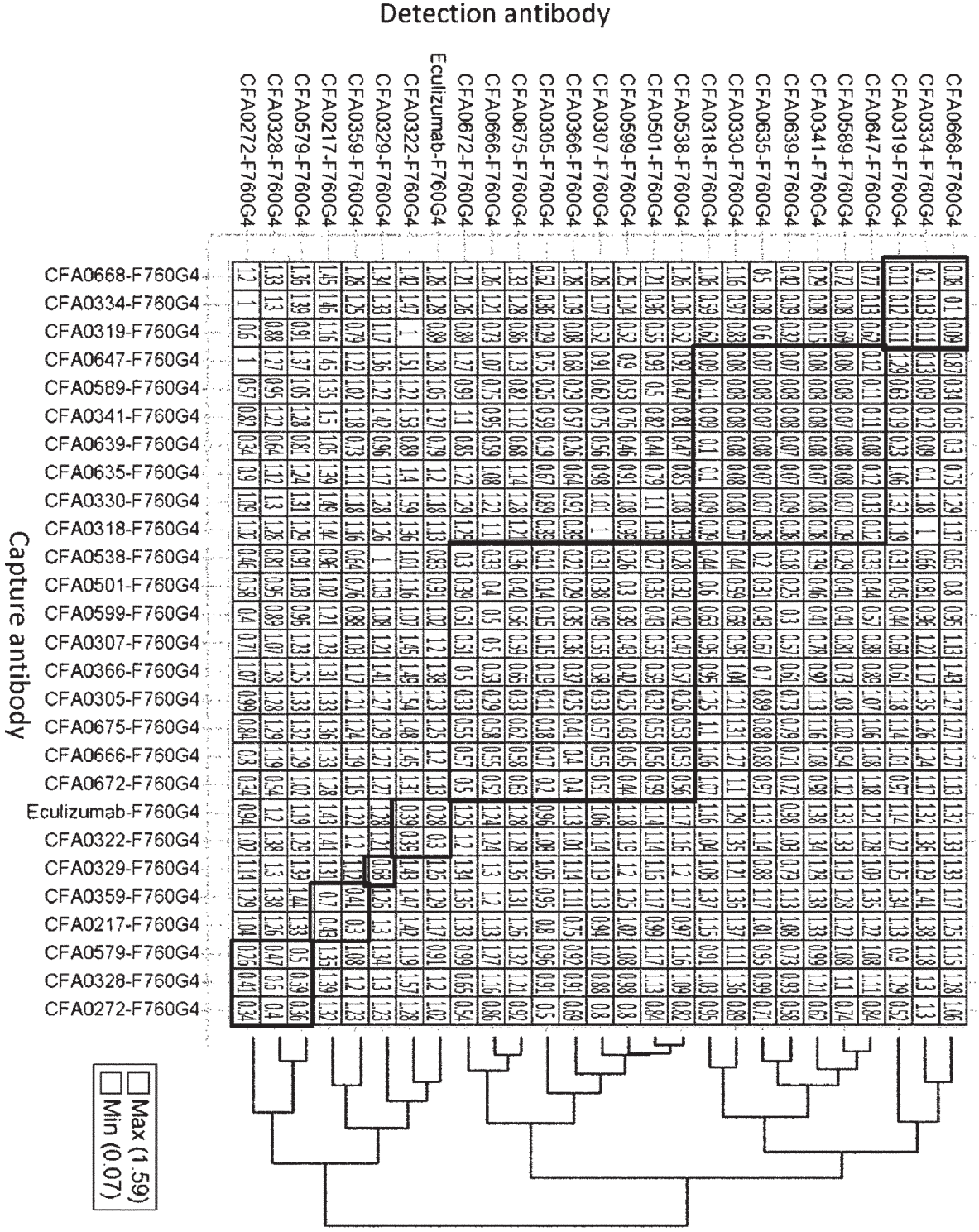
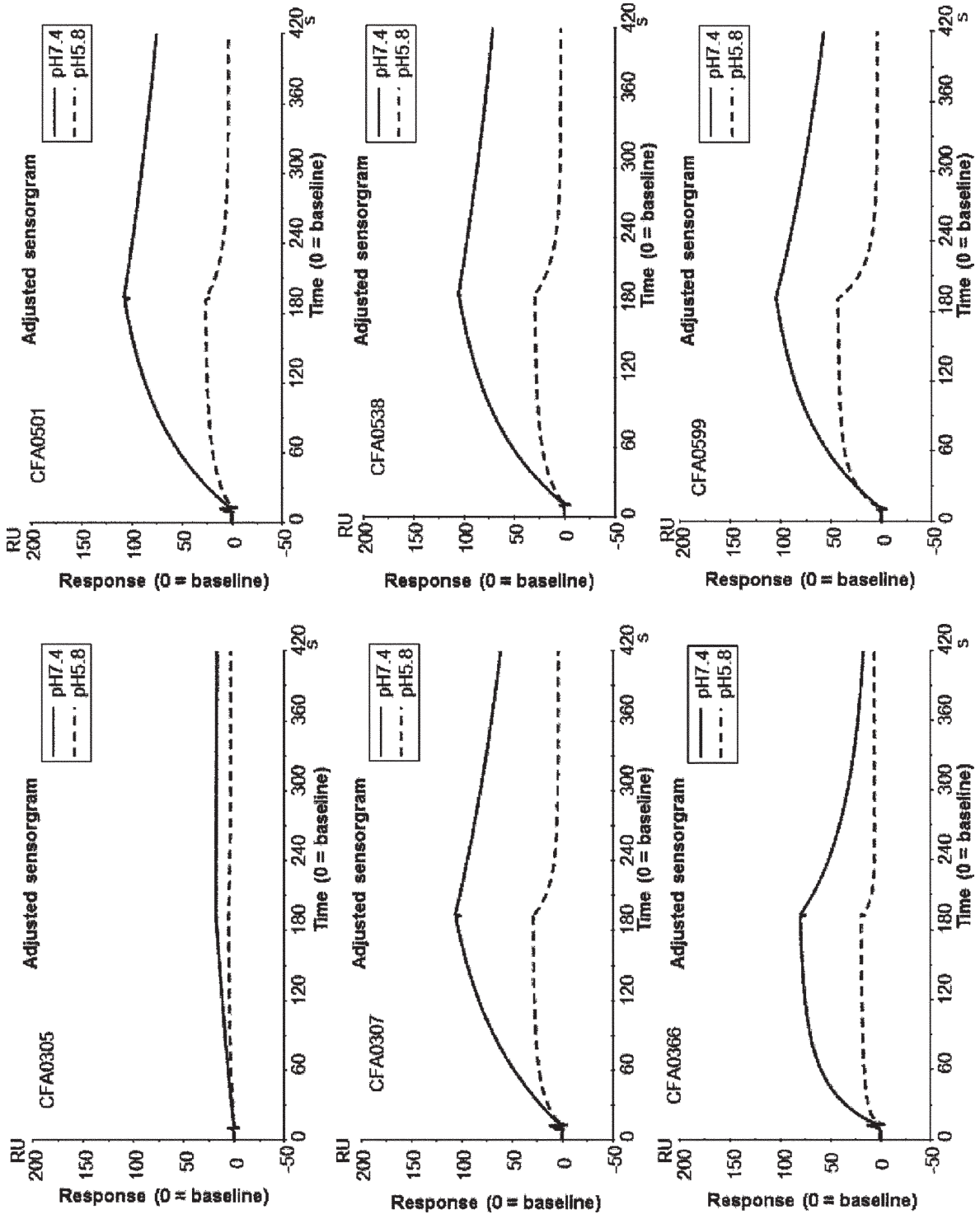
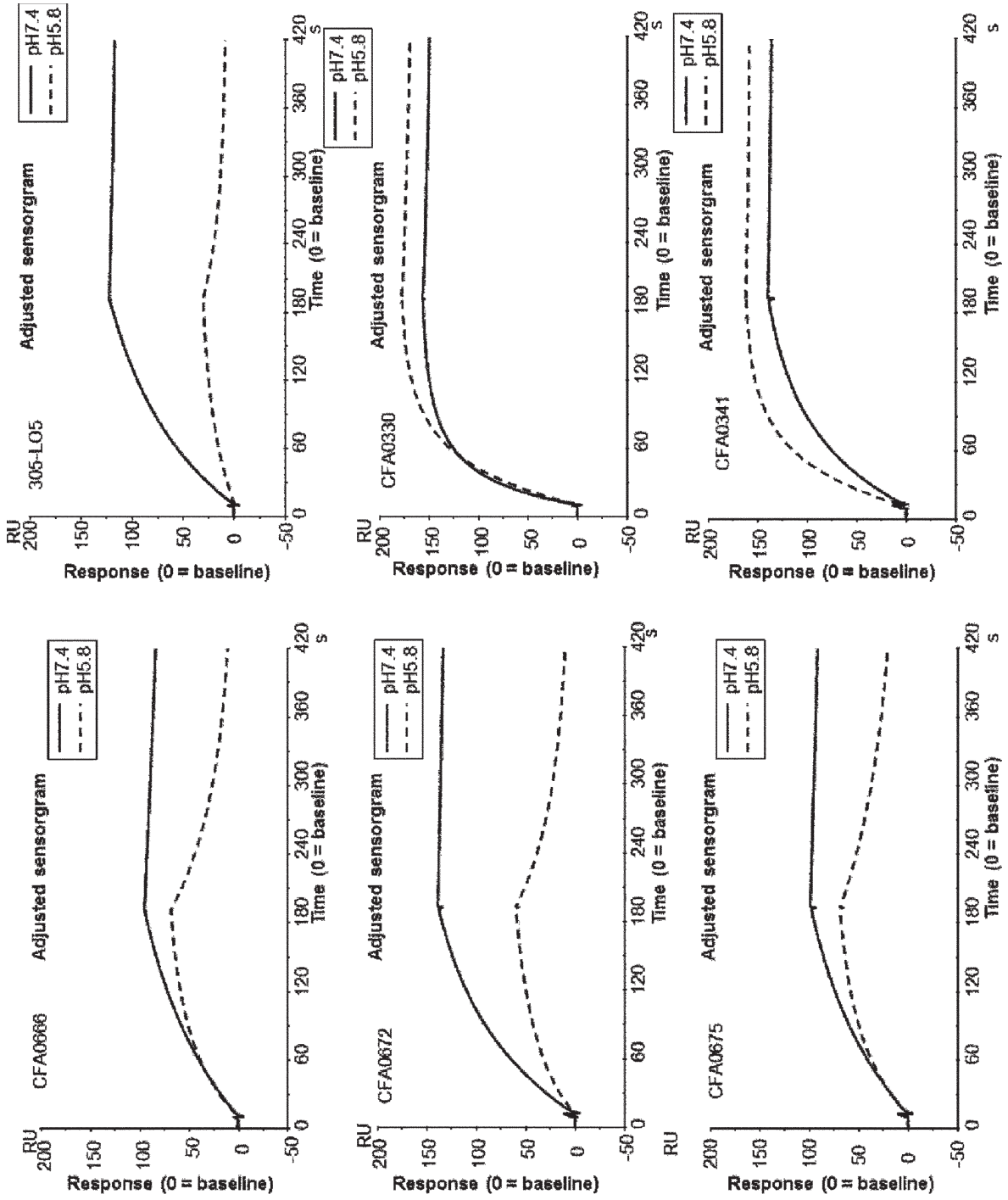
[Fig. 1]


Detection antibody
Capture antibody
CFA0668-F760G4
CFA0334-F760G4
CFA0319-F760G4
CFA0647-F760G4
CFA0589-F760G4
CFA0341-F760G4
CFA0639-F760G4
CFA0635-F760G4
CFA0330-F760G4
CFA0318-F760G4
CFA0538-F760G4
CFA0501-F760G4
CFA0599-F760G4
CFA0307-F760G4
CFA0366-F760G4
CFA0305-F760G4
CFA0675-F760G4
CFA0666-F760G4
CFA0672-F760G4
Eculizumab-F760G4
CFA0322-F760G4
CFA0329-F760G4
CFA0359-F760G4
CFA0217-F760G4
CFA0579-F760G4
CFA0328-F760G4
CFA0272-F760G4
Max (1.59)
Min (0.07)

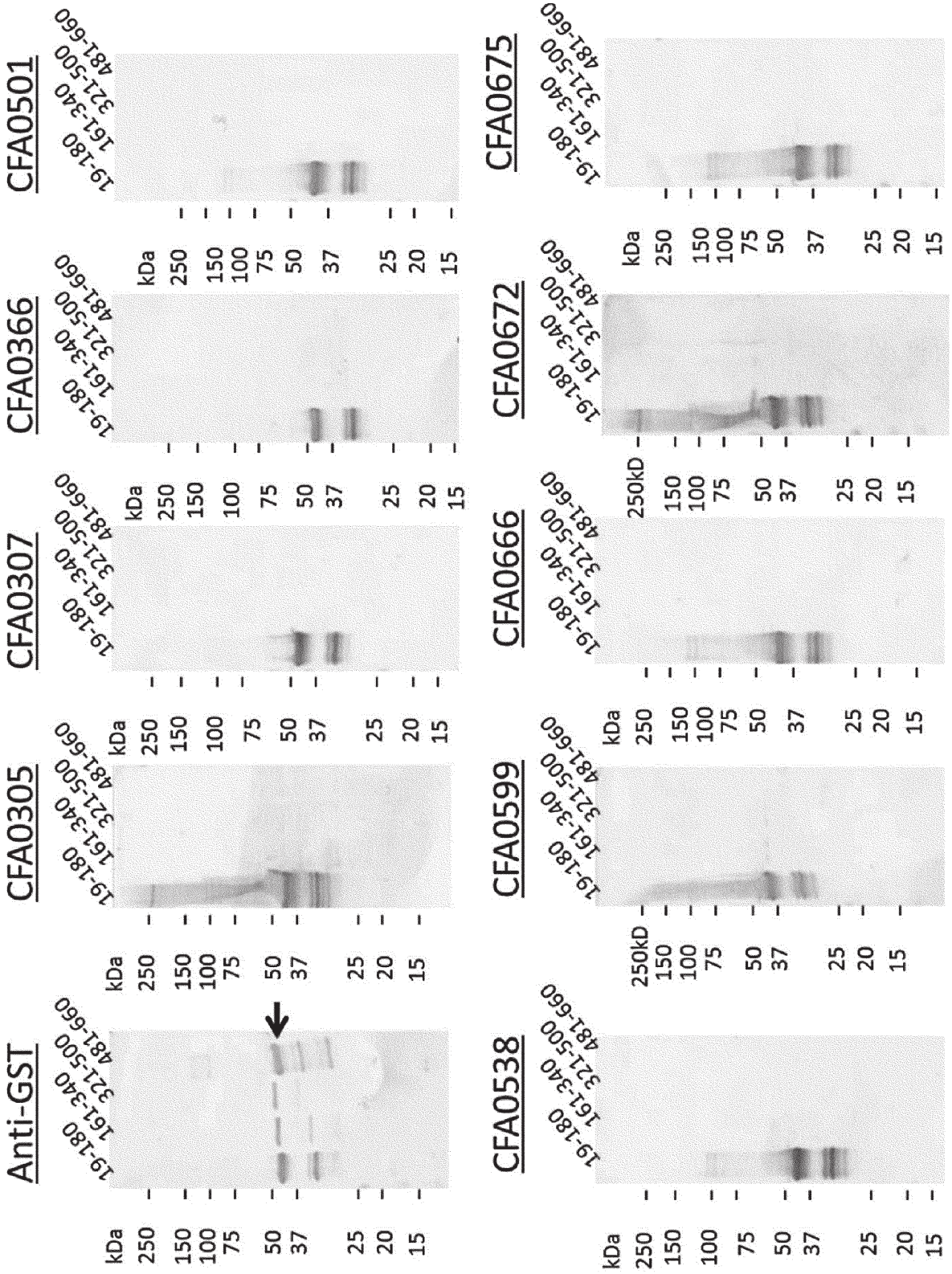
[Fig. 2A]


CFA0501
CFA0538
CFA0599
CFA0305
CFA0307
CFA0366
Adjusted sensorgram
pH7.4
pH5.8
RU
Response (0 = baseline)
Time (0 = baseline)
s

