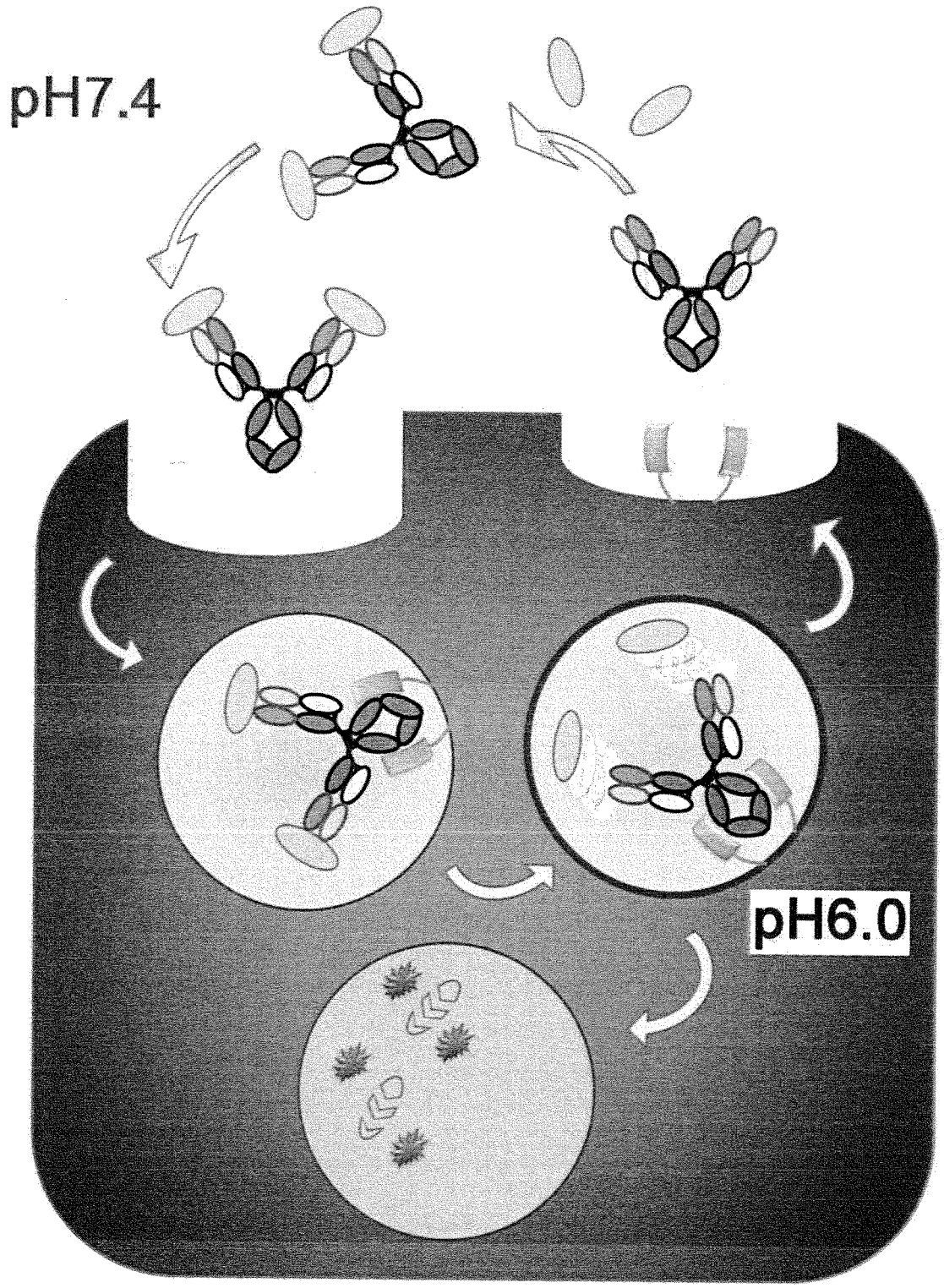


FIG. 1

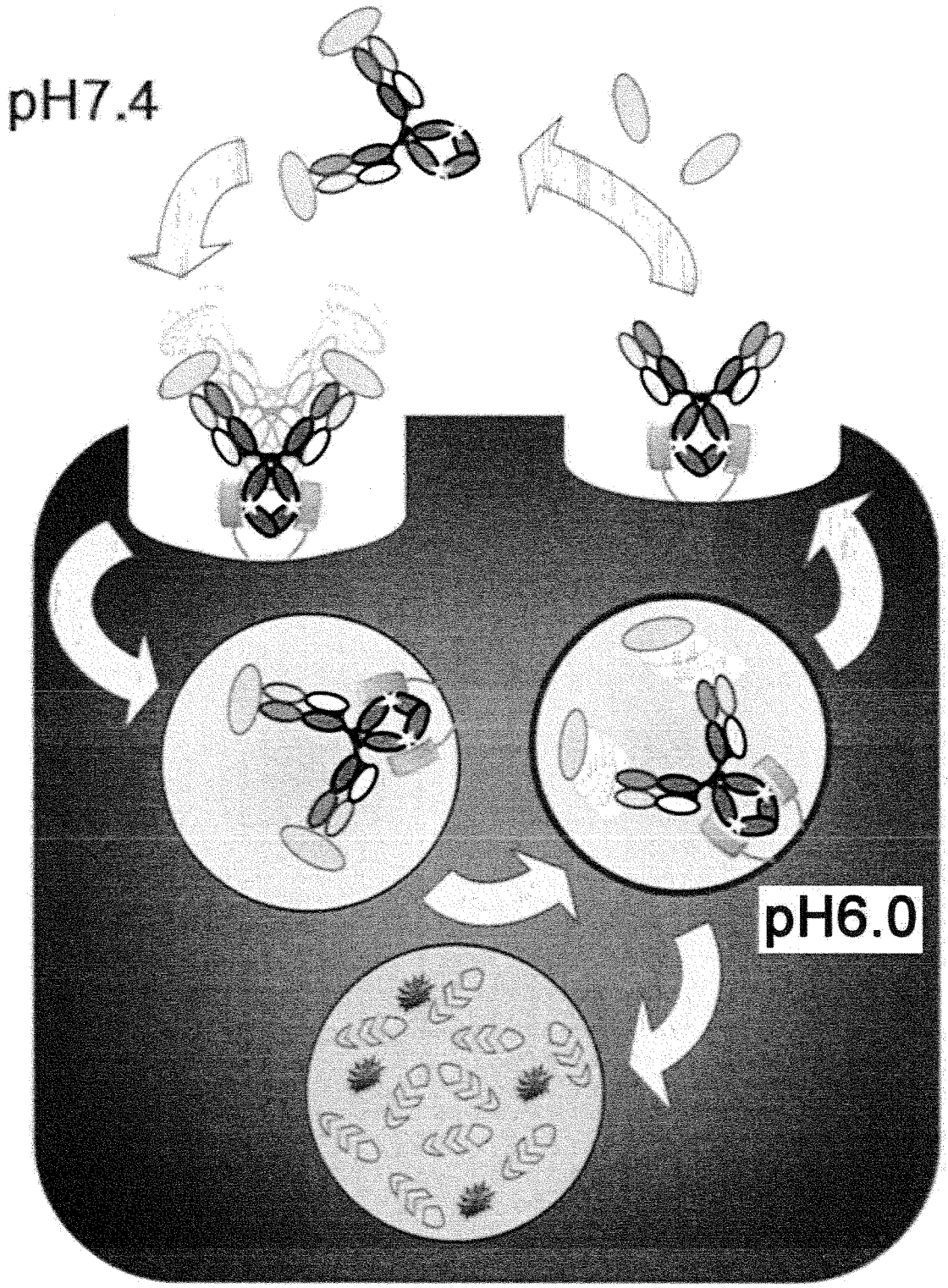


FIG. 2

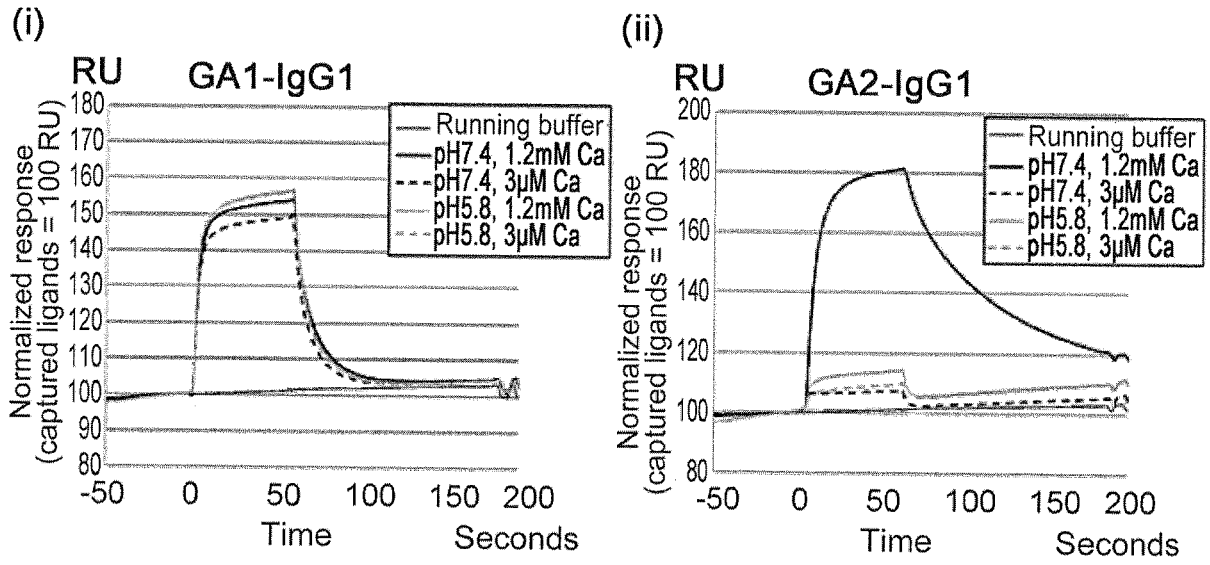

(i)
RU
GA1-IgG1
Normalized response (captured ligands = 100 RU)
180
170
160
150
140
130
120
110
100
90
80
-50
0
50
100
150
200
Time
Seconds
Running buffer
pH7.4, 1.2mM Ca
pH7.4, 3μM Ca
pH5.8, 1.2mM Ca
pH5.8, 3μM Ca
(ii)
RU
GA2-IgG1
Normalized response (captured ligands = 100 RU)
200
180
160
140
120
100
80
-50
0
50
100
150
200
Time
Seconds
Running buffer
pH7.4, 1.2mM Ca
pH7.4, 3μM Ca
pH5.8, 1.2mM Ca
pH5.8, 3μM Ca

