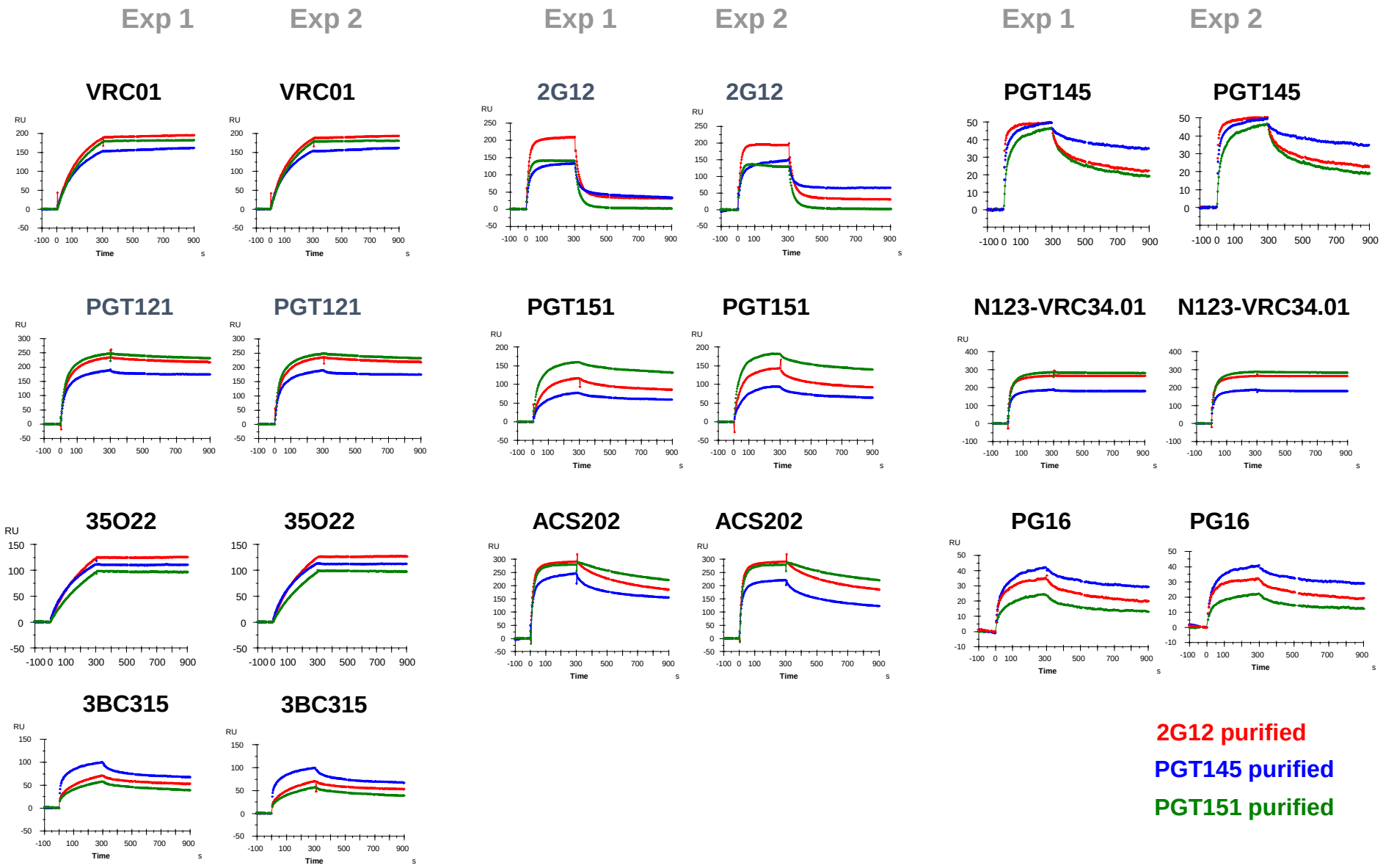
CM5-aHis

mAbs binding to CZA SOSIP.664 : zero analyte subtracted



2G12 purified

PGT145 purified

PGT151 purified

CZA SOSIP.664 Trimers were captured at mean density of 253 RU with a standard deviation of ± 5.5 RU

CZA97.012 SOSIP.664

Experiment **Slide #**

Fig 10B: 3BNC117 fab vs CZA97-2G12 purified: SCK……..2

Fig S4: 3BNC117 fab vs CZA97-2G12 purified: MCK……3

Fig 11: PGT151 fab vs CZA97-2G12 purified: SCK……..4-6

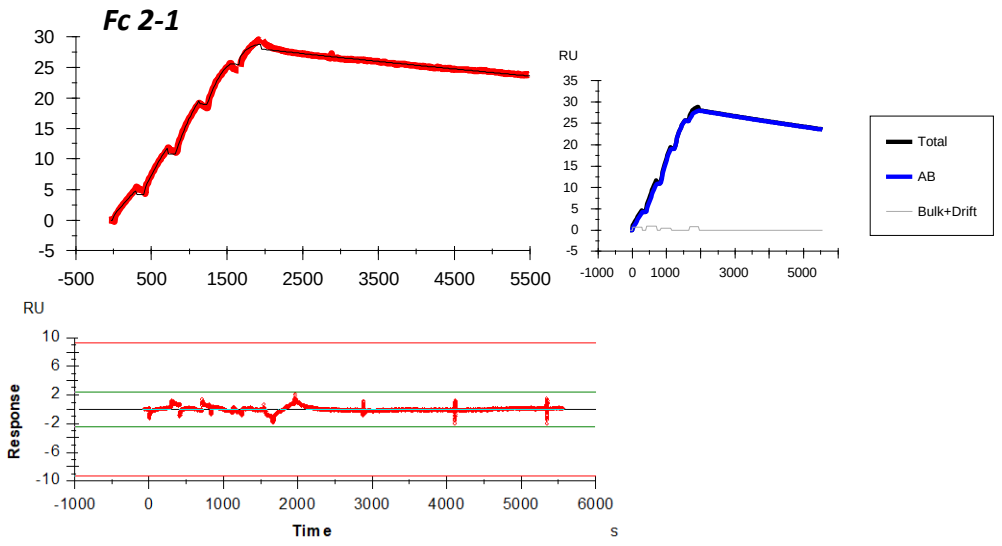
Fig S4: PGT151 fab vs CZA97-2G12 purified: MCK……7-12

Fig 11: PGT151 fab vs CZA97-PGT151 purified: SCK……14-19

Langmuir

SCK: 3BNC117 fab vs CZA97.012 *2G12-purified*

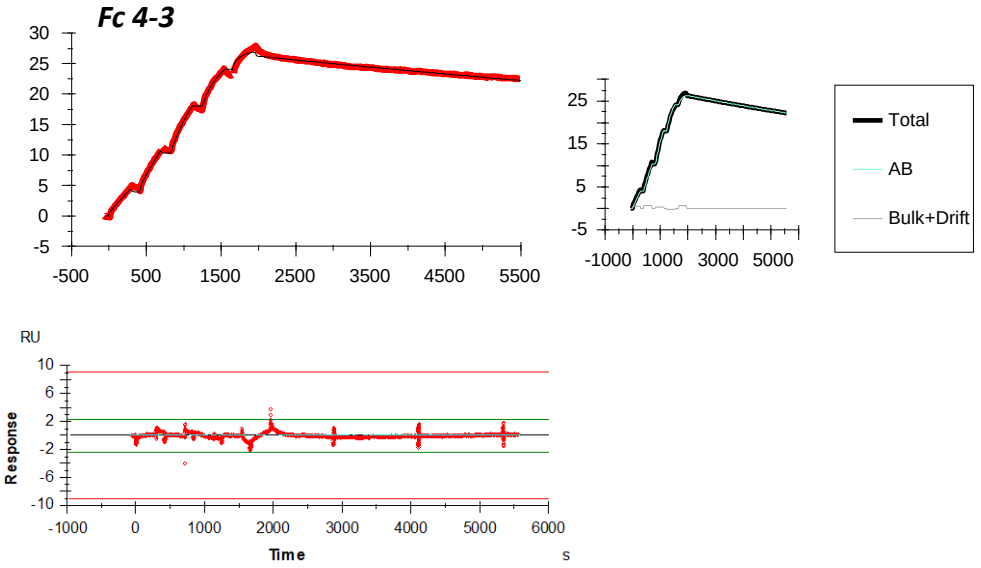
CM5-anti-his



Fc 2-1	Langmuir Global Rmax					
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	354	72	10.2	28	2.8

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	8.73E+03	4.83E-05	5.53E-09	28.37		4.59E+13				0.096	1
Cycle: 4					6.25E-08		50	1.69E+14	0.68		
					1.25E-07				0.94		
					2.50E-07				0.49		
					5.00E-07				9.2E-04		
					1.00E-06				0.85		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.73E+03	1.50E+03	4.83E-05	8.10E+02	28.4	7.40E+03		4.59E+13	2.20E-02			
Cycle: 4							6.25E-08			50	0.7	120
							1.25E-07				0.9	140
							2.50E-07				0.5	60
							5.00E-07				0	0.12
							1.00E-06				0.8	130



Fc 4-3	Langmuir Global Rmax					
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	354	65.8	9.3	27	2.9

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	8.94E+03	4.68E-05	5.24E-09	26.6		5.49E+20				0.0967	1
Cycle: 4					6.25E-08		50	2.02E+21	0.52		
					1.25E-07				0.73		
					2.50E-07				0.30		
					5.00E-07				-2.2E-01		
					1.00E-06				0.67		

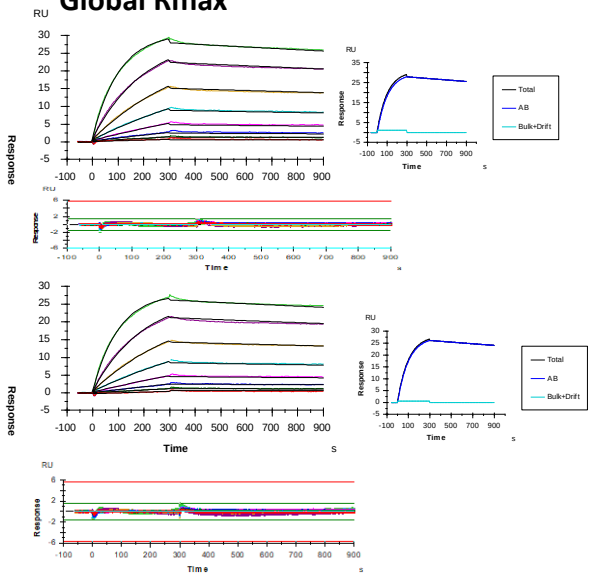
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.94E+03	1.40E+03	4.68E-05	7.30E+02	26.6	7.00E+03		5.49E+20	1.50E-04			
Cycle: 4							6.25E-08			50	0.5	89
							1.25E-07				0.7	100
							2.50E-07				0.3	36
							5.00E-07				-0.2	-30
							1.00E-06				0.7	100

