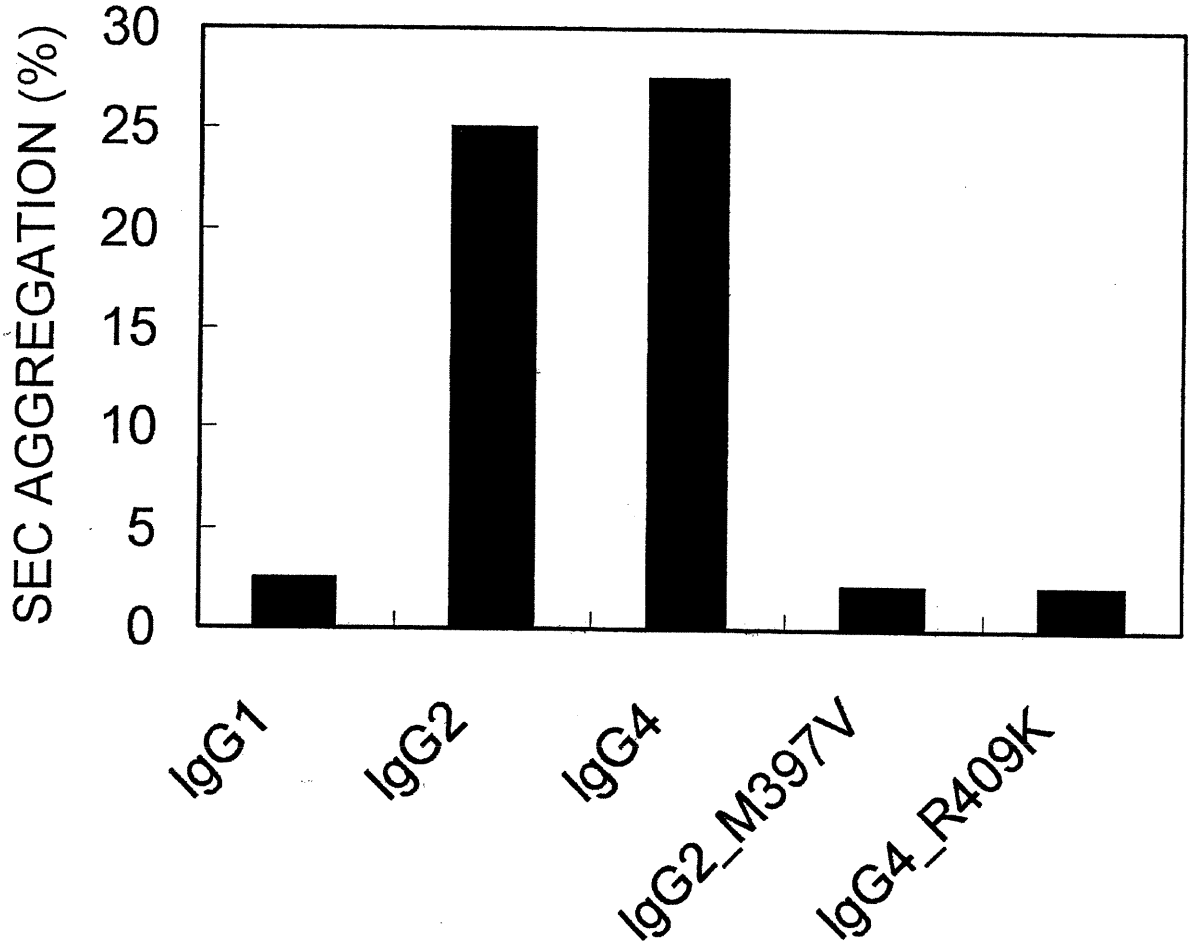

SEC AGGREGATION (%)
30
25
20
15
10
5
0
IgG1
IgG2
IgG4
IgG2_M397V
IgG4_R409K

FIG. 1

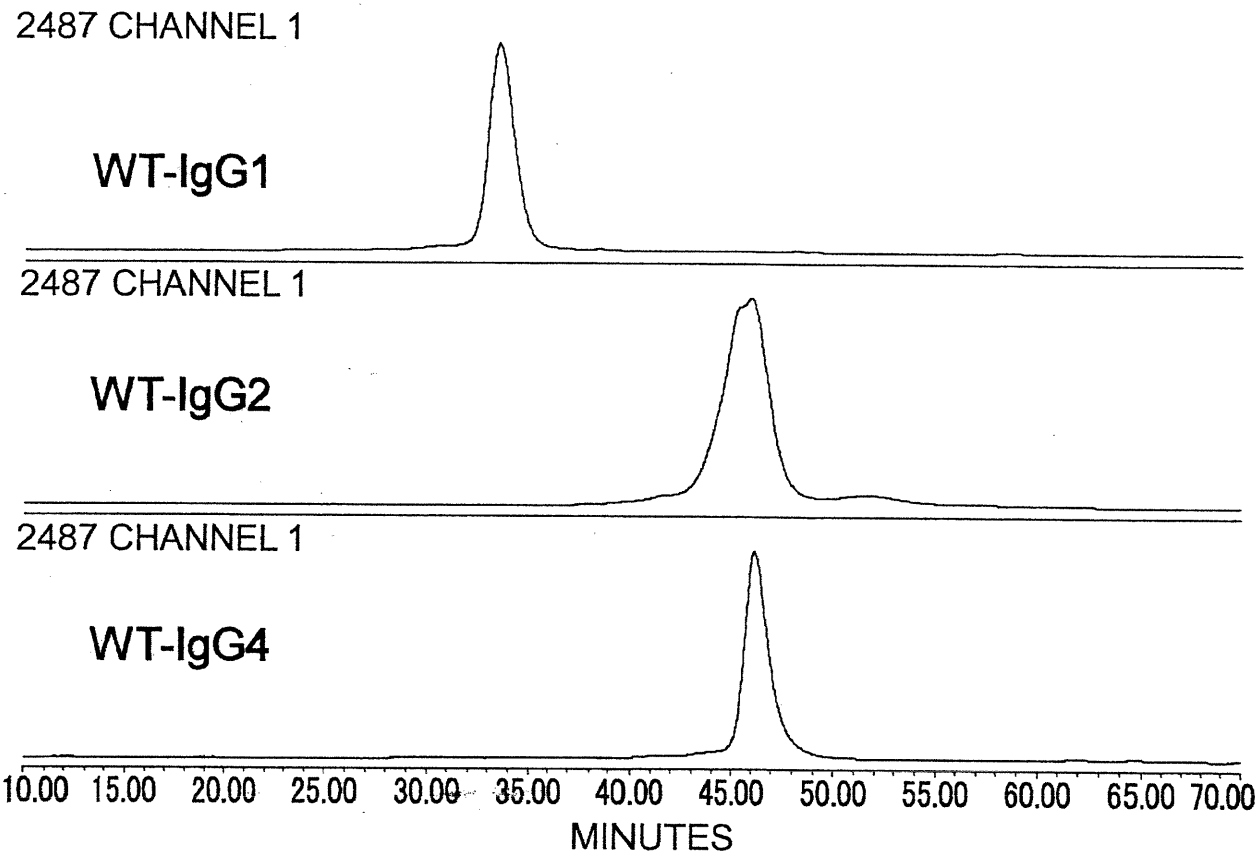

2487 CHANNEL 1
WT-IgG1
2487 CHANNEL 1
WT-IgG2
2487 CHANNEL 1
WT-IgG4
10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00
MINUTES

FIG. 2

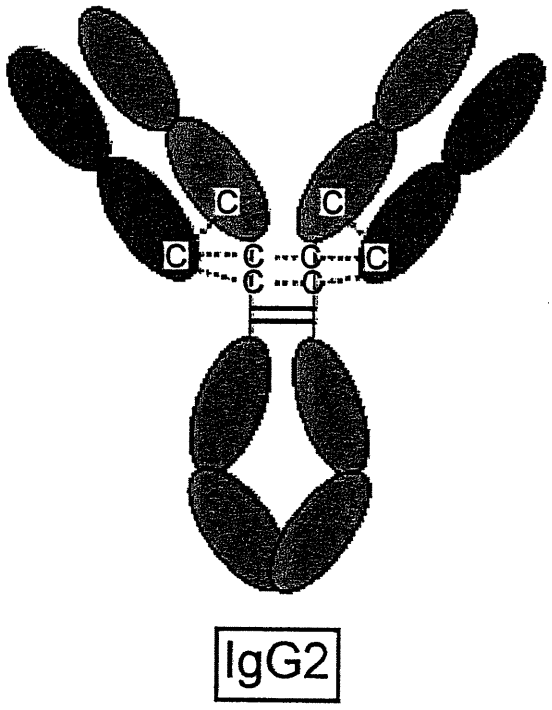
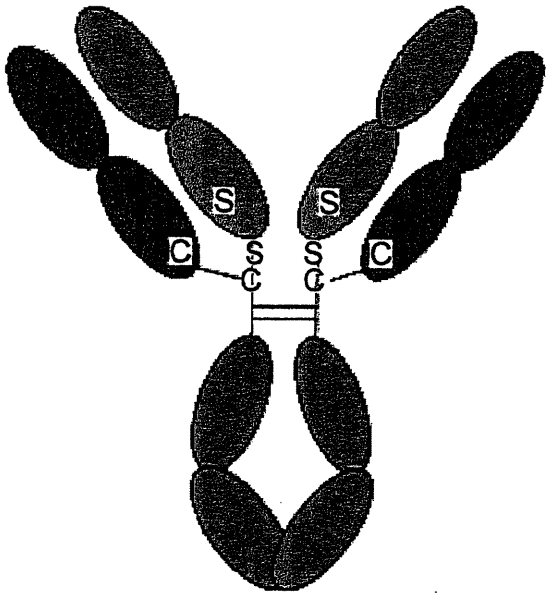