FIG. 3

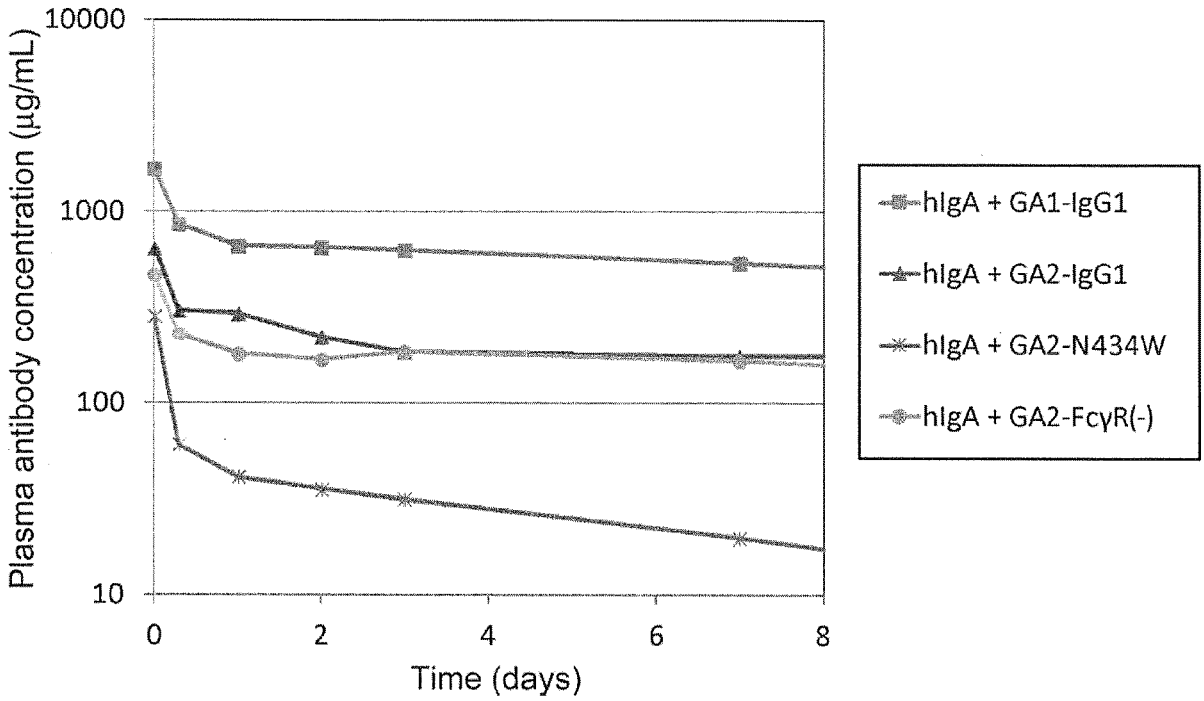

Plasma antibody concentration (μg/mL)
10000
1000
100
10
0
2
4
6
8
Time (days)
hIgA + GA1-IgG1
hIgA + GA2-IgG1
hIgA + GA2-N434W
hIgA + GA2-FcγR(-)

FIG. 4

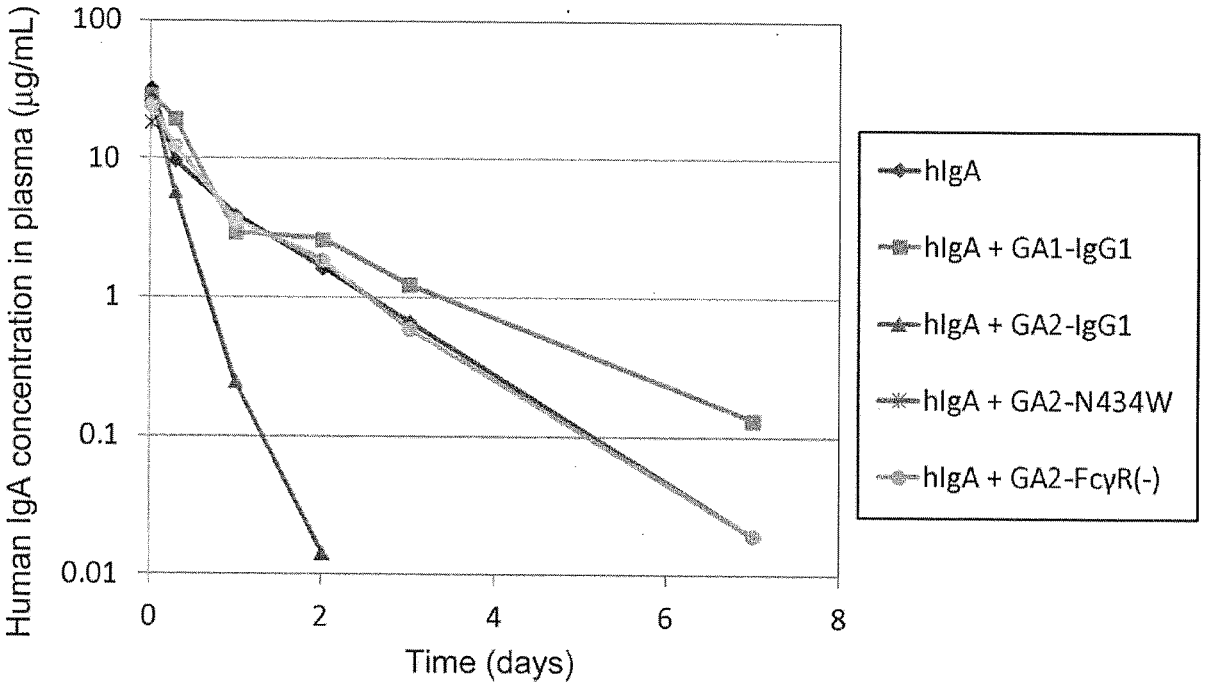

Human IgA concentration in plasma (µg/mL)
100
10
1
0.1
0.01
0
2
4
6
8
Time (days)
hIgA
hIgA + GA1-IgG1
hIgA + GA2-IgG1
hIgA + GA2-N434W
hIgA + GA2-FcγR(-)

FIG. 5

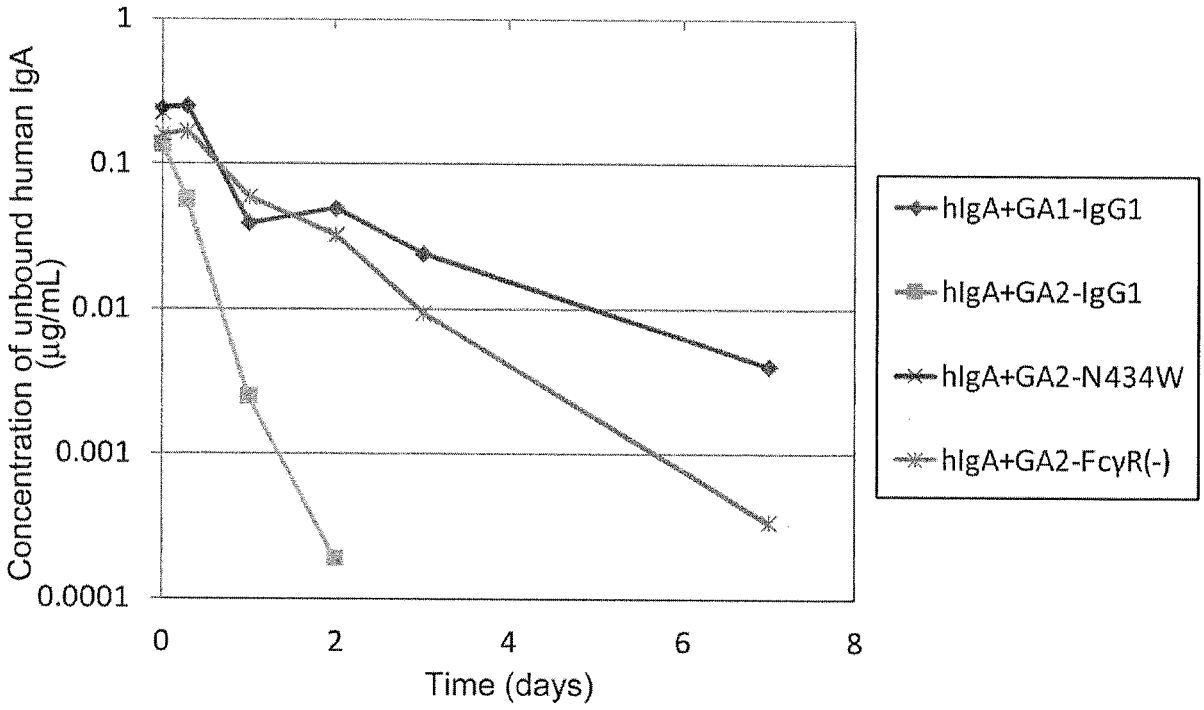

Concentration of unbound human IgA (μg/mL)
1
0.1
0.01
0.001
0.0001
0
2
4
6
8
Time (days)
hIgA+GA1-IgG1
hIgA+GA2-IgG1
hIgA+GA2-N434W
hIgA+GA2-FcγR(-)

FIG. 6

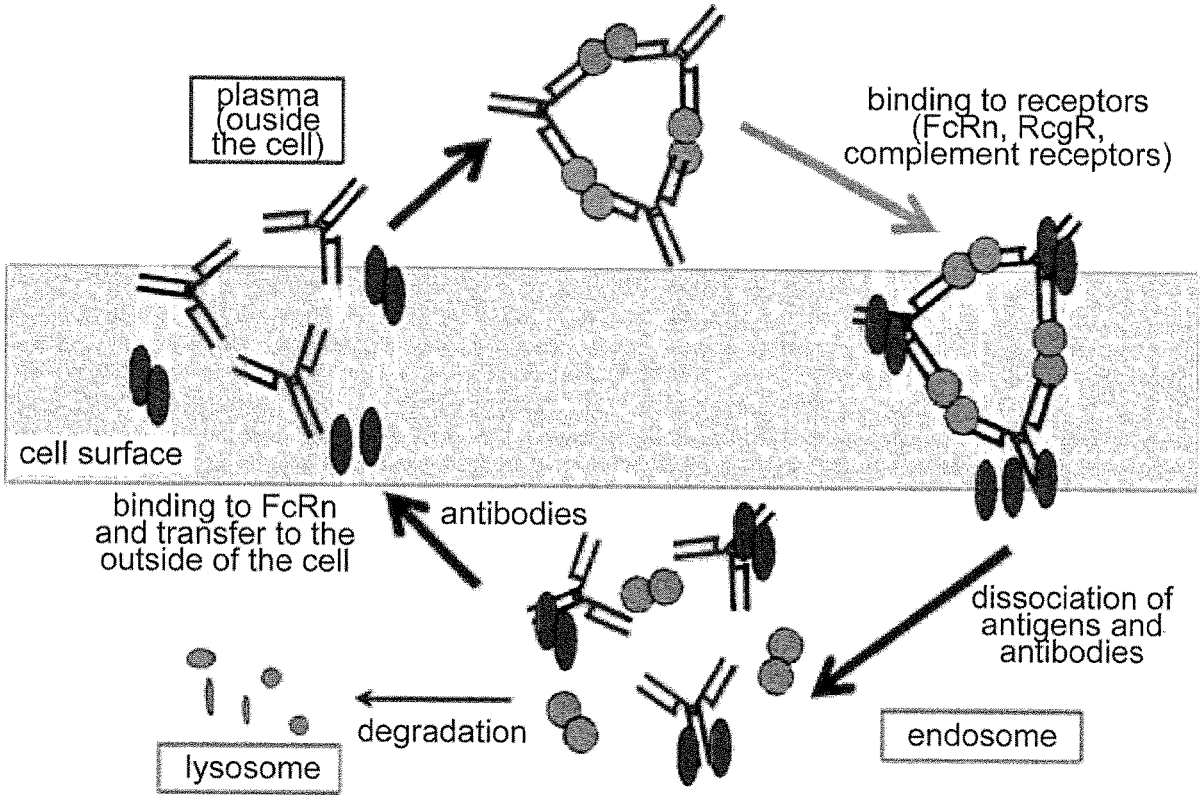

plasma (ouside the cell)
binding to receptors (FcRn, RcgR, complement receptors)
cell surface
binding to FcRn and transfer to the outside of the cell
antibodies
dissociation of antigens and antibodies
degradation
lysosome
endosome

