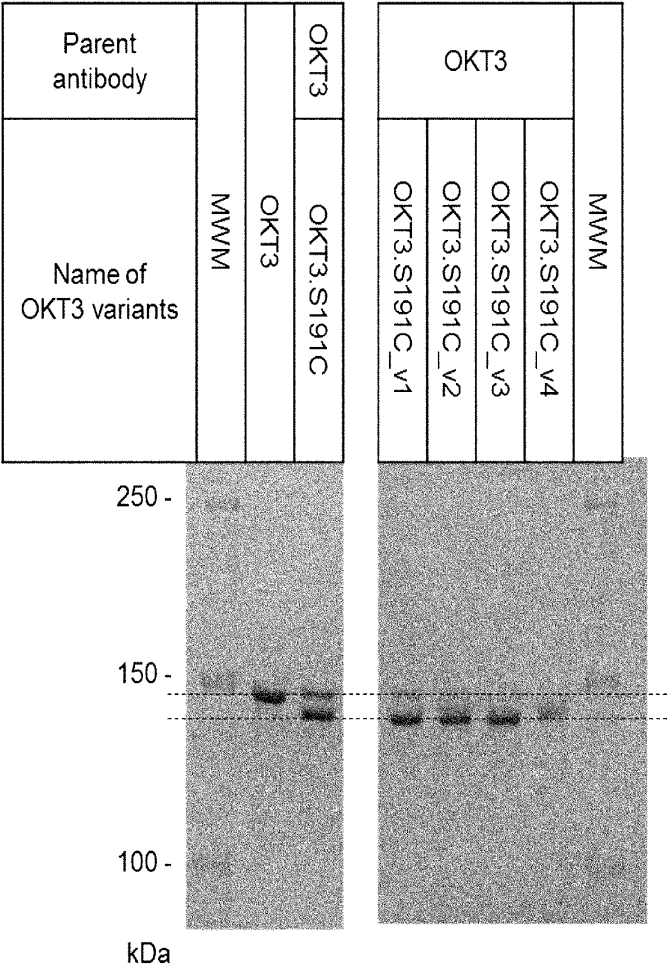
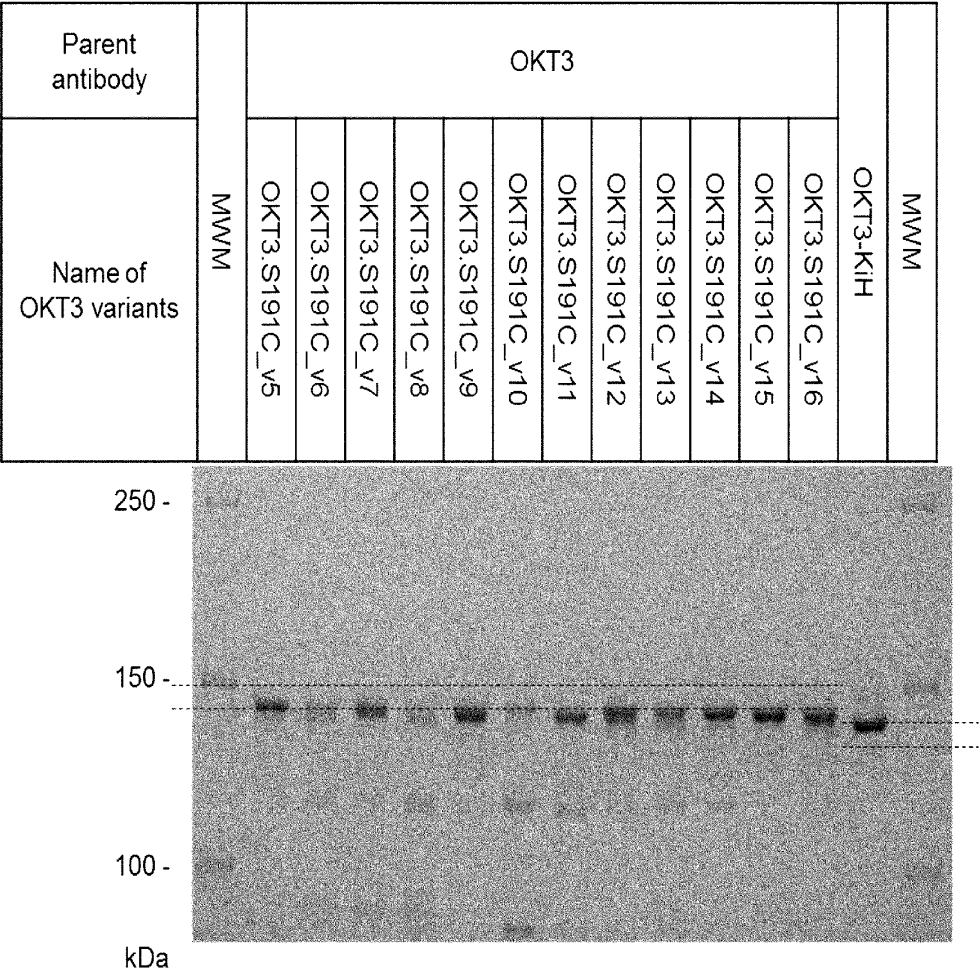


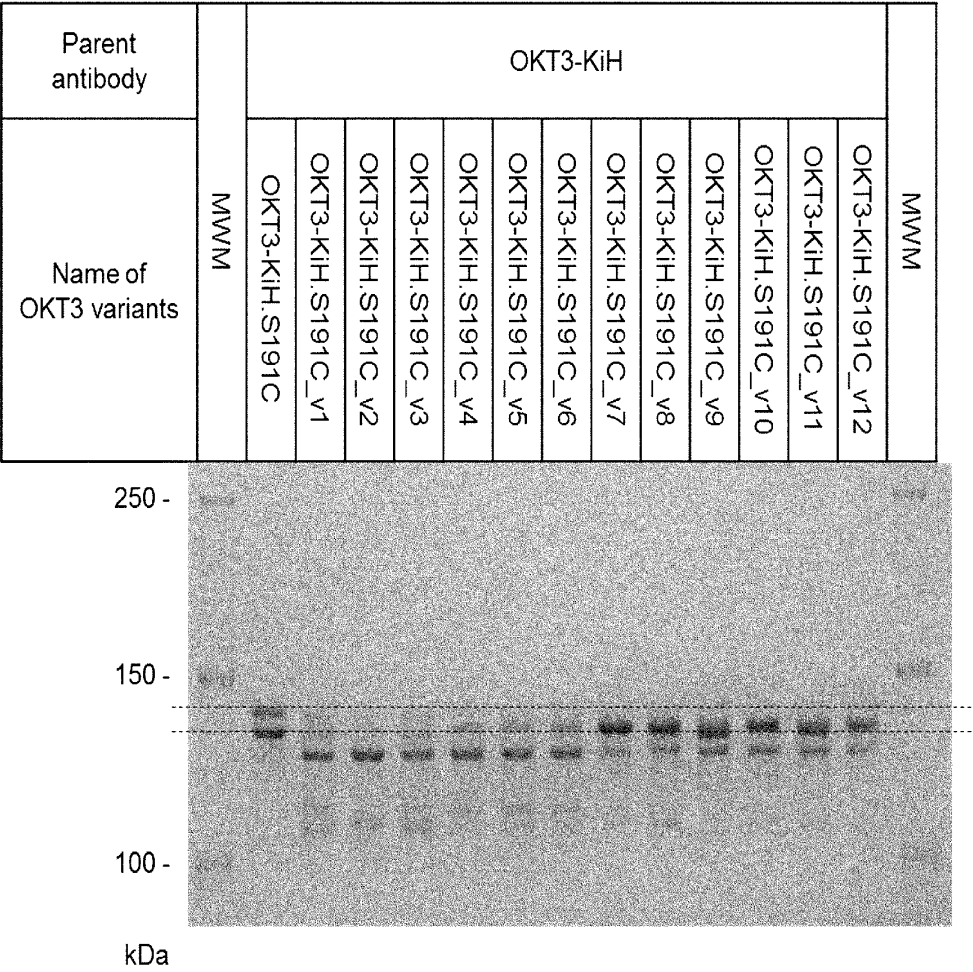
[Fig. 1]



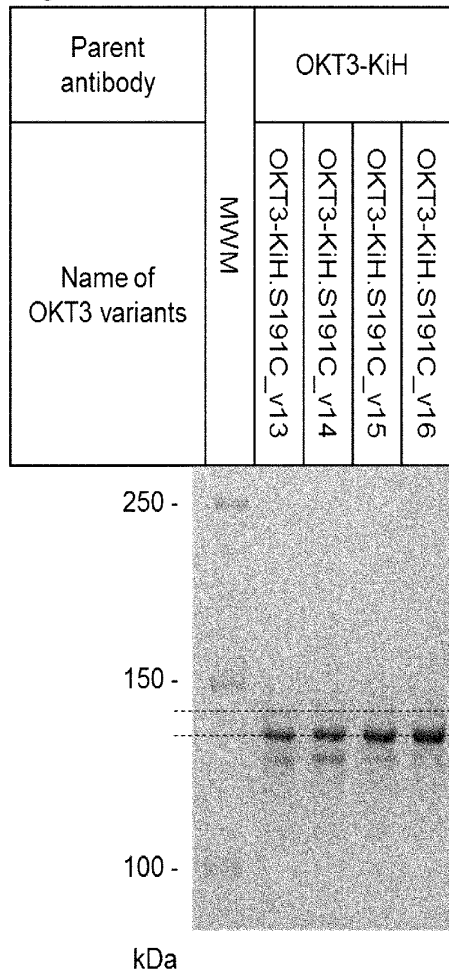
[Fig. 2]



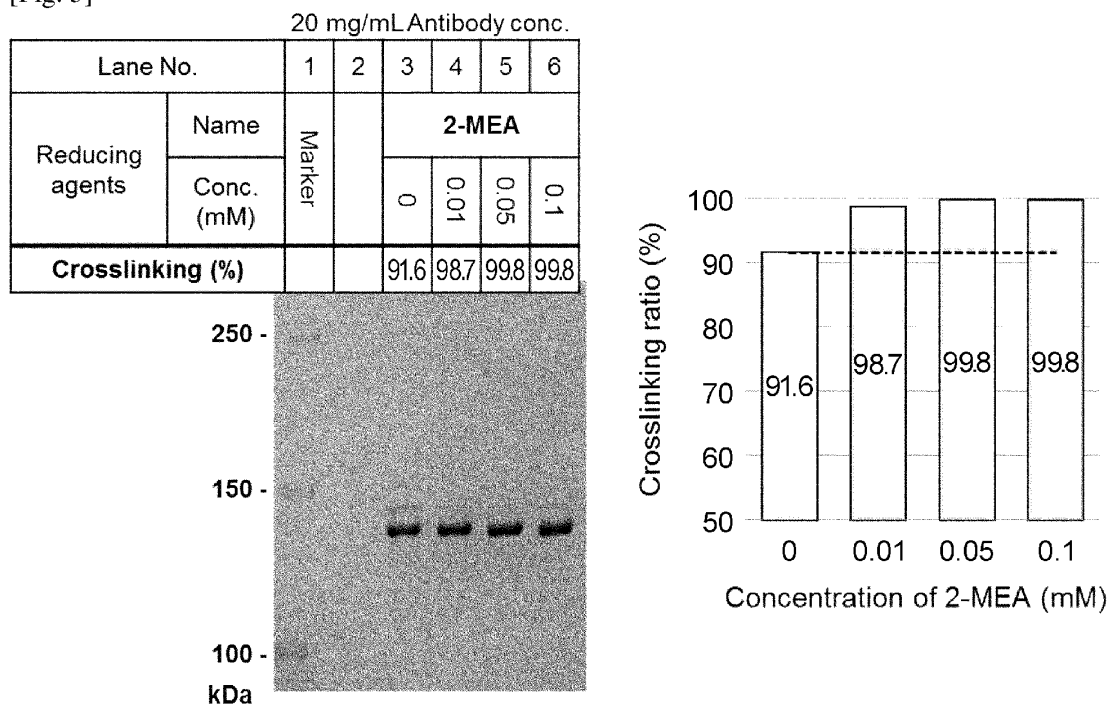
[Fig. 3]



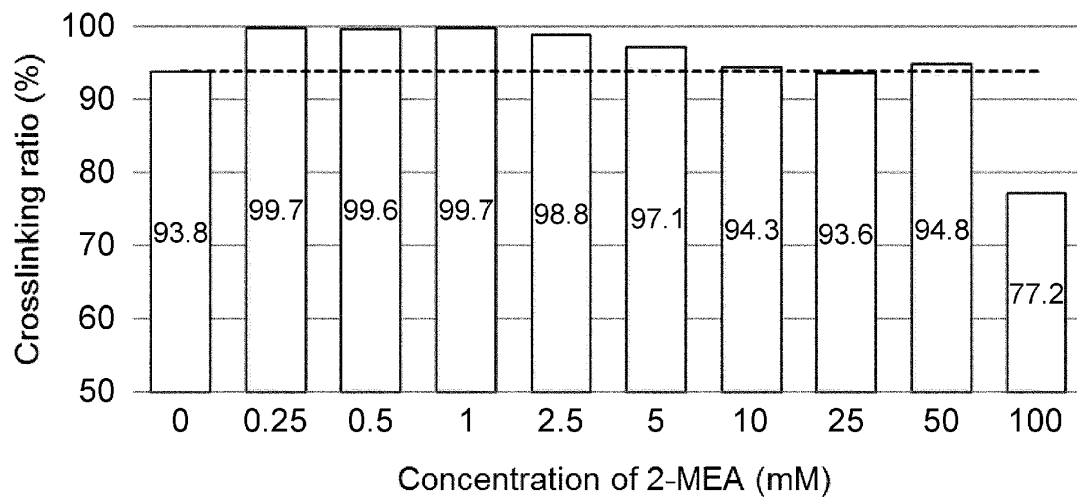
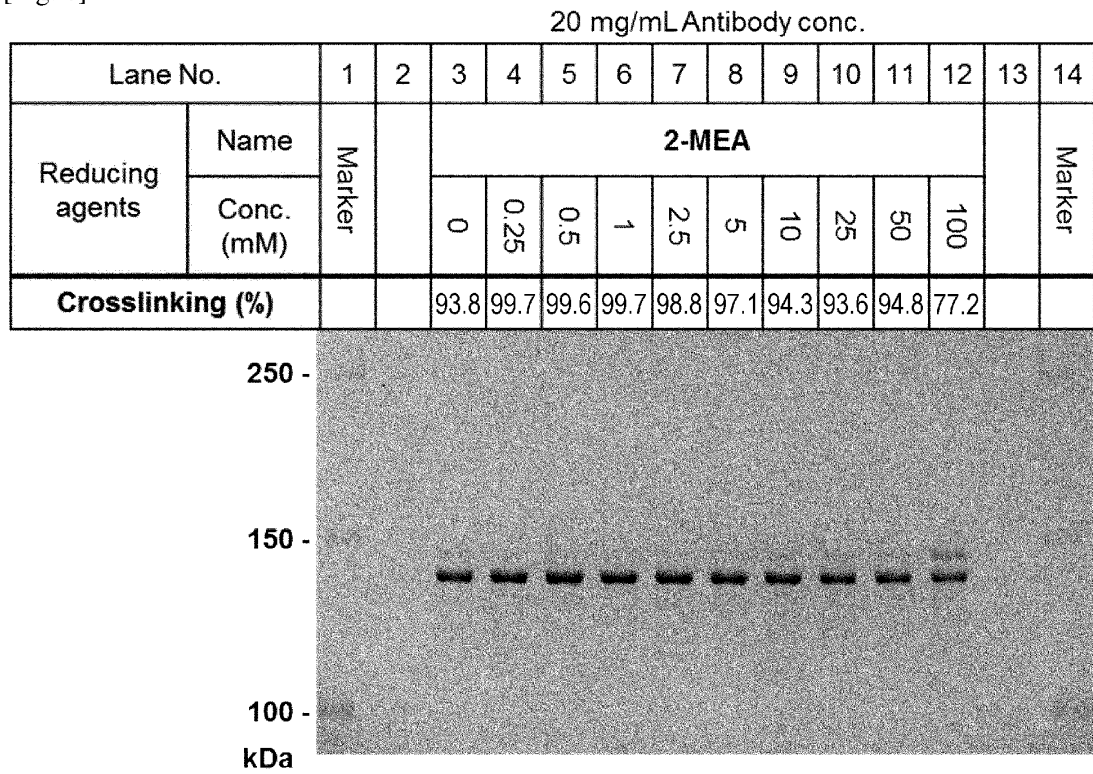
[Fig. 4]



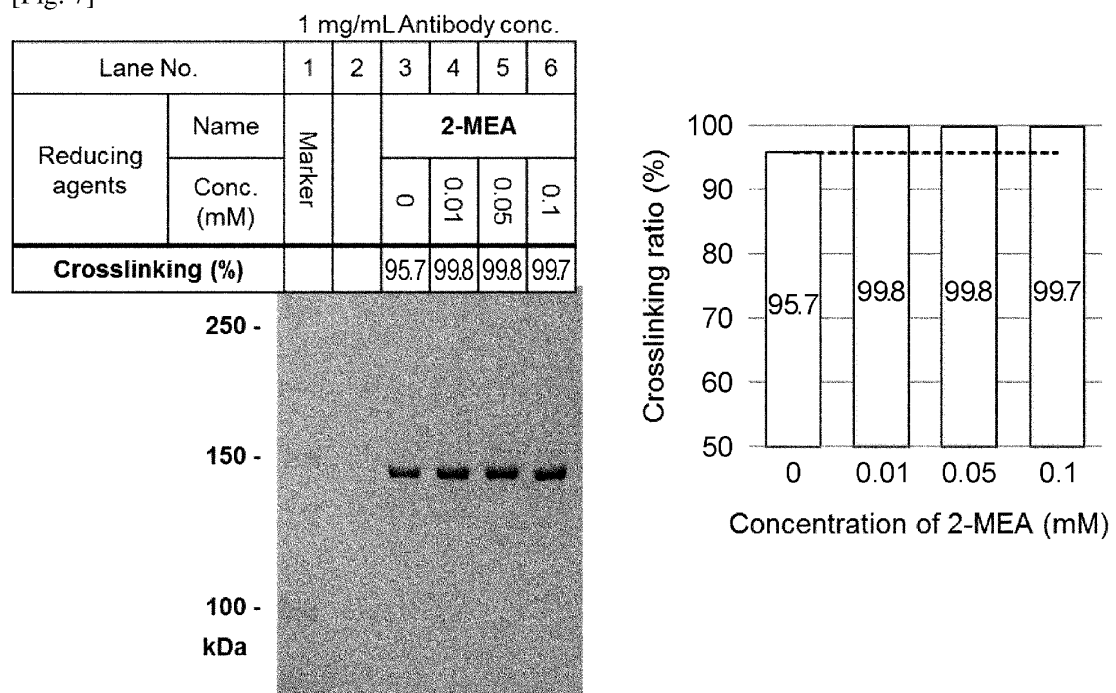
[Fig. 5]



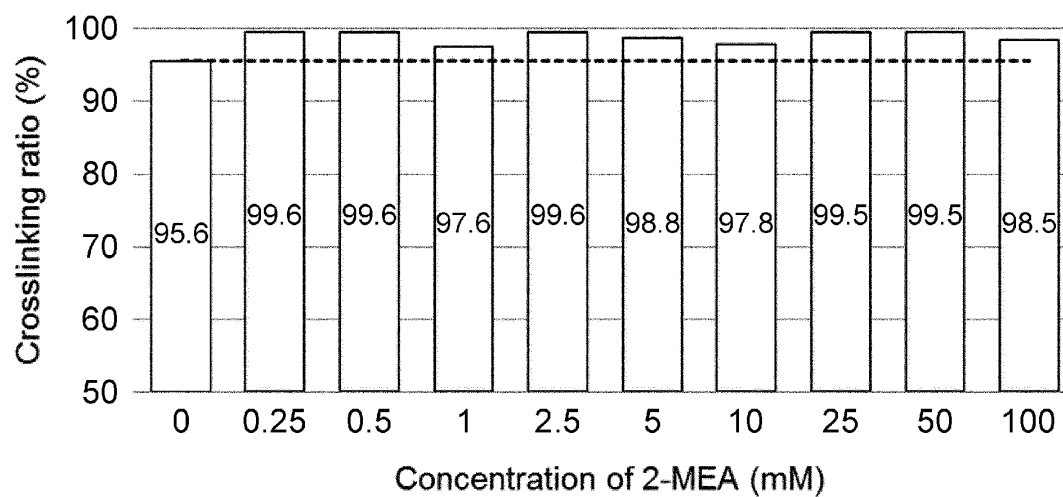
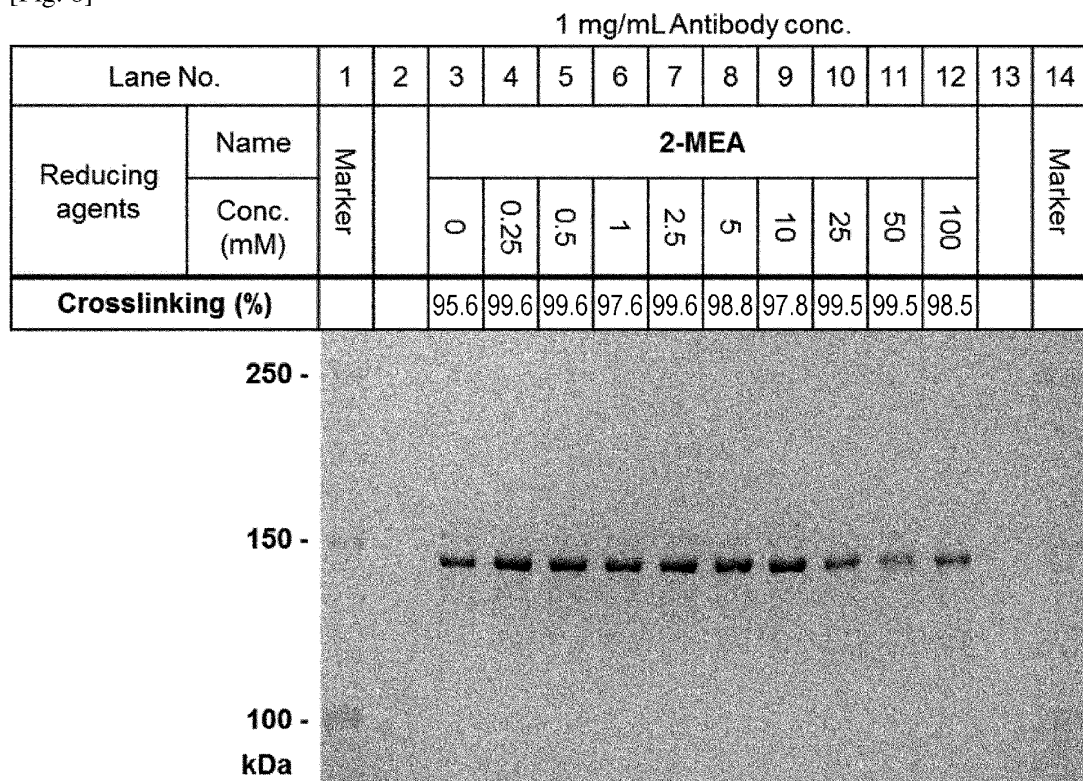
[Fig. 6]



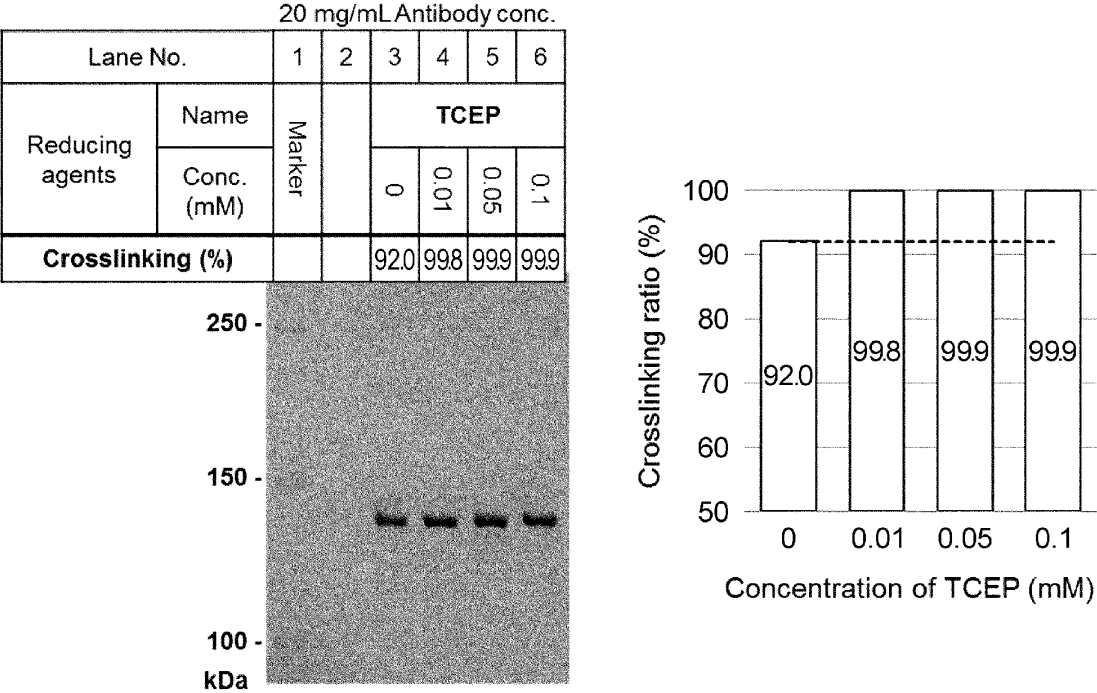
[Fig. 7]