FIG. 3



IgG2_SKSC

FIG. 4

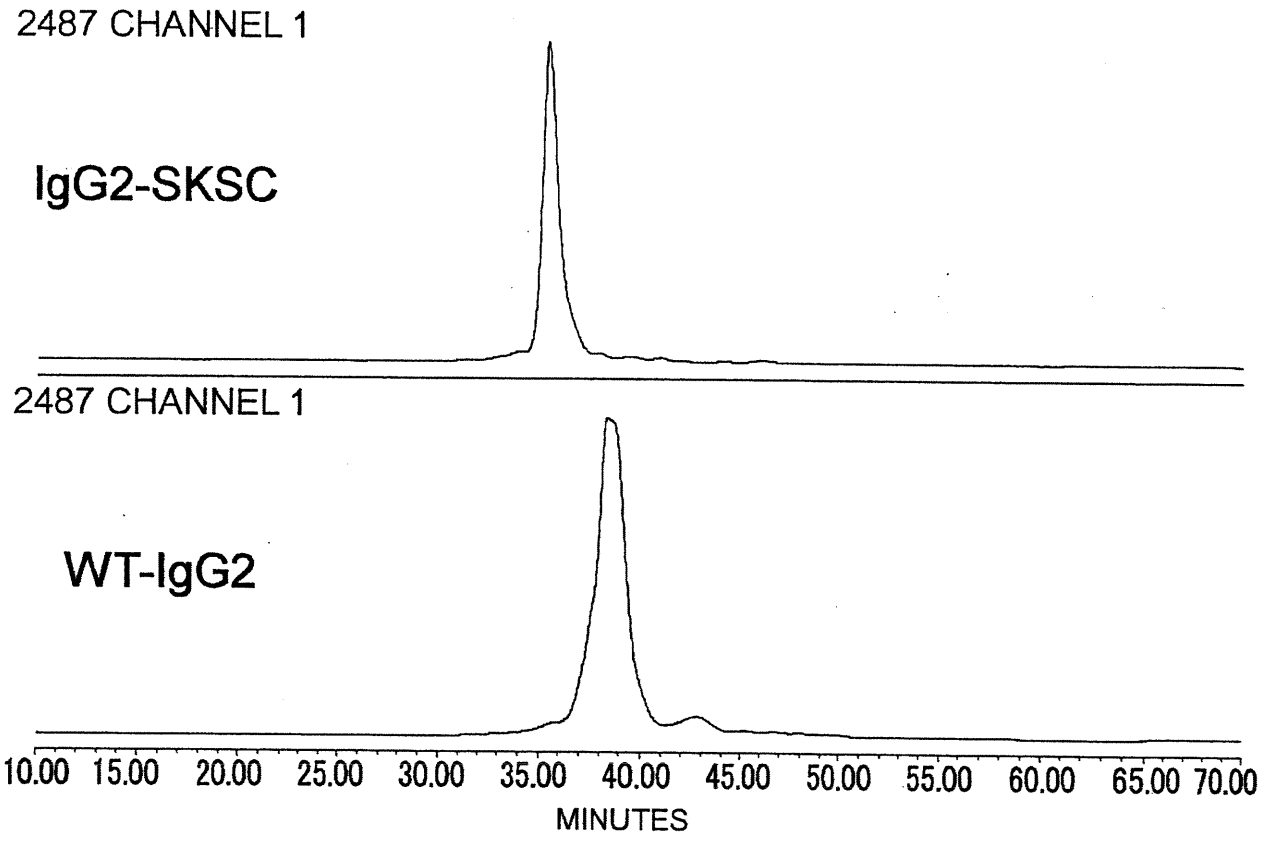

2487 CHANNEL 1
IgG2-SKSC
2487 CHANNEL 1
WT-IgG2
10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00
MINUTES

FIG. 5

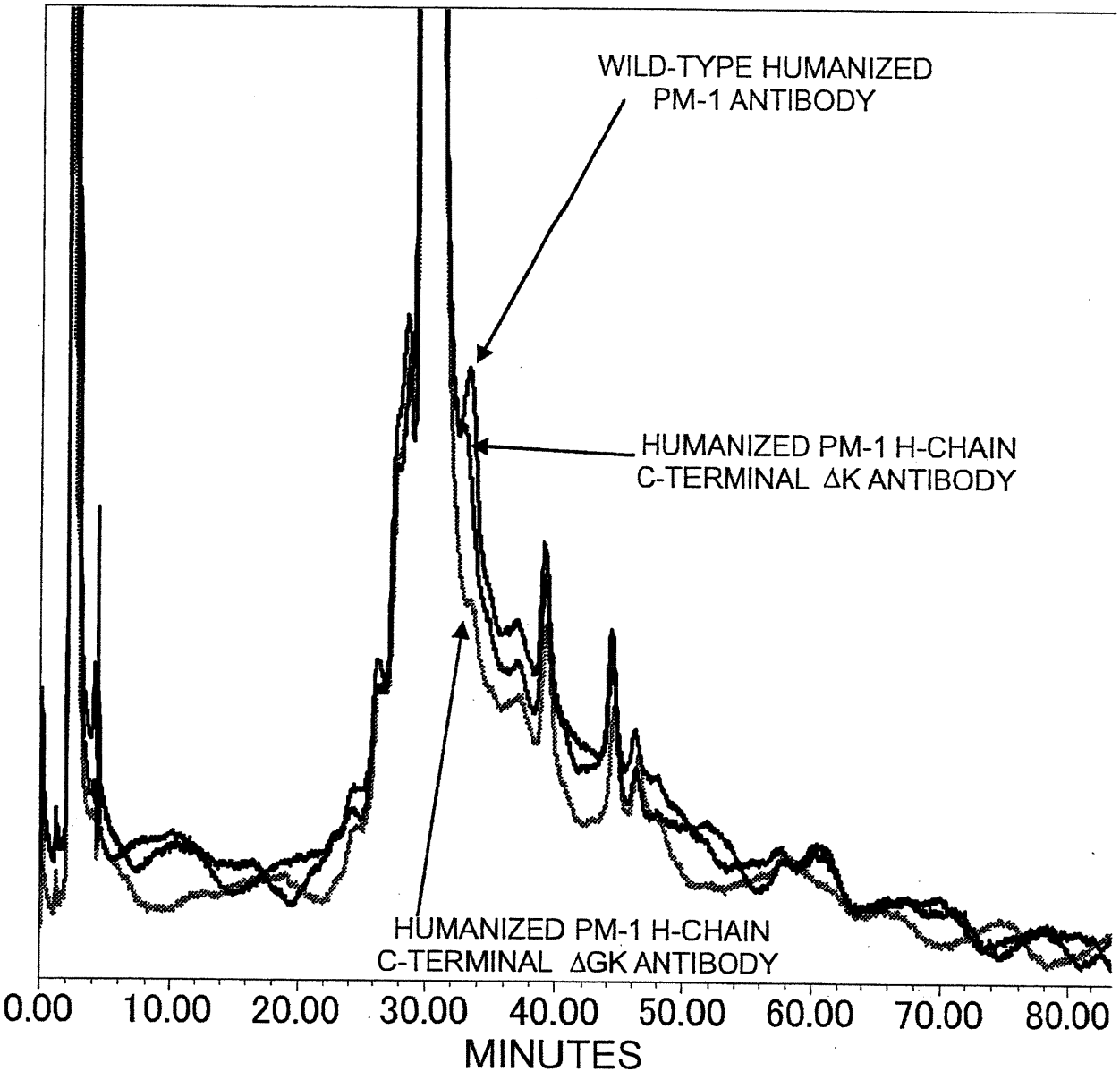

WILD-TYPE HUMANIZED
PM-1 ANTIBODY
HUMANIZED PM-1 H-CHAIN
C-TERMINAL ΔK ANTIBODY
HUMANIZED PM-1 H-CHAIN
C-TERMINAL ΔGK ANTIBODY
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
MINUTES

