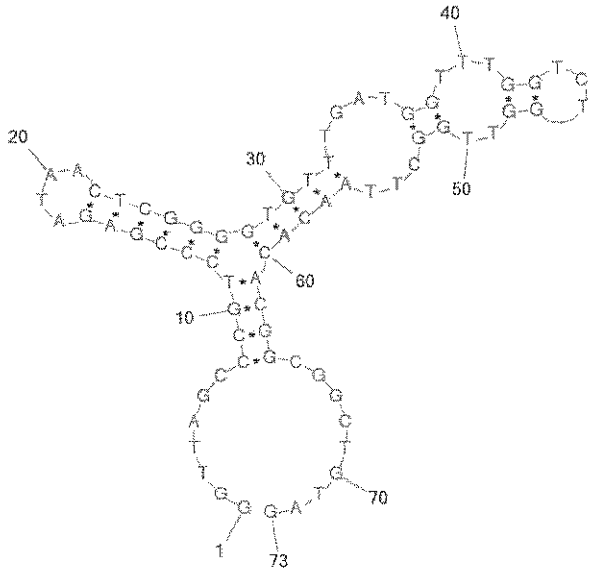
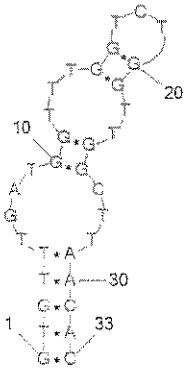
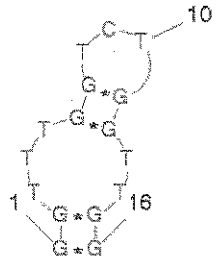


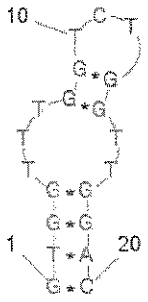
RHA0002
(SEQ ID NO: 12)



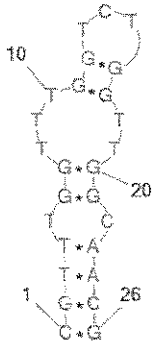
RHA0002__s33
(SEQ ID NO: 17)



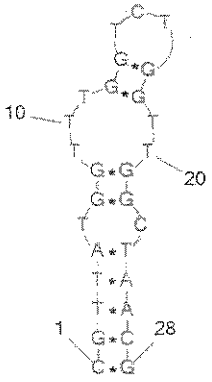
RHA0002__s16
(SEQ ID NO: 13)



RHA0002__s20
(SEQ ID NO: 14)

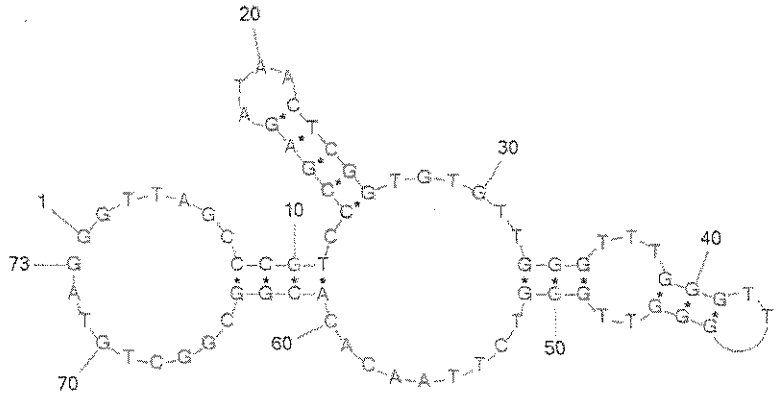


RHA0002__s26
(SEQ ID NO: 15)

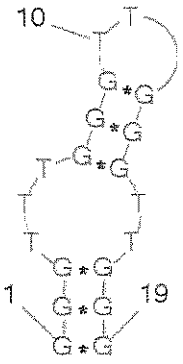


RHA0002__s28
(SEQ ID NO: 16)

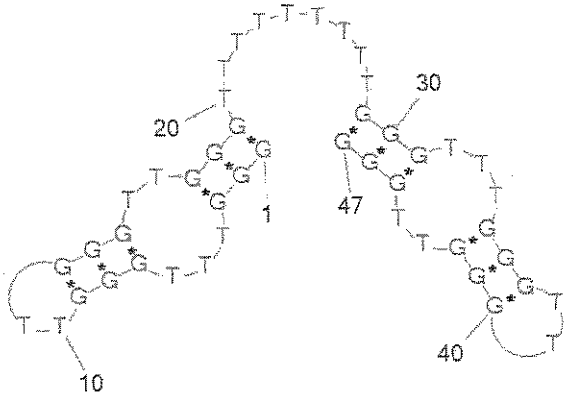
FIG. 1



RHA0006
(SEQ ID NO: 18)

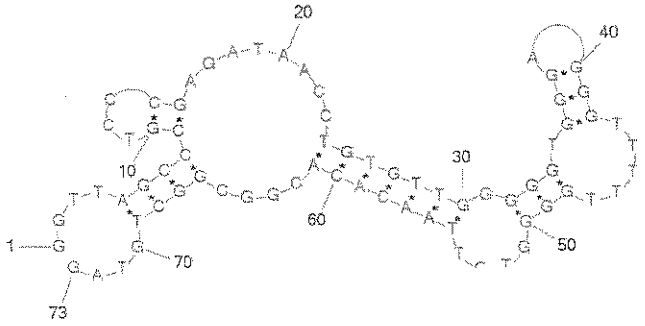


RHA0006__s19
(SEQ ID NO: 19)

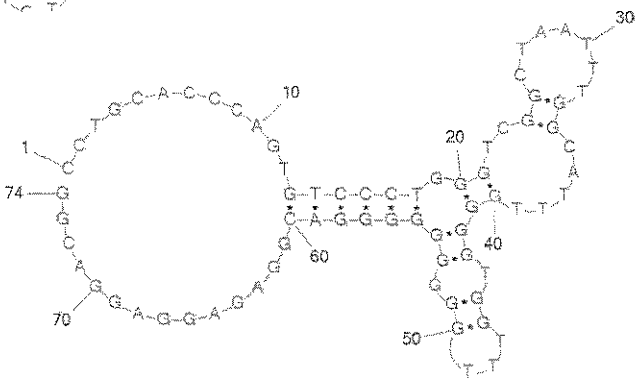


RHA0006__s19__d9
(SEQ ID NO: 32)

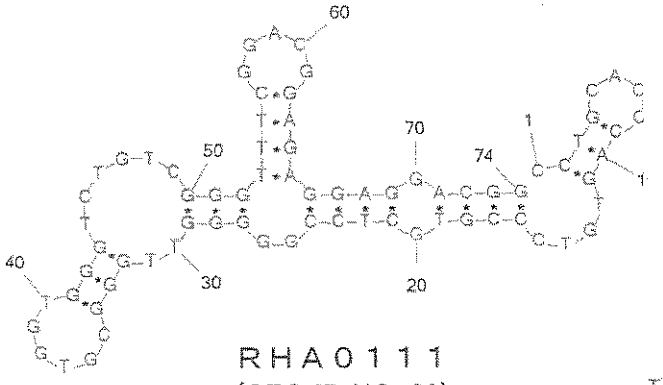
FIG. 2



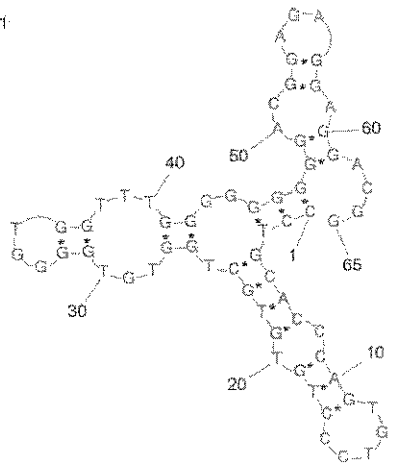
RHA0020
(SEQ ID NO: 11)



RHA0127
(SEQ ID NO: 29)



RHA0111
(SEQ ID NO: 28)



RHA0124
(SEQ ID NO: 30)

FIG. 3

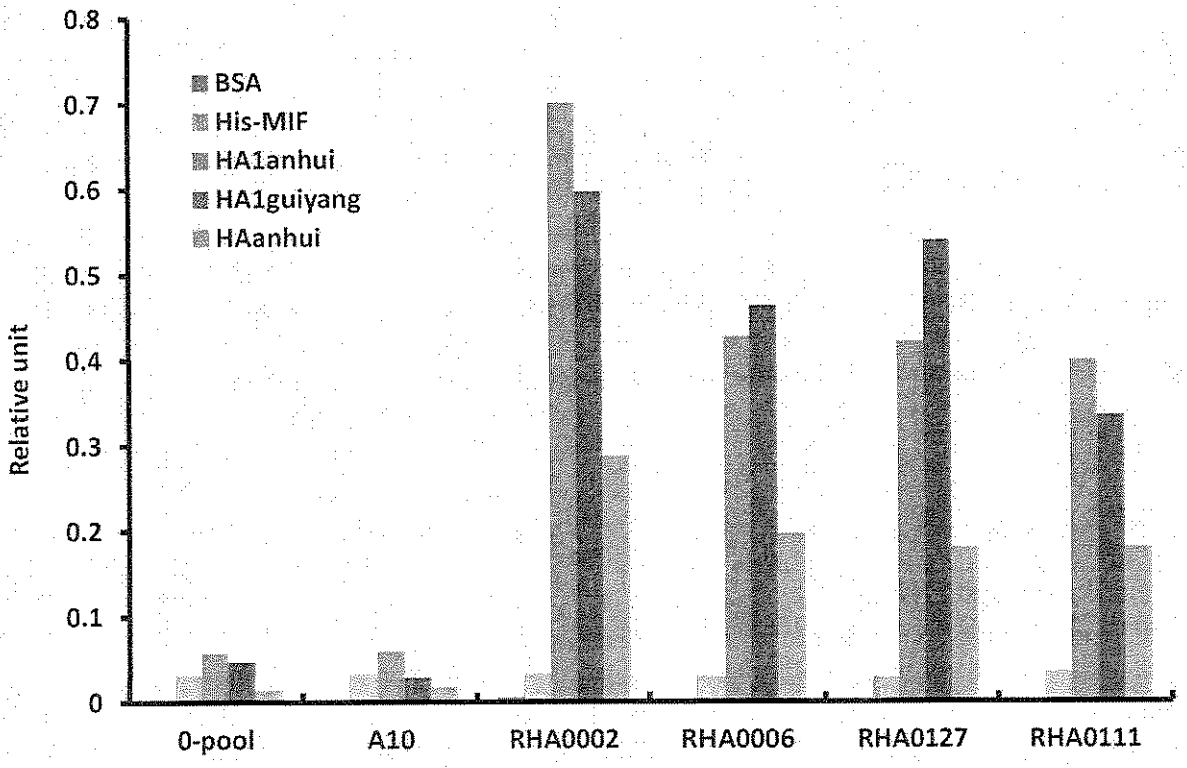

0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Relative unit
BSA
His-MIF
HA1anhui
HA1guiyang
HAanhui
0-pool
A10
RHA0002
RHA0006
RHA0127
RHA0111

