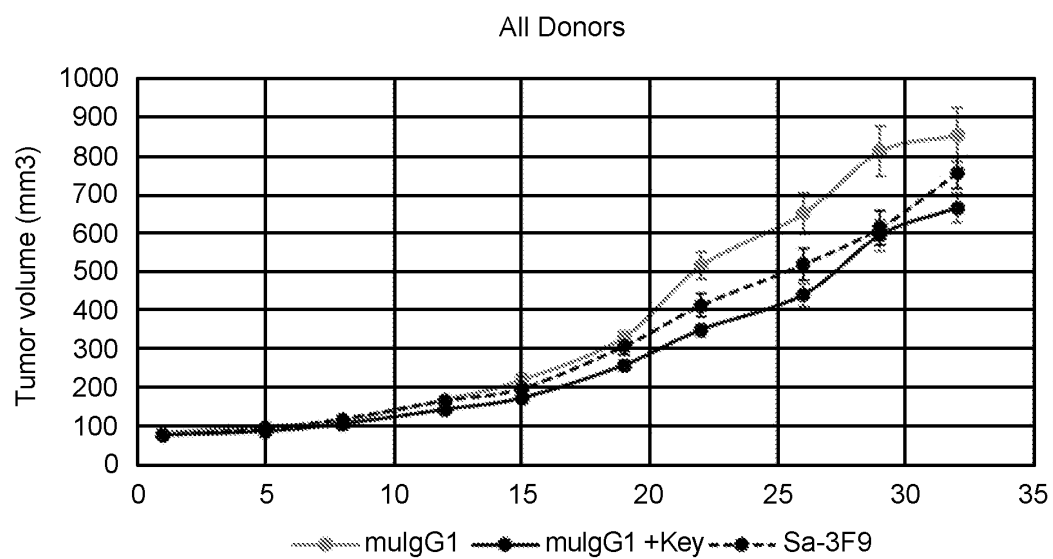


FIGURE 13B

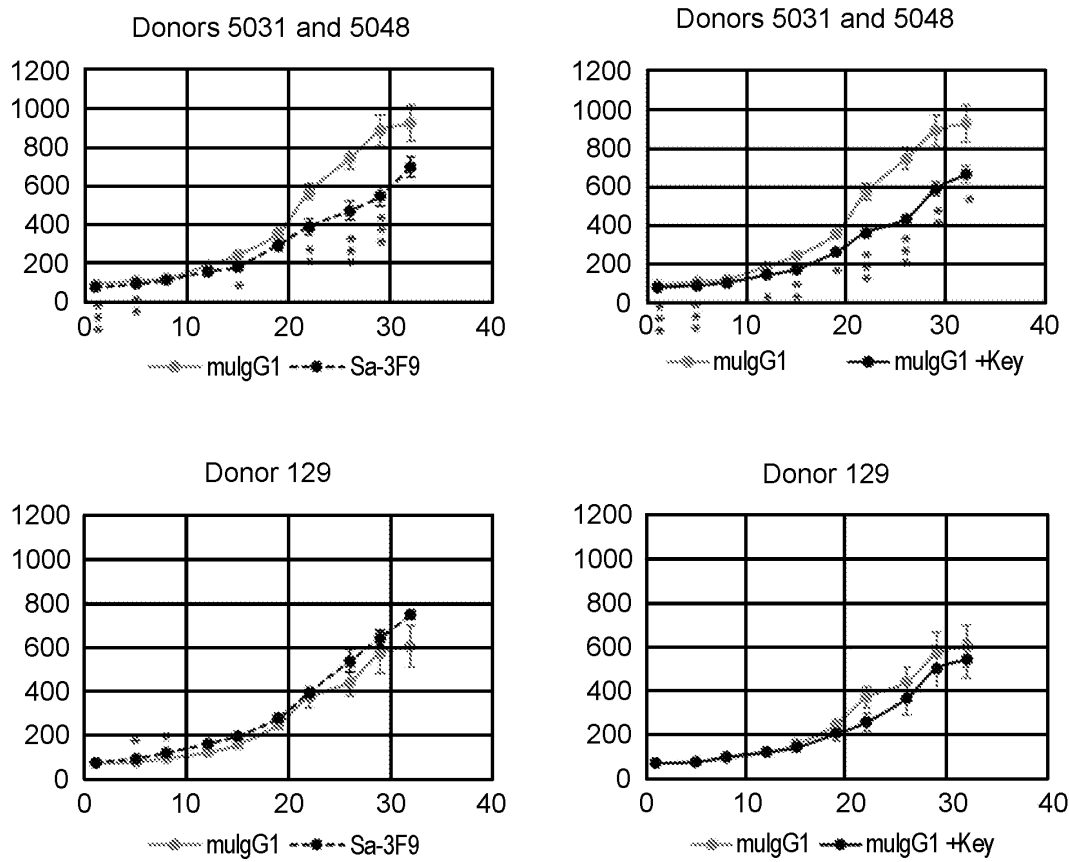


FIGURE 14A

Potential humanized sequence based on IGHV3-23*01 acceptor framework (AbM CDR definition)
IGHV3-23*01 EVQLLESGGGLVQPQGGSLRLSCAASGFTFSSYAMSVWRQAPGKLEWVSAISGSGSTYYADSVKQ
RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK
Joining region IMGT J00256|IGHJ4*01|YFDYWGQGLVTVSS

seq	10	20	30	40	50	60
AbM	10	20	30	40	50	ab
	b b b	p p b b	b b b	b i i	i i b b	b
SB-3F9	EVKLVESGGGLVQPKPGGSLRLSCAAS	GFTFSSYAMS	WVRQTPPKLEWVA	TISDYGGSYTY		
	* * *	*	* * *	*		
IGHV3-23*01	EVQLLESGGGLVQPQGGSLRLSCAAS	GFTFSSYAMS	WVRQAPGKLEWVS	AISG-SGGSTY		
hSB-3F9-H1	EVQLLESGGGLVQPQGGSLRLSCAAS	GFTFSSYAMS	WVRQAPGKLEWVS	TISDYGGSYTY		
hSB-3F9-H2	EVQLLESGGGLVQPQGGSLRLSCAAS	GFTFSSYAMS	WVRQAPGKLEWVA	TISDYGGSYTY		

seq	70	80	90	100	110	120
AbM	60	70	80	abc	90	100abcd
	i b	b b b x	b b b b	b i b b b	i b b b	
SB-3F9	YFDSVKGRFTISRDN AKYTL YQMNSLRAEDTAVYYCAK	PPYDDYGGFAY	WGQGLVTVSSA			
	* * *	* * *	* * *			
IGHV3-23*01	YADSVKGRFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK					
hSB-3F9-H1	YADSVKGRFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK	PPYDDYGGFAY	WGQGLVTVSS			
hSB-3F9-H2	YADSVKGRFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK	PPYDDYGGFAY	WGQGLVTVSS			