FIG. 6

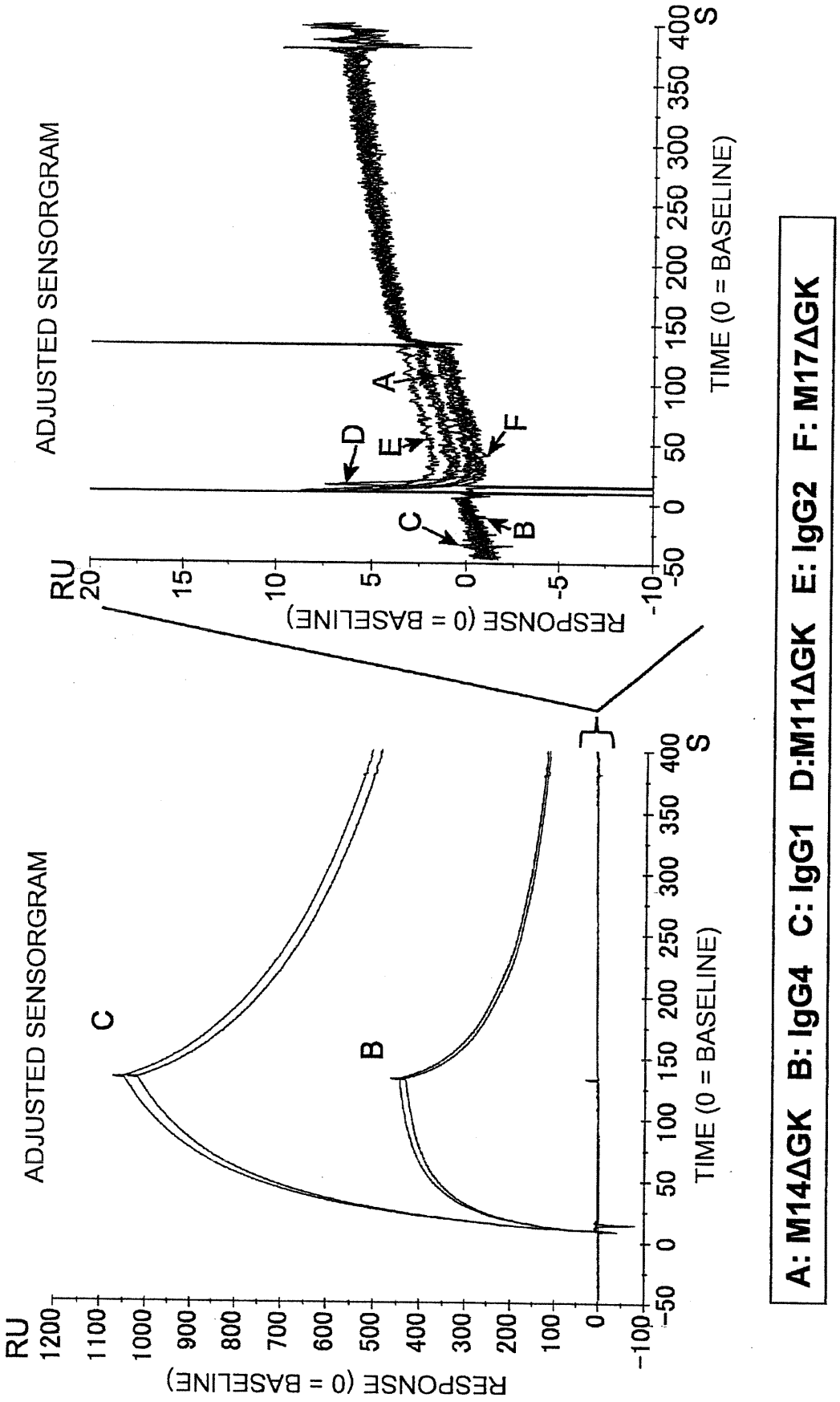

ADJUSTED SENSORGRAM
RU
RESPONSE (0 = BASELINE)
TIME (0 = BASELINE)
S
A
B
C
D
E
F
A: M14ΔGK B: IgG4 C: IgG1 D:M11ΔGK E: IgG2 F: M17ΔGK

FIG. 7

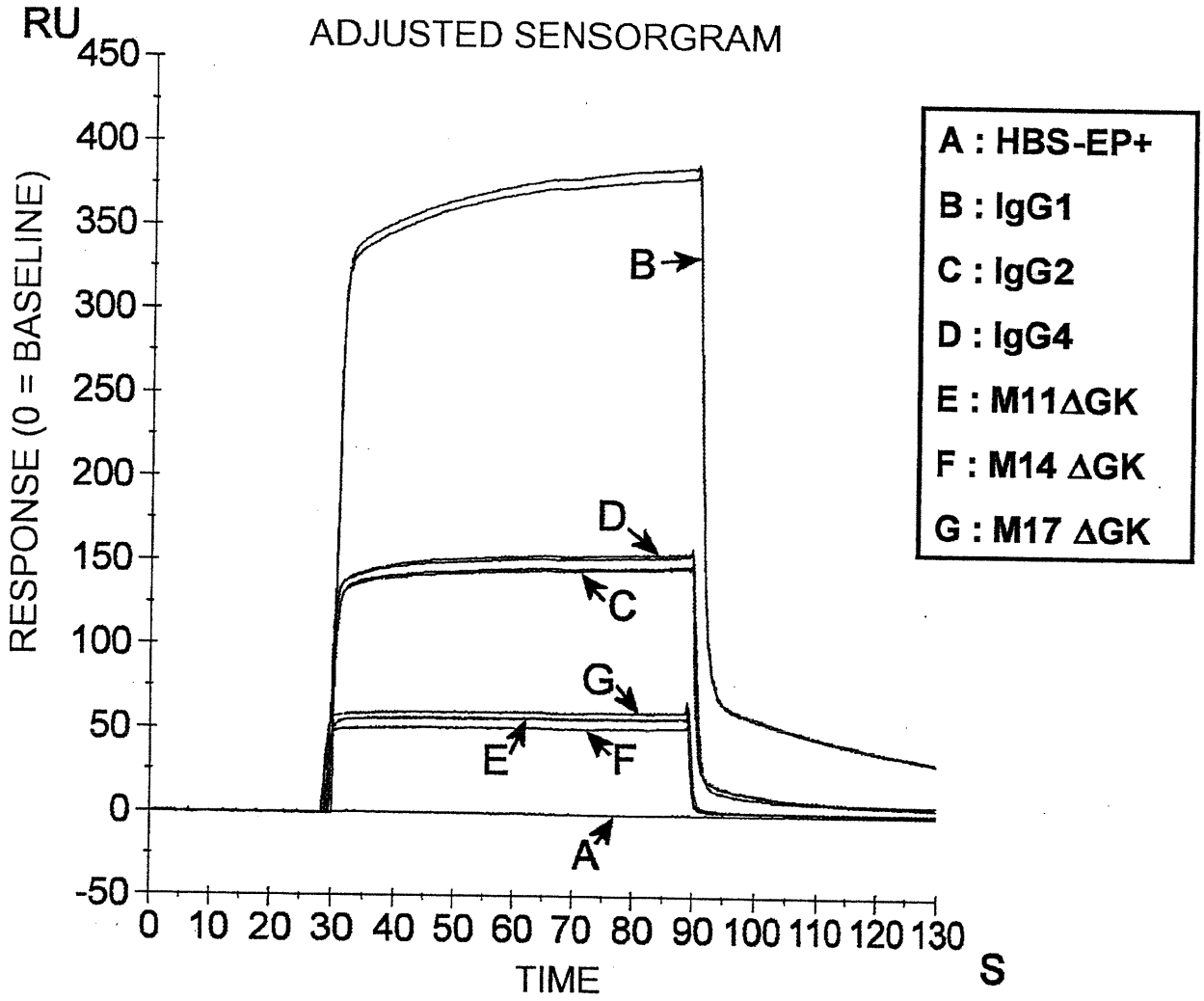

RU
ADJUSTED SENSORGRAM
RESPONSE (0 = BASELINE)
450
400
350
300
250
200
150
100
50
0
-50
0 10 20 30 40 50 60 70 80 90 100 110 120 130
TIME
S
B
D
C
G
E
F
A
A : HBS-EP+
B : IgG1
C : IgG2
D : IgG4
E : M11ΔGK
F : M14 ΔGK
G : M17 ΔGK

FIG. 8

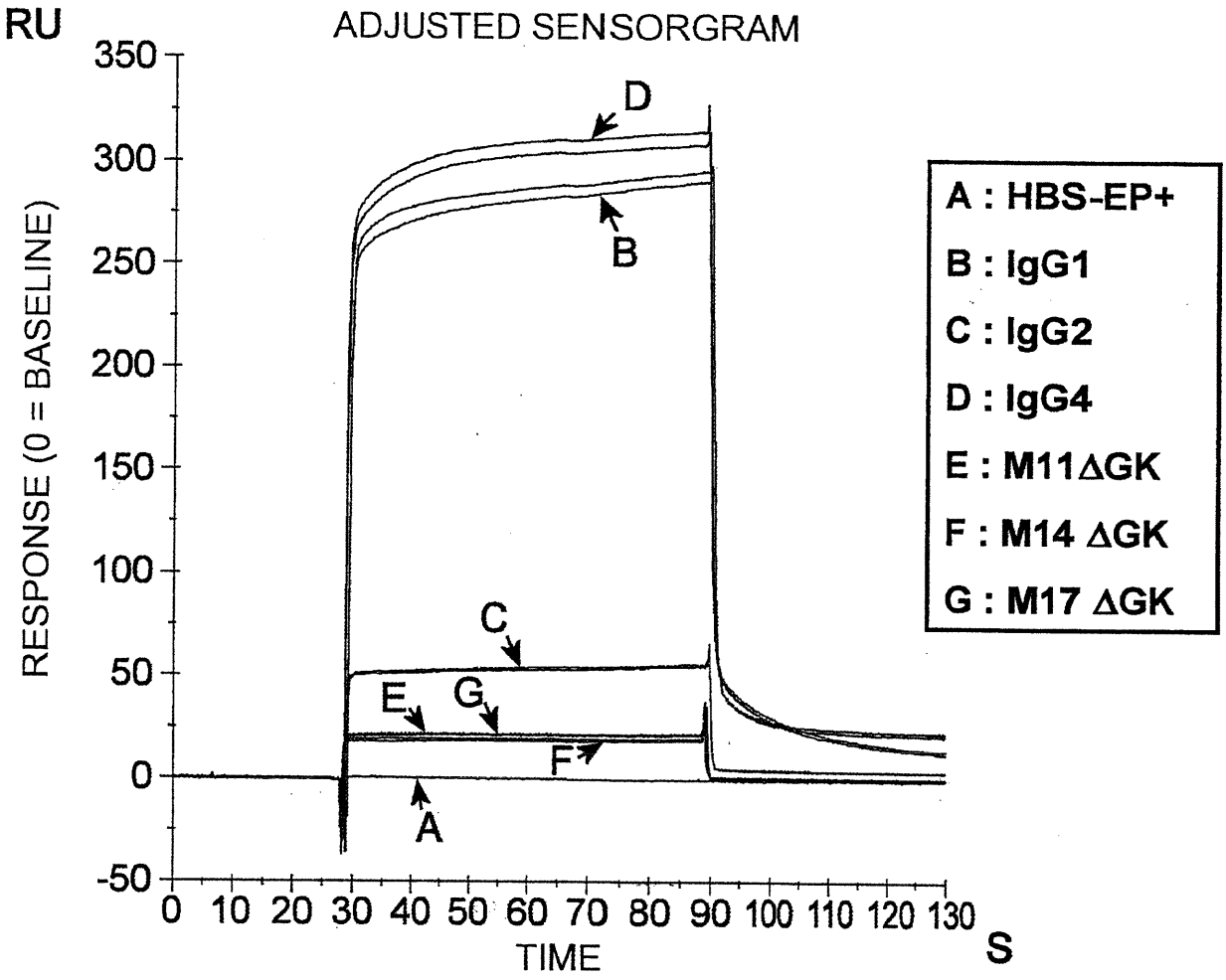

RU
ADJUSTED SENSORGRAM
RESPONSE (0 = BASELINE)
350
300
250
200
150
100
50
0
-50
0 10 20 30 40 50 60 70 80 90 100 110 120 130
TIME
S
A
B
C
D
E
F
G
A : HBS-EP+
B : IgG1
C : IgG2
D : IgG4
E : M11ΔGK
F : M14 ΔGK
G : M17 ΔGK