FIG. 7

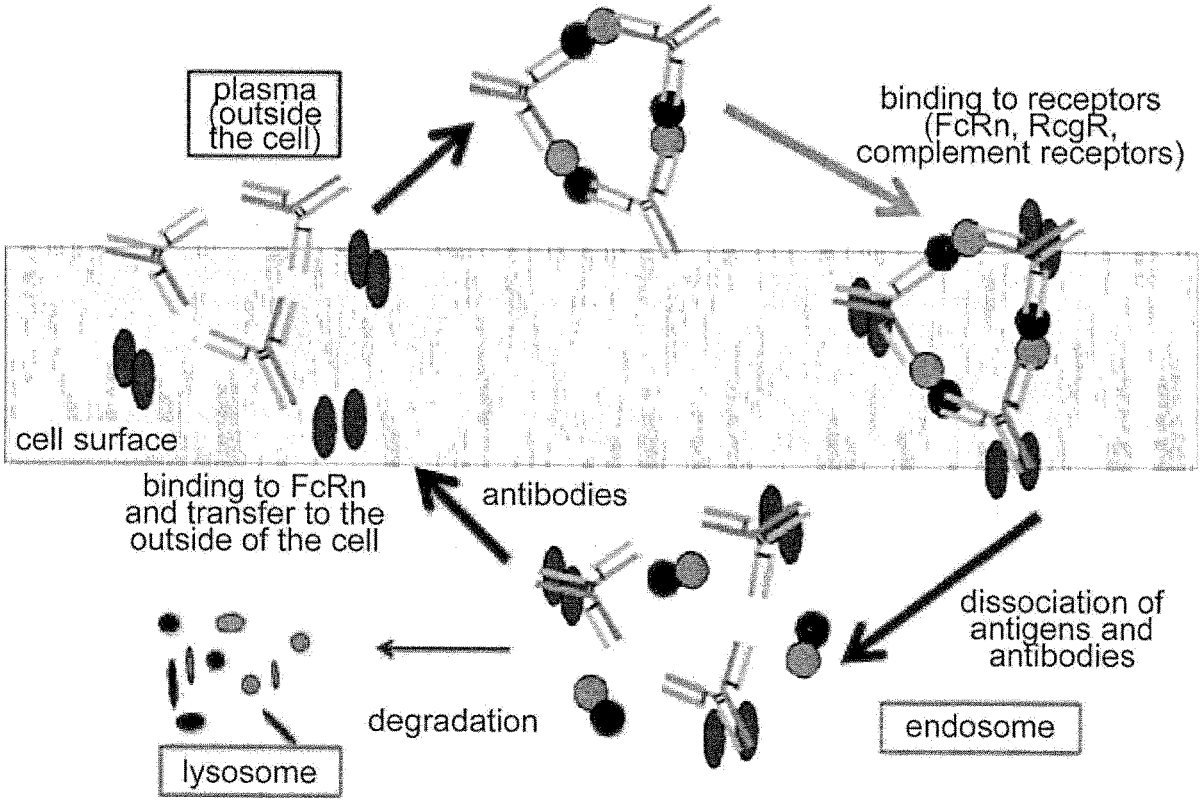

plasma (outside the cell)
binding to receptors (FcRn, RcgR, complement receptors)
cell surface
binding to FcRn and transfer to the outside of the cell
antibodies
dissociation of antigens and antibodies
endosome
degradation
lysosome

FIG. 8

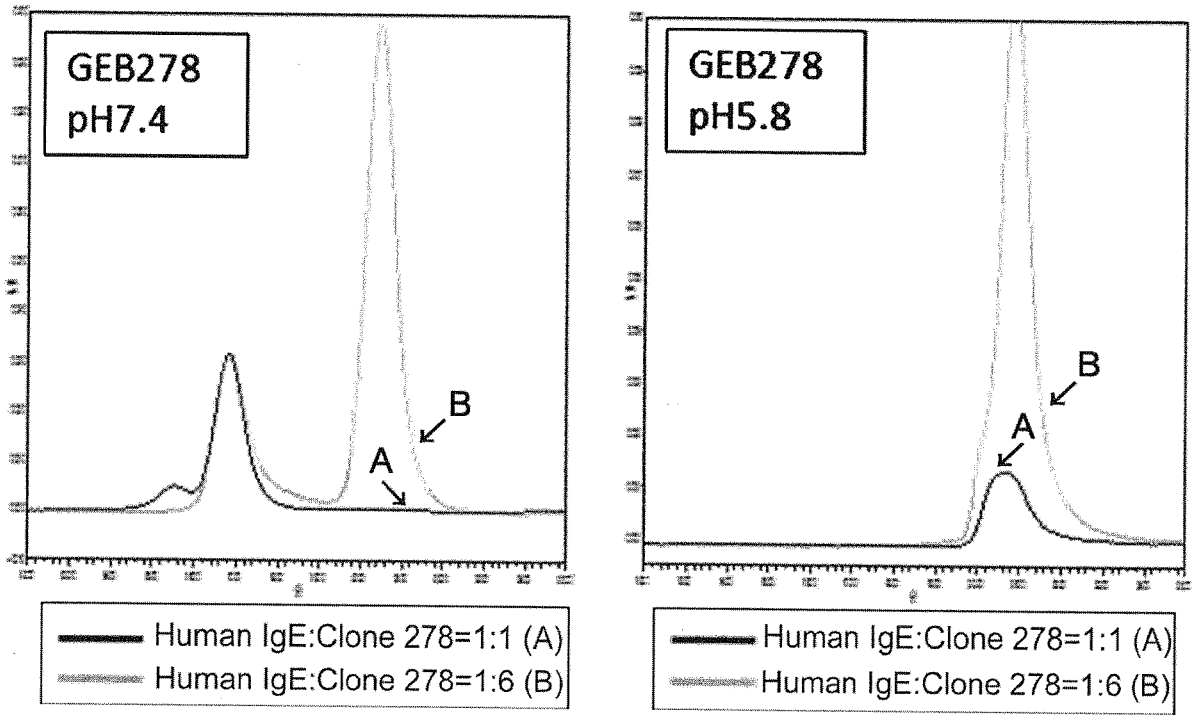

GEB278
pH7.4
A
B
Human IgE:Clone 278=1:1 (A)
Human IgE:Clone 278=1:6 (B)
GEB278
pH5.8
A
B
Human IgE:Clone 278=1:1 (A)
Human IgE:Clone 278=1:6 (B)

FIG. 9

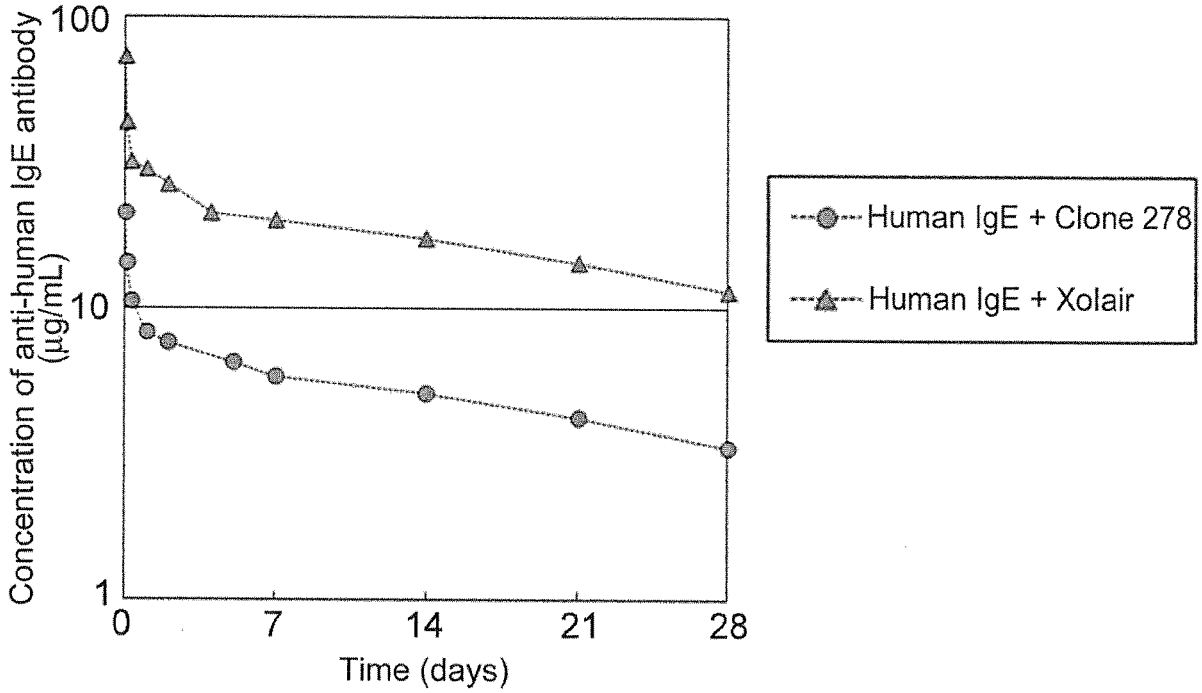

Concentration of anti-human IgE antibody (µg/mL)
100
10
1
0
7
14
21
28
Time (days)
Human IgE + Clone 278
Human IgE + Xolair