FIG. 4

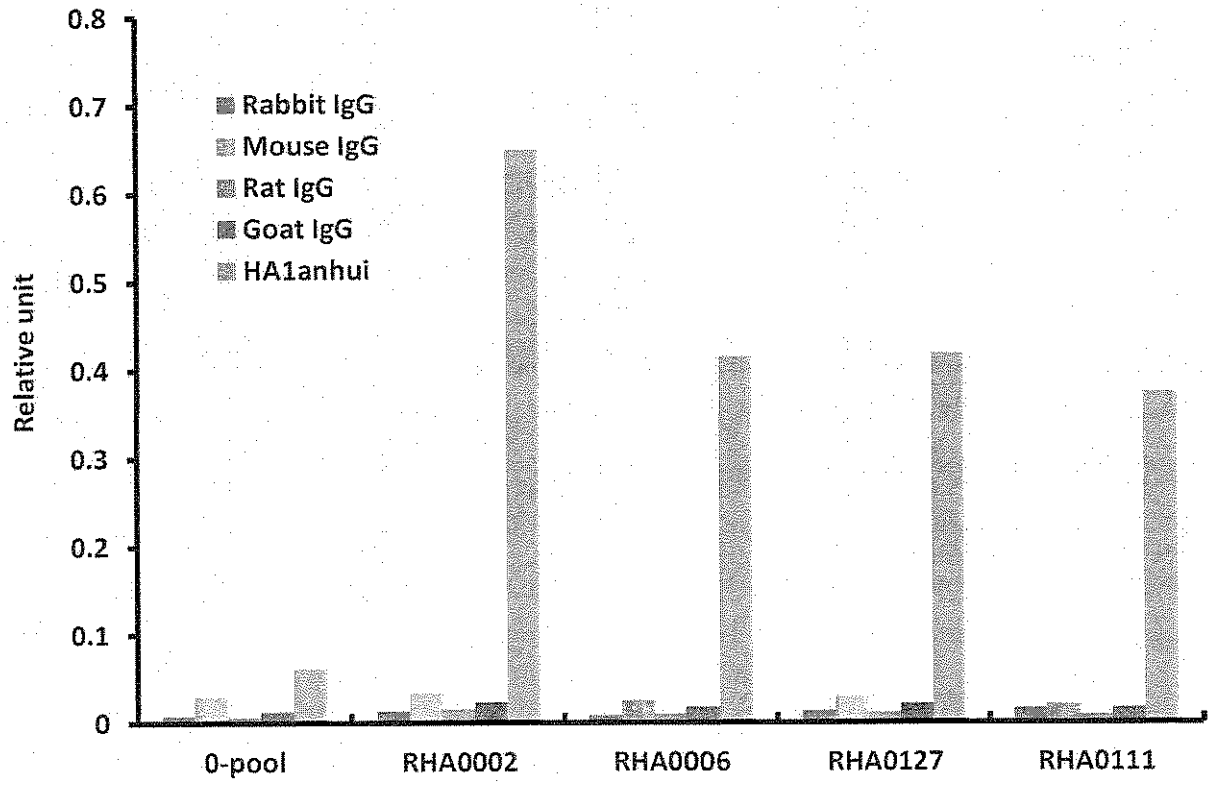

0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Relative unit
Rabbit IgG
Mouse IgG
Rat IgG
Goat IgG
HA1anhui
0-pool
RHA0002
RHA0006
RHA0127
RHA0111

FIG. 5

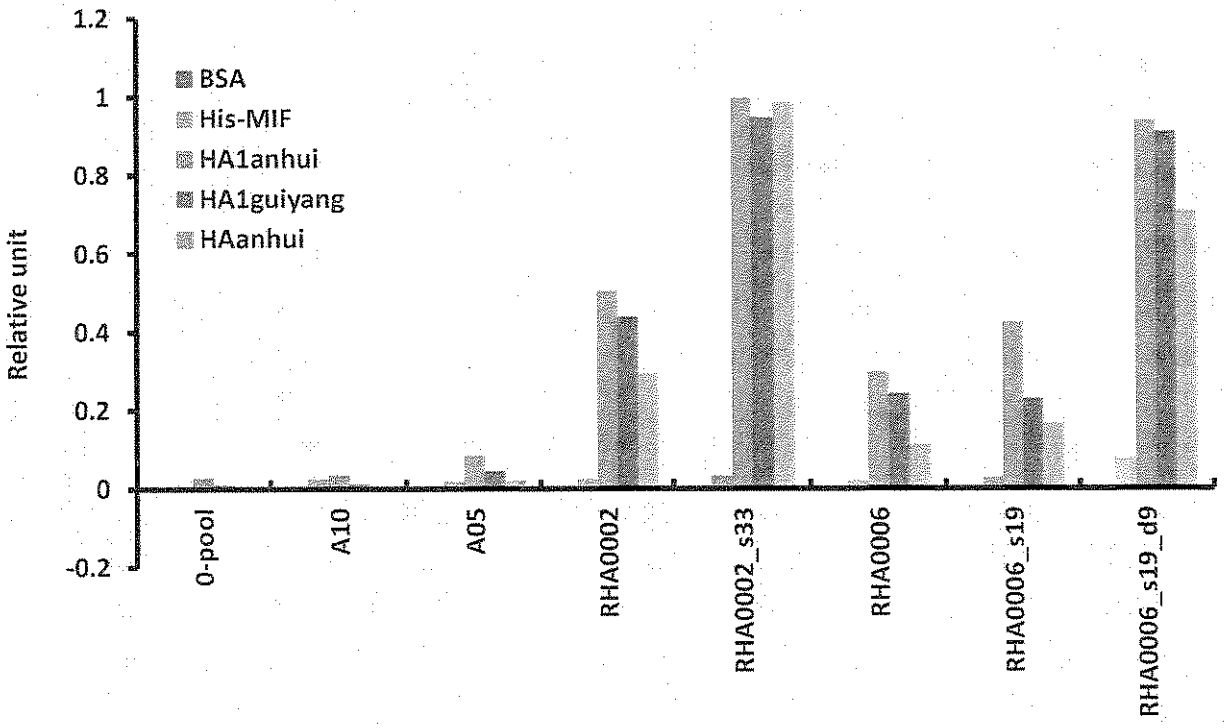

1.2
1
0.8
0.6
0.4
0.2
0
-0.2
Relative unit
BSA
His-MIF
HA1anhui
HA1guiyang
HAanhui
0-pool
A10
A05
RHA0002
RHA0002_s33
RHA0006
RHA0006_s19
RHA0006_s19_d9