FIG. 9

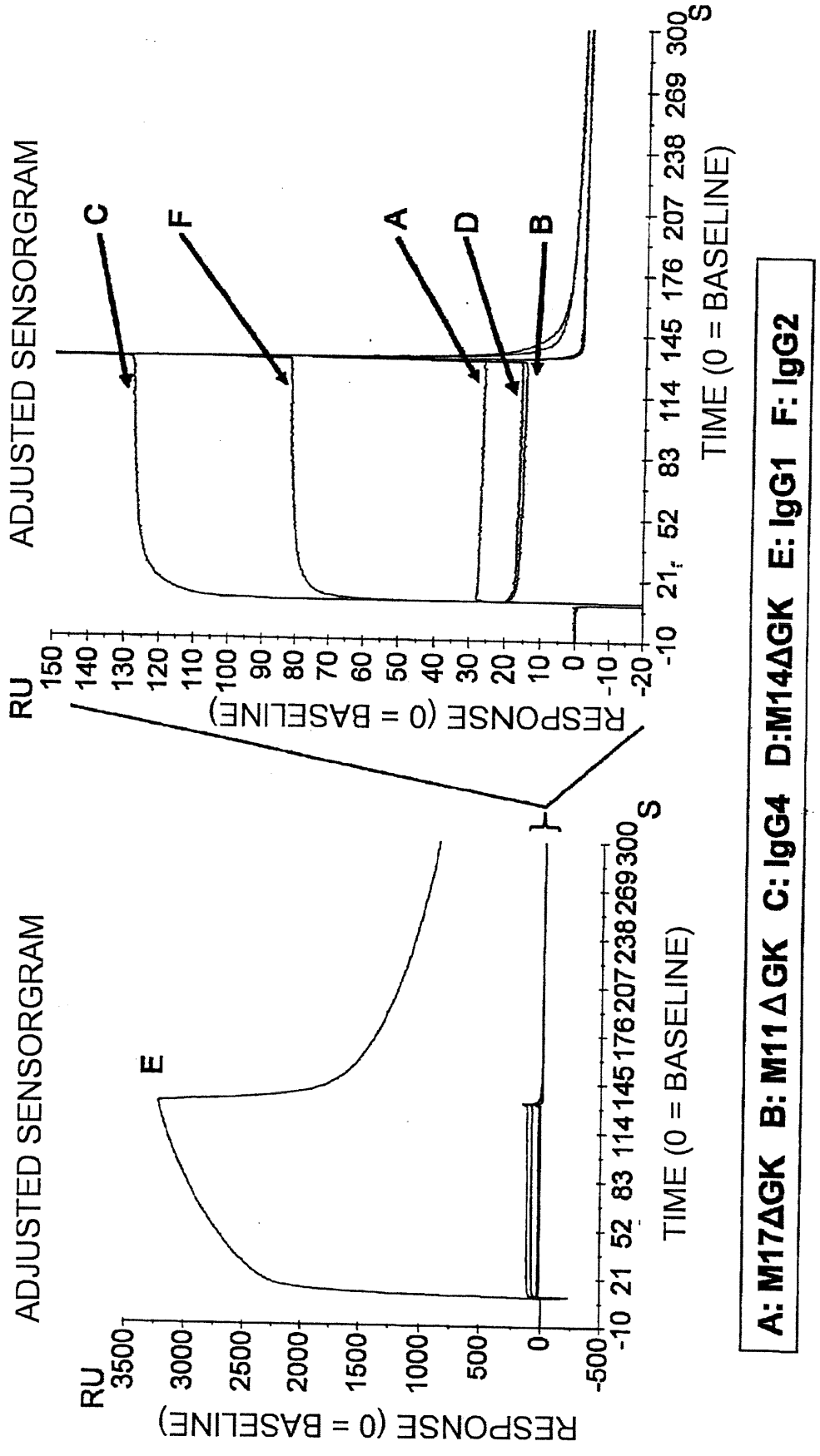

ADJUSTED SENSORGRAM
RU
RESPONSE (0 = BASELINE)
TIME (0 = BASELINE)
S
A
B
C
D
E
F
A: M17ΔGK B: M11ΔGK C: IgG4 D:M14ΔGK E: IgG1 F: IgG2

FIG. 10

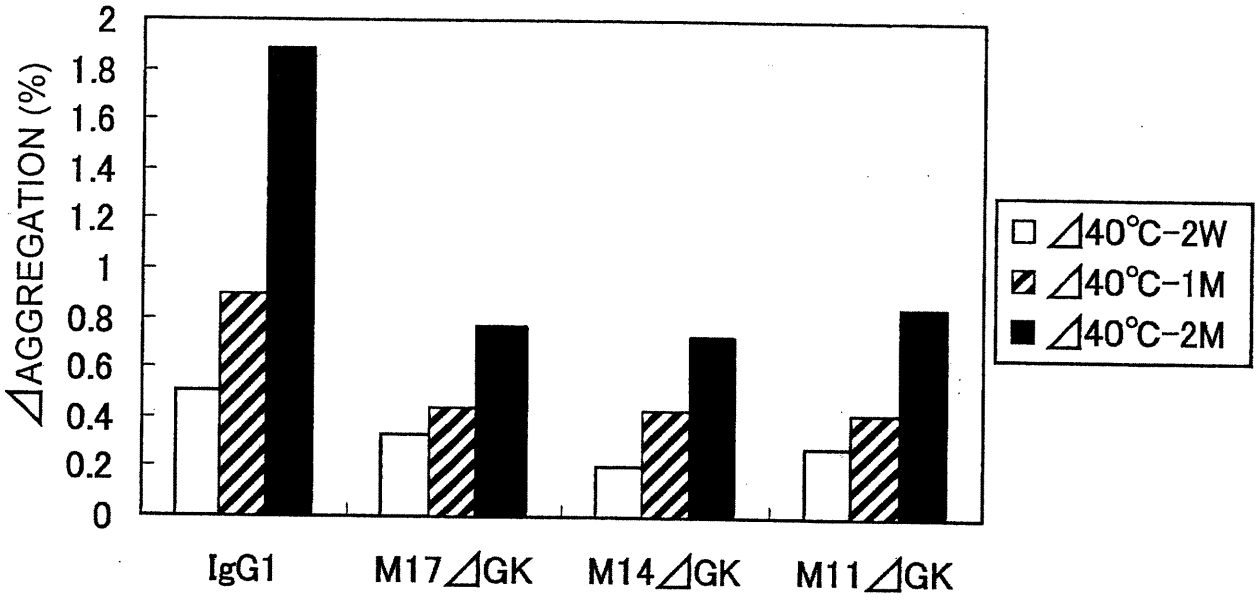

2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
⊿AGGREGATION (%)
IgG1
M17⊿GK
M14⊿GK
M11⊿GK
□ ⊿40℃-2W
▨ ⊿40℃-1M
■ ⊿40℃-2M