Langmuir

MCK: 3BNC117 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

Global Rmax



Fc 2-1 — Langmuir Global Rmax

MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	78	11.0	30	2.7

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	9.60E+03	1.45E-04	1.51E-08	30		3.37E+20				0.0608	3
Cycle: 5 1000 nM					1.00E-06		50	1.24E+21	1.15		
Cycle: 6 500 nM					5.00E-07		50	1.24E+21	0.91		
Cycle: 7 250 nM					2.50E-07		50	1.24E+21	0.73		
Cycle: 8 125 nM					1.25E-07		50	1.24E+21	0.61		
Cycle: 9 62.5 nM					6.25E-08		50	1.24E+21	0.45		
Cycle: 10 31.2 nM					3.12E-08		50	1.24E+21	0.23		
Cycle: 11 15.6 nM					1.56E-08		50	1.24E+21	0.11		
Cycle: 12 7.8 nM					7.80E-09		50	1.24E+21	0.09		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	9.60E+03	2.80E+03	1.45E-04	3.20E+02	30	4.50E+03		3.37E+20	3.50E-04			
Cycle: 5 1000 nM							1.00E-06			50	1.1	200
Cycle: 6 500 nM							5.00E-07			50	0.9	170
Cycle: 7 250 nM							2.50E-07			50	0.7	150
Cycle: 8 125 nM							1.25E-07			50	0.6	130
Cycle: 9 62.5 nM							6.25E-08			50	0.5	99
Cycle: 10 31.2 nM							3.12E-08			50	0.2	51
Cycle: 11 15.6 nM							1.56E-08			50	0.1	24
Cycle: 12 7.8 nM							7.80E-09			50	0.1	21

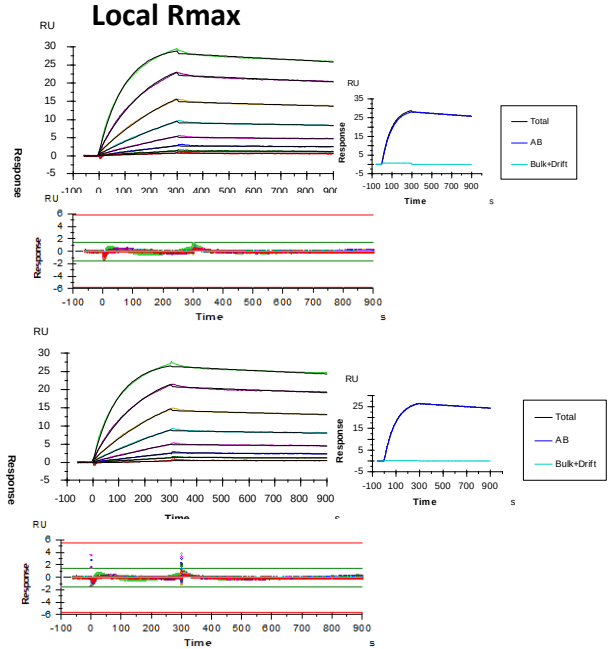
Fc 4-3 — Langmuir Global Rmax

MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	72	10.2	28	2.8

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	9.86E+03	1.37E-04	1.39E-08	28		2.11E+13				0.0618	3
Cycle: 5 1000 nM					1.00E-06		50	7.77E+13	0.56		
Cycle: 6 500 nM					5.00E-07		50	7.77E+13	0.54		
Cycle: 7 250 nM					2.50E-07		50	7.77E+13	0.53		
Cycle: 8 125 nM					1.25E-07		50	7.77E+13	0.44		
Cycle: 9 62.5 nM					6.25E-08		50	7.77E+13	0.23		
Cycle: 10 31.2 nM					3.12E-08		50	7.77E+13	0.04		
Cycle: 11 15.6 nM					1.56E-08		50	7.77E+13	-0.01		
Cycle: 12 7.8 nM					7.80E-09		50	7.77E+13	-0.23		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	9.86E+03	2.70E+03	1.37E-04	2.80E+02	27.9	4.20E+03		2.11E+13	9.40E-02			
Cycle: 5 1000 nM							1.00E-06			50	0.6	99
Cycle: 6 500 nM							5.00E-07			50	0.5	100
Cycle: 7 250 nM							2.50E-07			50	0.5	110
Cycle: 8 125 nM							1.25E-07			50	0.4	94
Cycle: 9 62.5 nM							6.25E-08			50	0.2	51
Cycle: 10 31.2 nM							3.12E-08			50	0	9.1
Cycle: 11 15.6 nM							1.56E-08			50	0	-2.8
Cycle: 12 7.8 nM							7.80E-09			50	-0.2	-50

Local Rmax



Fc 2-1 — Langmuir Local Rmax

MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	78	11.0	30	2.7

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.01E+04	1.45E-04	1.43E-08			2.76E+19				0.028	2
Cycle: 5 1000 nM				29.91	1.00E-06		50	1.02E+20	0.75		
Cycle: 6 500 nM				28.84	5.00E-07		50	1.02E+20	0.98		
Cycle: 7 250 nM				28.5	2.50E-07		50	1.02E+20	0.80		
Cycle: 8 125 nM				29.57	1.25E-07		50	1.02E+20	0.44		
Cycle: 9 62.5 nM				30.22	6.25E-08		50	1.02E+20	0.30		
Cycle: 10 31.2 nM				31.37	3.12E-08		50	1.02E+20	0.10		
Cycle: 11 15.6 nM				30.32	1.56E-08		50	1.02E+20	0.06		
Cycle: 12 7.8 nM				31.08	7.80E-09		50	1.02E+20	0.06		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.01E+04	9.40E+02	1.45E-04	4.70E+02				2.76E+19	4.80E-05			
Cycle: 5 1000 nM					29.9	4800	1.00E-06			50	0.8	110
Cycle: 6 500 nM					28.8	2100	5.00E-07			50	1	210
Cycle: 7 250 nM					28.5	1400	2.50E-07			50	0.8	220
Cycle: 8 125 nM					29.6	1100	1.25E-07			50	0.4	130
Cycle: 9 62.5 nM					30.2	940	6.25E-08			50	0.3	91
Cycle: 10 31.2 nM					31.4	780	3.12E-08			50	0.1	29
Cycle: 11 15.6 nM					30.3	520	1.56E-08			50	0.1	20
Cycle: 12 7.8 nM					31.1	310	7.80E-09			50	0.1	19

Fc 4-3 — Langmuir Local Rmax

MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	72	10.2	28	2.8

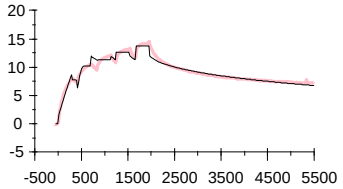
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.04E+04	1.36E-04	1.31E-08			9.21E+12				0.0269	2
Cycle: 5 1000 nM				27.92	1.00E-06		50	3.39E+13	0.16		
Cycle: 6 500 nM				26.72	5.00E-07		50	3.39E+13	0.69		
Cycle: 7 250 nM				26.78	2.50E-07		50	3.39E+13	0.54		
Cycle: 8 125 nM				27.63	1.25E-07		50	3.39E+13	0.28		
Cycle: 9 62.5 nM				28.26	6.25E-08		50	3.39E+13	0.08		
Cycle: 10 31.2 nM				28.46	3.12E-08		50	3.39E+13	-0.05		
Cycle: 11 15.6 nM				28.26	1.56E-08		50	3.39E+13	-0.05		
Cycle: 12 7.8 nM				22.08	7.80E-09		50	3.39E+13	-0.17		

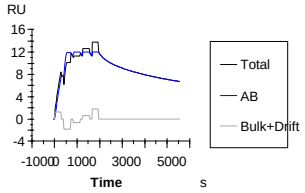
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.04E+04	9.10E+02	1.36E-04	4.30E+02				9.21E+12	5.30E-02			
Cycle: 5 1000 nM					27.9	4800	1.00E-06			50	0.2	25
Cycle: 6 500 nM					26.7	2100	5.00E-07			50	0.7	150
Cycle: 7 250 nM					26.8	1300	2.50E-07			50	0.5	150
Cycle: 8 125 nM					27.6	1100	1.25E-07			50	0.3	84
Cycle: 9 62.5 nM					28.3	920	6.25E-08			50	0.1	25
Cycle: 10 31.2 nM					28.5	750	3.12E-08			50	0	-15
Cycle: 11 15.6 nM					28.3	510	1.56E-08			50	-0.1	-16
Cycle: 12 7.8 nM					22.1	230	7.80E-09			50	-0.2	-54

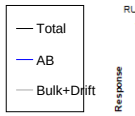
Langmuir

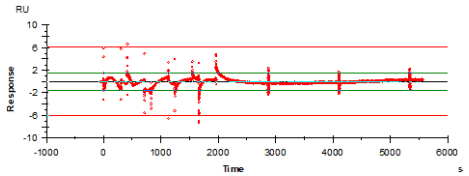
SCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his









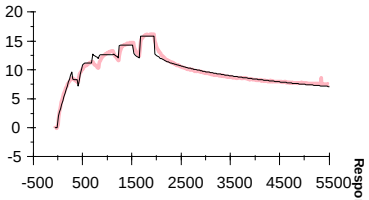
Fc 2-1

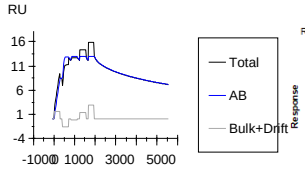
Langmuir fit

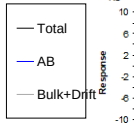
MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	85	12.0	13	1.1

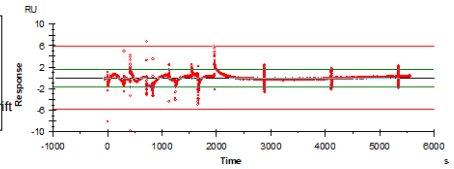
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.5E+05	9.8E-04	1.3E-09	13		133621.2				0.287116	15.14376
Cycle: 5					6.3E-08		50	4.9E+05	1.6		
					1.3E-07				-1.6		
					2.5E-07				-0.2		
					5.0E-07				1.4		
					1.0E-06				2.9		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.5E+05	2.6E+01	9.8E-04	2.7E+01	13	948		1.34E+05	274			
Cycle: 5							6.3E-08			50	1.6	133
							1.3E-07				-1.6	-92
							2.5E-07				-0.2	-15
							5.0E-07				1.4	81
							1.0E-06				2.9	173









Fc 3-4

Fc=4-3

Langmuir fit

MA	ML	RL	(MA/ML)*RL	Rmax	Sm
50	354	79	11.2	12.08	1.1

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.1E+05	9.1E-04	1.3E-09	12.084754		124215				0.237228	11.64904
Cycle: 5					6.3E-08		50	4.6E+05	1.2		
					1.3E-07				-1.8		
					2.5E-07				-0.7		
					5.0E-07				0.6		
					1.0E-06				1.7		

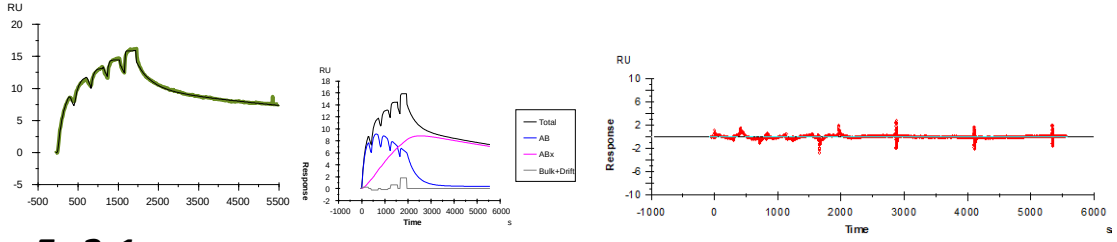
Parameters

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.1E+05	35	9.1E-04	37	12	1192		1.24E+05	339			
Cycle: 5							6.3E-08			50	1.2	115
							1.3E-07				-1.8	-127
							2.5E-07				-0.7	-52
							5.0E-07				0.6	46
							1.0E-06				1.7	128

