Figure 1

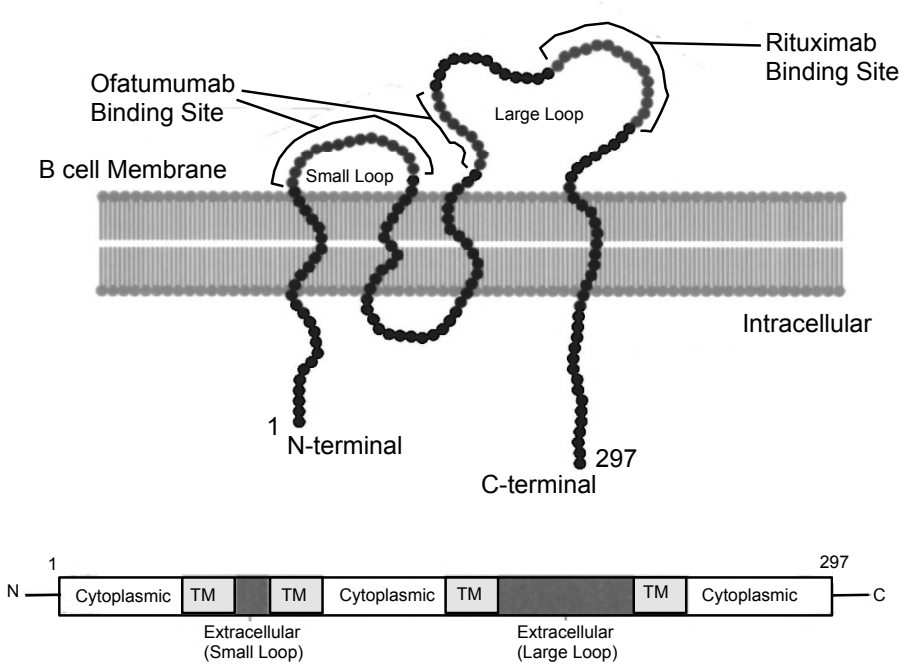

Rituximab
Binding Site
Ofatumumab
Binding Site
Large Loop
B cell Membrane
Small Loop
Intracellular
1
N-terminal
297
C-terminal
1
297
N
Cytoplasmic
TM
TM
Cytoplasmic
TM
TM
Cytoplasmic
C
Extracellular
(Small Loop)
Extracellular
(Large Loop)

Figure 2

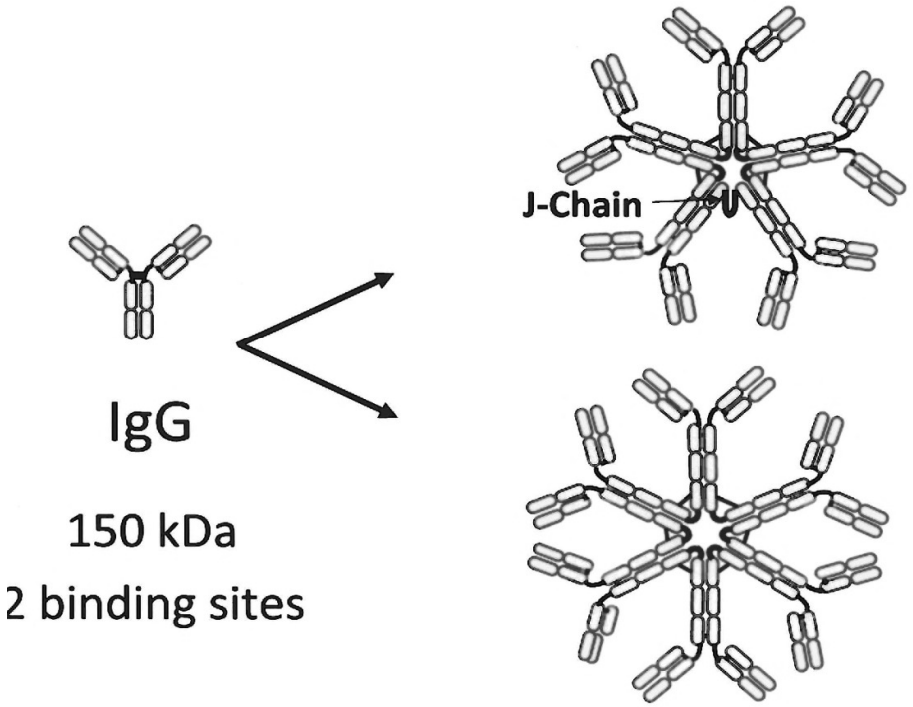

J-Chain
IgG
150 kDa
2 binding sites
IgM pentamer
plus J Chain
875 KDa
10 binding sites
IgM hexamer
1095 KDa
12 binding sites