FIG. 11

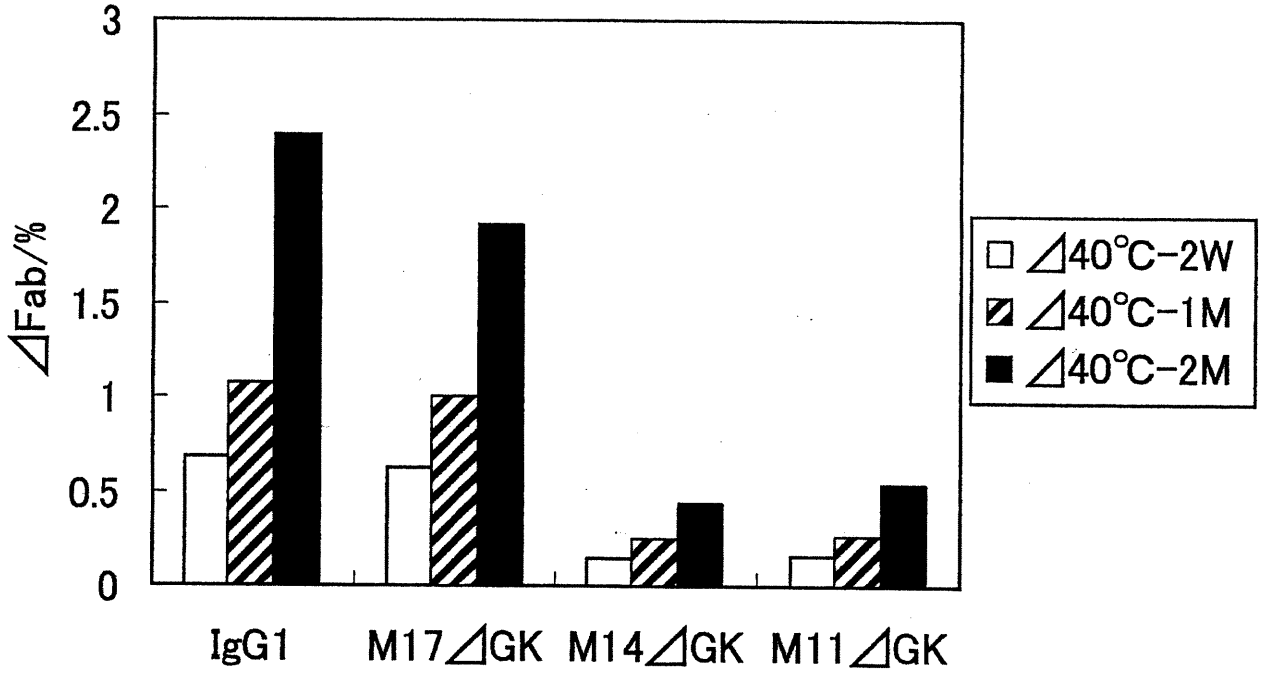


FIG. 12

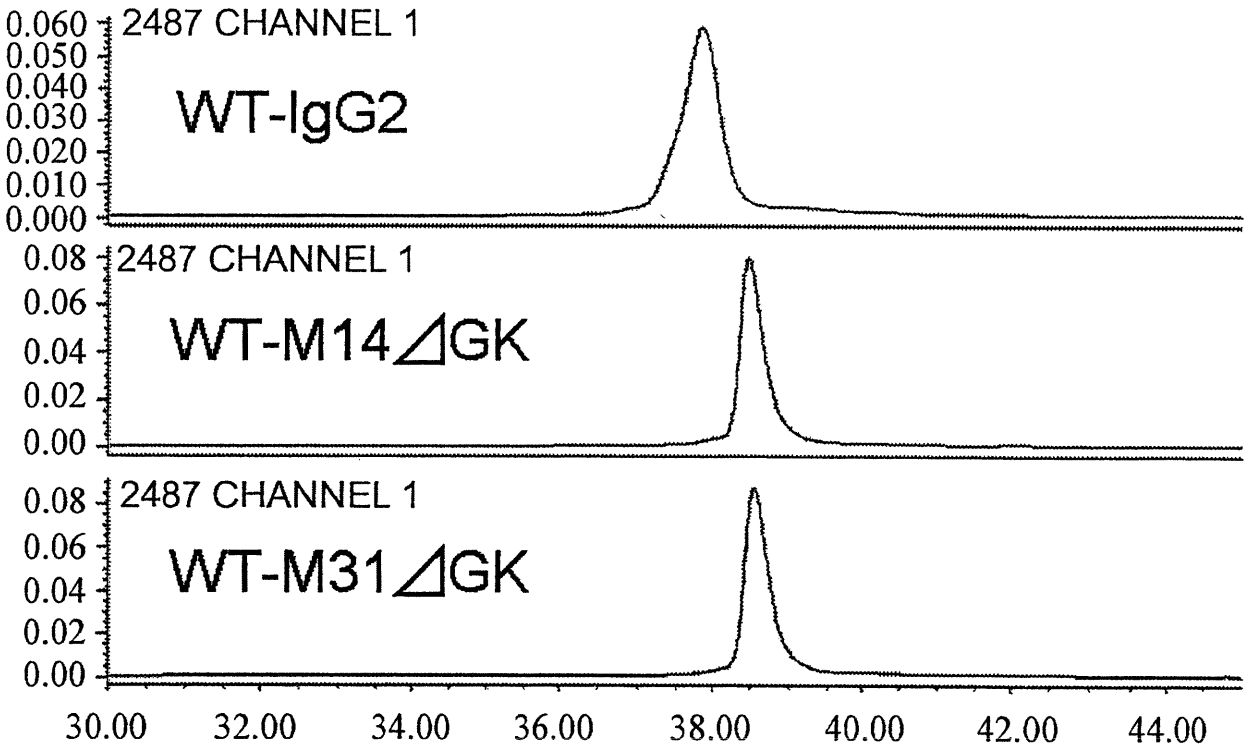

2487 CHANNEL 1
WT-IgG2
0.060
0.050
0.040
0.030
0.020
0.010
0.000
2487 CHANNEL 1
WT-M14⊿GK
0.08
0.06
0.04
0.02
0.00
2487 CHANNEL 1
WT-M31⊿GK
0.08
0.06
0.04
0.02
0.00
30.00
32.00
34.00
36.00
38.00
40.00
42.00
44.00

