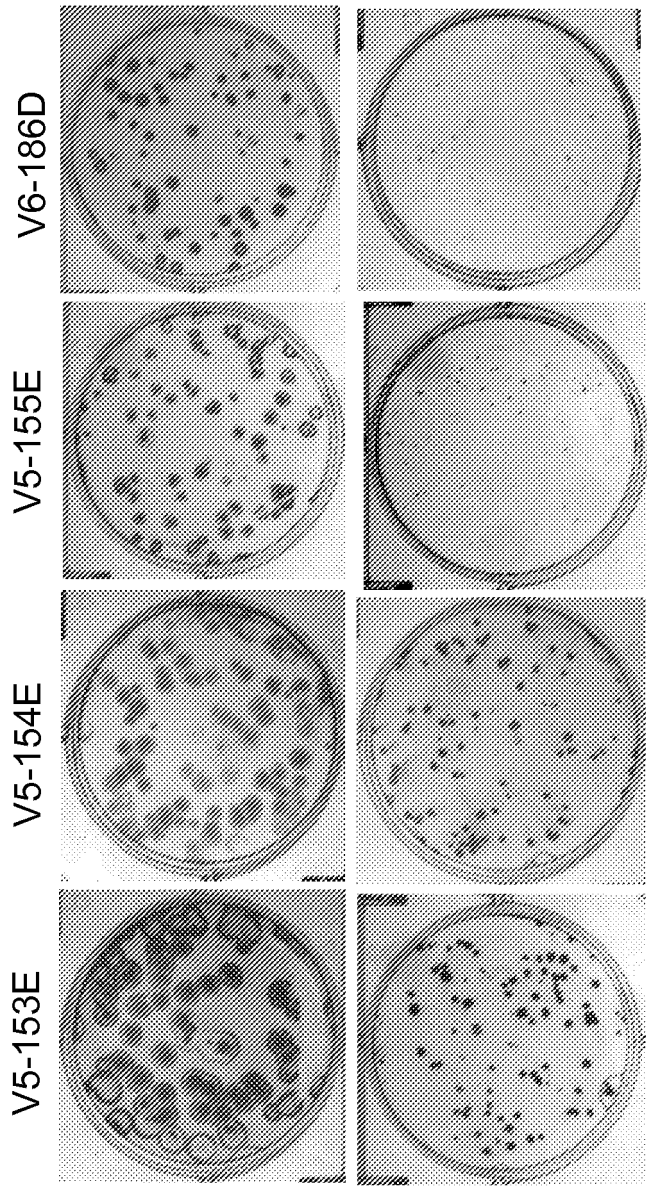


Fig. 1A

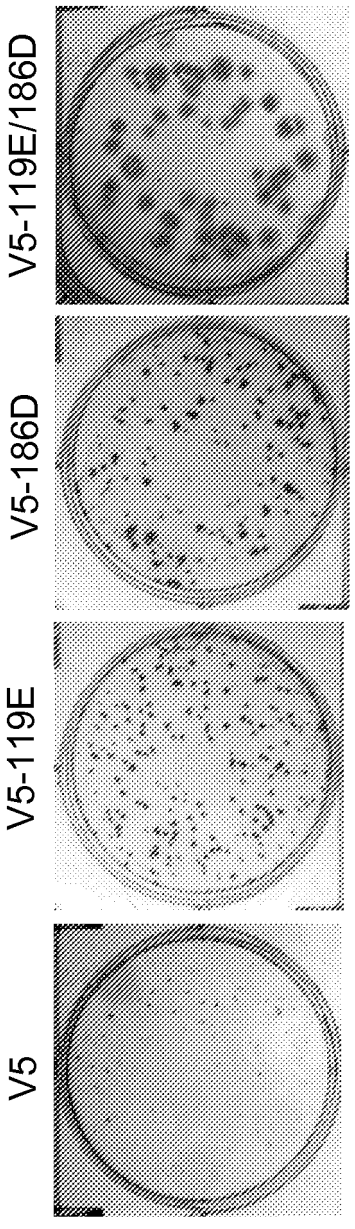


Fig. 1B

```
                        1                                                  50
A/California/7/09       DTLCIGYHAN NSTDTVDTVL EKNVTVTHSV NLLEDKHNGK LCKLRGVAPL
A/swine/Iowa/1/76       DTLCIGYHAN NSTDTVDTIL EKNVTVTHSV NLLEDRHNGK LCKLGGIAPL
A/Swine/31              DTLCIGYHAN NSTDTVDTVL EKNVTVTHSV NLLEDSHNGK LCRLGGIAPL
A/South Dakota/6/07     DTICIGYHAN NSTDTVDTVL EKNVTVTHSV NLLENSHNGR LCLLKGIAPL

                        51                                                 100
A/California/7/09       HLGKCNIAGW ILGNPECESL STASSWSYIV ETPSSDNGTC YPGDFIDYEE
A/swine/Iowa/1/1976     HLGKCNIAGW LLGNPECELL FTVSSWSYIV ETSNSDNGTC YPGDFINYEE
A/Swine/31              QLGKCNIAGW LLGNPECDLL LTVSSWSYIV ETSNSDNGTC YPGDFIDYEE
A/South Dakota/6/07     QLGNCSVAGW ILGNPECELL ISKESWSYIV EKPNPENGTC YPGHFADYEE

                        101              119                               150
A/California/7/09       LREQLSSVSS FERFEIFPKT SSWPNHDSNK GVTAACPHAG AKSFYKNLIW
A/swine/Iowa/1/76       LREQLSSVSS FEKFEIFPKT SSWPNHETNR GVTAACPYAG ANSFYRNLIW
A/Swine/31              LREQLSSVSS FEKFEIFPKT SSWPNHETTR GVTAACPYAG ASSFYRNLLW
A/South Dakota/6/07     LREQLSSVSS LERFEIFPKE SSWPNHTVT. GVSASCSHNG ESSFYRNLLW

                      153-155                          186                  200