FIG. 10

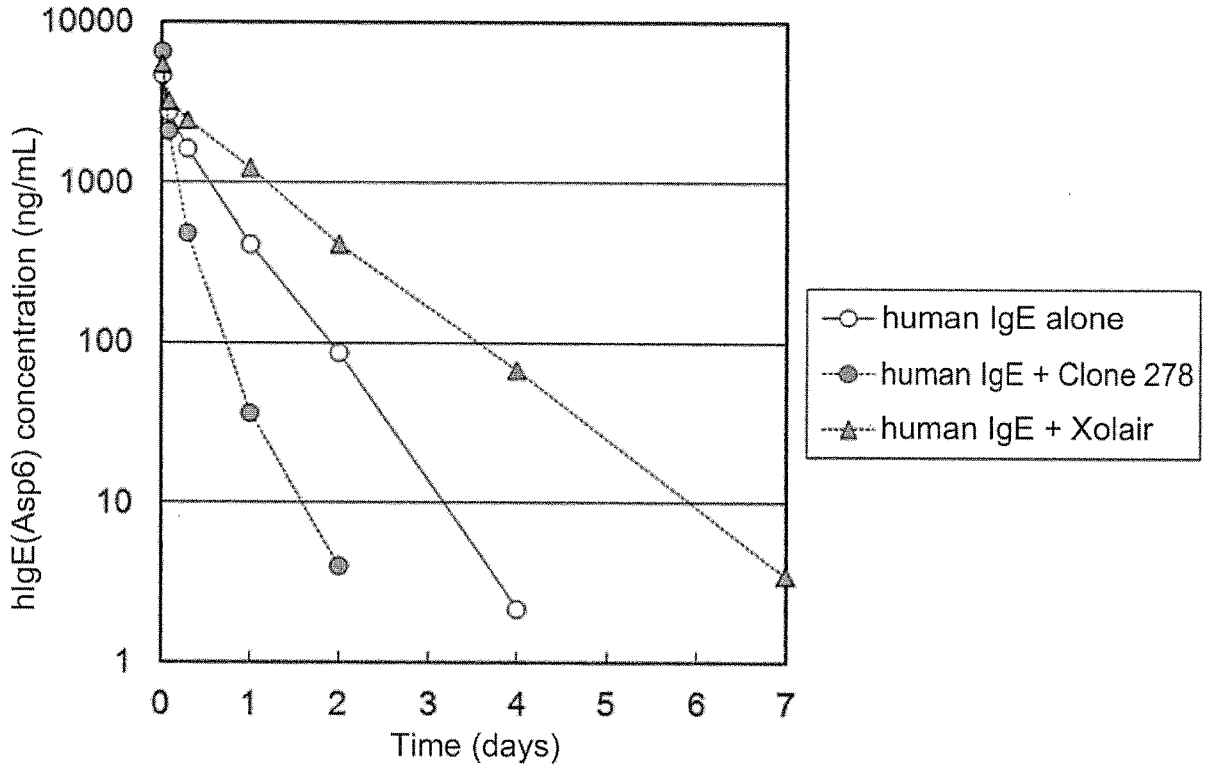

10000
1000
100
10
1
hIgE(Asp6) concentration (ng/mL)
0
1
2
3
4
5
6
7
Time (days)
human IgE alone
human IgE + Clone 278
human IgE + Xolair

FIG. 11

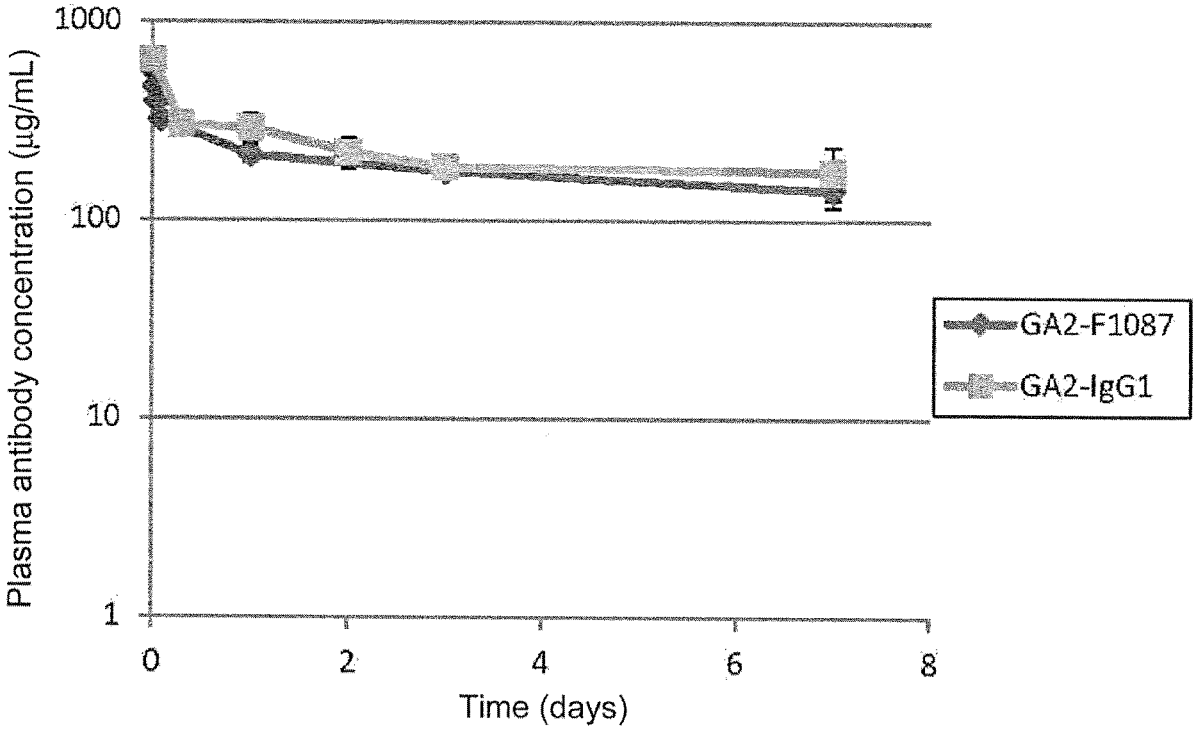

1000
100
10
1
Plasma antibody concentration (µg/mL)
0
2
4
6
8
Time (days)
GA2-F1087
GA2-IgG1

FIG. 12

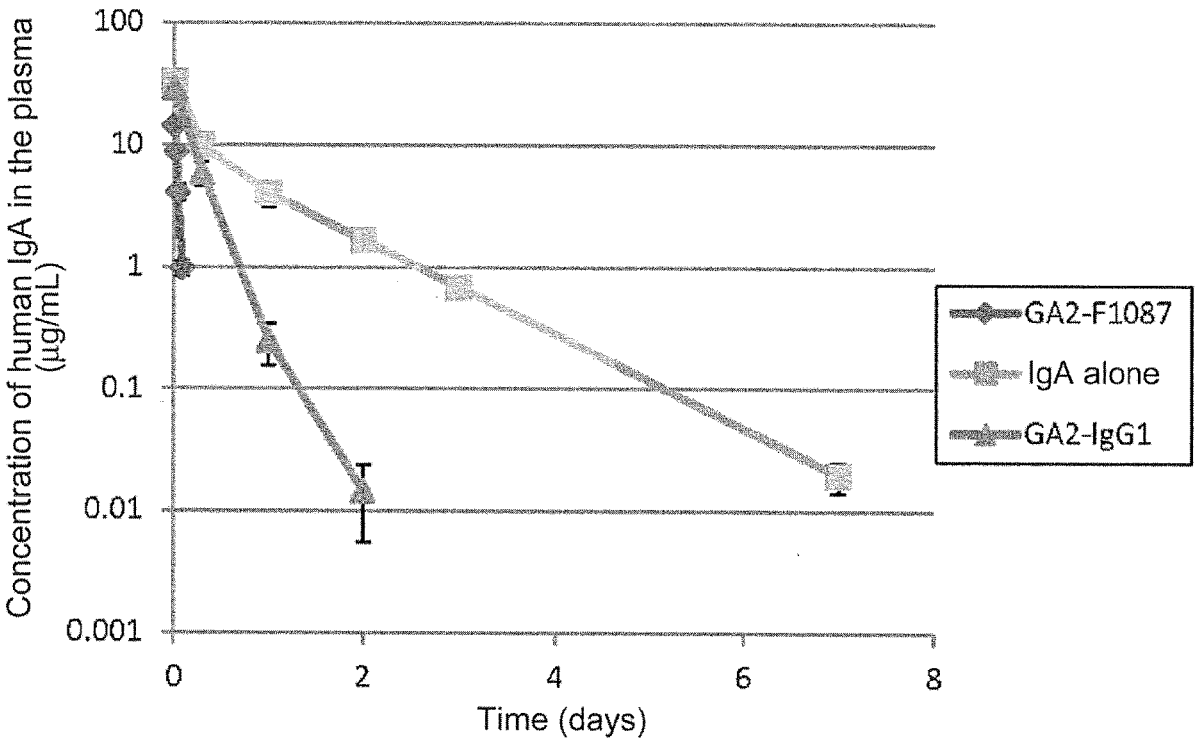

Concentration of human IgA in the plasma (µg/mL)
100
10
1
0.1
0.01
0.001
0
2
4
6
8
Time (days)
GA2-F1087
IgA alone
GA2-IgG1

FIG. 13

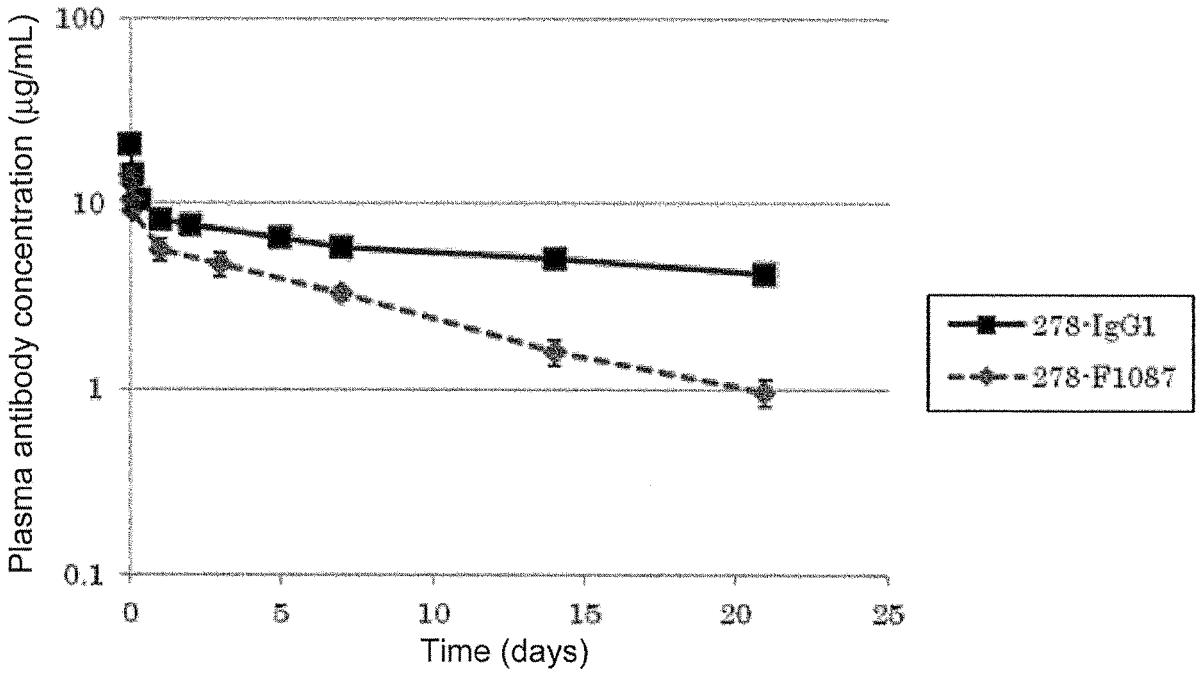

Plasma antibody concentration (μg/mL)
100
10
1
0.1
0
5
10
15
20
25
Time (days)
278-IgG1
278-F1087