Figure 3

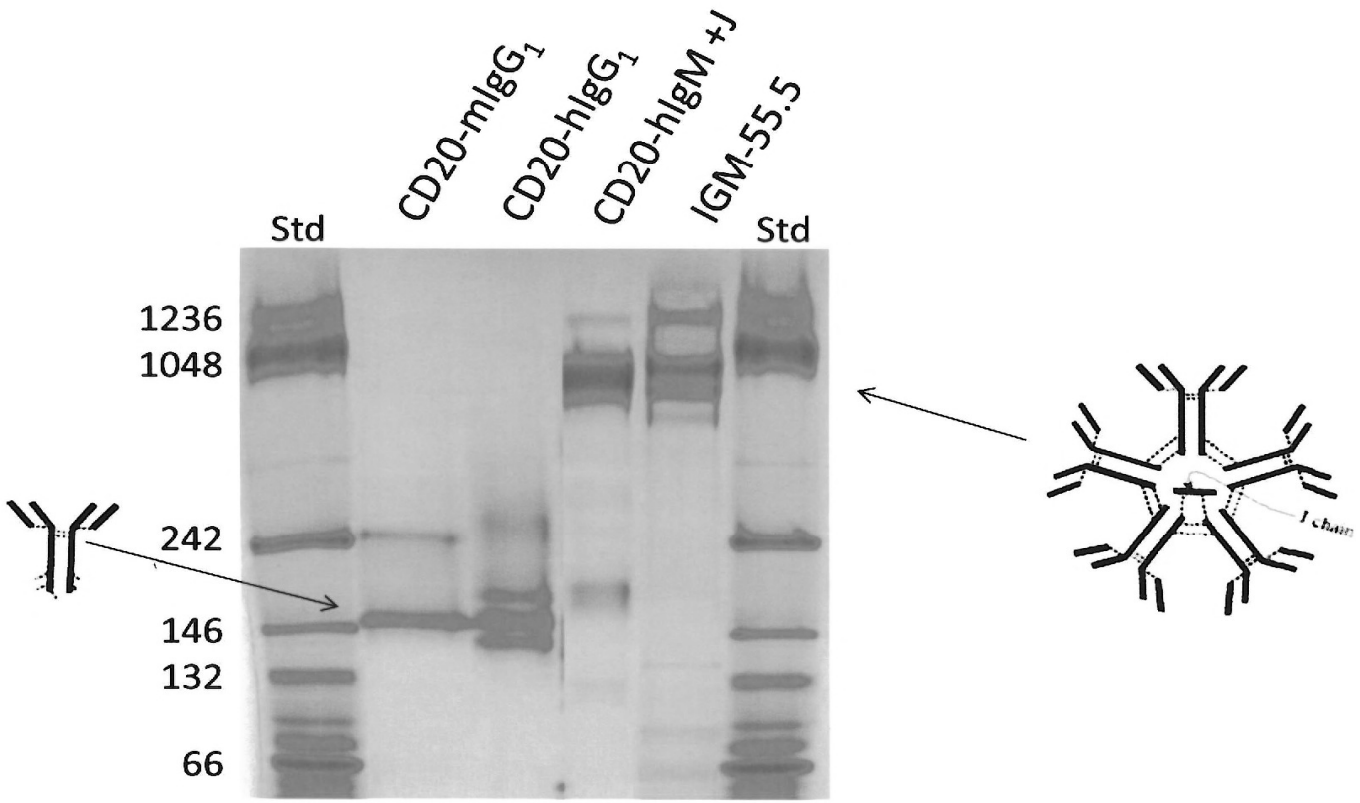

CD20-mIgG1
CD20-hIgG1
CD20-hIgM +J
IGM-55.5
Std
Std
1236
1048
242
146
132
66

Figure 4

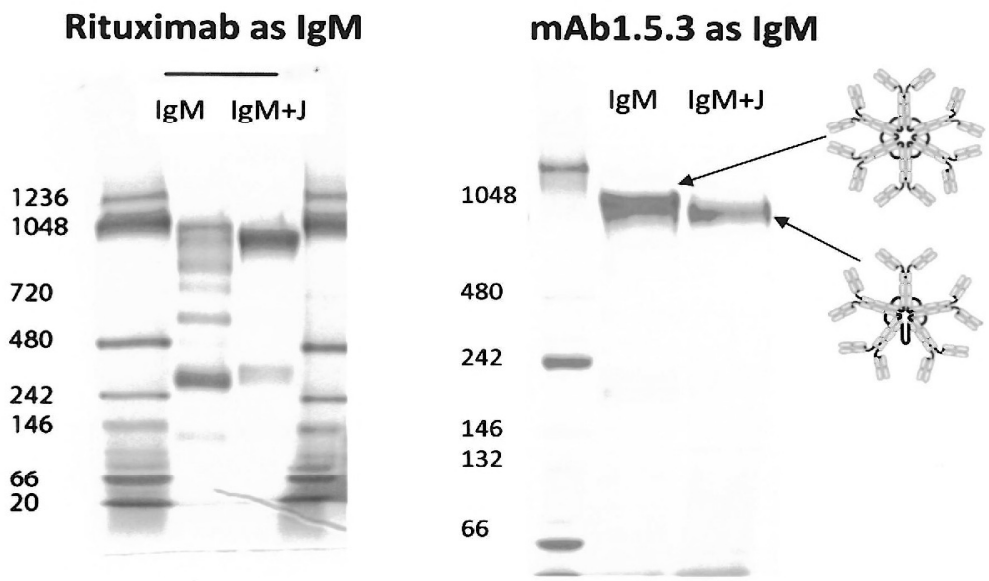

Rituximab as IgM
IgM
IgM+J
1236
1048
720
480
242
146
66
20
mAb1.5.3 as IgM
IgM
IgM+J
1048
480
242
146
132
66