FIG. 13

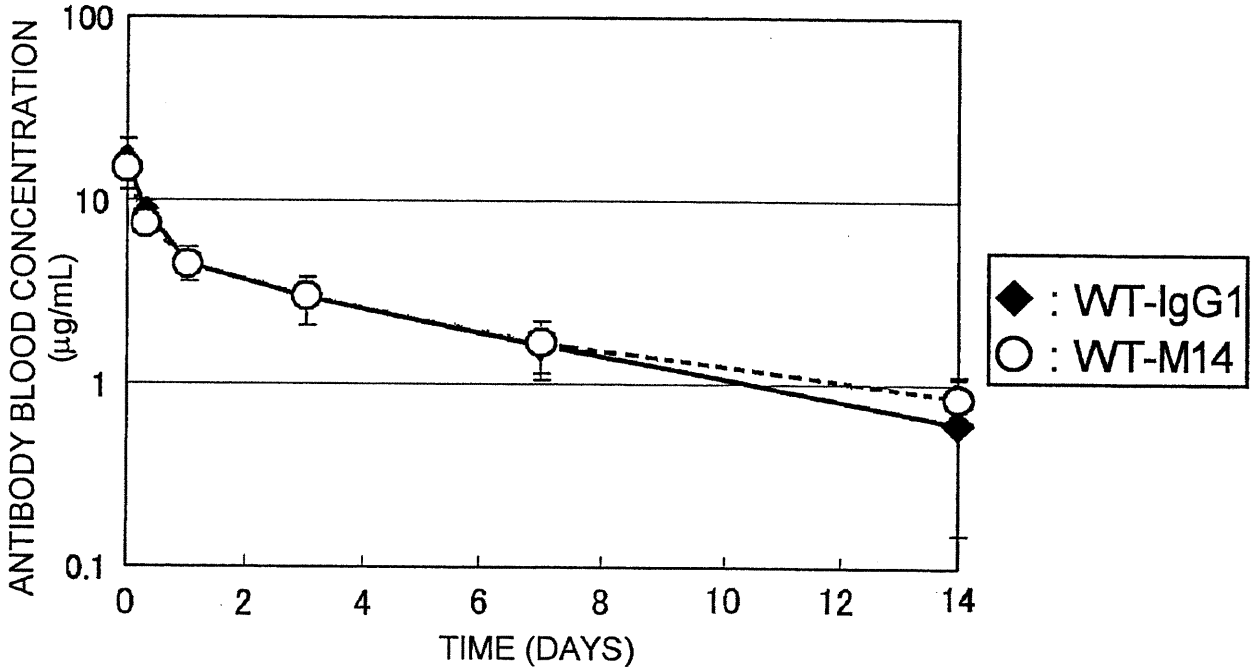

100
10
1
0.1
ANTIBODY BLOOD CONCENTRATION (μg/mL)
0
2
4
6
8
10
12
14
TIME (DAYS)
◆ : WT-IgG1
○ : WT-M14

FIG. 14

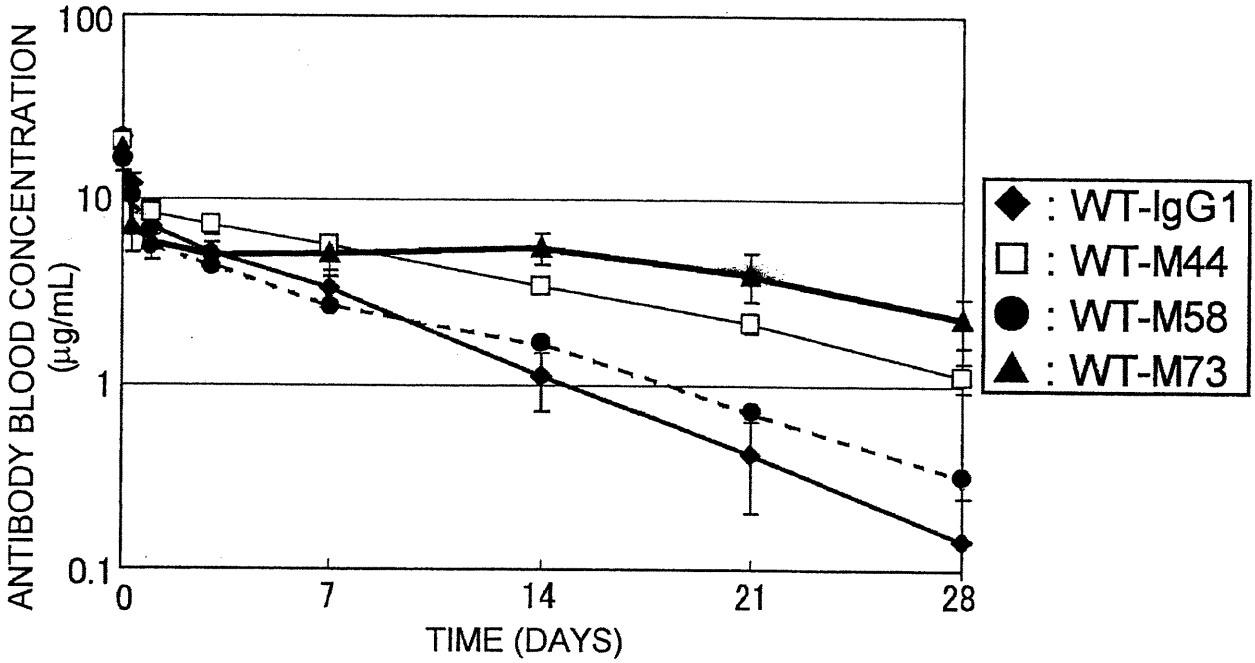

100
10
1
0.1
ANTIBODY BLOOD CONCENTRATION (μg/mL)
0
7
14
21
28
TIME (DAYS)
: WT-IgG1
: WT-M44
: WT-M58
: WT-M73

FIG. 15

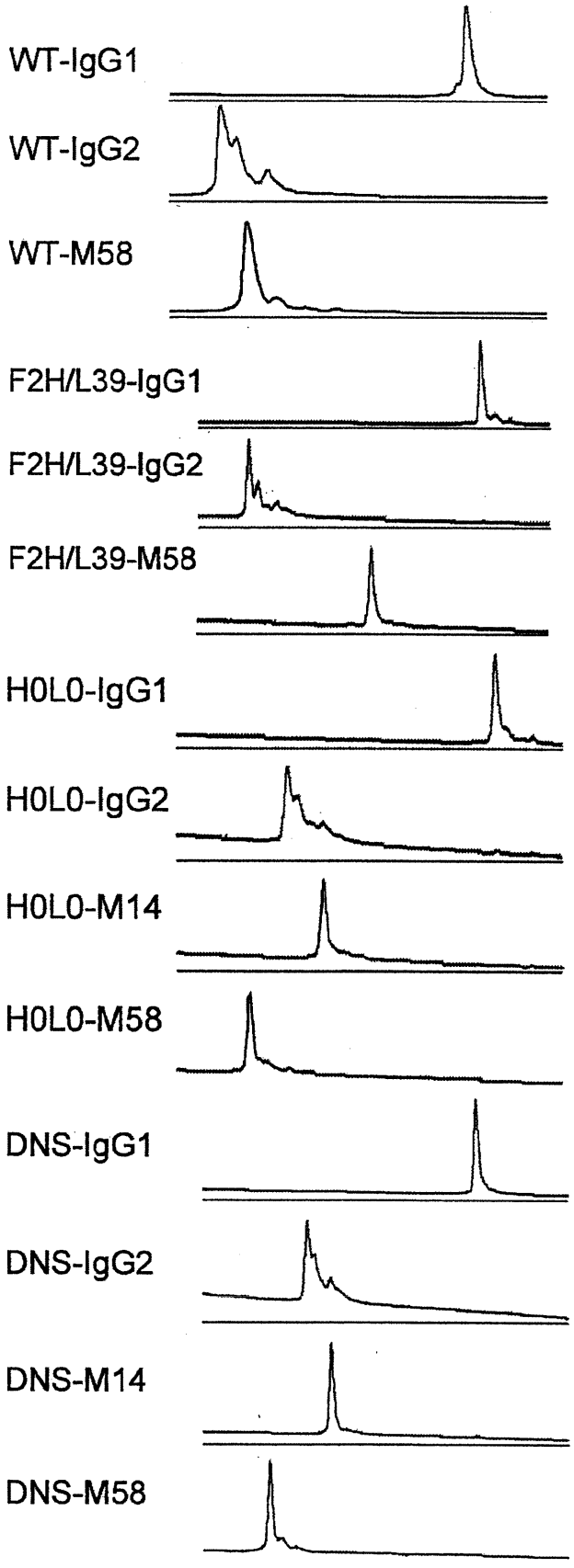

WT-IgG1
WT-IgG2
WT-M58
F2H/L39-IgG1
F2H/L39-IgG2
F2H/L39-M58
H0L0-IgG1
H0L0-IgG2
H0L0-M14
H0L0-M58
DNS-IgG1
DNS-IgG2
DNS-M14
DNS-M58