FIG. 14

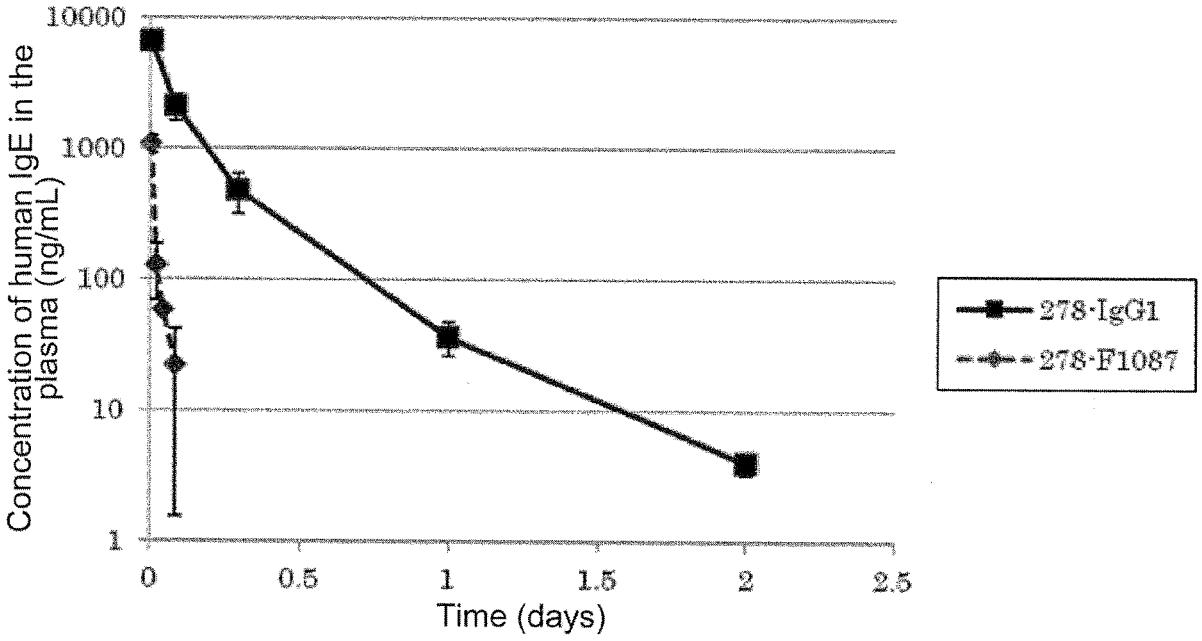

10000
1000
100
10
1
Concentration of human IgE in the plasma (ng/mL)
0
0.5
1
1.5
2
2.5
Time (days)
278-IgG1
278-F1087

FIG. 15

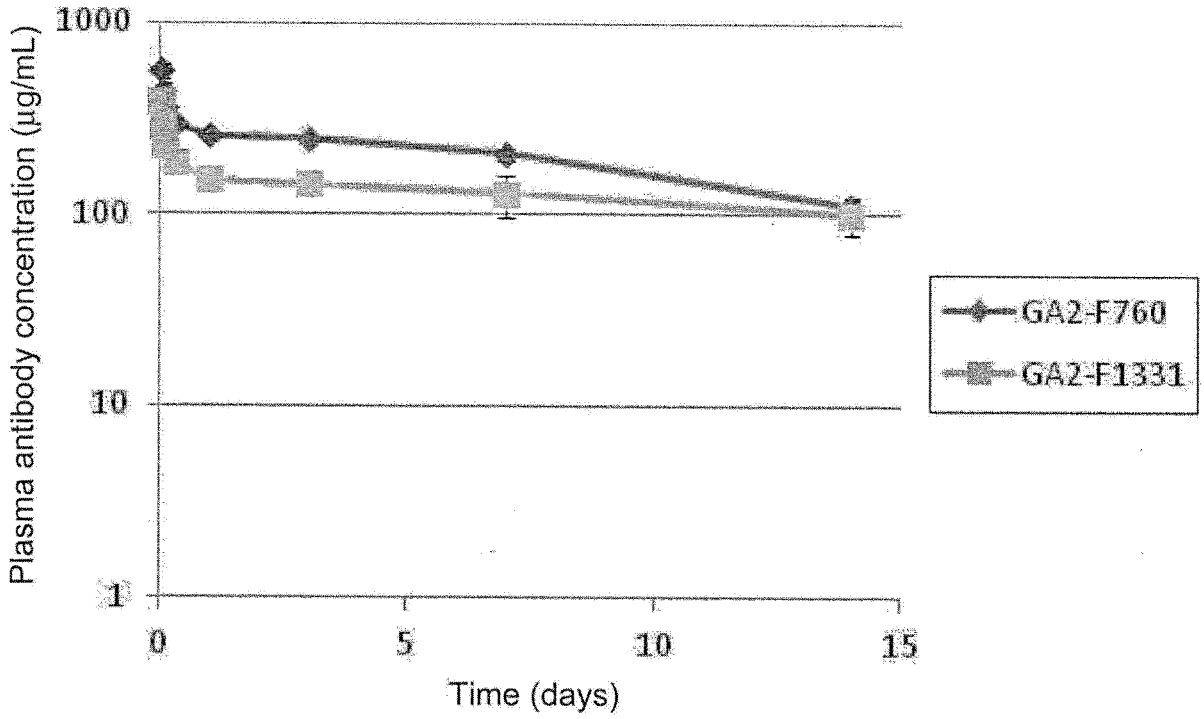

1000
100
10
1
Plasma antibody concentration (µg/mL)
0
5
10
15
Time (days)
GA2-F760
GA2-F1331

FIG. 16

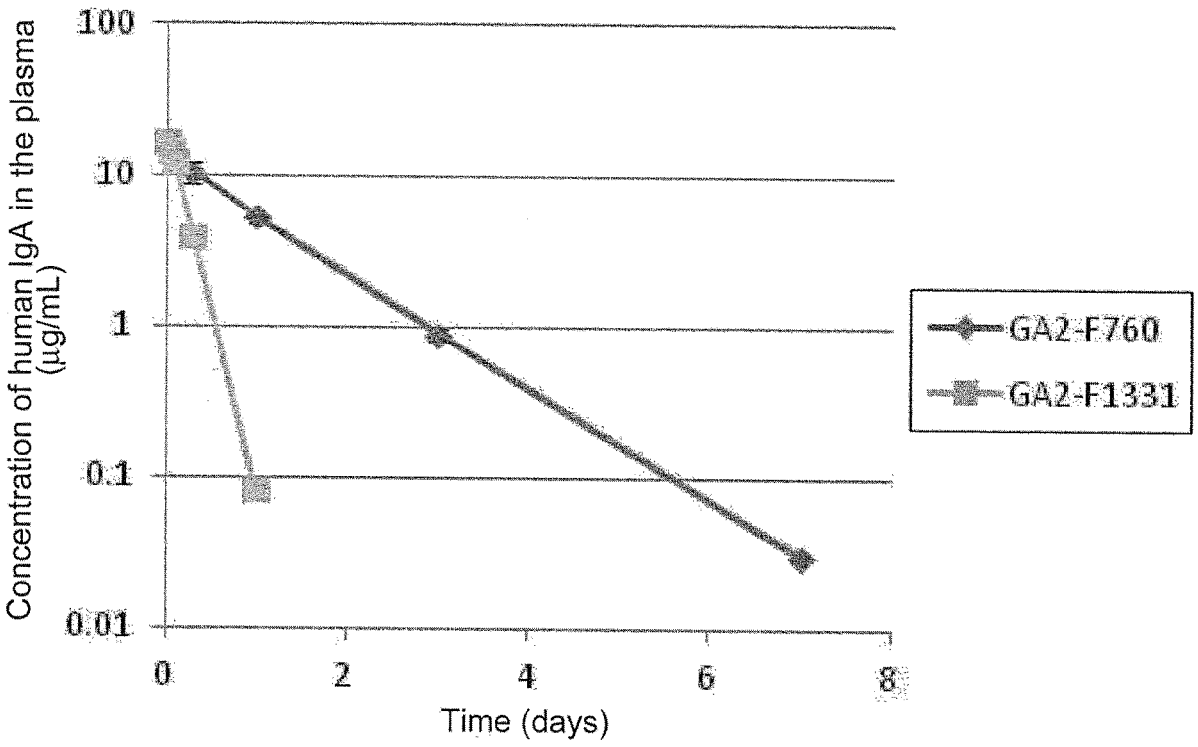

Concentration of human IgA in the plasma (μg/mL)
100
10
1
0.1
0.01
0
2
4
6
8
Time (days)
GA2-F760
GA2-F1331

FIG. 17

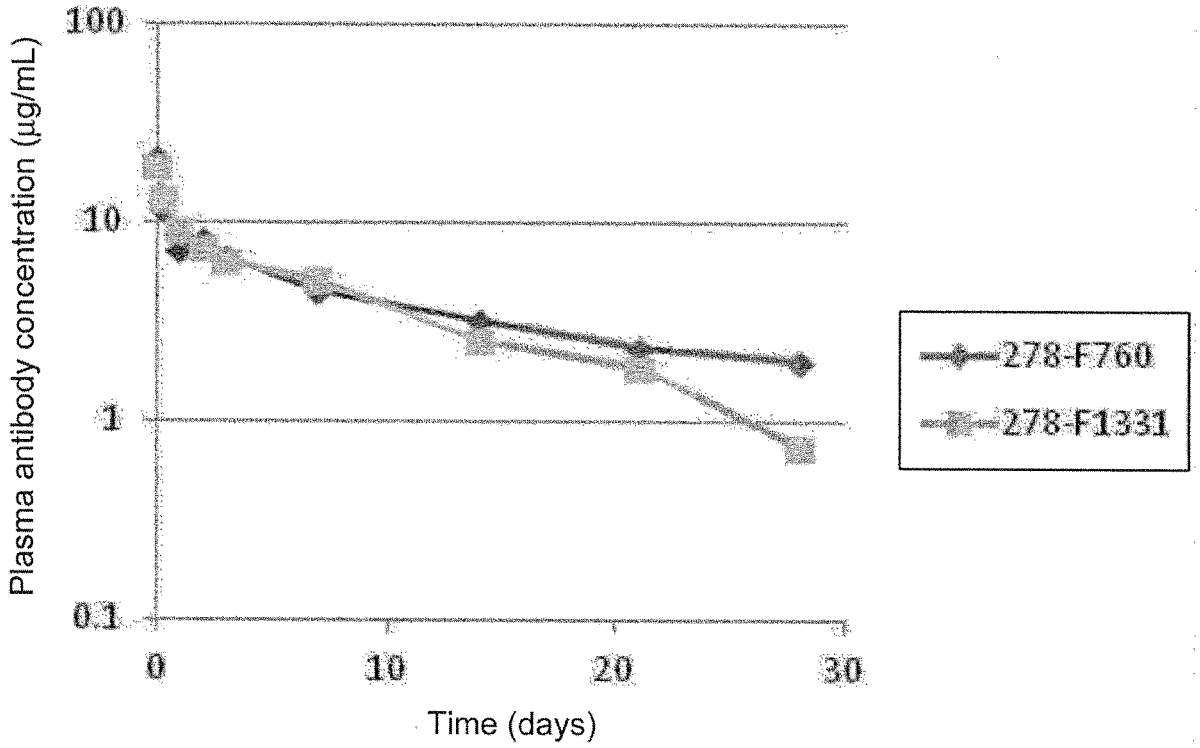

100
10
1
0.1
Plasma antibody concentration (μg/mL)
0
10
20
30
Time (days)
278-F760
278-F1331