FIG. 6

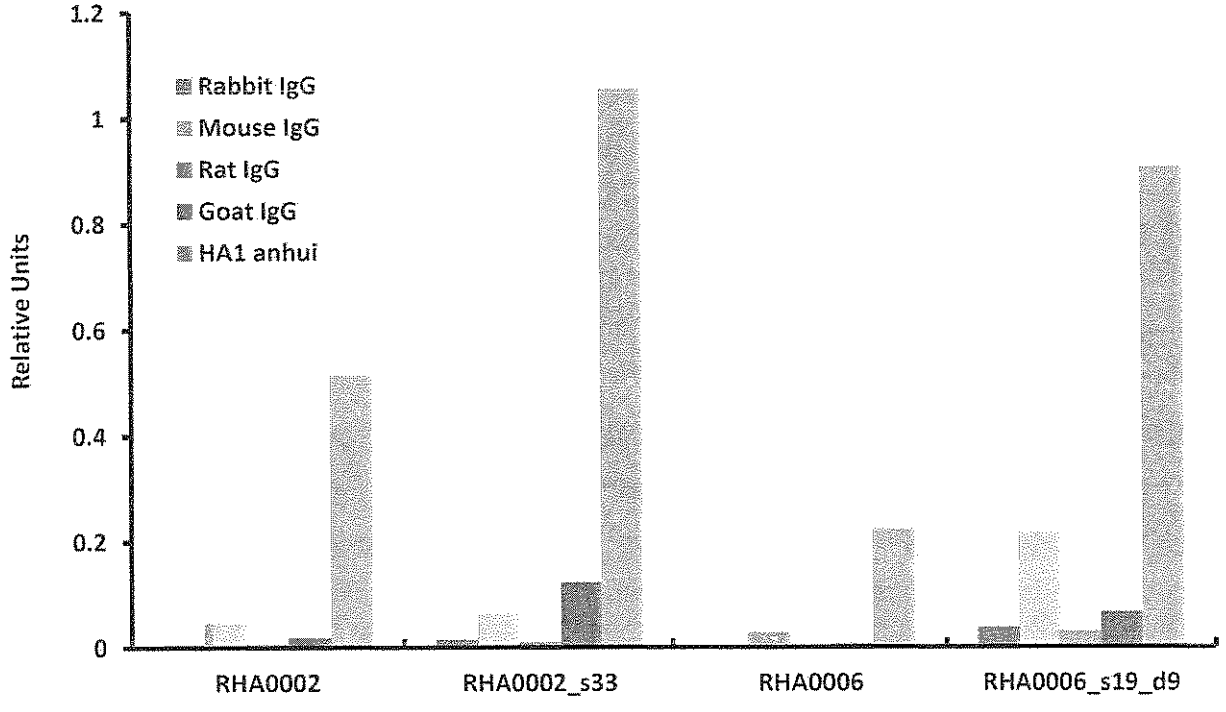
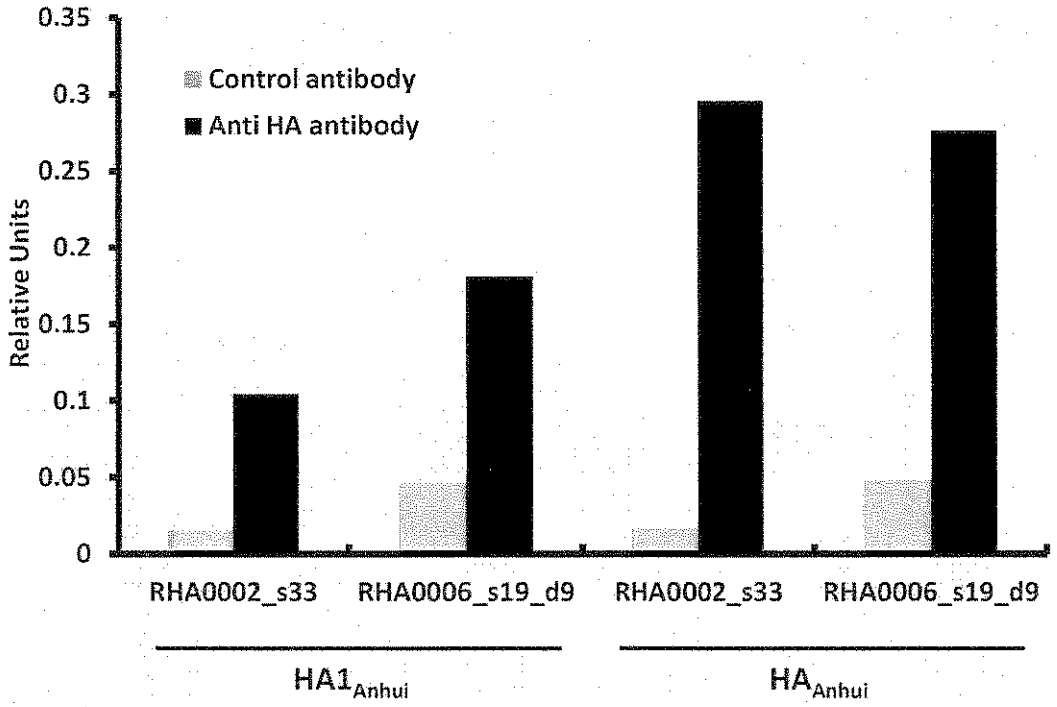

1.2
1
0.8
0.6
0.4
0.2
0
Relative Units
Rabbit IgG
Mouse IgG
Rat IgG
Goat IgG
HA1 anhui
RHA0002
RHA0002_s33
RHA0006
RHA0006_s19_d9

FIG. 7



(Step 1) Capturing aptamer→(Step 2) Target HA protein→(Step 3) Detection antibody

FIG. 8

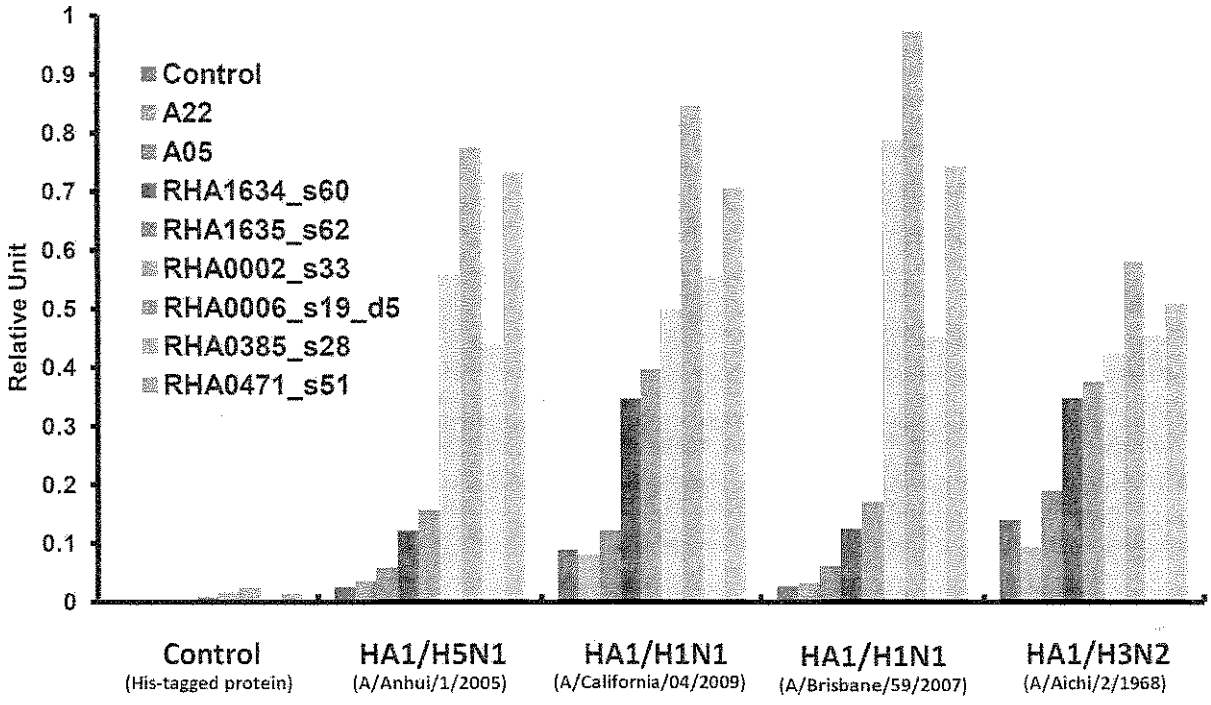


FIG. 9

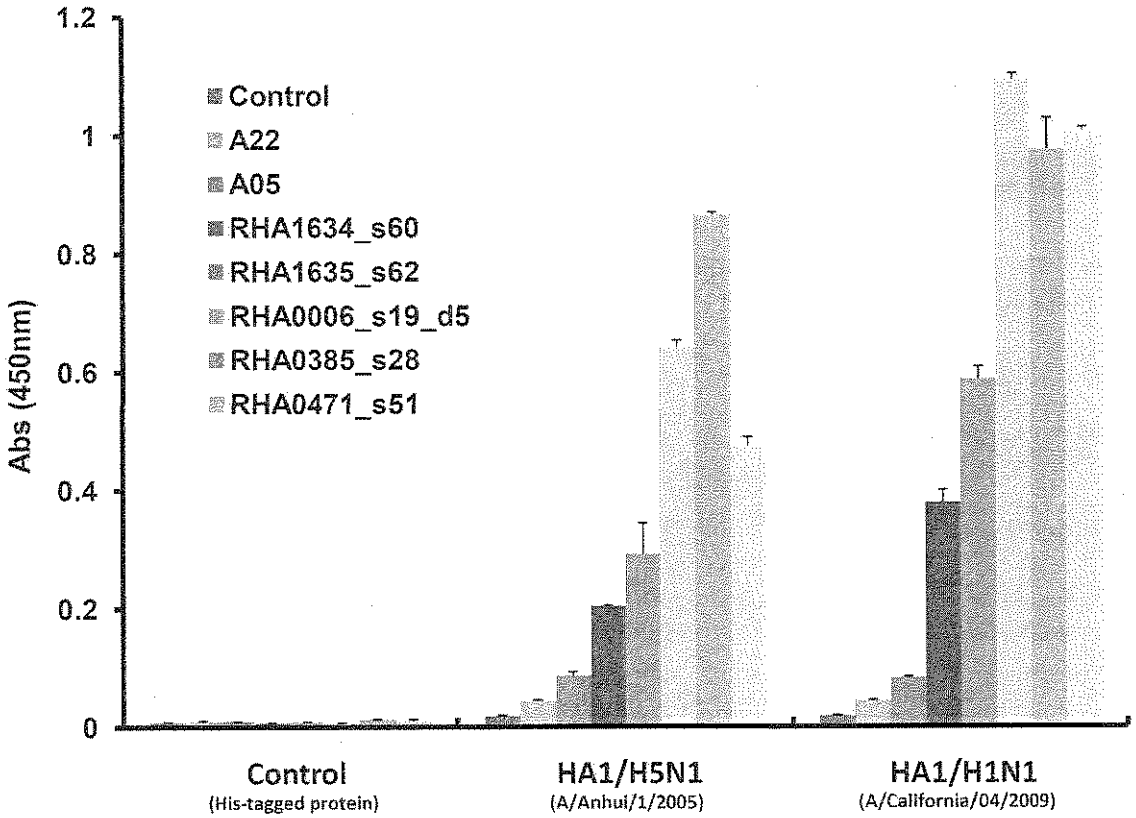
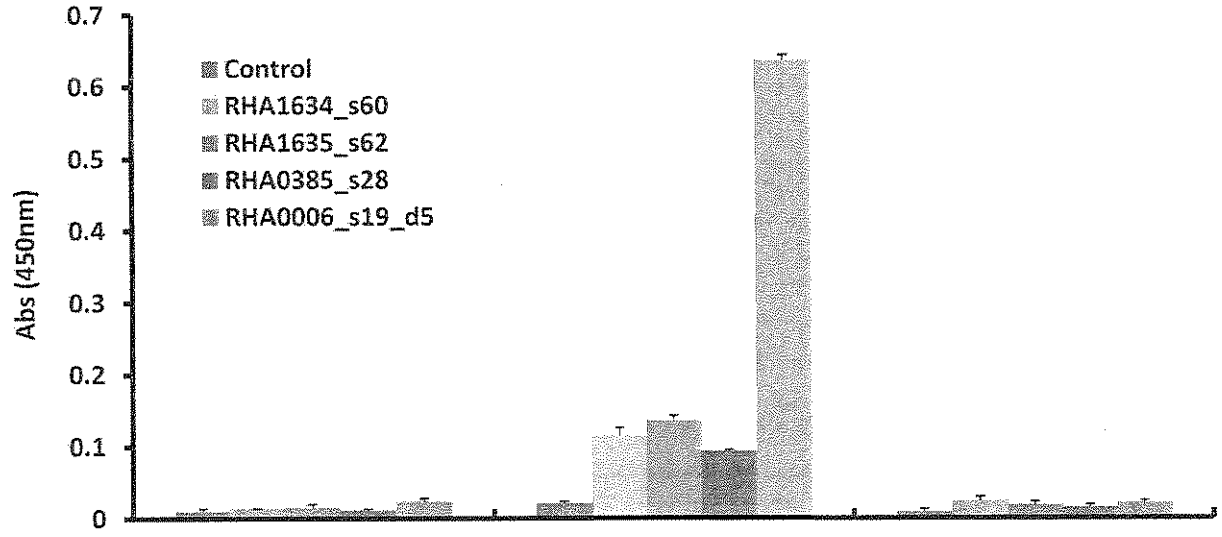


