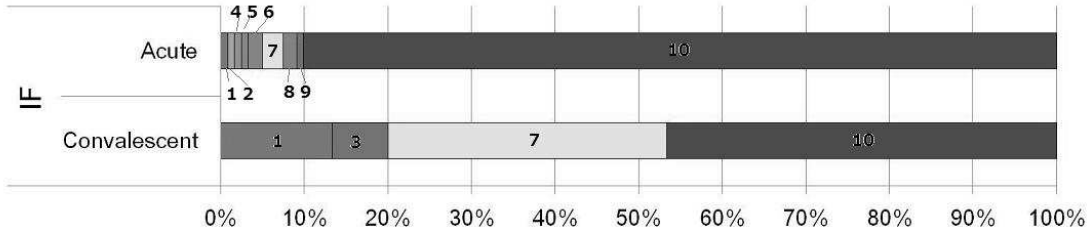
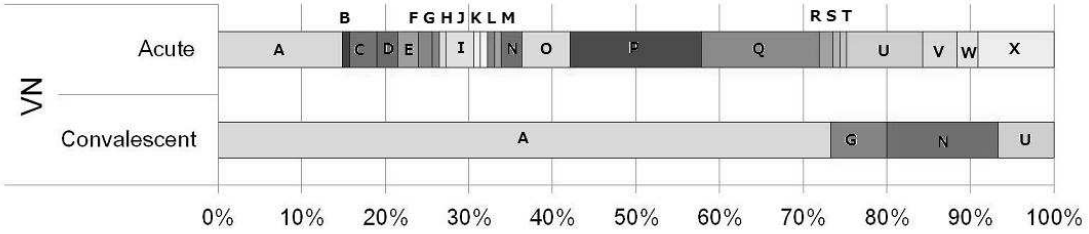
[Fig. 1]



Groups by IF assay	1	2	3	4	5	6	7	8	9	10
DENV-1	-	-	+	+	-	-	+	+	-	+
DENV-2	+	-	+	-	+	+	+	+	+	+
DENV-3	-	-	-	-	+	-	+	-	+	+
DENV-4	-	+	-	+	-	+	-	+	+	+

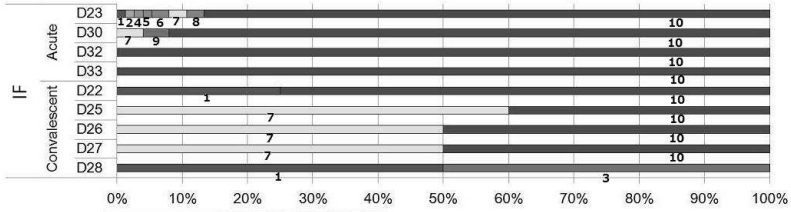


Groups by VN assay	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
DENV-1	-	+	-	-	-	-	-	-	+	+	+	+	+	-	-	+	+	+	++	+	+	++	+	++
DENV-2	-	-	+	-	-	+	+	++	+	++	++	+	++	+	++	+	++	+	++	++	++	++	++	++
DENV-3	-	-	-	+	-	+	-	-	+	+	++	-	-	+	+	+	+	+	+	++	+	+	++	++
DENV-4	-	-	-	-	+	-	+	+	-	-	-	+	+	+	+	+	+	++	+	+	++	++	++	++

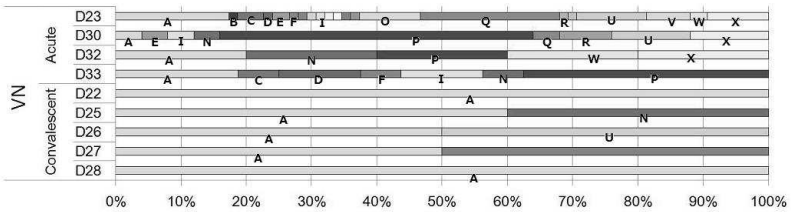
-: <50% reduction of virus replication.
+: 50% to <90% reduction of virus replication.
++: ≥90% reduction of virus replication.

Fig.1

[Fig. 2]



Groups by IF assay	1	2	3	4	5	6	7	8	9	10
DENV-1	-	-	+	+	-	-	+	+	-	+
DENV-2	+	-	+	-	+	+	+	+	+	+
DENV-3	-	-	-	-	+	-	+	-	+	+
DENV-4	-	+	-	+	-	+	-	+	+	+



Groups by VN assay	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
DENV-1	-	+	-	-	-	-	-	+	+	+	+	+	+	-	-	+	+	+	++	+	+	++	+	++
DENV-2	-	-	+	-	-	+	++	+	++	++	++	+	++	+	++	+	++	+	++	++	++	++	++	++
DENV-3	-	-	-	+	-	+	-	-	+	+	++	-	-	+	+	+	+	+	+	++	+	+	++	++
DENV-4	-	-	-	-	+	-	+	+	-	-	-	+	+	+	+	+	+	++	+	+	++	++	++	++

-: <50% reduction of virus replication.
+: 50% to <90% reduction of virus replication.
++: ≥90% reduction of virus replication.

Fig. 2

[Fig. 3]