Conformational change

SCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

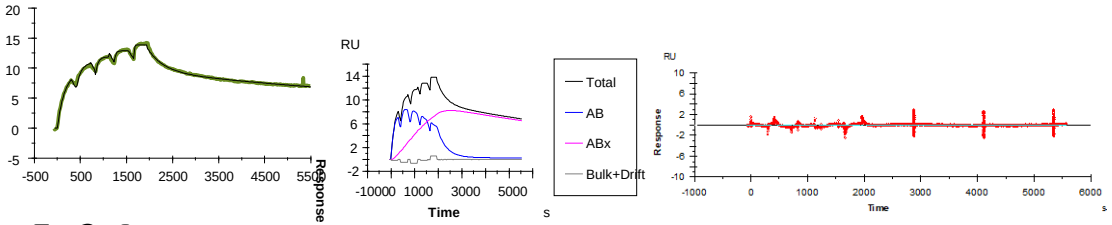


Fc 2-1

Conformational change							
MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
50	354	85	12	14.3	1.2	2.70E-08	5.7

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.42E+04	2.00E-03	6.48E-04	1.14E-04	4.05E-09	14.29		8.88E+14				0.0467	N/A
Cycle: 5							6.25E-08		50	3.27E+15	0.1794		
							1.25E-07				-0.2877		
							2.50E-07				-0.2107		
							5.00E-07				0.5713		
							1.00E-06				1.777		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.42E+04	4.80E+02	2.0E-03	2.70E+02	6.48E-04	4.8E+02	1.14E-04	3.40E+02	14.3	2.60E+03		8.88E+14	0.0054			
Cycle: 5											6.25E-08			50	0.2	24
											1.25E-07				-0.3	-48
											2.50E-07				-0.2	-40
											5.00E-07				0.6	98
											1.00E-06				1.8	2.80E+02



Fc 3-4

Conformational change							
MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
50	354	79	11	13.4	1.2	2.80E-08	5.7

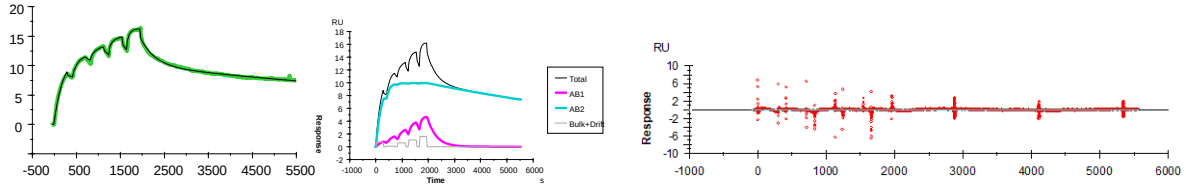
Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.43E+04	2.08E-03	6.62E-04	1.16E-04	4.16E-09	13.39		2.83E+14				0.0467	N/A
Cycle: 5							6.25E-08		50	1.04E+15	-0.1039		
							1.25E-07				-0.477		
							2.50E-07				-0.6194		
							5.00E-07				-0.1007		
							1.00E-06				0.6627		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.43E+04	4.50E+02	0.002079	2.60E+02	6.62E-04	4.60E+02	1.16E-04	3.30E+02	13.4	2.50E+03		2.83E+14	0.0083			
Cycle: 5											6.25E-08			50	-0.1	-14
											1.25E-07				-0.5	-80
											2.50E-07				-0.6	-1.2E+02
											5.00E-07				-0.1	-17
											1.00E-06				0.7	1.0E+02

Heterogeneous Ligand fit

SCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

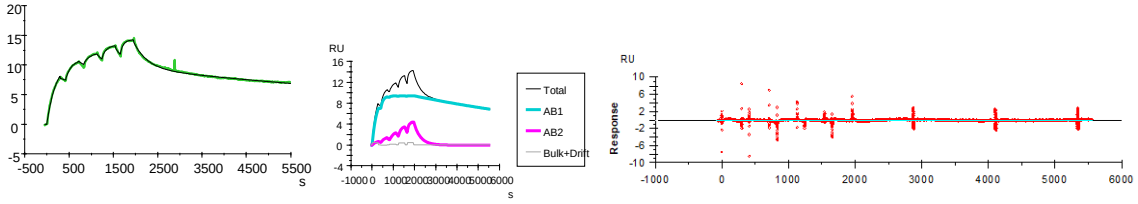


Fc 2-1

Heterogeneous Ligand fit								
MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2
50	354	85	12.0	5.8	0.48	10.0	0.83	1.3

Curve	ka2 (1/Ms	kd2 (1/s)	KD2 (M)	ka1 (1/Ms	kd1 (1/s)	KD1 (M)	Rmax2 (RU	Rmax1 (RU	Conc (M)	tc	Flow (ul/r	kt (RU/Ms	RI (RU)	Chi² (RU²)	U-value
	7.71E+04	8.48E-05	1.10E-09	1.24E+04	2.99E-03	2.4E-07	9.984	5.827		1.02E+17				0.0738	N/A
Cycle: 5									6.25E-08		50	3.75E+17	0.7191		
									1.25E-07				0.1111		
									2.50E-07				0.5764		
									5.00E-07				1.061		
									1.00E-06				1.581		

Curve	ka1 (1/Ms	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.24E+04	1.50E+02	0.002985	2.20E+02	7.71E+04	4.3E+02	8.48E-05	2.70E+02	5.827	3.60E+02	9.984	1.30E+03		1.02E+17	6.70E-05			
Cycle: 5													6.25E-08			50	0.7	93
													1.25E-07				0.1	16
													2.50E-07				0.6	77
													5.00E-07				1.1	140
													1.00E-06				1.6	200



Fc 3-4

Heterogeneous Ligand fit								
MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2
50	354	79	11.2	9.443	0.85	5.7	0.51	1.4

Curve	ka1 (1/Ms	kd1 (1/s)	KD1 (M)	ka2 (1/Ms	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc	Flow (ul/r	kt (RU/Ms	RI (RU)	Chi² (RU²)	U-value
	7.48E+04	8.86E-05	1.18E-09	1.13E+04	3.24E-03	2.87E-07	9.443	5.664		4.08E+16				0.0449	N/A
Cycle: 5									6.25E-08		50	1.50E+17	0.4648		
									1.25E-07				-0.08811		
									2.50E-07				0.1252		
									5.00E-07				0.3816		
									1.00E-06				0.4415		

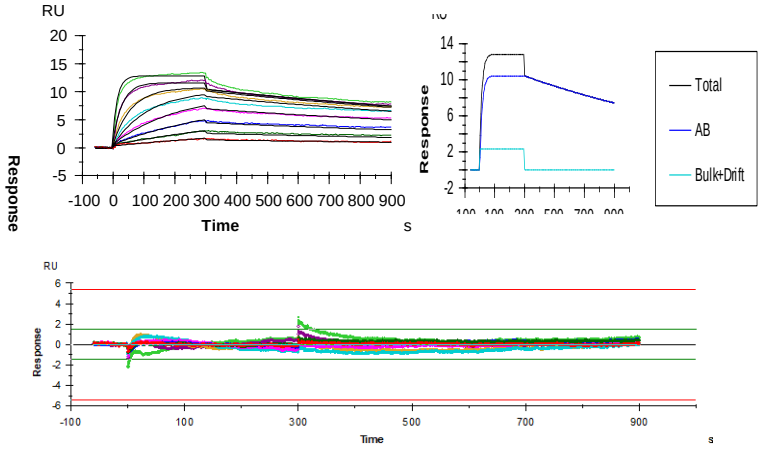
Curve	ka1 (1/Ms	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.48E+04	5.30E+02	8.86E-05	3.60E+02	1.13E+04	1.70E+02	0.003236	2.70E+02	9.443	1.60E+03	5.664	3.90E+02		4.08E+16	2.00E-05			
Cycle: 5													6.25E-08			50	0.5	78
													1.25E-07				-0.1	-16
													2.50E-07				0.1	22
													5.00E-07				0.4	64
													1.00E-06				0.4	69

Langmuir

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

Global Rmax

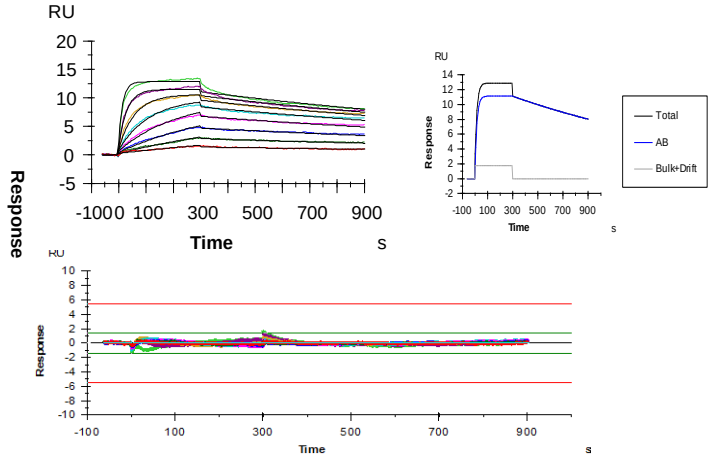


Curve:	Fc=2-1	**Langmuir Global Rmax**										
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	354	73	10.3	10.6	1.0						
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value	
	6.51E+04	5.64E-04	8.67E-09	10.6		5.64E+19				0.14	3.1	
Cycle: 4 1000 nM					1.00E-06		50	2.08E+20	2.4			
Cycle: 5 500 nM					5.0E-07		50	2.08E+20	1.2			
Cycle: 6 250 nM					2.5E-07		50	2.08E+20	0.55			
Cycle: 7 125 nM					1.3E-07		50	2.08E+20	0.39			
Cycle: 8 62.5 nM					6.3E-08		50	2.08E+20	0.63			
Cycle: 9 31.25 nM					3.1E-08		50	2.08E+20	0.60			
Cycle: 10 15.6 nM					1.6E-08		50	2.08E+20	0.49			
Cycle: 11 7.8 nM					7.8E-09		50	2.08E+20	0.33			

Parameters

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	6.51E+04	9.40E+02	5.64E-04	3.93E+02	10.556	1935.902		5.64E+19	1.4E-04			
Cycle: 4 1000 nM							1.00E-06			50	2.4	287
Cycle: 5 500 nM							5.0E-07			50	1.2	149
Cycle: 6 250 nM							2.5E-07			50	0.5	70
Cycle: 7 125 nM							1.3E-07			50	0.4	50
Cycle: 8 62.5 nM							6.3E-08			50	0.6	84
Cycle: 9 31.25 nM							3.1E-08			50	0.6	84
Cycle: 10 15.6 nM							1.6E-08			50	0.5	72
Cycle: 11 7.8 nM							7.8E-09			50	0.3	49

Local Rmax



Curve:	Fc=2-1	**Langmuir Local Rmax**										
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	354	73	10.3	11	1.1						
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value	
	6.6E+04	5.4E-04	8.19E-09			2.72E+19				0.048	1.9	
Cycle: 4 1000 nM				11	1.0E-06		50	1E+20	1.7			
Cycle: 5 500 nM				11	5.0E-07		50	1E+20	1.1			
Cycle: 6 250 nM				10	2.5E-07		50	1E+20	0.94			
Cycle: 7 125 nM				10	1.3E-07		50	1E+20	0.86			
Cycle: 8 62.5 nM				10	6.3E-08		50	1E+20	0.69			
Cycle: 9 31.25 nM				11	3.1E-08		50	1E+20	0.43			
Cycle: 10 15.6 nM				12	1.6E-08		50	1E+20	0.29			
Cycle: 11 7.8 nM				11	7.8E-09		50	1E+20	0.31			