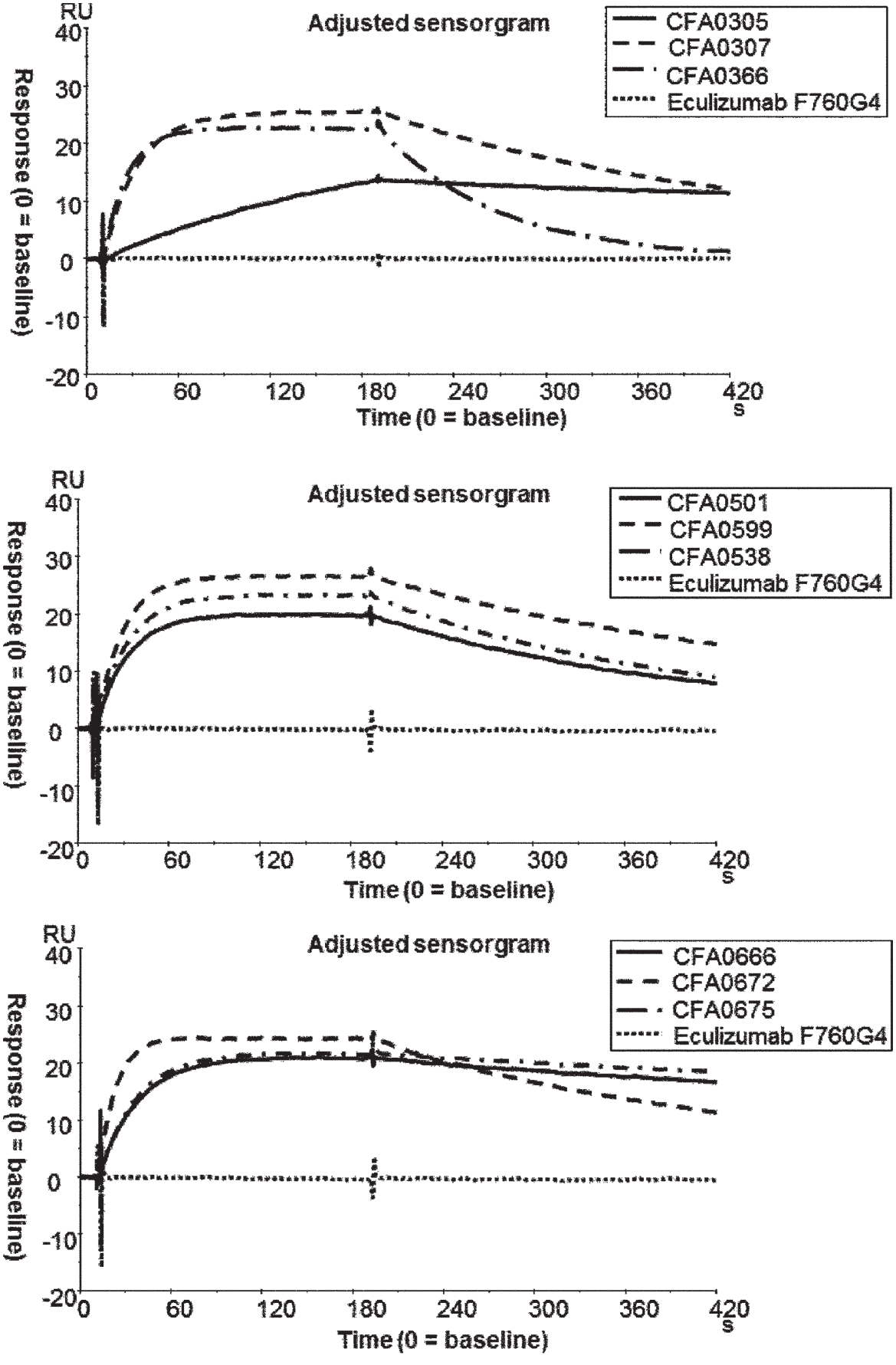
[Fig. 2B]


305-L05
Adjusted sensorgram
pH7.4
pH5.8
RU
Response (0 = baseline)
Time (0 = baseline)
s
CFA0330
CFA0341
CFA0666
CFA0672
CFA0675

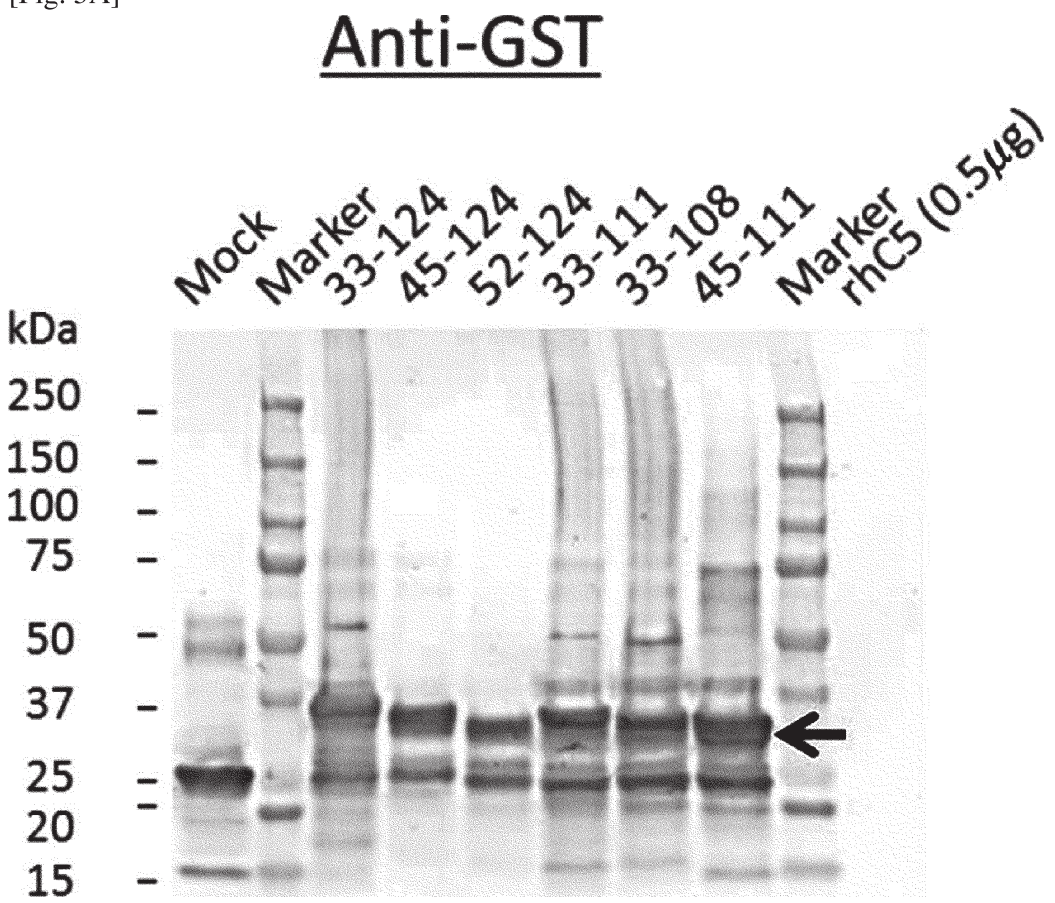
[Fig. 3]


Anti-GST
CFA0305
CFA0307
CFA0366
CFA0501
CFA0538
CFA0599
CFA0666
CFA0672
CFA0675
kDa
250
150
100
75
50
37
25
20
15
250kD
19-180
161-340
321-500
481-660

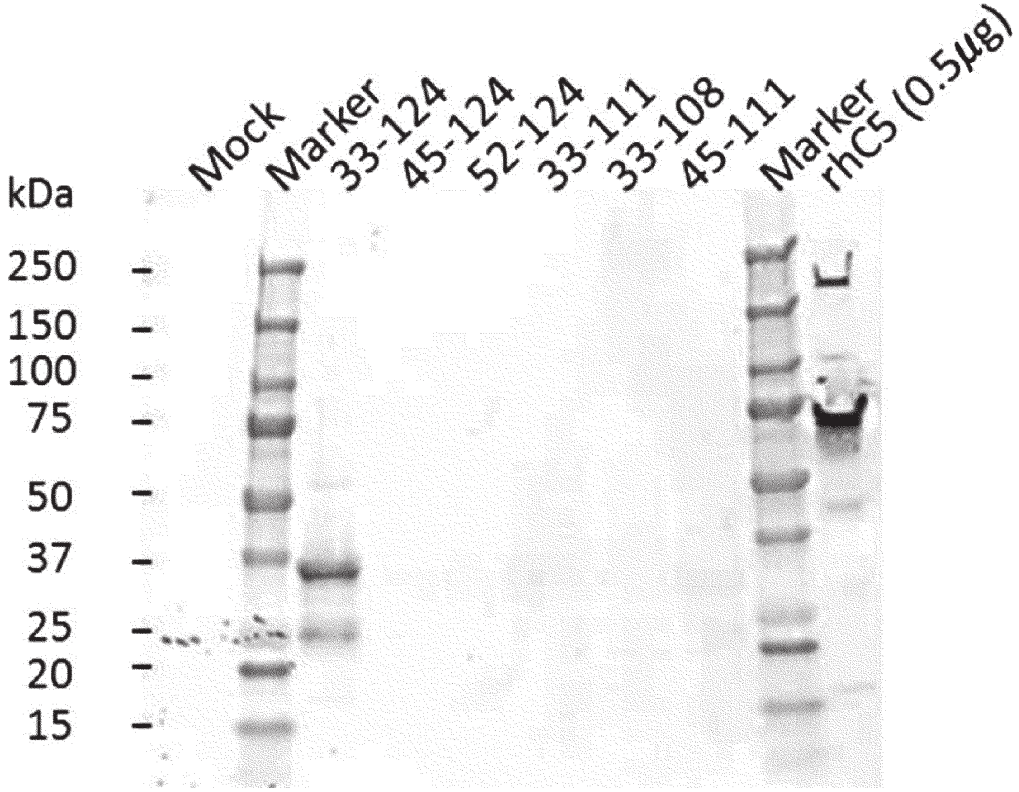
[Fig. 4]


RU
Adjusted sensorgram
CFA0305
CFA0307
CFA0366
Eculizumab F760G4
Response (0 = baseline)
40
30
20
10
0
-10
-20
0
60
120
180
240
300
360
420
s
Time (0 = baseline)
RU
Adjusted sensorgram
CFA0501
CFA0599
CFA0538
Eculizumab F760G4
Response (0 = baseline)
Time (0 = baseline)
RU
Adjusted sensorgram
CFA0666
CFA0672
CFA0675
Eculizumab F760G4
Response (0 = baseline)
Time (0 = baseline)

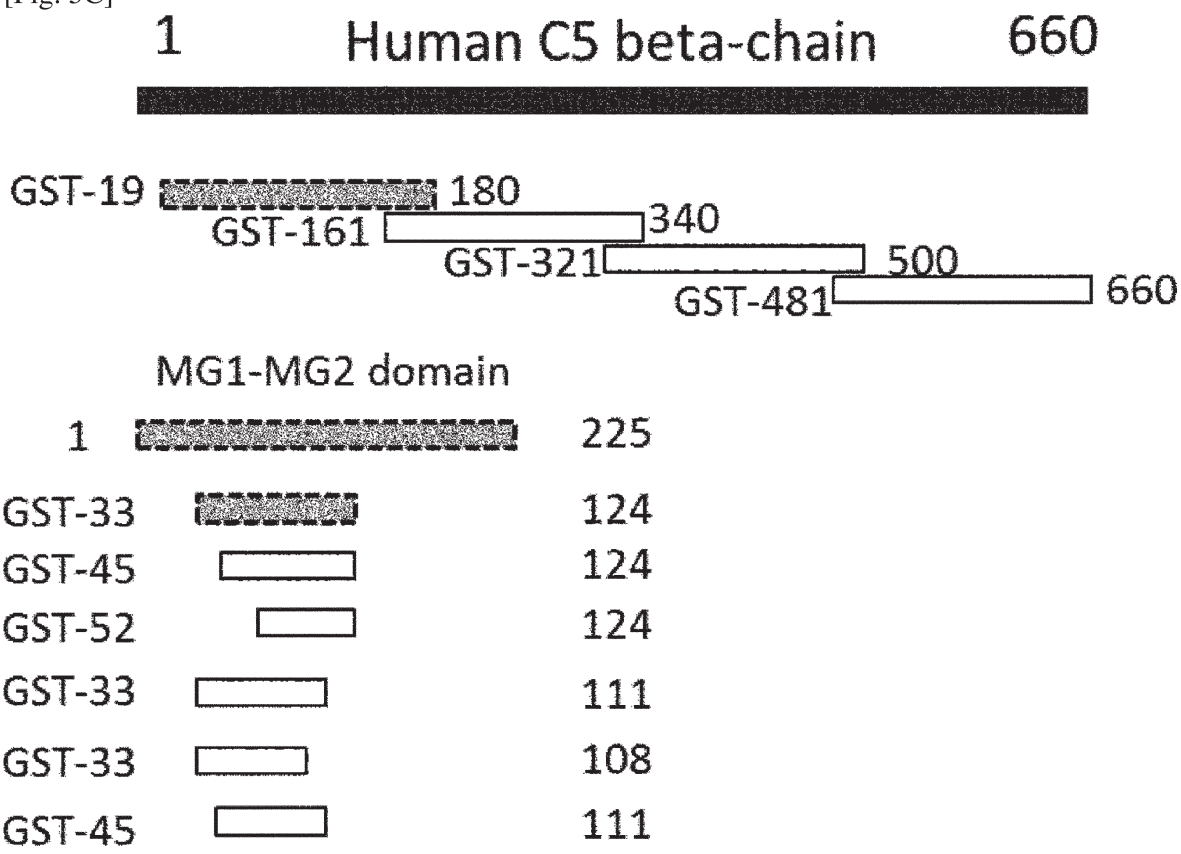
[Fig. 5A]


Anti-GST
Mock
Marker
33-124
45-124
52-124
33-111
33-108
45-111
Marker
rhC5 (0.5μg)
kDa
250
150
100
75
50
37
25
20
15

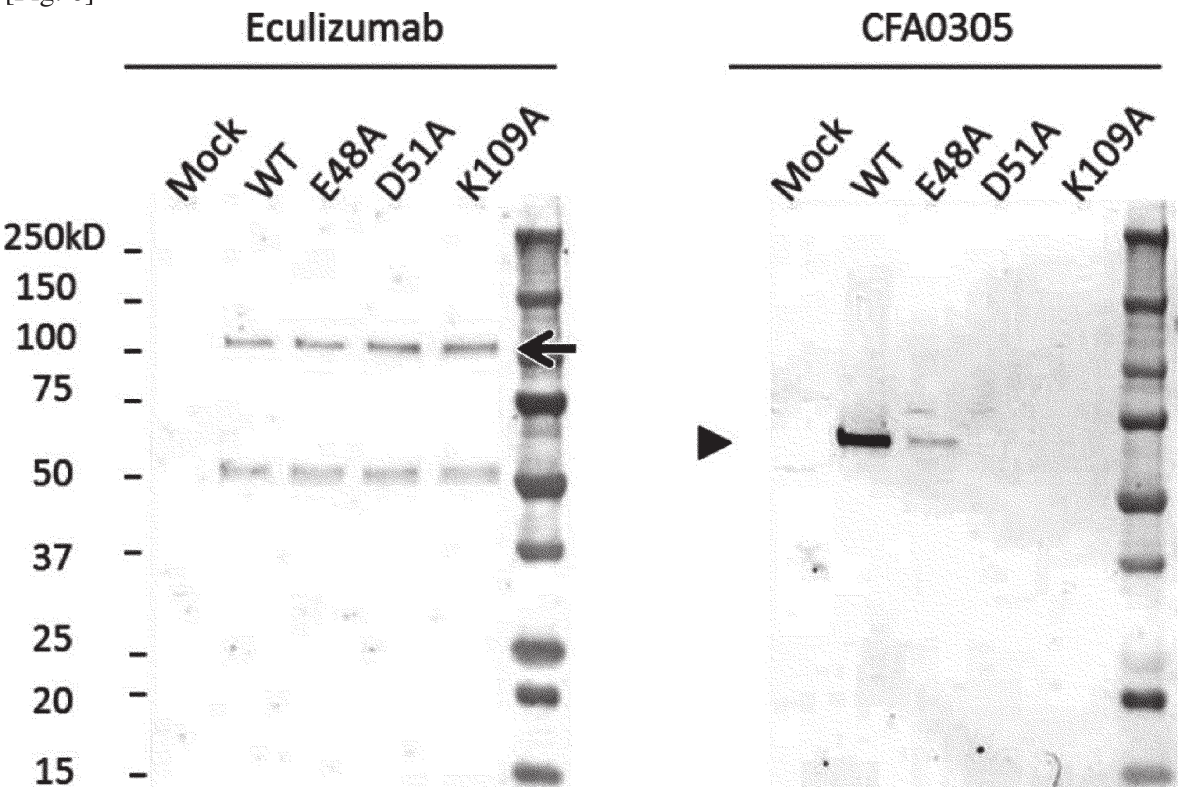
[Fig. 5B]


CFA0305
Mock
Marker
33-124
45-124
52-124
33-111
33-108
45-111
Marker
rhC5 (0.5μg)
kDa
250
150
100
75
50
37
25
20
15