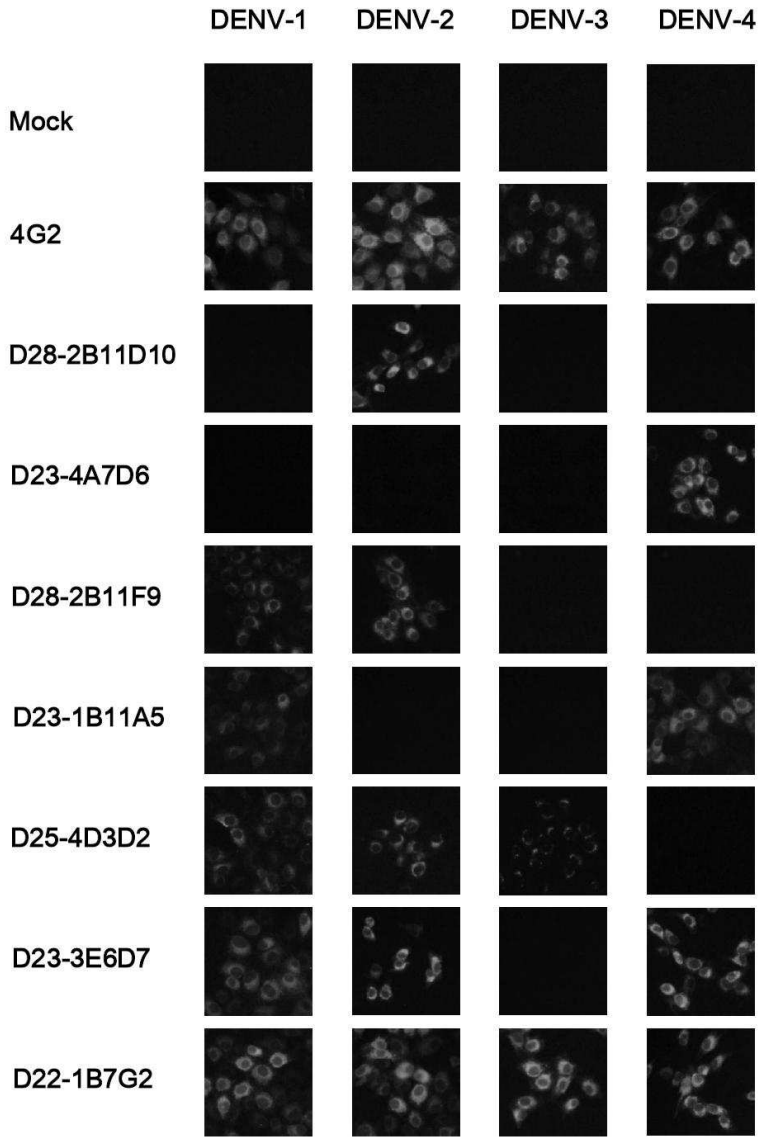

DENV-1
DENV-2
DENV-3
DENV-4
Mock
4G2
D28-2B11D10
D23-4A7D6
D28-2B11F9
D23-1B11A5
D25-4D3D2
D23-3E6D7
D22-1B7G2

Fig. 3

[Fig. 4]

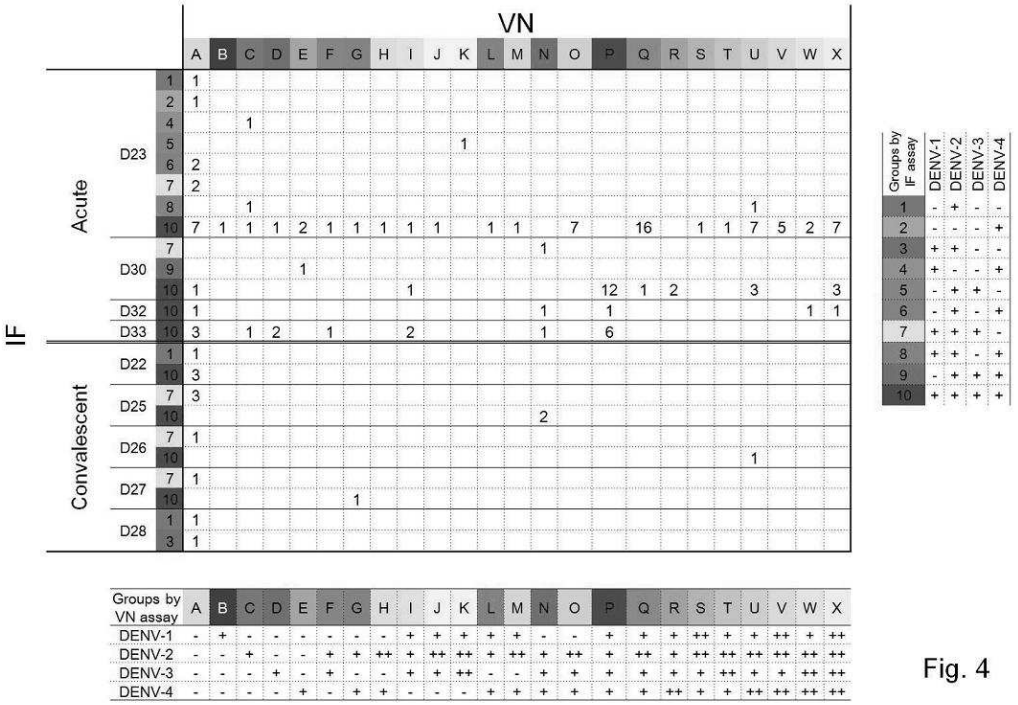


Fig. 4

[Fig. 5]

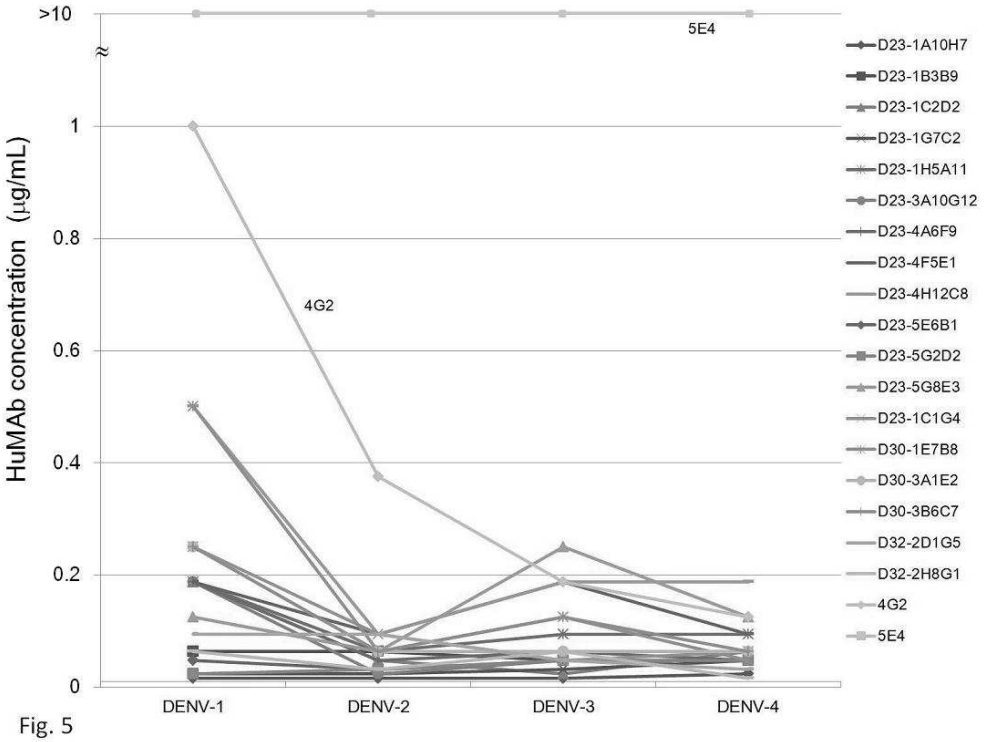


Fig. 5

[Fig. 6]