FIG. 18

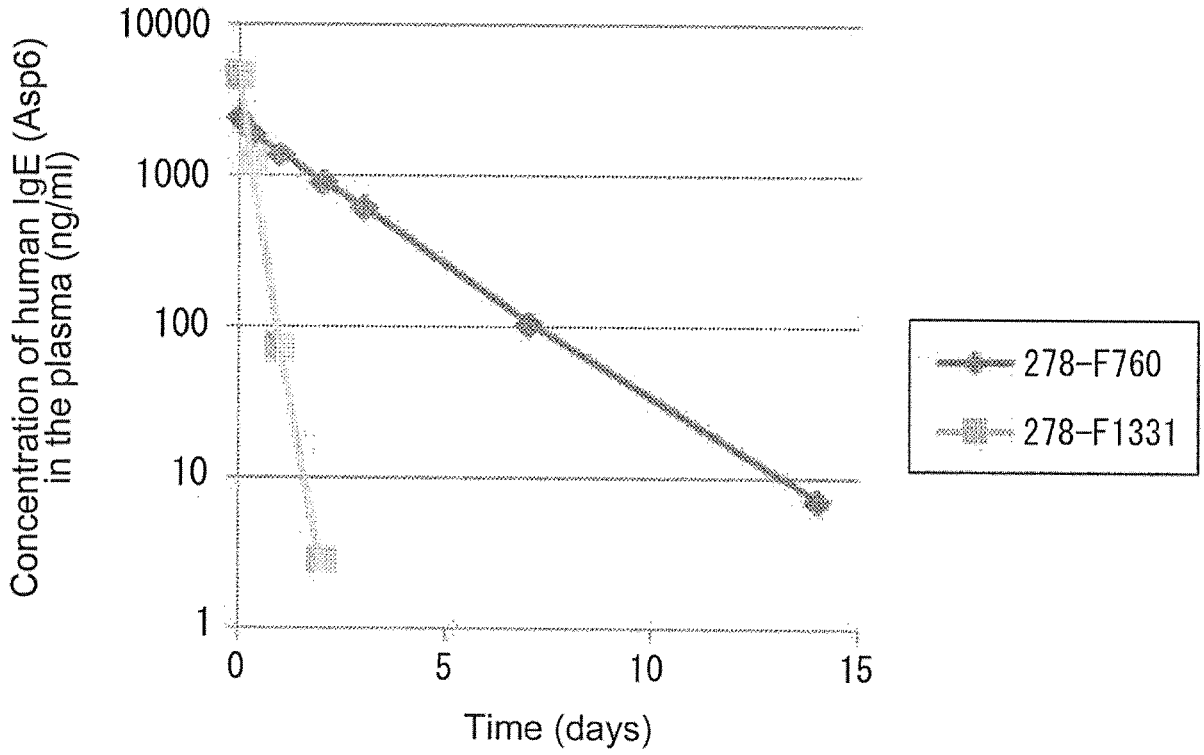

10000
1000
100
10
1
0
5
10
15
Concentration of human IgE (Asp6) in the plasma (ng/ml)
Time (days)
278-F760
278-F1331

FIG. 19

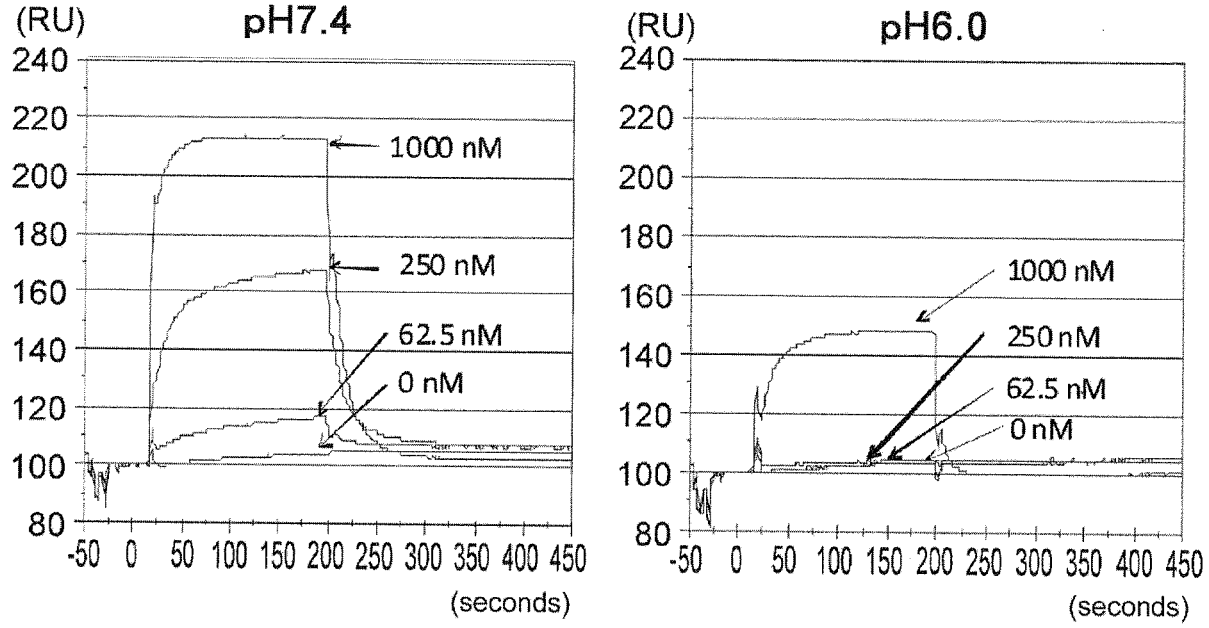

(RU)
pH7.4
240
220
200
180
160
140
120
100
80
1000 nM
250 nM
62.5 nM
0 nM
-50 0 50 100 150 200 250 300 350 400 450
(seconds)
(RU)
pH6.0
240
220
200
180
160
140
120
100
80
1000 nM
250 nM
62.5 nM
0 nM
-50 0 50 100 150 200 250 300 350 400 450
(seconds)

FIG. 20

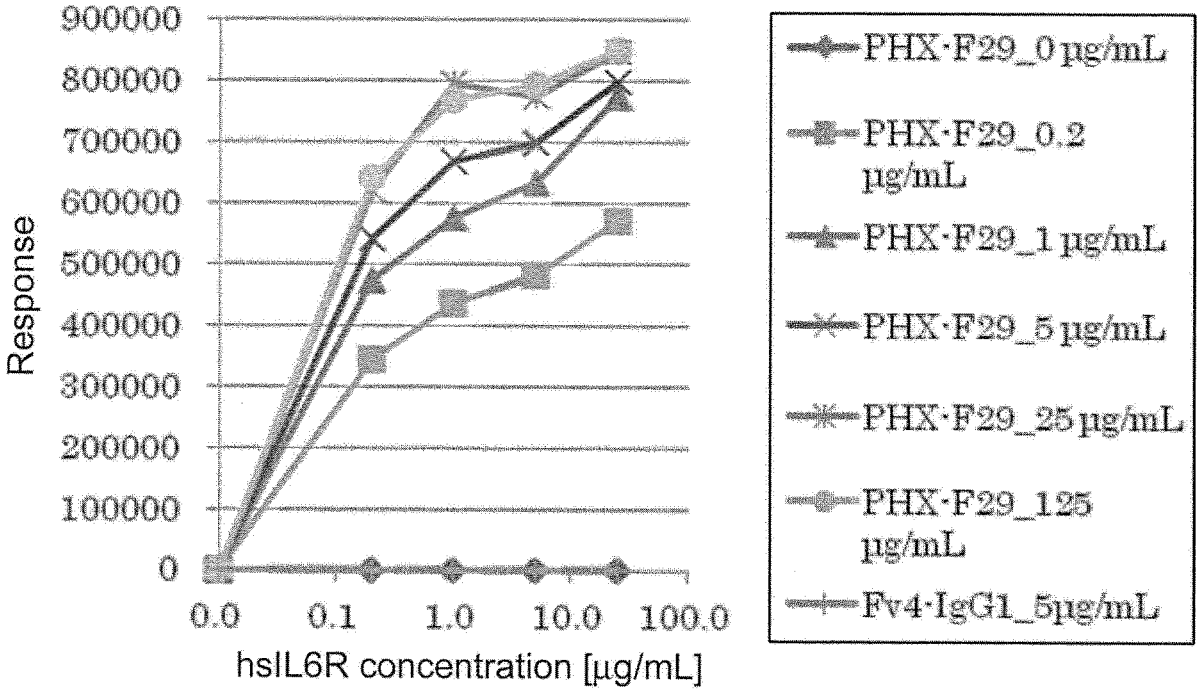

900000
800000
700000
600000
500000
400000
300000
200000
100000
0
Response
0.0
0.1
1.0
10.0
100.0
hsIL6R concentration [μg/mL]
PHX-F29_0 μg/mL
PHX-F29_0.2 μg/mL
PHX-F29_1 μg/mL
PHX-F29_5 μg/mL
PHX-F29_25 μg/mL
PHX-F29_125 μg/mL
Fv4-IgG1_5μg/mL