Figure 5

A

B

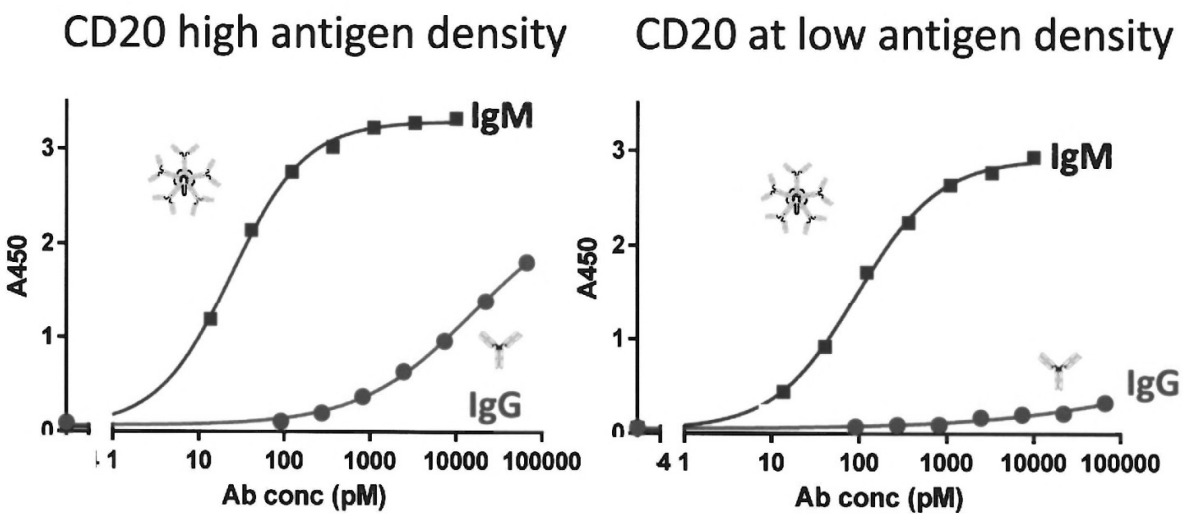

CD20 high antigen density
CD20 at low antigen density
IgM
IgG
A450
Ab conc (pM)
0
1
2
3
1
10
100
1000
10000
100000