A/California/7/09       LVKKGNSYPK LSKSYINDKG KEVLVLWGIH HPSTSADQQS LYQNADAYVF
A/swine/Iowa/1/76       LVKKGNSYPK LSKSYVNNKG KEVLVLWGIH HPPTSTDQQS LYQNADAYVF
A/Swine/31              LVKKENSYPK LSKSYVNNKG KEVLVLWGVH HPPTSTDQQS LYQNADAYVS
A/South Dakota/6/07     LTGKNGLYPN LSKSYANNKE KEVLVLWGVH HPPNIGNQKA LYHTENAYVS

                        201                                                250
A/California/7/09       VGSSRYSKKF KPEIAIRPKV RXXEGRMNYY WTLVEPGDKI TFEATGNLVV
A/swine/Iowa/1/76       VGTSKYNRKF KPEIAARPKV RGQAGRMNYY WTLIESGDTI TFEATGNLVV
A/Swine/31              VGSSKYDRRF TPEIAARPKV RGQAGRMNYY WTLLEPGDTI TFEATGNLVA
A/South Dakota/6/07     VVSSHYSRKF TPEIAKRPKV RDQEGRINYY WTLLEPGDTI IFEANGNLIA

                        251                    278                         300
A/California/7/09       PRYAFAMERN AGSGIIISDT PVHDCNTTCQ TPKGAINTSL PFQNIHPITI
A/swine/Iowa/1/76       PRYAFAMNRG FGSGIIISDA PVHDCNTKCQ TPKGAINTSL PFQNIHPVTI
A/Swine/31              PRYAFALNRG SESGIITSDA PVHDCDTKCQ TPHGAINSSL PFQNIHPVTI
A/South Dakota/6/07     PRYAFALSRG FGSGIINSNA PMDKCDAKCQ TPQGAINSSL PFQNVHPVTI

                        301
A/California/7/09       GKCPKYVKST KLRLATGLRN IPSIQSR
A/swine/Iowa/1/76       GECPKYVKST KLRMATGLRN IPSIQSR
A/Swine/31              GECPKYVKST KLRMVTGLRN IPSIQSR
A/South Dakota/6/07     GECPKYVRSA KLRMVTGLRN IPSIQSR
```