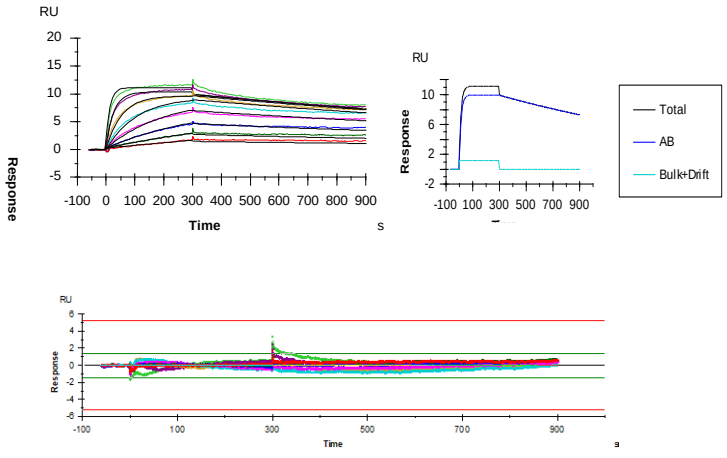
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	6.63E+04	5.28E+02	5.43E-04	6.33E+02				2.72E+19	0.000283			
Cycle: 4 1000 nM					11	2.6E+03	1.0E-06			50	1.7	300
Cycle: 5 500 nM					11	2.5E+03	5.0E-07			50	1.1	189
Cycle: 6 250 nM					10	2.3E+03	2.5E-07			50	0.94	154
Cycle: 7 125 nM					10	1.5E+03	1.3E-07			50	0.86	157
Cycle: 8 62.5 nM					10	9.1E+02	6.3E-08			50	0.69	144
Cycle: 9 31.25 nM					11	6.5E+02	3.1E-08			50	0.43	96
Cycle: 10 15.6 nM					12	5.1E+02	1.6E-08			50	0.29	67
Cycle: 11 7.8 nM					11	3.5E+02	7.8E-09			50	0.31	70

Langmuir

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

Global Rmax



Langmuir Global Rmax

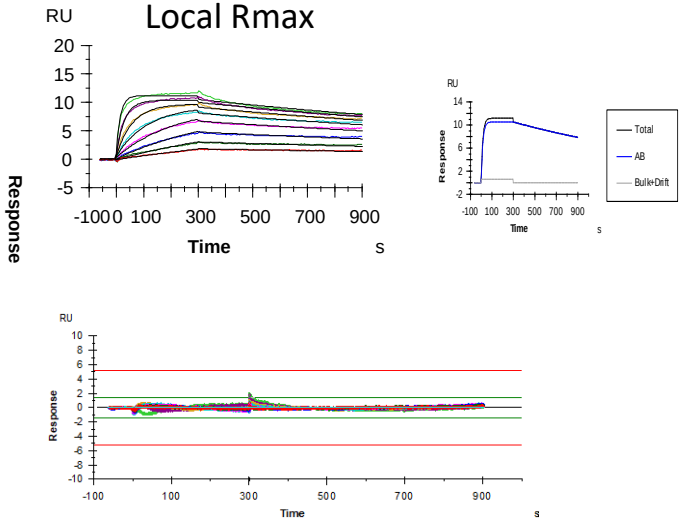
Curve:	Fc=4-3					
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	354	66.3	9.4	10	1.1

Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.29E+04	5.12E-04	7.02E-09	10		4.75E+18				0.15	3.1
Cycle: 4 1000 nM					1.00E-06		50	1.8E+19	1.17		
Cycle: 5 500 nM					5.0E-07		50	1.8E+19	0.45		
Cycle: 6 250 nM					2.5E-07		50	1.8E+19	-0.09		
Cycle: 7 125 nM					1.3E-07		50	1.8E+19	-0.14		
Cycle: 8 62.5 nM					6.3E-08		50	1.8E+19	0.13		
Cycle: 9 31.25 nM					3.1E-08		50	1.8E+19	0.18		
Cycle: 10 15.6 nM					1.6E-08		50	1.8E+19	0.23		
Cycle: 11 7.8 nM					7.8E-09		50	1.8E+19	0.19		

Parameters

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.29E+04	8.60E+02	5.12E-04	3.30E+02	10.02444	1786.645		4.75E+18	0.00039			
Cycle: 4 1000 nM							1.00E-06			50	1.2	133
Cycle: 5 500 nM							5.0E-07			50	0.4	52
Cycle: 6 250 nM							2.5E-07			50	-0.1	-10
Cycle: 7 125 nM							1.3E-07			50	-0.1	-17
Cycle: 8 62.5 nM							6.3E-08			50	0.1	16
Cycle: 9 31.25 nM							3.1E-08			50	0.2	24
Cycle: 10 15.6 nM							1.6E-08			50	0.2	32
Cycle: 11 7.8 nM							7.8E-09			50	0.2	27

Local Rmax



Curve:	Fc=4-3					
	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	354	66.3	9.4	10	1.1

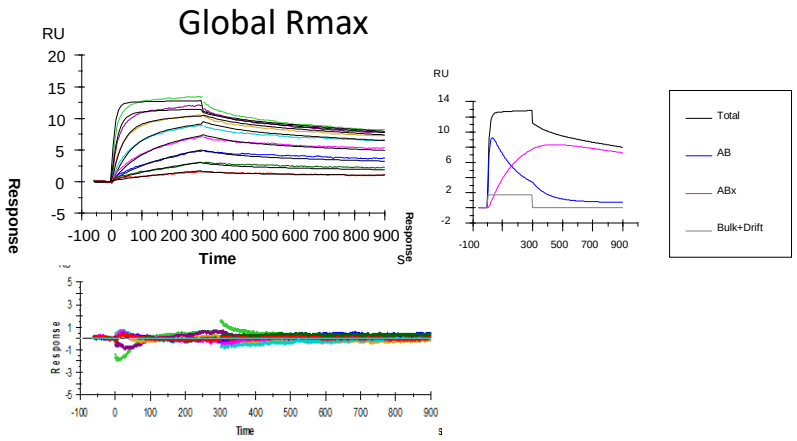
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	6.6E+04	4.8E-04	7.34E-09			2.07E+18				0.045	1.9
Cycle: 4 1000 nM				11	1.0E-06		50	7.64E+18	0.7		
Cycle: 5 500 nM				10	5.0E-07		50	7.64E+18	0.4		
Cycle: 6 250 nM				10	2.5E-07		50	7.64E+18	0.48		
Cycle: 7 125 nM				9	1.3E-07		50	7.64E+18	0.55		
Cycle: 8 62.5 nM				10	6.3E-08		50	7.64E+18	0.37		
Cycle: 9 31.25 nM				11	3.1E-08		50	7.64E+18	0.11		
Cycle: 10 15.6 nM				13	1.6E-08		50	7.64E+18	0.01		
Cycle: 11 7.8 nM				14	7.8E-09		50	7.64E+18	-0.04		

Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	6.60E+04	5.22E+02	4.84E-04	5.72E+02				2.07E+18	0.000174			
Cycle: 4 1000 nM					11	2615	1.0E-06			50	0.7	116
Cycle: 5 500 nM					10	2511	5.0E-07			50	0.4	67
Cycle: 6 250 nM					10	2292	2.5E-07			50	0.48	82
Cycle: 7 125 nM					9	1539	1.3E-07			50	0.55	104
Cycle: 8 62.5 nM					10	903	6.3E-08			50	0.37	79
Cycle: 9 31.25 nM					11	649	3.1E-08			50	0.11	26
Cycle: 10 15.6 nM					13	522	1.6E-08			50	0.01	3
Cycle: 11 7.8 nM					14	417	7.8E-09			50	-0.04	-9

Conformational change

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

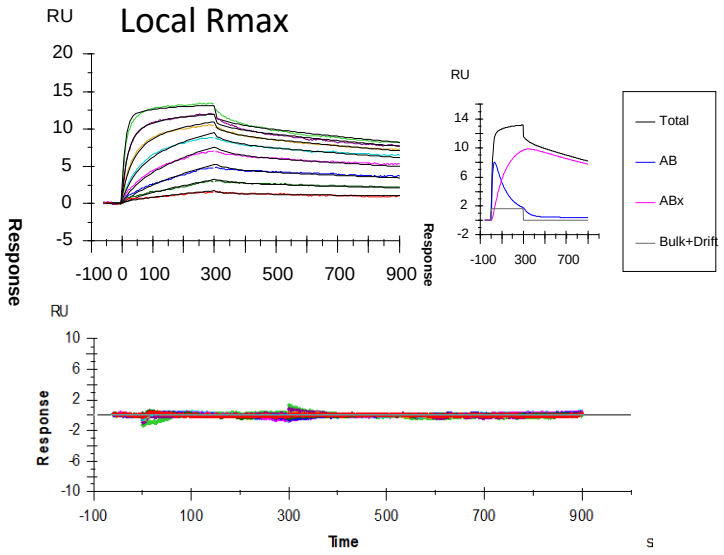
CM5-anti-his



Curve:	Fc=2-1	Model:	Two State Reaction		Global Rmax			
	MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
	50	354	73	10	11.32	1.1	4.54E-08	5.8

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	9.63E+04	0.004372	0.005114	8.87E-04	6.71E-09	11.32		6.55E+12				0.0887	N/A
Cycle: 4 1000 nM							1.00E-06		50	2.41E+13	1.7		
Cycle: 5 500 nM							5.00E-07		50	2.41E+13	0.5		
Cycle: 6 250 nM							2.50E-07		50	2.41E+13	-0.2		
Cycle: 7 125 nM							1.25E-07		50	2.41E+13	-0.4		
Cycle: 8 62.5 nM							6.25E-08		50	2.41E+13	-0.1		
Cycle: 9 31.25 nM							3.13E-08		50	2.41E+13	0.1		
Cycle: 10 15.6 nM							1.56E-08		50	2.41E+13	0.2		
Cycle: 11 7.8 nM							7.80E-09		50	2.41E+13	0.2		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	9.63E+04	8.20E+02	0.004372	2.70E+02	0.005114	3.10E+02	8.87E-04	2.50E+02	11.3	3.10E+03		6.55E+12	1.90E+02			
Cycle: 4 1000 nM											1.00E-06			50	1.7	3.20E+02
Cycle: 5 500 nM											5.00E-07			50	0.5	2.10E+02
Cycle: 6 250 nM											2.50E-07			50	-0.2	-1.90E+02
Cycle: 7 125 nM											1.25E-07			50	-0.4	-2.00E+02
Cycle: 8 62.5 nM											6.25E-08			50	-0.1	-1.90E+02
Cycle: 9 31.25 nM											3.13E-08			50	0.1	1.90E+02
Cycle: 10 15.6 nM											1.56E-08			50	0.2	1.90E+02
Cycle: 11 7.8 nM											7.80E-09			50	0.2	1.90E+02



Curve:	Fc=2-1		Model:	Two State Reaction				
	MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
	50	354	73	10	12.0	1.2	1.34E-07	10.0