Figure 6

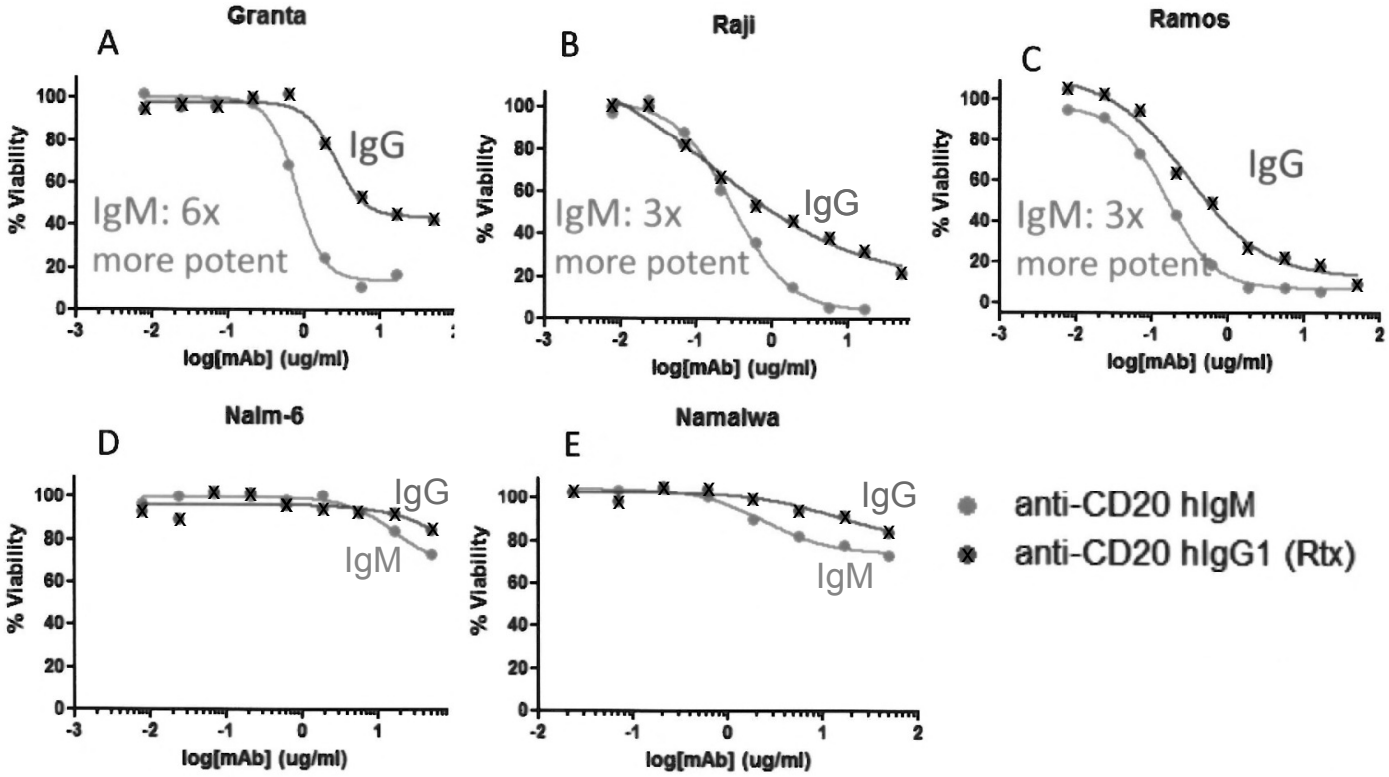

Granta
A
% Viability
log[mAb] (ug/ml)
IgG
IgM: 6x
more potent
Raji
B
IgM: 3x
more potent
Ramos
C
Naim-6
D
IgM
Namalwa
E
anti-CD20 hIgM
anti-CD20 hIgG1 (Rtx)

Figure 7

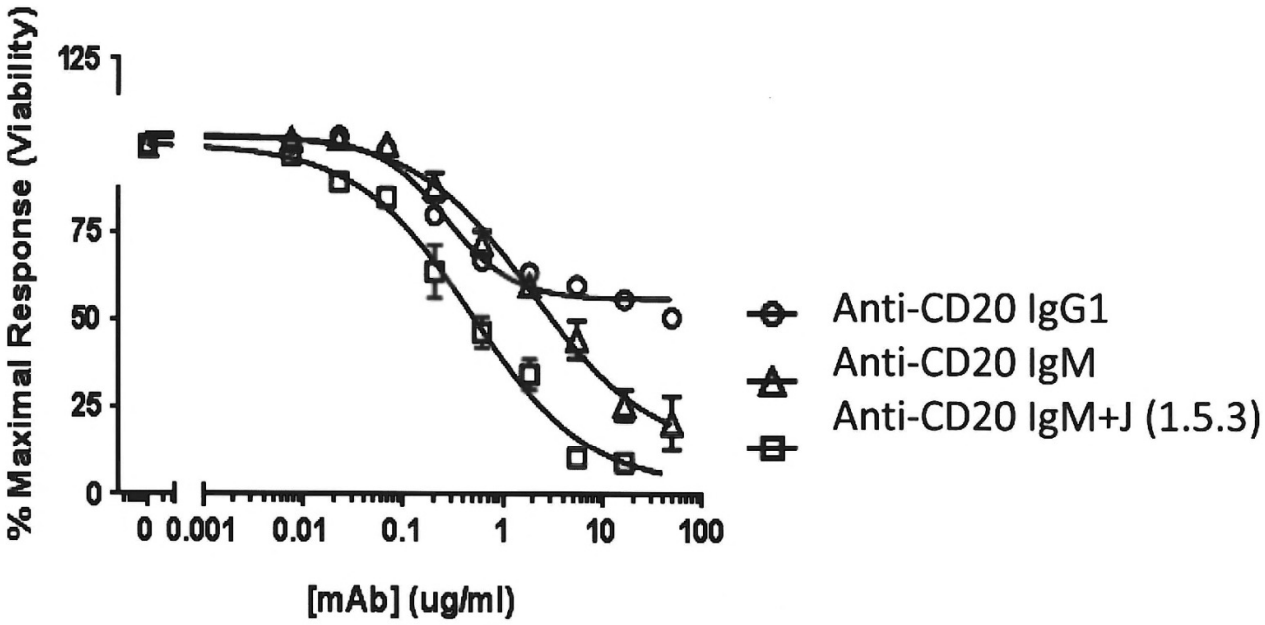
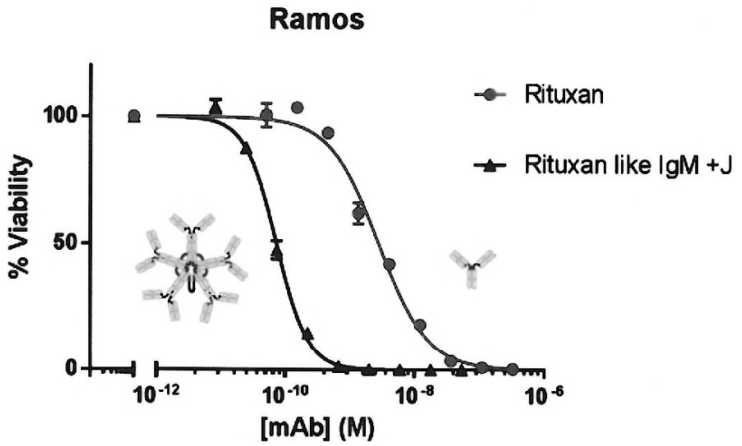
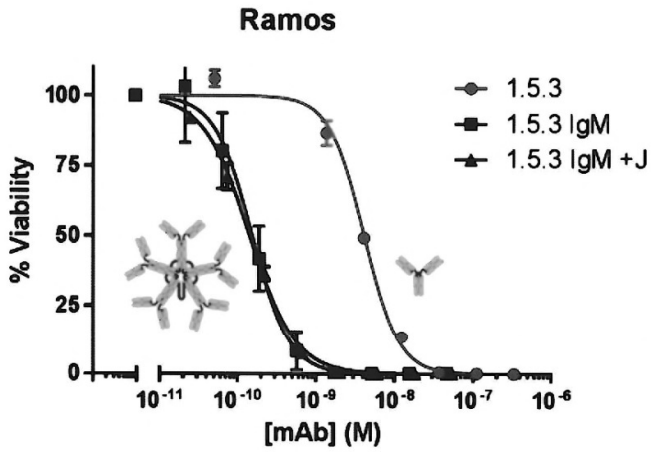