FIG. 10



Capturing antibody	Anti-HA antibody	Anti-HA antibody	(-)
Target protein	(-)	HA proteins	HA proteins
Detection aptamer	(+)	(+)	(+)

FIG. 11

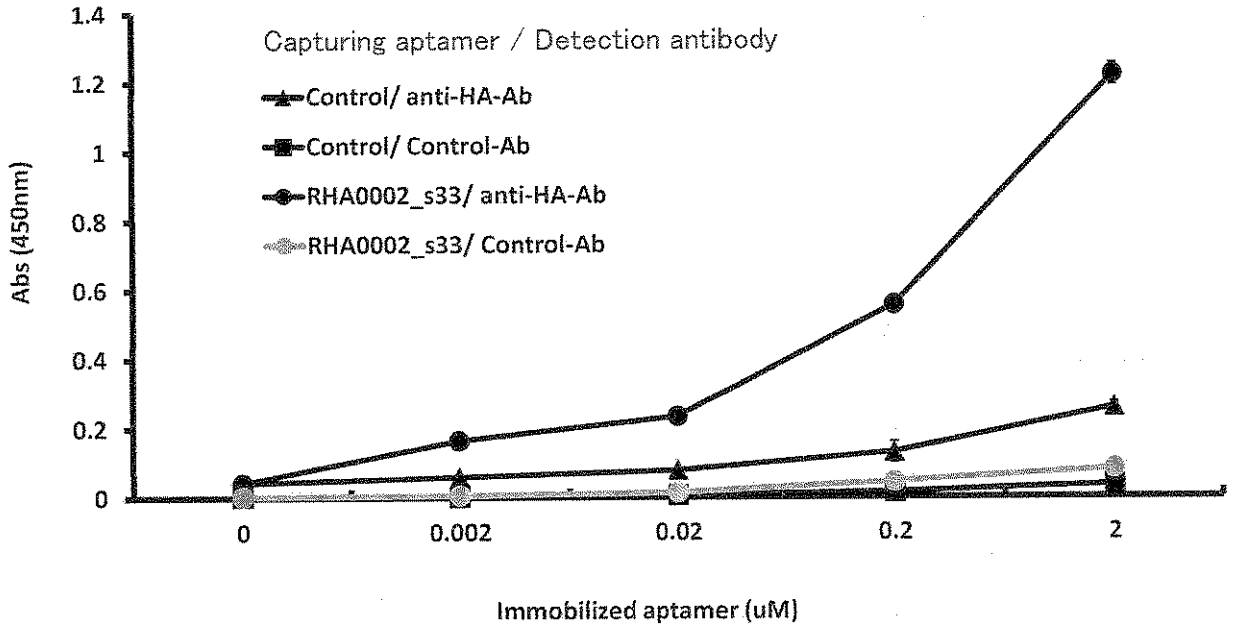

Capturing aptamer / Detection antibody
Control/ anti-HA-Ab
Control/ Control-Ab
RHA0002_s33/ anti-HA-Ab
RHA0002_s33/ Control-Ab
Abs (450nm)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
0.002
0.02
0.2
2
Immobilized aptamer (uM)

FIG. 12

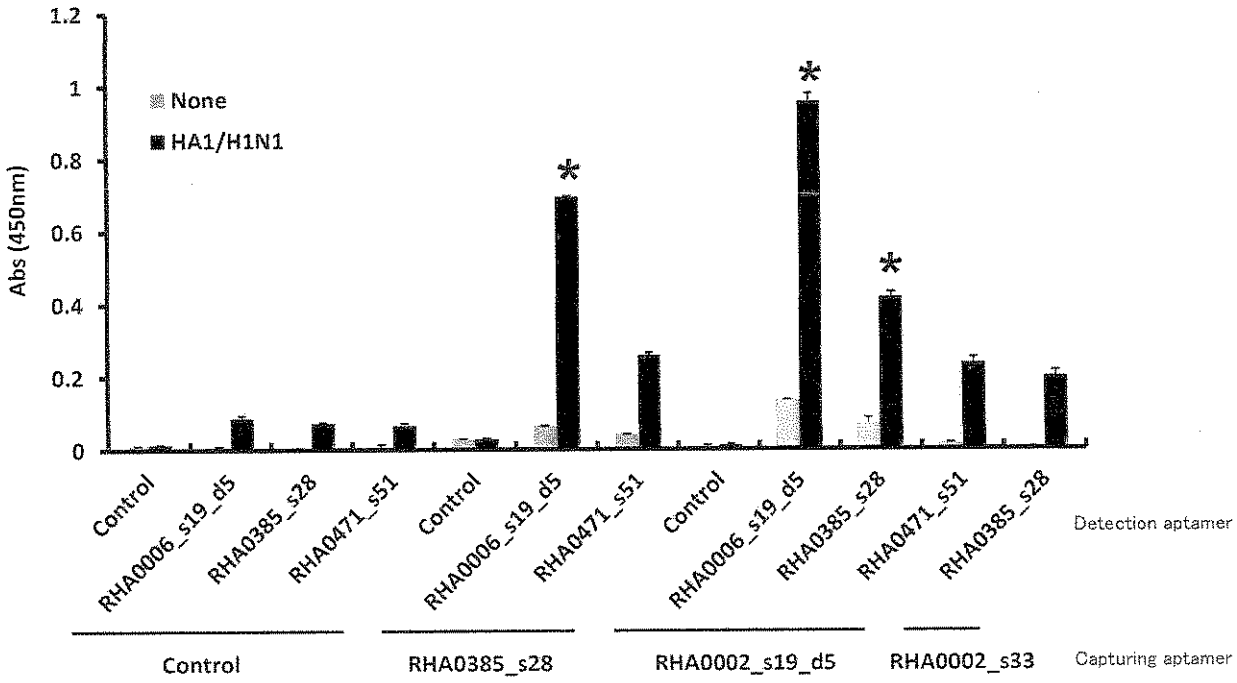

None
HA1/H1N1
Abs (450nm)
1.2
1
0.8
0.6
0.4
0.2
0
*
*
*
Control
RHA0006_s19_d5
RHA0385_s28
RHA0471_s51
Control
RHA0006_s19_d5
RHA0471_s51
Control
RHA0006_s19_d5
RHA0385_s28
RHA0471_s51
RHA0385_s28
Detection aptamer
Control
RHA0385_s28
RHA0002_s19_d5
RHA0002_s33
Capturing aptamer

FIG. 13

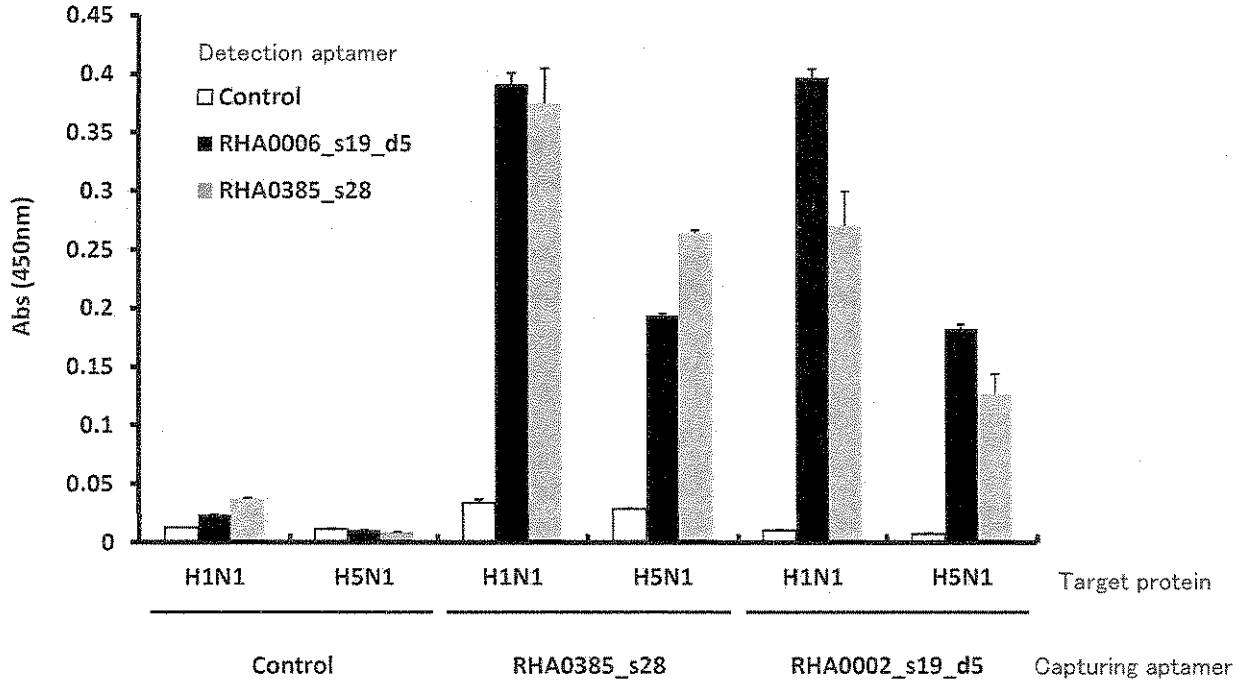

Detection aptamer
Control
RHA0006_s19_d5
RHA0385_s28
Abs (450nm)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
H1N1
H5N1
H1N1
H5N1
H1N1
H5N1
Target protein
Control
RHA0385_s28
RHA0002_s19_d5
Capturing aptamer