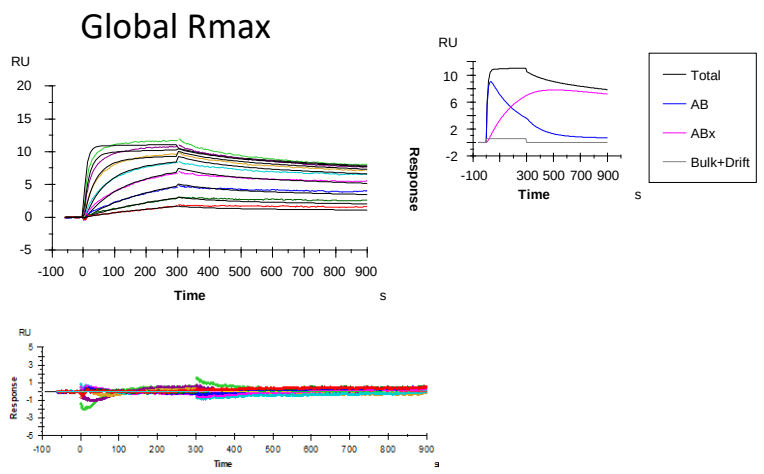
Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.67E+04	1.03E-02	9.26E-03	9.25E-04	1.22E-08			16590650				0.036664	N/A
Cycle: 4 1000 nM						12	1.0E-06		50	6.1E+07	1.6		
Cycle: 5 500 nM						11	5.0E-07		50	6.1E+07	1.0		
Cycle: 6 250 nM						12	2.5E-07		50	6.1E+07	0.71		
Cycle: 7 125 nM						13	1.3E-07		50	6.1E+07	0.35		
Cycle: 8 62.5 nM						15	6.3E-08		50	6.1E+07	0.07		
Cycle: 9 31.25 nM						17	3.1E-08		50	6.1E+07	-0.07		
Cycle: 10 15.6 nM						19	1.6E-08		50	6.1E+07	-0.03		
Cycle: 11 7.8 nM						17	7.8E-09		50	6.1E+07	0.14		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.67E+04	2.49E+02	1.03E-02	1.04E+02	9.26E-03	2.11E+02	9.25E-04	2.14E+02				1.66E+07	3.9			
Cycle: 4 1000 nM									12	1892	1.0E-06			50	1.6	271
Cycle: 5 500 nM									11	1395	5.0E-07			50	1.0	168
Cycle: 6 250 nM									12	876	2.5E-07			50	0.7	113
Cycle: 7 125 nM									13	560	1.3E-07			50	0.3	57
Cycle: 8 62.5 nM									15	416	6.3E-08			50	0.1	13
Cycle: 9 31.25 nM									17	343	3.1E-08			50	-0.1	-14
Cycle: 10 15.6 nM									19	299	1.6E-08			50	0.0	-8
Cycle: 11 7.8 nM									17	257	7.8E-09			50	0.1	35

Conformational change

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

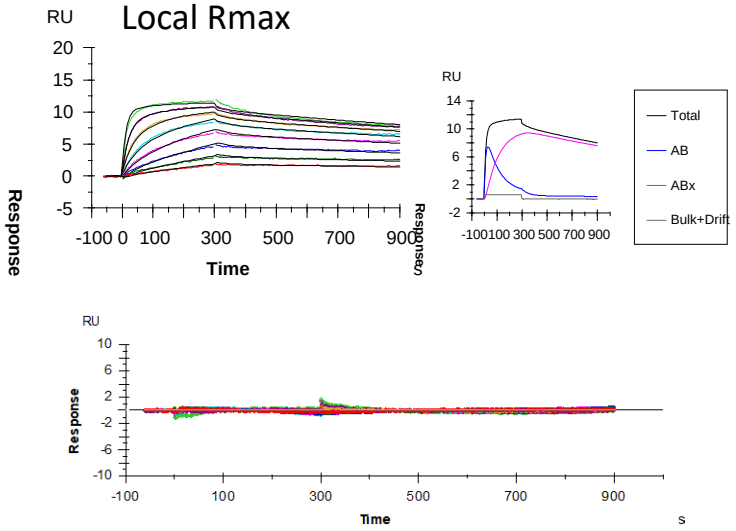
CM5-anti-his



Curve:	Fc=4-3		Model:	Two State Reaction			Global Rmax	
	MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
	50	354	66.3	9.4	10.7	1.1	3.42E-08	6.3

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.04E+05	0.003536	0.004381	7.01E-04	4.71E-09	10.7		6.50E+12				0.111	N/A
Cycle: 4 1000 nM							1.00E-06		50	2.40E+13	0.5		
Cycle: 5 500 nM							5.00E-07		50	2.40E+13	-0.2		
Cycle: 6 250 nM							2.50E-07		50	2.40E+13	-0.7		
Cycle: 7 125 nM							1.25E-07		50	2.40E+13	-0.8		
Cycle: 8 62.5 nM							6.25E-08		50	2.40E+13	-0.5		
Cycle: 9 31.25 nM							3.13E-08		50	2.40E+13	-0.3		
Cycle: 10 15.6 nM							1.56E-08		50	2.40E+13	-0.1		
Cycle: 11 7.8 nM							7.80E-09		50	2.40E+13	0		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.04E+05	3.40E+02	0.003536	91	0.004381	85	7.01E-04	61	10.7	1.50E+03		6.50E+12	0.49			
Cycle: 4 1000 nM											1.00E-06			50	0.5	56
Cycle: 5 500 nM											5.00E-07			50	-0.2	-21
Cycle: 6 250 nM											2.50E-07			50	-0.7	-85
Cycle: 7 125 nM											1.25E-07			50	-0.8	-98
Cycle: 8 62.5 nM											6.25E-08			50	-0.5	-66
Cycle: 9 31.25 nM											3.13E-08			50	-0.3	-43
Cycle: 10 15.6 nM											1.56E-08			50	-0.1	-12
Cycle: 11 7.8 nM											7.80E-09			50	0	2.6



Curve:	Fc=4-3		Model:	Two State Reaction				
	MA	ML	RL	MA/ML)*RL	Rmax	Sm	KD1	KF
	50	354	66.3	9.4	11.0	1.2	1.20E-07	10.8

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.45E+04	8.95E-03	1.01E-02	9.31E-04	1.02E-08			1.1E+08				0.037309	N/A
Cycle: 4 1000 nM						11	1.0E-06		50	4.1E+08	0.6		
Cycle: 5 500 nM						11	5.0E-07		50	4.1E+08	0.4		
Cycle: 6 250 nM						11	2.5E-07		50	4.1E+08	0.36		
Cycle: 7 125 nM						12	1.3E-07		50	4.1E+08	0.18		
Cycle: 8 62.5 nM						14	6.3E-08		50	4.1E+08	-0.12		
Cycle: 9 31.25 nM						16	3.1E-08		50	4.1E+08	-0.30		
Cycle: 10 15.6 nM						19	1.6E-08		50	4.1E+08	-0.28		
Cycle: 11 7.8 nM						22	7.8E-09		50	4.1E+08	-0.22		

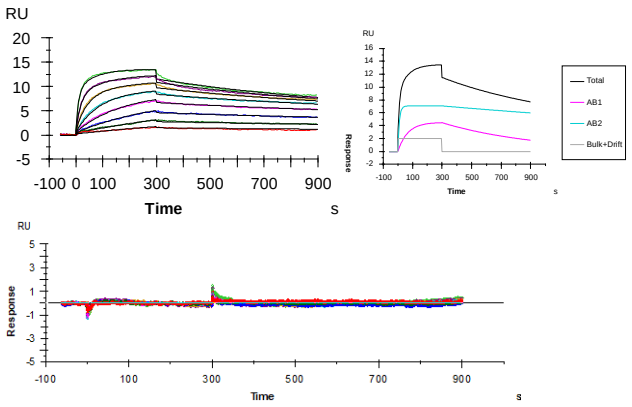
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.45E+04	3.89E+02	8.95E-03	1.01E+02	1.01E-02	1.70E+02	9.31E-04	1.71E+02				1.10E+08	2.5			
Cycle: 4 1000 nM									11	2004	1.0E-06			50	0.6	111
Cycle: 5 500 nM									11	1448	5.0E-07			50	0.4	67
Cycle: 6 250 nM									11	870	2.5E-07			50	0.4	60
Cycle: 7 125 nM									12	541	1.3E-07			50	0.2	29
Cycle: 8 62.5 nM									14	399	6.3E-08			50	-0.1	-21
Cycle: 9 31.25 nM									16	336	3.1E-08			50	-0.3	-59
Cycle: 10 15.6 nM									19	303	1.6E-08			50	-0.3	-61
Cycle: 11 7.8 nM									22	275	7.8E-09			50	-0.2	-53

Heterogeneous Ligand fit

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

CM5-anti-his

Global Rmax



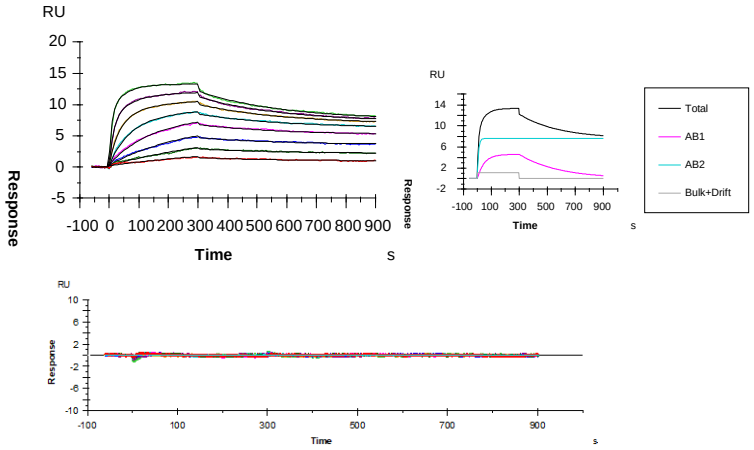
Curve: Fc=2-1 Model: **Heterogeneous Ligand** **Global Rmax**

MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2
50	354	73	10.3	5.0	0.49	7.1	0.69	1.2

Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU)	Rmax2 (RU)	Conc (M)	tc	Flow (ul/min)	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.35E+04	0.001559	1.16E-07	9.72E+04	2.78E-04	2.86E-09	5.032	7.093		1.99E+21				0.0272	N/A
Cycle: 4 1000 nM									1.00E-06		50	7.34E+21	2.0		
Cycle: 5 500 nM									5.00E-07		50	7.34E+21	1.4		
Cycle: 6 250 nM									2.50E-07		50	7.34E+21	1.0		
Cycle: 7 125 nM									1.25E-07		50	7.34E+21	0.69		
Cycle: 8 62.5 nM									6.25E-08		50	7.34E+21	0.63		
Cycle: 9 31.25 nM									3.13E-08		50	7.34E+21	0.48		
Cycle: 10 15.6 nM									1.56E-08		50	7.34E+21	0.38		
Cycle: 11 7.8 nM									7.80E-09		50	7.34E+21	0.26		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU)	T(Rmax1)	Rmax2 (RU)	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.35E+04	2.10E+02	0.001559	2.70E+02	9.72E+04	7.00E+02	2.78E-04	1.70E+02	5.032	4.70E+02	7.093	6.20E+02		1.99E+21	0.0012			
Cycle: 4 1000 nM													1.00E-06			50	2	460
Cycle: 5 500 nM													5.00E-07			50	1.4	360
Cycle: 6 250 nM													2.50E-07			50	1	290
Cycle: 7 125 nM													1.25E-07			50	0.7	190
Cycle: 8 62.5 nM													6.25E-08			50	0.6	180
Cycle: 9 31.25 nM													3.13E-08			50	0.5	150
Cycle: 10 15.6 nM													1.56E-08			50	0.4	120
Cycle: 11 7.8 nM													7.80E-09			50	0.3	84

Local Rmax



Curve: Fc=2-1 Model: **Heterogeneous Ligand**

MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2
50	354	73	10.3	5.6	0.54	7.6	0.74	1.3

Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU)	Rmax2 (RU)	Conc (M)	tc	Flow (ul/min)	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.68E+04	3.55E-03	2.11E-07	1.22E+05	4.23E-07	3.47E-12				4.21E+09				0.011407	N/A
Cycle: 4 1000 nM							5.6	7.6	1.0E-06		50	1.6E+10	1.10		
Cycle: 5 500 nM							5.9	7.3	5.0E-07		50	1.6E+10	0.67		
Cycle: 6 250 nM							6.4	6.9	2.5E-07		50	1.6E+10	0.43		
Cycle: 7 125 nM							7.3	6.4	1.3E-07		50	1.6E+10	0.34		
Cycle: 8 62.5 nM							9.6	5.8	6.3E-08		50	1.6E+10	0.38		
Cycle: 9 31.25 nM							12	5.3	3.1E-08		50	1.6E+10	0.30		
Cycle: 10 15.6 nM							16	5.1	1.6E-08		50	1.6E+10	0.23		
Cycle: 11 7.8 nM							22	4.0	7.8E-09		50	1.6E+10	0.22		