Fig. 2

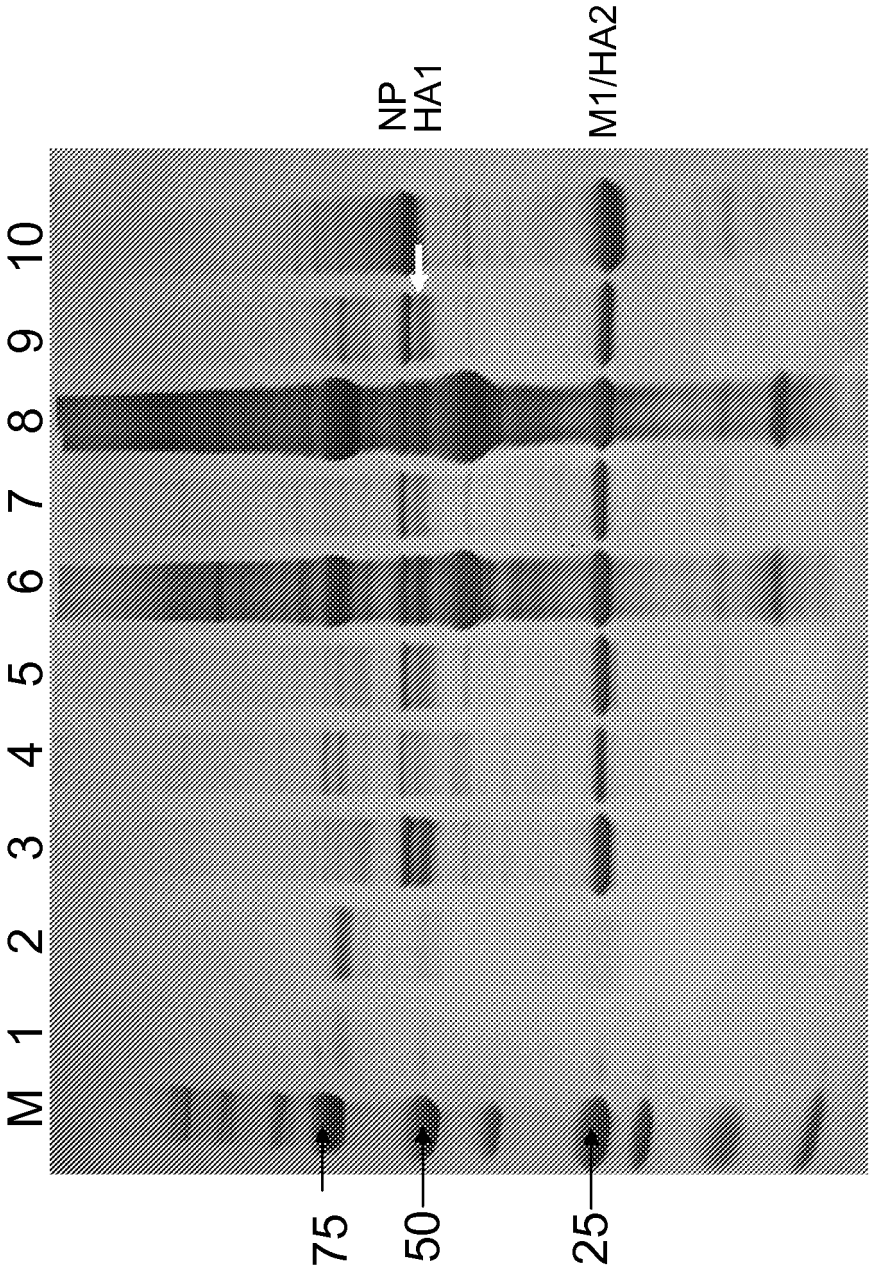


Fig. 3A

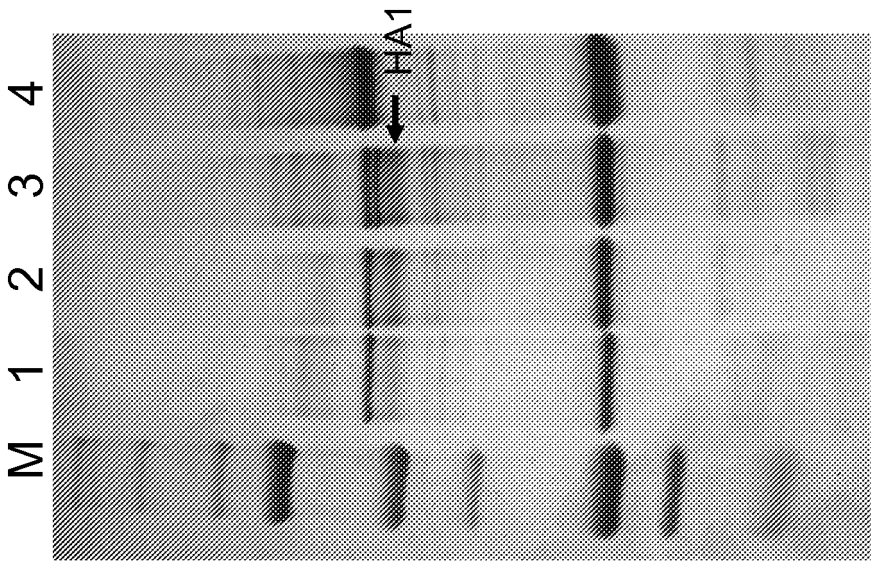


Fig. 3B

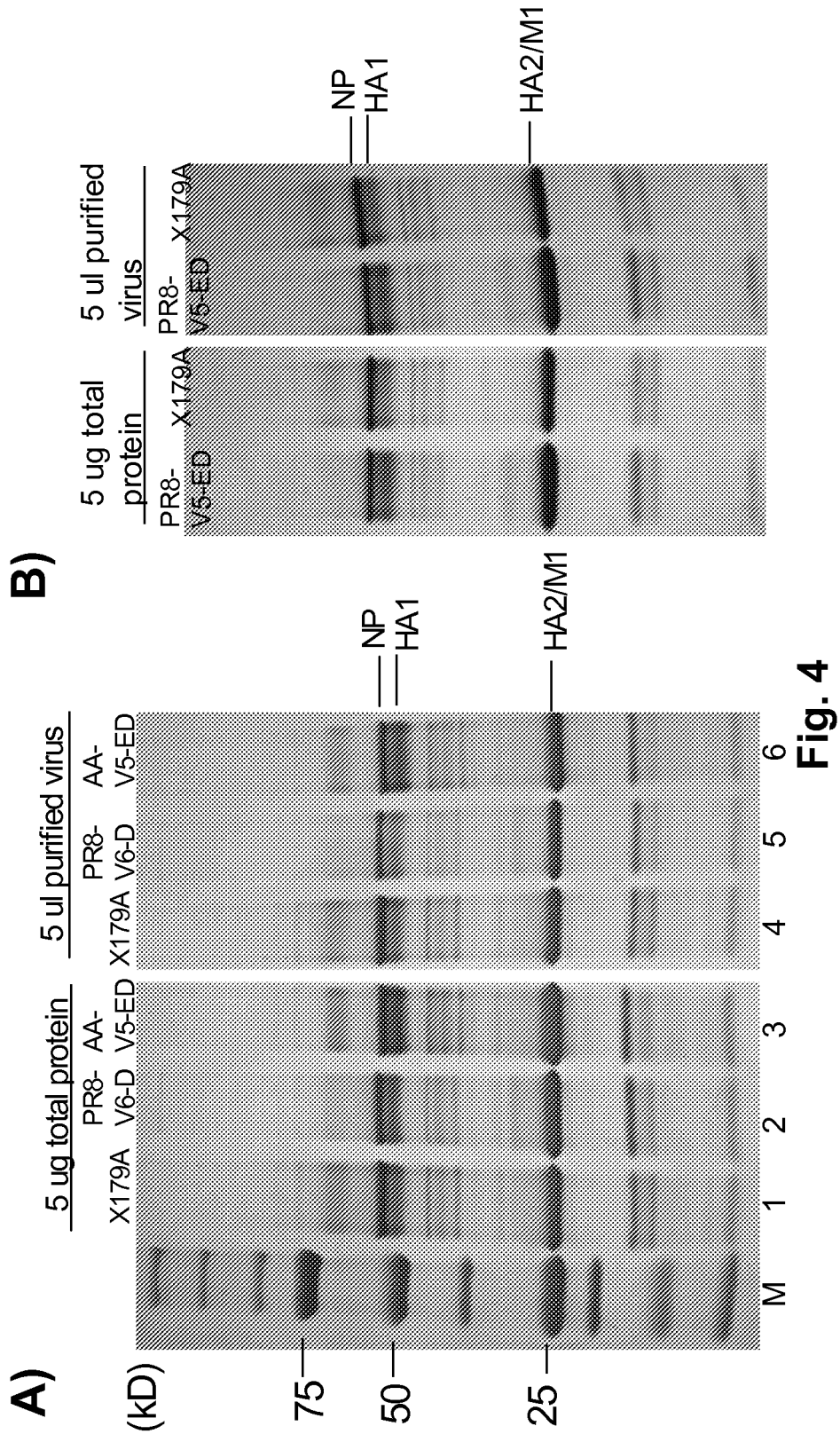

A)
(kD)
75
50
25
5 ug total protein
PR8-X179A
PR8-V6-D
AA-V5-ED
5 ul purified virus
PR8-X179A
PR8-V6-D
AA-V5-ED
M
1
2
3
4
5
6
NP
HA1
HA2/M1
B)
5 ug total protein
PR8-V5-ED
X179A
5 ul purified virus
PR8-V5-ED
X179A
NP
HA1
HA2/M1