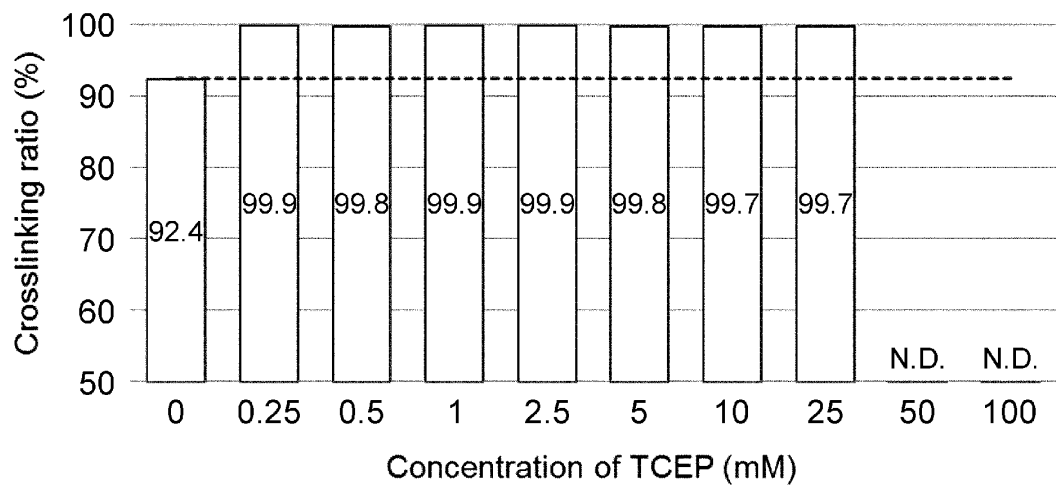
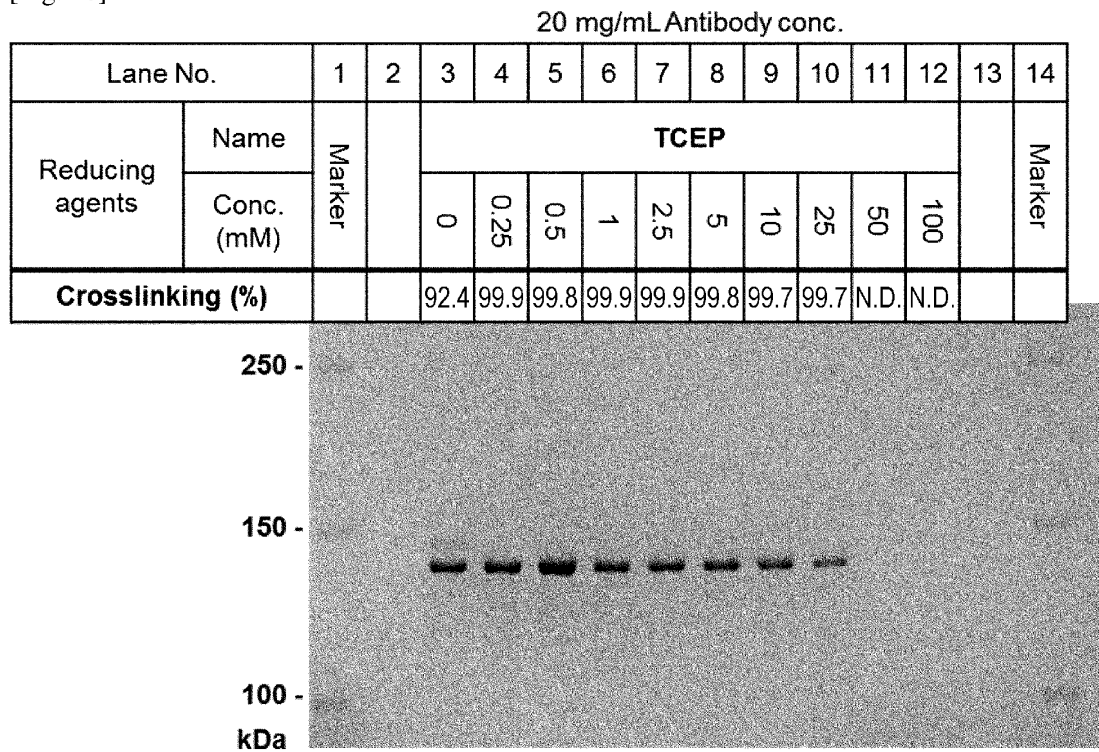
[Fig. 8]



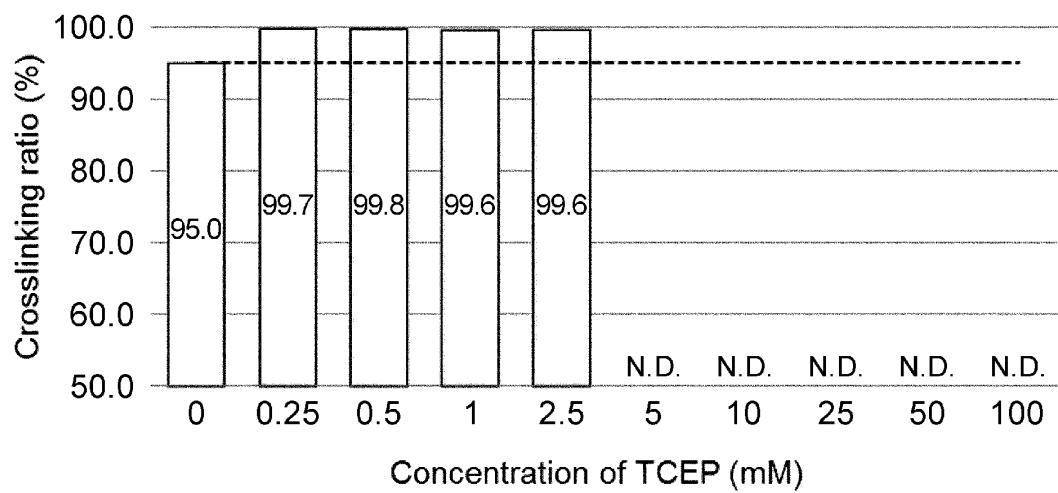
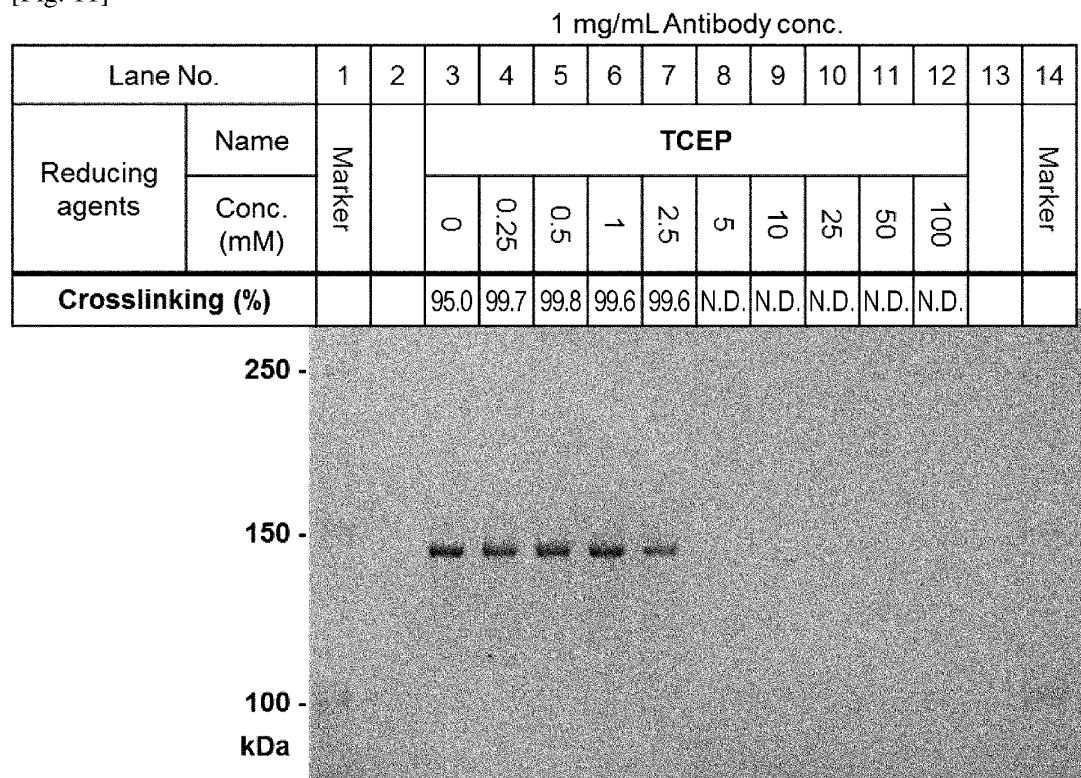
[Fig. 9]



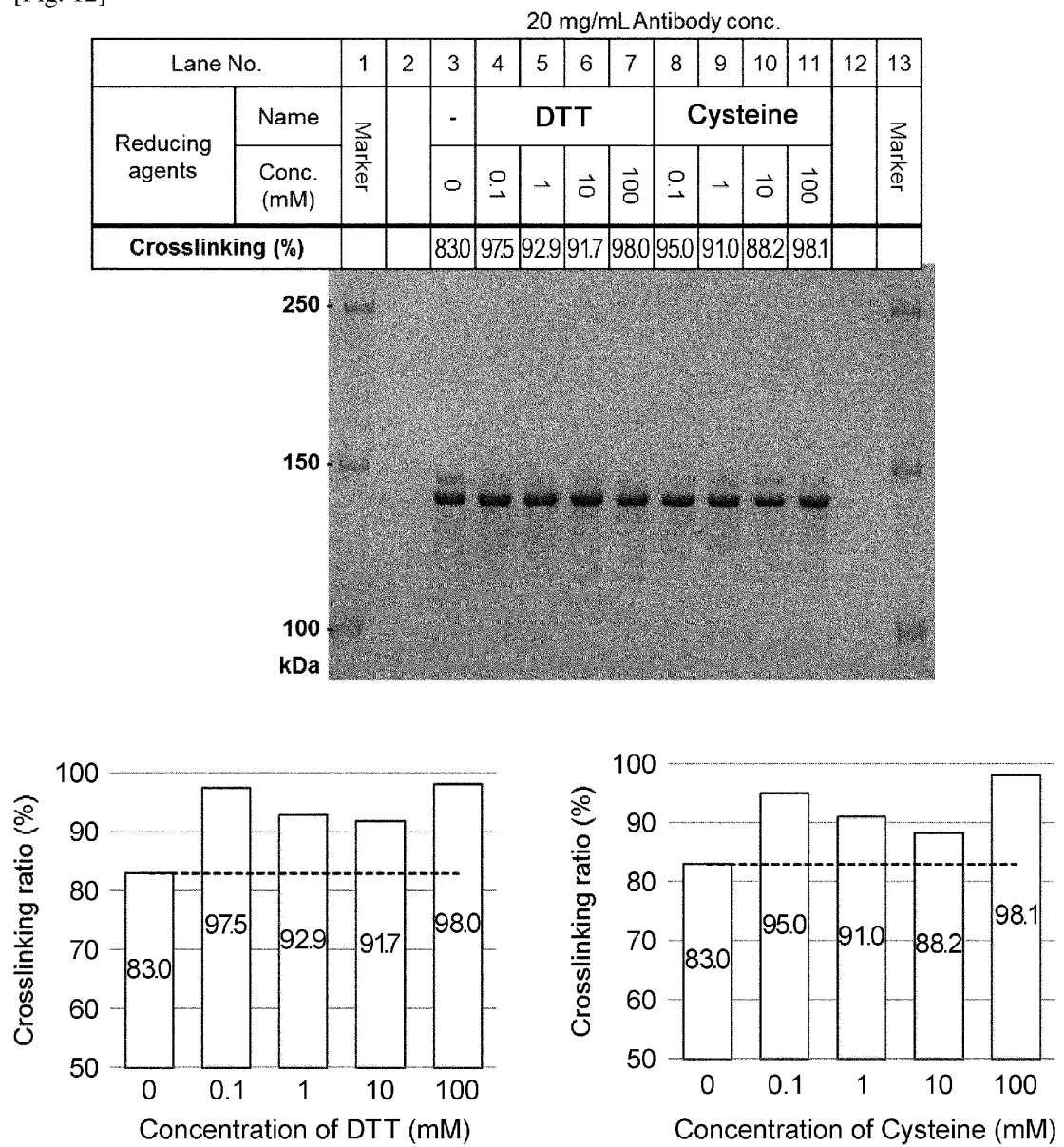
[Fig. 10]



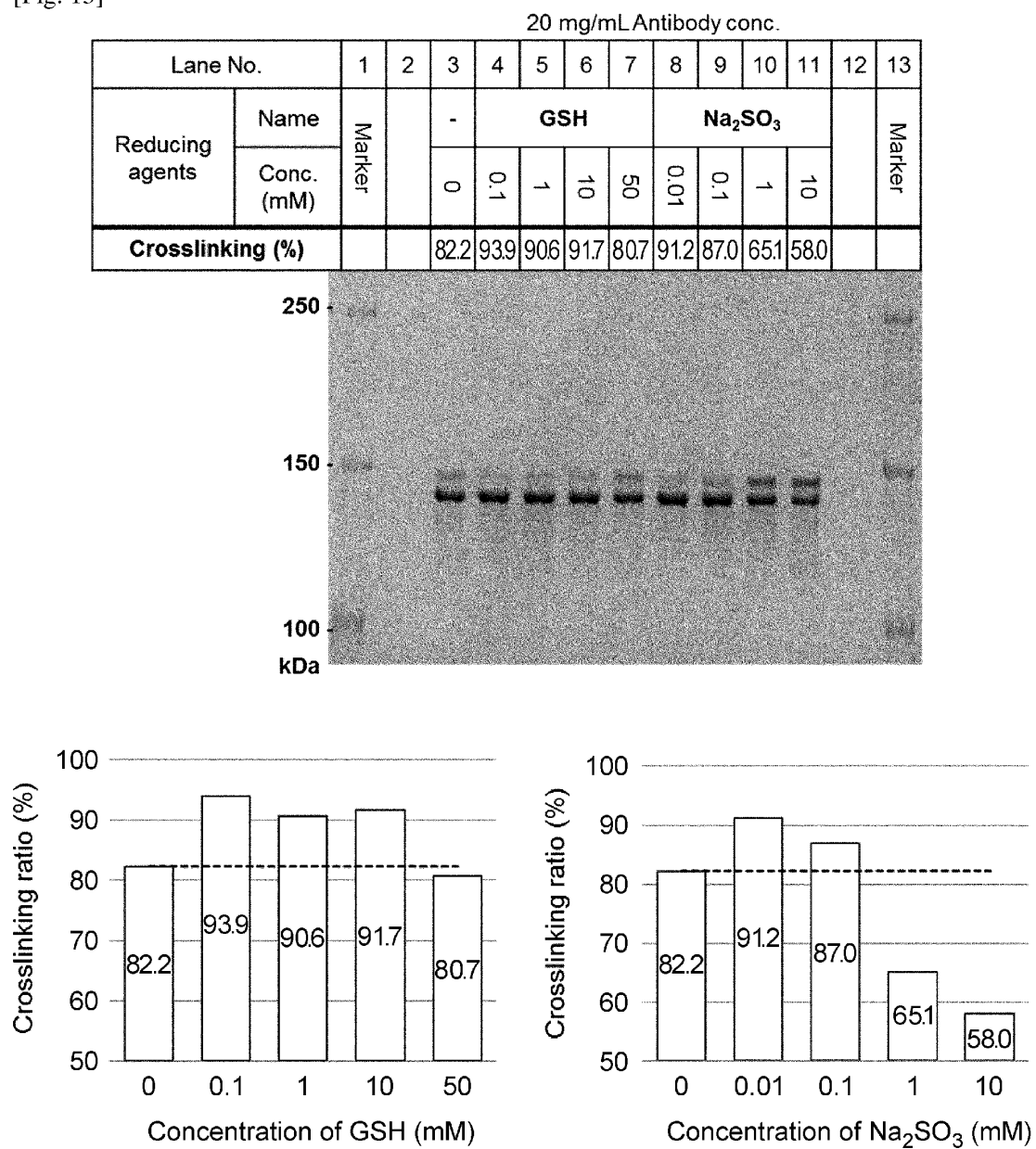
[Fig. 11]



[Fig. 12]



[Fig. 13]



[Fig. 14]

20 mg/mL Antibody conc.

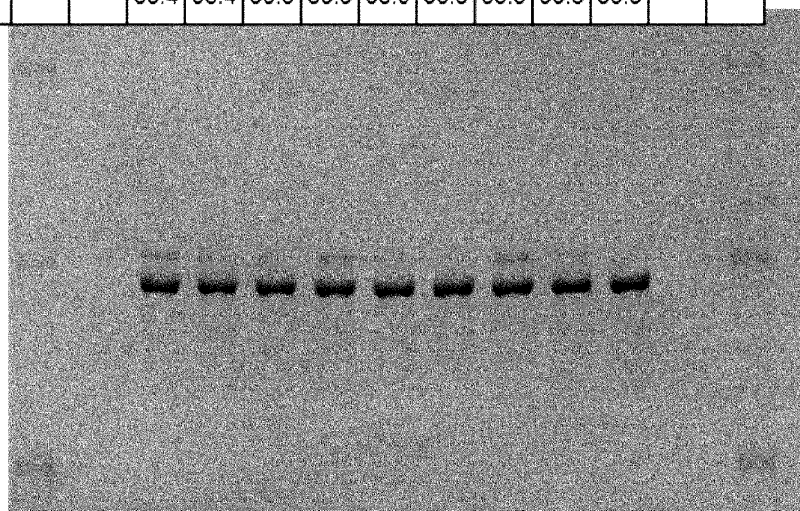
Lane No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Buffer pH	Marker		3			4			5				Marker
2-MEA conc. (mM)			0	1	-	0	1	-	0	1	-		
TCEP conc. (mM)			0	-	0.25	0	-	0.25	0	-	0.25		
Crosslinking (%)			89.4	95.4	99.8	89.9	98.0	99.8	88.8	99.6	99.9		

250 -

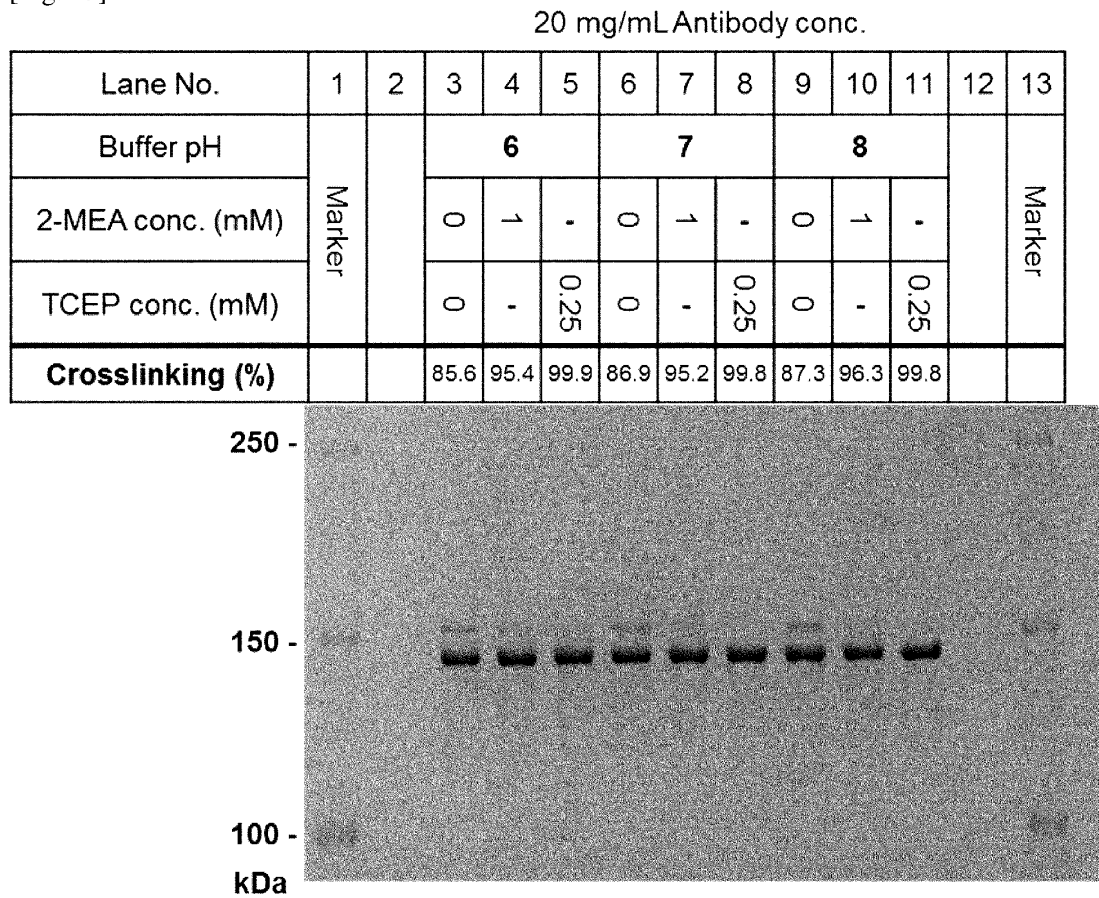
150 -

100 -

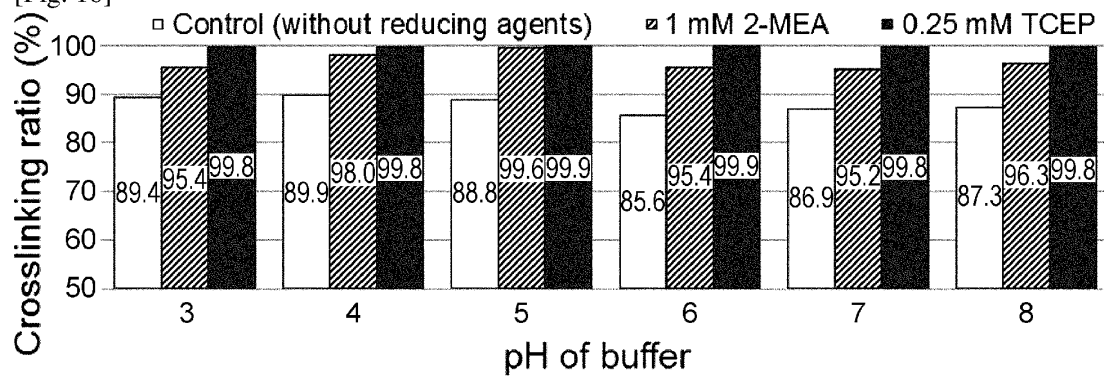
kDa



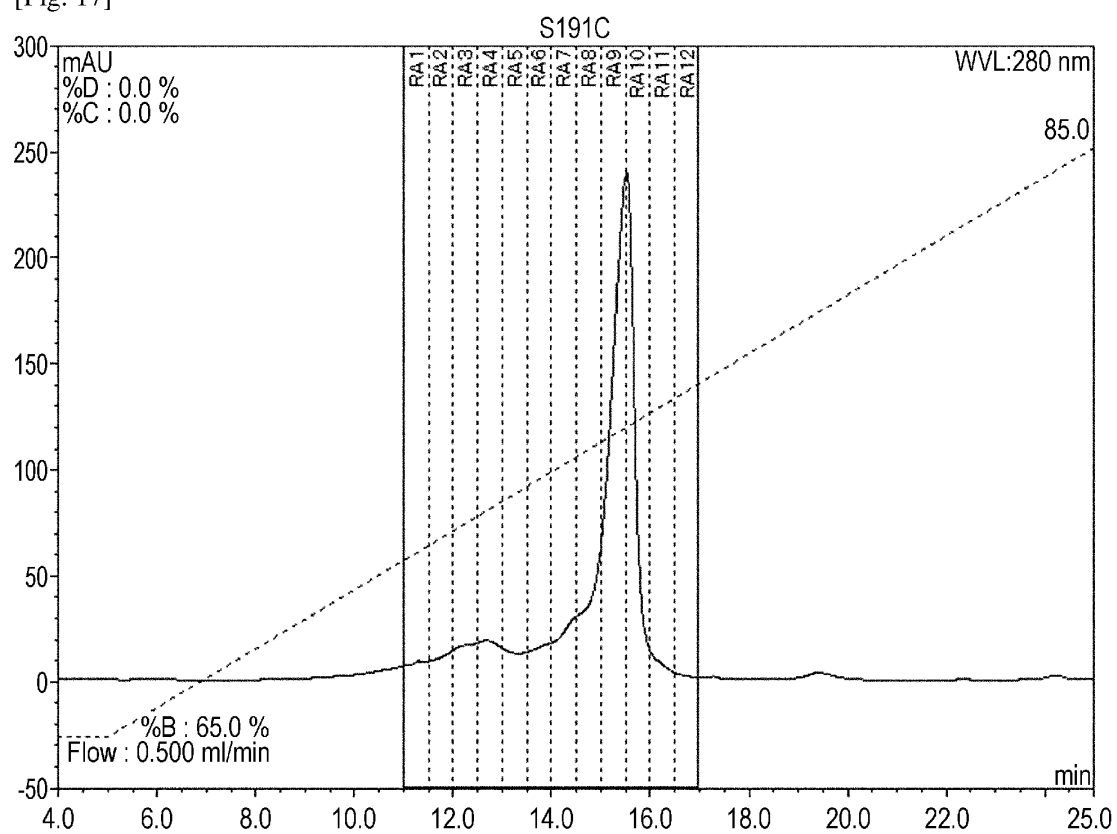
[Fig. 15]