FIG. 14

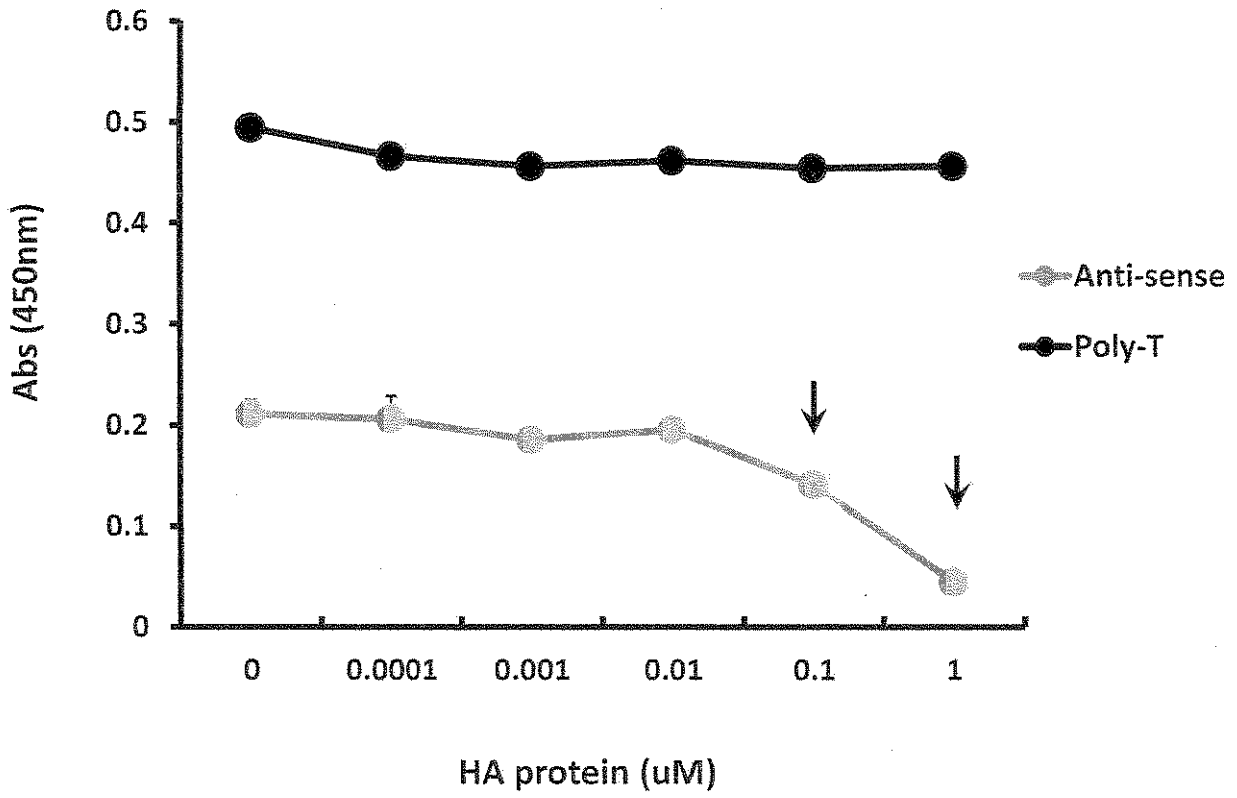

Abs (450nm)
0.6
0.5
0.4
0.3
0.2
0.1
0
0
0.0001
0.001
0.01
0.1
1
HA protein (uM)
Anti-sense
Poly-T

FIG. 15

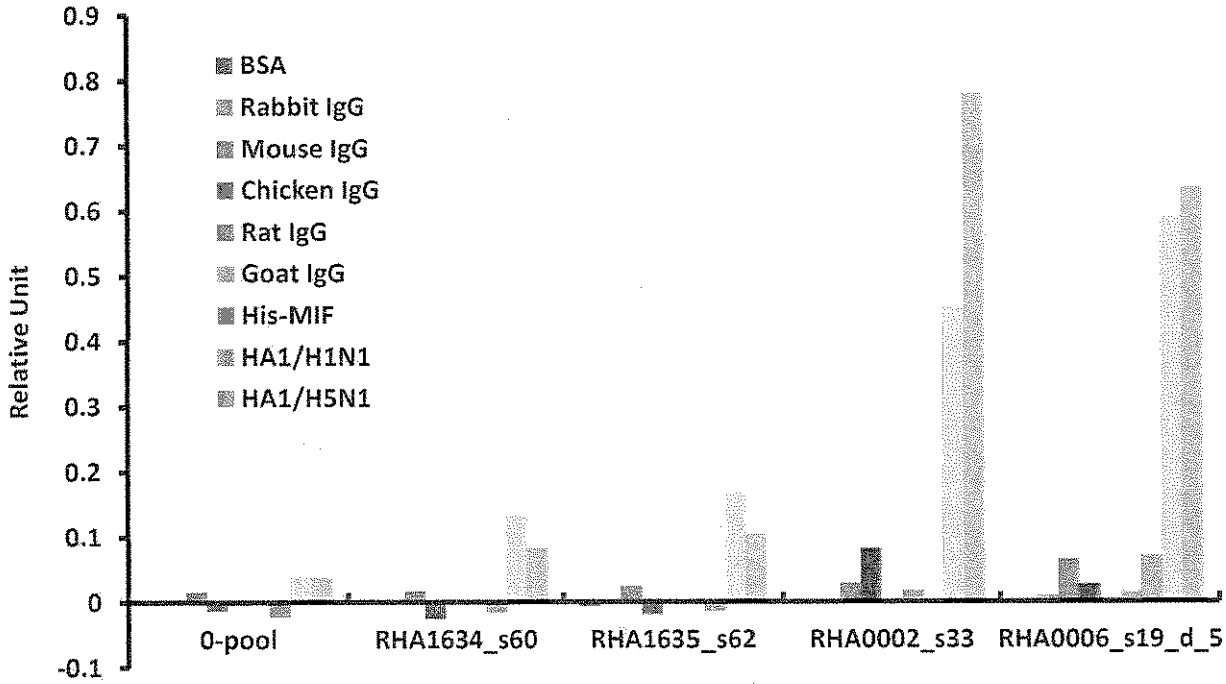

0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
Relative Unit
BSA
Rabbit IgG
Mouse IgG
Chicken IgG
Rat IgG
Goat IgG
His-MIF
HA1/H1N1
HA1/H5N1
0-pool
RHA1634_s60
RHA1635_s62
RHA0002_s33
RHA0006_s19_d_5

FIG. 16

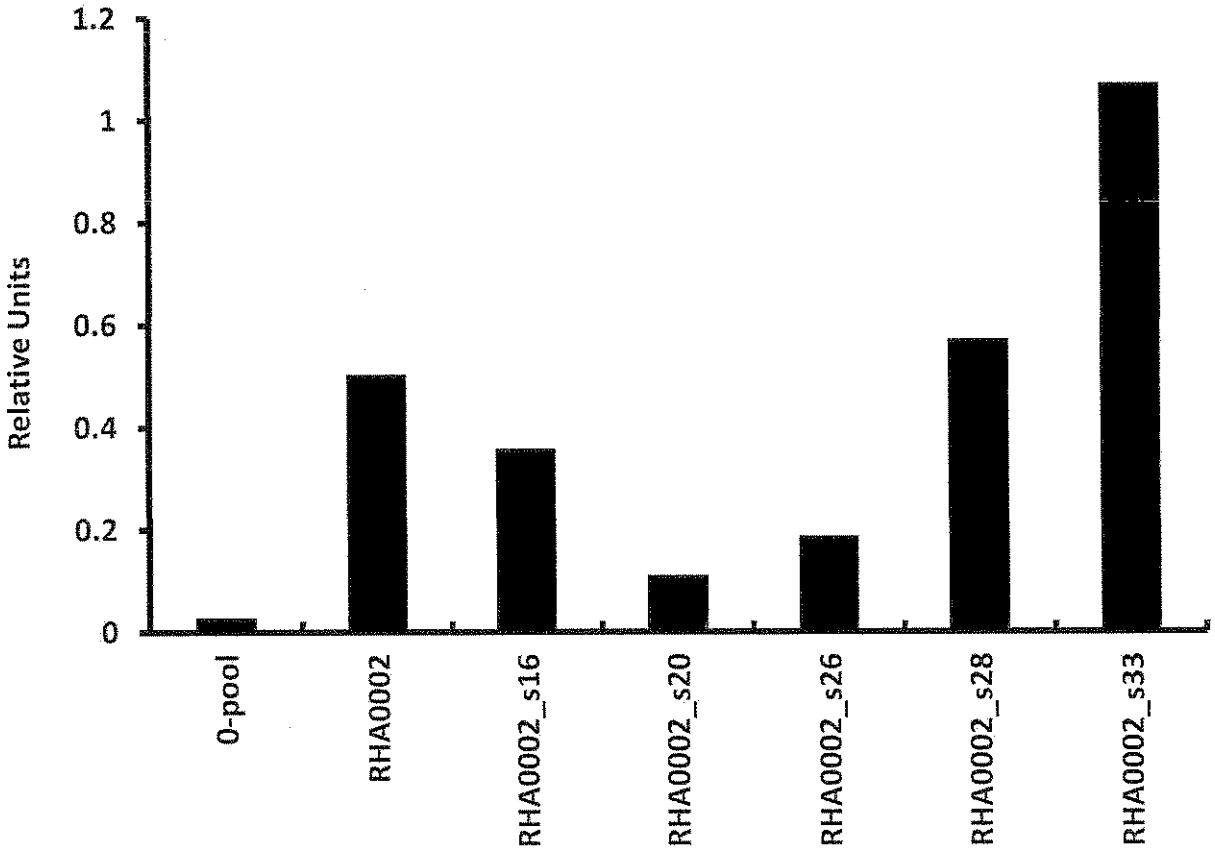

1.2
1
0.8
0.6
0.4
0.2
0
Relative Units
0-pool
RHA0002
RHA0002_s16
RHA0002_s20
RHA0002_s26
RHA0002_s28
RHA0002_s33