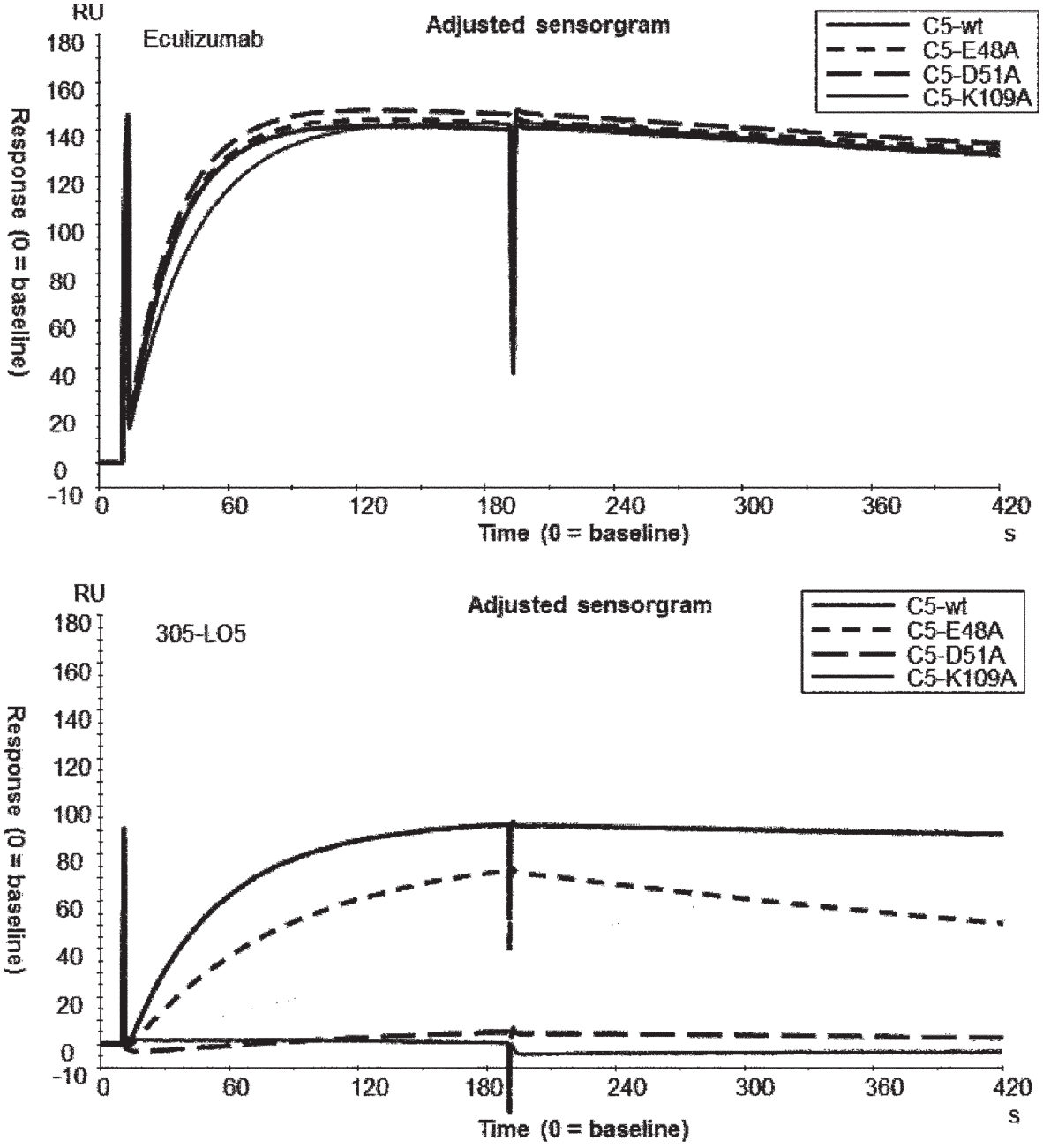
[Fig. 5C]


1
Human C5 beta-chain
660
GST-19
180
GST-161
340
GST-321
500
GST-481
660
MG1-MG2 domain
1
225
GST-33
124
GST-45
124
GST-52
124
GST-33
111
GST-33
108
GST-45
111

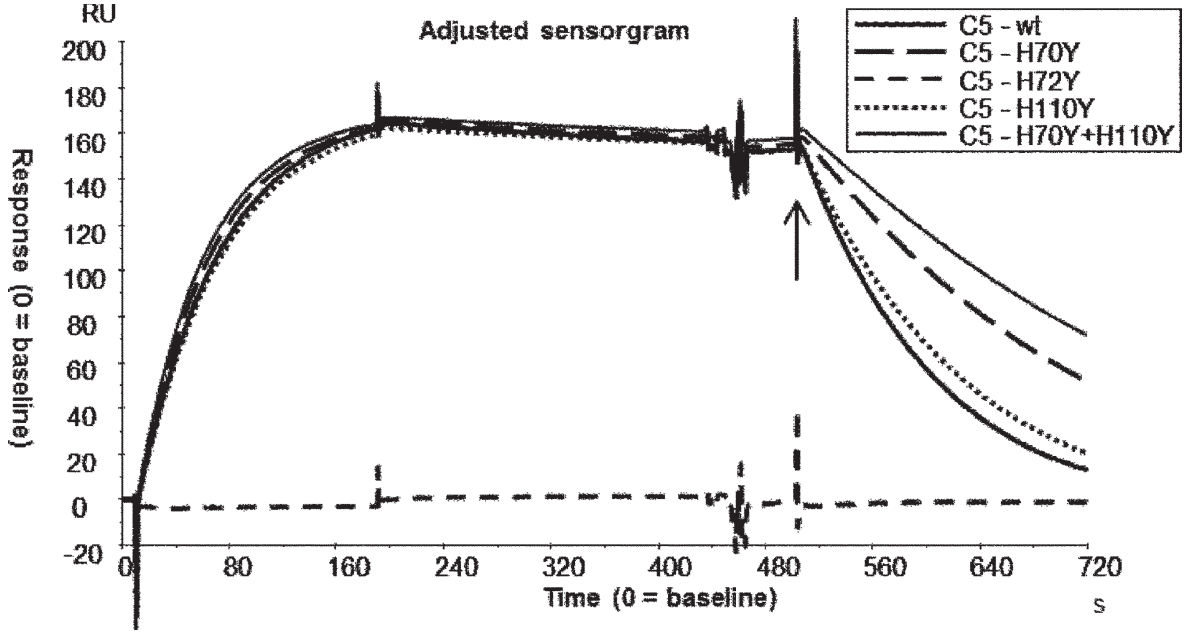
[Fig. 6]


Eculizumab
CFA0305
Mock
WT
E48A
D51A
K109A
250kD
150
100
75
50
37
25
20
15

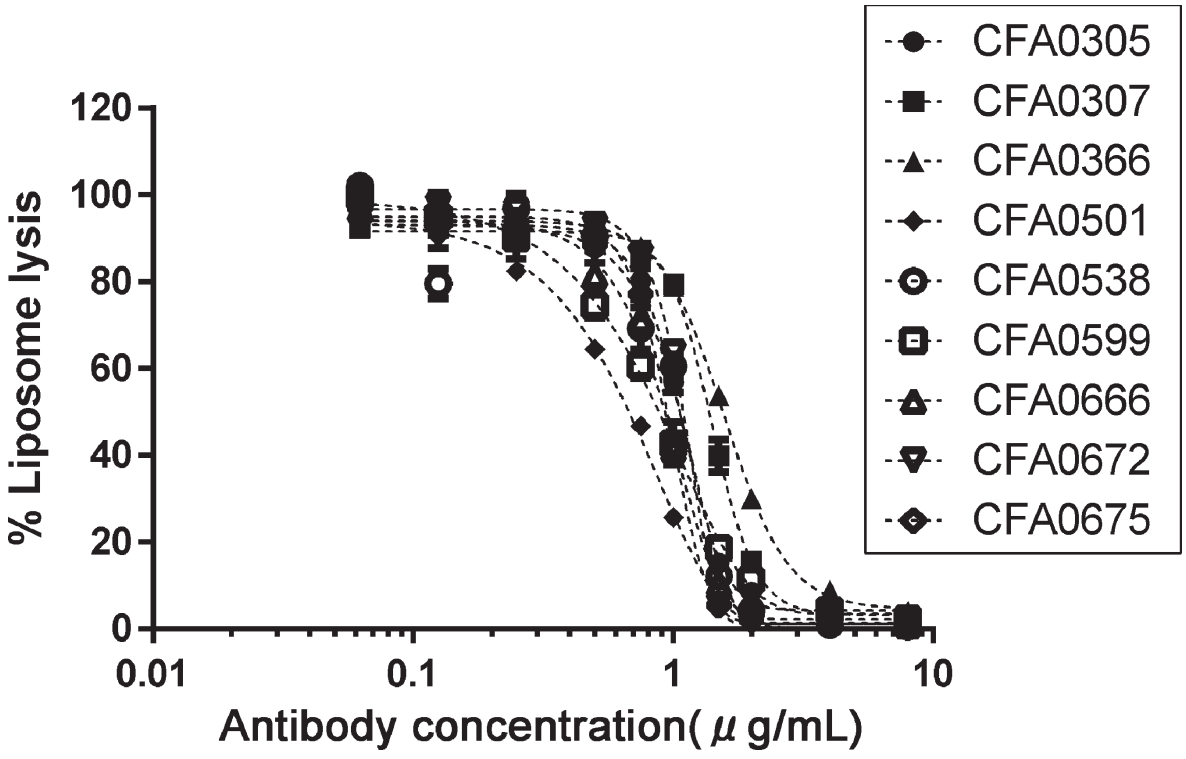
[Fig. 7]


RU
Eculizumab
Adjusted sensorgram
C5-wt
C5-E48A
C5-D51A
C5-K109A
Response (0 = baseline)
180
160
140
120
100
80
60
40
20
0
-10
0
60
120
180
240
300
360
420
Time (0 = baseline)
s
RU
305-LO5
Adjusted sensorgram
C5-wt
C5-E48A
C5-D51A
C5-K109A
Response (0 = baseline)
Time (0 = baseline)
s

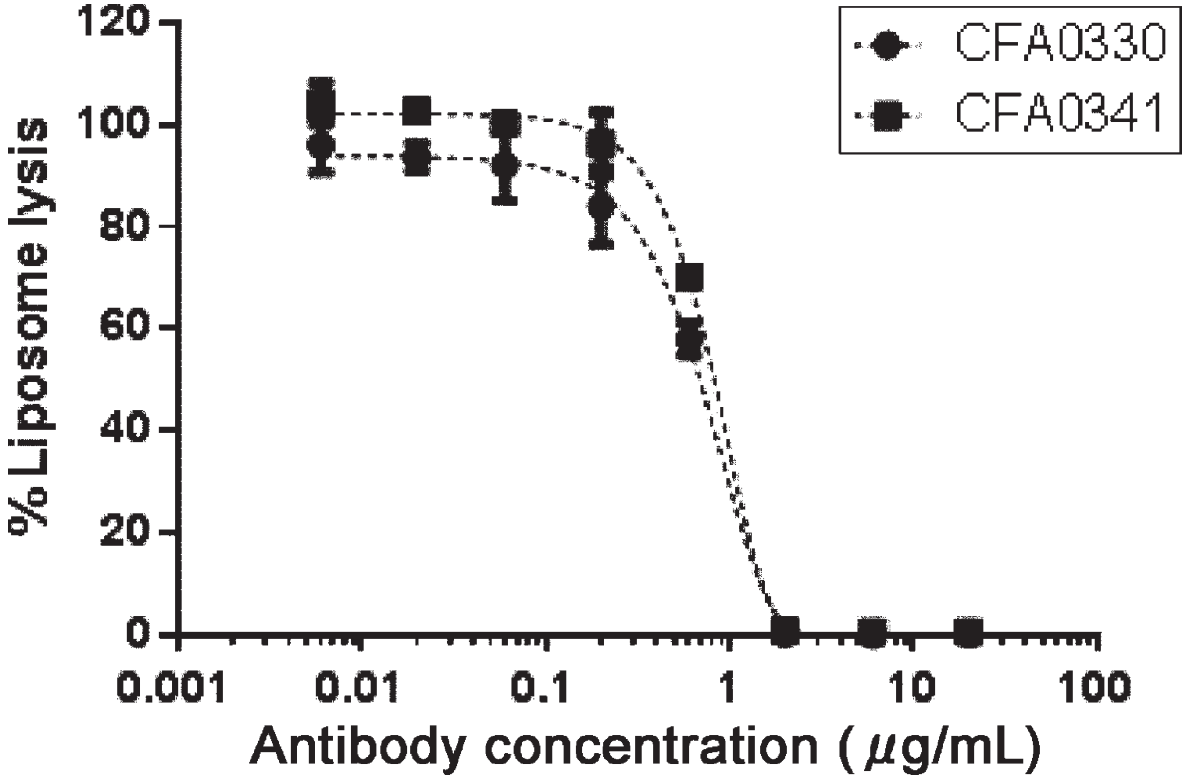
[Fig. 8]


RU
Adjusted sensorgram
C5 - wt
C5 - H70Y
C5 - H72Y
C5 - H110Y
C5 - H70Y+H110Y
Response (0 = baseline)
200
180
160
140
120
100
80
60
40
20
0
-20
0
80
160
240
320
400
480
560
640
720
Time (0 = baseline)
s

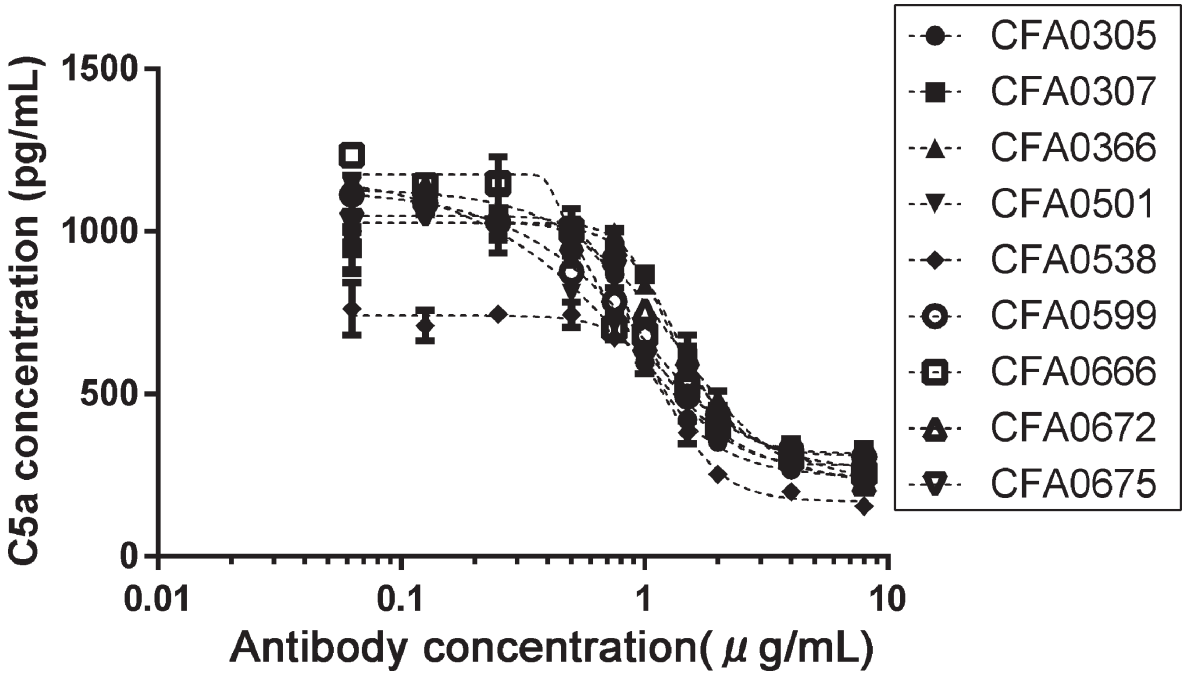
[Fig. 9A]


CFA0305
CFA0307
CFA0366
CFA0501
CFA0538
CFA0599
CFA0666
CFA0672
CFA0675
% Liposome lysis
120
100
80
60
40
20
0
0.01
0.1
1
10
Antibody concentration(μg/mL)