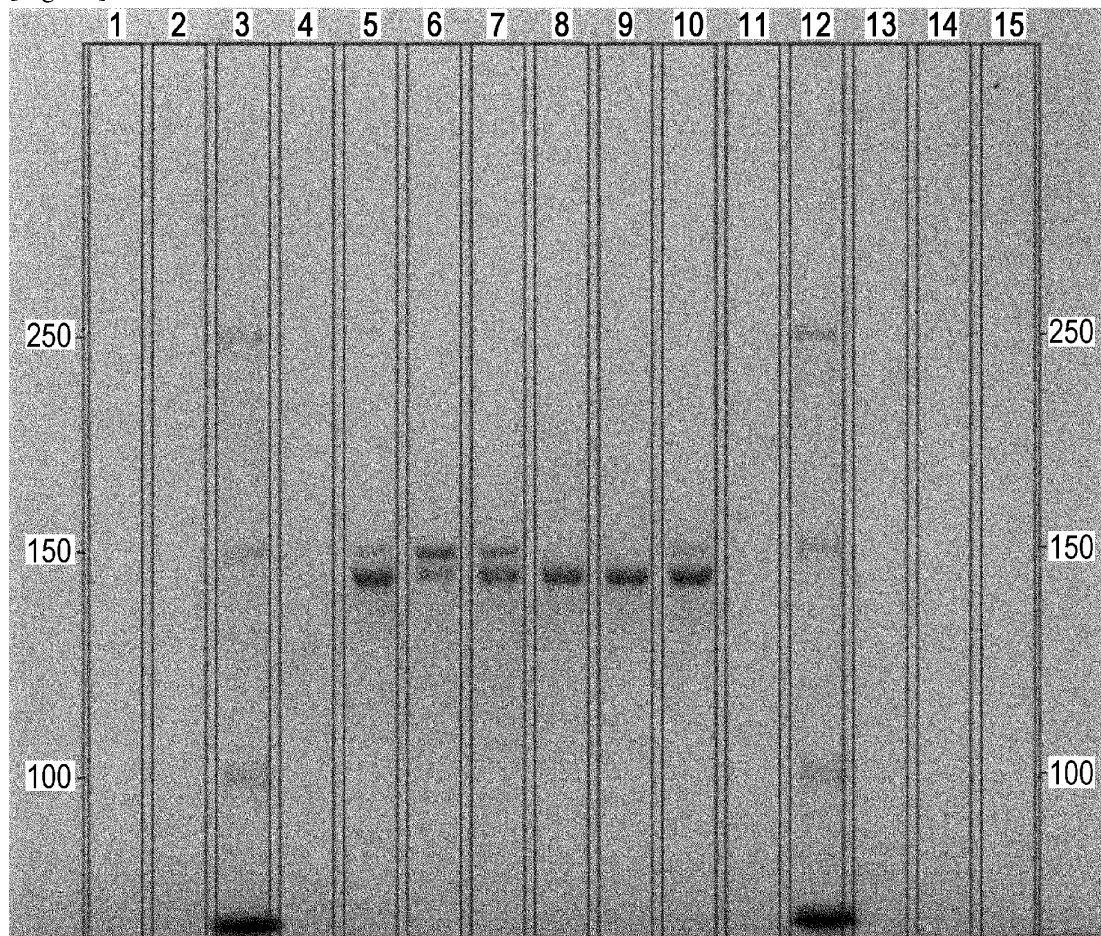
[Fig. 16]



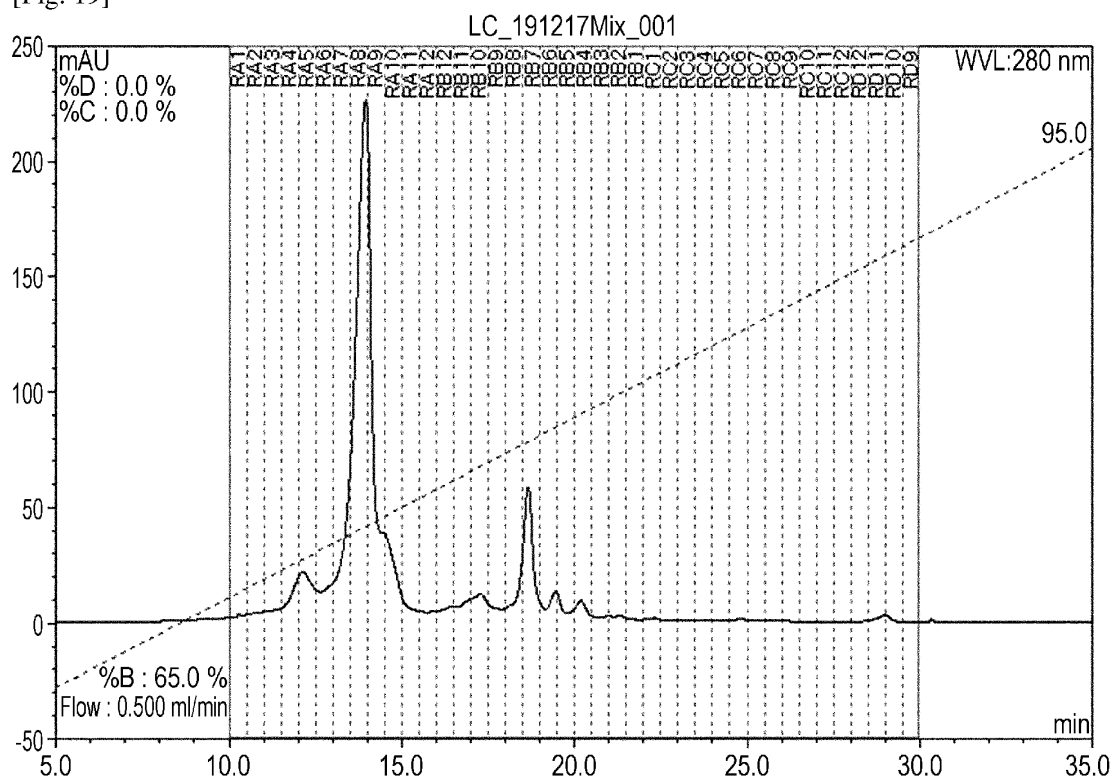
[Fig. 17]



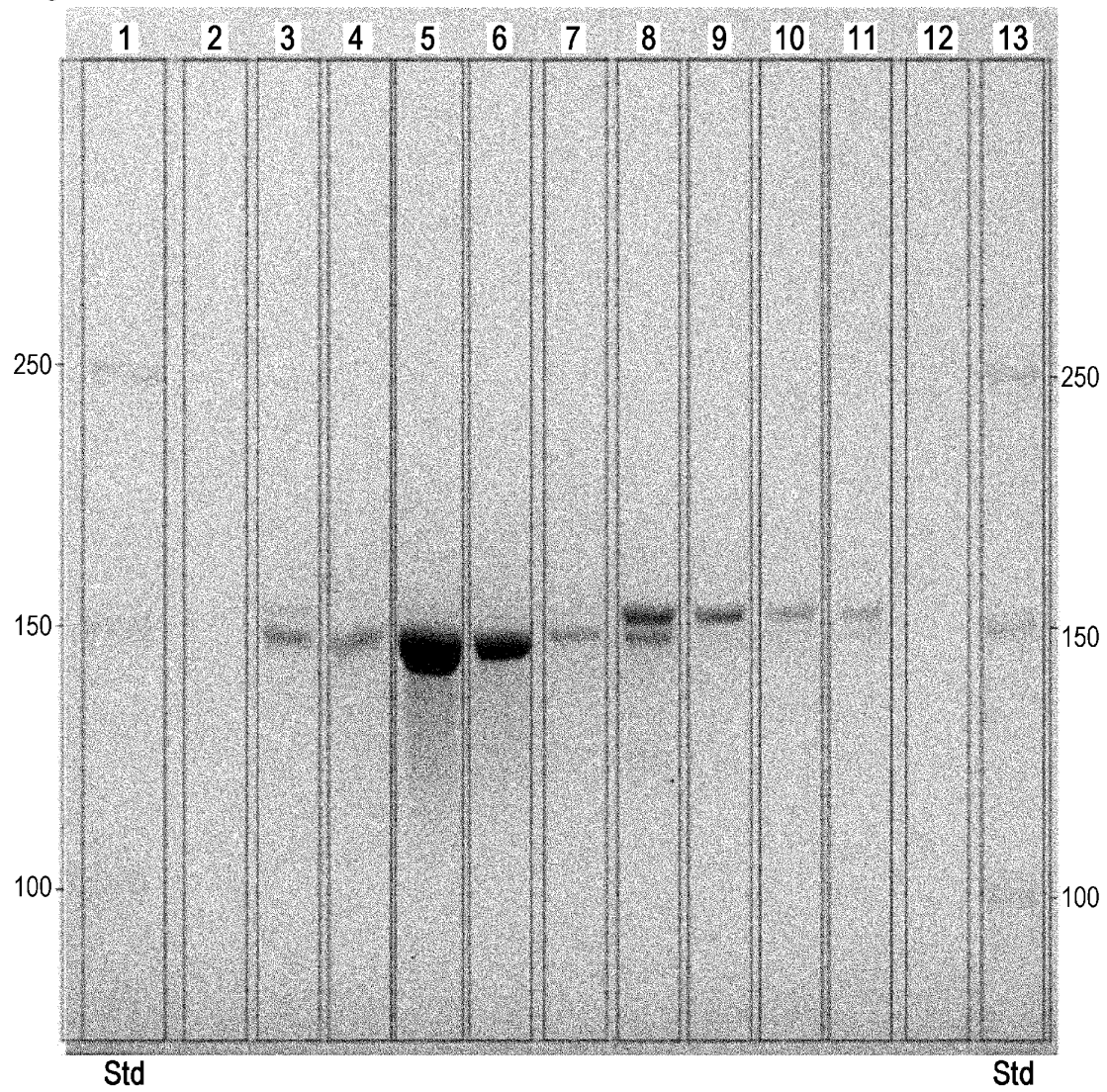
[Fig. 18]



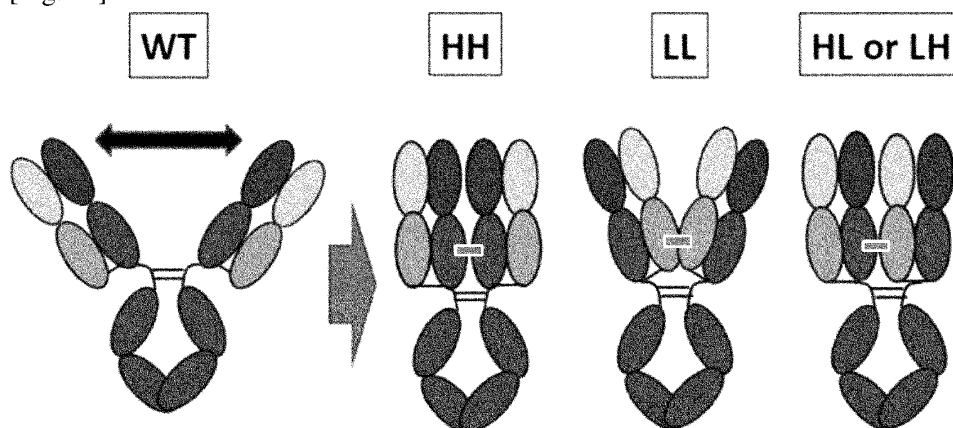
[Fig. 19]



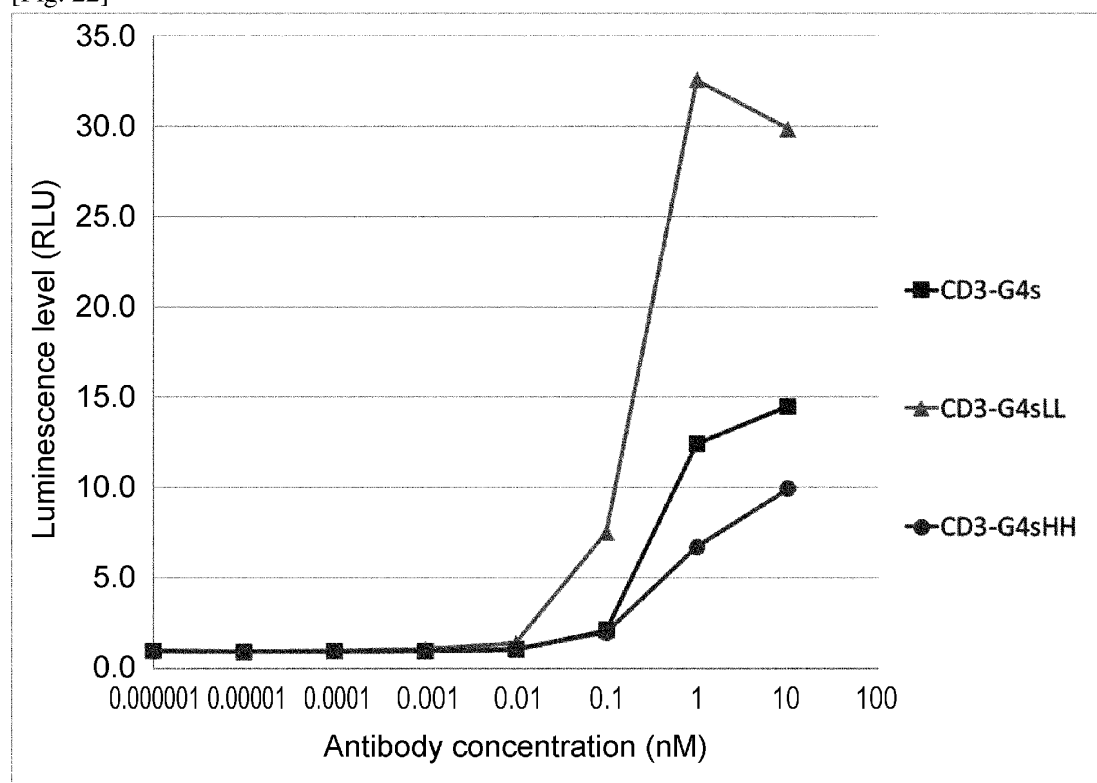
[Fig. 20]



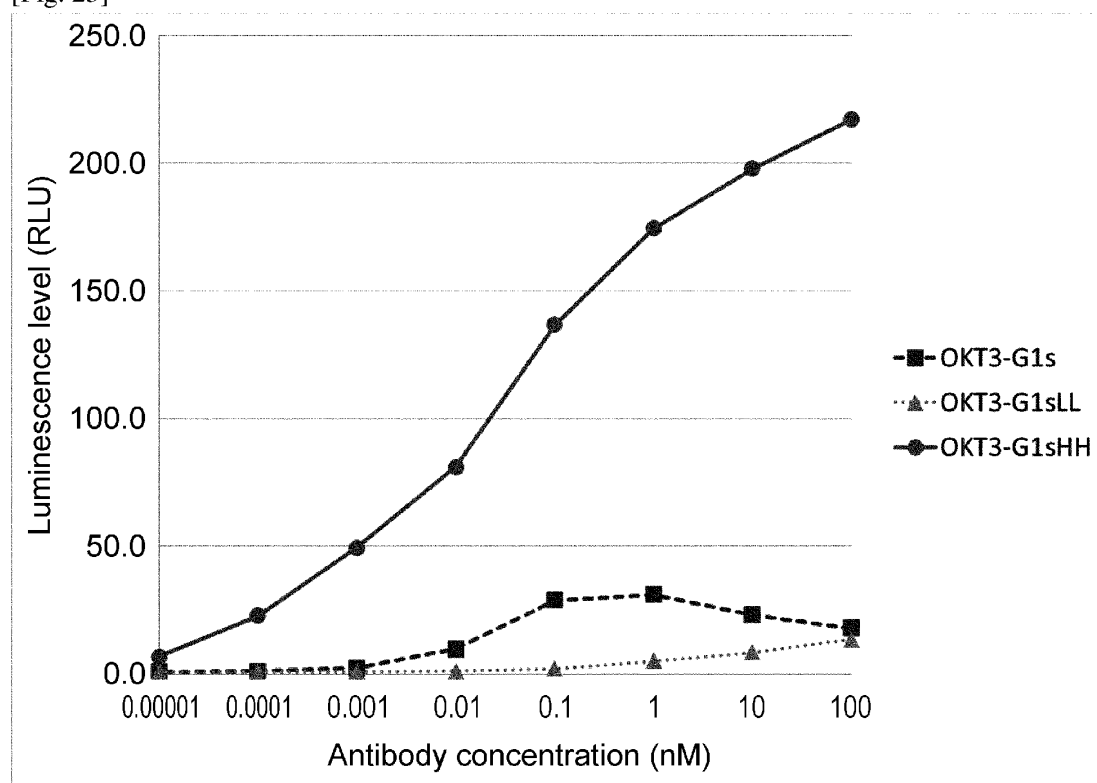
[Fig. 21]



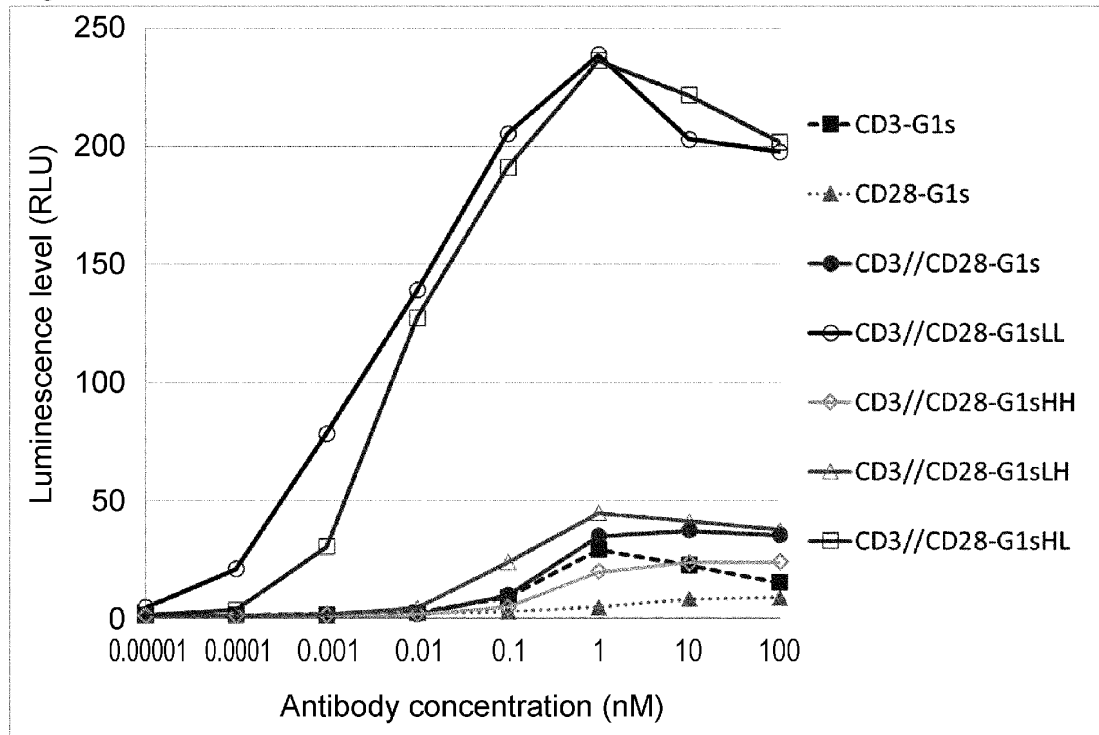
[Fig. 22]



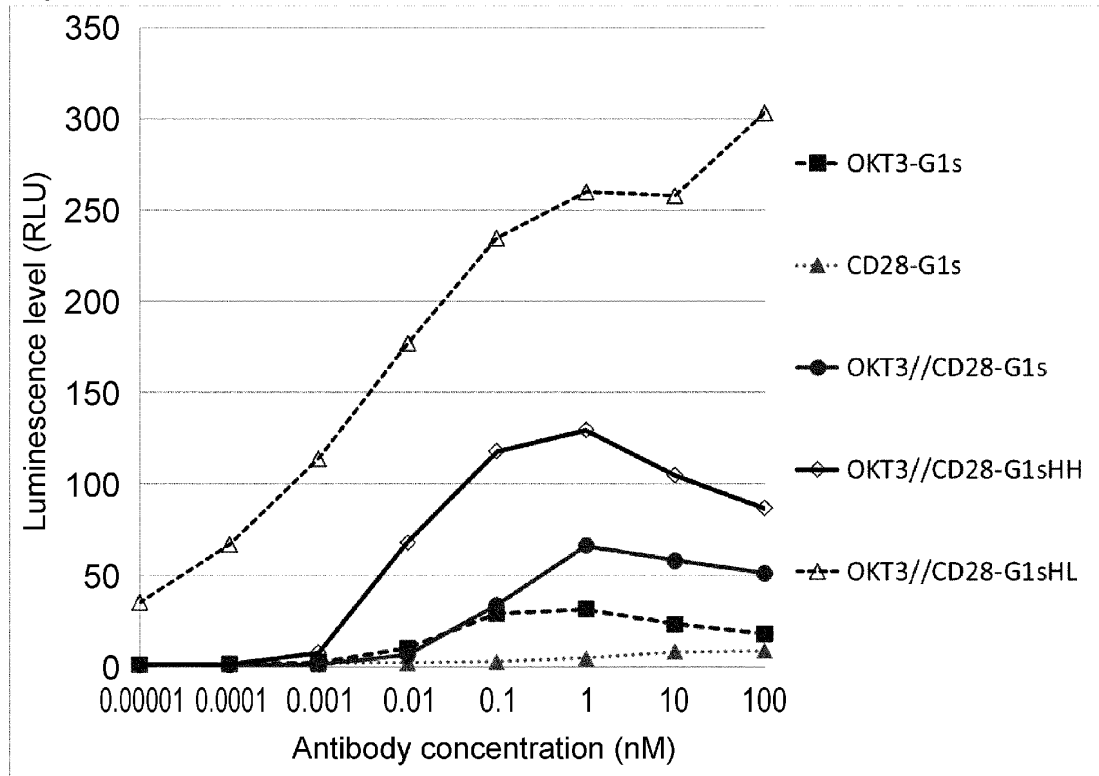
[Fig. 23]



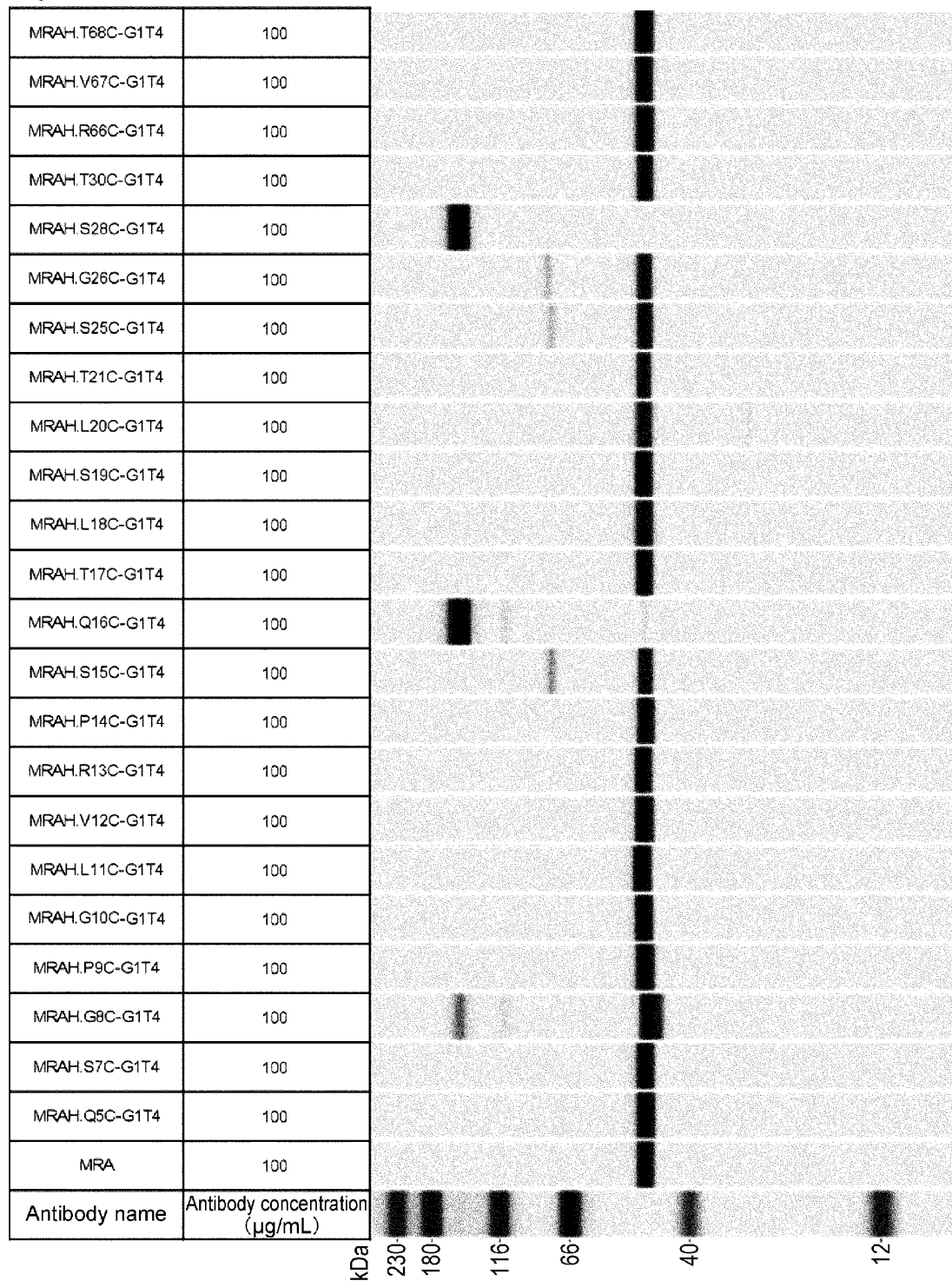
[Fig. 24]