Fig. 4

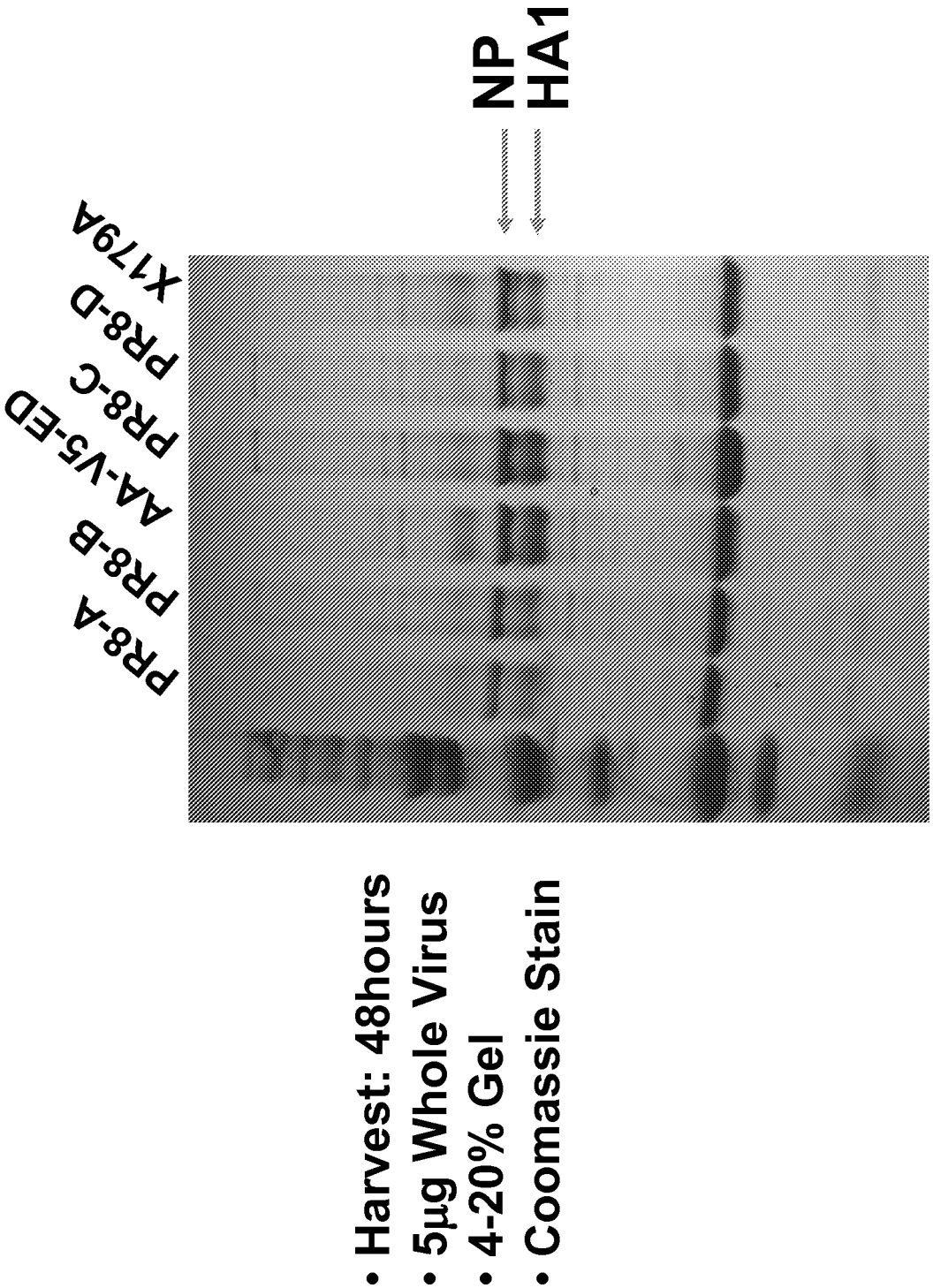
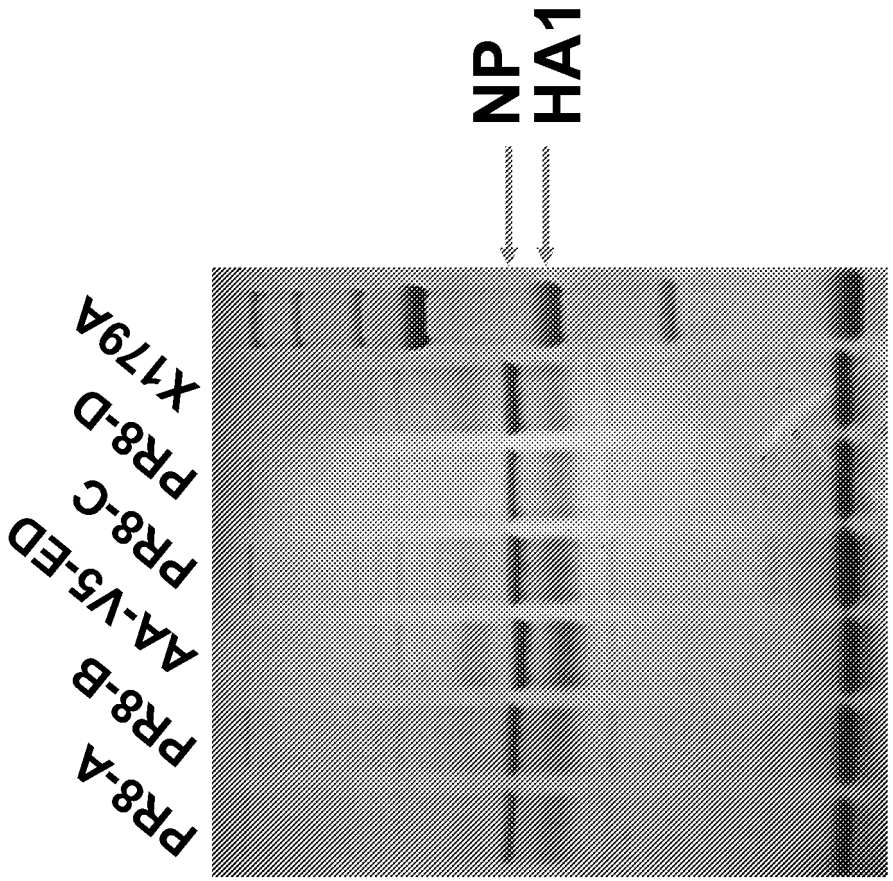

NP
HA1
PR8-A
PR8-B
AA-V5-ED
PR8-C
PR8-D
X179A
• Harvest: 48hours
• 5µg Whole Virus
• 4-20% Gel
• Coomassie Stain