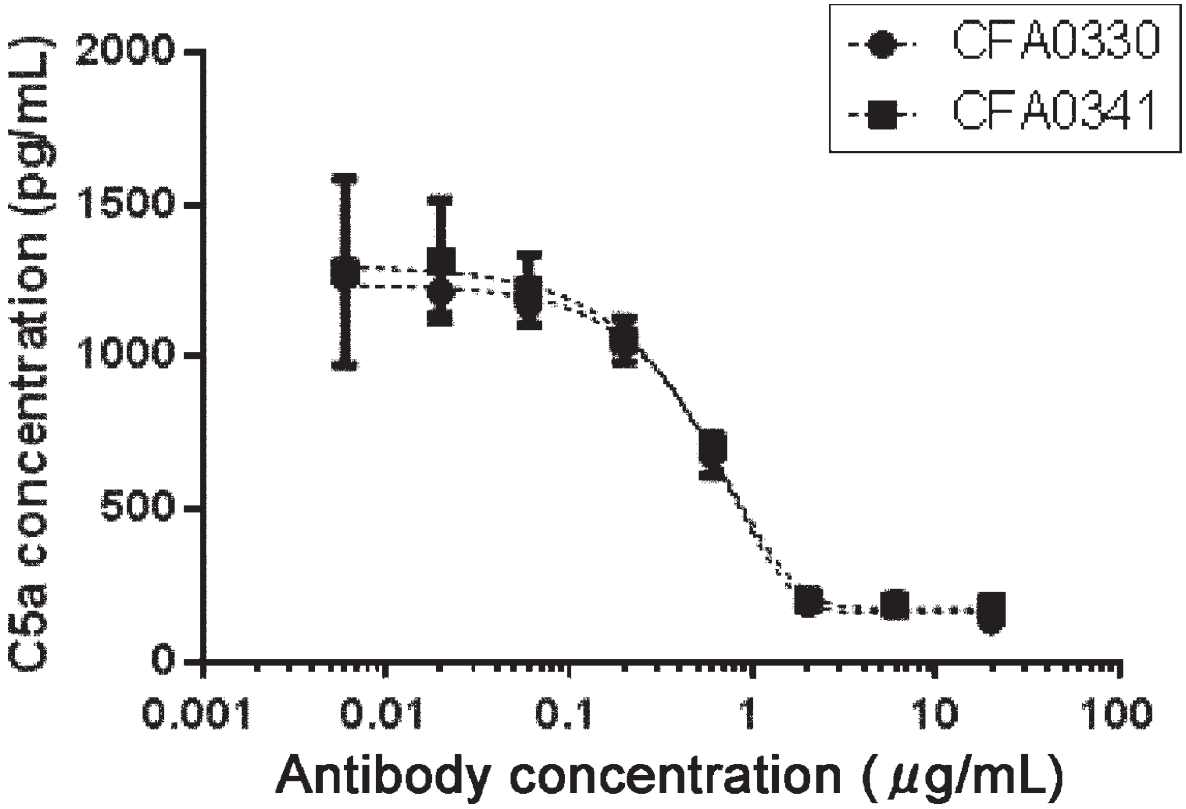
[Fig. 9B]



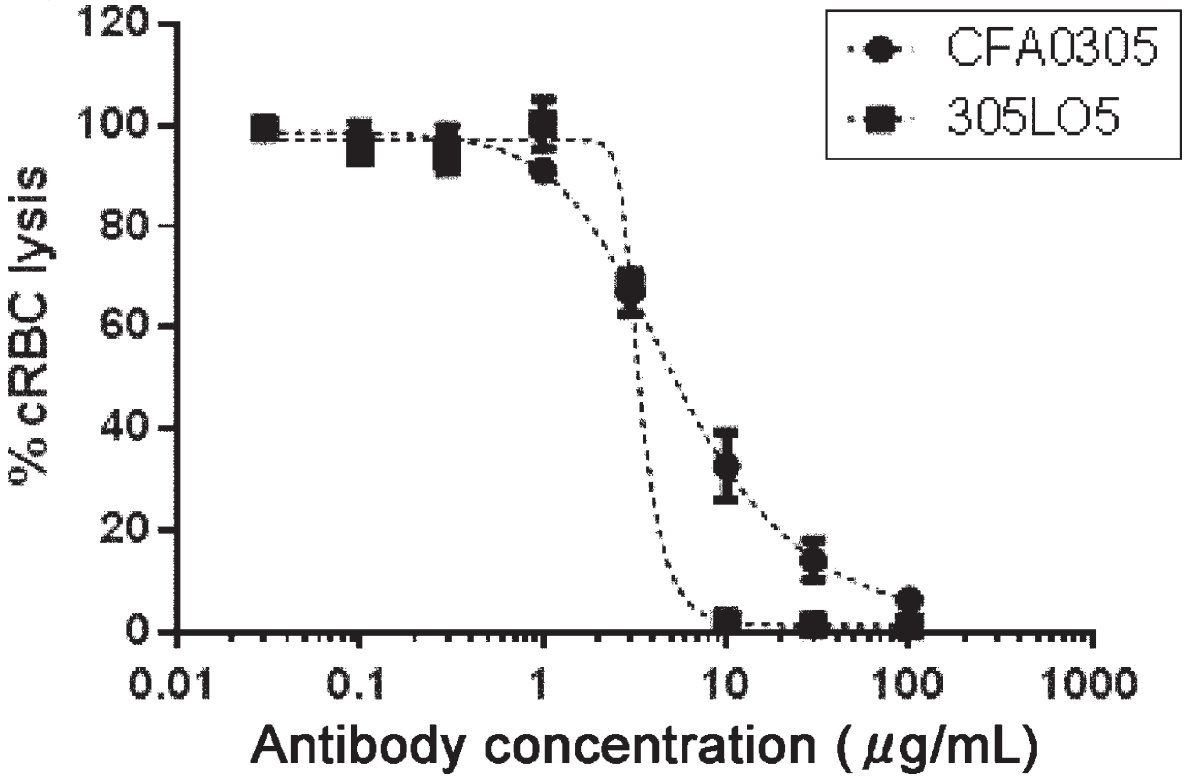
[Fig. 10A]



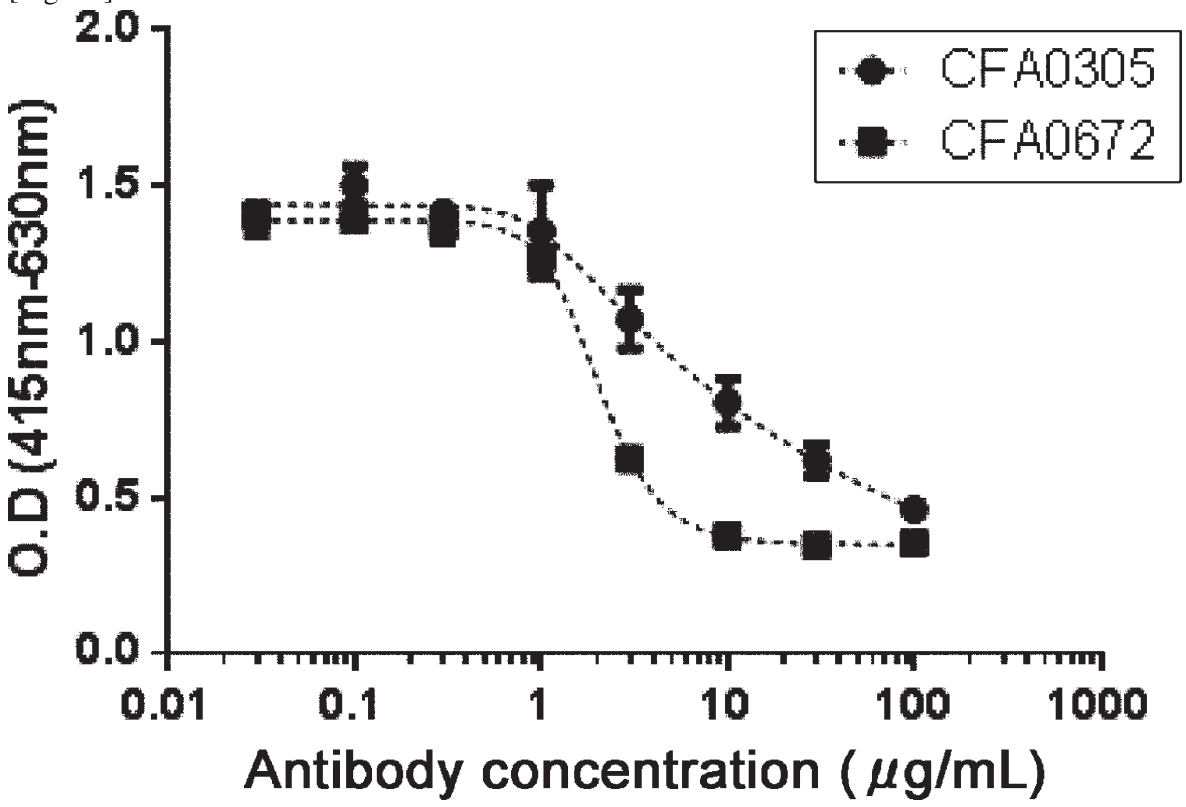
[Fig. 10B]



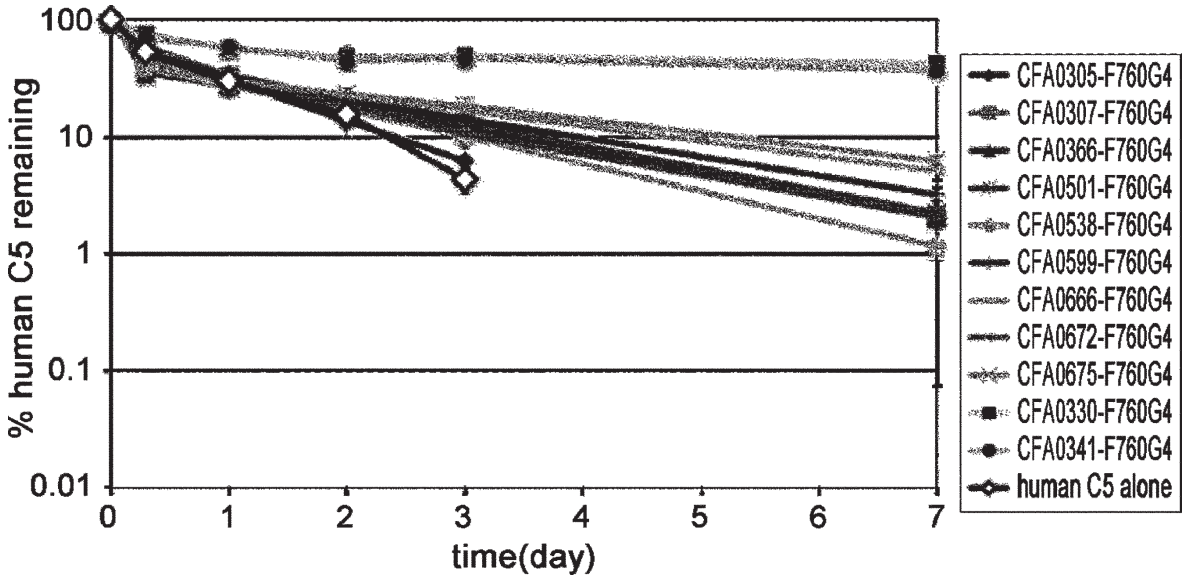
[Fig. 11]



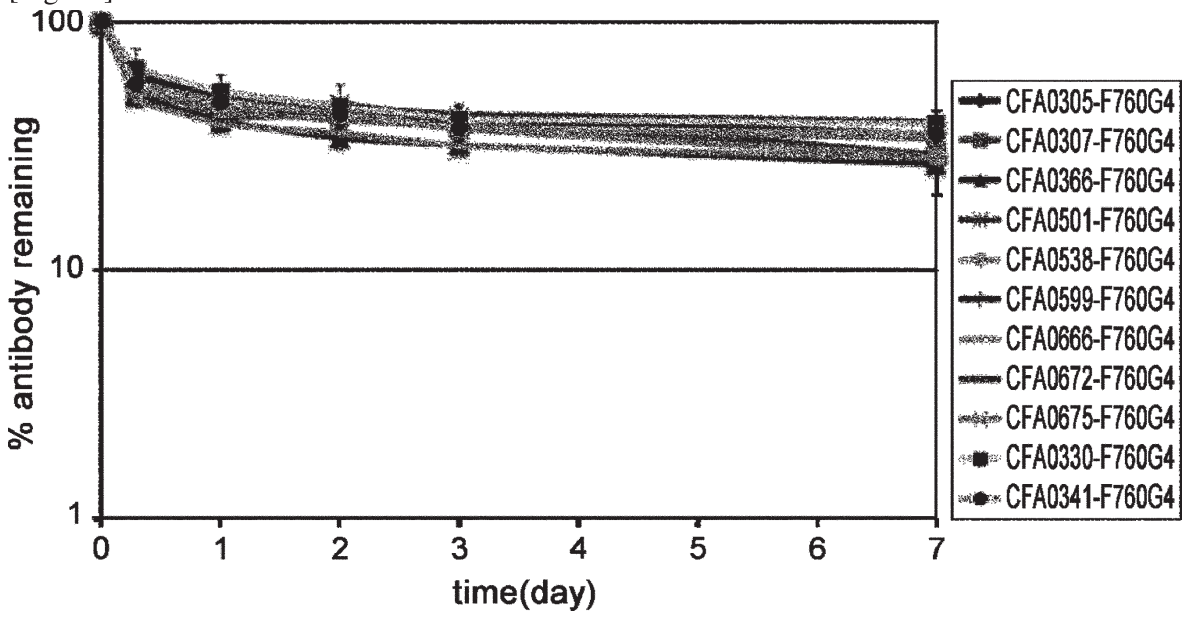
[Fig. 12]


CFA0305
CFA0672
O.D (415nm-630nm)
2.0
1.5
1.0
0.5
0.0
0.01
0.1
1
10
100
1000
Antibody concentration (μg/mL)

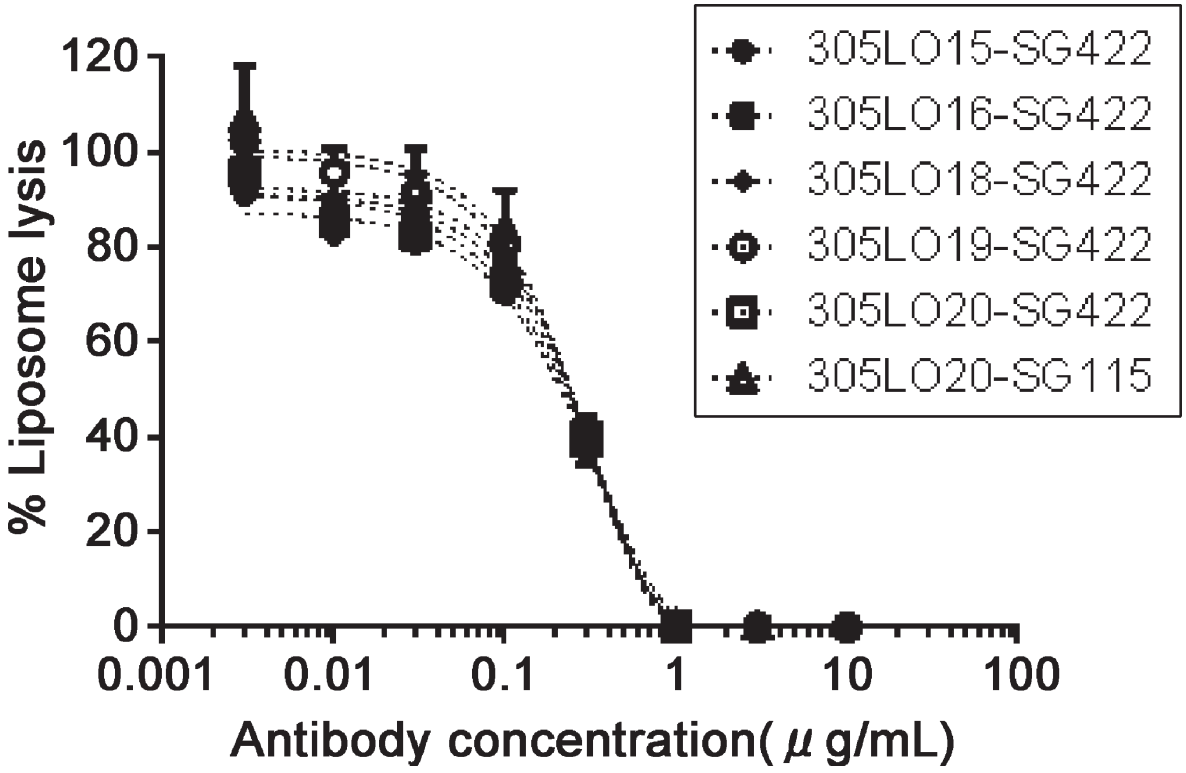
[Fig. 13]


% human C5 remaining
100
10
1
0.1
0.01
0
1
2
3
4
5
6
7
time(day)
CFA0305-F760G4
CFA0307-F760G4
CFA0366-F760G4
CFA0501-F760G4
CFA0538-F760G4
CFA0599-F760G4
CFA0666-F760G4
CFA0672-F760G4
CFA0675-F760G4
CFA0330-F760G4
CFA0341-F760G4
human C5 alone