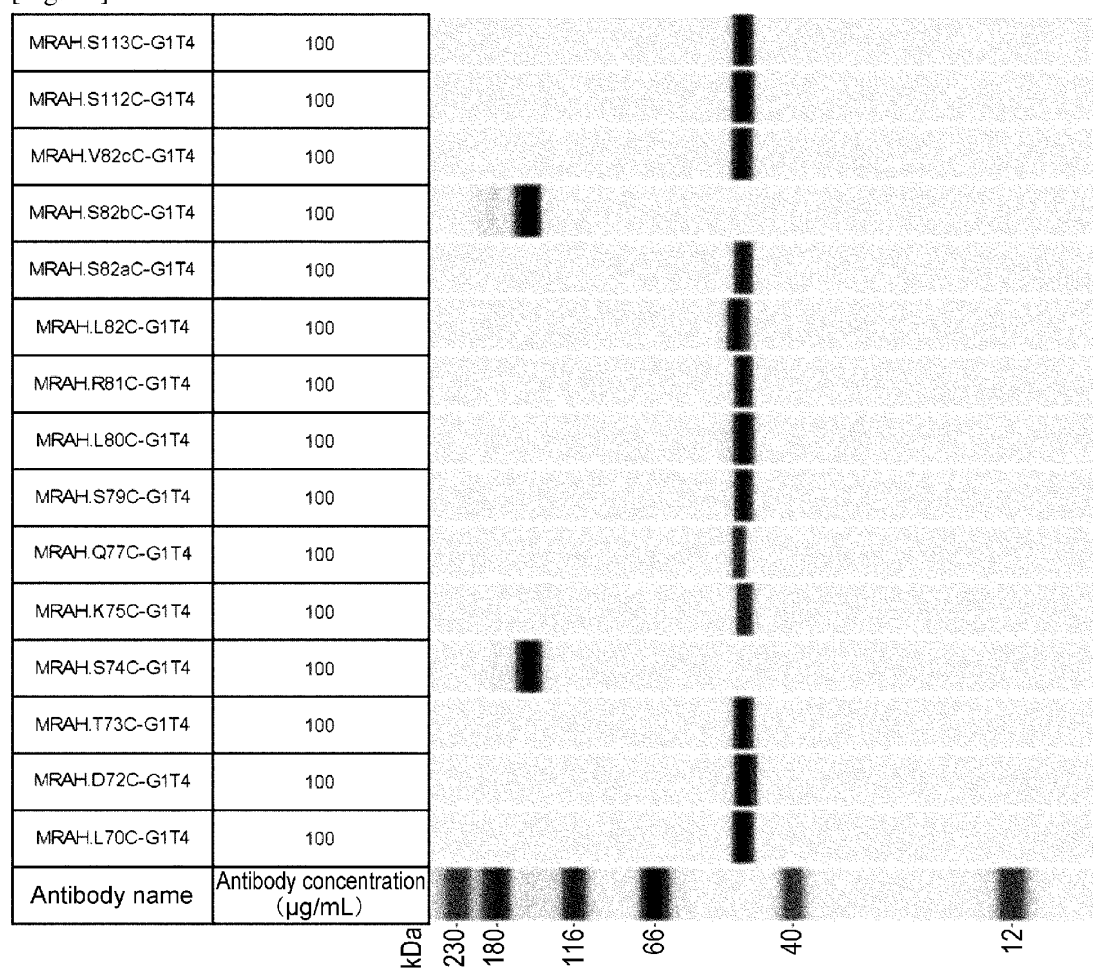
[Fig. 25]



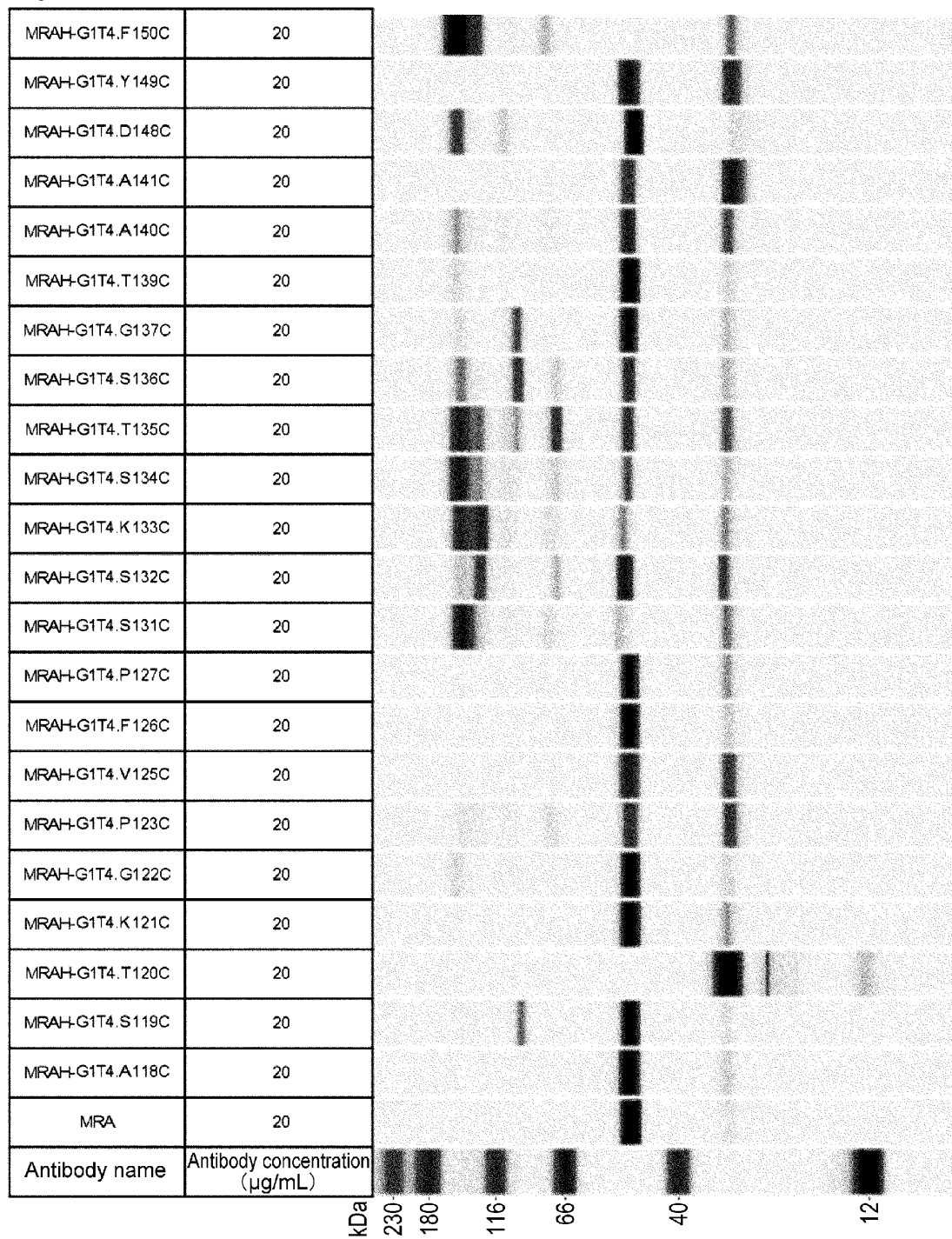
[Fig. 26]



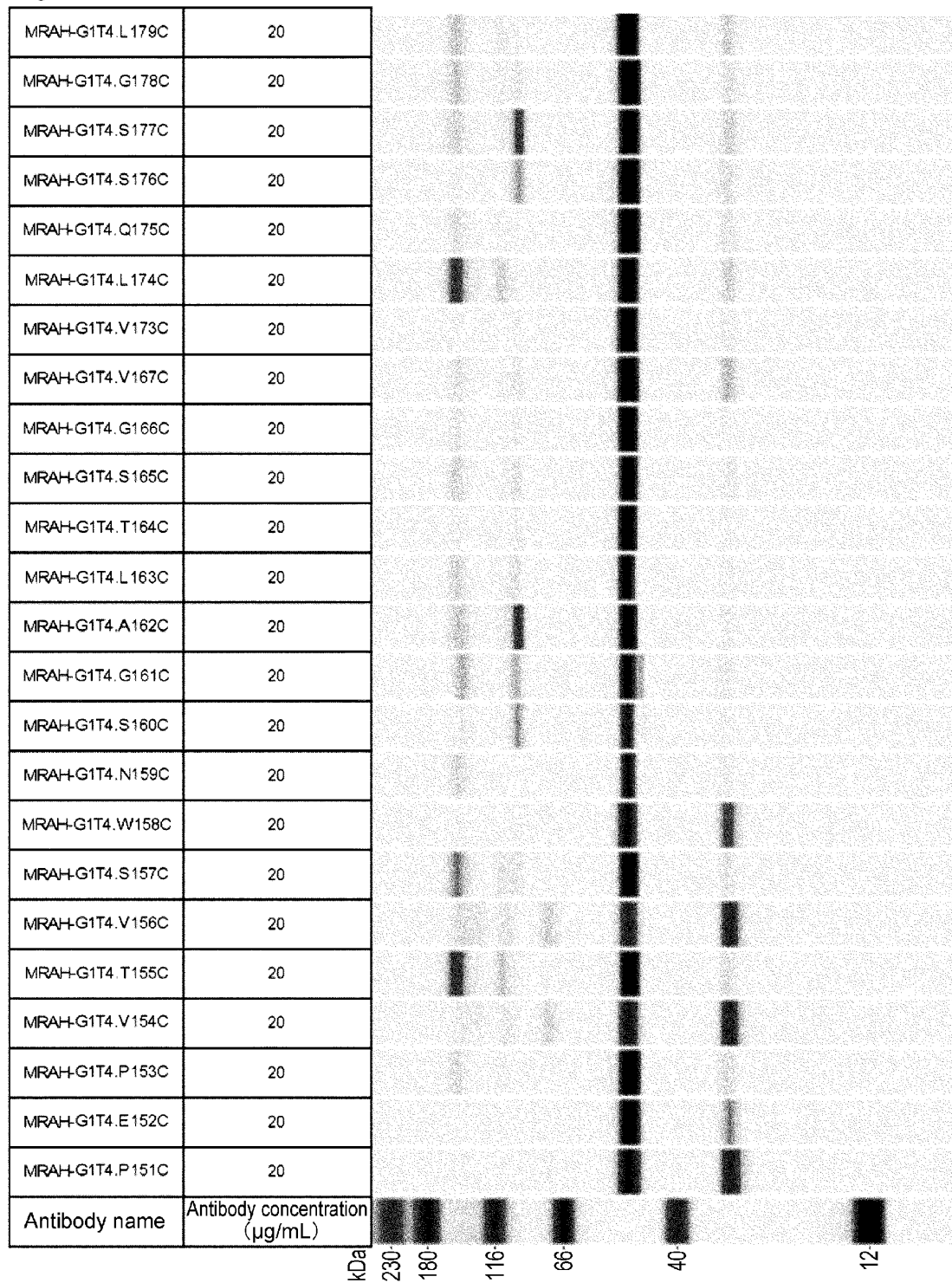
[Fig. 27]



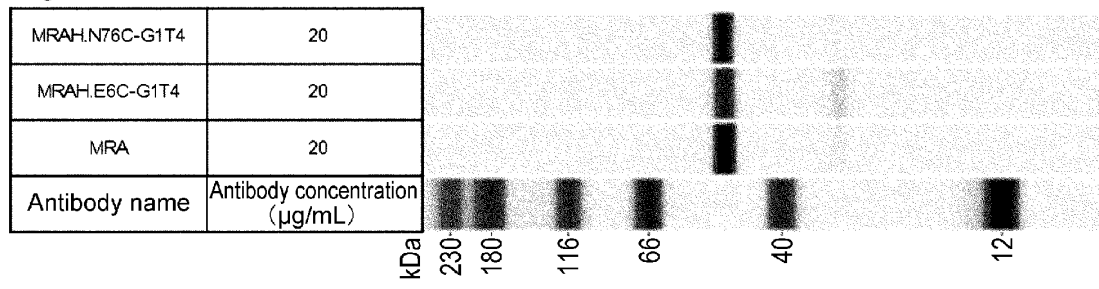
[Fig. 28]



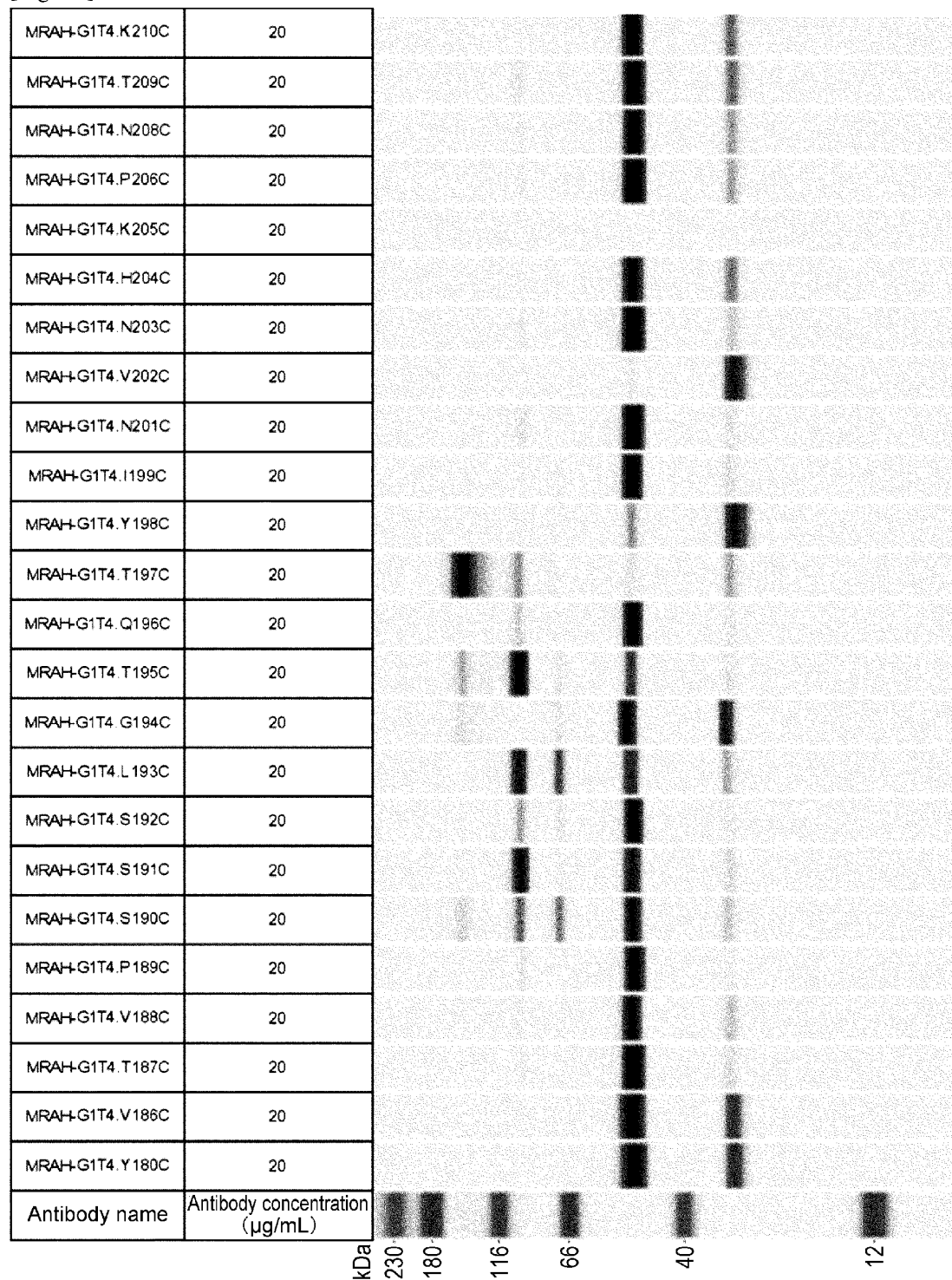
[Fig. 29]



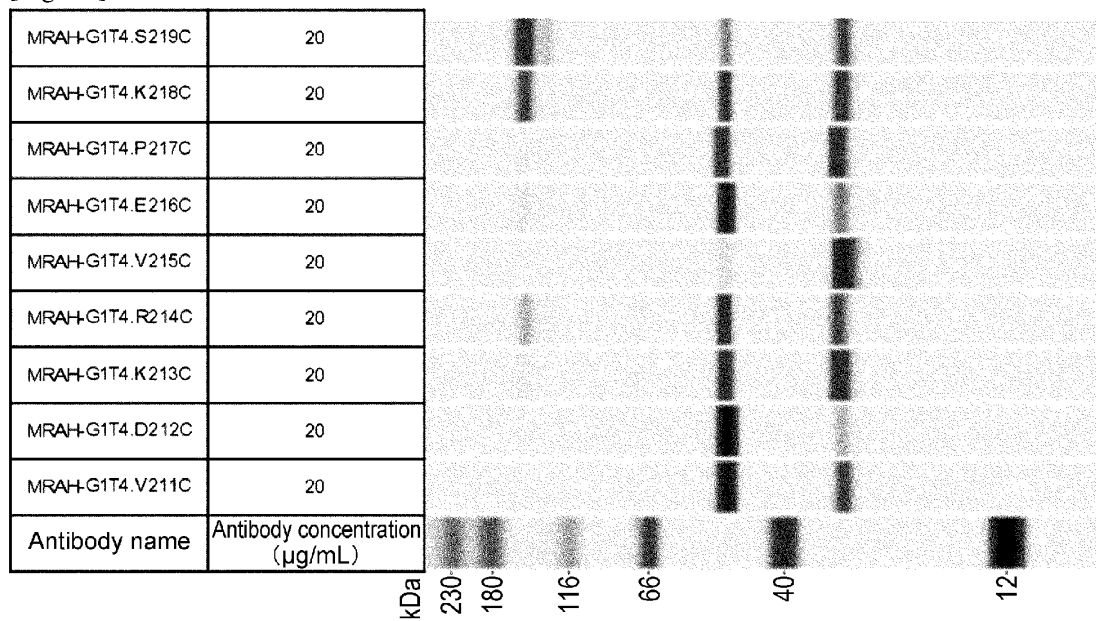
[Fig. 30]



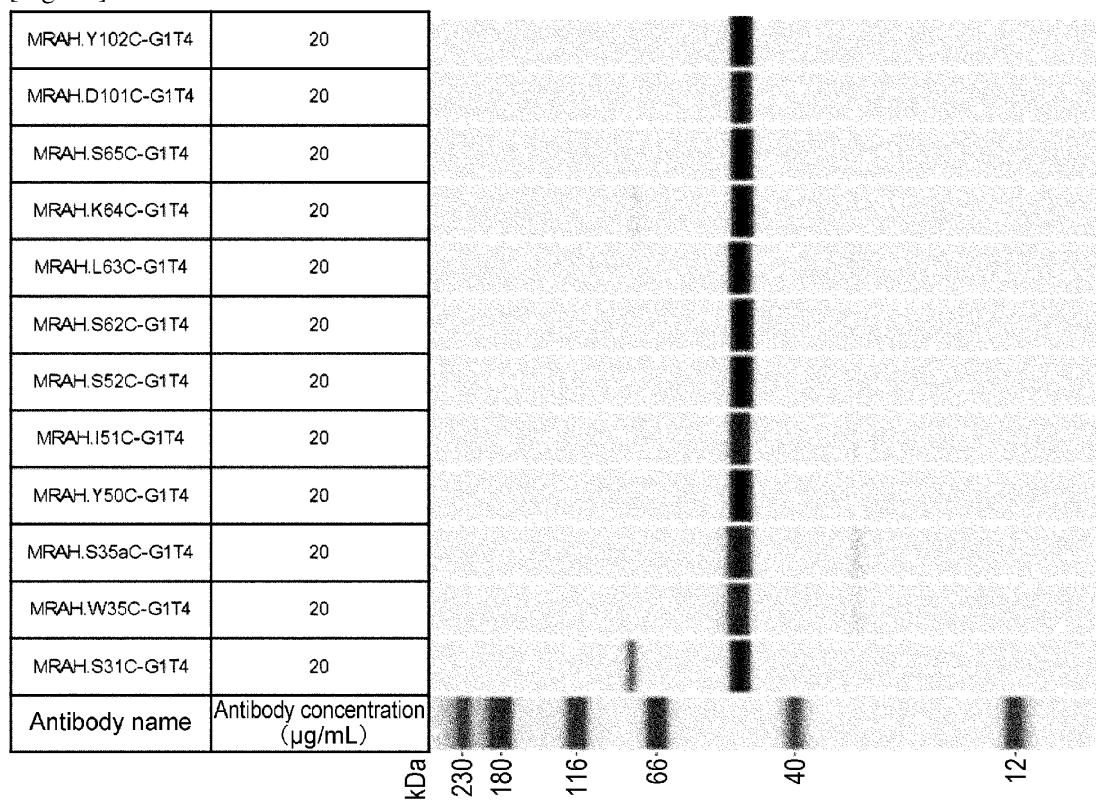
[Fig. 31]



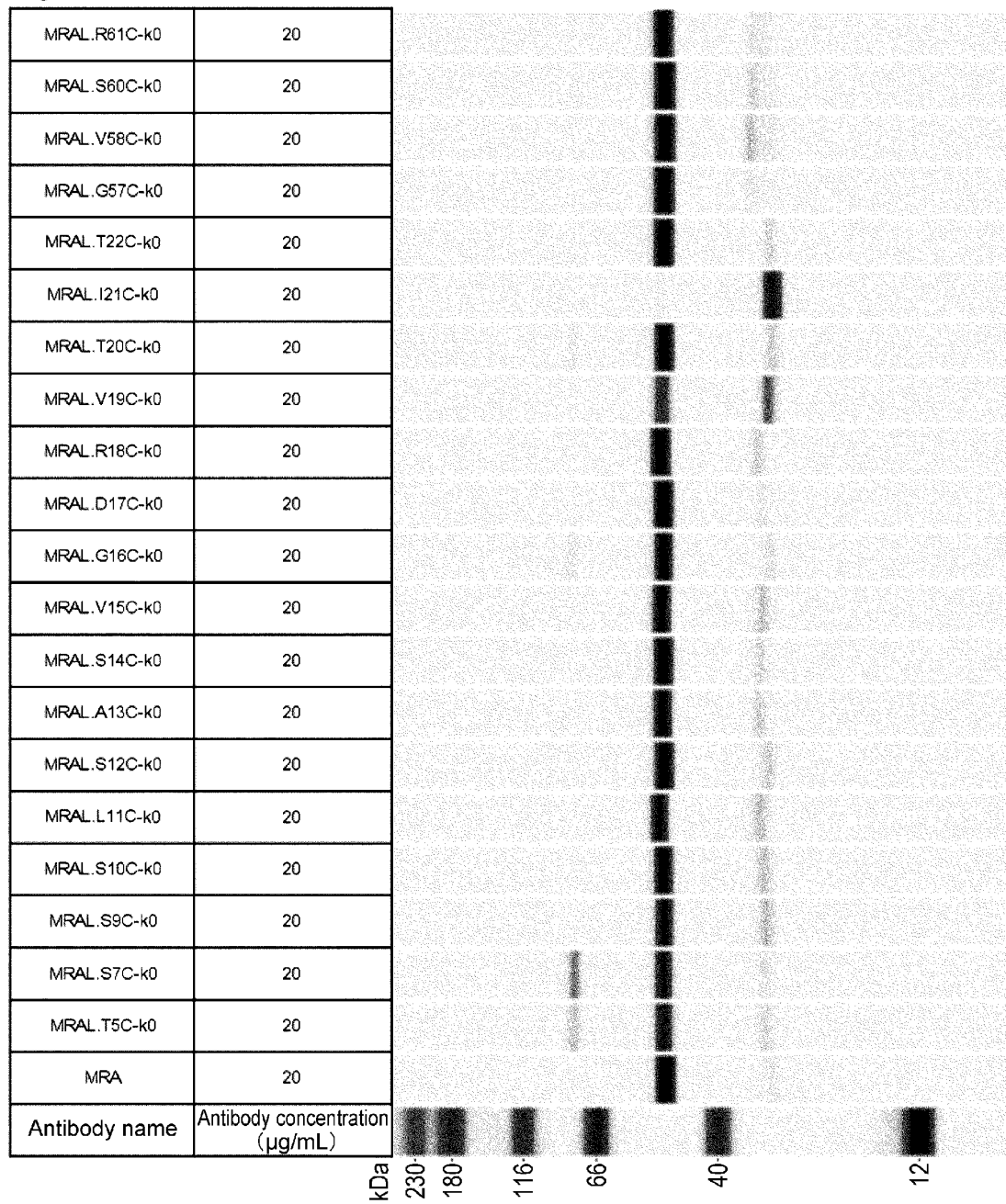
[Fig. 32]