L
P

FIGURE 14B

Potential humanized sequence based on IGV3-11*01 acceptor framework (AbM CDR definition)
 IGV3-11*01 EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLIIYDASNRAT
 GIPARFSGSGGTDFLTITSSLEPEDFAVYYCQQRSNWFF
 Joining region IMGT J00242|IGKJ2*01|YTFGQGTKLEIK

seq	10	20	30	40	50	60
AbM	10	20	30abcd	40	50	
	b b b	p p	b b b	b b i	i i i b b i	i
SB-3F9	DIVLTQSPASLAVSLGQRATISC RASKSVSSSGSYNMH WYQKPGQPPKLLIY LASNLES					
	*	* * *	*		*	*
3-11*01	EIVLTQSPATLSLSPGERATLSC RASQSVS----SYLA WYQKPGQAPRLIIY DASNRAT					
hSB-3F9-L1	EIVLTQSPATLSLSPGERATLSC RASKSVSSSGSYNMH WYQKPGQAPRLIIY LASNLES					
hSB-3F9-L2	EIVLTQSPATLSLSPGERATLSC RASKSVSSSGSYNMH WYQKPGQAPRLIIY LASNLES					
hSB-3F9-L3	EIVLTQSPATLSLSPGERATLSC RASKSVSSSGSYNMH WYQKPGQAPRLIIY LASNLES					
						#
						P
						V

seq	70	80	90	100	110
AbM	60	70	80	90	100
	b b	b b b	b b b	i b i	b b b
SB-3F9	GVPARFSGSGGTDFLTINHPVEEDAAIYYC QHNRELPT FGGTKLEIK				
	*	* * * *	*	*	*
3-11*01	GIPARFSGSGGTDFLTITSSLEPEDFAVYYC QQRSNWFF				
hSB-3F9-L1	GIPARFSGSGGTDFLTITSSLEPEDFAVYYC QHNRELPT FGGTKLEIK				
hSB-3F9-L2	GVPARFSGSGGTDFLTITSSVEPEDFAVYYC QHNRELPT FGGTKLEIK				
hSB-3F9-L3	GVPARFSGSGGTDFLTITSSVEPEDFAVYYC QHNRELPT FGGTKLEIK				
					^
					#
					A

