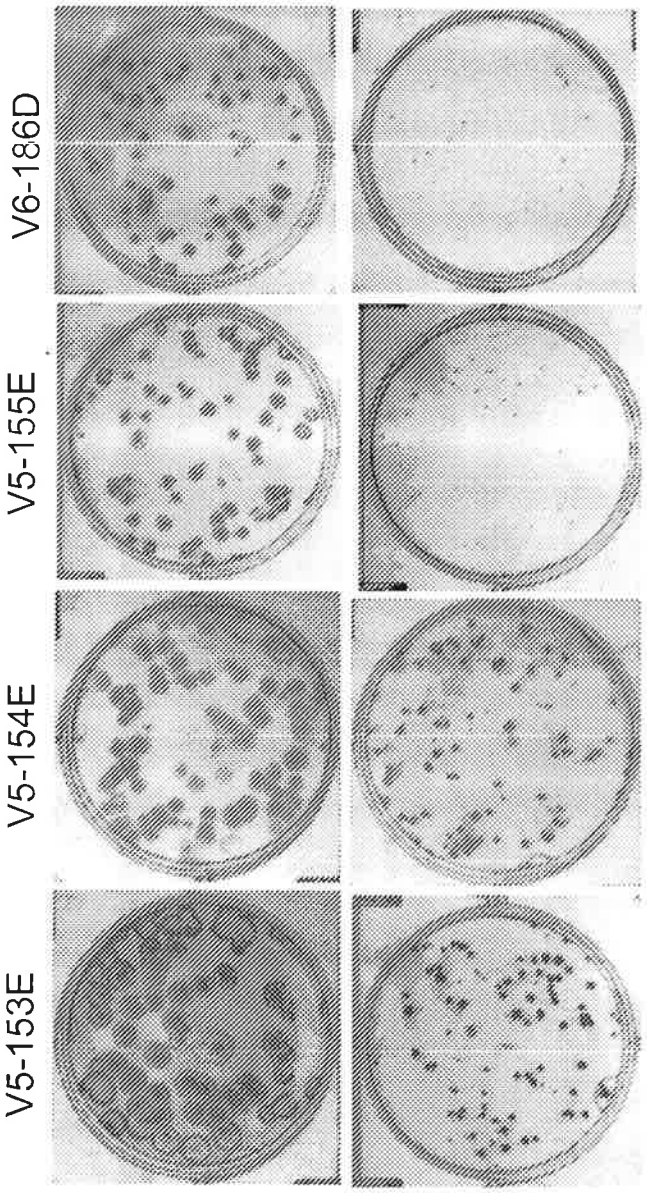


Fig. 1A

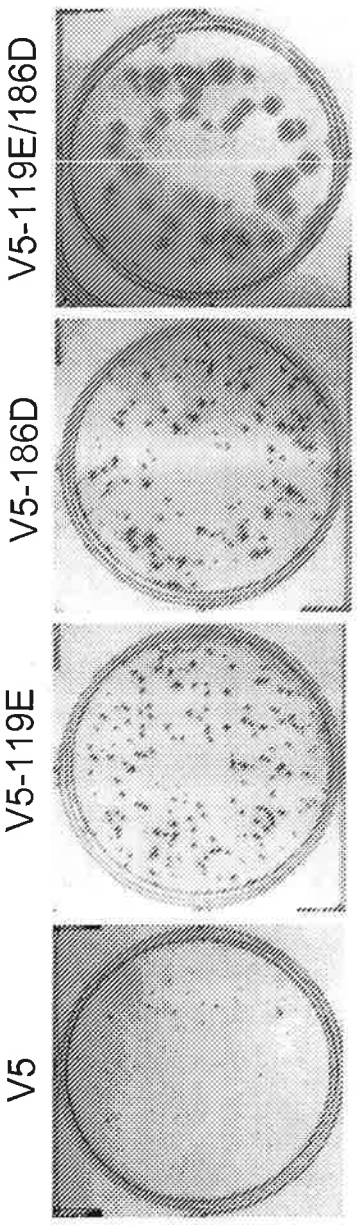


Fig. 1B

```
                          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