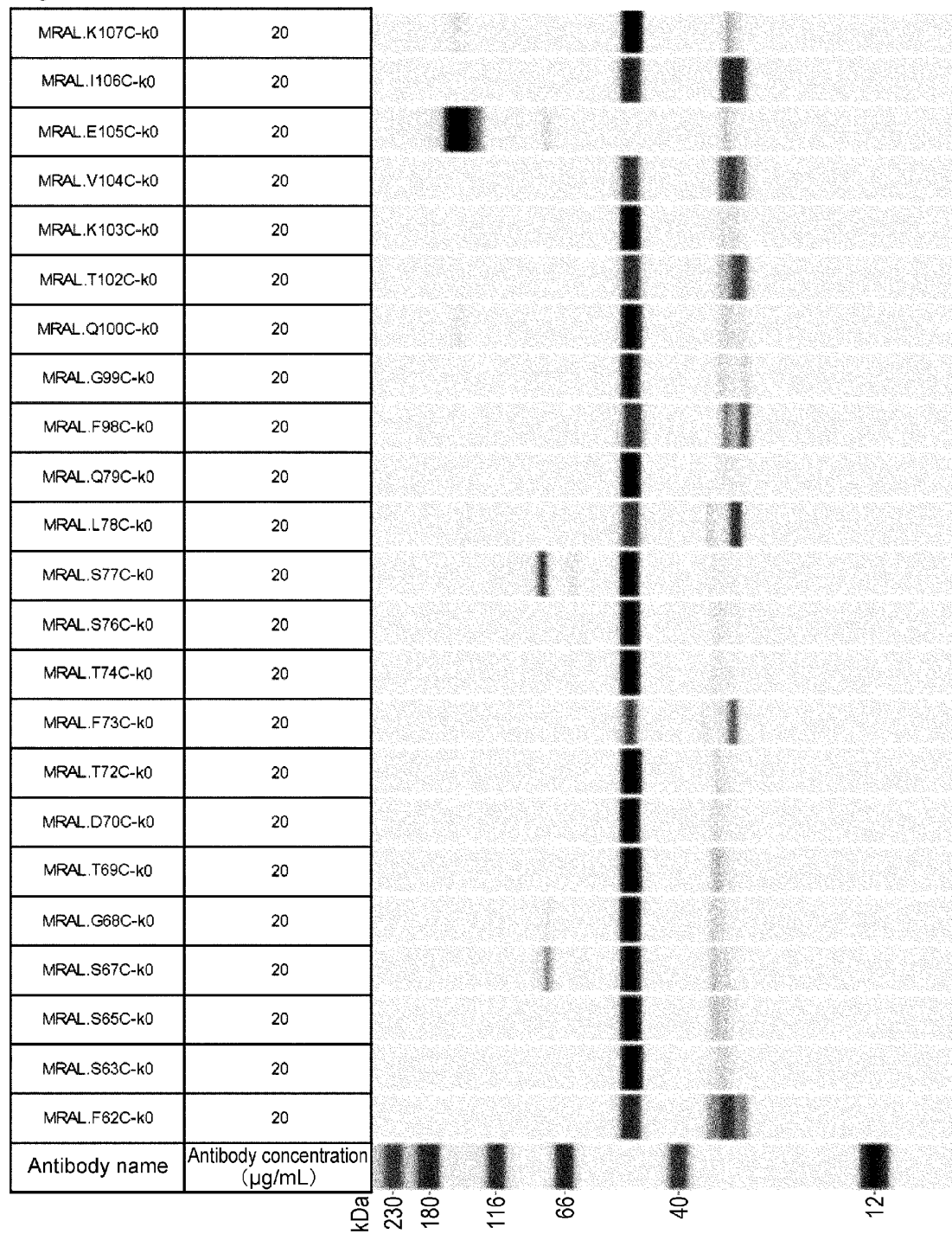
[Fig. 33]



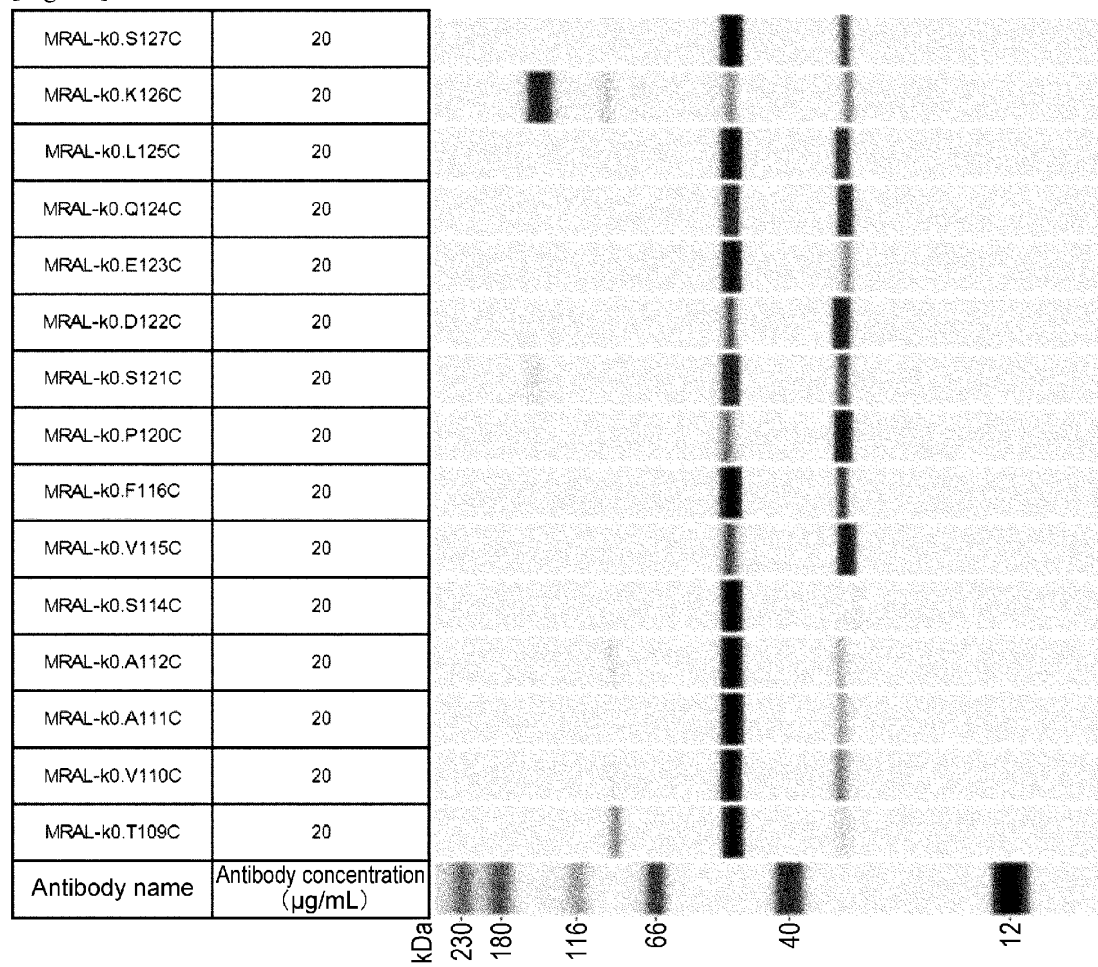
[Fig. 34]



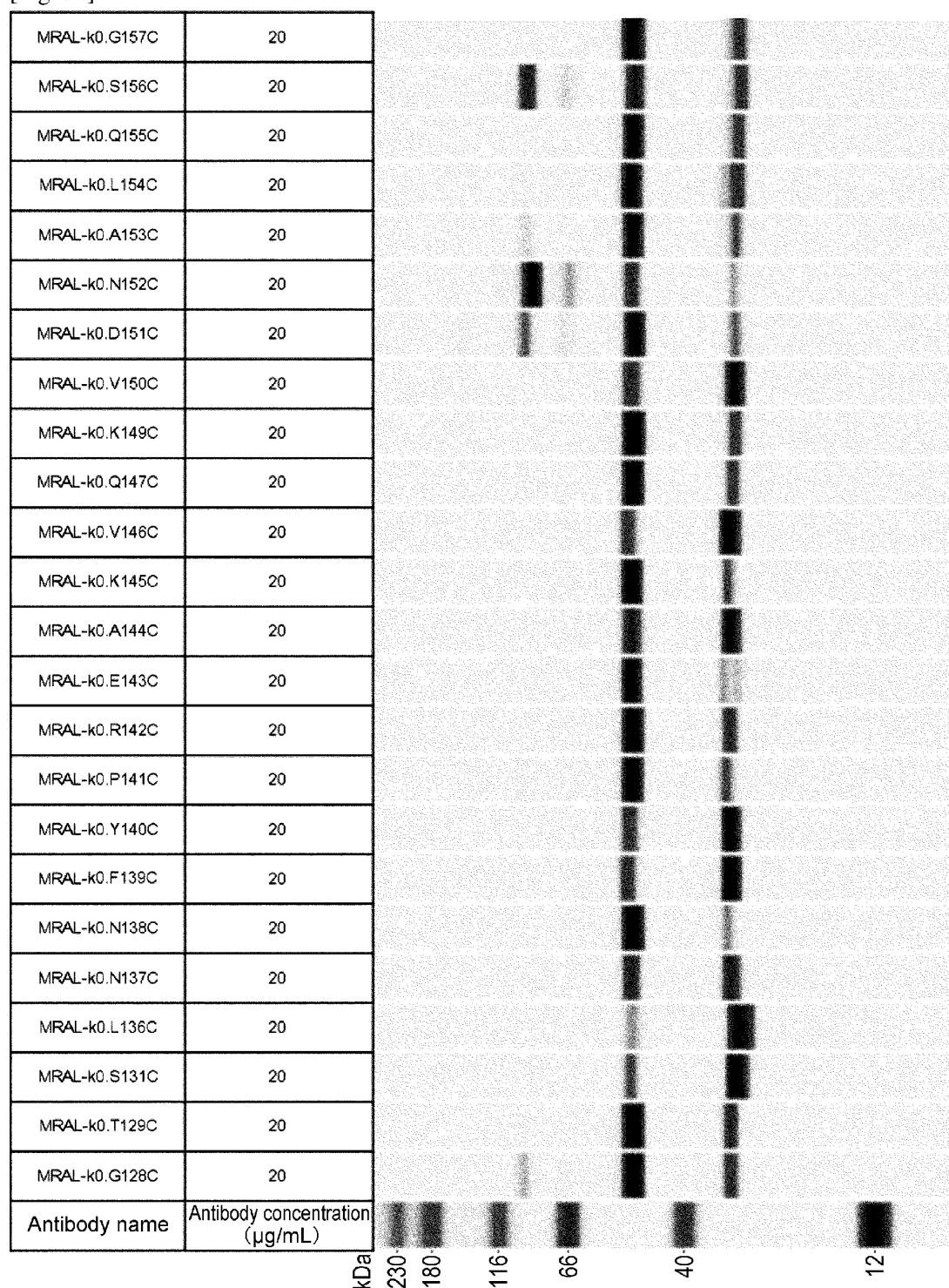
[Fig. 35]



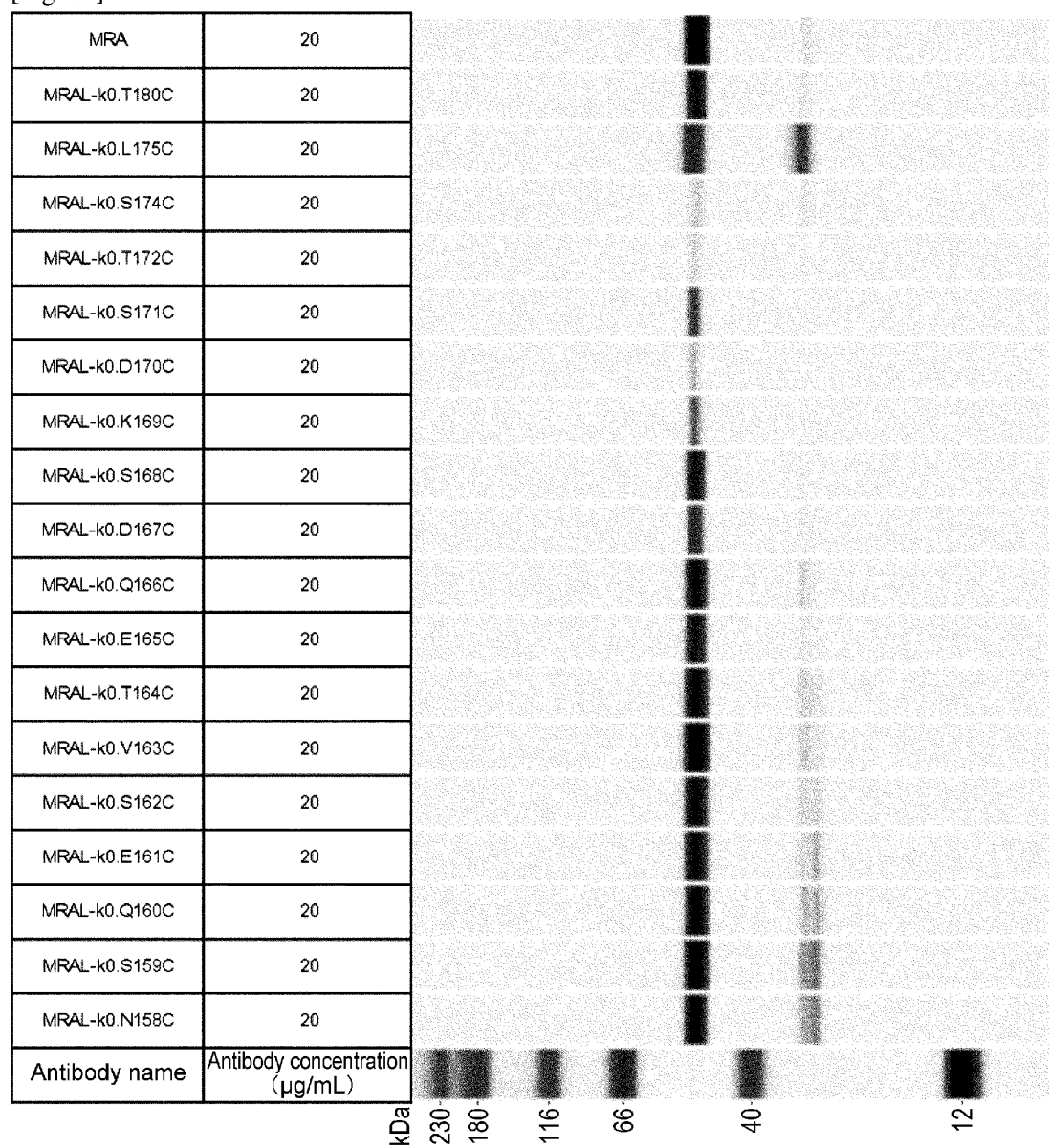
[Fig. 36]



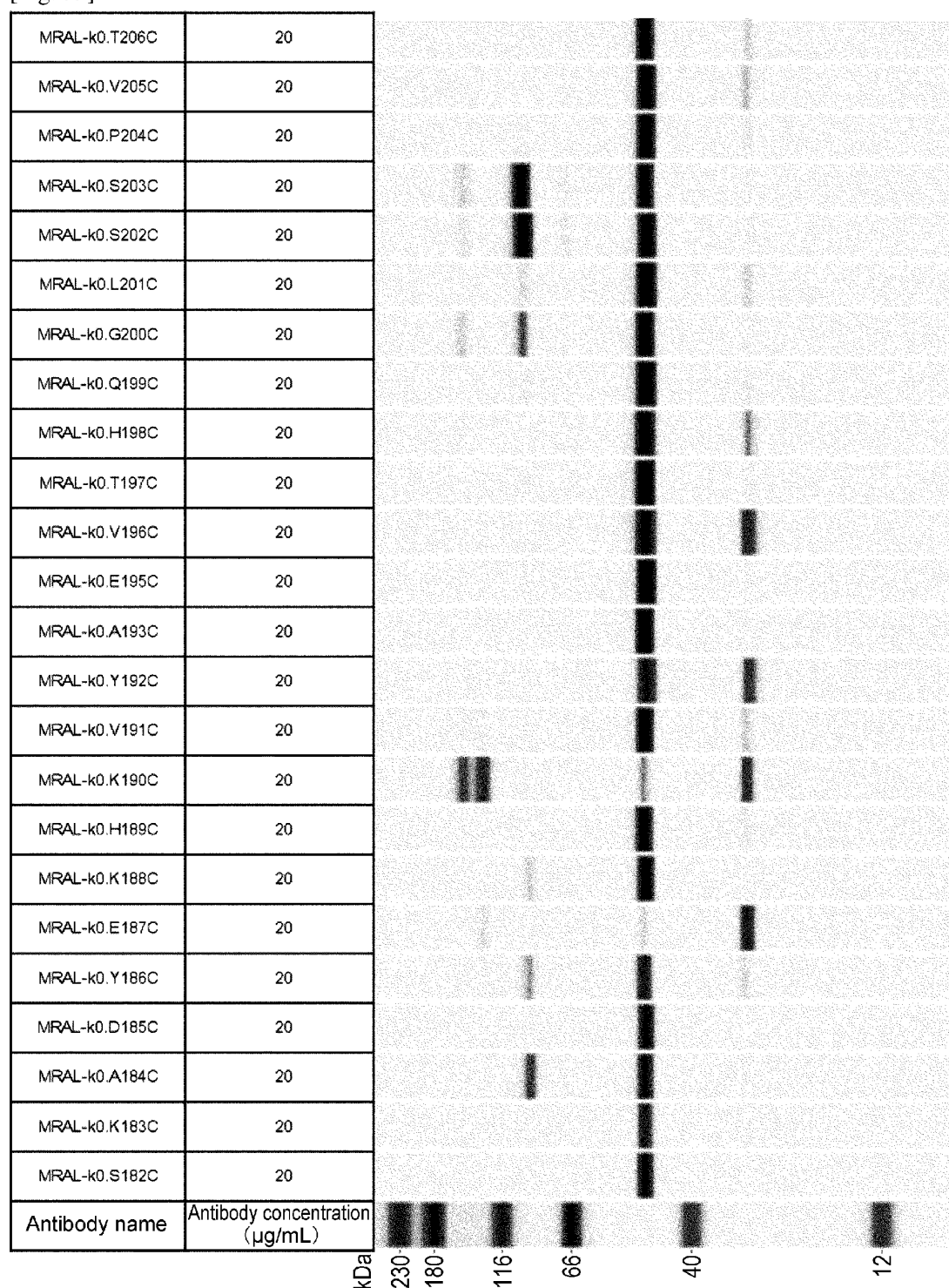
[Fig. 37]



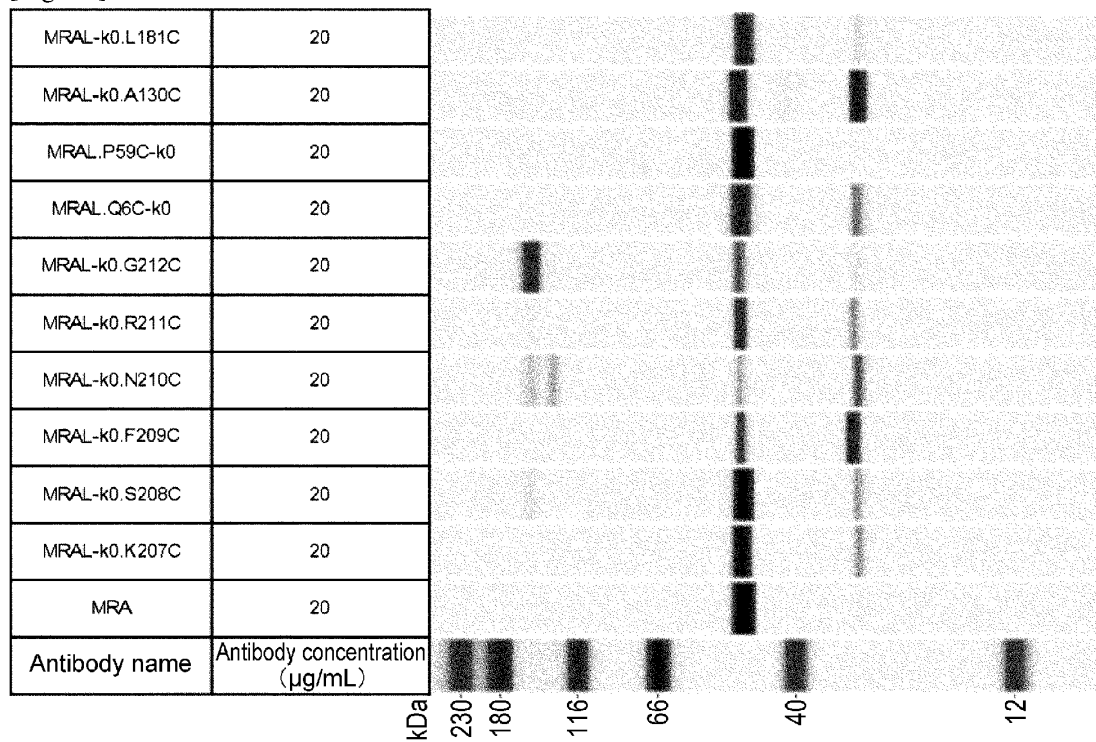
[Fig. 38]



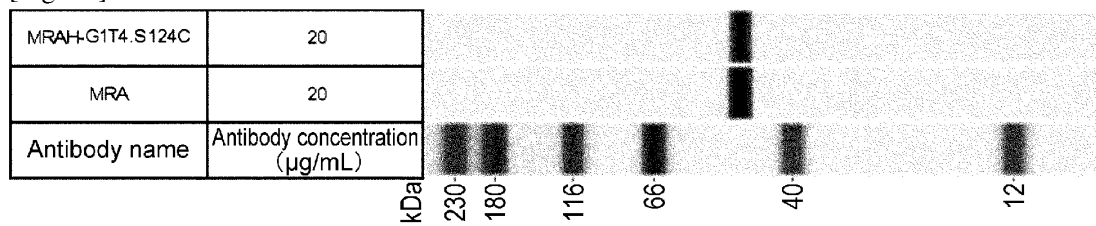
[Fig. 39]



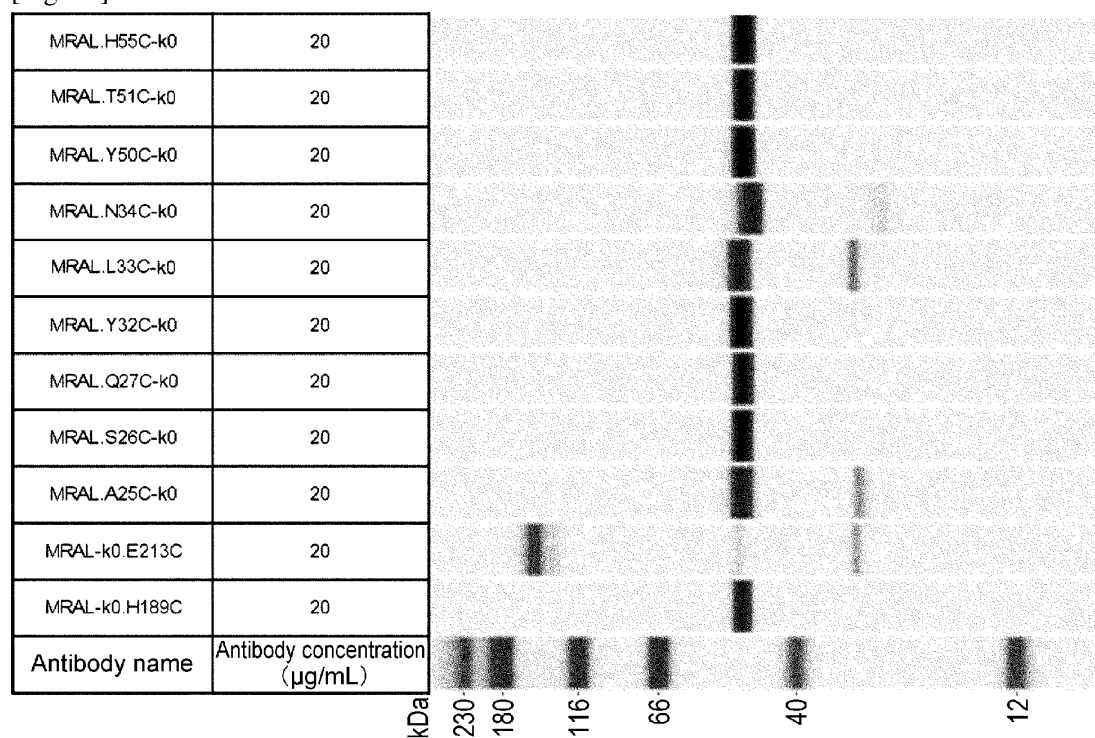
[Fig. 40]



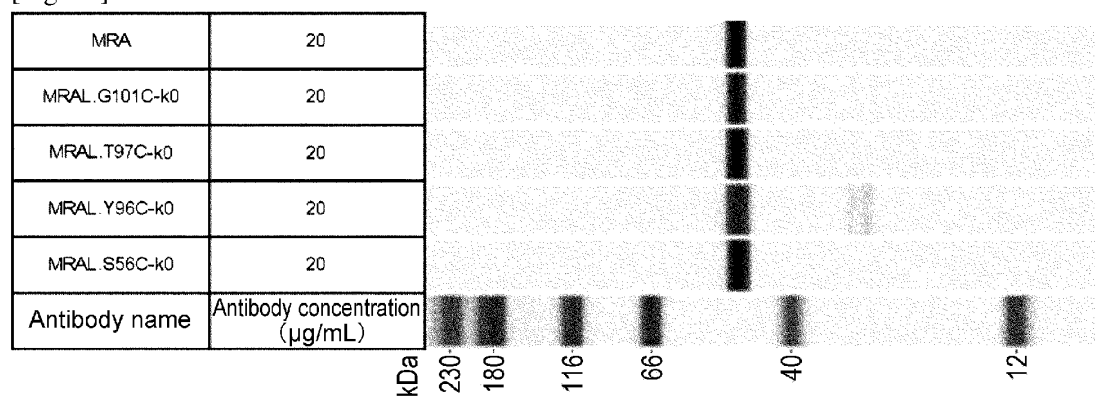
[Fig. 41]