FIGURE 14D

Potential humanized sequence based on IGV3-11*01 acceptor framework (AbM CDR definition)
IGKV3-11*01 EIVLTQSPATLSLSPGERATLSCRAQSVSSYLAWYQOKPGQAPRLIIYDASNRAT
GIPARFSGSGGTDFITISLSPEDFAVYYCQQRSNWPP
Joining region IMGT J00242|IGKJ2*01|YTFQGGTKLEIK

seq	10	20	30	40	50
AbM	10	20	30	40	50
SB-9C2	b b b	p p	b b b	b b b	i i i
	QIVLSQSPAILSA	SPGKVTMT	RASSSVS	-YMH	WYQOKPGSSPAPWIY
	* *	* *	** **	** **	VTSNLAS
3-11*01	EIVLTQSPATLSL	SPGERATLSC	RASQSVSSYLA	WYQOKPGQAPRLIIY	DASNRAT
hSB-9C2-L1	EIVLTQSPATLSL	SPGERATLSC	RASSSVS	-YMH	WYQOKPGQAPRLIIY
hSB-9C2-L2	EIVLTQSPATLSL	SPGERATLSC	RASSSVS	-YMH	WYQOKPGQAPRLIIY
hSB-9C2-L3	EIVLTQSPATLSL	SPGERATLSC	RASSSVS	-YMH	WYQOKPGQAPRLIIY
hSB-9C2-L4	EIVLTQSPATLSL	SPGERVTMSC	RASSSVS	-YMH	WYQOKPGQAPRLIIY

A S #

seq	60	70	80	90	100
AbM	60	70	80	90	100
SB-9C2	b b	b b b	b b b	i b i	b b b
	GVPTAFSGSGGT	SYSLTISR	VEAEDATYYC	QWSSNPRT	FGQGTKEIK
	* *	***	** *	*	*
3-11*01	GIPARFSGSGGT	DFITISLSP	EDFAVYYC	QQRSNWPP	
hSB-9C2-L1	GIPARFSGSGGT	DFITISLSP	EDFAVYYC	QWSSNPRT	FGQGTKEIK
hSB-9C2-L2	GIPARFSGSGGT	DFITISLSP	EDFAVYYC	QWSSNPRT	FGQGTKEIK
hSB-9C2-L3	GIPARFSGSGGT	DFITISLSP	EDFAVYYC	QWSSNPRT	FGQGTKEIK
hSB-9C2-L4	GIPARFSGSGGT	DFITISLSP	EDFAVYYC	QWSSNPRT	FGQGTKEIK