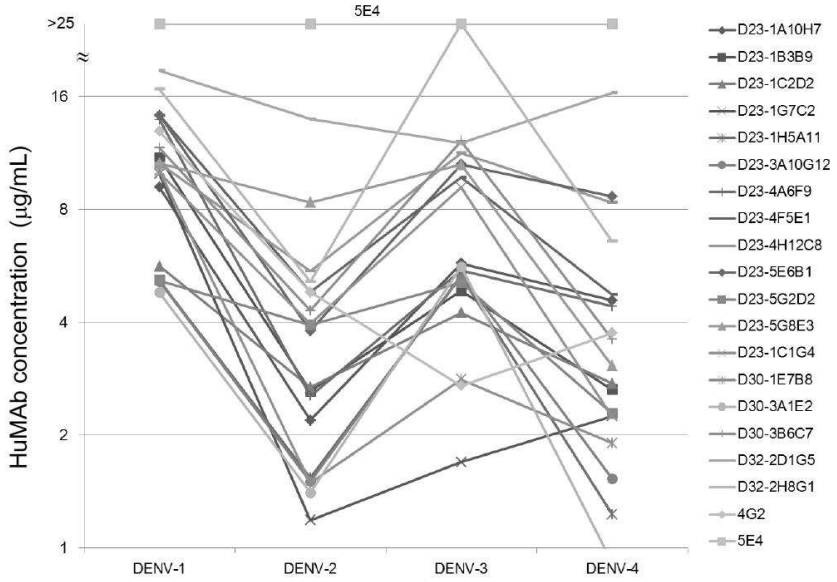

5E4
>25
≈
16
8
4
2
1
HuMAb concentration (μg/mL)
DENV-1
DENV-2
DENV-3
DENV-4
D23-1A10H7
D23-1B3B9
D23-1C2D2
D23-1G7C2
D23-1H5A11
D23-3A10G12
D23-4A6F9
D23-4F5E1
D23-4H12C8
D23-5E6B1
D23-5G2D2
D23-5G8E3
D23-1C1G4
D30-1E7B8
D30-3A1E2
D30-3B6C7
D32-2D1G5
D32-2H8G1
4G2
5E4

Fig. 6

[Fig. 7-1]

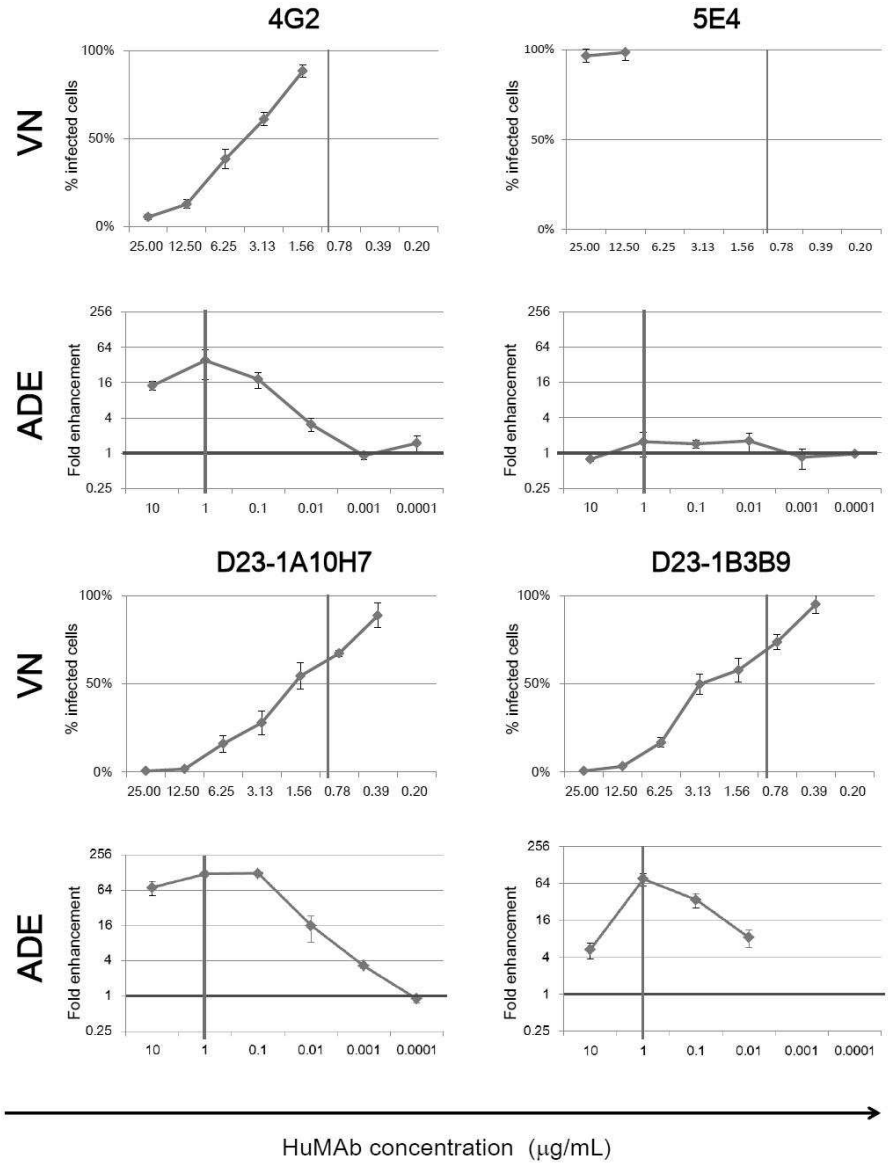

4G2
5E4
D23-1A10H7
D23-1B3B9
VN
ADE
% infected cells
Fold enhancement
100%
50%
0%
256
64
16
4
1
0.25
25.00 12.50 6.25 3.13 1.56 0.78 0.39 0.20
10 1 0.1 0.01 0.001 0.0001
HuMAb concentration (μg/mL)