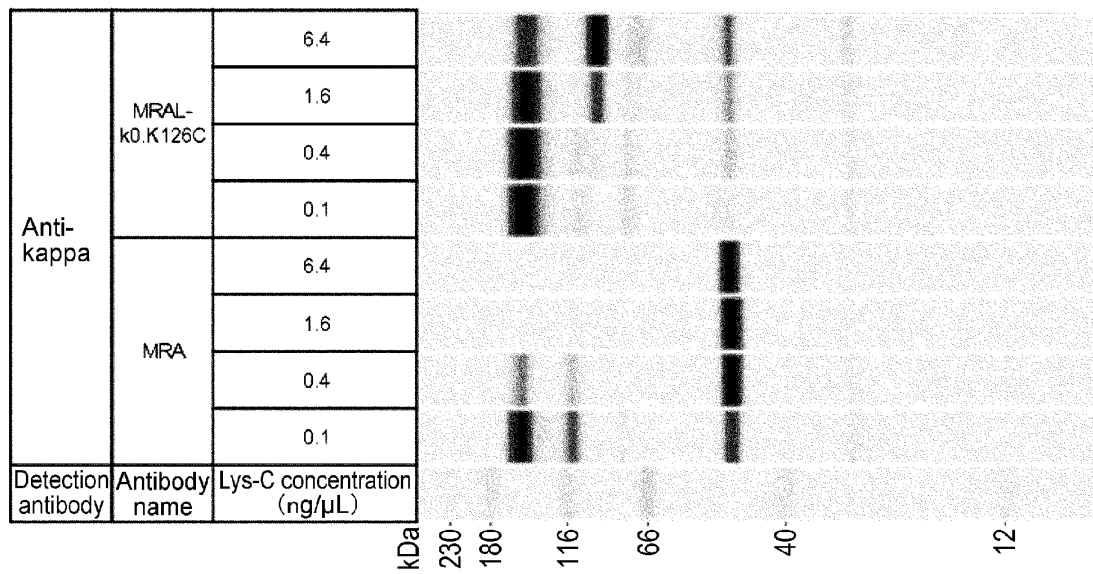
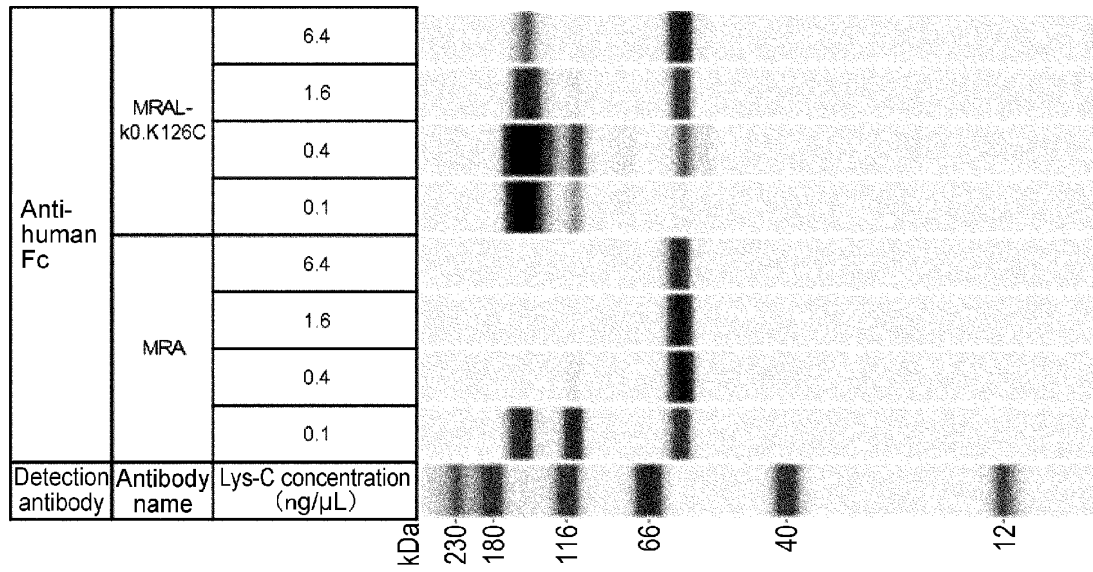
[Fig. 42]



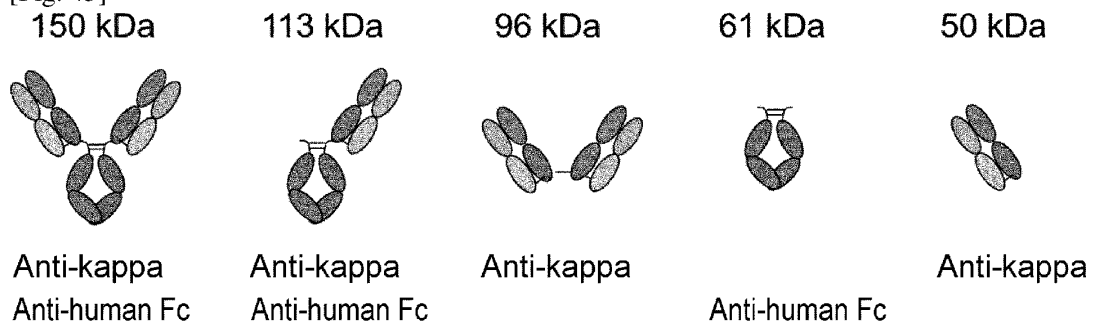
[Fig. 43]



[Fig. 44]



[Fig. 45]

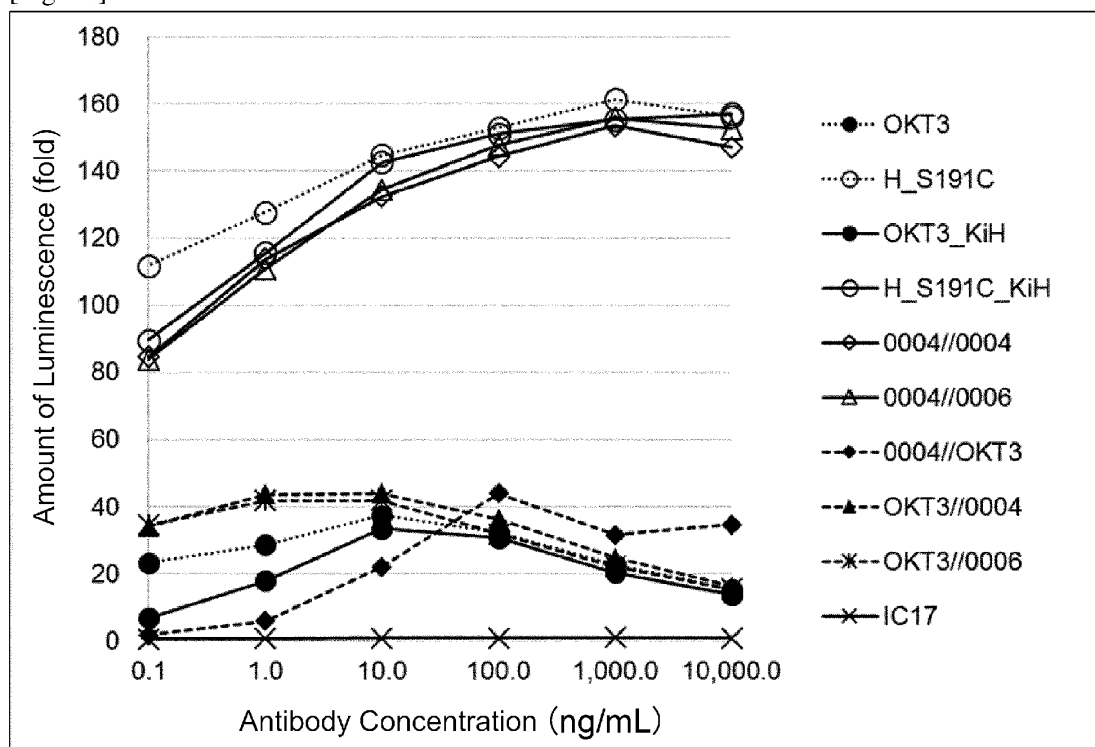


Antibody Concentration (ng/mL)	OKT3	H_T135C	H_S136C	H_S191C	L_K126C	IC17
0.1	~2	~3	~30	~45	~0	~0
1.0	~15	~95	~95	~115	~0	~0
10.0	~38	~138	~145	~155	~5	~0
100.0	~38	~175	~190	~190	~5	~0
1,000.0	~28	~185	~195	~205	~10	~0
10,000.0	~20	~175	~190	~205	~15	~0

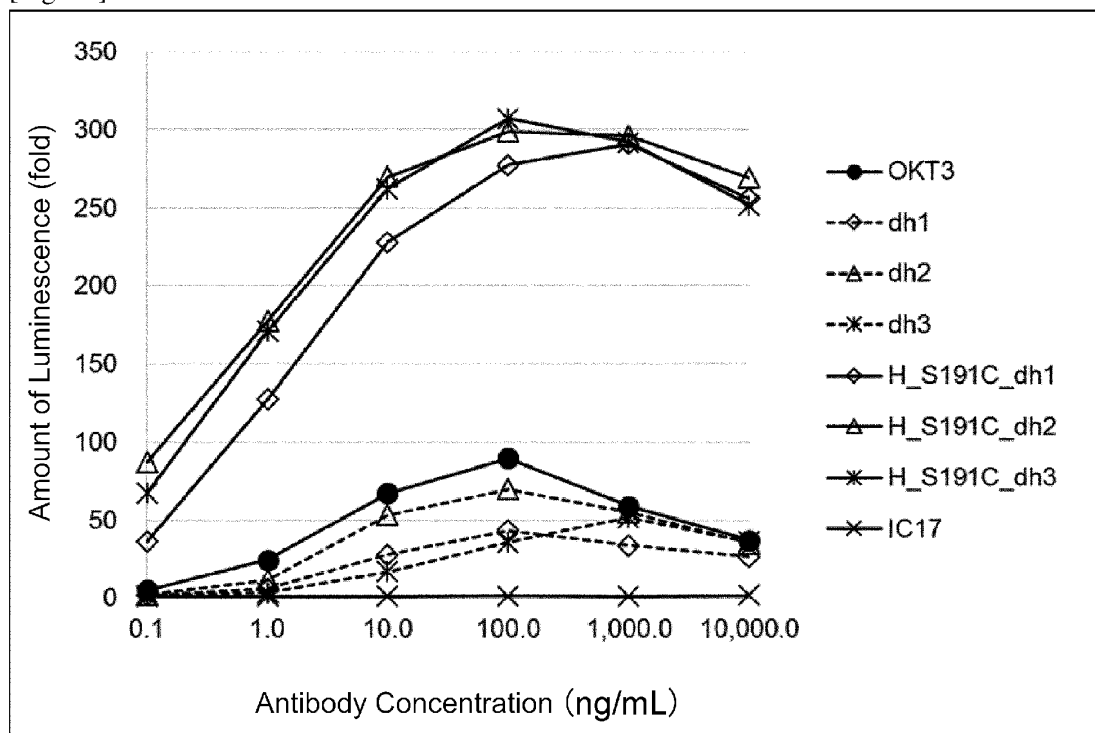
Figure 1 is a line graph showing the amount of luminescence (fold) versus antibody concentration (ng/mL) for various anti-OKT3 antibodies. The x-axis is logarithmic, ranging from 0.1 to 10,000.0 ng/mL. The y-axis ranges from 0 to 400 fold. The graph shows that most antibodies reach a maximum luminescence between 1.0 and 100.0 ng/mL, with H_S191C_KiH and OKT3_KiH showing the highest activity. IC17 shows no activity across the tested concentration range.

Antibody Concentration (ng/mL)	OKT3	OKT3_KiH	H_S191C_KiH	H_S191C/V188C_KiH	H_S191C/P189C_KiH	H_S191C/S190C_KiH	H_S191C/S192C_KiH	H_S191C/L193C_KiH	H_S191C/G194C_KiH	IC17
0.1	~5	~5	~160	~60	~80	~90	~60	~80	~90	~0
1.0	~20	~20	~240	~170	~160	~190	~170	~190	~190	~0
10.0	~60	~60	~300	~250	~270	~280	~250	~270	~280	~0
100.0	~80	~80	~330	~300	~320	~330	~300	~320	~330	~0
1,000.0	~55	~55	~350	~240	~290	~320	~250	~320	~320	~0
10,000.0	~35	~35	~345	~180	~245	~280	~180	~320	~320	~0

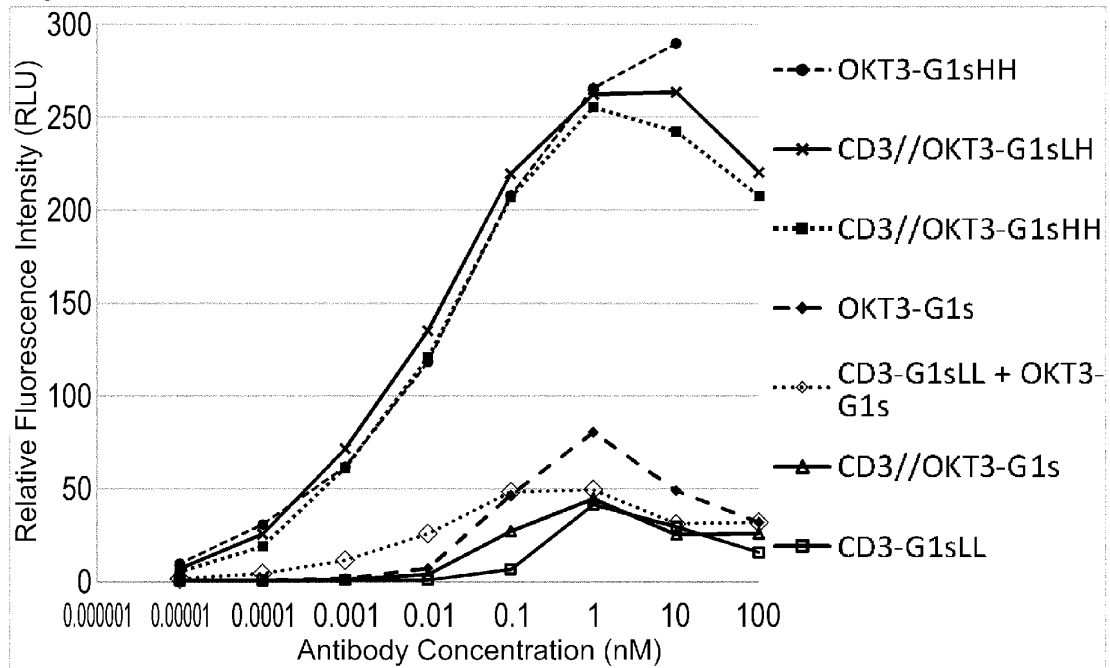
[Fig. 48]



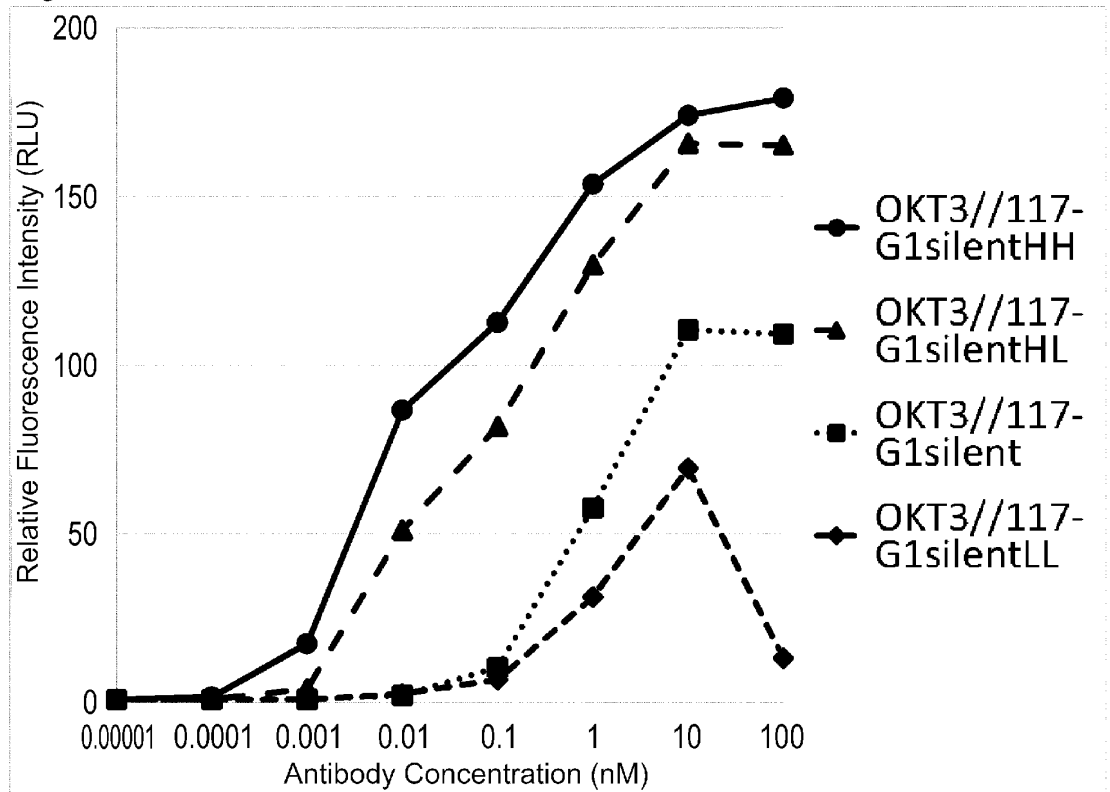
[Fig. 49]



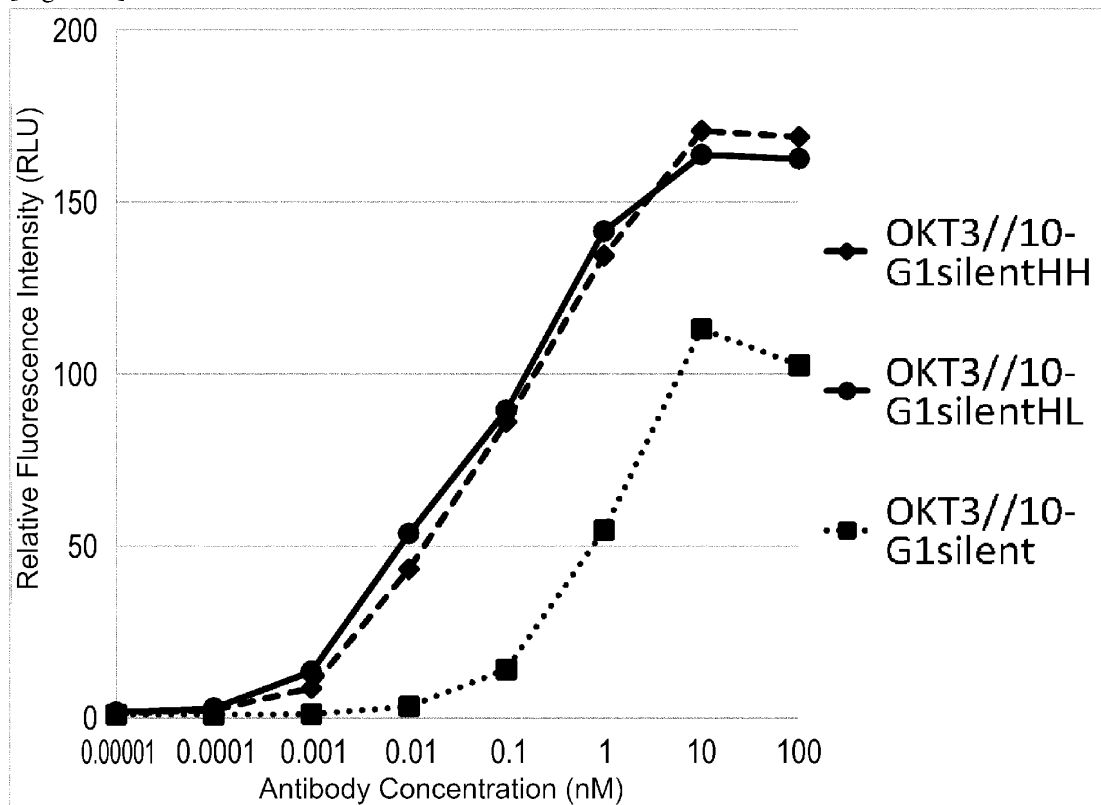
[Fig. 50]



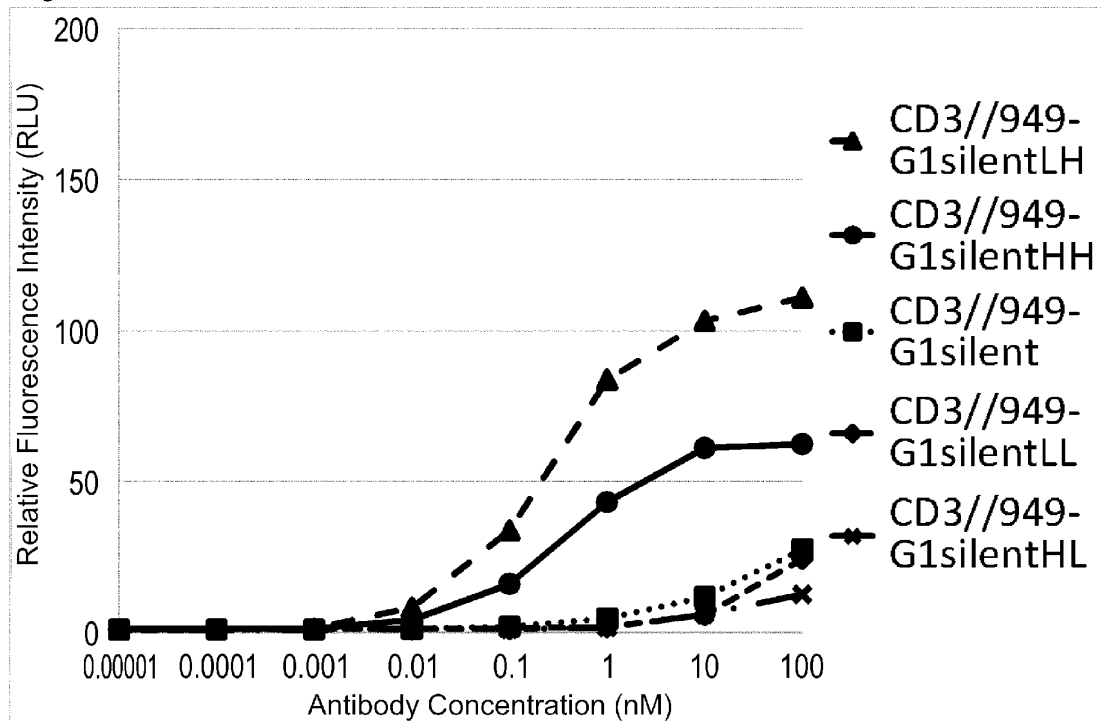
[Fig. 51A]



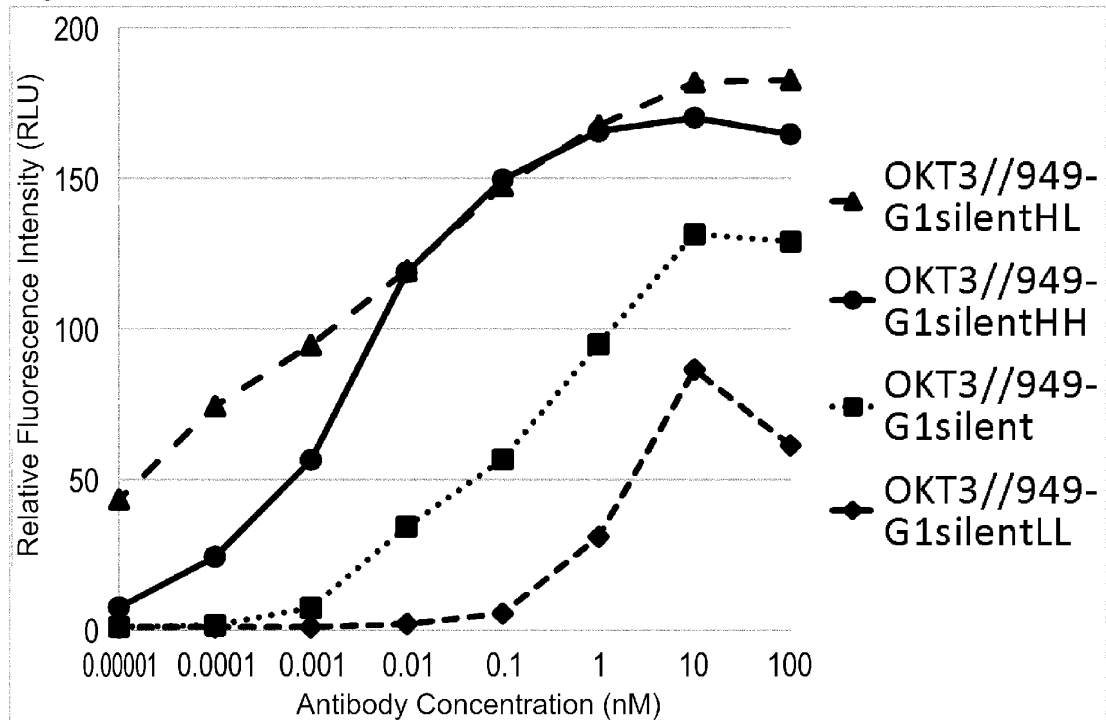
[Fig. 51B]