FIG. 17

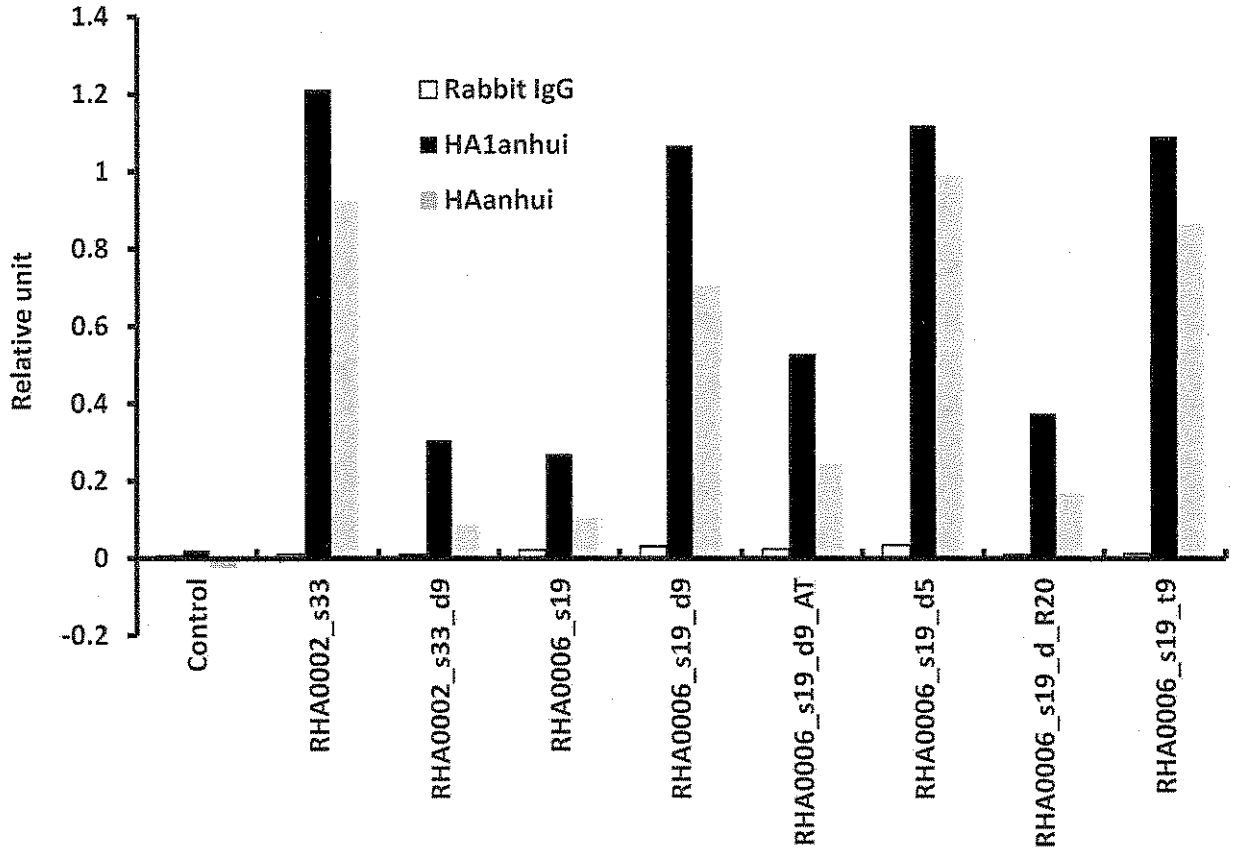
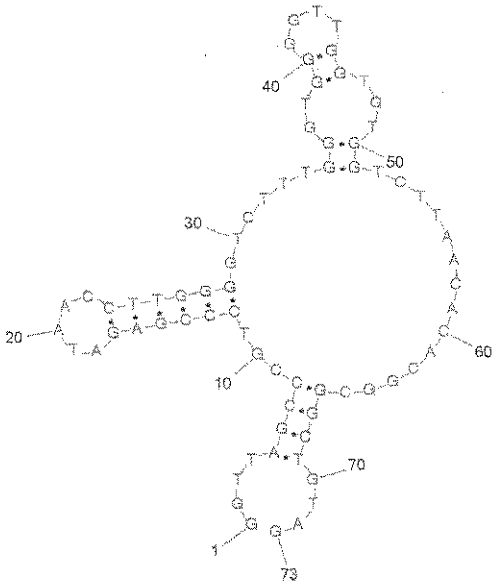
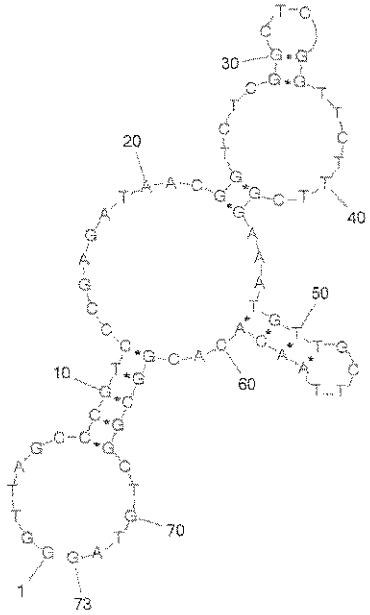

1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
Relative unit
Rabbit IgG
HA1anhui
HAanhui
Control
RHA0002_s33
RHA0002_s33_d9
RHA0006_s19
RHA0006_s19_d9
RHA0006_s19_d9_AT
RHA0006_s19_d5
RHA0006_s19_d_R20
RHA0006_s19_t9

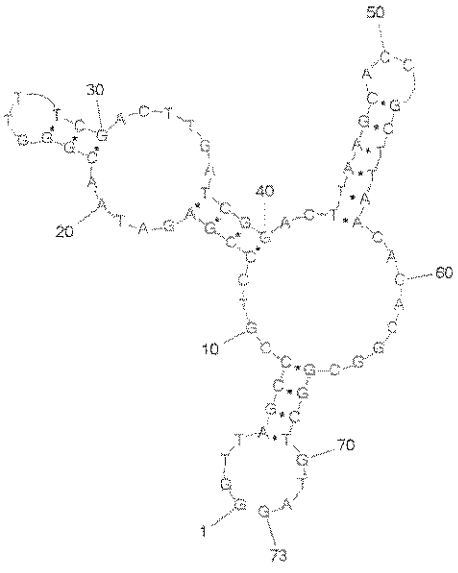
FIG. 18



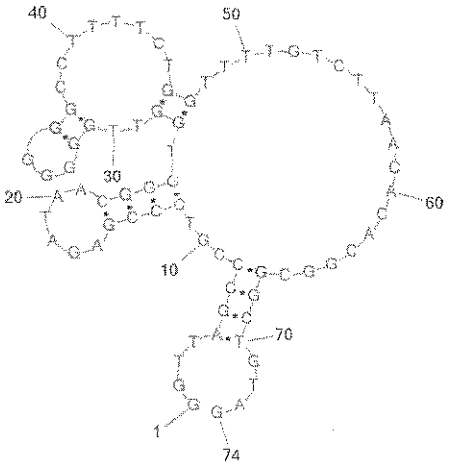
RHA0023
(SEQ ID NO: 1)



RHA0030
(SEQ ID NO: 2)

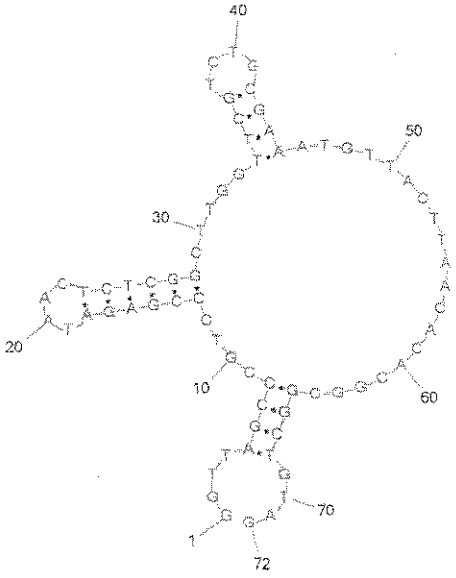


RHA0013
(SEQ ID NO: 3)

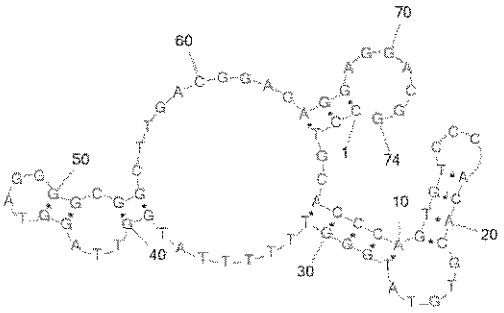


RHA0009
(SEQ ID NO: 4)

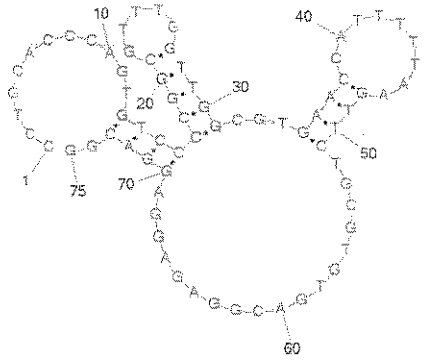
FIG. 19



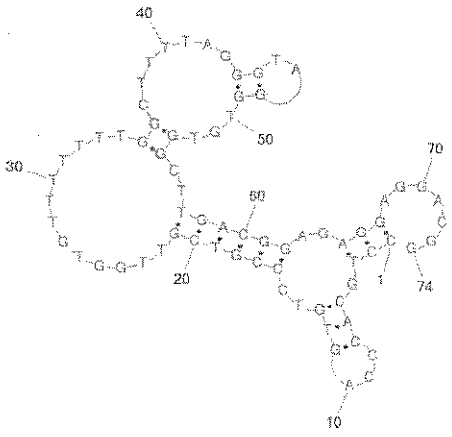
RHA0058
(SEQ ID NO: 5)



