Figure 1

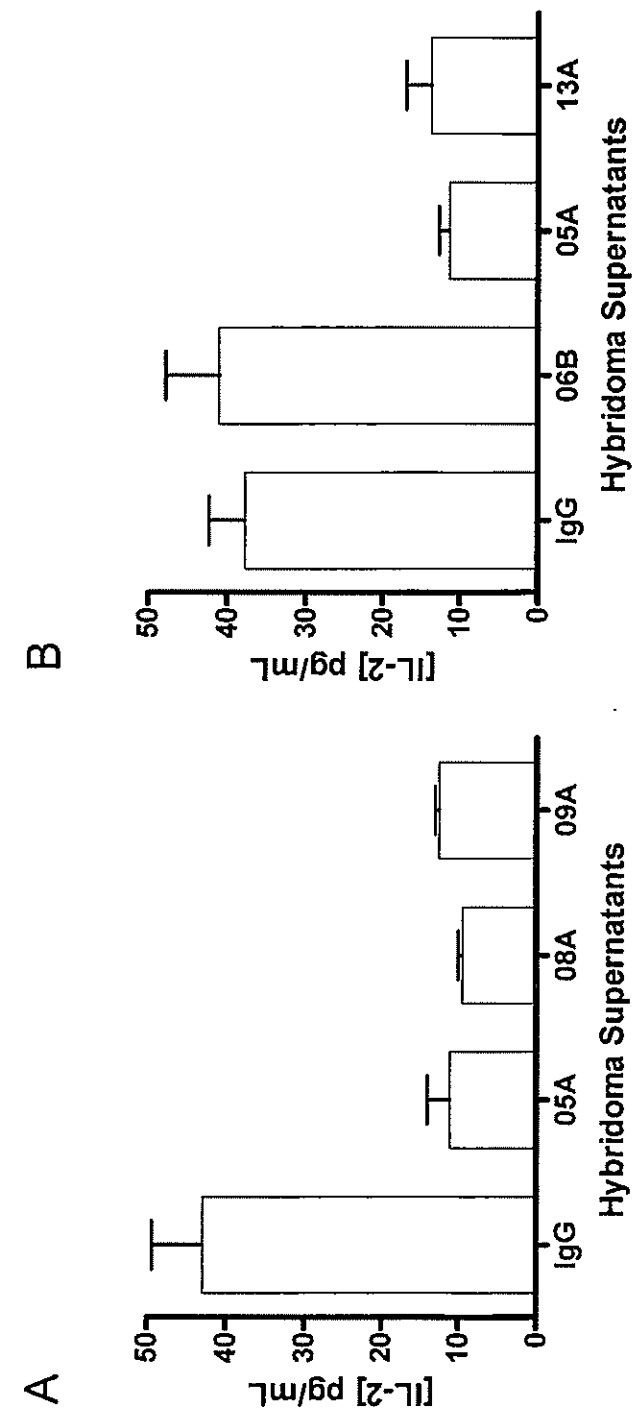

A
B
[IL-2] pg/mL
0
10
20
30
40
50
IgG
05A
08A
09A
06B
05A
13A
Hybridoma Supernatants
Hybridoma Supernatants