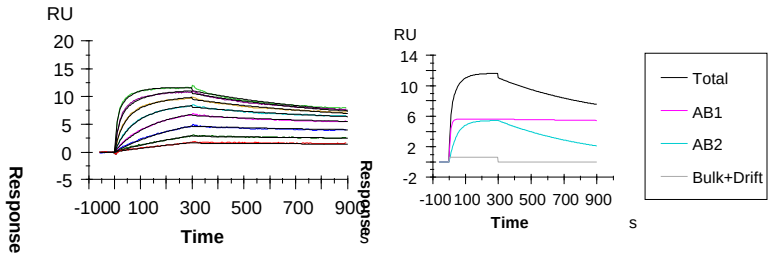
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU)	T(Rmax1)	Rmax2 (RU)	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.68E+04	2.27E+02	3.55E-03	3.38E+02	1.22E+05	6.45E+02	4.23E-07	0.55						4.21E+09	2.503452			
Cycle: 4 1000 nM									6	7.7E+02	7.6	1.0E+03	1.0E-06			50	1.10	245
Cycle: 5 500 nM									6	5.3E+02	7.3	1.1E+03	5.0E-07			50	0.67	164
Cycle: 6 250 nM									6	3.3E+02	6.9	1.1E+03	2.5E-07			50	0.43	118
Cycle: 7 125 nM									7	2.5E+02	6.4	1.1E+03	1.3E-07			50	0.34	99
Cycle: 8 62.5 nM									10	2.1E+02	5.8	9.2E+02	6.3E-08			50	0.38	124
Cycle: 9 31.25 nM									12	1.7E+02	5.3	6.7E+02	3.1E-08			50	0.30	107
Cycle: 10 15.6 nM									16	1.2E+02	5.1	5.0E+02	1.6E-08			50	0.23	83
Cycle: 11 7.8 nM									22	9.5E+01	4.0	3.1E+02	7.8E-09			50	0.22	80

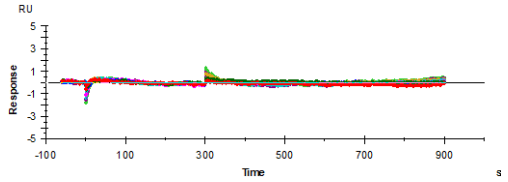
Heterogeneous Ligand fit

MCK: PGT151 fab vs CZA97.012 *2G12-purified*

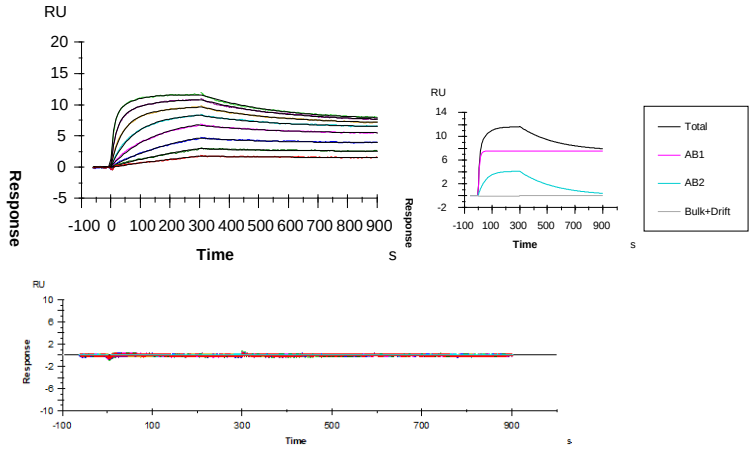
CM5-anti-his

Global Rmax





Local Rmax



Curve: Fc=4-3 Model: **Heterogeneous Ligand** **Global Rmax**

MA	ML	RL	(MA/ML)*RL	Rmax1	Sm 1	Rmax2	Sm 2	Sm1+Sm2
50	354	66.3	9.4	5.6	0.60	5.9	0.63	1.2

Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.24E+05	5.10E-05	4.10E-10	2.00E+04	0.00158	7.90E-08	5.646	5.861		1.14E+20				0.019	N/A
Cycle: 4 1000 nM									1.00E-06		50	4.18E+20	0.59		
Cycle: 5 500 nM									5.00E-07		50	4.18E+20	0.46		
Cycle: 6 250 nM									2.50E-07		50	4.18E+20	0.39		
Cycle: 7 125 nM									1.25E-07		50	4.18E+20	0.30		
Cycle: 8 62.5 nM									6.25E-08		50	4.18E+20	0.22		
Cycle: 9 31.25 nM									3.13E-08		50	4.18E+20	0.08		
Cycle: 10 15.6 nM									1.56E-08		50	4.18E+20	0.11		
Cycle: 11 7.8 nM									7.80E-09		50	4.18E+20	0.10		

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.24E+05	7.10E+02	5.10E-05	30	2.00E+04	3.40E+02	0.00158	4.00E+02	5.646	5.80E+02	5.861	6.40E+02		1.14E+20	4.10E-04			
Cycle: 4 1000 nM													1.00E-06			50	0.60	160
Cycle: 5 500 nM													5.00E-07			50	0.50	140
Cycle: 6 250 nM													2.50E-07			50	0.40	130
Cycle: 7 125 nM													1.25E-07			50	0.30	100
Cycle: 8 62.5 nM													6.25E-08			50	0.20	76
Cycle: 9 31.25 nM													3.13E-08			50	0.10	28
Cycle: 10 15.6 nM													1.56E-08			50	0.10	40
Cycle: 11 7.8 nM													7.80E-09			50	0.10	40

Curve: Fc=4-3 Model: **Heterogeneous Ligand**

MA	ML	RL	(MA/ML)*RL	Rmax1	Sm 1	Rmax2	Sm 2	Sm1+Sm2
50	354	66.3	9.4	7.5	0.80	5.2	0.56	1.4

Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	1.16E+05	9.71E-07	8.38E-12	1.54E+04	3.87E-03	2.51E-07				3.71E+09				0.006499	N/A
Cycle: 4 1000 nM							7.5	5.2	1.0E-06		50	1.4E+10	-0.08		
Cycle: 5 500 nM							7.3	5.5	5.0E-07		50	1.4E+10	-0.12		
Cycle: 6 250 nM							6.9	6.2	2.5E-07		50	1.4E+10	-0.08		
Cycle: 7 125 nM							6.4	7.2	1.3E-07		50	1.4E+10	0.01		
Cycle: 8 62.5 nM							6.1	8.9	6.3E-08		50	1.4E+10	0.08		
Cycle: 9 31.25 nM							6	10.1	3.1E-08		50	1.4E+10	0.04		
Cycle: 10 15.6 nM							6	10.9	1.6E-08		50	1.4E+10	0.03		
Cycle: 11 7.8 nM							7	12.7	7.8E-09		50	1.4E+10	-0.01		

Parameters

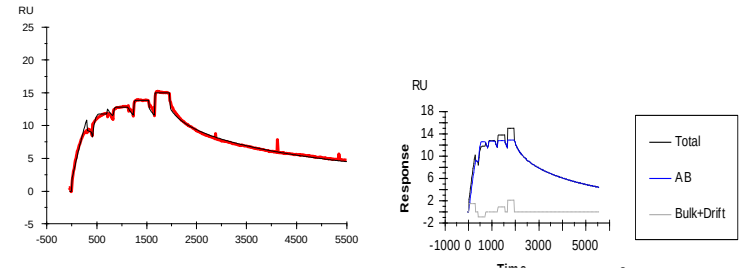
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.16E+05	9.20E+02	9.71E-07	3.18E+00	1.54E+04	2.77E+02	3.87E-03	443.55						3.71E+09	4.181535			
Cycle: 4 1000 nM									7.5	1.8E+03	5.2	9.4E+02	1.0E-06			50	-0.08	-23
Cycle: 5 500 nM									7.3	1.9E+03	5.5	5.6E+02	5.0E-07			50	-0.12	-40
Cycle: 6 250 nM									6.9	2.1E+03	6.2	3.6E+02	2.5E-07			50	-0.08	-28
Cycle: 7 125 nM									6.4	2.1E+03	7.2	2.8E+02	1.3E-07			50	0.01	5
Cycle: 8 62.5 nM									6.1	1.7E+03	8.9	2.3E+02	6.3E-08			50	0.08	36
Cycle: 9 31.25 nM									5.9	1.2E+03	10.1	1.7E+02	3.1E-08			50	0.04	20
Cycle: 10 15.6 nM									6.1	8.5E+02	10.9	1.1E+02	1.6E-08			50	0.03	14
Cycle: 11 7.8 nM									6.6	6.4E+02	12.7	6.9E+01	7.8E-09			50	-0.01	-5

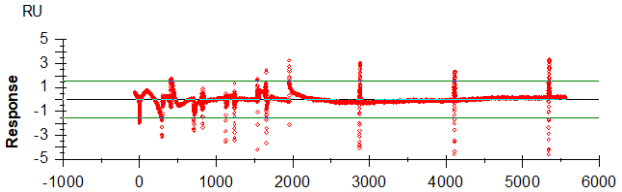
CZA97.012 *PGT151-purified*

Langmuir

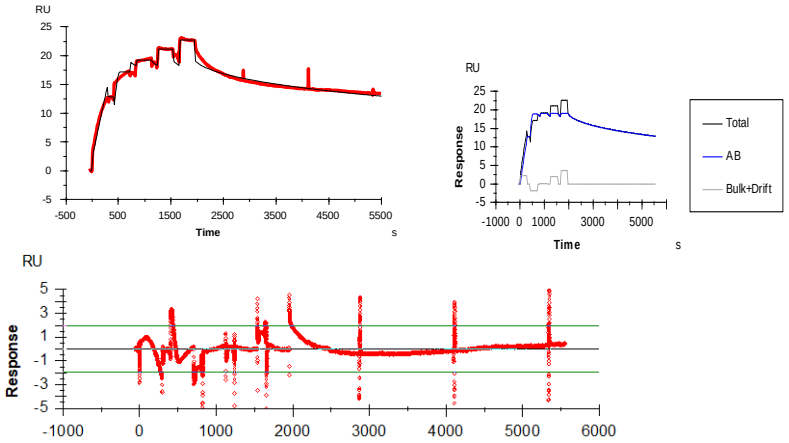
SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his





Curve:	**Fc=3-1**											
Model:	**1:1 Binding**											
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	361	93	13	13	1.0						
Report												
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/min	kt (RU/Ms)	RI (RU)	Chi² (RU	U-value	
	5.0E+05	1.5E-03	3.02E-09	13		1.6E+05				0.10	4.1	
Cycle: 4					6.3E-08		50	6.1E+05	1.5			
					1.3E-07				-0.8			
					2.5E-07				0.0			
					5.0E-07				1.0			
					1.0E-06				2.1			
Parameters												
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min	RI (RU)	T(RI)
	5.0E+05	7.1E+01	1.5E-03	7.0E+01	13	1.5E+03		1.6E+05	3.7E+02			
Cycle: 4							6.3E-08			50	1.5	2.0E+02
							1.3E-07				-0.8	-8.0E+01
							2.5E-07				0.0	2.7E+00
							5.0E-07				1.0	9.7E+01
							1.0E-06				2.1	2.0E+02