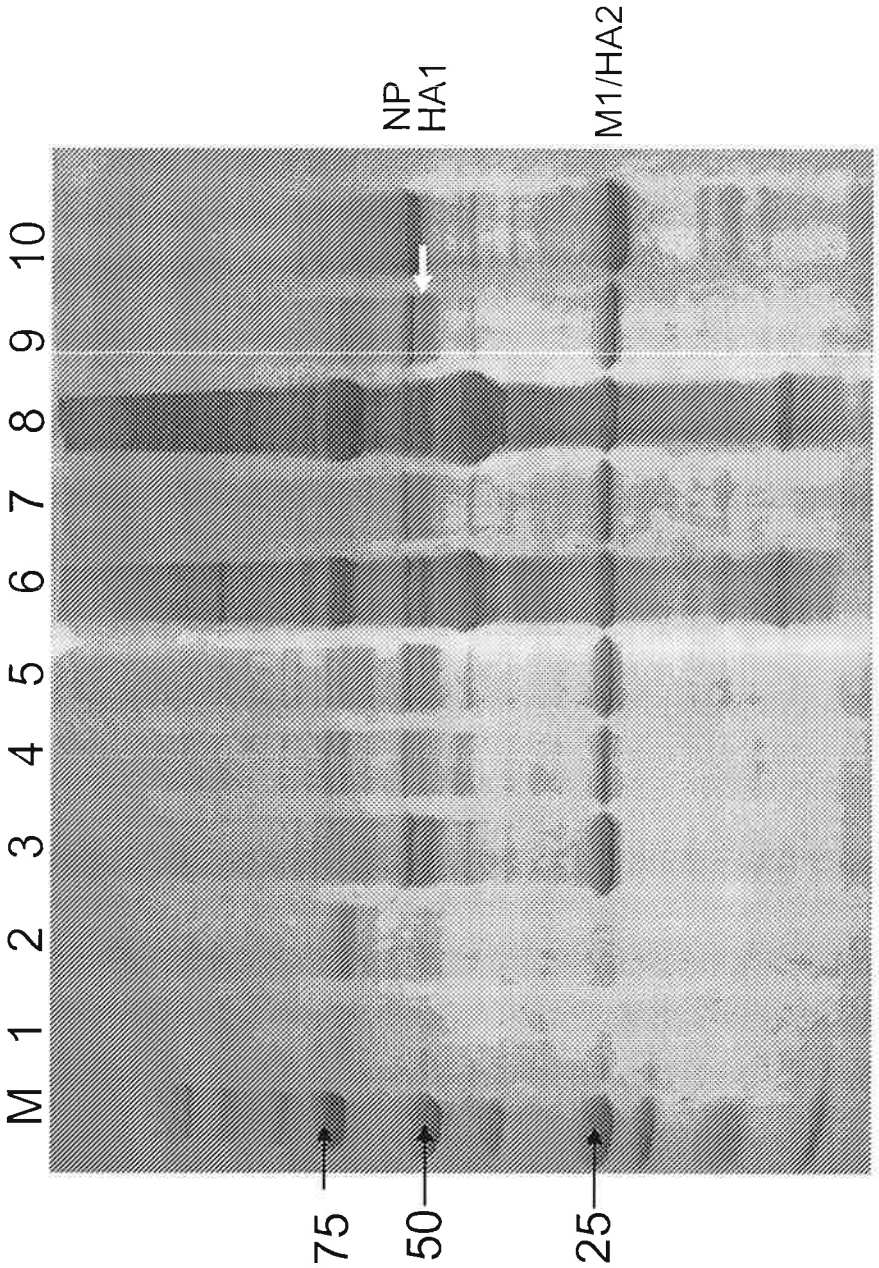


Fig. 3A

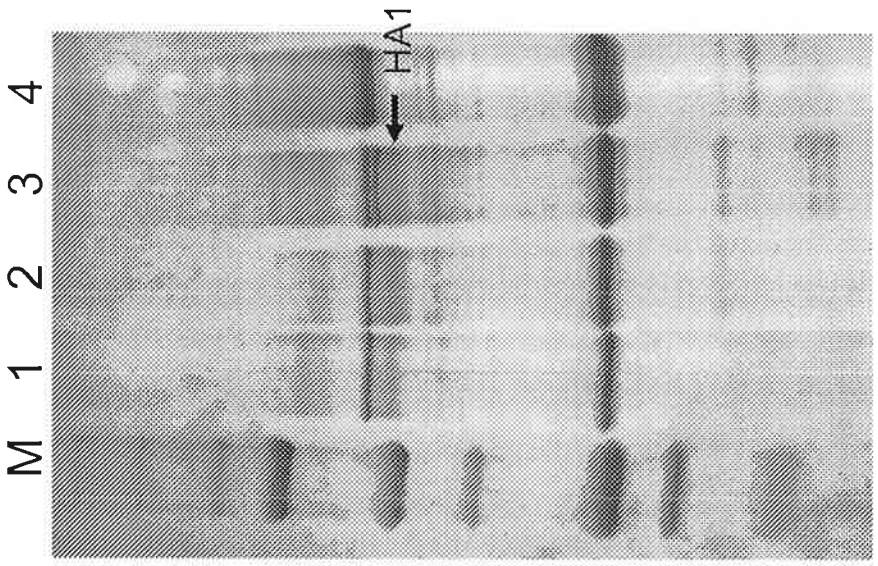


Fig. 3B

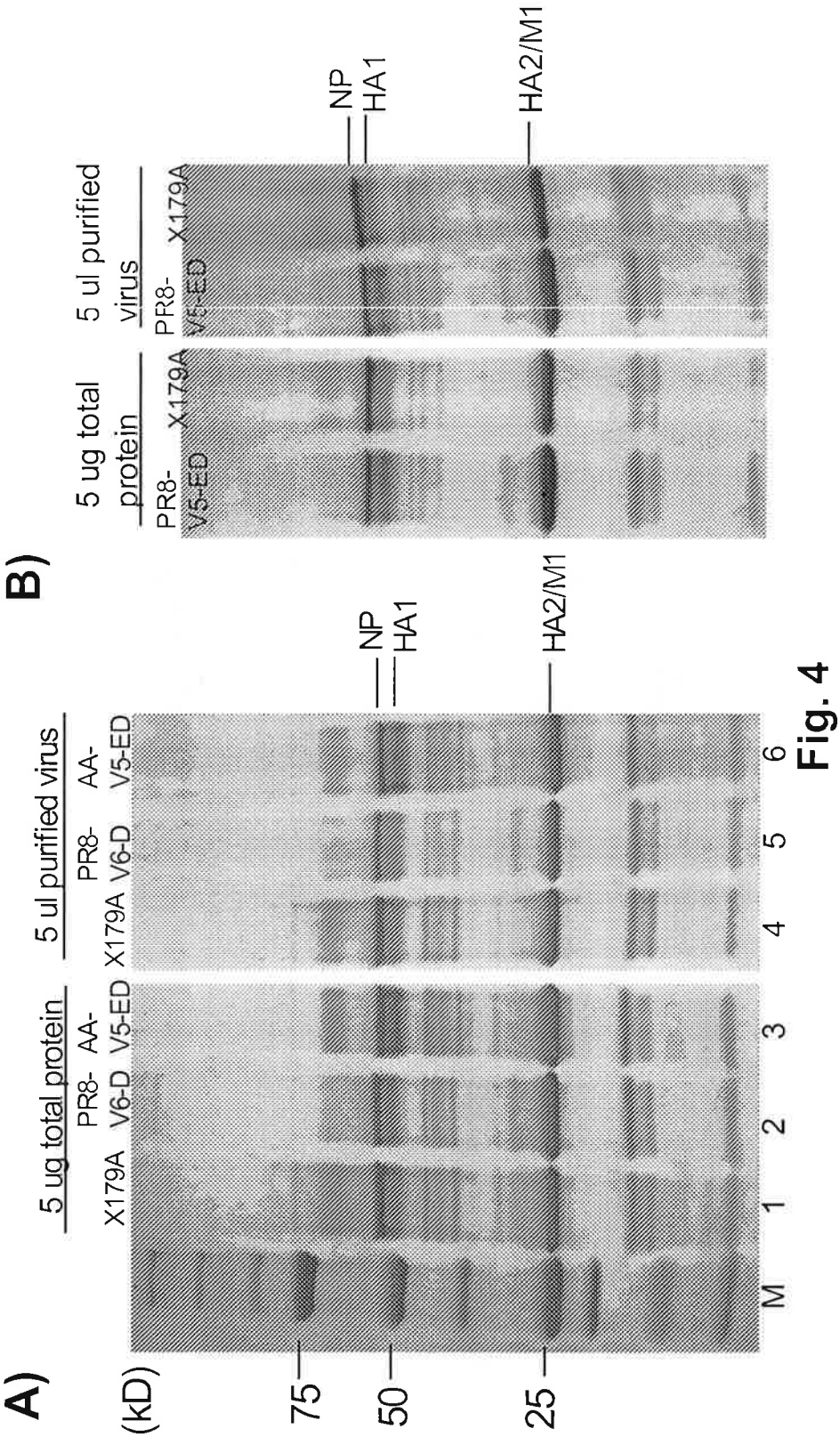