Figure 2

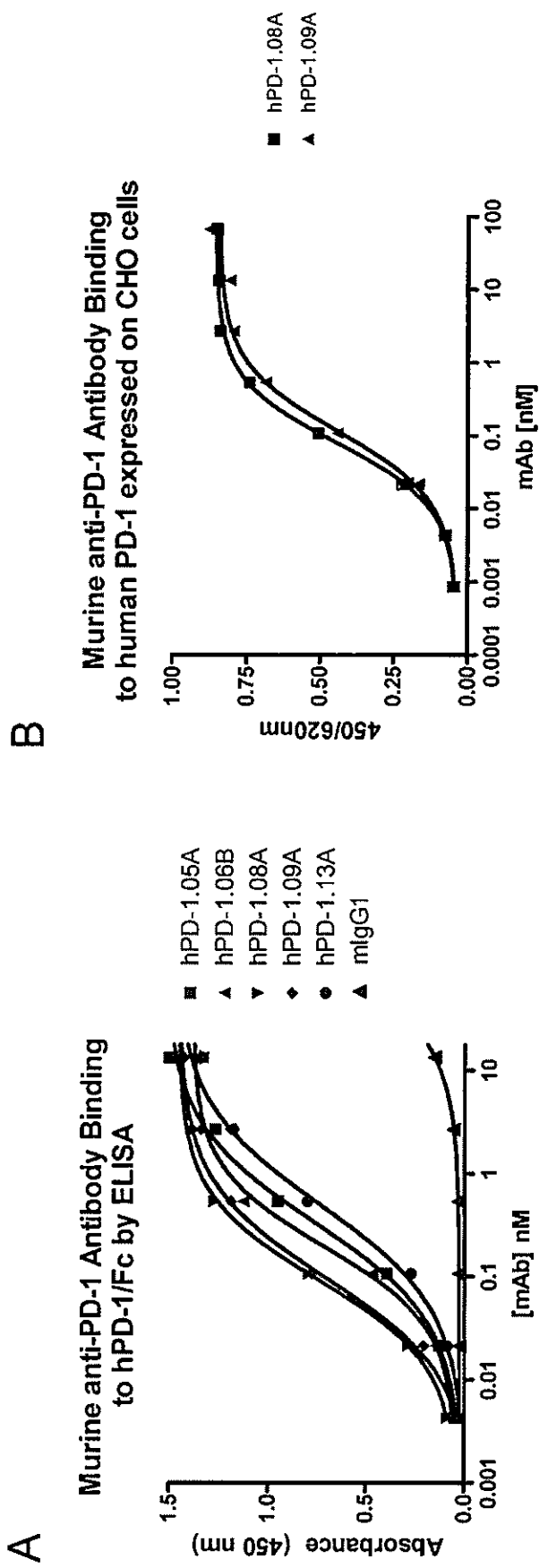

A
Murine anti-PD-1 Antibody Binding to hPD-1/Fc by ELISA
Absorbance (450 nm)
1.5
1.0
0.5
0.0
0.001
0.01
0.1
1
10
[mAb] nM
hPD-1.05A
hPD-1.06B
hPD-1.08A
hPD-1.09A
hPD-1.13A
mIgG1
B
Murine anti-PD-1 Antibody Binding to human PD-1 expressed on CHO cells
450/620nm
1.00
0.75
0.50
0.25
0.00
0.0001
0.001
0.01
0.1
1
10
100
mAb [nM]
hPD-1.08A
hPD-1.09A

Figure 3

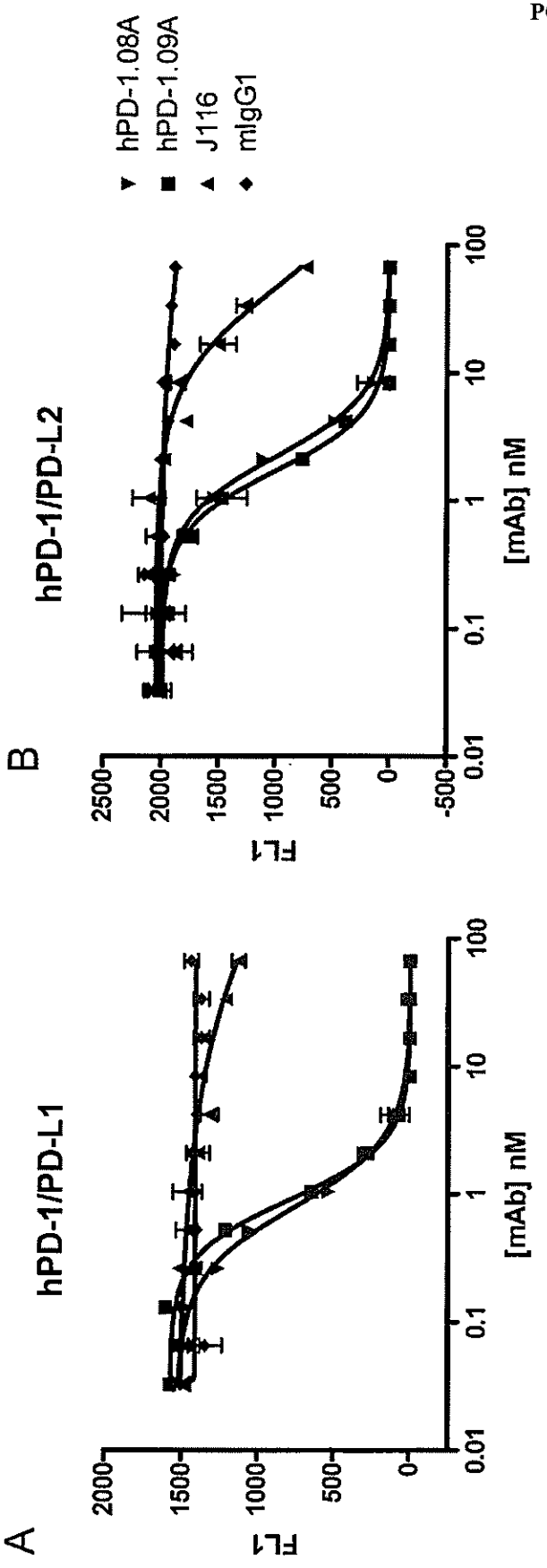

A
hPD-1/PD-L1
FL1
2000
1500
1000
500
0
0.01
0.1
1
10
100
[mAb] nM
B
hPD-1/PD-L2
FL1
2500
2000
1500
1000
500
0
-500
0.01
0.1
1
10
100
[mAb] nM
hPD-1.08A
hPD-1.09A
J116
mIgG1