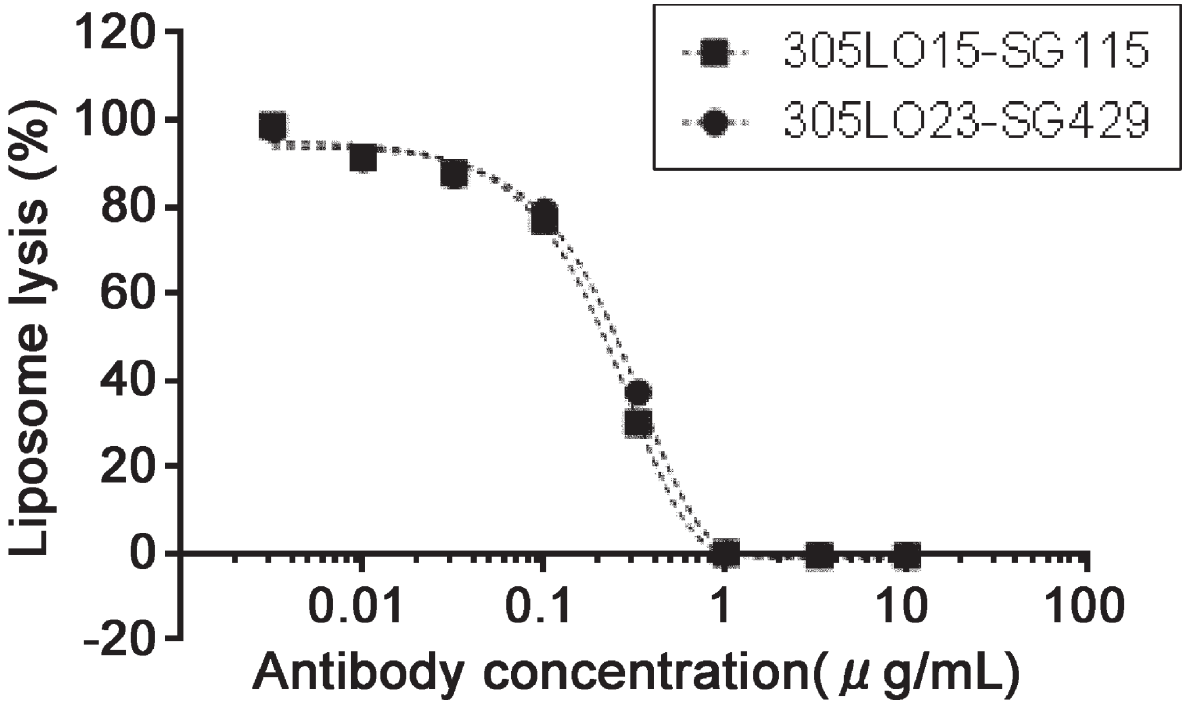
[Fig. 14]


100
10
1
% antibody remaining
0
1
2
3
4
5
6
7
time(day)
CFA0305-F760G4
CFA0307-F760G4
CFA0366-F760G4
CFA0501-F760G4
CFA0538-F760G4
CFA0599-F760G4
CFA0666-F760G4
CFA0672-F760G4
CFA0675-F760G4
CFA0330-F760G4
CFA0341-F760G4

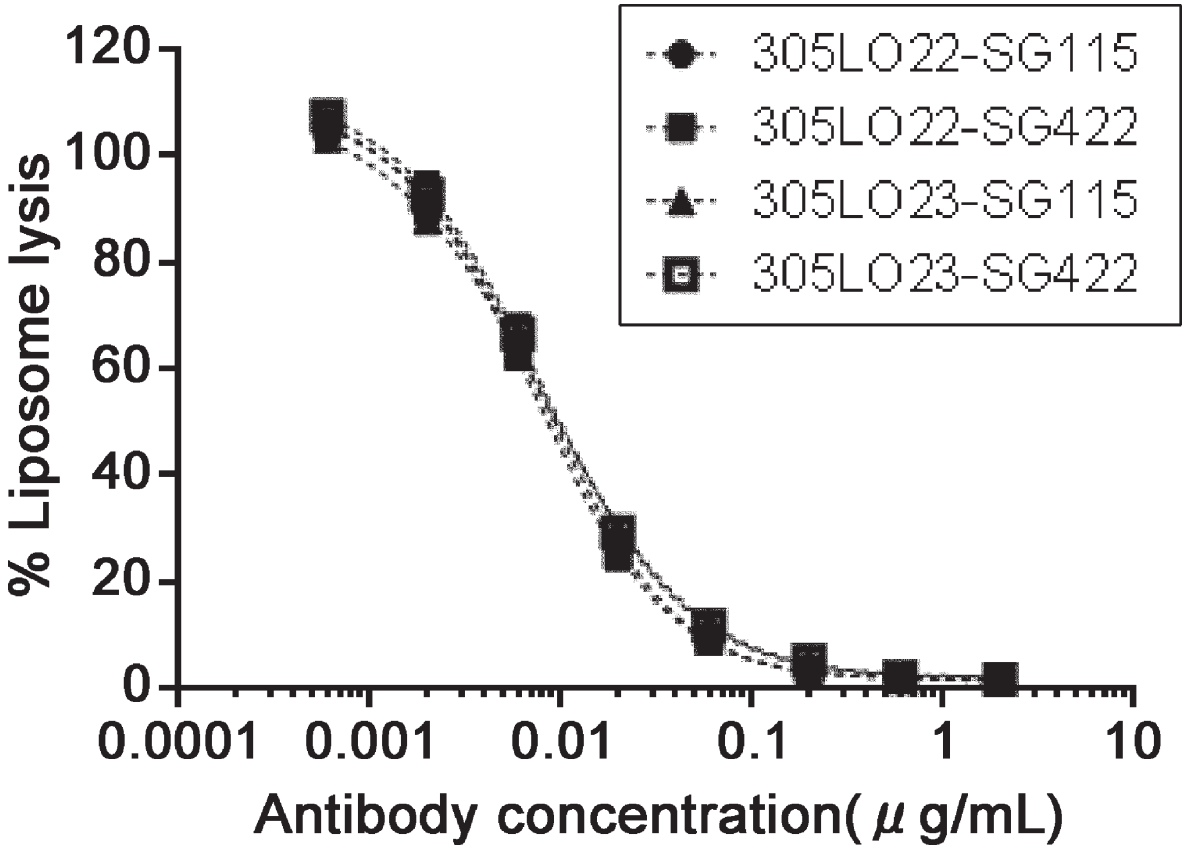
[Fig. 15]


120
100
80
60
40
20
0
% Liposome lysis
0.001
0.01
0.1
1
10
100
Antibody concentration(μ g/mL)
305LO15-SG422
305LO16-SG422
305LO18-SG422
305LO19-SG422
305LO20-SG422
305LO20-SG115

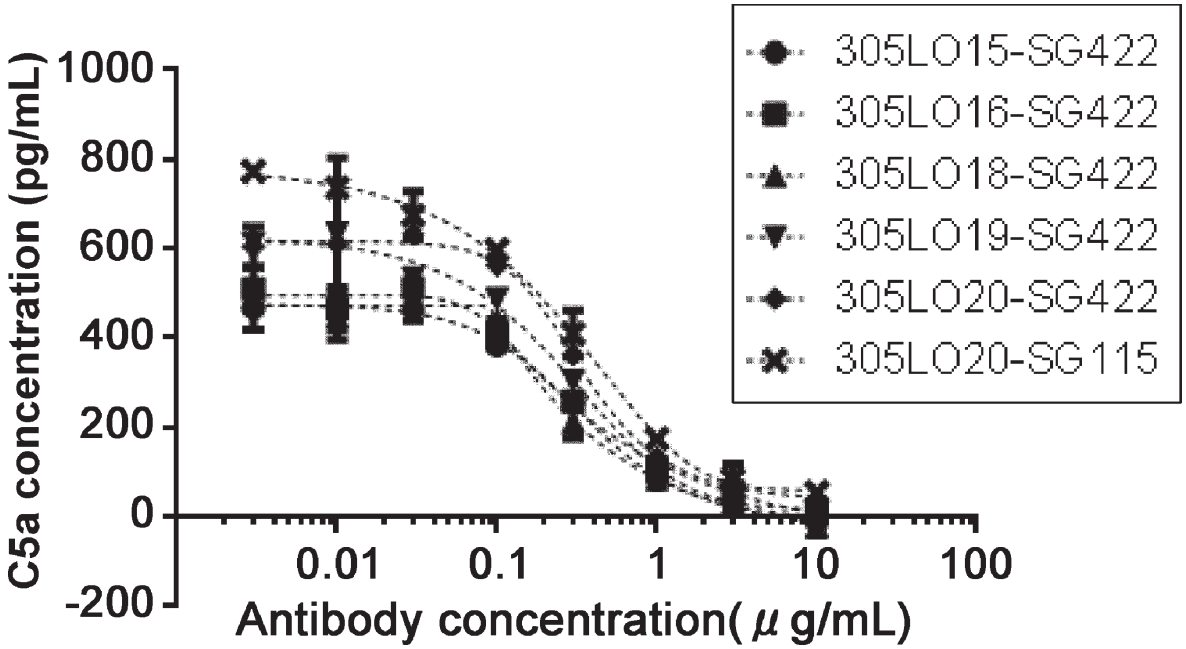
[Fig. 16]


305LO15-SG115
305LO23-SG429
Liposome lysis (%)
120
100
80
60
40
20
0
-20
0.01
0.1
1
10
100
Antibody concentration(μg/mL)

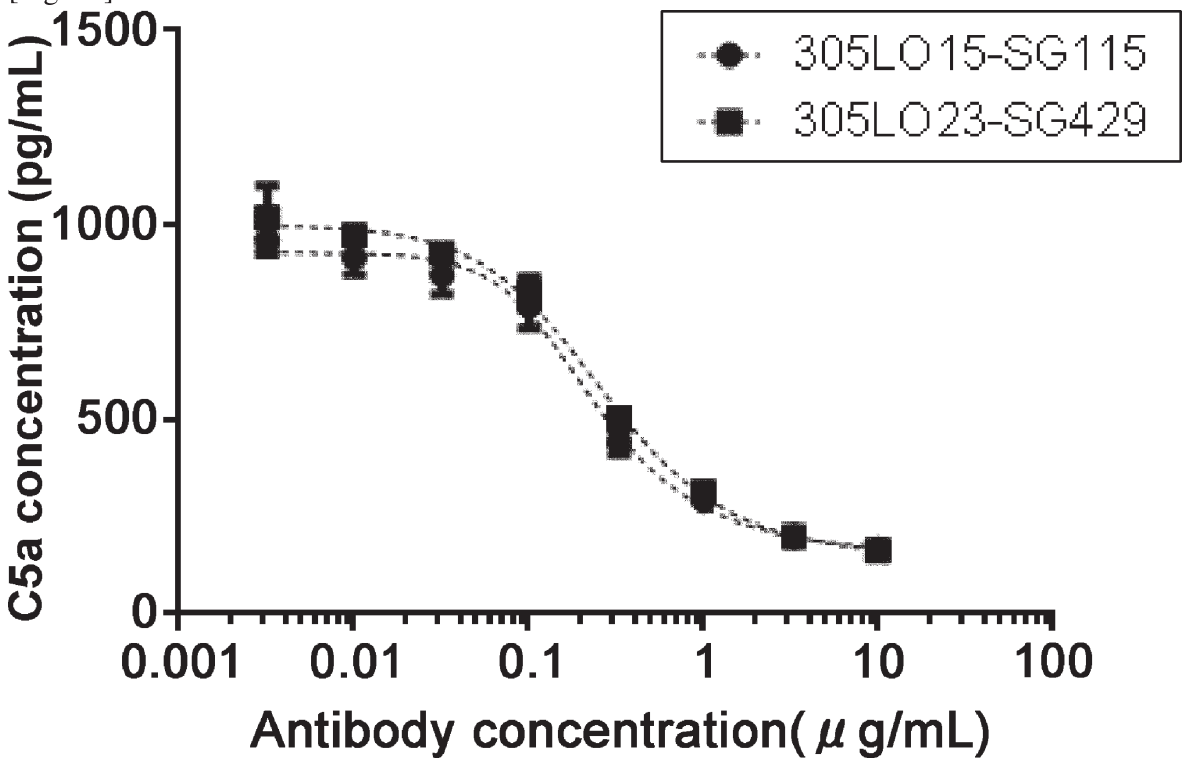
[Fig. 17]


305LO22-SG115
305LO22-SG422
305LO23-SG115
305LO23-SG422
% Liposome lysis
120
100
80
60
40
20
0
0.0001
0.001
0.01
0.1
1
10
Antibody concentration(μg/mL)

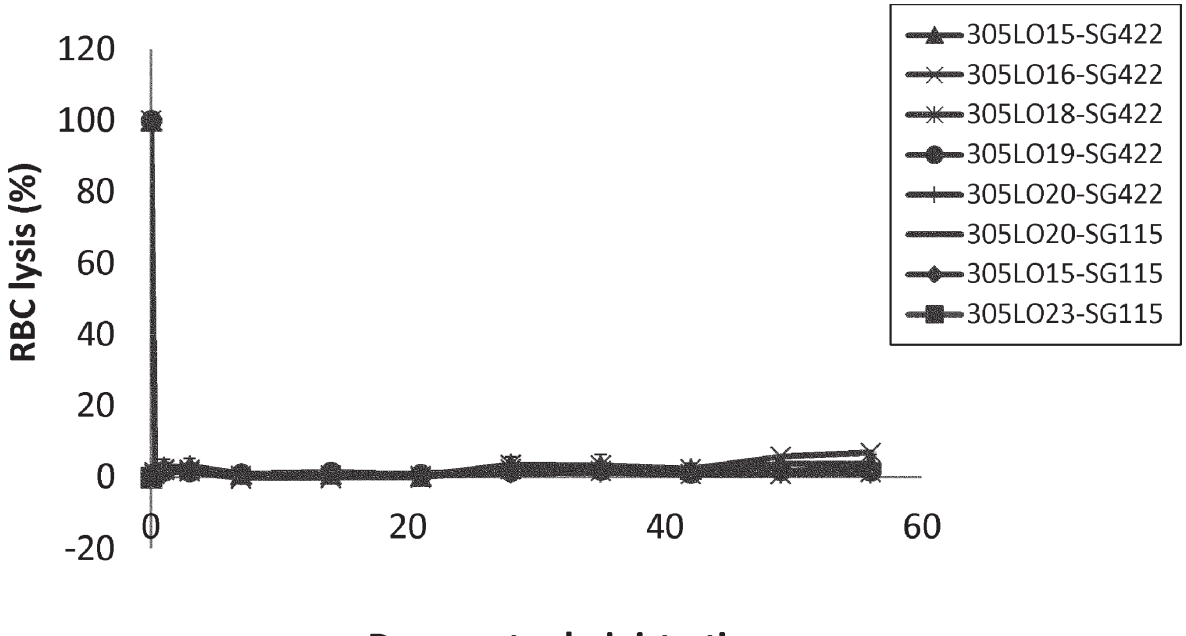
[Fig. 18]


305LO15-SG422
305LO16-SG422
305LO18-SG422
305LO19-SG422
305LO20-SG422
305LO20-SG115
C5a concentration (pg/mL)
1000
800
600
400
200
0
-200
0.01
0.1
1
10
100
Antibody concentration(μg/mL)

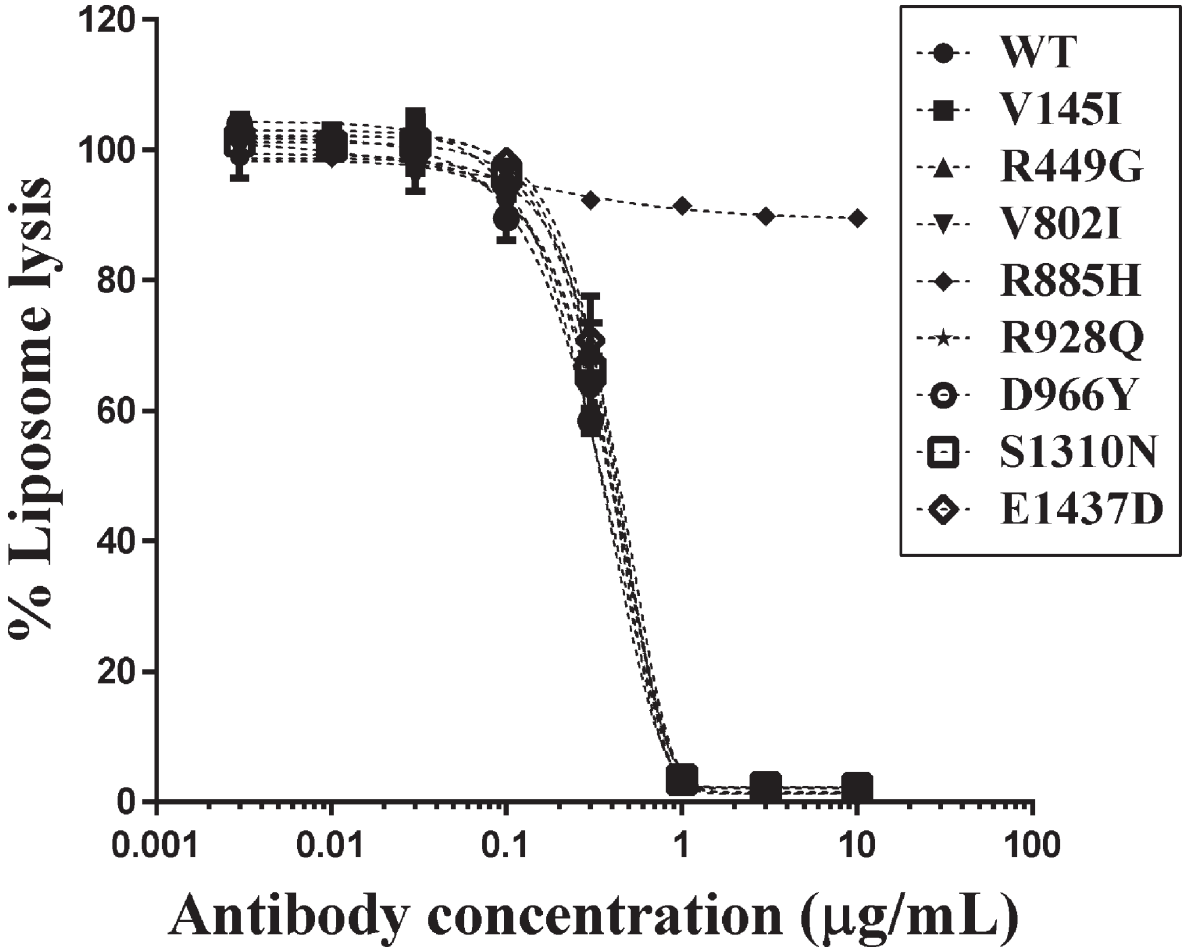
[Fig. 19]