Fig. 7-1

[Fig. 7-2]

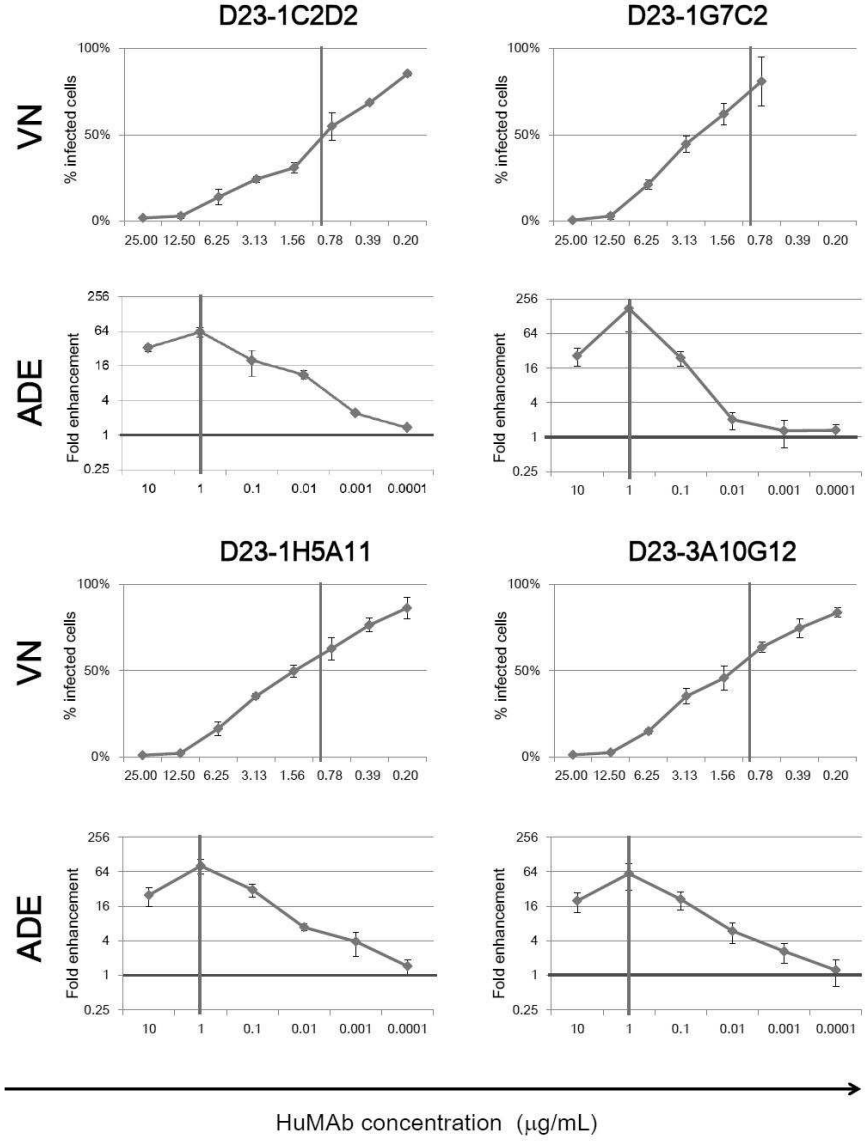

D23-1C2D2
D23-1G7C2
D23-1H5A11
D23-3A10G12
VN
ADE
% infected cells
Fold enhancement
100%
50%
0%
25.00 12.50 6.25 3.13 1.56 0.78 0.39 0.20
256
64
16
4
1
0.25
10 1 0.1 0.01 0.001 0.0001
HuMAb concentration (μg/mL)

Fig. 7-2

[Fig. 7-3]

