FIG. 1

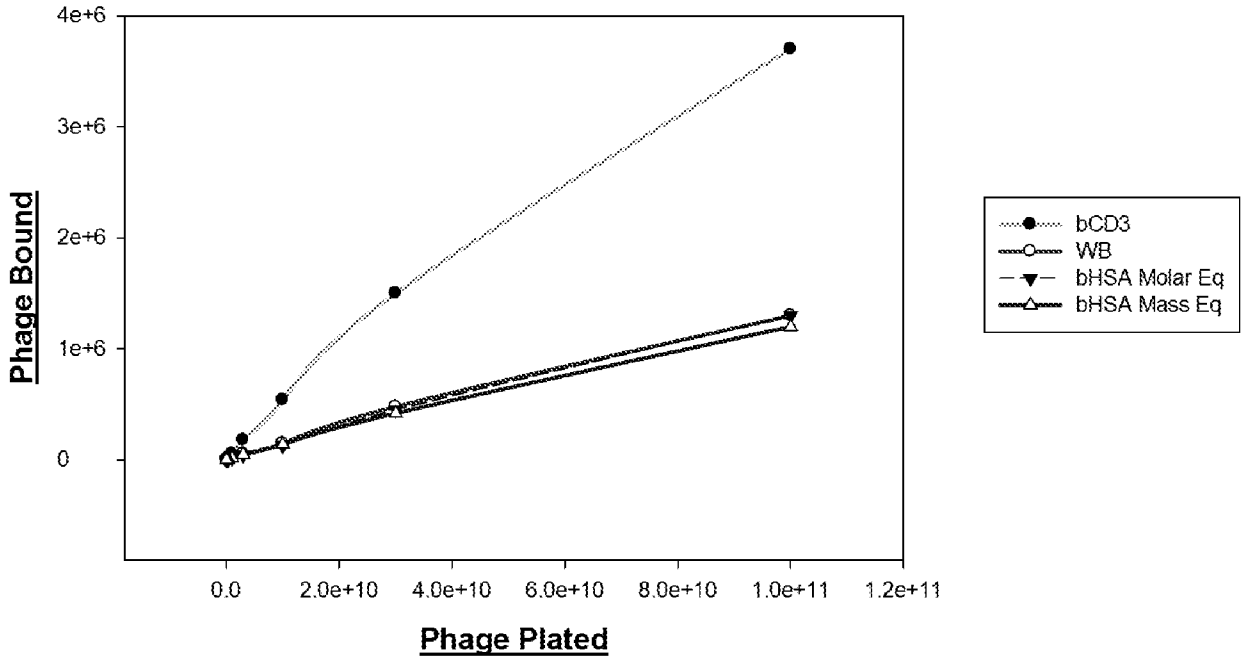

4e+6
3e+6
2e+6
1e+6
0
Phage Bound
0.0
2.0e+10
4.0e+10
6.0e+10
8.0e+10
1.0e+11
1.2e+11
Phage Plated
bCD3
WB
bHSA Molar Eq
bHSA Mass Eq

FIG. 2

EVQLVESGGGLVQPGGSLKLSCAASGFTFNKYAMNW
VRQAPGKGLEWVARIRSKYNNYATYYADSVKDRFTIS
RDDSKNTAYLQMNNLKTEDTAVYYCVRHGNFGNSYIS
YWAYWGQGTLVTVSSGGGGSGGGGSGGGGSQTVVTQ
EPSLTVSPGGTVTLTCGSSTGAVTSGNYPNWVQQKPG
QAPRGLIGGTKFLAPGTPARFSGSLLGGKAALTLSGVQ
PEDEAEYYCVLWYSNRWVFGGGTKLTVL

FIG. 3

anti-CD3e scFv	KD (nM) hum CD3e	kon(1/Ms)	kdis(1/s)	KD (nM) cyno CD3e	kon(1/Ms)	kdis(1/s)	cyno/hum ratio
wt	4.4	4.71E+05	2.07E-03	3.9	4.63E+05	1.83E-03	0.9
2B2	3.8	6.08E+05	2.32E-03	3.5	5.57E+05	1.93E-03	0.9
9F2	4.1	3.61E+05	1.33E-03	3.4	3.38E+05	1.05E-03	0.8
5A2	4.3	5.66E+05	2.36E-03	4.2	4.75E+05	1.93E-03	1.0
6A2	4.7	5.22E+05	2.48E-03	4.9	4.56E+05	2.22E-03	1.0
2D2	6.4	5.27E+05	3.38E-03	6.6	4.71E+05	3.09E-03	1.0
3F2	8.0	7.04E+05	5.02E-03	6.6	7.12E+05	4.38E-03	0.8
2E4	14.4	4.16E+05	5.99E-03	13.2	4.04E+05	5.32E-03	0.9
2H2	16.0	5.87E+05	9.06E-03	16.0	5.25E+05	8.37E-03	1.0
10B2	17.9	4.90E+05	8.74E-03	16.6	4.93E+05	8.15E-03	0.9
1A2	19.9	5.99E+05	1.19E-02	17	5.31E+05	9.03E-03	0.9
1C2	36.8	6.63E+05	2.44E-02	30	6.69E+05	1.97E-02	0.8
2A4	46.3	3.64E+05	1.66E-02	43.4	3.53E+05	1.53E-02	0.9
10E4	49.8	5.22E+05	2.60E-02	46.8	5.08E+05	2.38E-02	0.9
8A5	109	7.46E+05	8.10E-02	103	7.23E+05	7.44E-02	0.9
2G5	117	9.94E+05	1.15E-01	115	9.64E+05	1.11E-01	1.0
1G4	132.9	1.67E+05	2.20E-02	133.7	1.64E+05	2.19E-02	1.0

FIG. 4

Anti-huCD3ε variants	T_h (^{0}C)
WT	59.2
2B2	57.4
3F2	52.2
2E4	55
2H2	53
10B2	51.5
2A4	56.2
2G5	58
1G4	60.3