305LO15-SG115
305LO23-SG429
C5a concentration (pg/mL)
1500
1000
500
0
0.001
0.01
0.1
1
10
100
Antibody concentration(μg/mL)

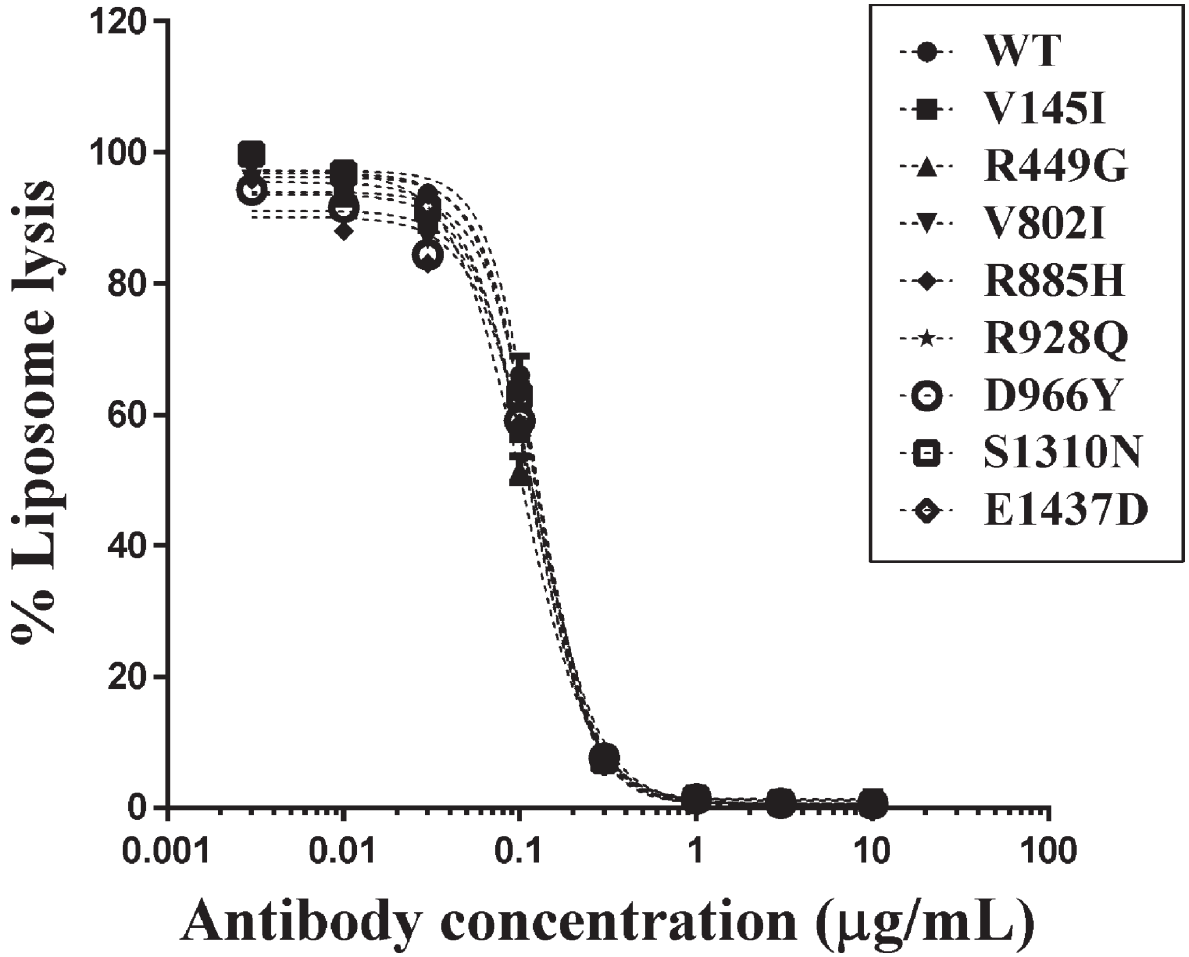
[Fig. 20]


120
100
80
60
40
20
0
-20
RBC lysis (%)
0
20
40
60
Days post-administration
305LO15-SG422
305LO16-SG422
305LO18-SG422
305LO19-SG422
305LO20-SG422
305LO20-SG115
305LO15-SG115
305LO23-SG115

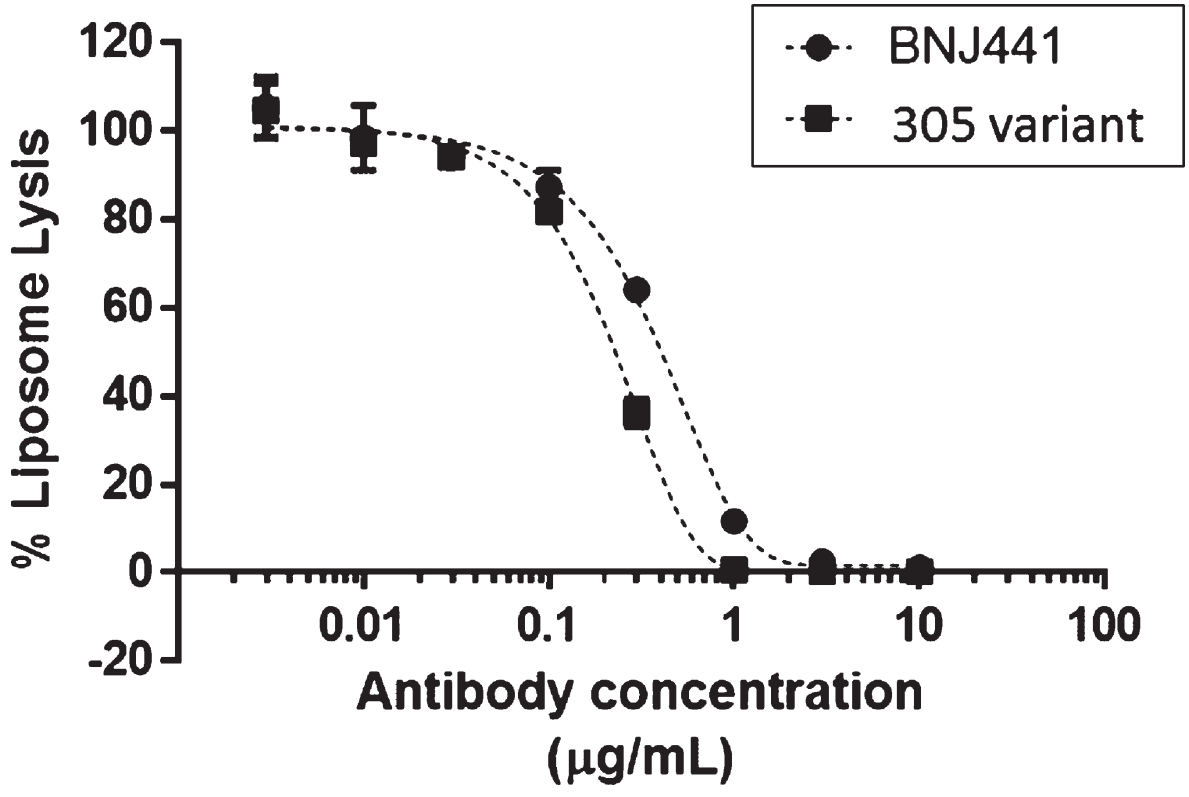
[Fig. 21]


120
100
80
60
40
20
0
% Liposome lysis
0.001
0.01
0.1
1
10
100
Antibody concentration (μg/mL)
WT
V145I
R449G
V802I
R885H
R928Q
D966Y
S1310N
E1437D

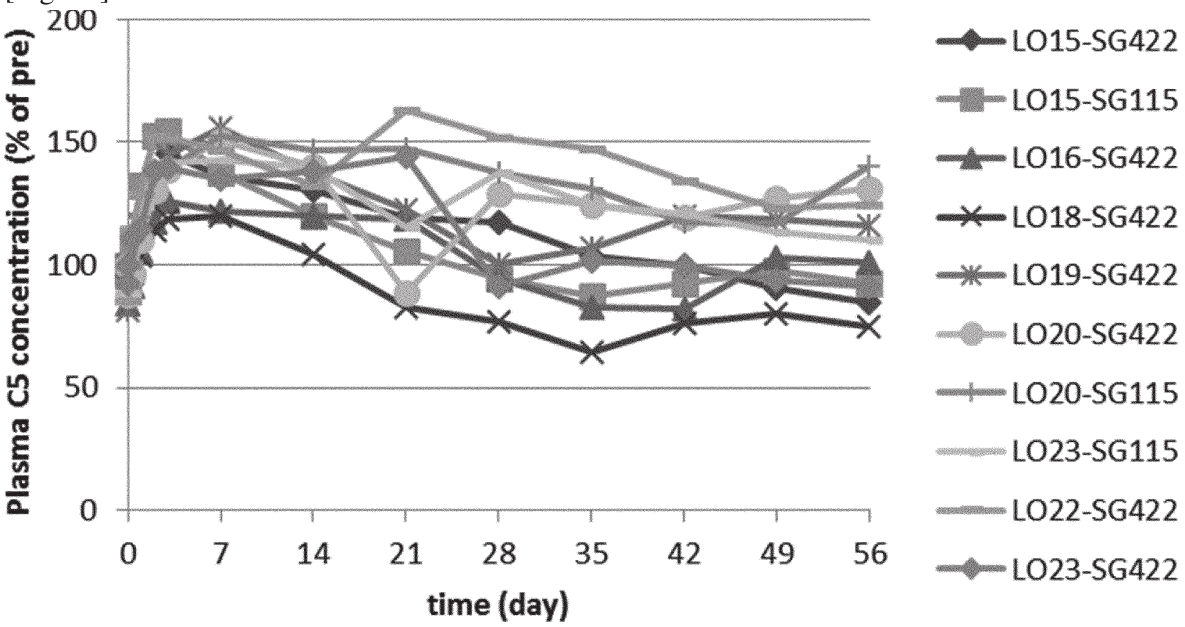
[Fig. 22]


% Liposome lysis
120
100
80
60
40
20
0
0.001
0.01
0.1
1
10
100
Antibody concentration (μg/mL)
WT
V145I
R449G
V802I
R885H
R928Q
D966Y
S1310N
E1437D

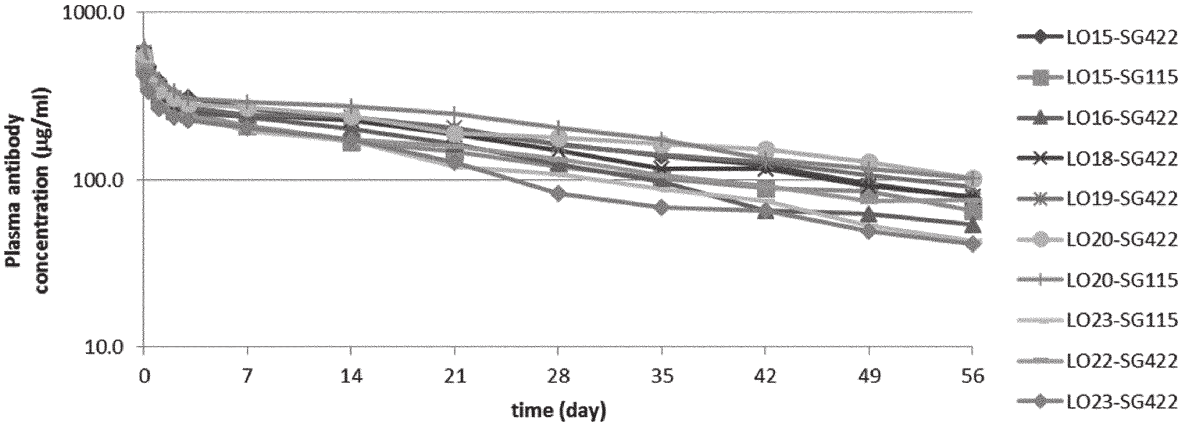
[Fig. 23]


% Liposome Lysis
120
100
80
60
40
20
0
-20
0.01
0.1
1
10
100
Antibody concentration
(μg/mL)
BNJ441
305 variant

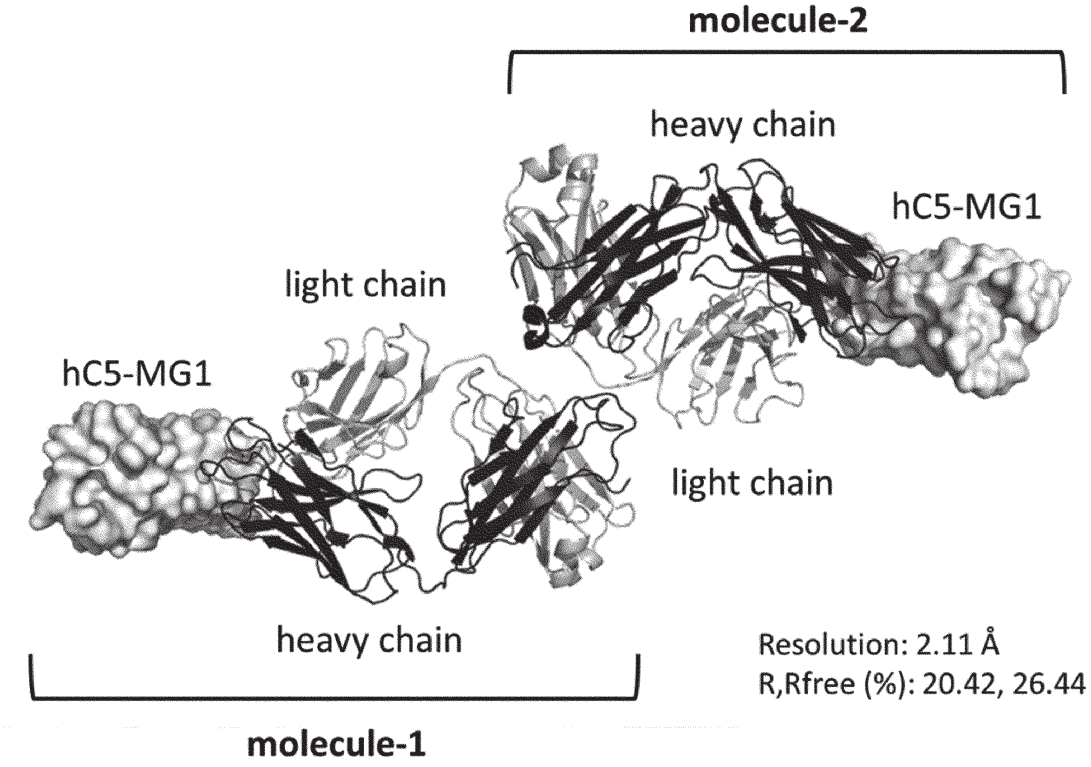
[Fig. 24]


Plasma C5 concentration (% of pre)
200
150
100
50
0
0
7
14
21
28
35
42
49
56
time (day)
LO15-SG422
LO15-SG115
LO16-SG422
LO18-SG422
LO19-SG422
LO20-SG422
LO20-SG115
LO23-SG115
LO22-SG422
LO23-SG422