A)
5 ug total protein
5 ul purified virus
PR8-X179A
PR8-V6-D
AA-V5-ED
M
1
2
3
4
5
6
(kD)
75
50
25
NP
HA1
HA2/M1
B)
5 ug total protein
5 ul purified virus
PR8-V5-ED
X179A
NP
HA1
HA2/M1

Fig. 4

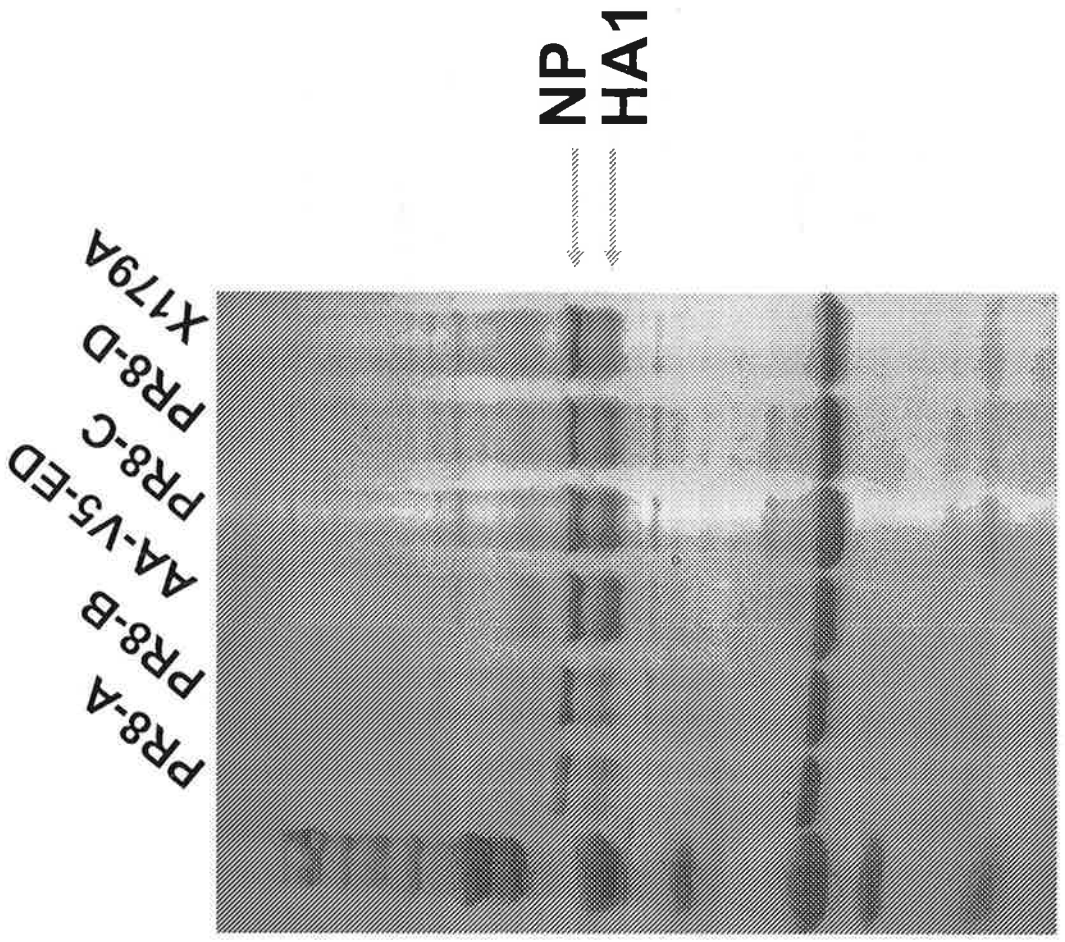
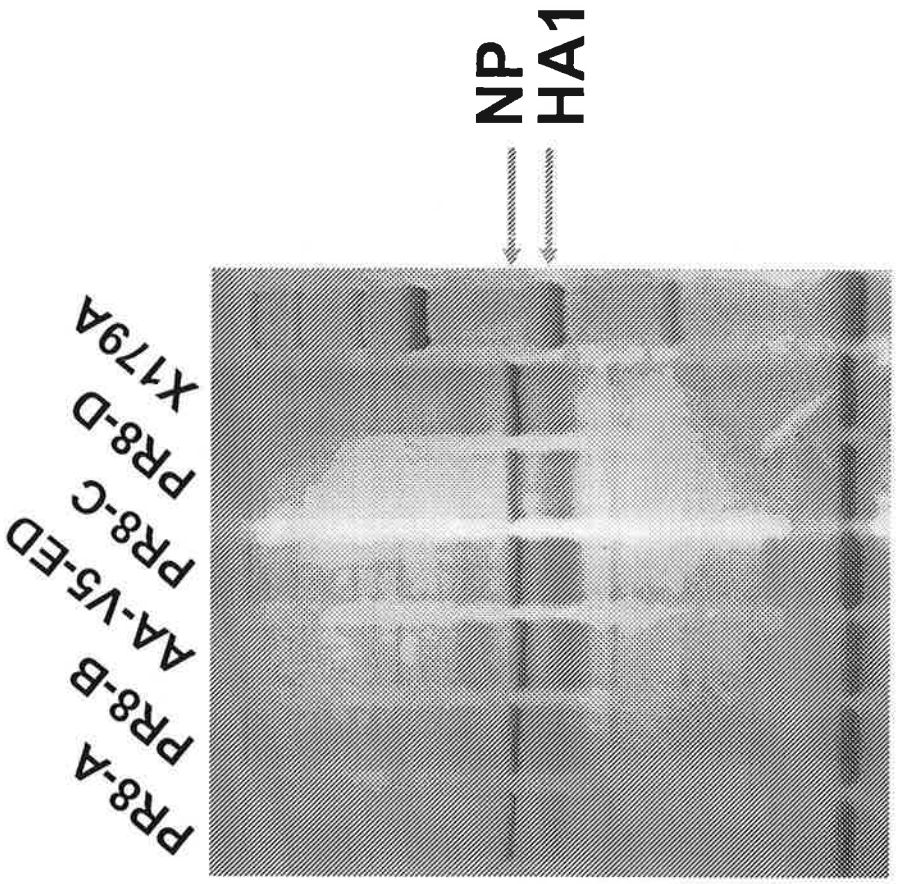

NP
HA1
PR8-A
PR8-B
AA-V5-ED
PR8-C