RHA0099
(SEQ ID NO: 6)

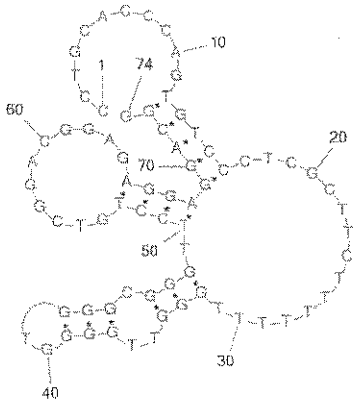


RHA0110
(SEQ ID NO: 7)

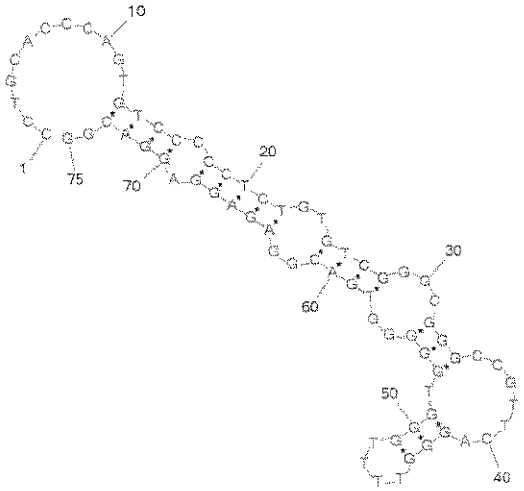


RHA0098
(SEQ ID NO: 8)

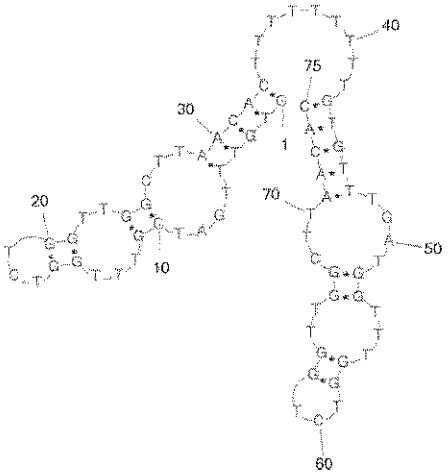
FIG. 20



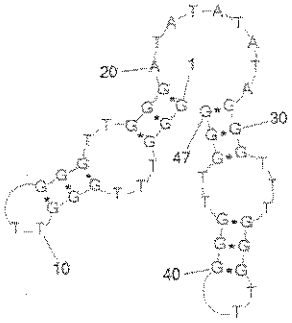
RHA0144
(SEQ ID NO: 9)



RHA0133
(SEQ ID NO: 10)

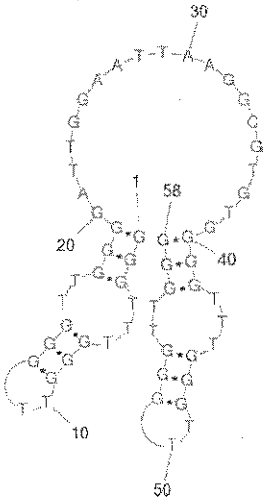


RHA0002_s33_d9
(SEQ ID NO: 48)

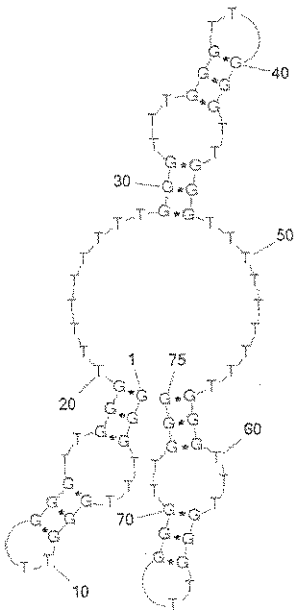


RHA0006_s19_d9_AT
(SEQ ID NO: 46)

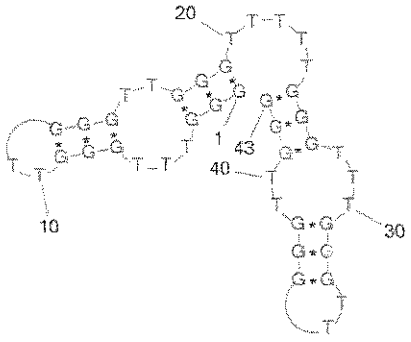
FIG. 21



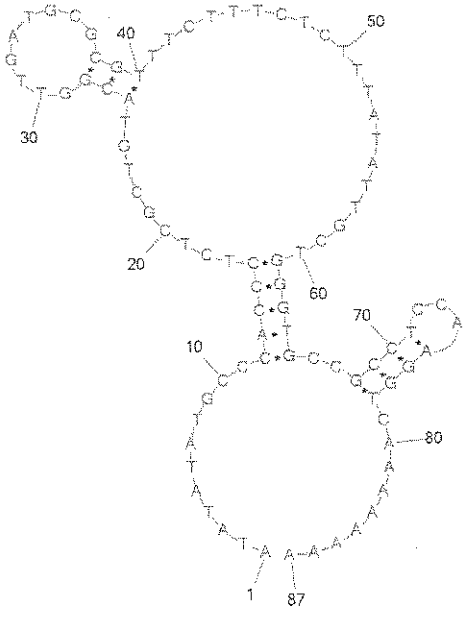
RHA0006_s19_d_R20
(SEQ ID NO: 47)



RHA0006_s19_t9
(SEQ ID NO: 51)

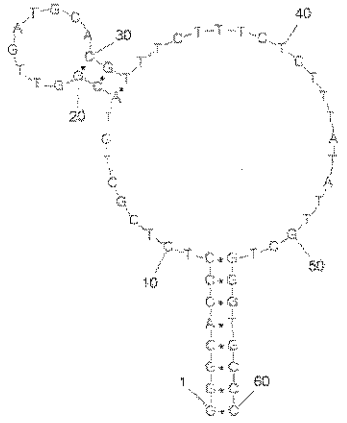


RHA0006__s19__d5
(SEQ ID NO: 33)

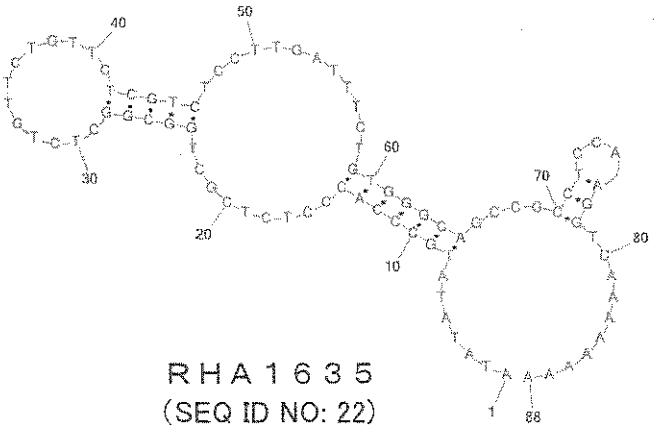


RHA1634
(SEQ ID NO: 20)

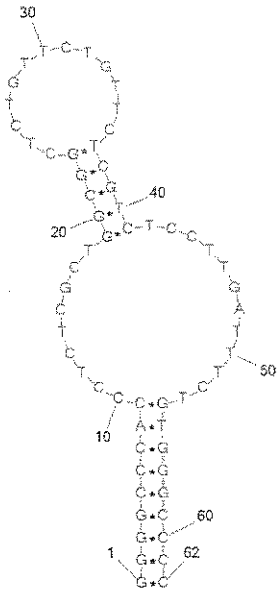
FIG. 22



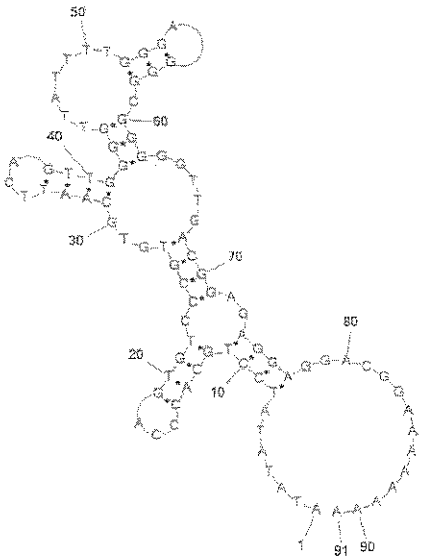
RHA1634__s60
(SEQ ID NO: 21)



RHA1635
(SEQ ID NO: 22)

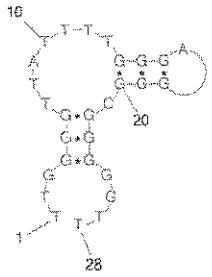


RHA1635__s62
(SEQ ID NO: 23)

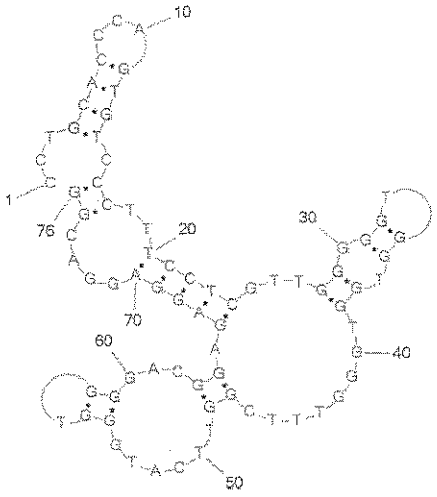


RHA0385
(SEQ ID NO: 24)