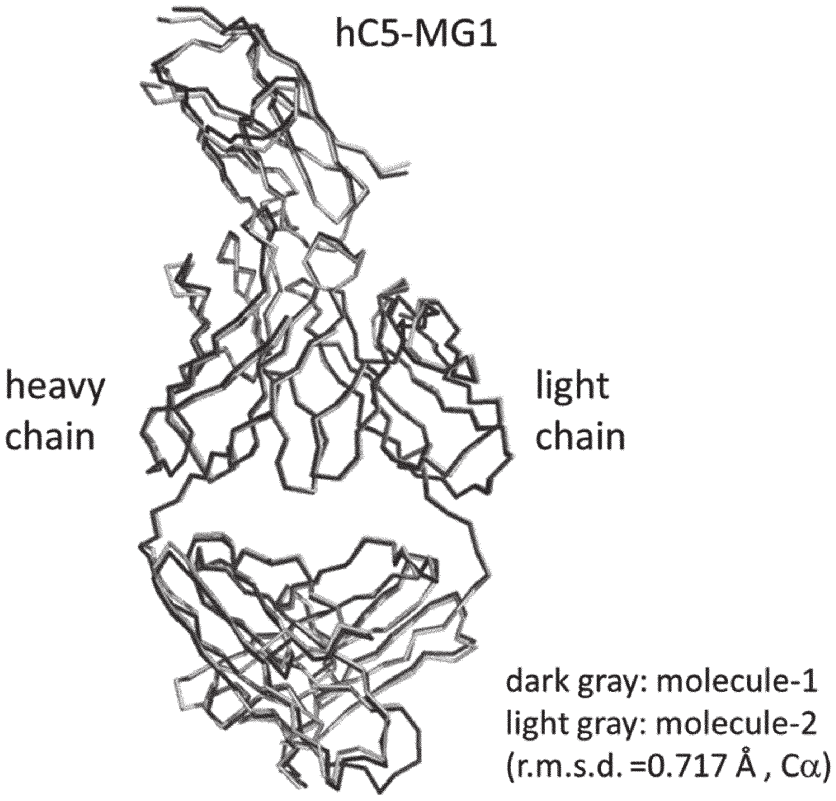
[Fig. 25]


Plasma antibody concentration (μg/ml)
1000.0
100.0
10.0
0
7
14
21
28
35
42
49
56
time (day)
LO15-SG422
LO15-SG115
LO16-SG422
LO18-SG422
LO19-SG422
LO20-SG422
LO20-SG115
LO23-SG115
LO22-SG422
LO23-SG422

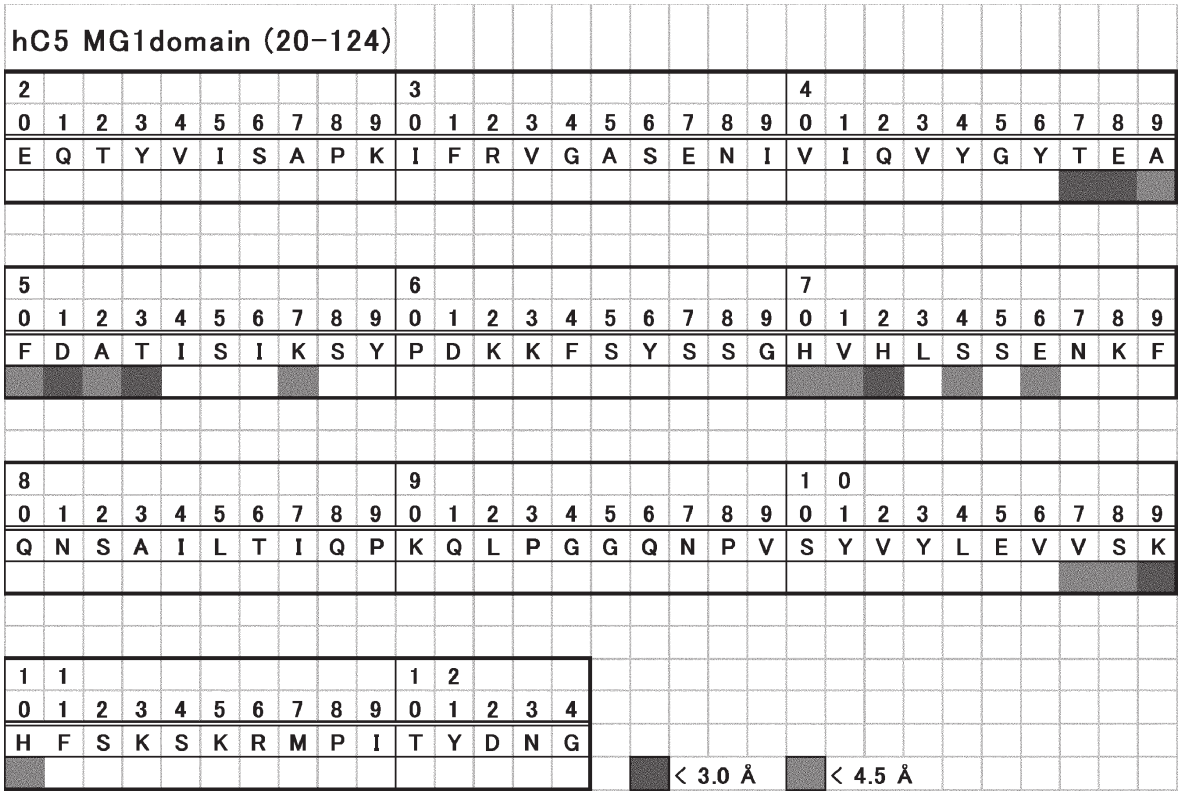
[Fig. 26]
A)


molecule-2
heavy chain
hC5-MG1
light chain
hC5-MG1
light chain
heavy chain
molecule-1
Resolution: 2.11 Å
R,Rfree (%): 20.42, 26.44

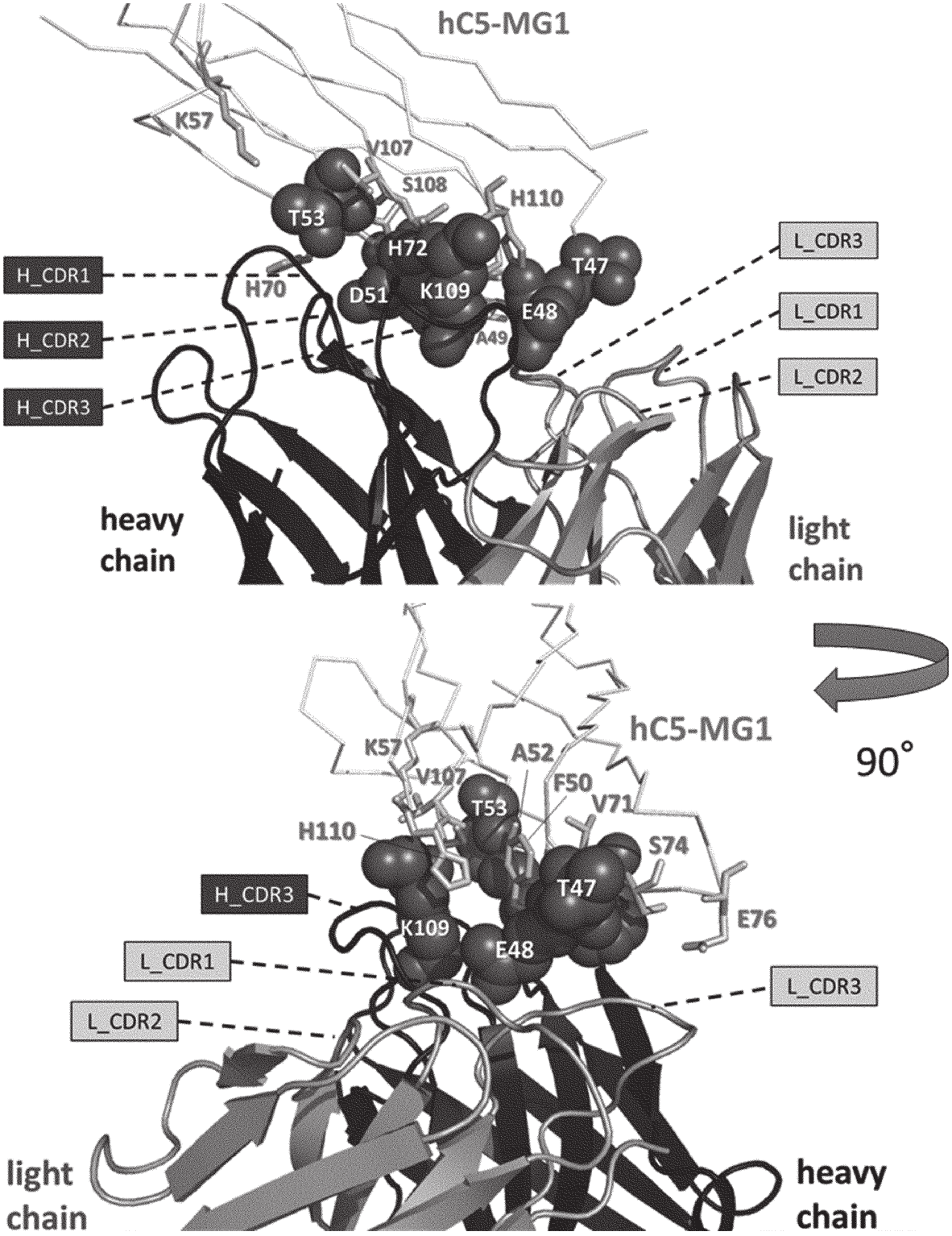
B)


hC5-MG1
heavy chain
light chain
dark gray: molecule-1
light gray: molecule-2
(r.m.s.d. =0.717 Å , Cα)

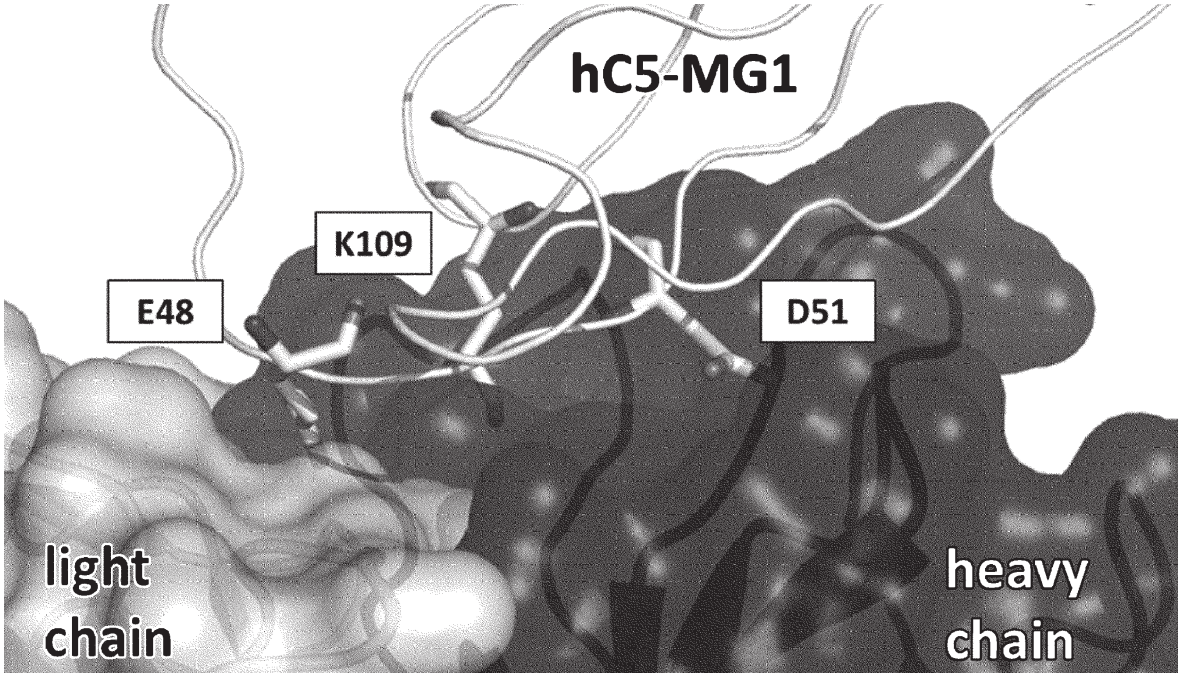
[Fig. 27A]


hC5 MG1domain (20-124)
2 0 1 2 3 4 5 6 7 8 9
E Q T Y V I S A P K
3 0 1 2 3 4 5 6 7 8 9
I F R V G A S E N I
4 0 1 2 3 4 5 6 7 8 9
V I Q V Y G Y T E A
5 0 1 2 3 4 5 6 7 8 9
F D A T I S I K S Y
6 0 1 2 3 4 5 6 7 8 9
P D K K F S Y S S G
7 0 1 2 3 4 5 6 7 8 9
H V H L S S E N K F
8 0 1 2 3 4 5 6 7 8 9
Q N S A I L T I Q P
9 0 1 2 3 4 5 6 7 8 9
K Q L P G G Q N P V
10 0 1 2 3 4 5 6 7 8 9
S Y V Y L E V V S K
11 0 1 2 3 4 5 6 7 8 9
H F S K S K R M P I
12 0 1 2 3 4
T Y D N G
< 3.0 Å
< 4.5 Å

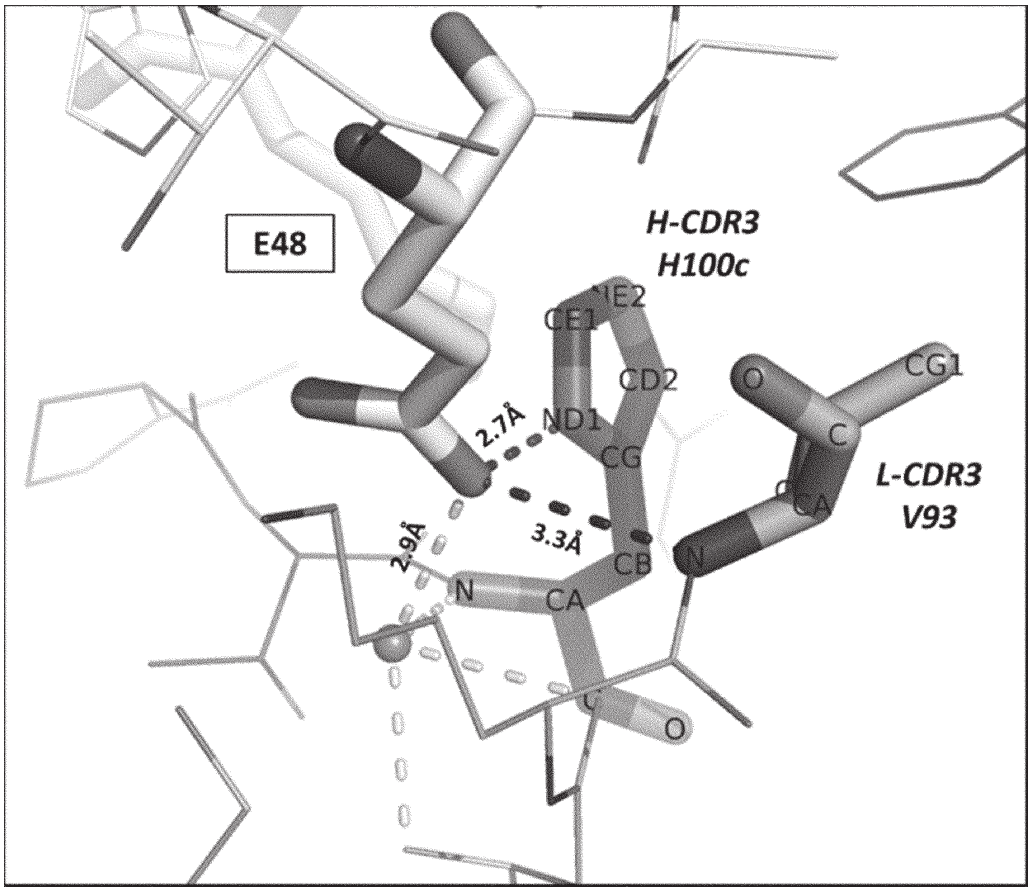
[Fig. 27B]


hC5-MG1
K57
V107
S108
H110
T53
H72
T47
H_CDR1
H70
D51
K109
L_CDR3
L_CDR1
H_CDR2
E48
A49
L_CDR2
H_CDR3
heavy chain
light chain
hC5-MG1
90°
K57
A52
V107
F50
T53
V71
H110
S74
H_CDR3
T47
E76
K109
E48
L_CDR1
L_CDR3
L_CDR2
light chain
heavy chain