PR8-D
X179A
• Harvest: 48hours
• 5µg Whole Virus
• 4-20% Gel
• Coomassie Stain

Fig. 5A



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

Fig. 5B

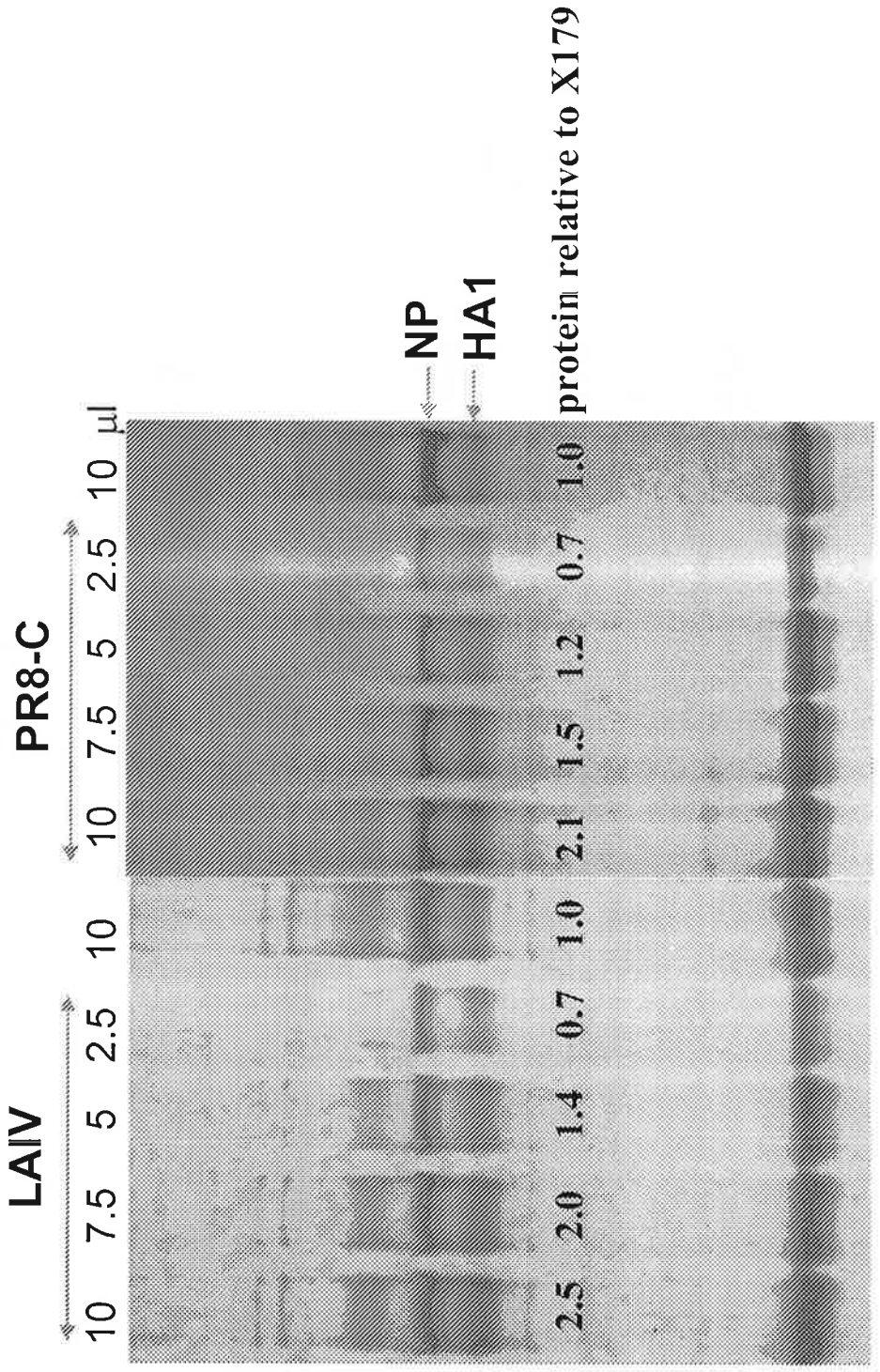

LAIV
PR8-C
10 7.5 5 2.5 10 µl
10 7.5 5 2.5 10 µl
NP
HA1
protein relative to X179
2.5 2.0 1.4 0.7 1.0
2.1 1.5 1.2 0.7 1.0

Fig. 6