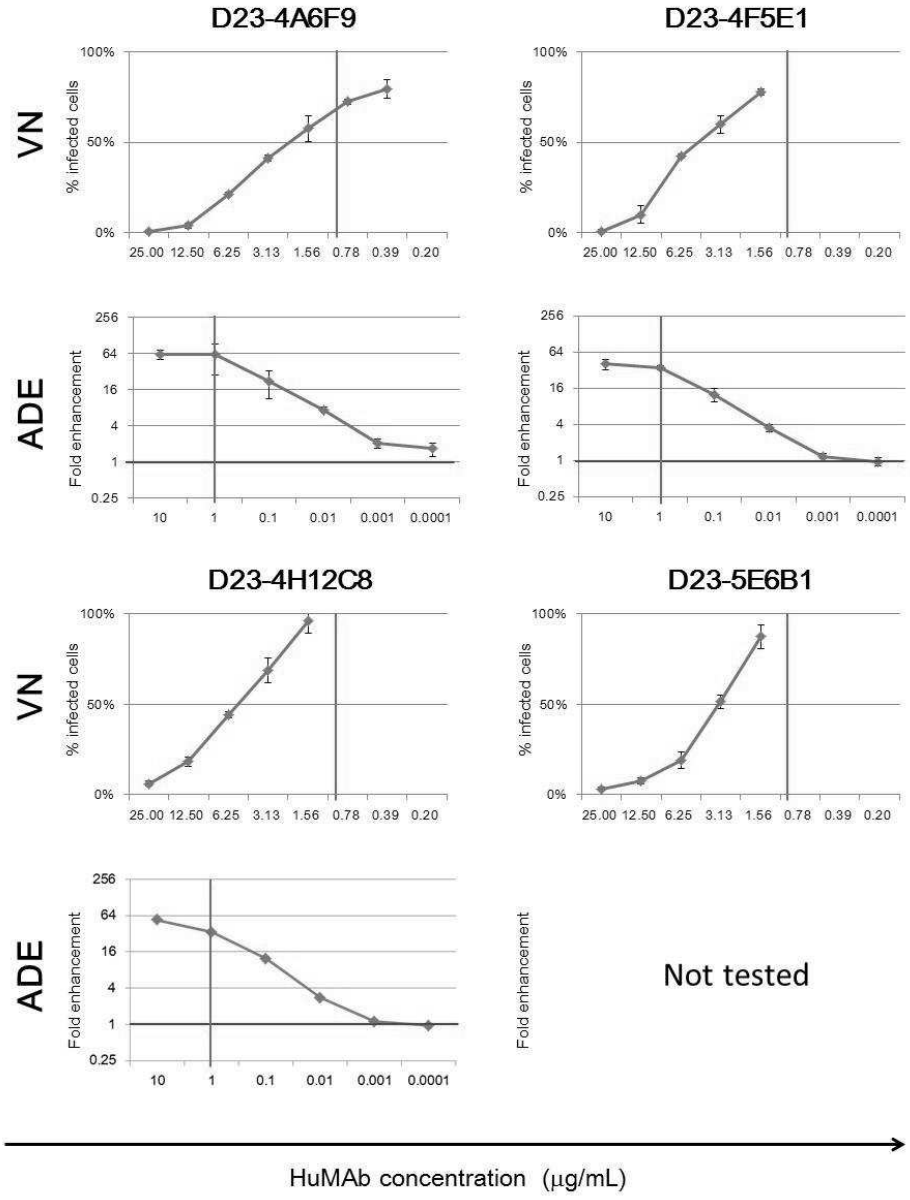

D23-4A6F9
D23-4F5E1
D23-4H12C8
D23-5E6B1
VN
ADE
% infected cells
Fold enhancement
100%
50%
0%
25.00 12.50 6.25 3.13 1.56 0.78 0.39 0.20
256
64
16
4
1
0.25
10 1 0.1 0.01 0.001 0.0001
Not tested
HuMAb concentration (μg/mL)

Fig. 7-3

[Fig. 7-4]

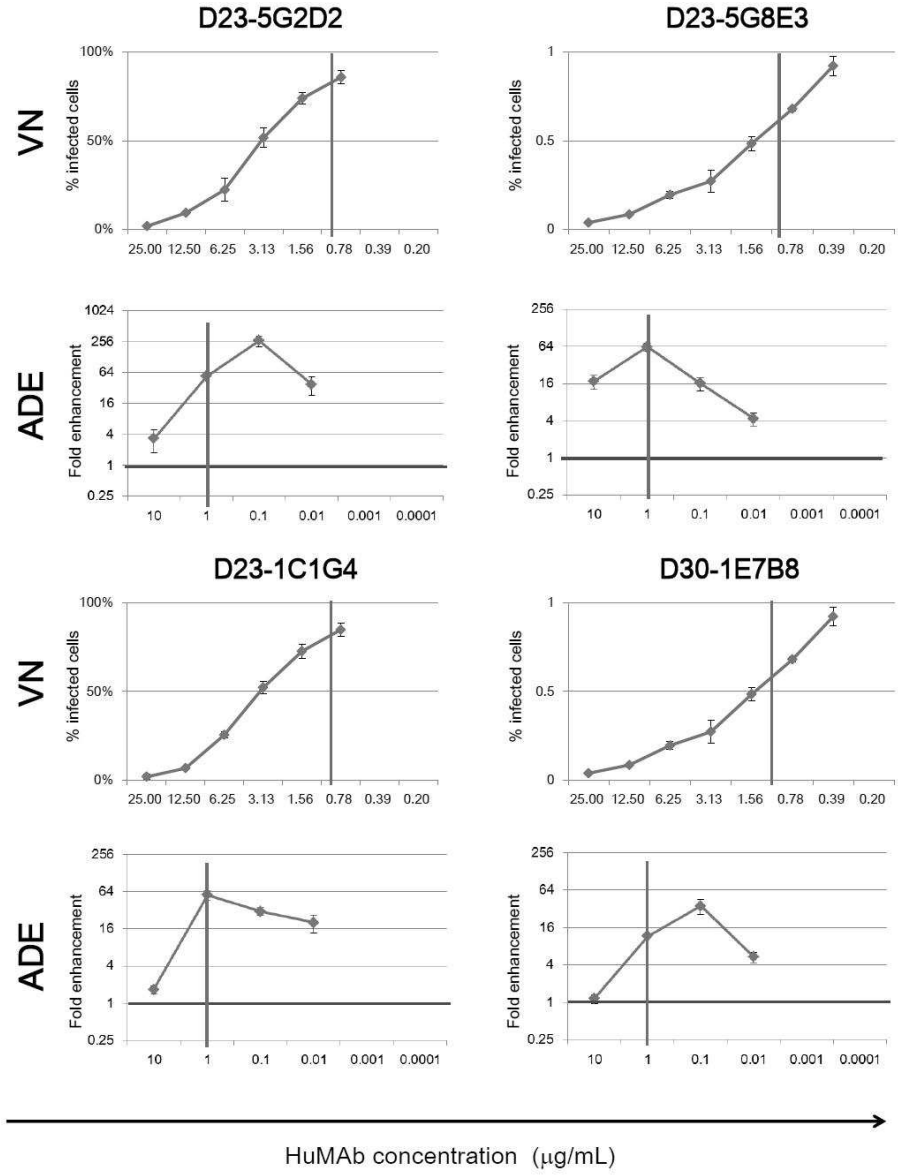

D23-5G2D2
D23-5G8E3
D23-1C1G4
D30-1E7B8
VN
ADE
% infected cells
Fold enhancement
100%
50%
0%
1
0.5
0
1024
256
64
16
4
1
0.25
25.00 12.50 6.25 3.13 1.56 0.78 0.39 0.20
10 1 0.1 0.01 0.001 0.0001
HuMAb concentration (μg/mL)

Fig. 7-4

[Fig. 7-5]