FIG. 21

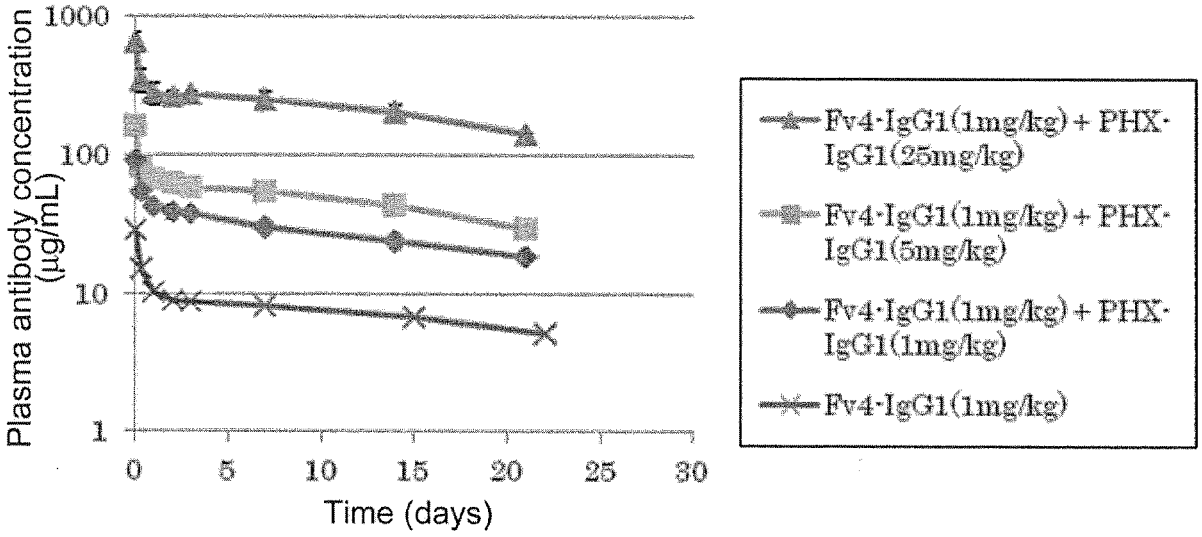

Plasma antibody concentration (μg/mL)
1000
100
10
1
0
5
10
15
20
25
30
Time (days)
Fv4-IgG1(1mg/kg) + PHX-IgG1(25mg/kg)
Fv4-IgG1(1mg/kg) + PHX-IgG1(5mg/kg)
Fv4-IgG1(1mg/kg) + PHX-IgG1(1mg/kg)
Fv4-IgG1(1mg/kg)

FIG. 22

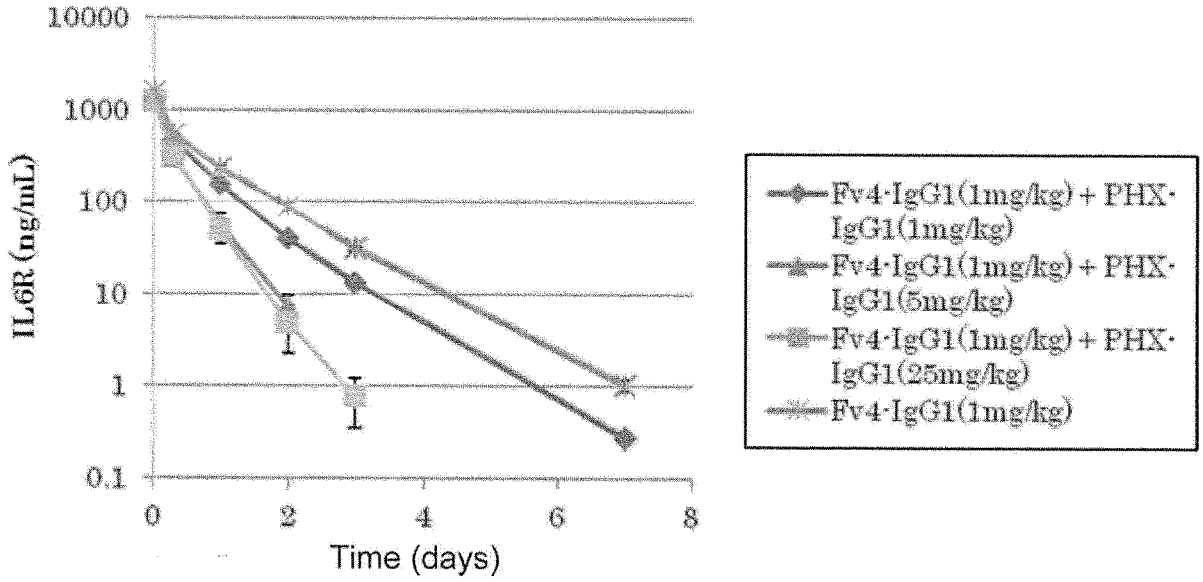

10000
1000
100
10
1
0.1
IL6R (ng/mL)
0
2
4
6
8
Time (days)
Fv4-IgG1(1mg/kg) + PHX-IgG1(1mg/kg)
Fv4-IgG1(1mg/kg) + PHX-IgG1(5mg/kg)
Fv4-IgG1(1mg/kg) + PHX-IgG1(25mg/kg)
Fv4-IgG1(1mg/kg)

FIG. 23

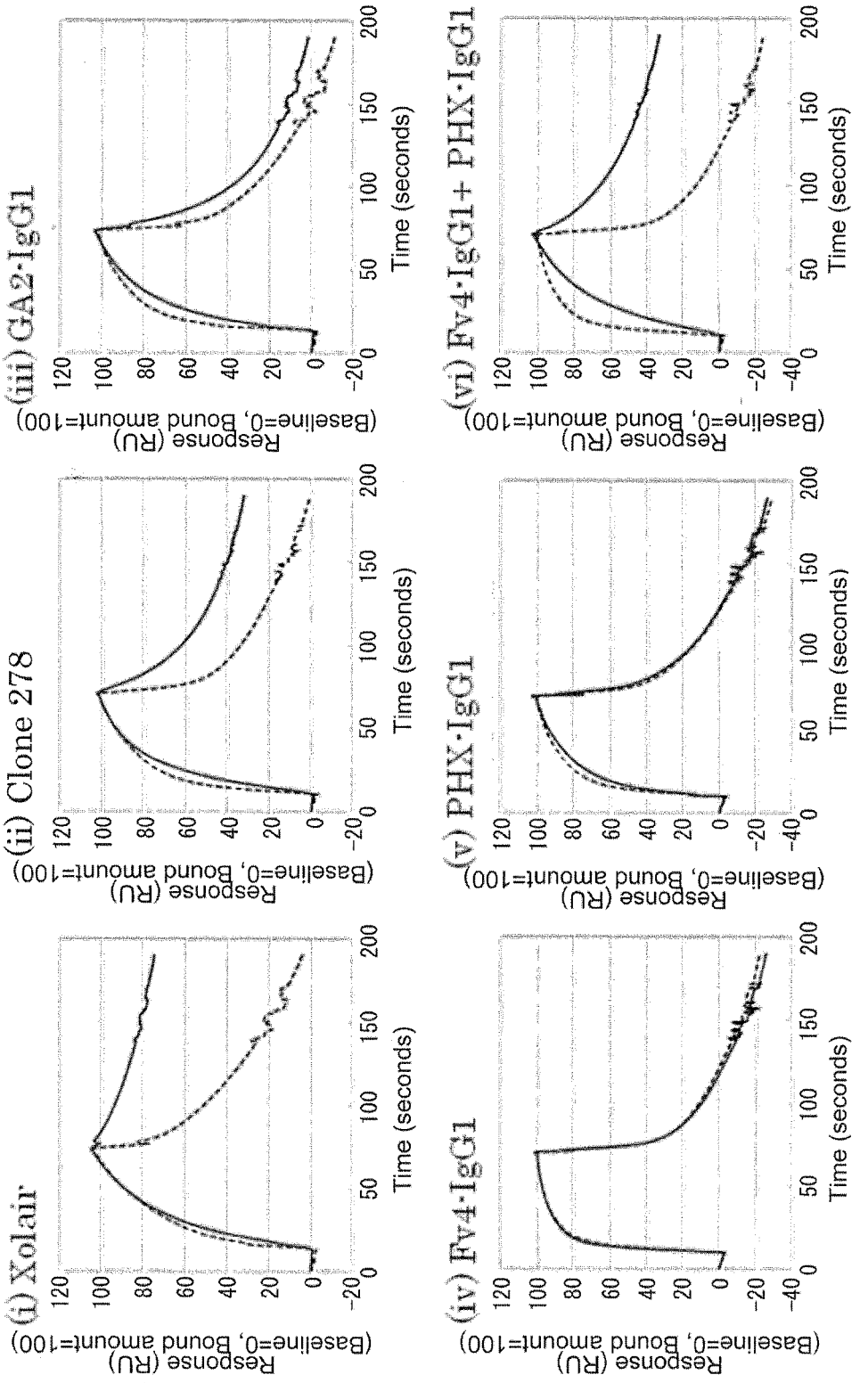

(i) Xolair
(ii) Clone 278
(iii) GA2·IgG1
(iv) Fv4·IgG1
(v) PHX·IgG1
(vi) Fv4·IgG1+ PHX·IgG1
Response (RU)
(Baseline=0, Bound amount=100)
Time (seconds)