FIG. 16

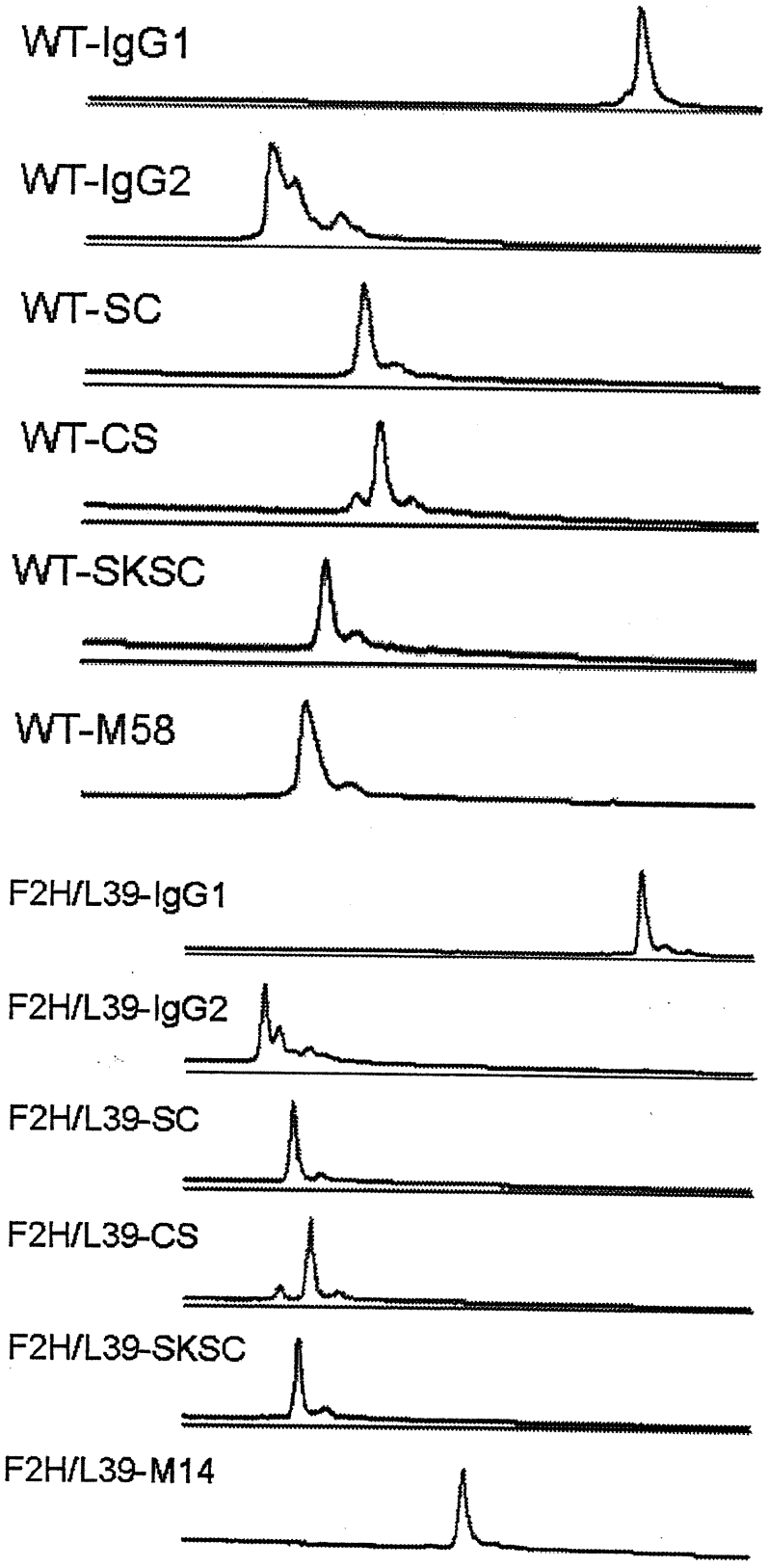

WT-IgG1
WT-IgG2
WT-SC
WT-CS
WT-SKSC
WT-M58
F2H/L39-IgG1
F2H/L39-IgG2
F2H/L39-SC
F2H/L39-CS
F2H/L39-SKSC
F2H/L39-M14

FIG. 17

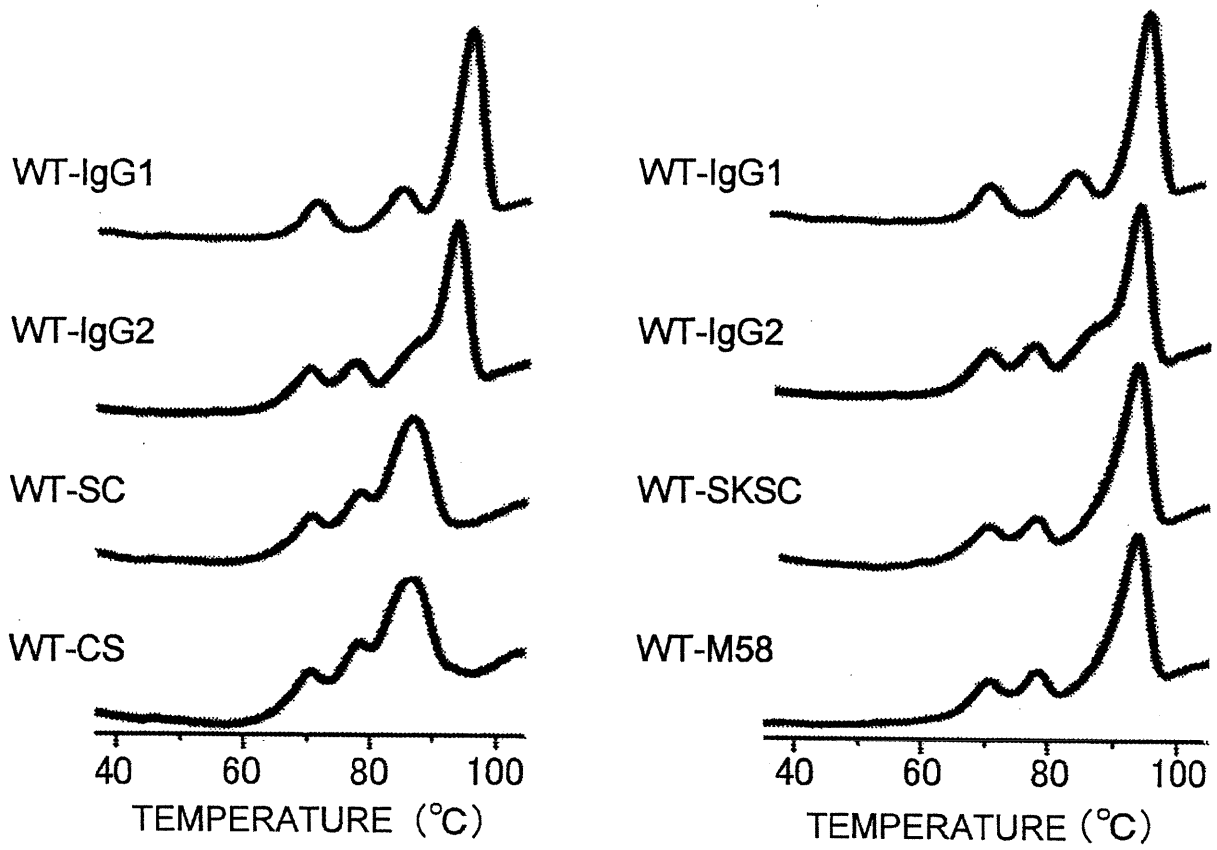

WT-IgG1
WT-IgG2
WT-SC
WT-CS
40
60
80
100
TEMPERATURE (℃)
WT-IgG1
WT-IgG2
WT-SKSC
WT-M58
40
60
80
100
TEMPERATURE (℃)

FIG. 18

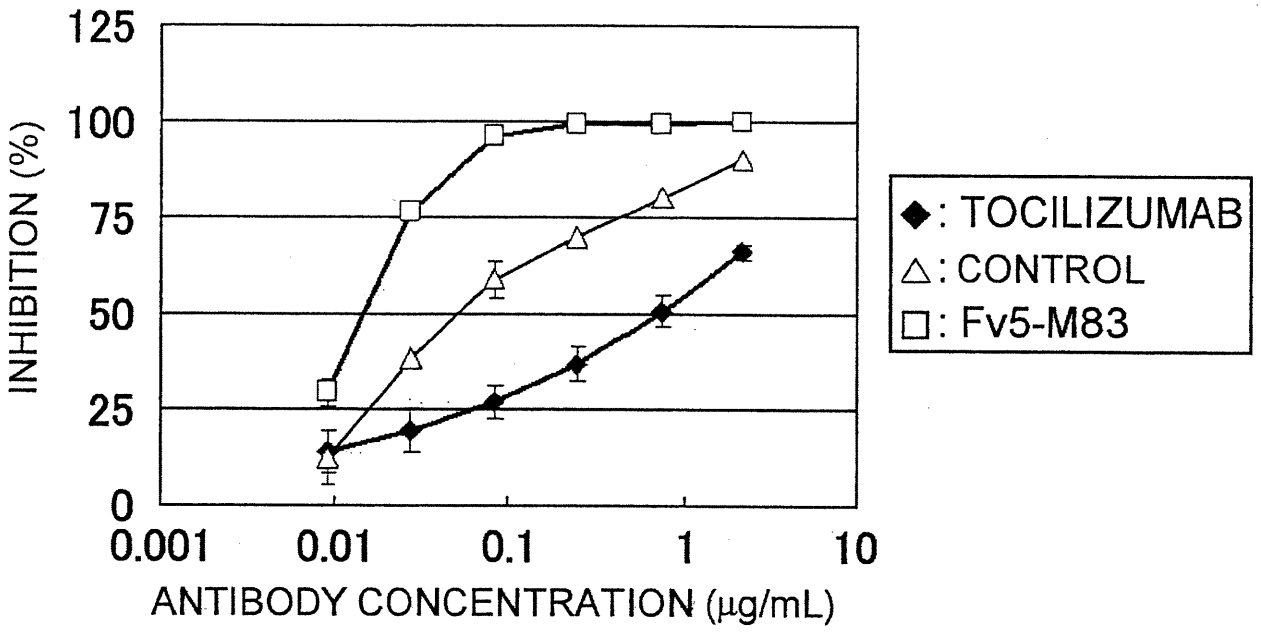

125
100
75
50
25
0
INHIBITION (%)
0.001
0.01
0.1
1
10
ANTIBODY CONCENTRATION (μg/mL)
◆: TOCILIZUMAB
△: CONTROL
□: Fv5-M83

FIG. 19

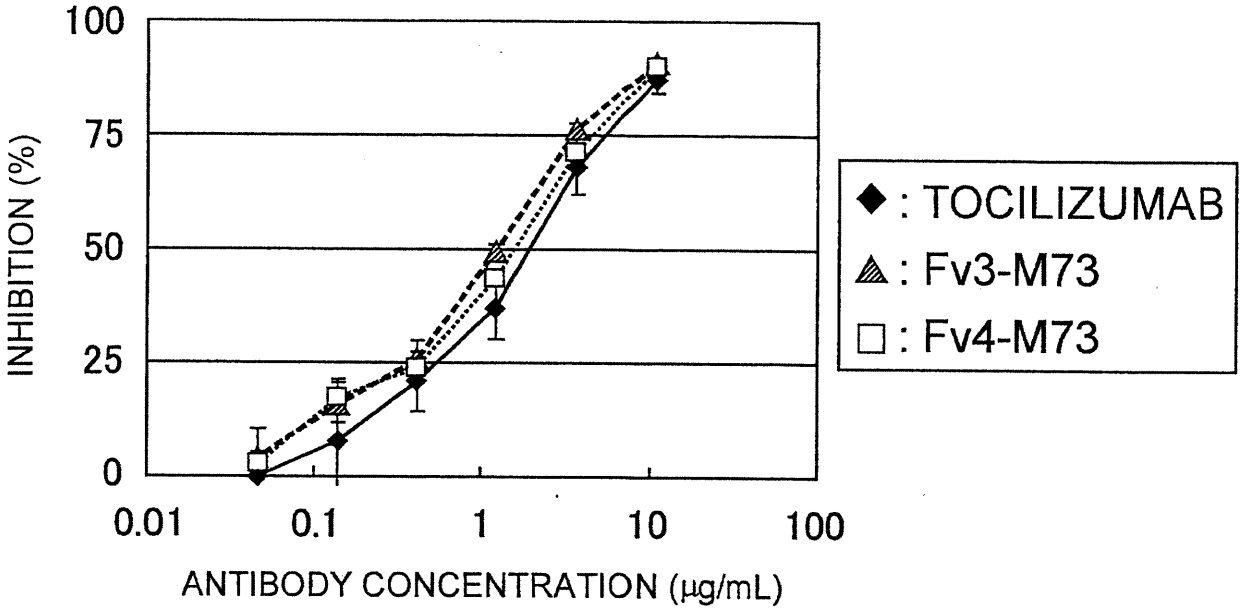

100
75
50
25
0
INHIBITION (%)
0.01
0.1
1
10
100
ANTIBODY CONCENTRATION (μg/mL)
◆ : TOCILIZUMAB
△ : Fv3-M73
□ : Fv4-M73

FIG. 20

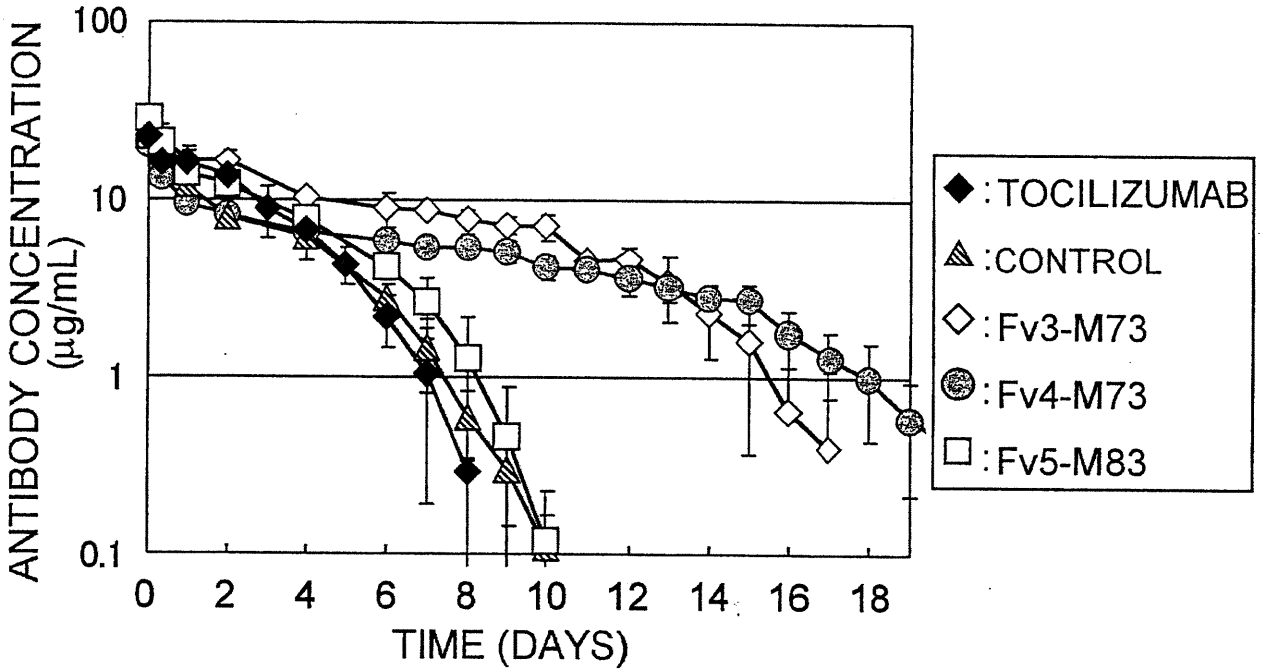

ANTIBODY CONCENTRATION (μg/mL)
100
10
1
0.1
0
2
4
6
8
10
12
14
16
18
TIME (DAYS)
◆ : TOCILIZUMAB
△ : CONTROL
◇ : Fv3-M73
◎ : Fv4-M73
□ : Fv5-M83