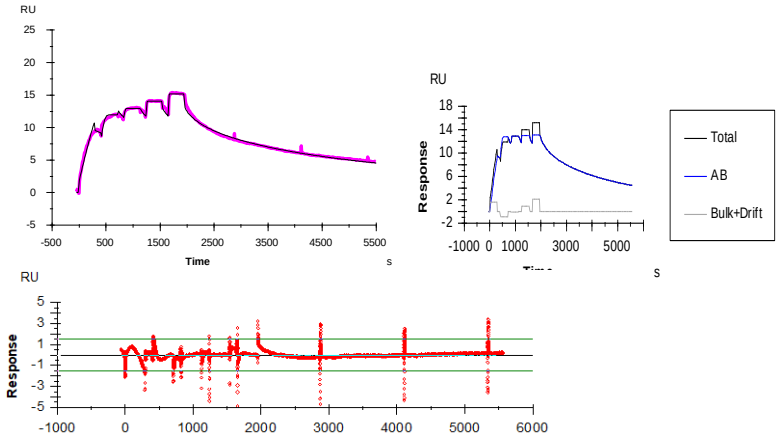
Curve:	**Fc=4-1**											
Model:	**1:1 Binding**											
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	361	104	14	19	1.3						
Report												
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/min	kt (RU/Ms)	RI (RU)	Chi² (RU	U-value	
	9.9E+05	5.9E-04	5.94E-10	19		2.0E+05				0.42	11.6	
Cycle: 4					6.3E-08		50	7.4E+05	2.3			
					1.3E-07				-1.8			
					2.5E-07				0.2			
					5.0E-07				2.0			
					1.0E-06				3.6			
Parameters												
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min	RI (RU)	T(RI)
	9.9E+05	2.4E+01	5.9E-04	2.6E+01	19	1.2E+03		2.0E+05	3.3E+02			
Cycle: 4							6.3E-08			50	2.3	1.6E+02
							1.3E-07				-1.8	-8.7E+01
							2.5E-07				0.2	8.2E+00
							5.0E-07				2.0	1.0E+02
							1.0E-06				3.6	1.8E+02

Exp 1

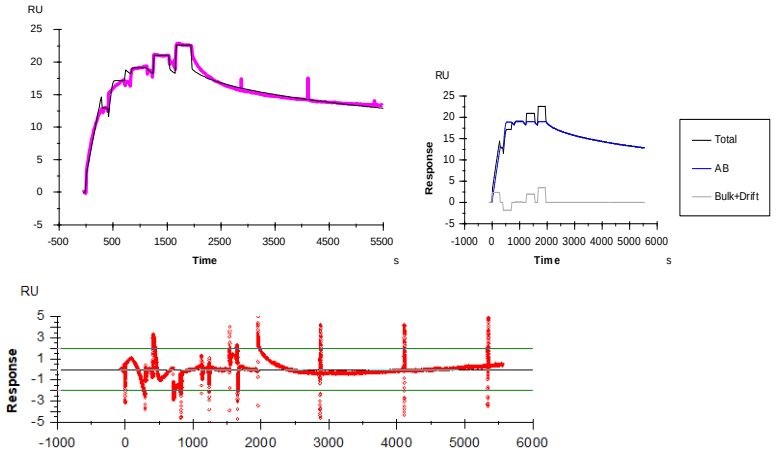
Langmuir

SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his



Curve:	**Fc=3-1**											
Model:	**1:1 Binding**											
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	361	95	13	13	1.0						
Report												
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/min	kt (RU/Ms)	RI (RU)	Chi² (RU	U-value	
	4.9E+05	1.5E-03	3.02E-09	13		1.7E+05				0.10	4.1	
Cycle: 5					6.3E-08		50	6.2E+05	1.6			
					1.3E-07				-0.8			
					2.5E-07				0.0			
					5.0E-07				1.0			
					1.0E-06				2.1			
Parameters												
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min	RI (RU)	T(RI)
	4.9E+05	7.4E+01	1.5E-03	7.3E+01	13	1.6E+03		2.0E+05	3.7E+02			
Cycle: 5							6.3E-08			50	1.6	2.1E+02
							1.3E-07				-0.8	-8.2E+01
							2.5E-07				0.0	-3.3E+00
							5.0E-07				1.0	9.8E+01
							1.0E-06				2.1	2.1E+02



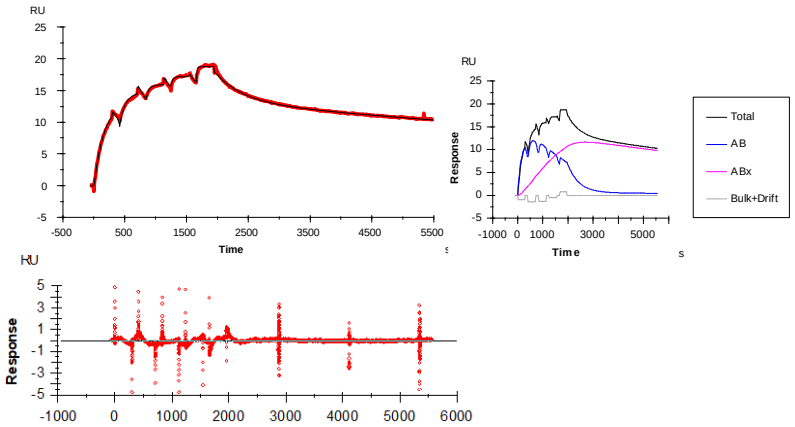
Curve:	**Fc=4-1**											
Model:	**1:1 Binding**											
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm						
	50	361	104	14	19	1.3						
Report												
Curve	ka (1/Ms)	kd (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/min	kt (RU/Ms)	RI (RU)	Chi² (RU	U-value	
	9.3E+05	5.6E-04	5.96E-10	19		2.0E+05				0.40	11.6	
Cycle: 5					6.3E-08		50	7.5E+05	2.4			
					1.3E-07				-1.8			
					2.5E-07				0.1			
					5.0E-07				2.0			
					1.0E-06				3.6			
Parameters												
Curve	ka (1/Ms)	T(ka)	kd (1/s)	T(kd)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min	RI (RU)	T(RI)
	9.3E+05	26	5.6E-04	28	19	1.3E+03		2.0E+05	3.3E+02			
Cycle: 5							6.3E-08			50	2.4	1.7E+02
							1.3E-07				-1.8	-8.9E+01
							2.5E-07				0.1	6.2E+00
							5.0E-07				2.0	1.1E+02
							1.0E-06				3.6	1.9E+02

Exp 2

Conformational change

SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his



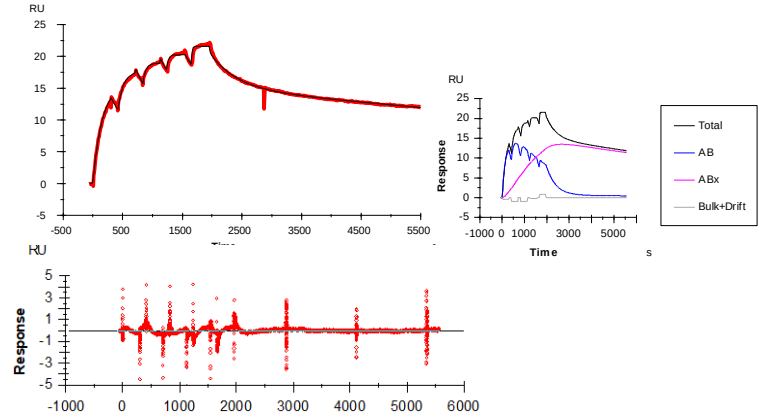
Curve:	**Fc=3-1**					
Model:	**Two State Reaction**					
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	361	93	13	18	1.4

Report

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	7.85E+04	1.57E-03	6.52E-04	1.02E-04	2.69E-09	18		1.05E+15				8.0E-02	N/A
Cycle: 4							6.25E-08		50.0	3.87E+15	-1.0		
							1.25E-07				-1.4		
							2.50E-07				-1.3		
							5.00E-07				-0.5		
							1.00E-06				0.9		

Parameters

Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	7.8E+04	4.7E+02	1.6E-03	2.2E+02	6.5E-04	3.7E+02	1.02E-04	2.6E+02	18	2.8E+03		1.05E+15	1.40E-02			
Cycle: 4											6.25E-08			50	-1.0	-96
											1.25E-07				-1.4	-190
											2.50E-07				-1.3	-190
											5.00E-07				-0.5	-67
											1.00E-06				0.9	110



Curve:	**Fc=4-1**					
Model:	**Two State Reaction**					
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm
	50	361	104	14	21	1.5

Report

Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value
	8.02E+04	1.69E-03	6.56E-04	9.59E-05	2.68E-09	21		6.02E+15				1.7E-01	N/A
Cycle: 4							6.25E-08		50.0	2.22E+16	-0.41		
							1.25E-07				-0.90		
							2.50E-07				-0.89		
							5.00E-07				-0.18		
							1.00E-06				0.90		

Parameters

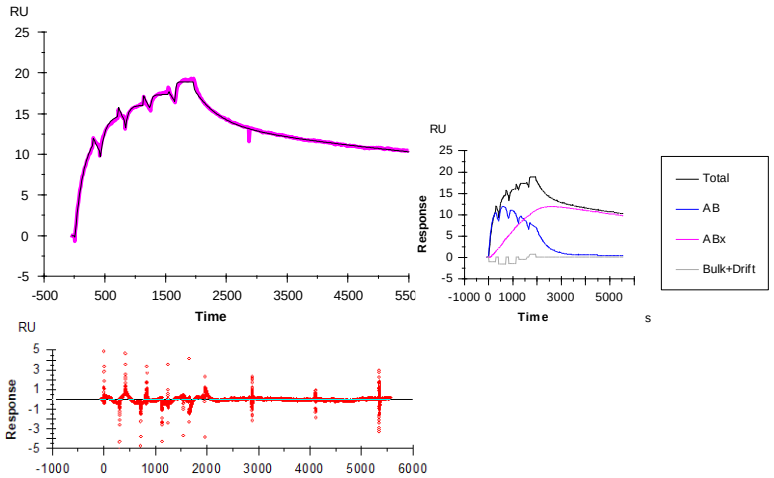
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.0E+04	3.7E+02	1.7E-03	1.9E+02	6.6E-04	3.3E+02	9.59E-05	2.1E+02	20.84	2.2E+03		6.02E+15	1.33E-03			
Cycle: 4											6.25E-08			50	-0.4	-28
											1.25E-07				-0.9	-83
											2.50E-07				-0.9	-92
											5.00E-07				-0.2	-17
											1.00E-06				0.9	78

Exp 1

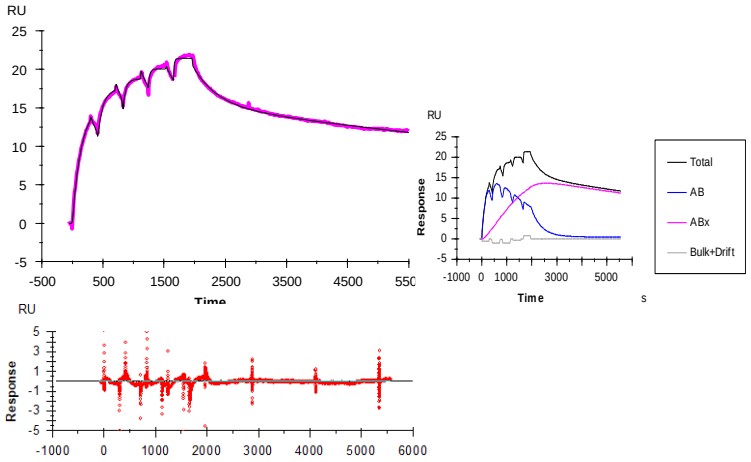
Conformational change

SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his



Curve:	**Fc=3-1**															
Model:	**Two State Reaction**															
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm										
	50	361	95	13	18	1.4										
Report																
Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value			
	8.26E+04	1.70E-03	6.85E-04	1.10E-04	2.86E-09	18		6.64E+14				8.8E-02	N/A			
Cycle: 5							6.25E-08		50.0	2.44E+15	-1.0					
							1.25E-07				-1.4					
							2.50E-07				-1.4					
							5.00E-07				-0.5					
							1.00E-06				0.8					
Parameters																
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.3E+04	4.3E+02	1.7E-03	2.2E+02	6.8E-04	3.9E+02	1.1E-04	3.0E+02	18	2.6E+03		6.64E+14	5.40E-03			
Cycle: 5											6.25E-08			50	-1.0	-95
											1.25E-07				-1.4	-180
											2.50E-07				-1.4	-200
											5.00E-07				-0.5	-69
											1.00E-06				0.8	94