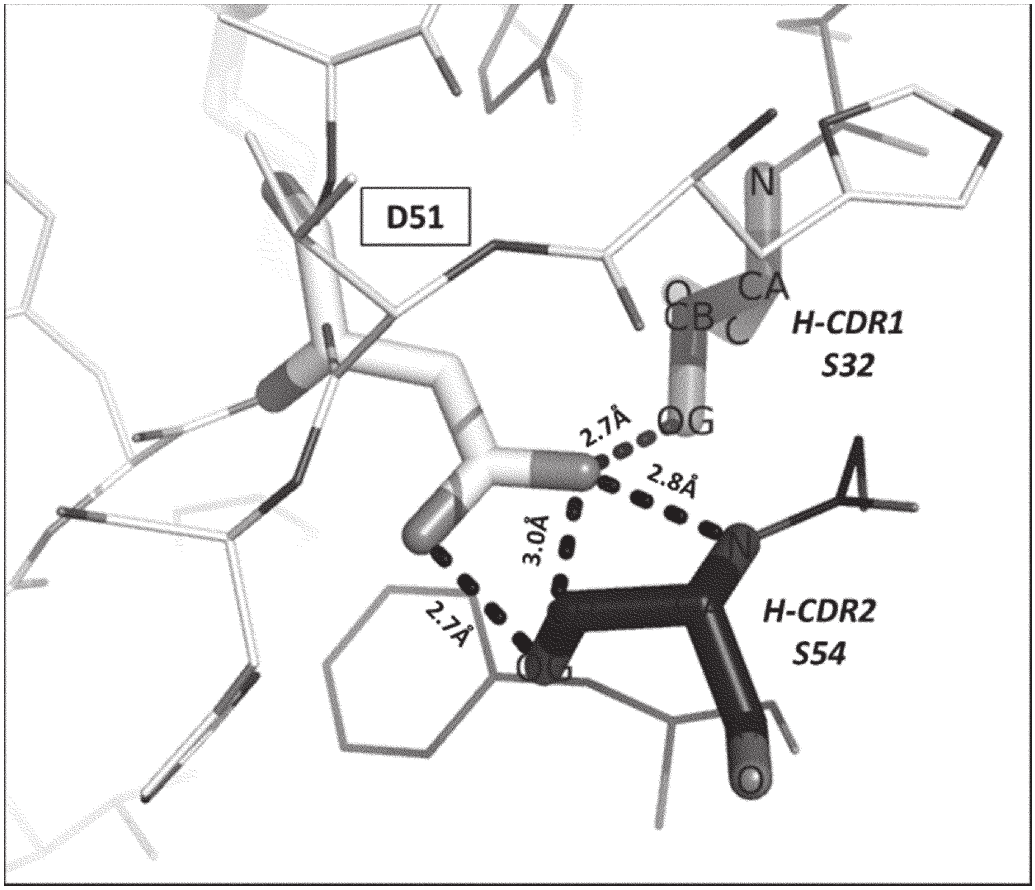
[Fig. 28A]



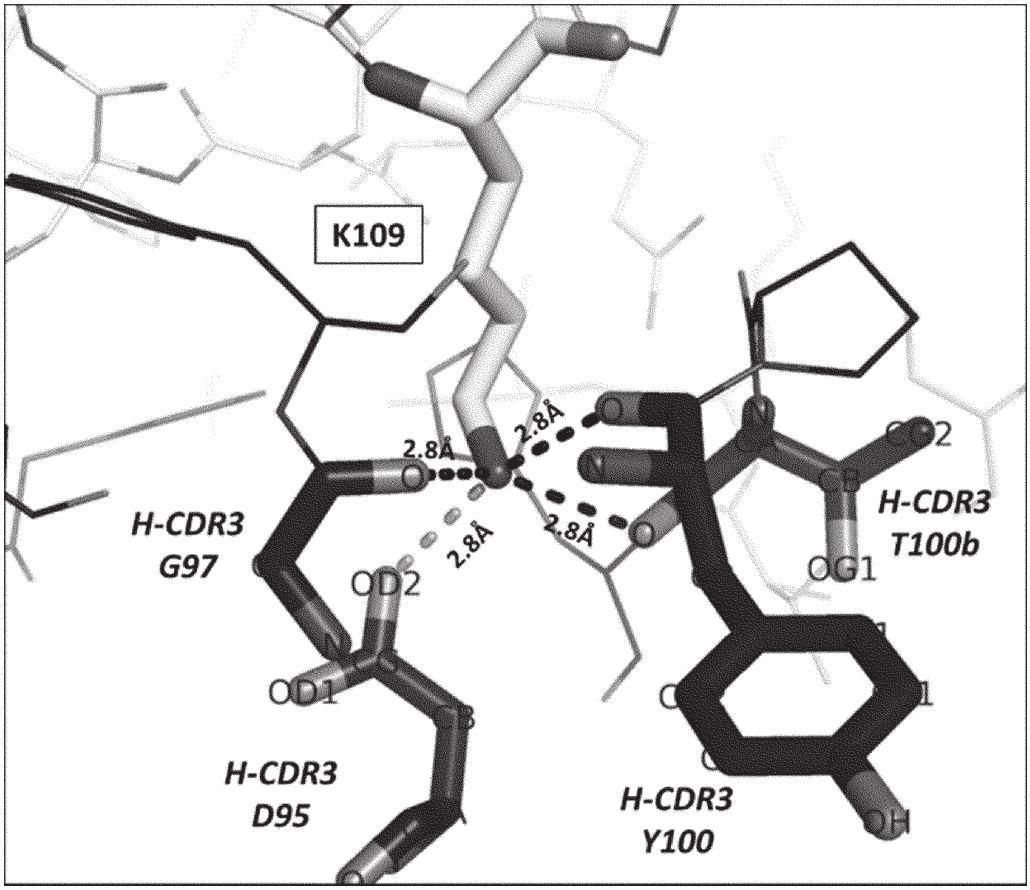
[Fig. 28B]



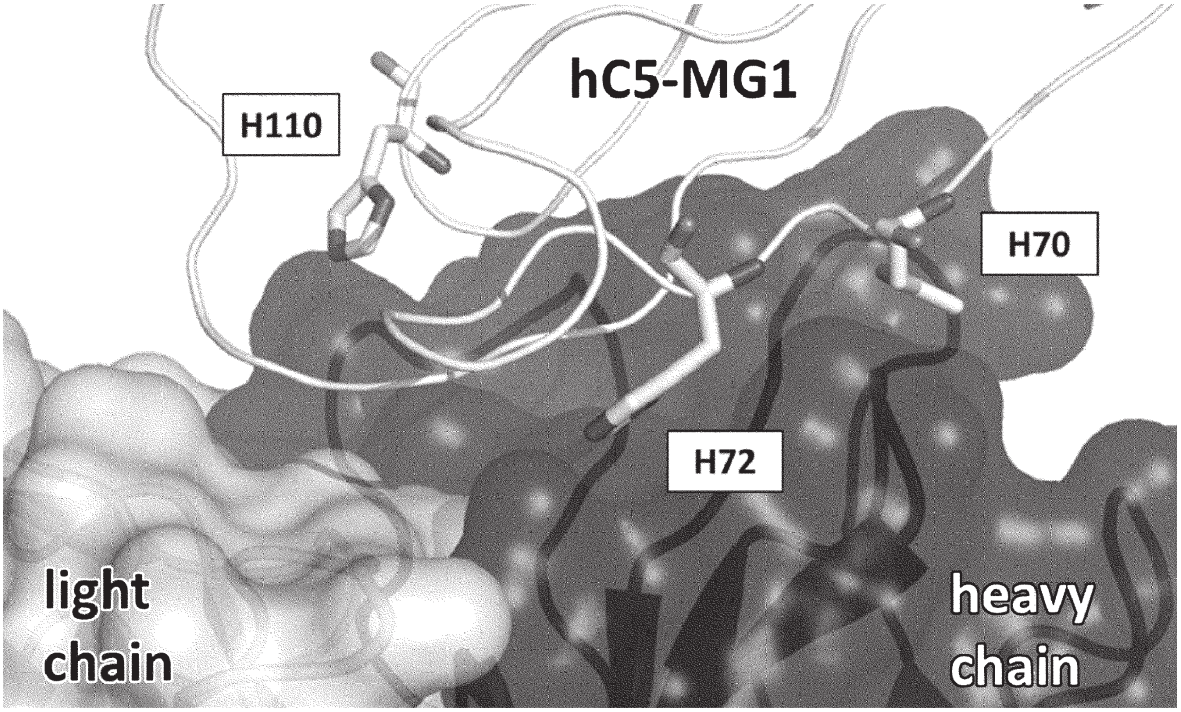
[Fig. 28C]



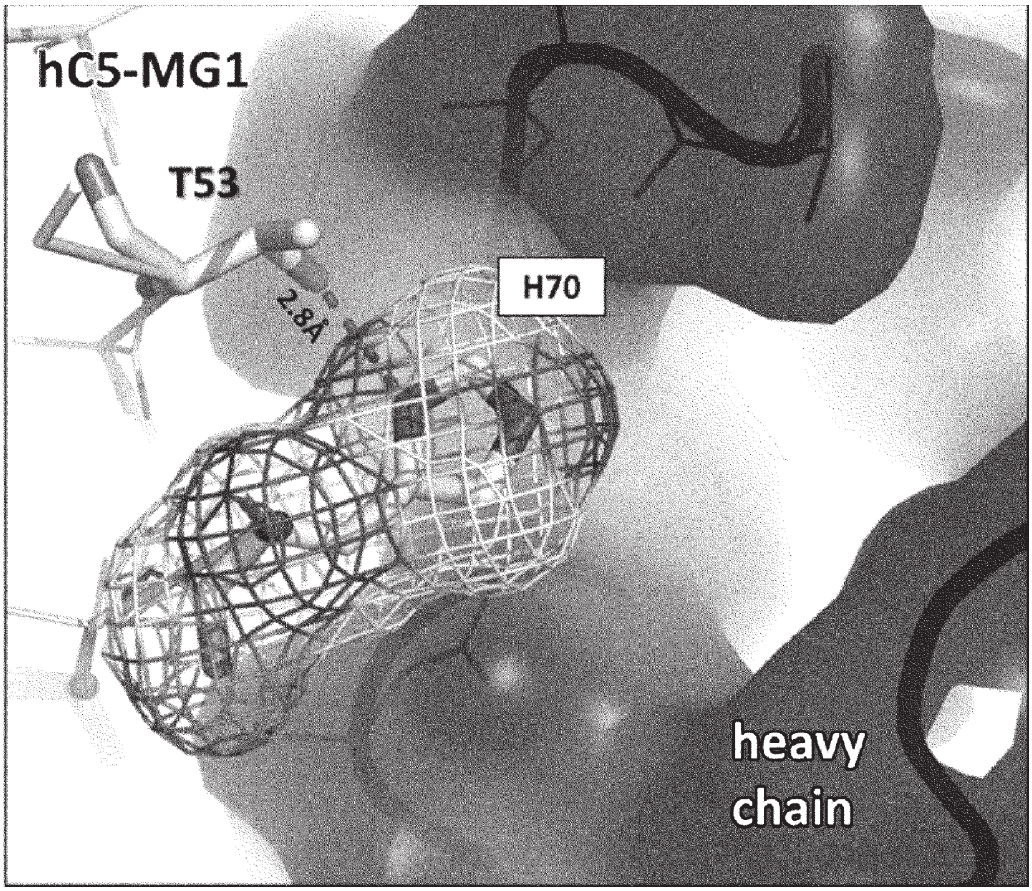
[Fig. 28D]



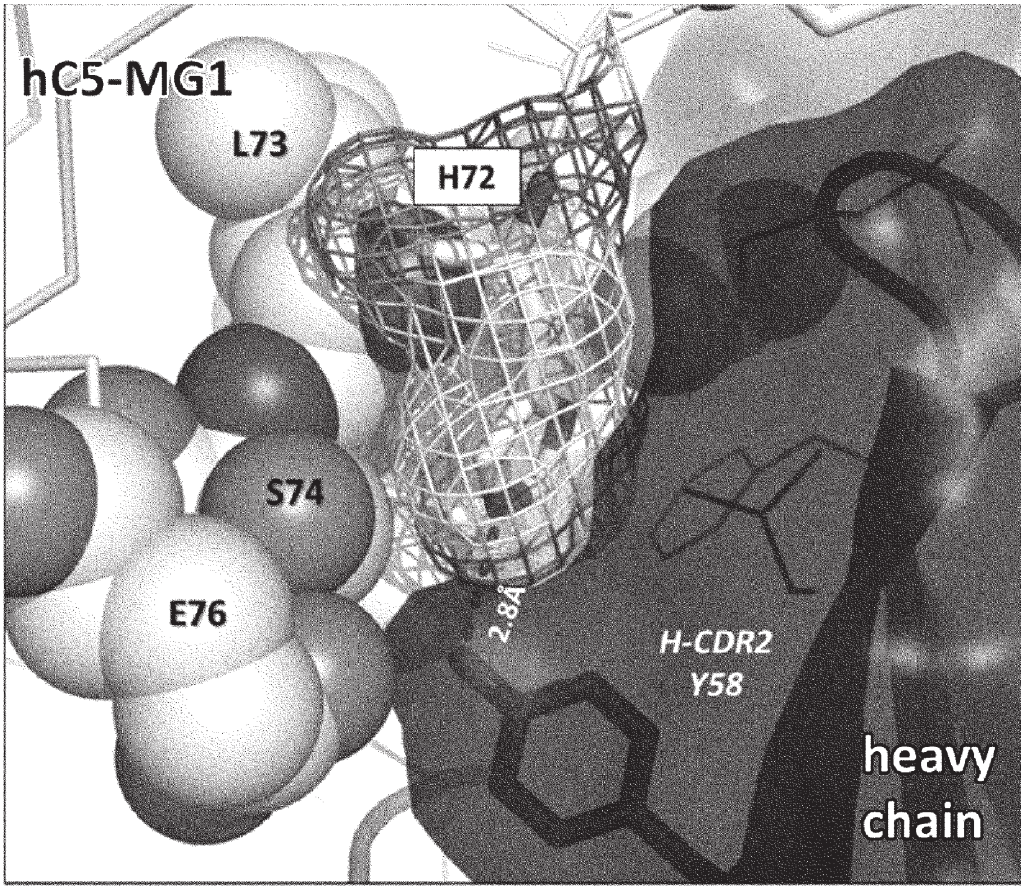
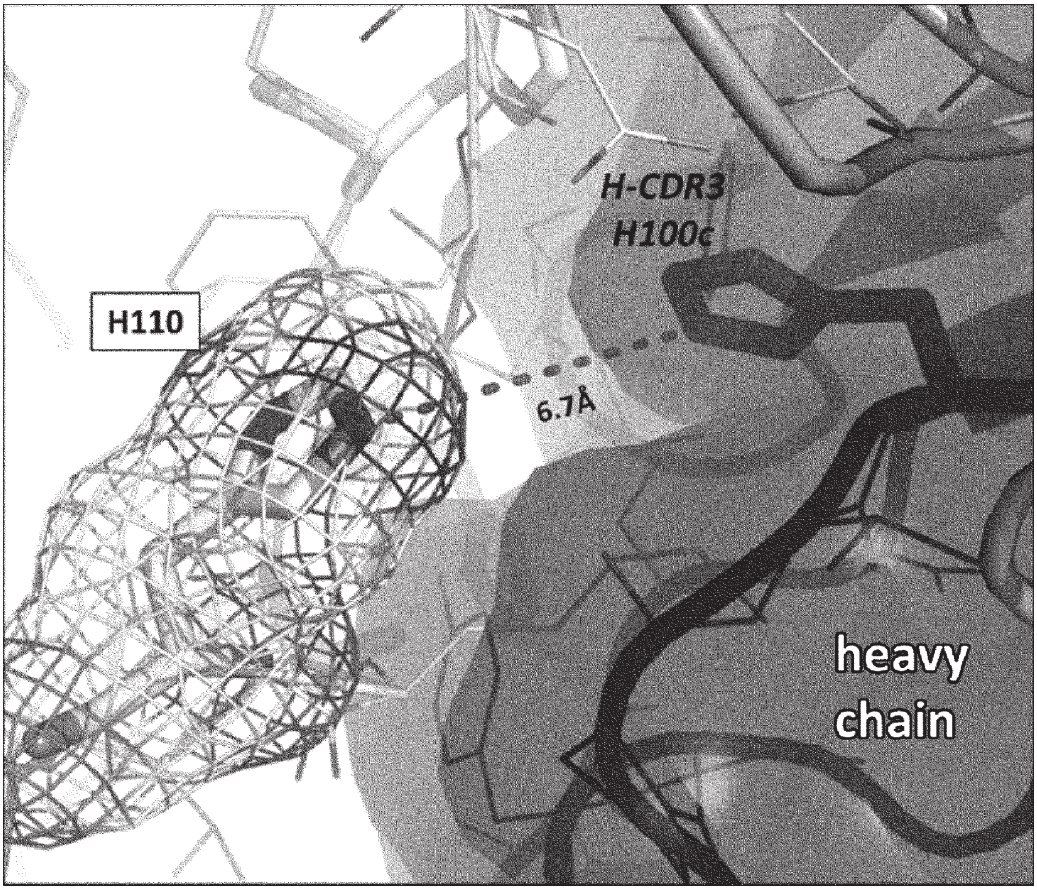
[Fig. 29A]



[Fig. 29B]



[Fig. 29C]



[Fig. 29D]