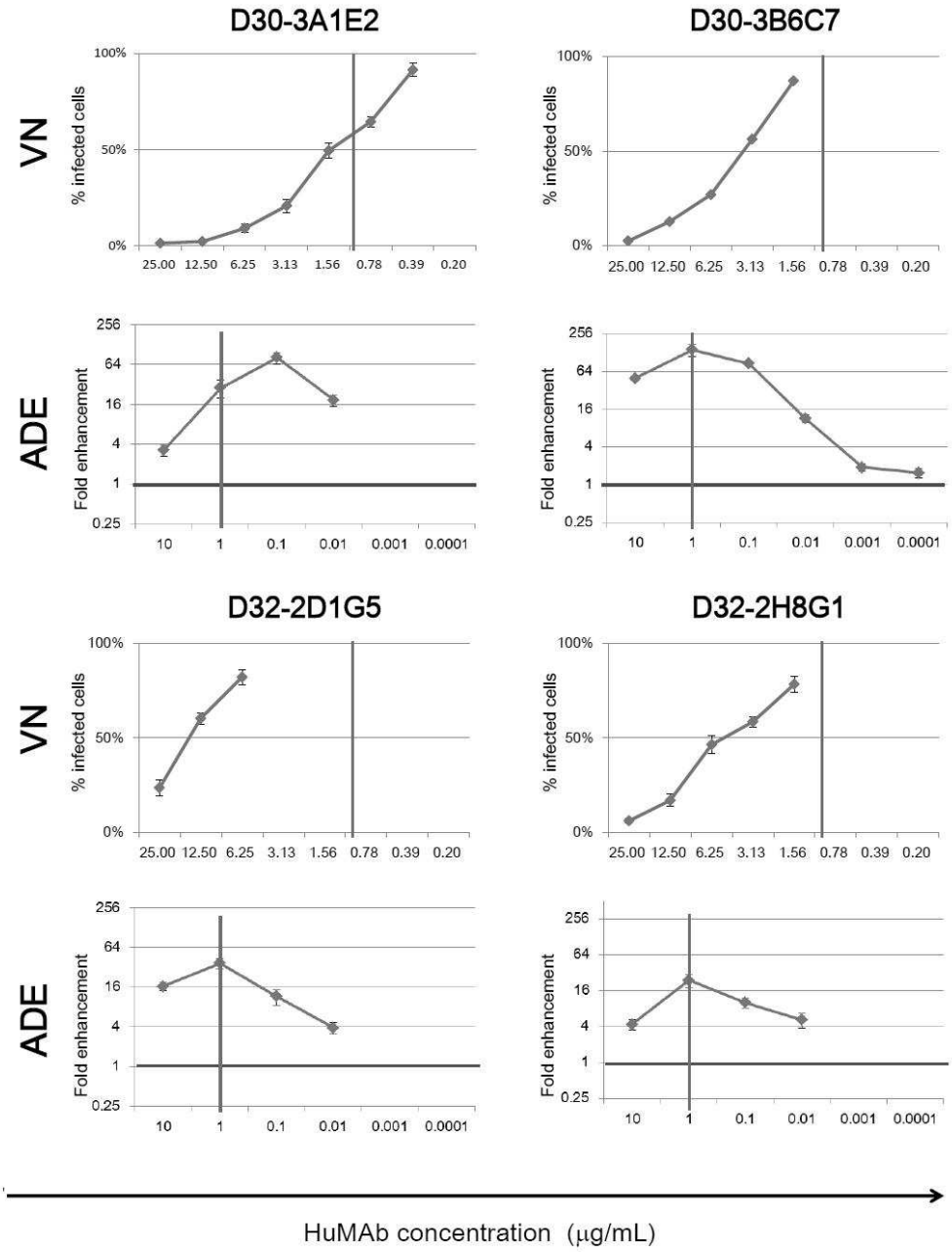

D30-3A1E2
D30-3B6C7
D32-2D1G5
D32-2H8G1
VN
ADE
% infected cells
Fold enhancement
100%
50%
0%
25.00 12.50 6.25 3.13 1.56 0.78 0.39 0.20
256
64
16
4
1
0.25
10 1 0.1 0.01 0.001 0.0001
HuMAb concentration (μg/mL)

Fig. 7-5

[Fig. 8]

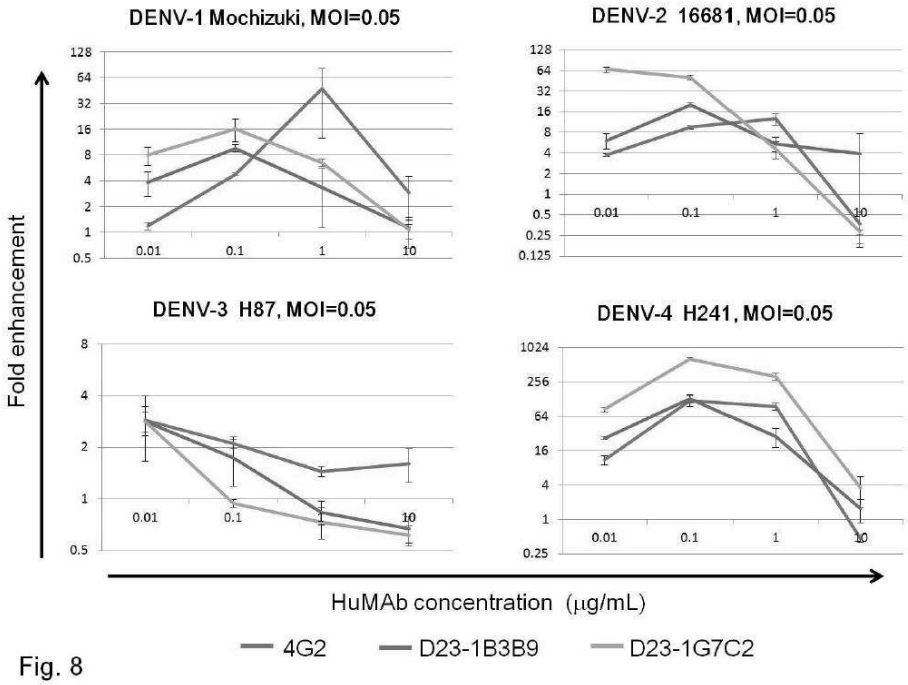


Fig. 8

[Fig. 9]