A ^ #

Figure 15A

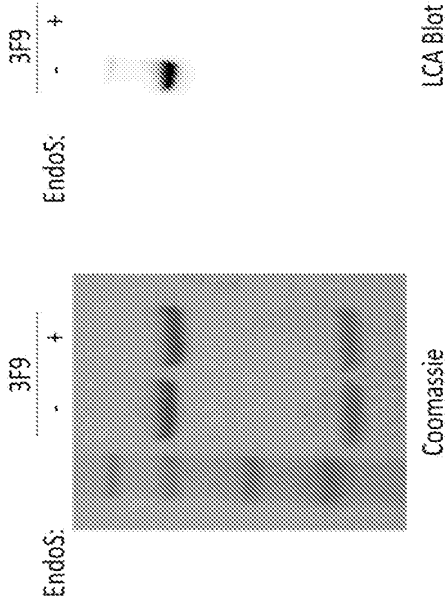


Figure 15B

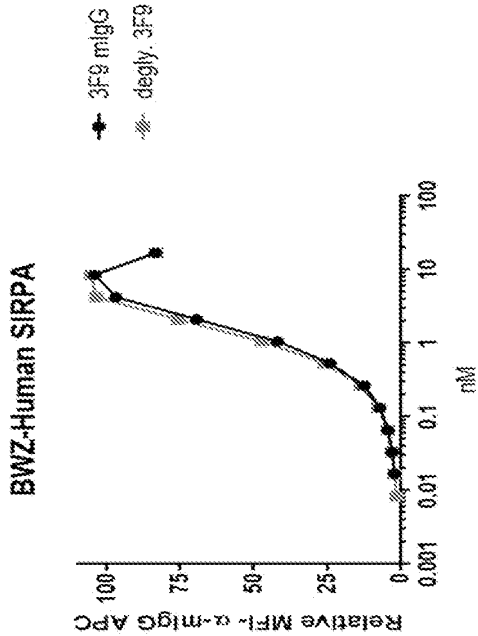


Figure 16

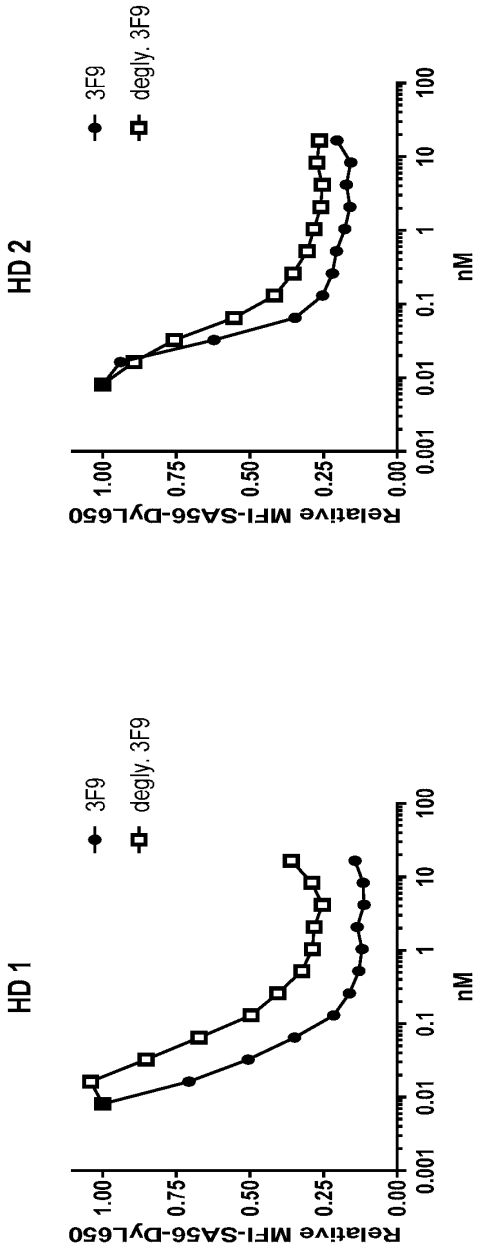


Figure 17A

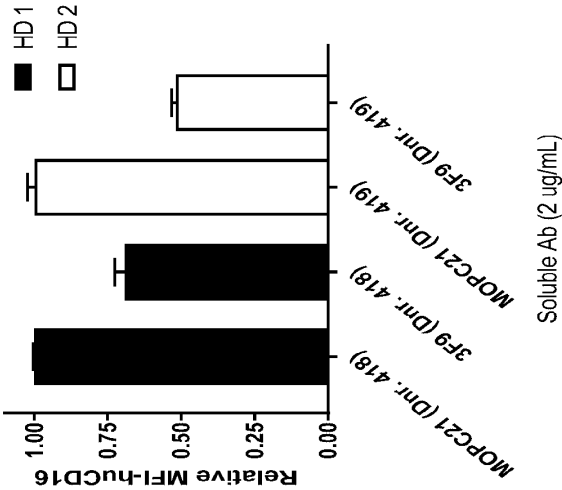


Figure 17B

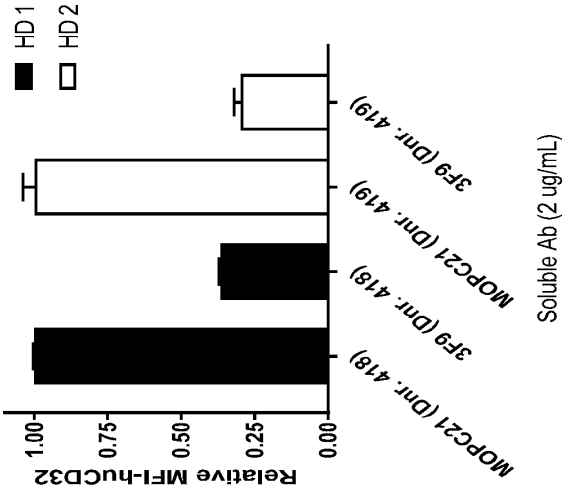


Figure 18