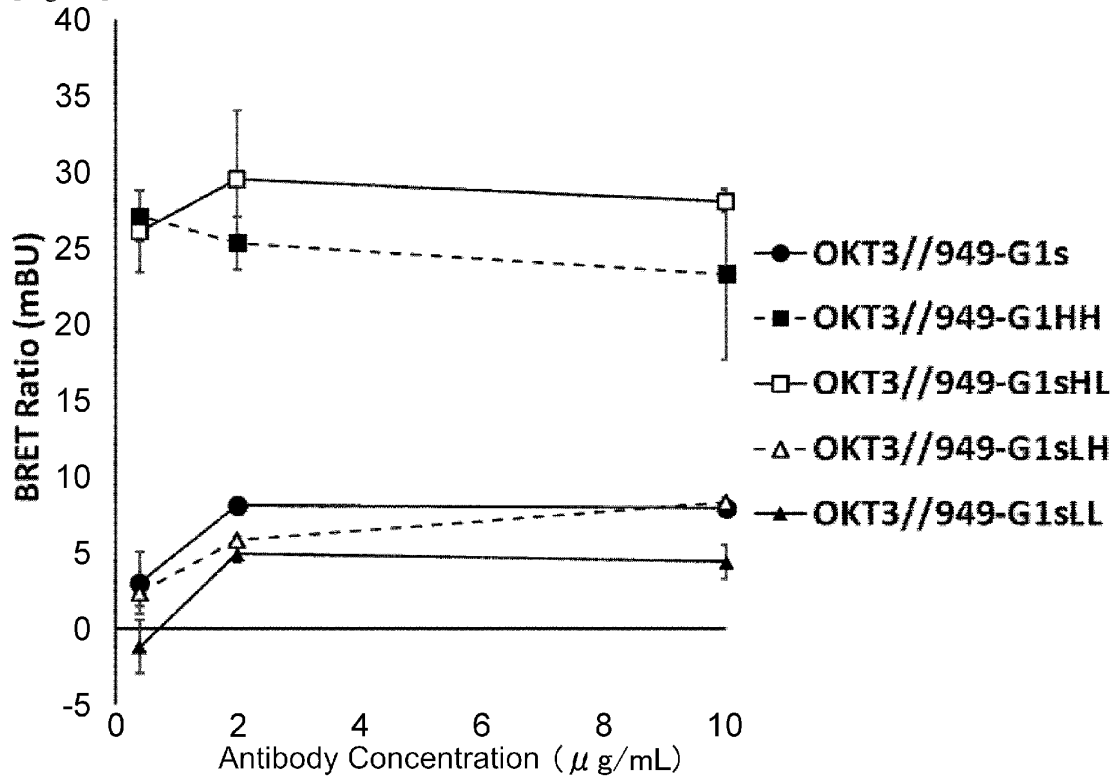
[Fig. 51C]



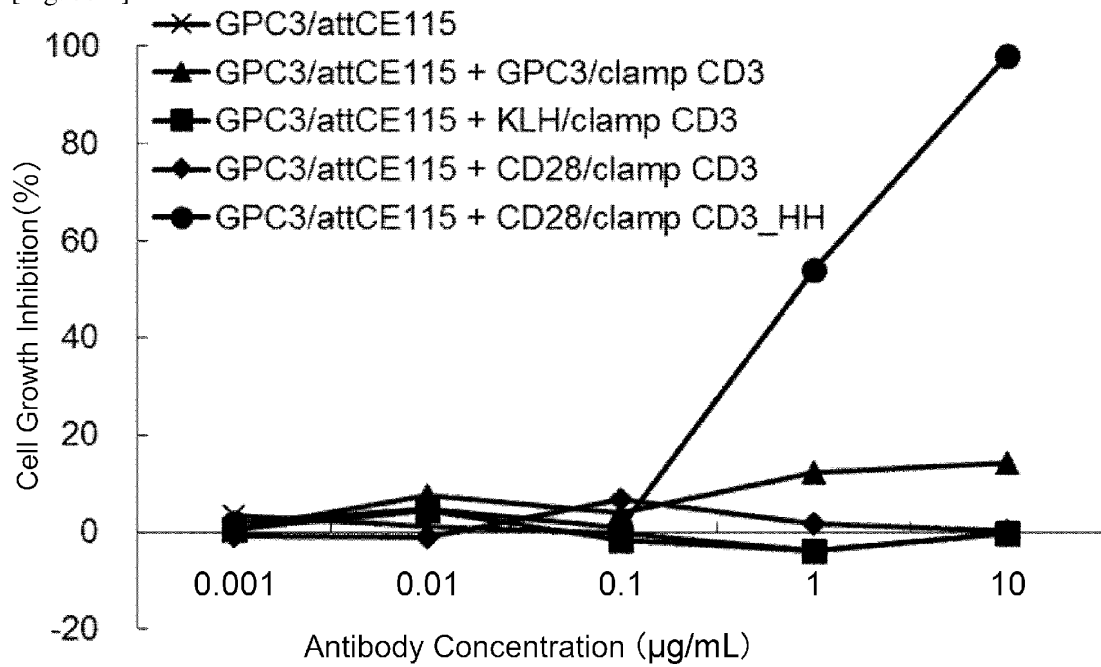
[Fig. 51D]



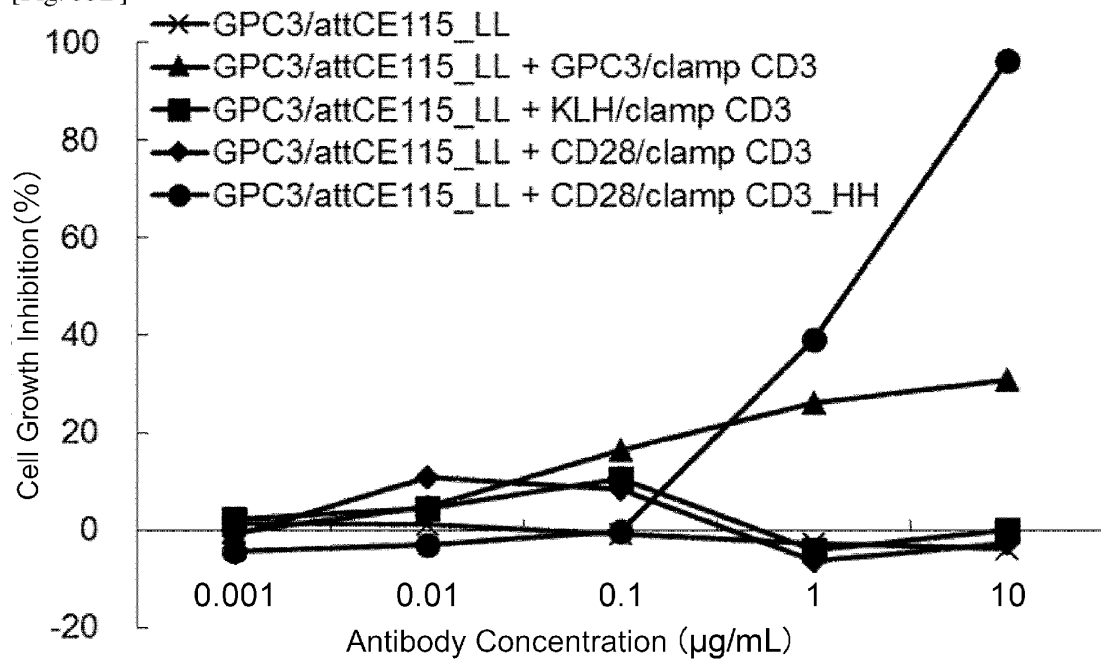
[Fig. 52]



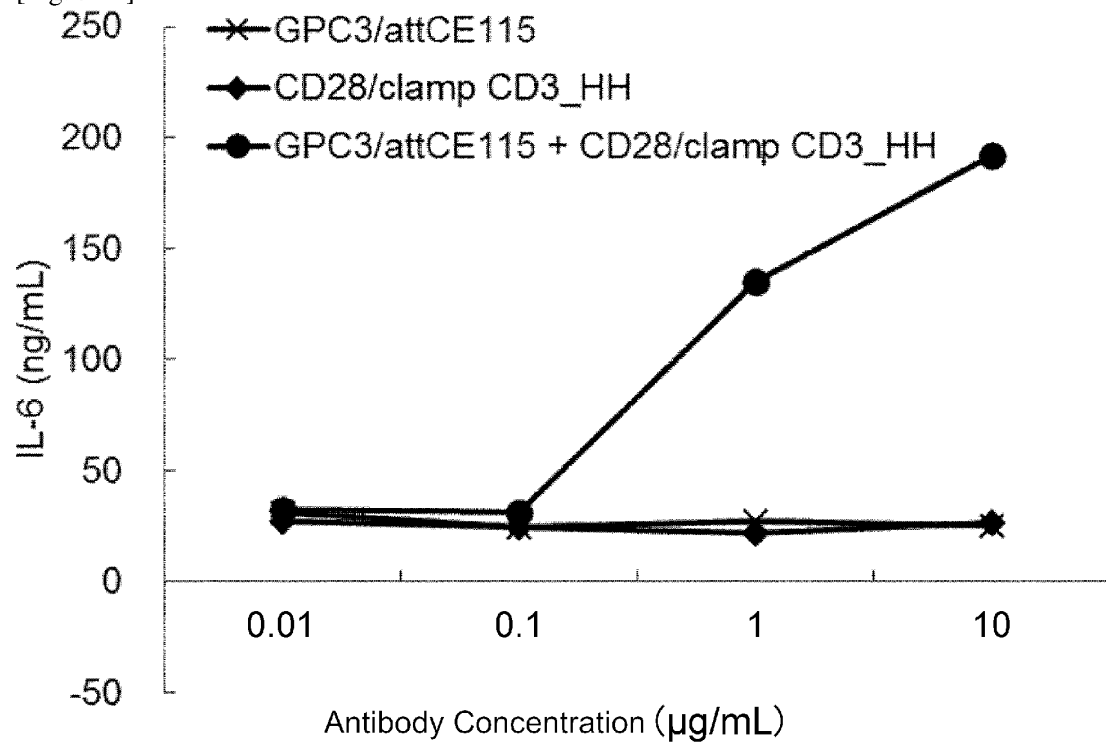
[Fig. 53A]



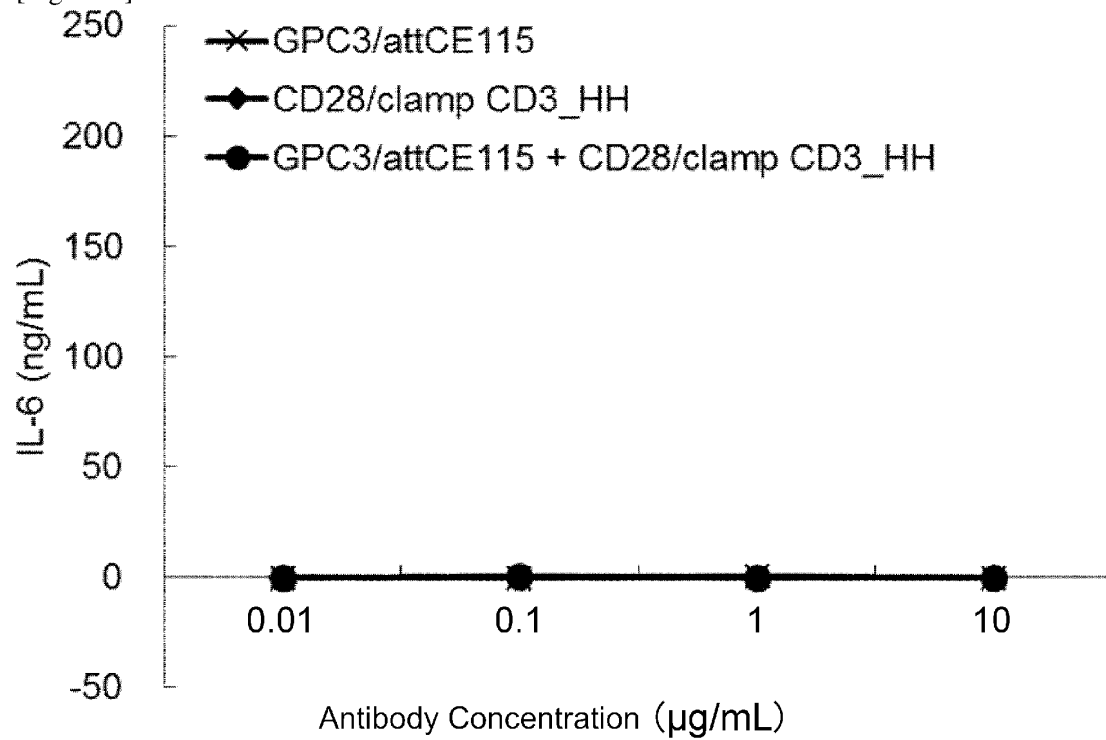
[Fig. 53B]



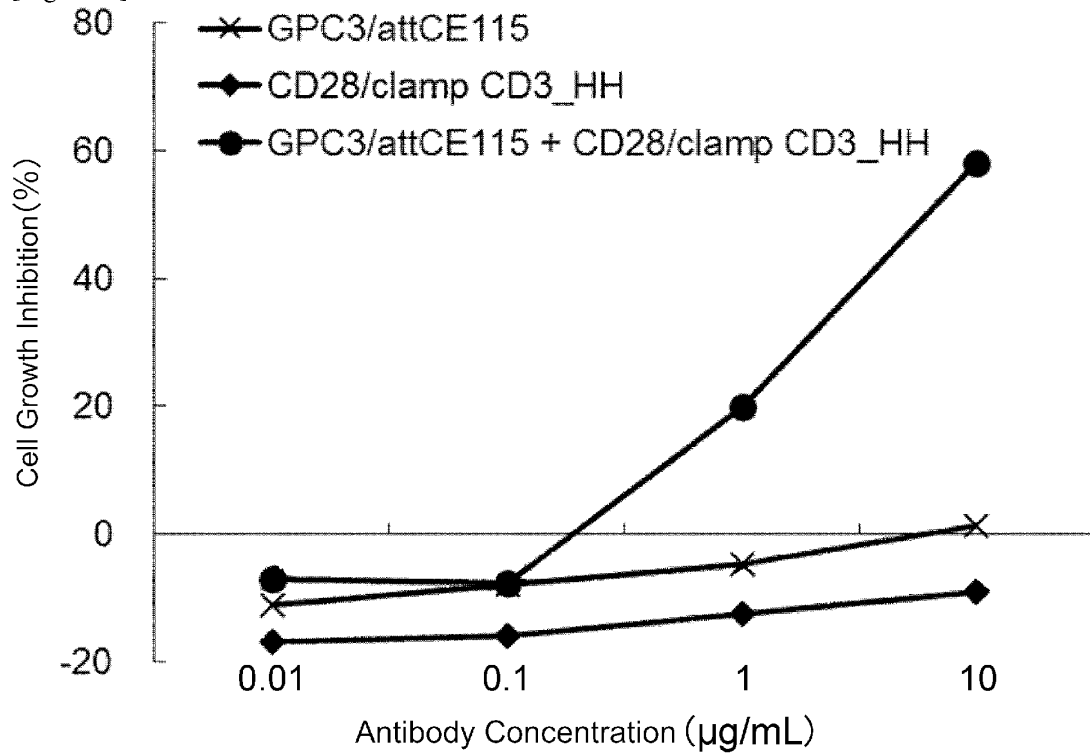
[Fig. 54A]



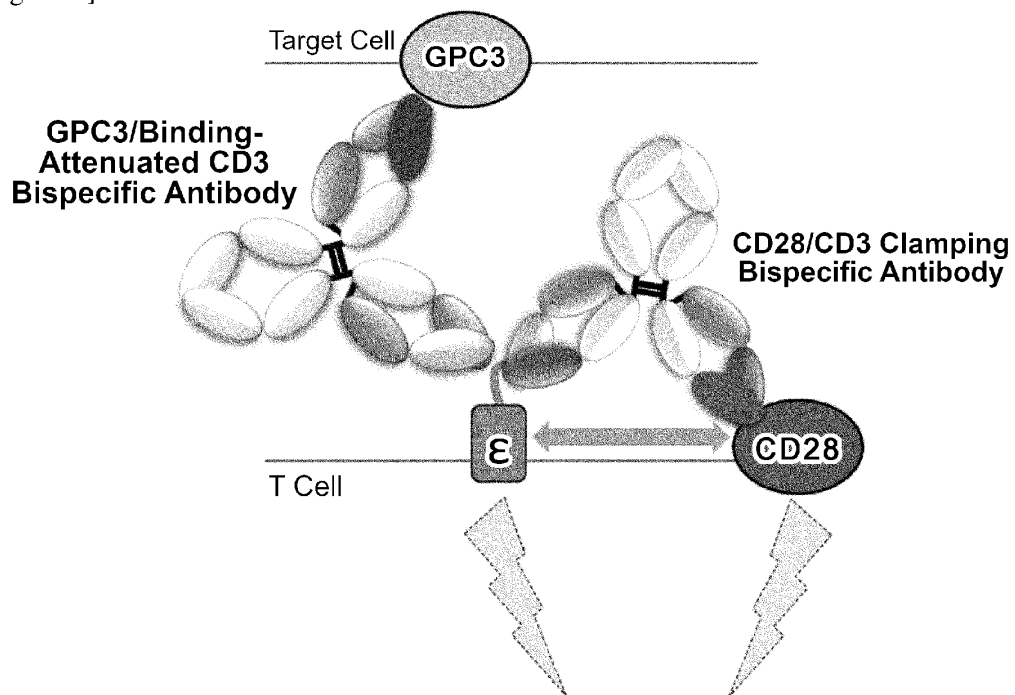
[Fig. 54B]



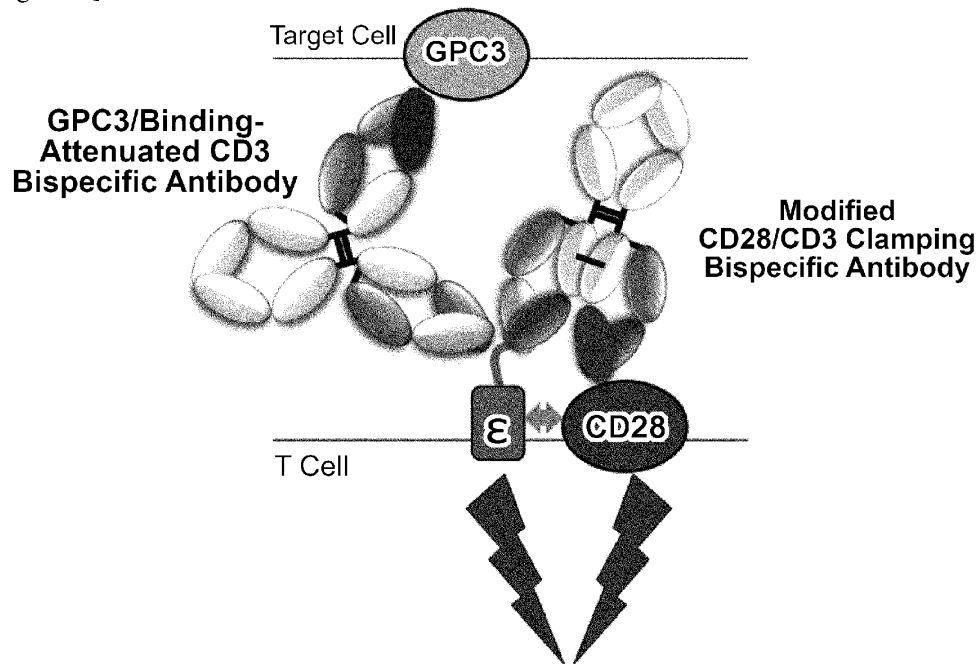
[Fig. 54C]



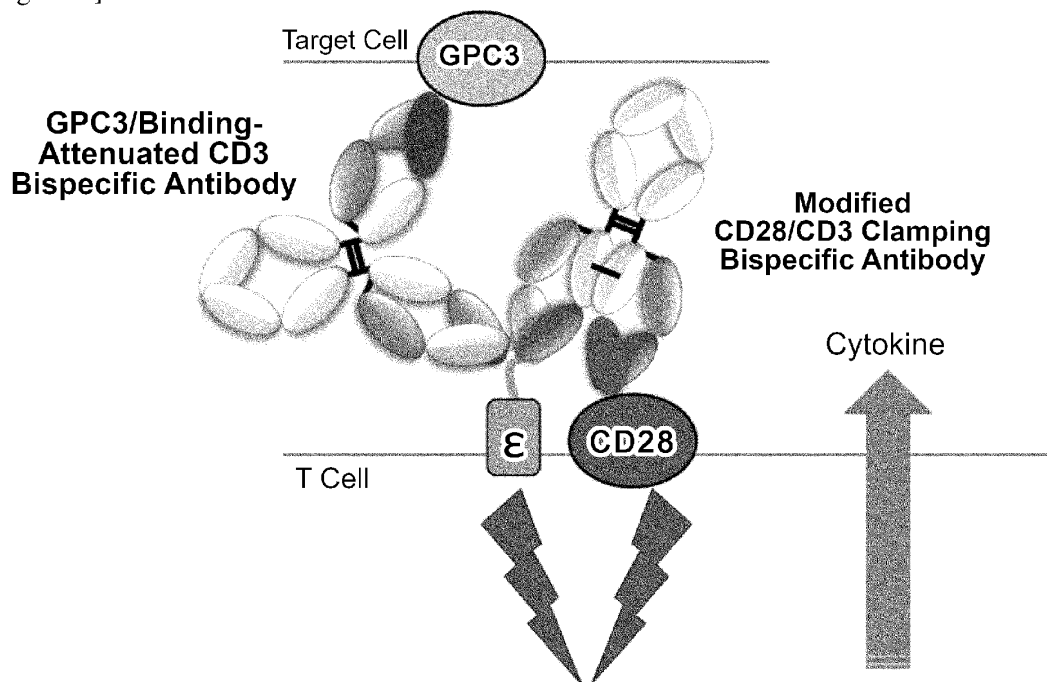
[Fig. 55A]



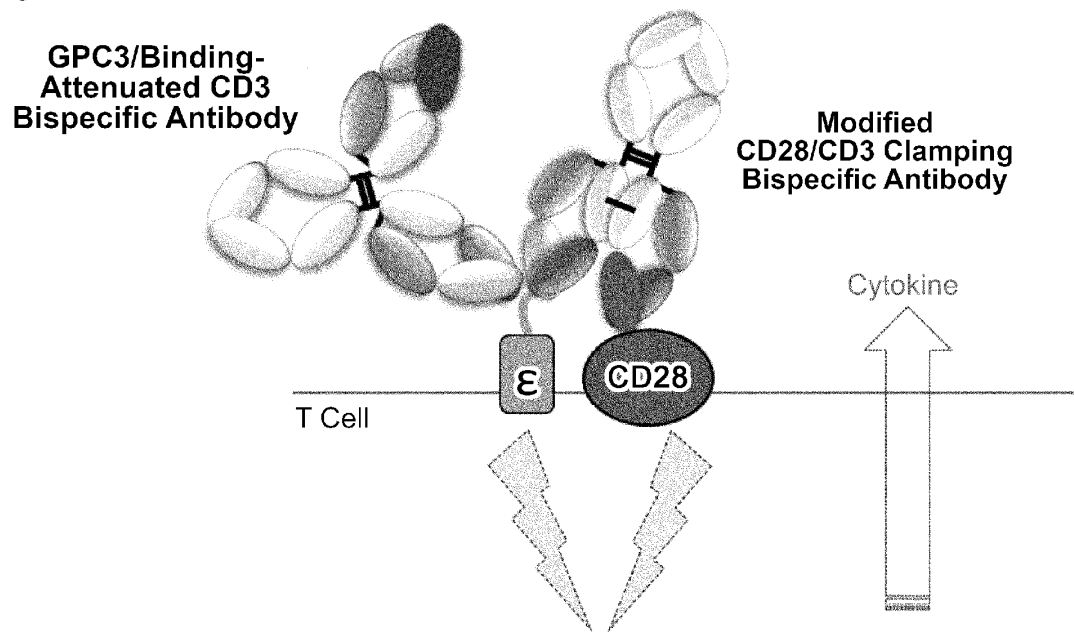
[Fig. 55B]



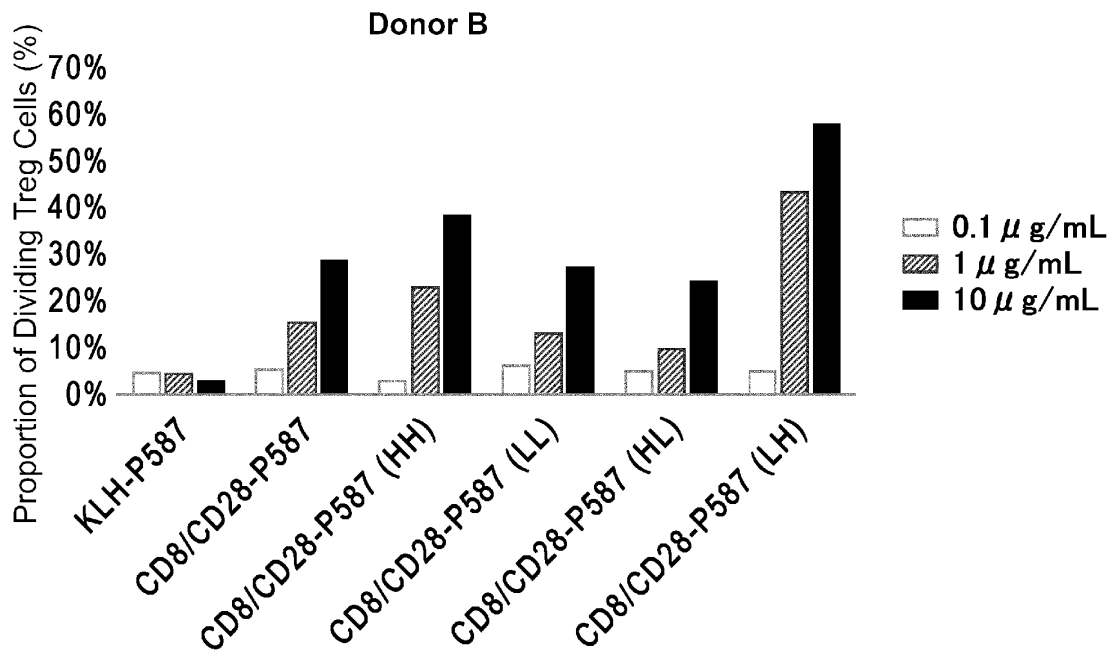
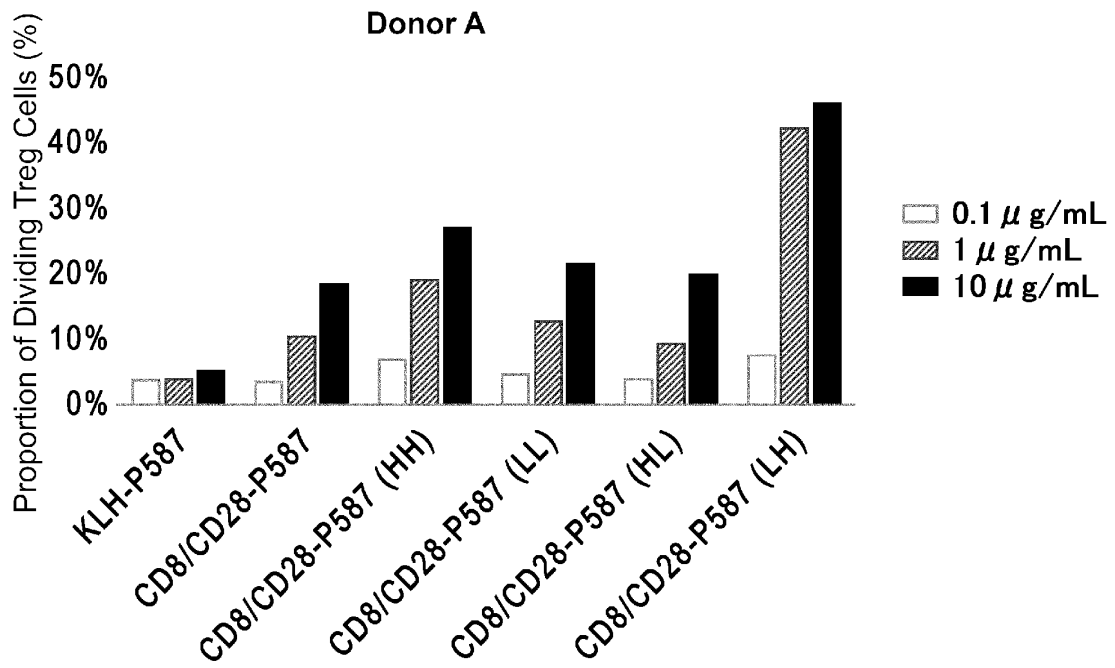
[Fig. 56A]