% Maximal Response (Viability)
125
75
50
25
0
0 0.001 0.01 0.1 1 10 100
[mAb] (ug/ml)
Anti-CD20 IgG1
Anti-CD20 IgM
Anti-CD20 IgM+J (1.5.3)

Figure 8A



	EC50
Rituxan	2.6e-009
Rituxan like IgM +J	6.9e-011

Figure 8B



	EC50
1.5.3	4.139e-009
1.5.3 IgM	1.551e-010
1.5.3 IgM +J	1.437e-010

Figure 9

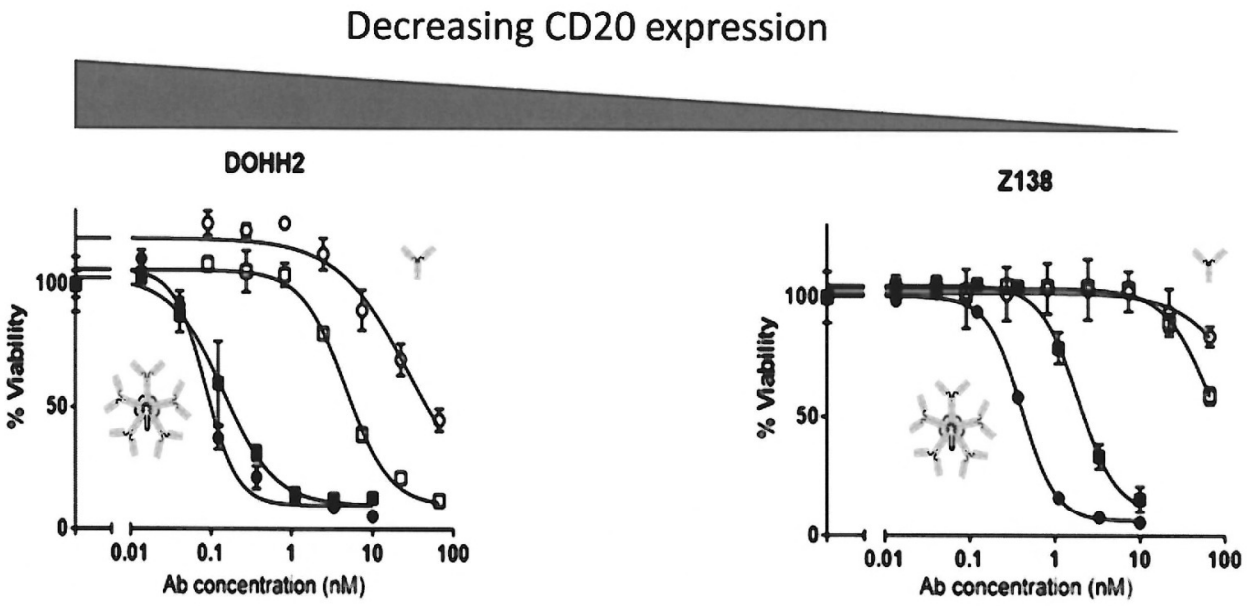
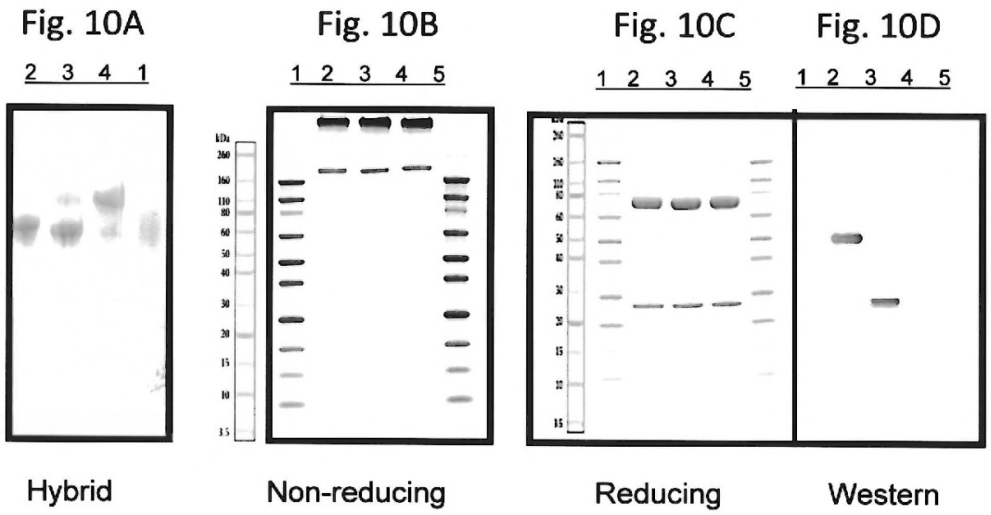