FIG. 24

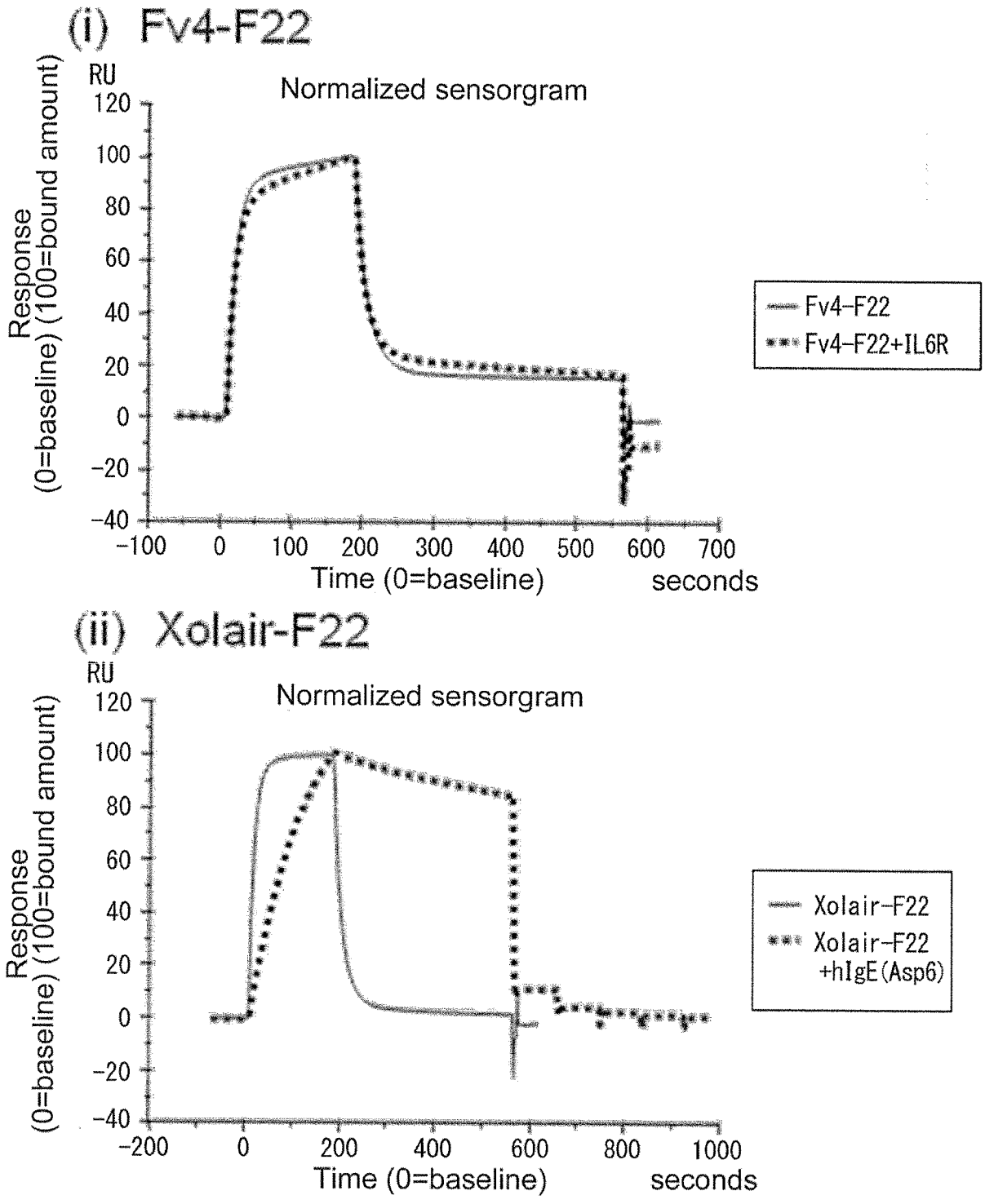

(i) Fv4-F22
RU
Normalized sensorgram
Response
(0=baseline) (100=bound amount)
120
100
80
60
40
20
0
-20
-40
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
Fv4-F22
Fv4-F22+IL6R
(ii) Xolair-F22
RU
Normalized sensorgram
Response
(0=baseline) (100=bound amount)
120
100
80
60
40
20
0
-20
-40
-200
0
200
400
600
800
1000
Time (0=baseline)
seconds
Xolair-F22
Xolair-F22
+hIgE(Asp6)

FIG. 25

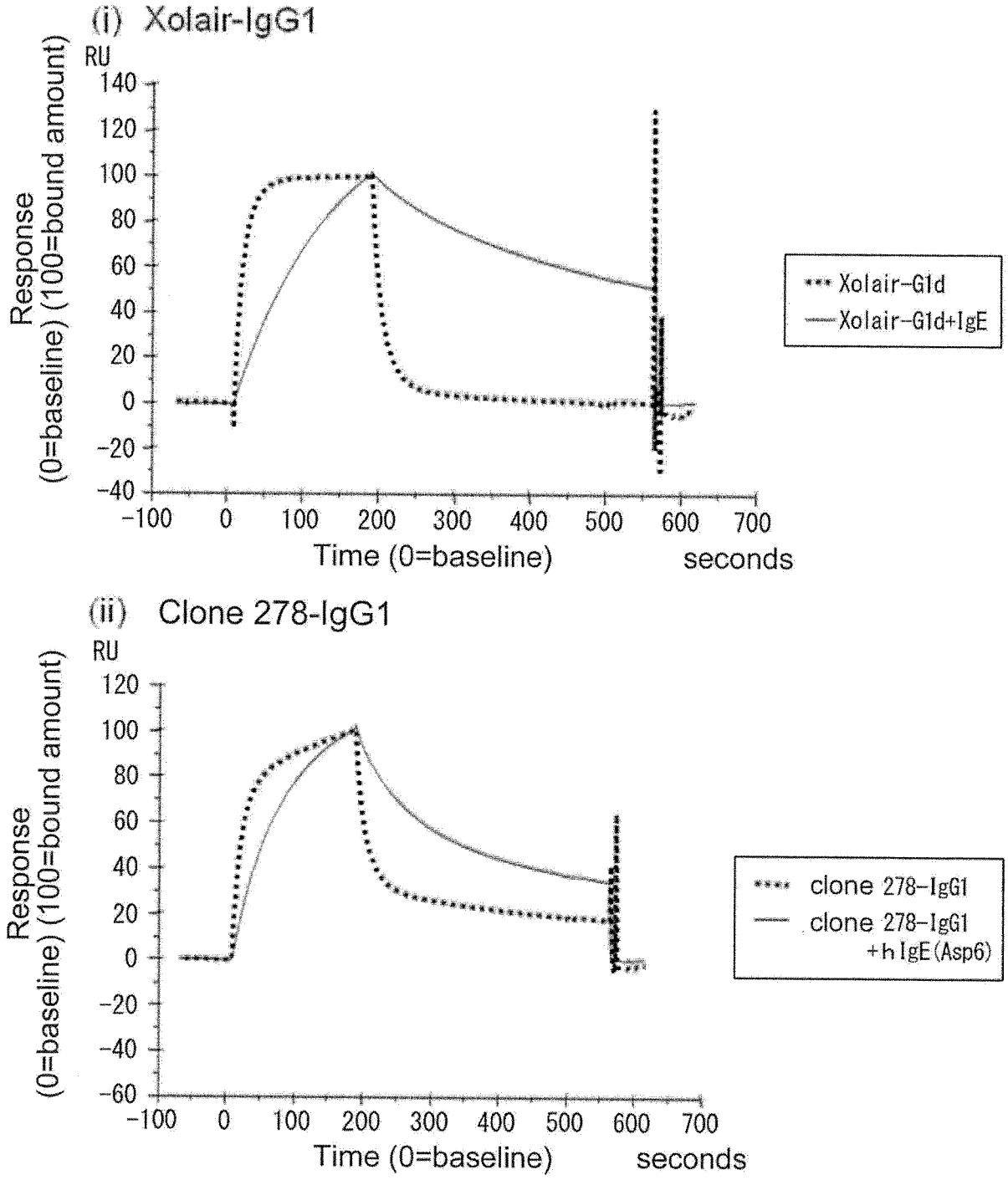

(i) Xolair-IgG1
RU
Response
(0=baseline) (100=bound amount)
140
120
100
80
60
40
20
0
-20
-40
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
Xolair-G1d
Xolair-G1d+IgE
(ii) Clone 278-IgG1
RU
Response
(0=baseline) (100=bound amount)
120
100
80
60
40
20
0
-20
-40
-60
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
clone 278-IgG1
clone 278-IgG1
+h IgE(Asp6)

FIG. 26

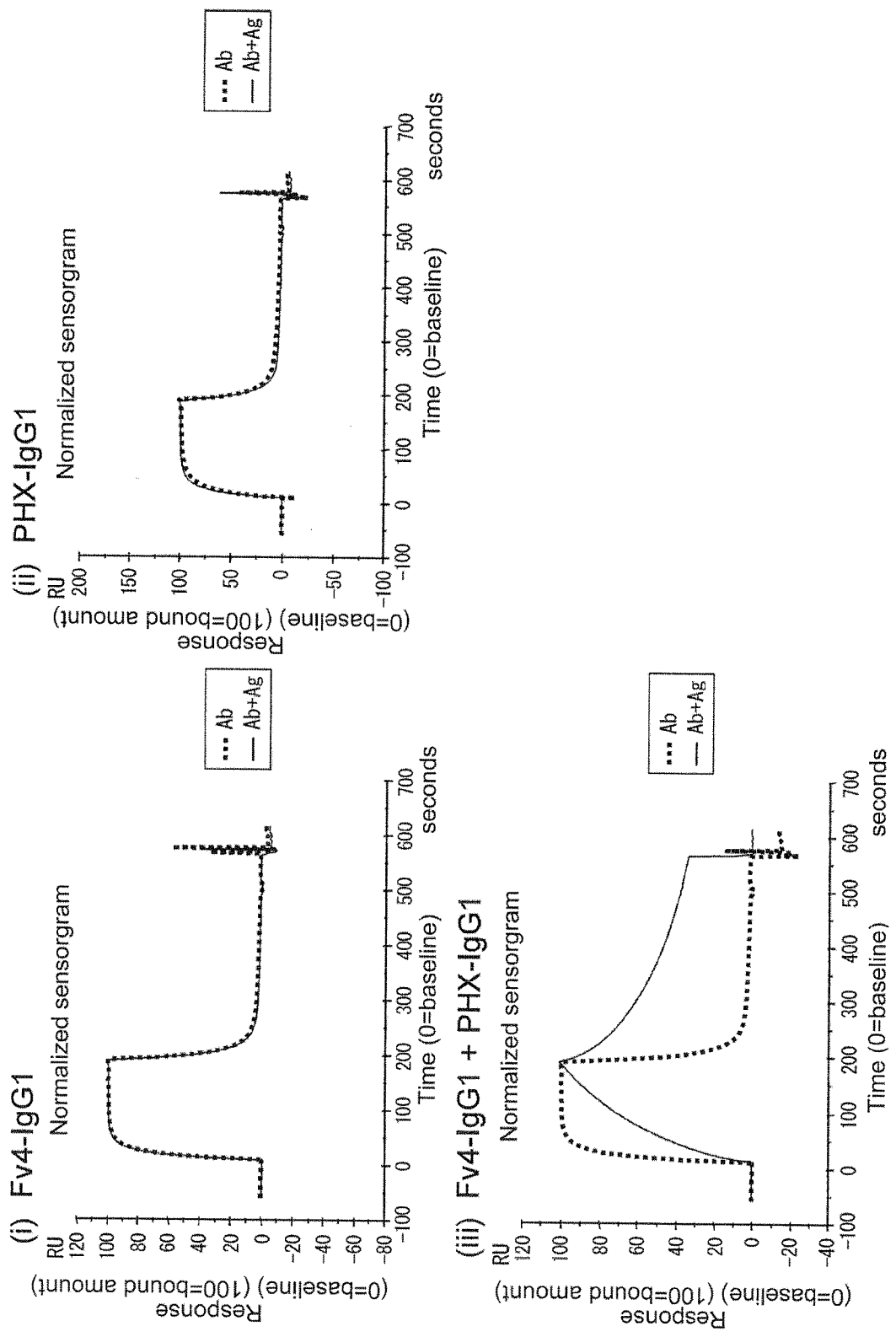

(i) Fv4-IgG1
Normalized sensorgram
RU
120
100
80
60
40
20
0
-20
-40
-60
-80
Response
(0=baseline) (100=bound amount)
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
... Ab
— Ab+Ag
(ii) PHX-IgG1
Normalized sensorgram
RU
200
150
100
50
0
-50
-100
Response
(0=baseline) (100=bound amount)
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
... Ab
— Ab+Ag
(iii) Fv4-IgG1 + PHX-IgG1
Normalized sensorgram
RU
120
100
80
60
40
20
0
-20
-40
Response
(0=baseline) (100=bound amount)
-100
0
100
200
300
400
500
600
700
Time (0=baseline)
seconds
... Ab
— Ab+Ag

FIG. 27