Figure 4

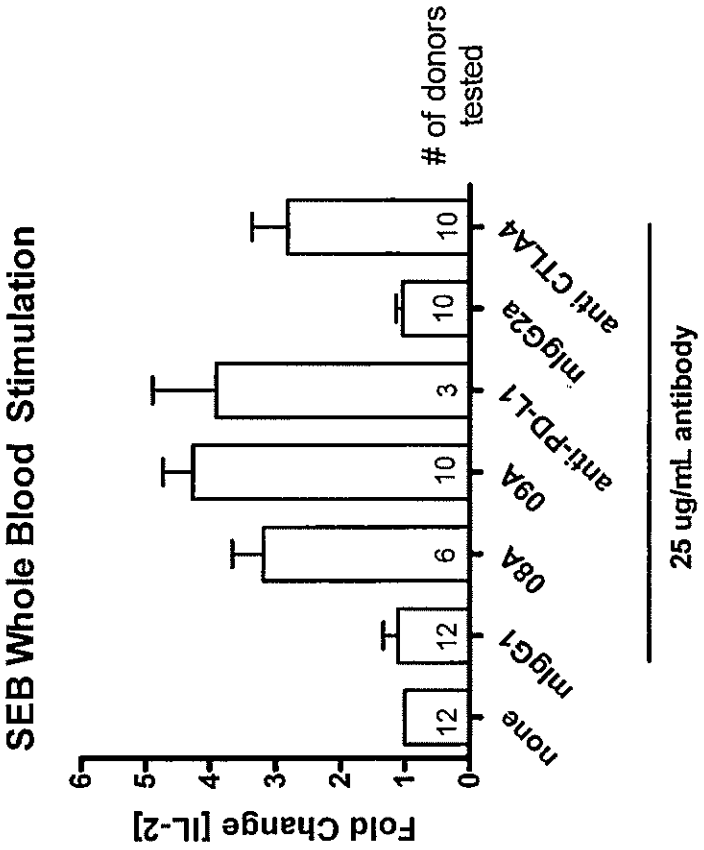

SEB Whole Blood Stimulation
Fold Change [IL-2]
0
1
2
3
4
5
6
# of donors tested
12
12
6
10
3
10
10
none
mIgG1
08A
09A
anti-PD-L1
mIgG2a
anti CTLA4
25 ug/mL antibody

Figure 5

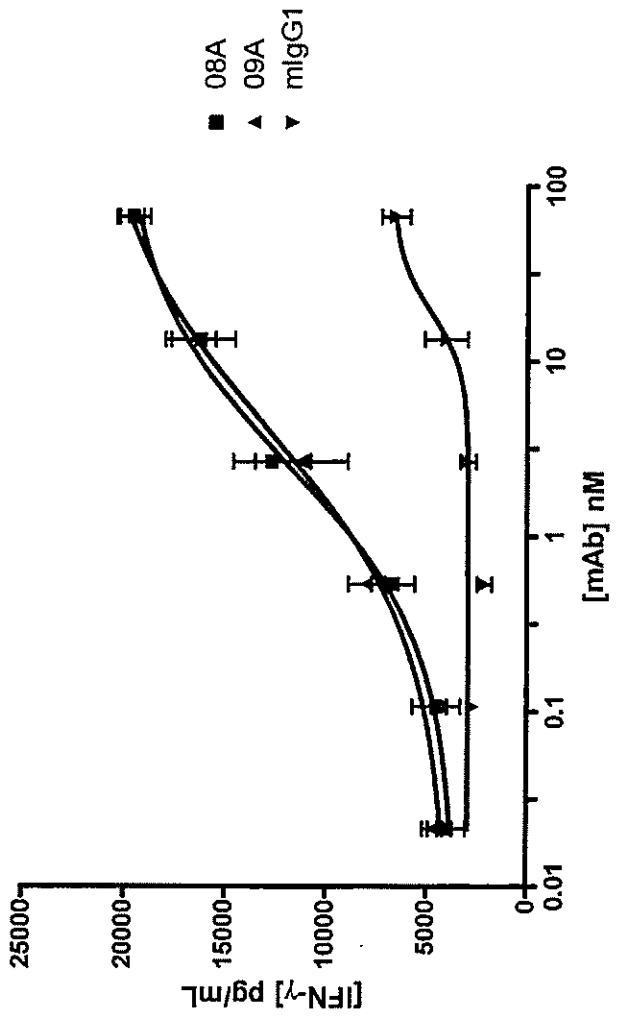

TT Recall Response
08A
09A
mIgG1
[IFN-γ] pg/mL
25000
20000
15000
10000
5000
0
0.01
0.1
1
10
100
[mAb] nM