Decreasing CD20 expression
DOHH2
Z138
% Viability
100
50
0
0.01
0.1
1
10
100
Ab concentration (nM)

Figure 10



1 Marker
2 1.5.3 IgM+V15J
3 1.5.3 IgM+wtJ
4 1.5.3 IgM
5 Marker

Figure 11

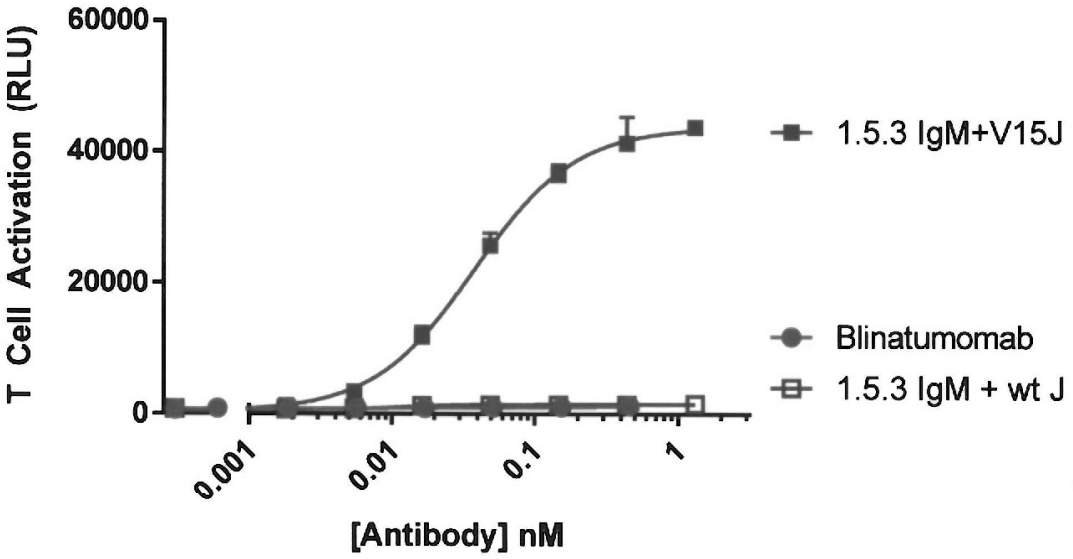

60000
40000
20000
0
T Cell Activation (RLU)
0.001
0.01
0.1
1
[Antibody] nM
1.5.3 IgM+V15J
Blinatumomab
1.5.3 IgM + wt J