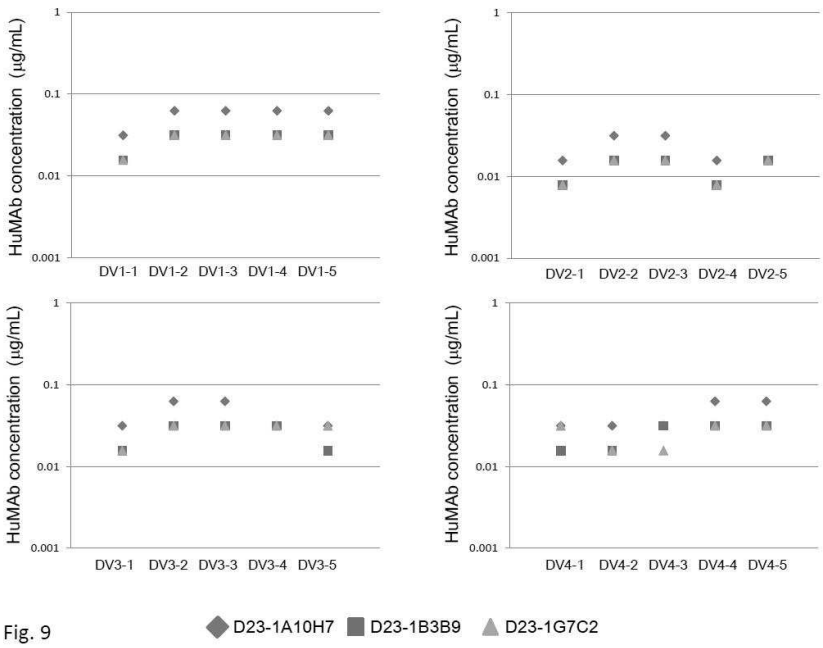


Fig. 9

[Fig. 10]

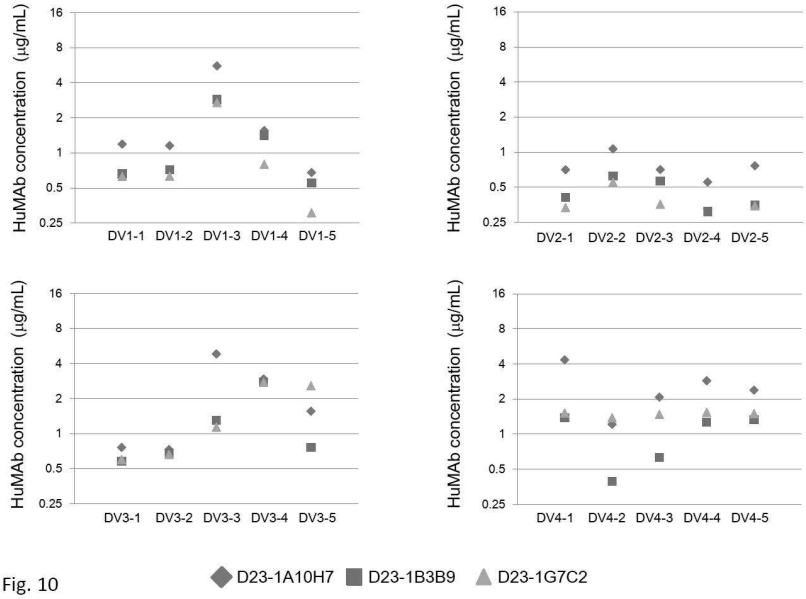
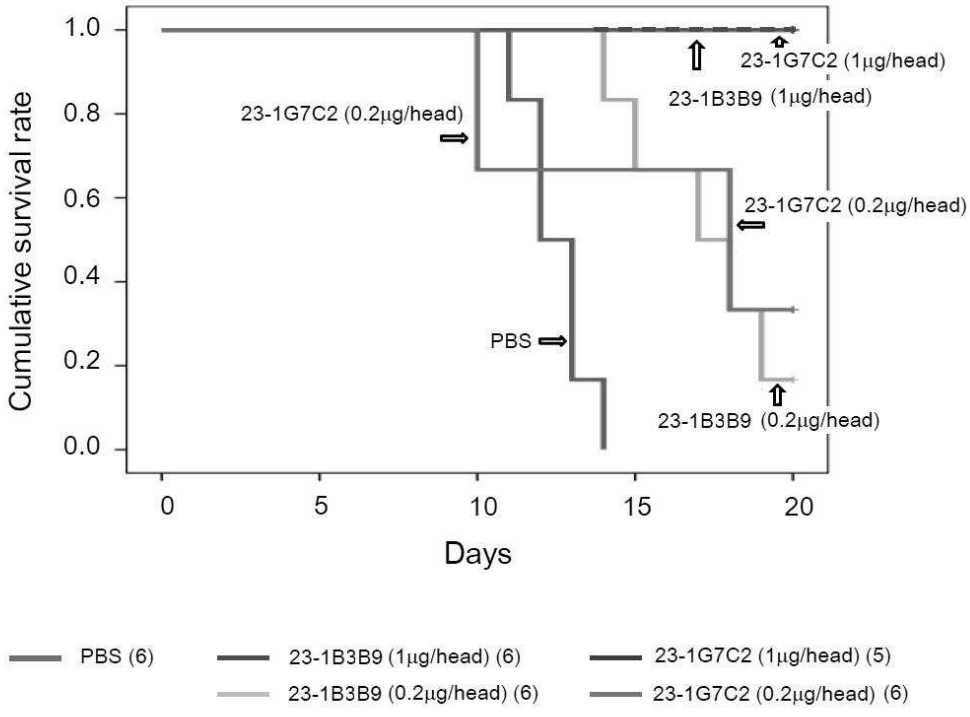


Fig. 10

[Fig. 11]



[Fig. 12]