Fig. 5A



- Harvest: 60hours
- Equal Volume
- 10% Gel
- Coomassie Stain

Fig. 5B

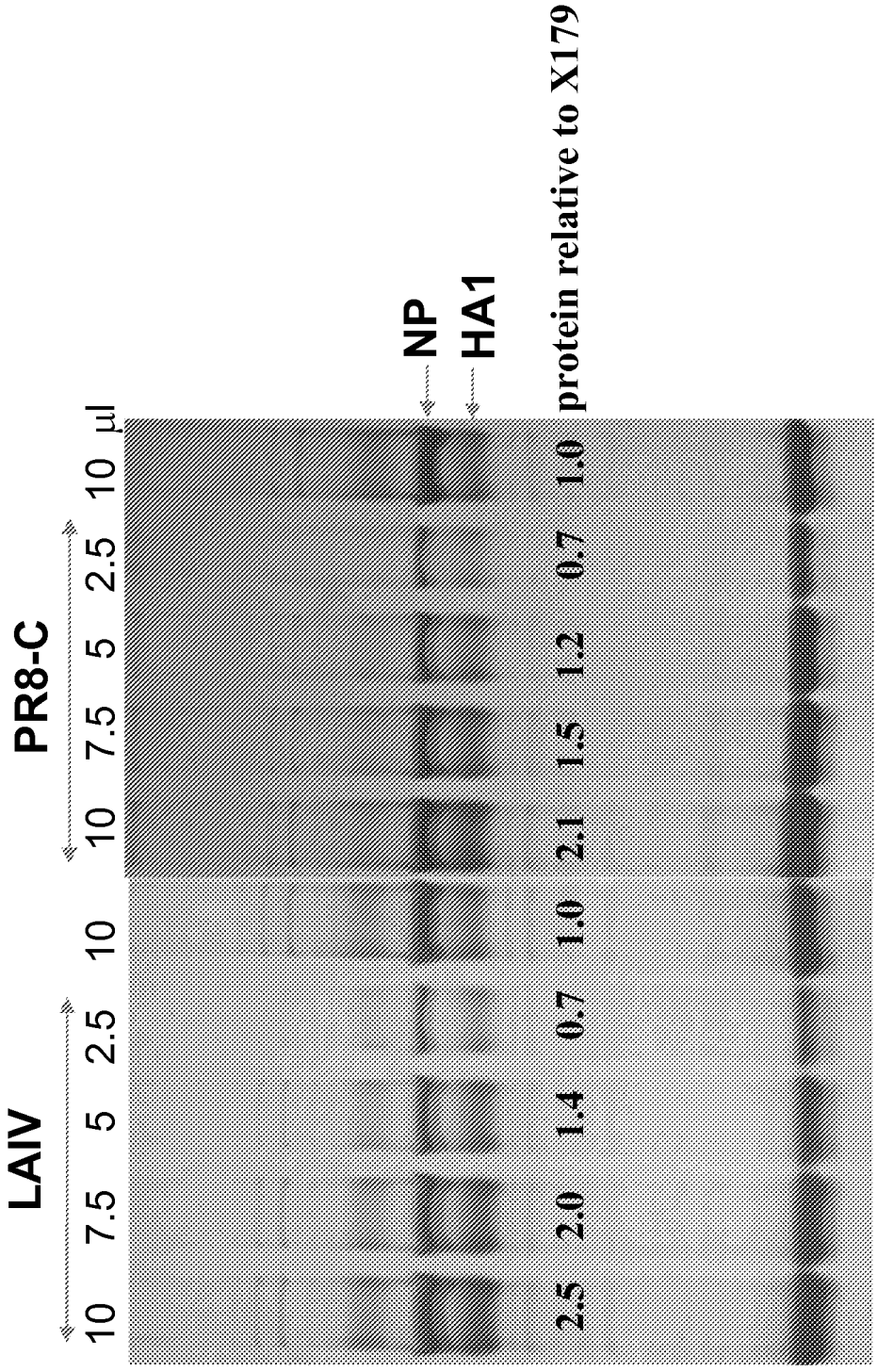

LAIV
10 7.5 5 2.5 10
PR8-C
10 7.5 5 2.5 10 µl
NP
HA1
protein relative to X179
2.5 2.0 1.4 0.7 1.0
2.1 1.5 1.2 0.7 1.0

Fig. 6