Figure 12

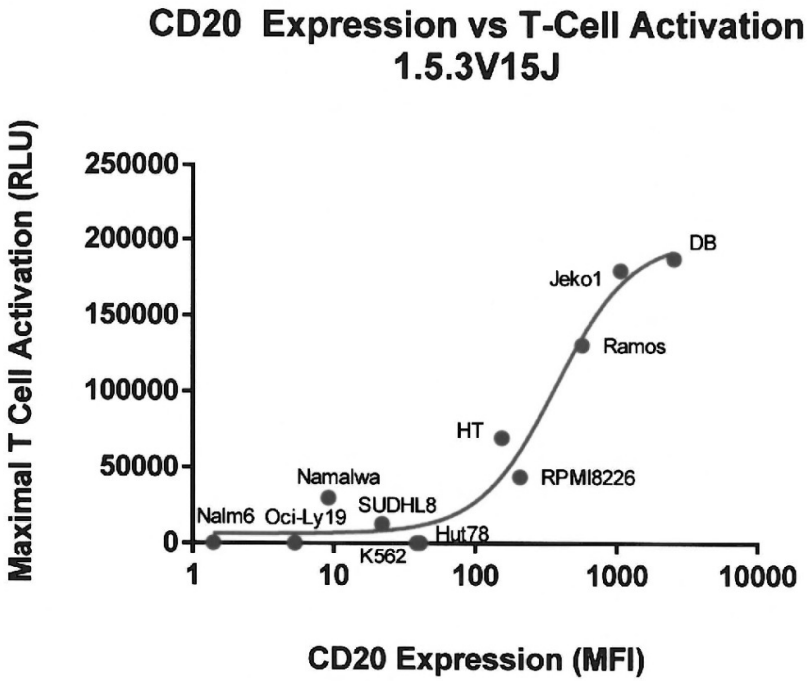

CD20 Expression vs T-Cell Activation
1.5.3V15J
Maximal T Cell Activation (RLU)
250000
200000
150000
100000
50000
0
1
10
100
1000
10000
CD20 Expression (MFI)
DB
Jeko1
Ramos
HT
RPMI8226
Namalwa
SUDHL8
Nalm6
Oci-Ly19
Hut78
K562

Figure 13

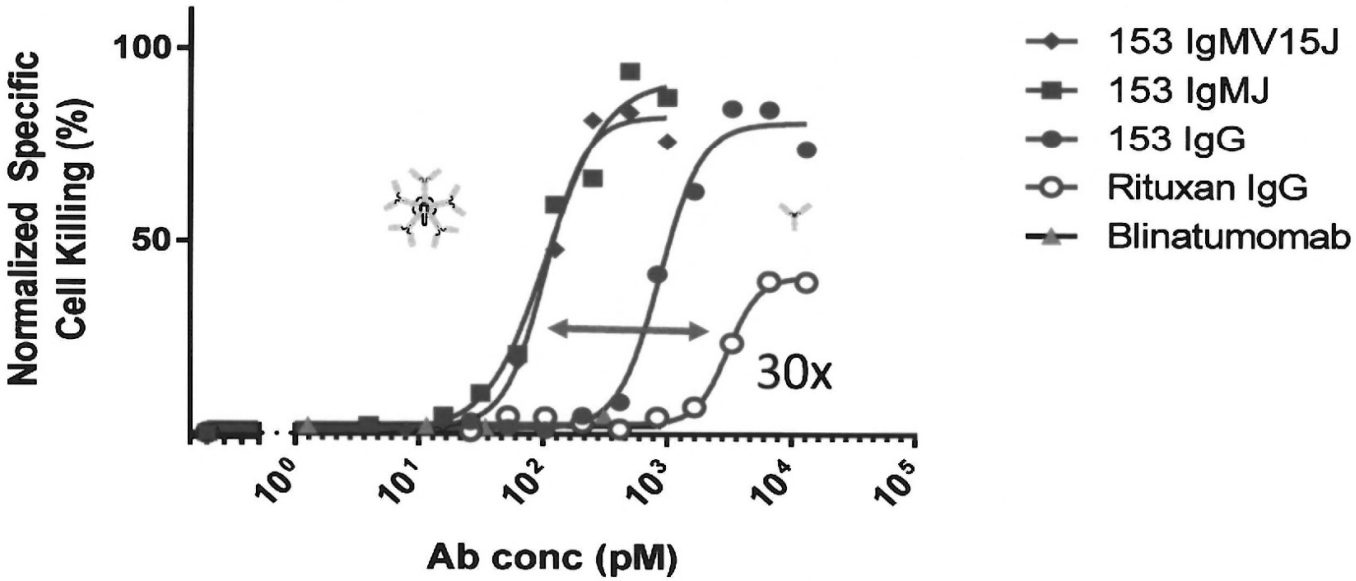

Normalized Specific Cell Killing (%)
100
50
10^0
10^1
10^2
10^3
10^4
10^5
Ab conc (pM)
30x
153 IgMV15J
153 IgMJ
153 IgG
Rituxan IgG
Blinatumomab