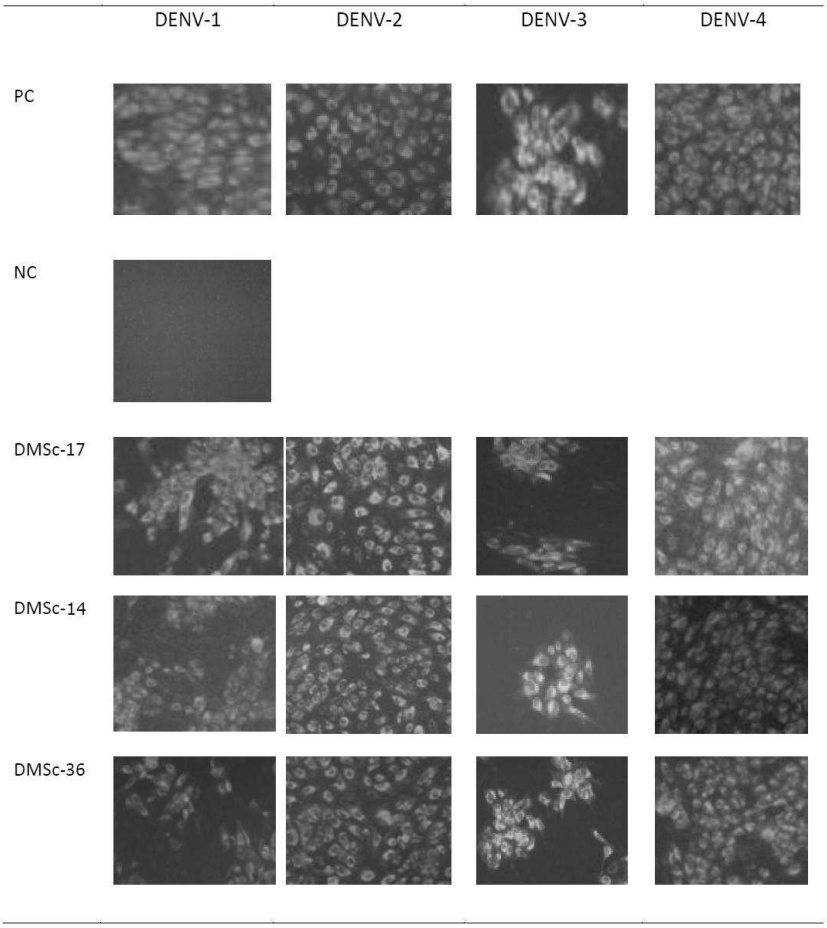


Figure 12 Examples of the pictures of Immunofluorescent assay of positive control, negative control, Hybridoma clones DMSc-17, DMSc-28 and DMSc-36

Each supernatant from clones DMSc-17, DMSc-14, DMSc-36, positive and negative control (diluted plasma) was reacted with 4 serotypes of dengue which were coated separately in 96-well microplates, the bound antibody was reacted with conjugate FITC-anti-human IgG and visualized under a fluorescent microscope. All clones show cross-reactive with all 4 serotypes of DENV.

[Fig. 13]

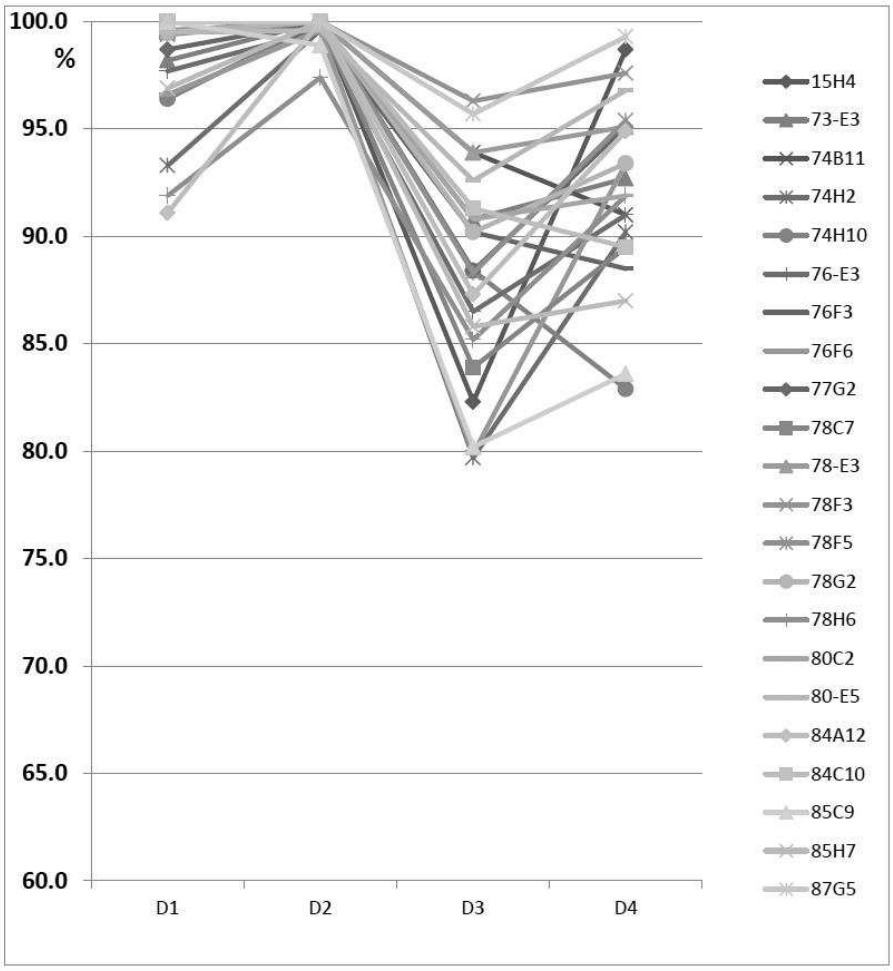


Figure 13

Illustration of 22 clones showing VN reduction to DENV1, DENV2, DENV3, DENV4 higher than 80%. VN was performed by neutralization DENV with HuMAb containing in supernatant and then allow DENV to infect the cells. Supernatant from each clone was neutralized with 50-100 FFU of each strain of 4 serotypes of DENV, (strain 16007 for DENV1, strain NGC for DENV2, strain H87 for DENV-3, and strain H241 for DENV-4) in a separate reaction. The numbers of foci was visualized by DAB staining. The VN percentage was calculated from the comparison of the number of foci found in supernatant and in control sample. The 10 clones (73E3, 74B11, 76F3, 78E3, 78F3, 78G2, 80C2, 80E5, 84C10, 87G5) showed VN against all DENV serotypes higher than 90%, the rest provided VN against all DENV serotypes higher than 80%.