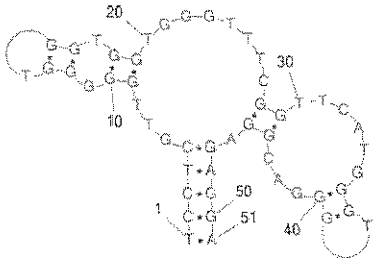
FIG. 23



RHA0385__s28
(SEQ ID NO: 25)



RHA0471
(SEQ ID NO: 26)



RHA0471__s51
(SEQ ID NO: 27)

FIG. 24

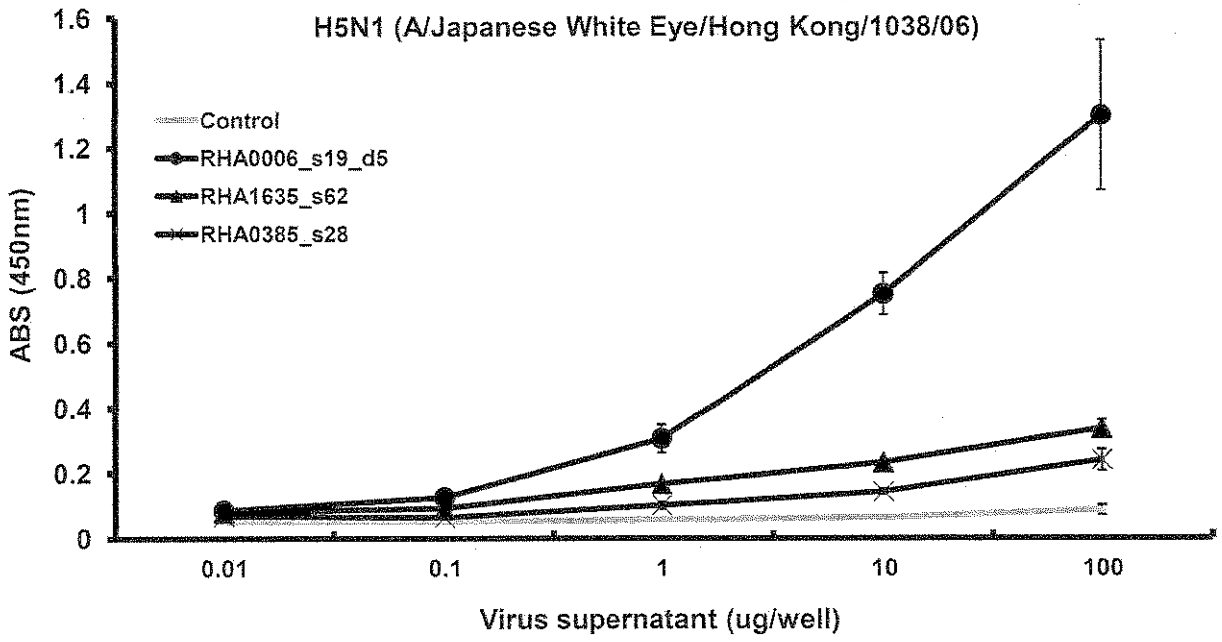

H5N1 (A/Japanese White Eye/Hong Kong/1038/06)
Control
RHA0006_s19_d5
RHA1635_s62
RHA0385_s28
ABS (450nm)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.01
0.1
1
10
100
Virus supernatant (ug/well)

FIG. 25

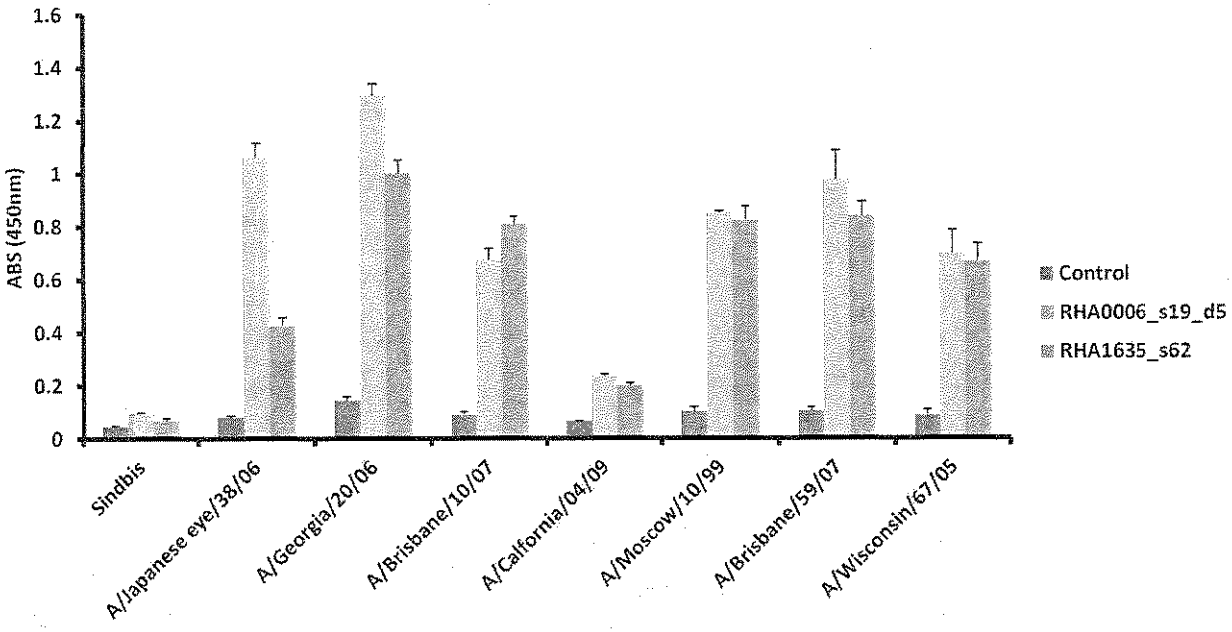

ABS (450nm)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Control
RHA0006_s19_d5
RHA1635_s62
Sindbis
A/Japanese eye/38/06
A/Georgia/20/06
A/Brisbane/10/07
A/California/04/09
A/Moscow/10/99
A/Brisbane/59/07
A/Wisconsin/67/05

FIG. 26

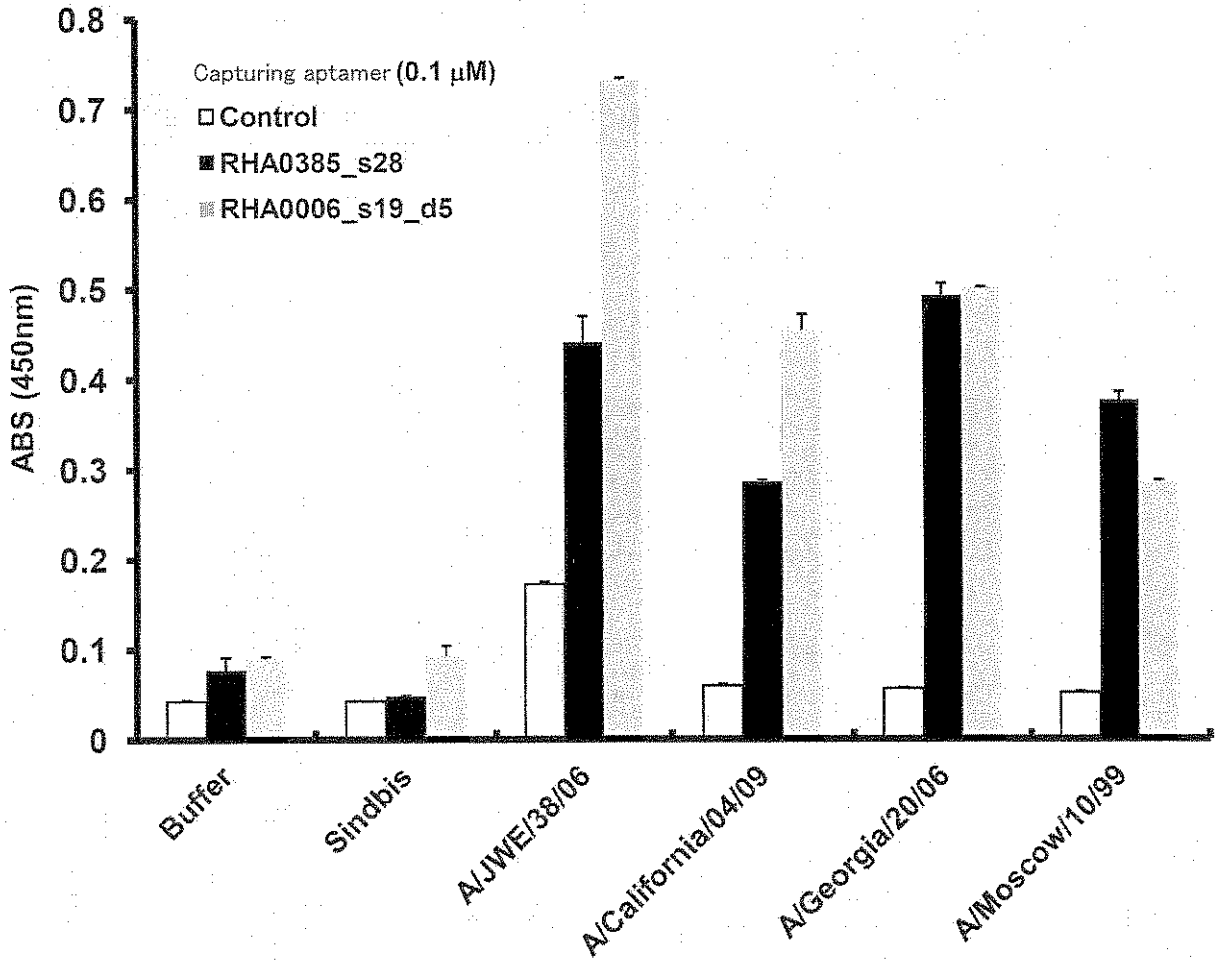

0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
ABS (450nm)
Capturing aptamer (0.1 μM)
Control
RHA0385_s28
RHA0006_s19_d5
Buffer
Sindbis
A/JWE/38/06
A/California/04/09
A/Georgia/20/06
A/Moscow/10/99

FIG. 27