Figure 6

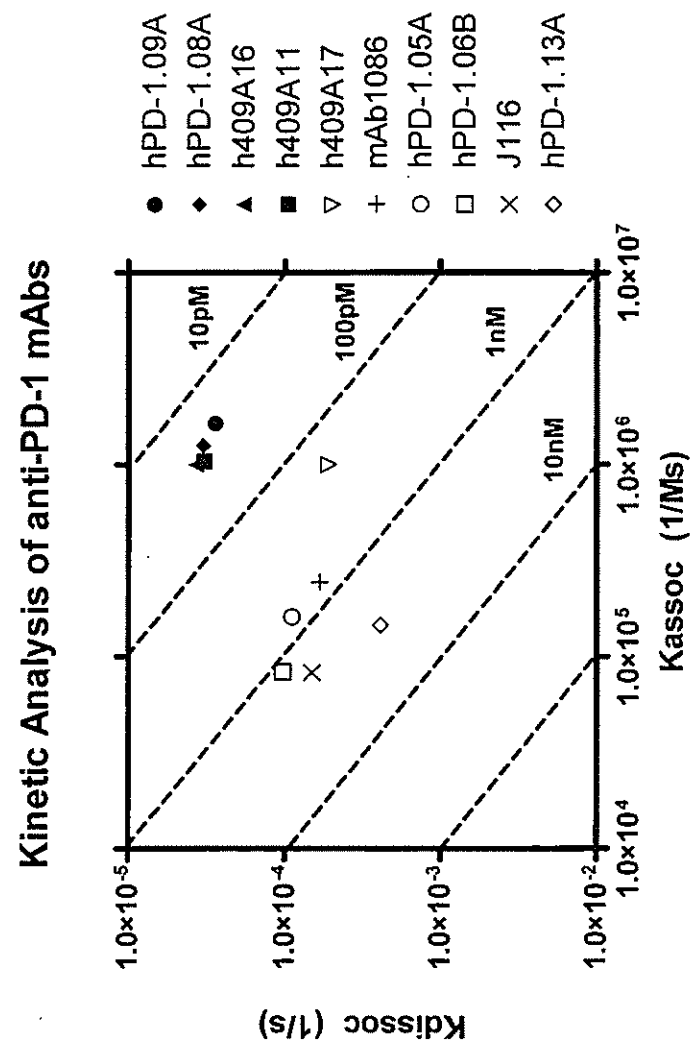
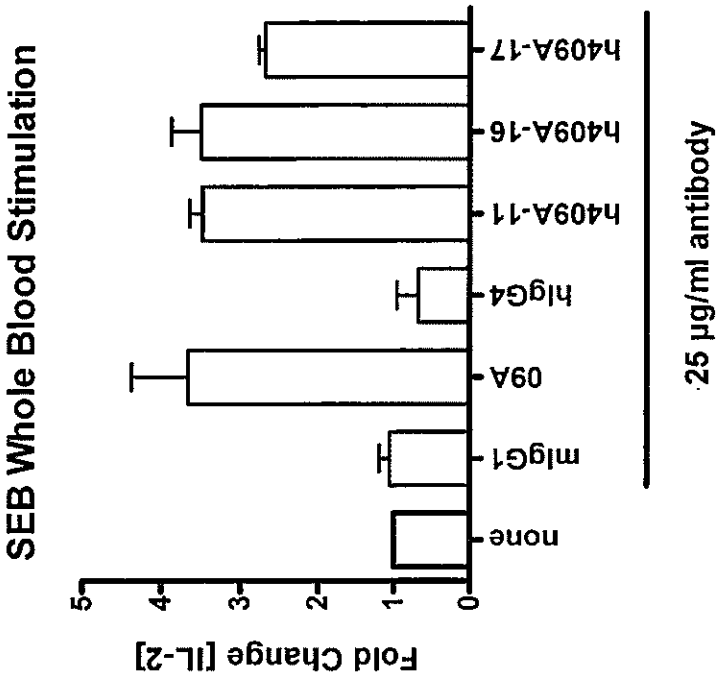

Kinetic Analysis of anti-PD-1 mAbs
hPD-1.09A
hPD-1.08A
h409A16
h409A11
h409A17
mAb1086
hPD-1.05A
hPD-1.06B
J116
hPD-1.13A
10pM
100pM
1nM
10nM
1.0×10⁻⁵
1.0×10⁻⁴
1.0×10⁻³
1.0×10⁻²
1.0×10⁴
1.0×10⁵
1.0×10⁶
1.0×10⁷
Kdissoc (1/s)
Kassoc (1/Ms)

Figure 7


SEB Whole Blood Stimulation
Fold Change [IL-2]
0
1
2
3
4
5
none
mIgG1
09A
hIgG4
h409A-11
h409A-16
h409A-17
25 µg/ml antibody