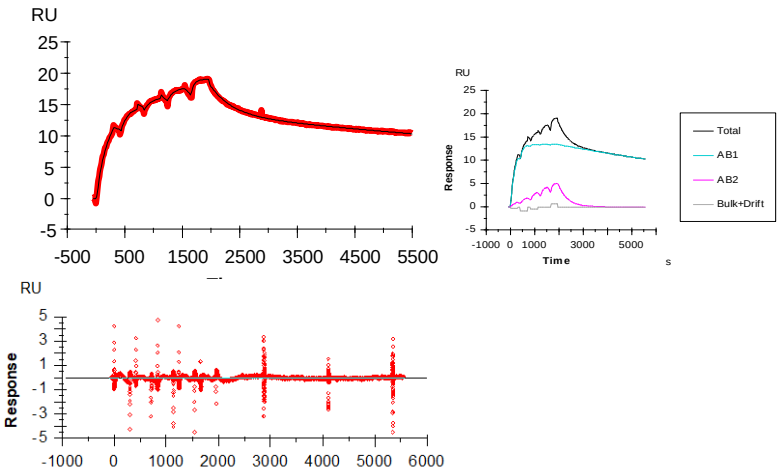
Curve:	**Fc=4-1**															
Model:	**Two State Reaction**															
Description:	MA	ML	RL	(MA/ML)*RL	Rmax	Sm										
	50	361	104	14	21	1.5										
Report																
Curve	ka1 (1/Ms)	kd1 (1/s)	ka2 (1/s)	kd2 (1/s)	KD (M)	Rmax (RU)	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value			
	8.53E+04	1.83E-03	6.97E-04	1.05E-04	2.81E-09	21		1.22E+18				1.5E-01	N/A			
Cycle: 5							6.25E-08		50.0	4.49E+18	-0.5					
							1.25E-07				-1.0					
							2.50E-07				-1.0					
							5.00E-07				-0.3					
							1.00E-06				0.8					
Parameters																
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/s)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax (RU)	T(Rmax)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.5E+04	3.7E+02	1.8E-03	2.0E+02	7.0E-04	3.7E+02	1.1E-04	2.6E+02	21	2.3E+03		1.22E+18	1.38E-03			
Cycle: 5											6.25E-08			50	-0.5	-35
											1.25E-07				-1.0	-93
											2.50E-07				-1.0	-110
											5.00E-07				-0.3	-27
											1.00E-06				0.8	74

Exp 2

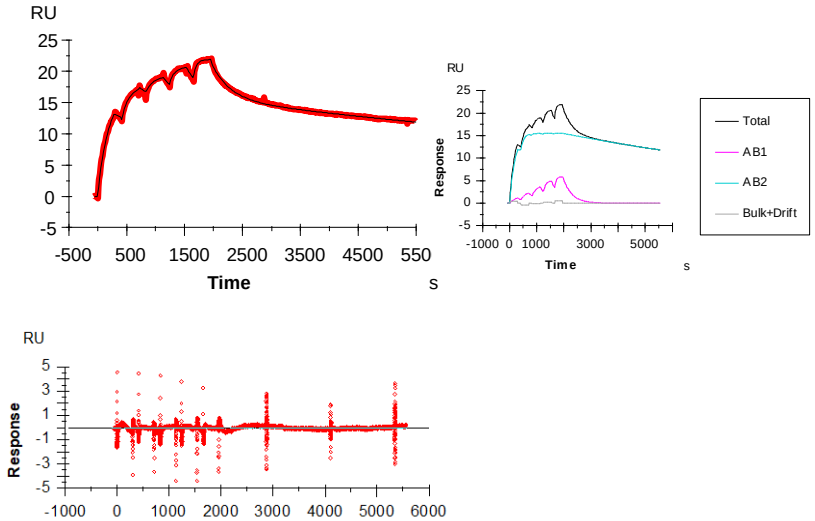
Heterogeneous Ligand fit

SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his



Curve:	**Fc=3-1**																	
Model:	**Heterogeneous Ligand**																	
Description:	MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2									
	50	361	93	12.9	13.4	1.0	5.9	0.46	1.5									
Report																		
Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc		Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value		
	8.04E+04	7.43E-05	9.25E-10	1.43E+04	2.65E-03	1.85E-07	13	5.9		2.84E+16					5.91E-02	N/A		
Cycle: 4									6.3E-08			50	1.05E+17	-0.3				
									1.3E-07					-0.9				
									2.5E-07					-0.5				
									5.0E-07					-0.1				
									1.0E-06					0.6				
Parameters																		
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)		Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.0E+04	6.2E+02	7.4E-05	3.2E+02	1.4E+04	1.9E+02	2.65E-03	2.6E+02	13	1.7E+03		5.945581	4.96E+02		2.84E+16	7.11E-04			
Cycle: 4														6.25E-08			50	-0.3	-45
														1.25E-07				-0.9	-146
														2.5E-07				-0.5	-74
														5.00E-07				-0.1	-15
														1.00E-06				0.6	84



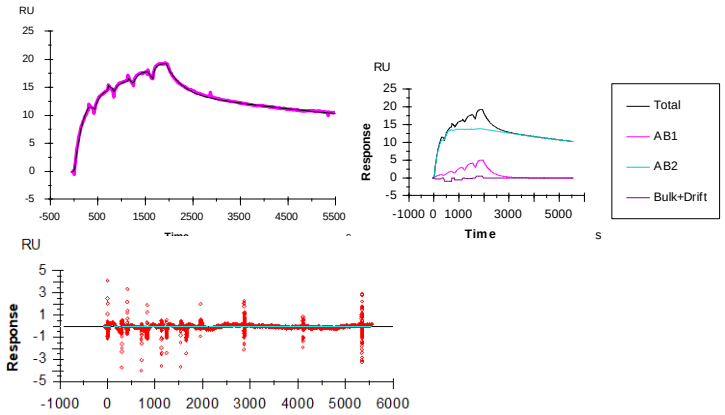
Curve:	**Fc=4-1**																	
Model:	**Heterogeneous Ligand**																	
Description:	MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2									
	50	361	104	14.4	7.1	0.49	16	1.1	1.6									
Report																		
Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc		Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value		
	1.52E+04	3.11E-03	2.04E-07	7.88E+04	7.58E-05	9.62E-10	7.1	15.6		4.09E+15					9.07E-02	N/A		
Cycle: 4									6.3E-08			50	1.51E+16	0.4				
									1.3E-07					-0.4				
									2.5E-07					-0.1				
									5.0E-07					0.2				
									1.0E-06					0.5				
Parameters																		
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)		Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.5E+04	1.8E+02	3.1E-03	2.6E+02	7.9E+04	6.0E+02	7.58E-05	3.5E+02	7.1	4.4E+02		15.55823	1.86E+03		4.09E+15	4.63E-07			
Cycle: 4														6.25E-08			50	0.4	49
														1.25E-07				-0.4	-54
														2.5E-07				-0.1	-12
														5.00E-07				0.2	22
														1.00E-06				0.5	54

Exp 1

Heterogeneous Ligand fit

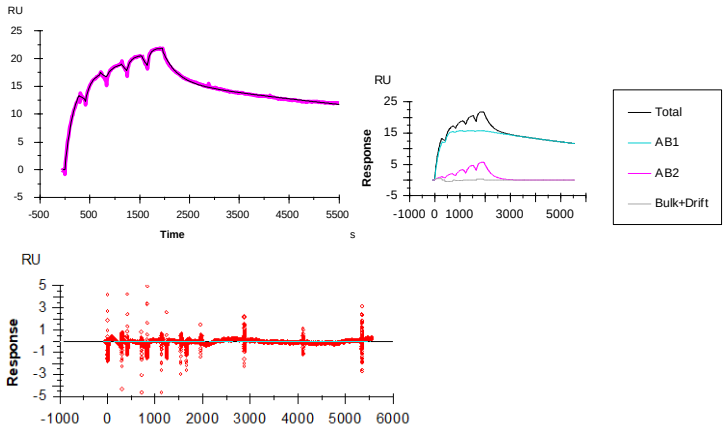
SCK: PGT151 fab vs CZA97.012 *PGT151-purified*

CM5-anti-his



Curve:	**Fc=3-1**																	
Model:	**Heterogeneous Ligand**																	
Description:	MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2									
	50	361	95	13.2	6.1	0.46	14	1.0	1.5									
Report																		
Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value			
	1.36E+04	2.98E-03	2.18E-07	8.10E+04	8.21E-05	1.01E-09	6	13.8		1.14E+18				2.97E-01	N/A			
Cycle: 5									6.3E-08		50	4.22E+18	-0.2					
									1.3E-07				-0.9					
									2.5E-07				-0.6					
									5.0E-07				-0.1					
									1.0E-06				0.5					

Parameters																		
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	1.4E+04	8.3E+01	3.0E-03	1.2E+02	8.1E+04	2.9E+02	8.21E-05	1.8E+02	6.11	2.0E+02	13.78819	8.67E+02		1.14E+18	4.99E-06			
Cycle: 5													6.25E-08			50	-0.2	-16
													1.25E-07				-0.9	-67
													2.5E-07				-0.6	-37
													5.00E-07				-0.1	-8
													1.00E-06				0.5	30



Curve:	**Fc=4-1**																	
Model:	**Heterogeneous Ligand**																	
Description:	MA	ML	RL	(MA/ML)*RL	Rmax 1	Sm 1	Rmax 2	Sm 2	Sm1+Sm2									
	50	361	104	14.4	16	1.1	7.1	0.49	1.6									
Report																		
Curve	ka1 (1/Ms)	kd1 (1/s)	KD1 (M)	ka2 (1/Ms)	kd2 (1/s)	KD2 (M)	Rmax1 (RU	Rmax2 (RU	Conc (M)	tc	Flow (ul/m	kt (RU/Ms)	RI (RU)	Chi² (RU²)	U-value			
	7.99E+04	8.29E-05	1.04E-09	1.46E+04	3.50E-03	2.40E-07	16	7.1		3.84E+19				2.61E-01	N/A			
Cycle: 5									6.3E-08		50	1.42E+20	0.5					
									1.3E-07				-0.5					
									2.5E-07				-0.2					
									5.0E-07				0.1					
									1.0E-06				0.4					

Parameters																		
Curve	ka1 (1/Ms)	T(ka1)	kd1 (1/s)	T(kd1)	ka2 (1/Ms)	T(ka2)	kd2 (1/s)	T(kd2)	Rmax1 (RU	T(Rmax1)	Rmax2 (RU	T(Rmax2)	Conc (M)	tc	T(tc)	f (ul/min)	RI (RU)	T(RI)
	8.0E+04	3.6E+02	8.3E-05	2.4E+02	1.5E+04	9.9E+01	3.50E-03	1.5E+02	15.79	1.2E+03	7.098339	2.32E+02		3.84E+19	1.31E-04			
Cycle: 5													6.25E-08			50	0.5	33
													1.25E-07				-0.5	-35
													2.5E-07				-0.2	-13
													5.00E-07				0.1	7
													1.00E-06				0.4	23

Exp 2