FIG. 21

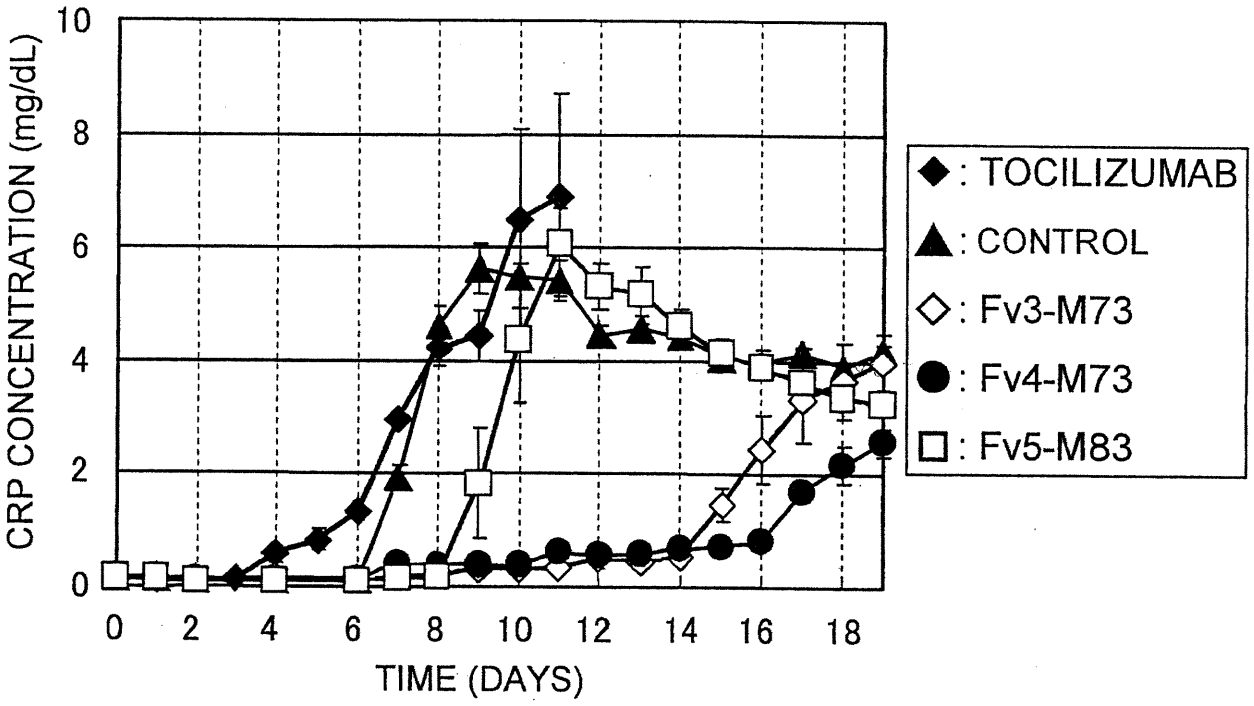

CRP CONCENTRATION (mg/dL)
10
8
6
4
2
0
0
2
4
6
8
10
12
14
16
18
TIME (DAYS)
◆: TOCILIZUMAB
▲: CONTROL
◇: Fv3-M73
●: Fv4-M73
□: Fv5-M83

FIG. 22

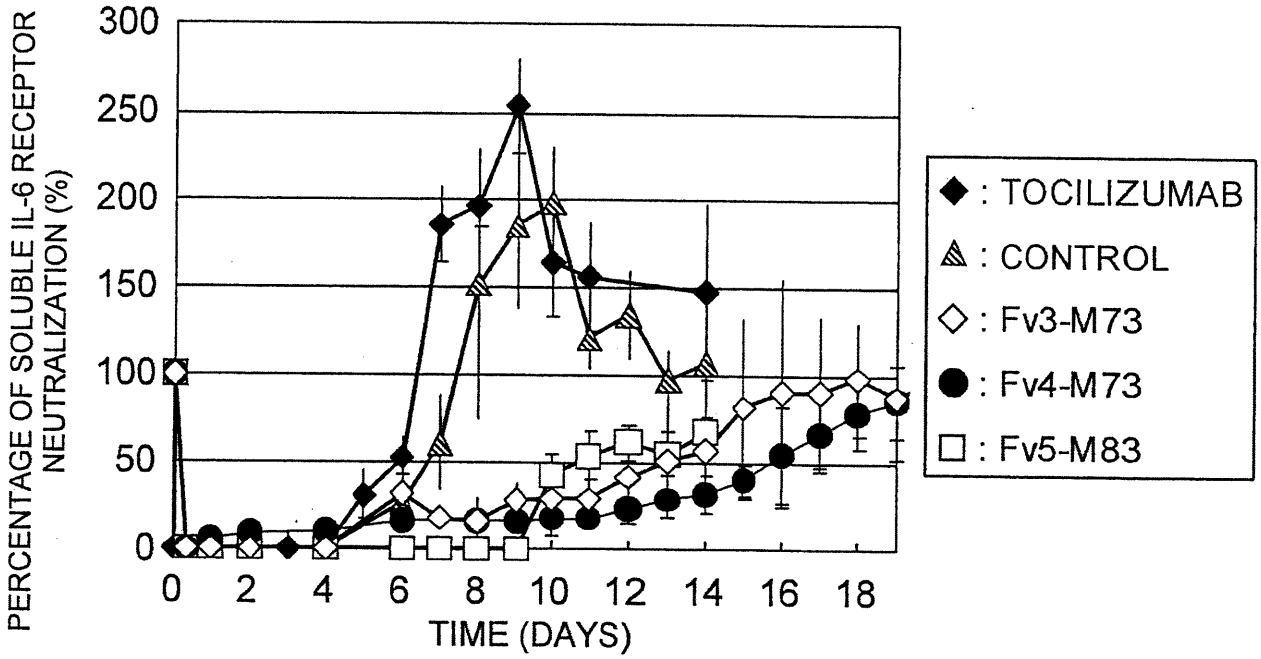

PERCENTAGE OF SOLUBLE IL-6 RECEPTOR NEUTRALIZATION (%)
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
TIME (DAYS)
: TOCILIZUMAB
: CONTROL
: Fv3-M73
: Fv4-M73
: Fv5-M83

FIG. 23

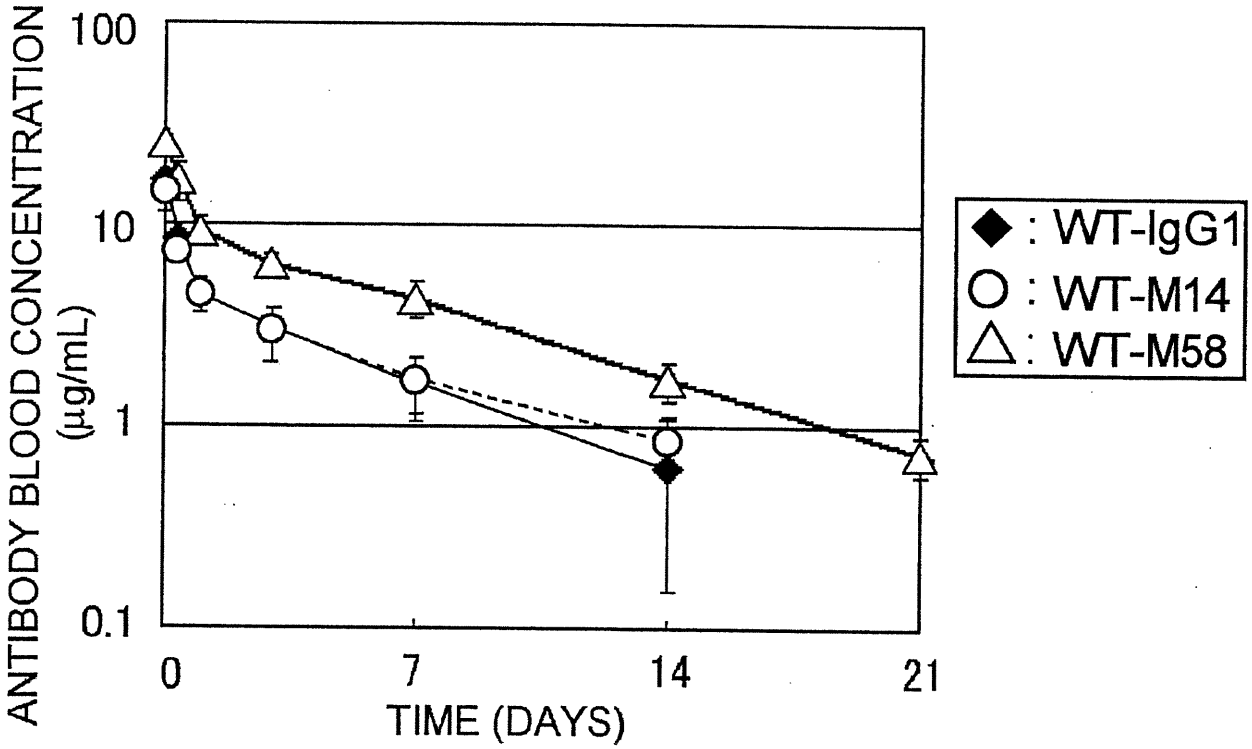

ANTIBODY BLOOD CONCENTRATION (μg/mL)
100
10
1
0.1
0
7
14
21
TIME (DAYS)
◆ : WT-IgG1
○ : WT-M14
△ : WT-M58

FIG. 24