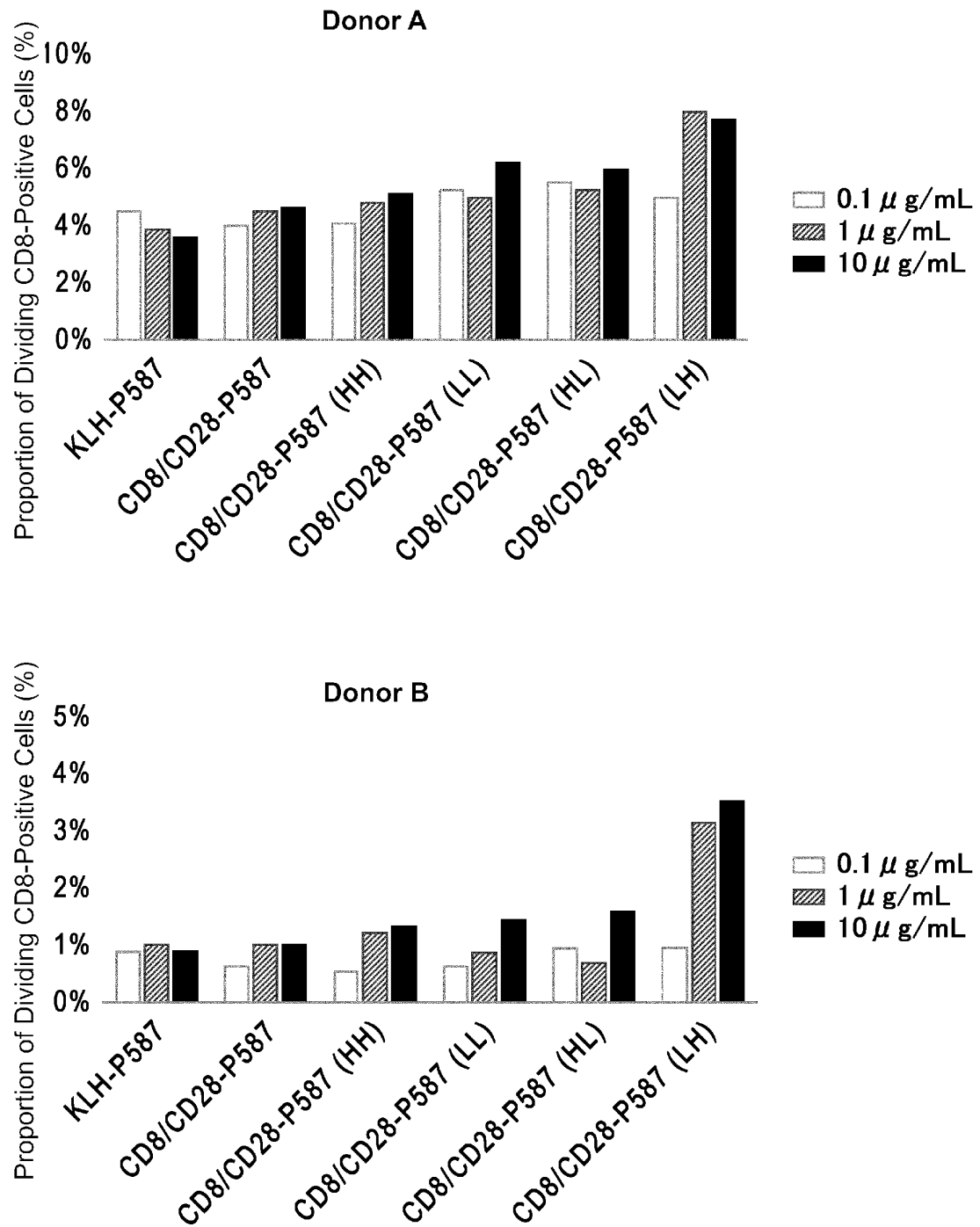
[Fig. 56B]



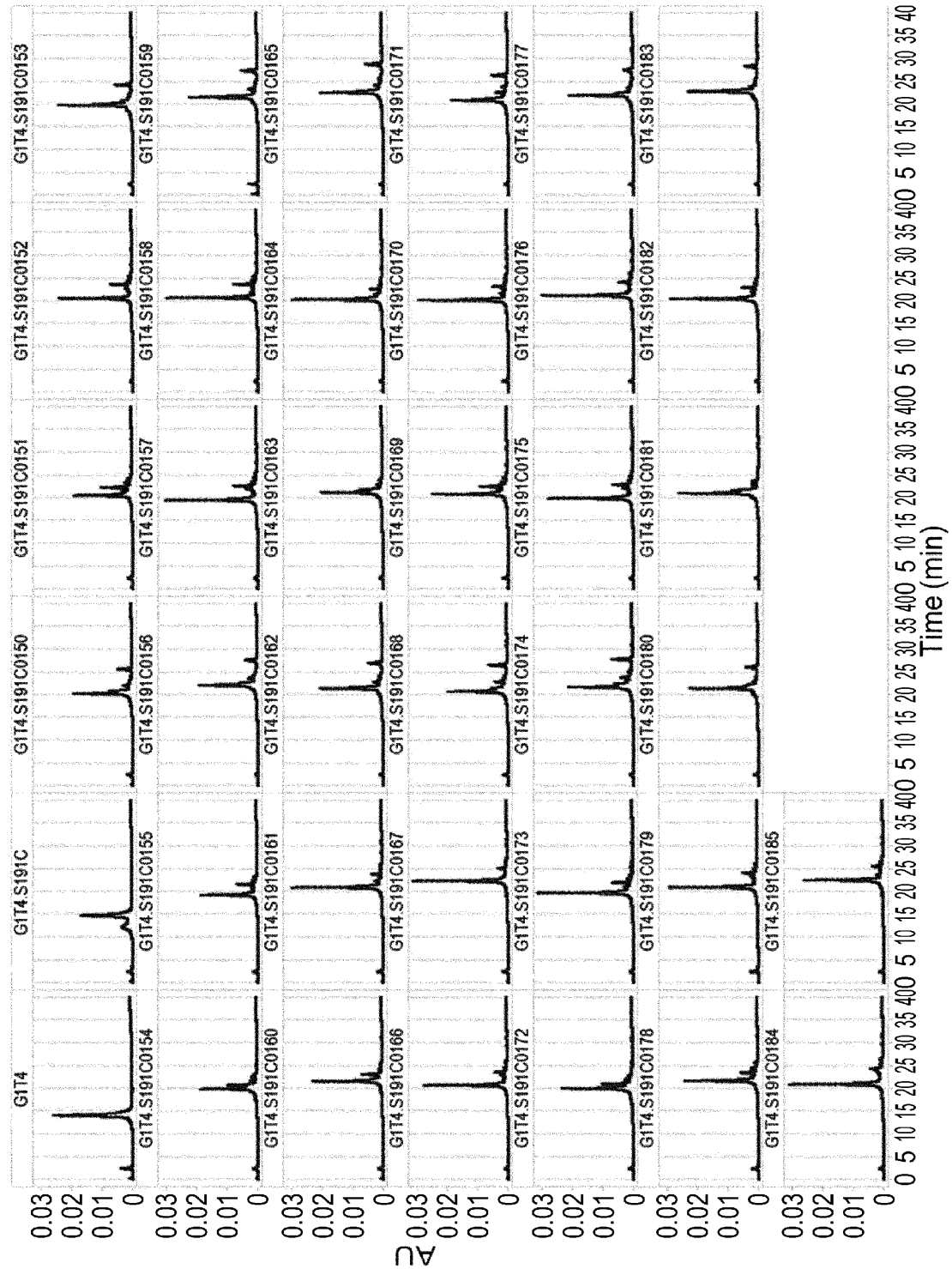
[Fig. 57A]



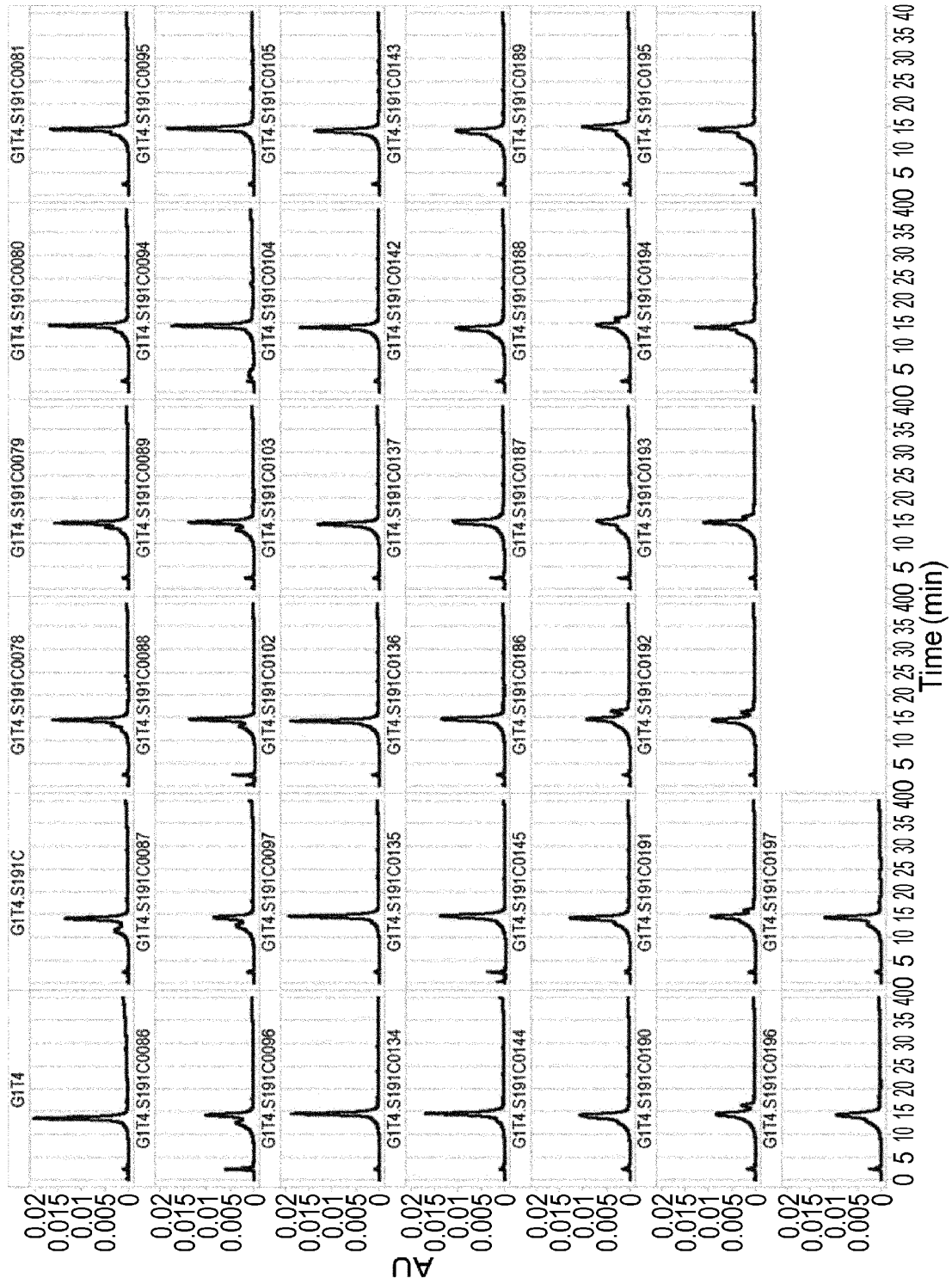
[Fig. 57B]



[Fig. 58]

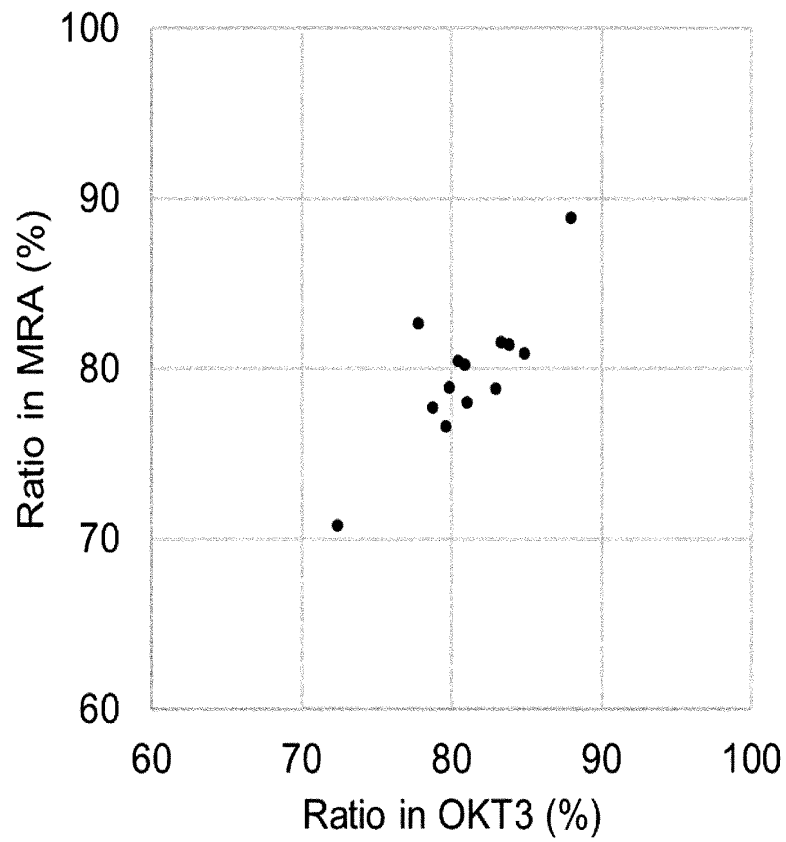


[Fig. 59]

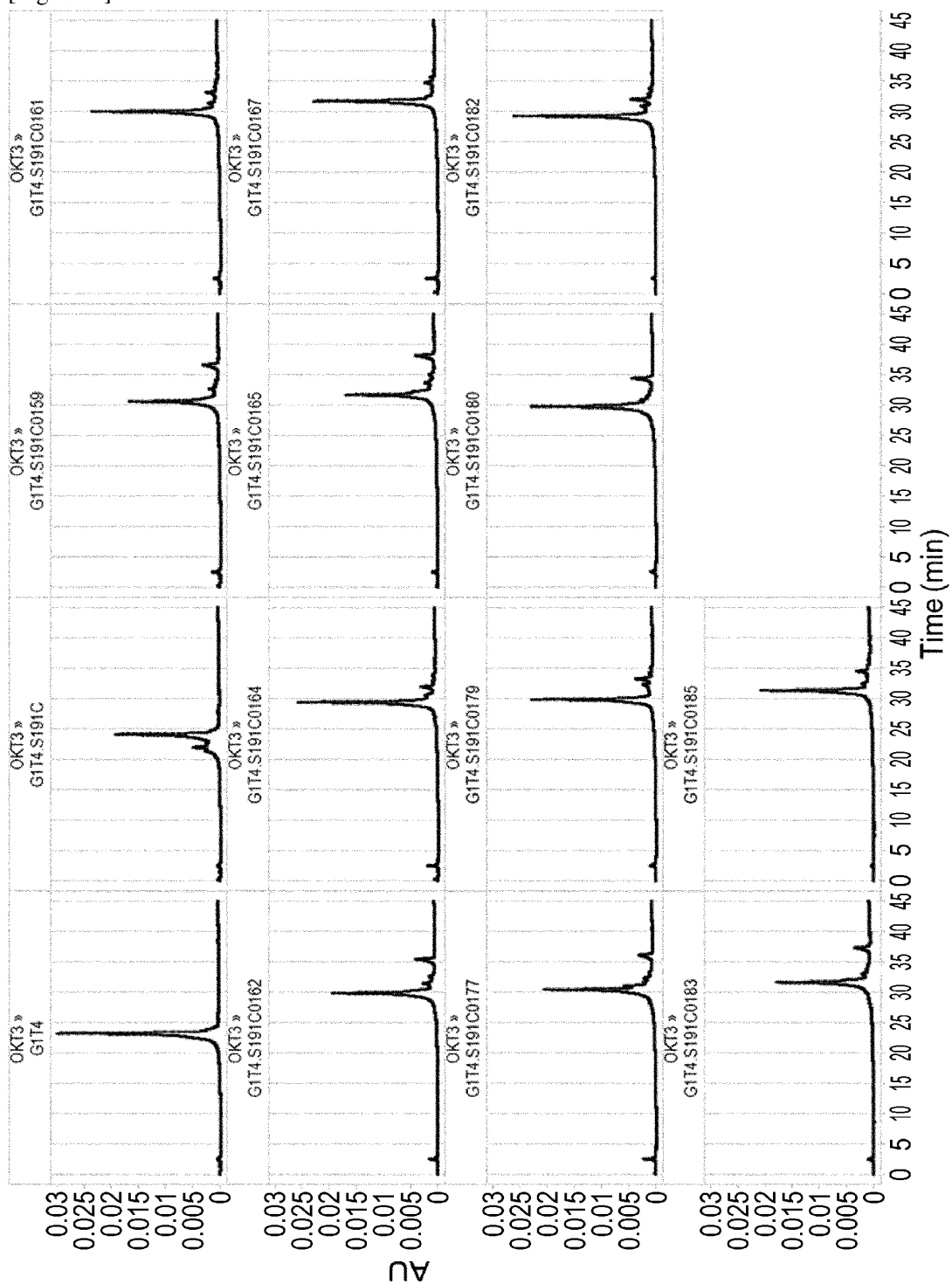


[Fig. 60]

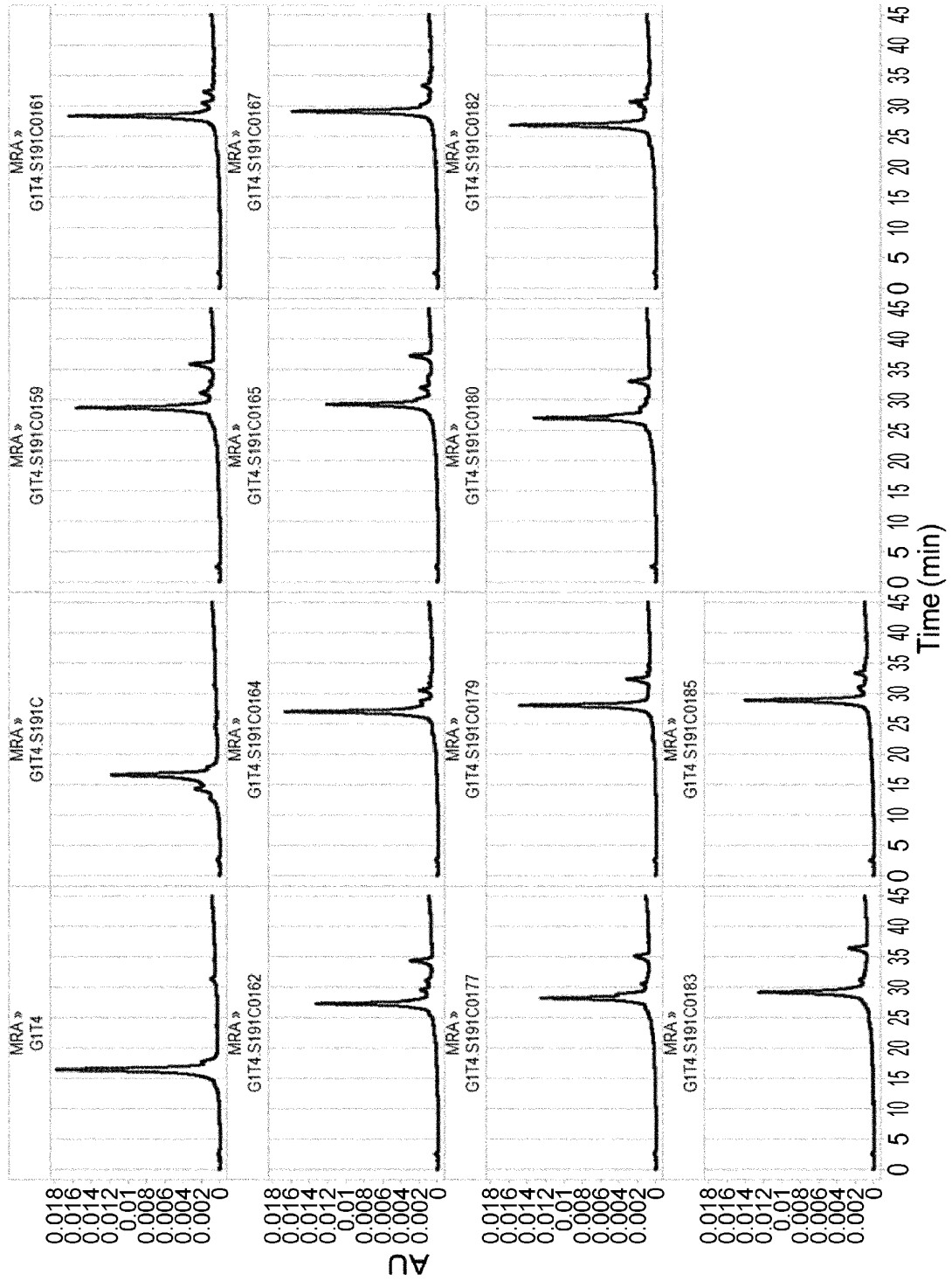
Band ratio of each mutation



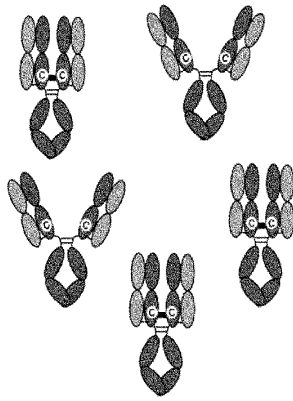
[Fig. 61A]



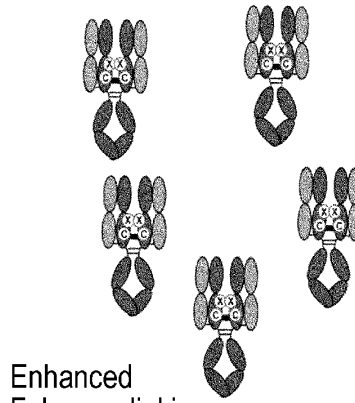
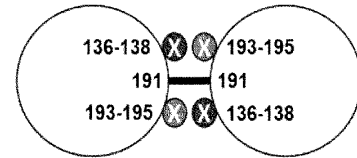
[Fig. 61B]



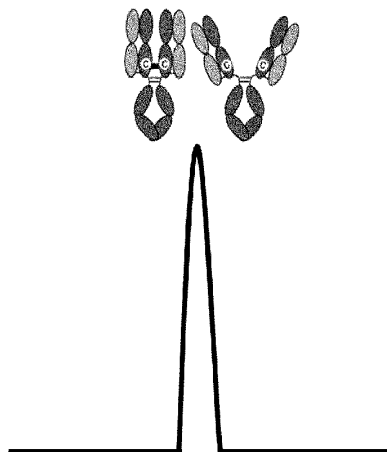
[Fig. 62A]

Without additional mutation**With** additional mutation (X)

X: charged or hydrophobic or "knob/hole" amino acids

Enhanced
Fab crosslinking

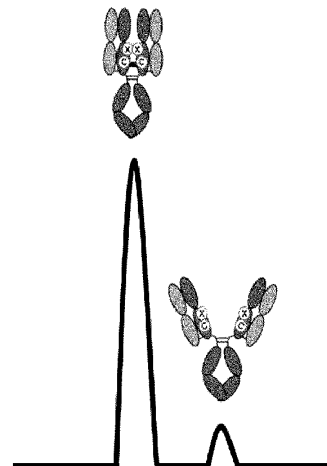
[Fig. 62B]

Without additional mutation

Little separation

With additional mutation (X)

X: charged or hydrophobic or "knob/hole" amino acids



Separation