Figure 14

FIG. 14A

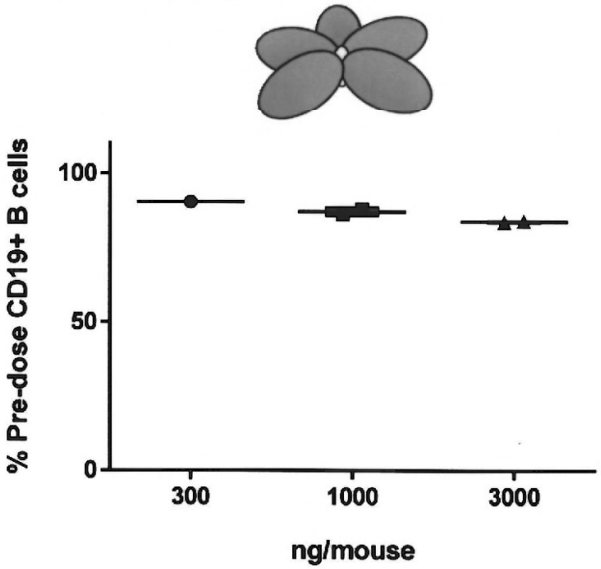


FIG. 14B

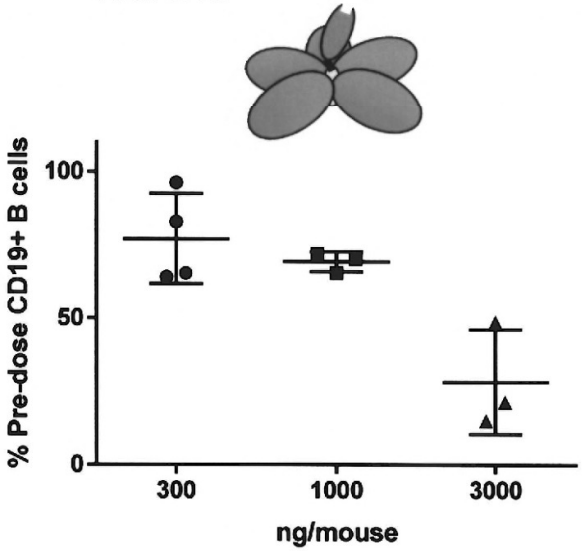
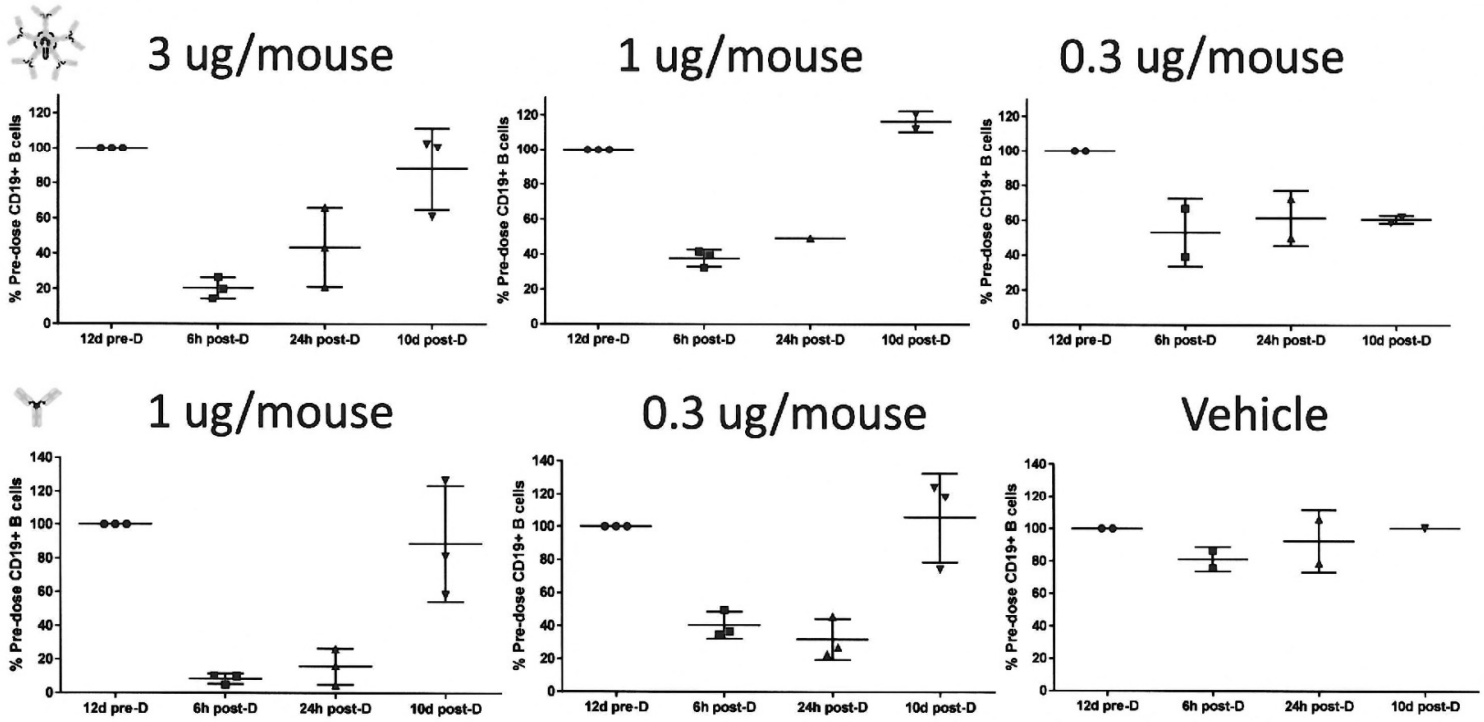


Figure 15


3 ug/mouse
1 ug/mouse
0.3 ug/mouse
1 ug/mouse
0.3 ug/mouse
Vehicle
% Pre-dose CD19+ B cells
12d pre-D
6h post-D
24h post-D
10d post-D