Supplementary Figures:

Figure S1. Antibody isotyping of mice serum vaccinated with diverse subtypes of NAtet or NAmono proteins. (A to F) The isotypes of NA-specific antibodies of serum from mice vaccinated with $H1N1_{PR8}NA_{tet}$ (A), $H1N1_{PR8}NA_{mono}$ (B), $H5N1_{VN}NA_{tet}$ (C), $H5N1_{VN}NA_{mono}$ (D), $H7N9_{SH}NA_{tet}$ (F) and $H7N9_{SH}NA_{mono}$ (G) were determined via ELISA.

Figure S2. The protective efficacy of $H1N1_{p09}NA_{tet}$ and $H3N2_{HK}NA_{tet}$. (A) The experimental design for immunization and challenge studies. Six- to eight-week-old BALB/c mice were immunized twice at 2-week interval with 20 μg of $H1N1_{p09}NA_{tet}$ and $H3N2_{HK}NA_{tet}$ proteins adjuvanted with aluminum (i.p.) respectively. Mice were challenged with 5 LD_{50} of A/PR8 (H1N1) virus intranasally (i.n.) two weeks after the final immunization. (B to E) Survival rates (B and D) and weight loss (C and E) were monitored for 14 days post-infection.

Figure S1

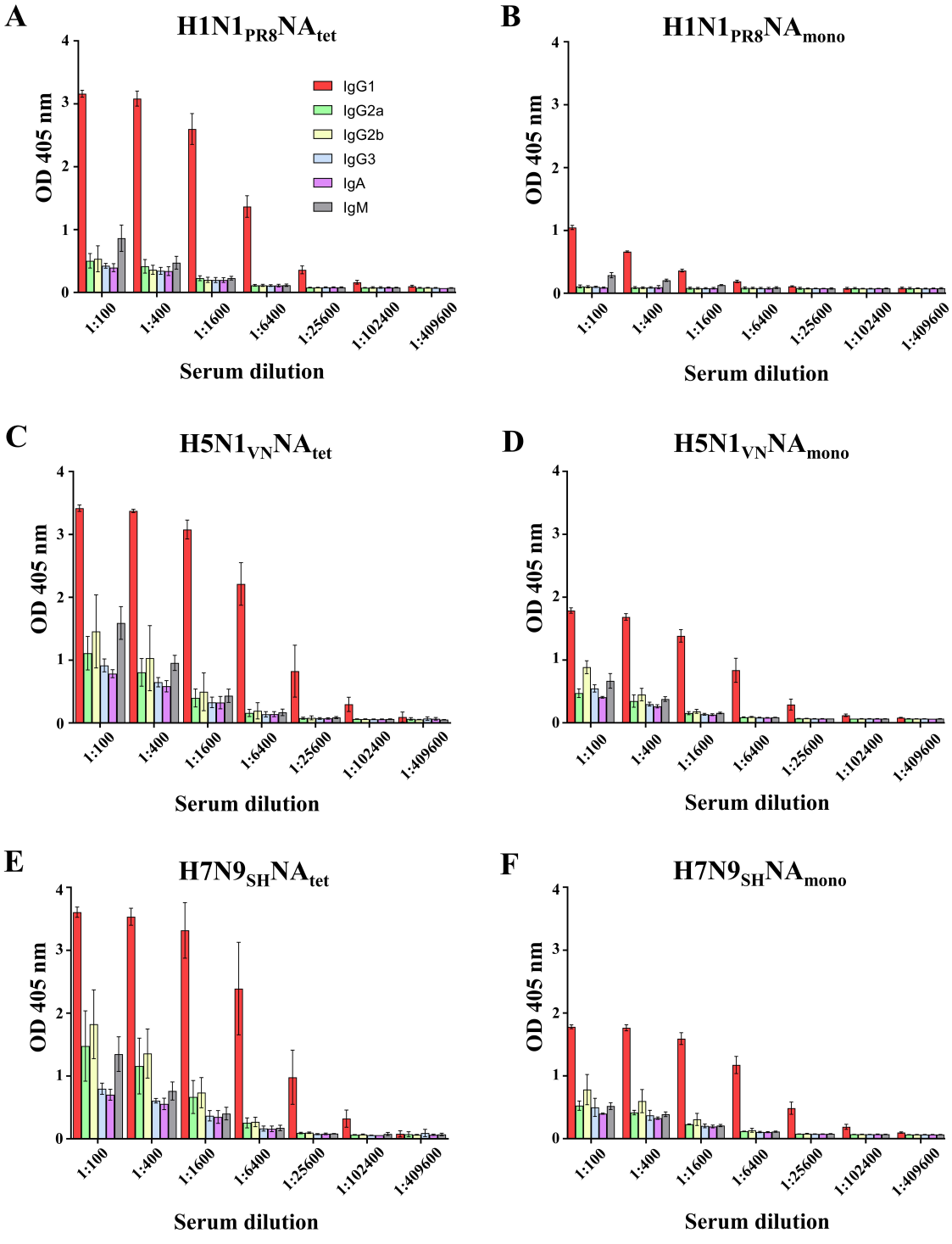
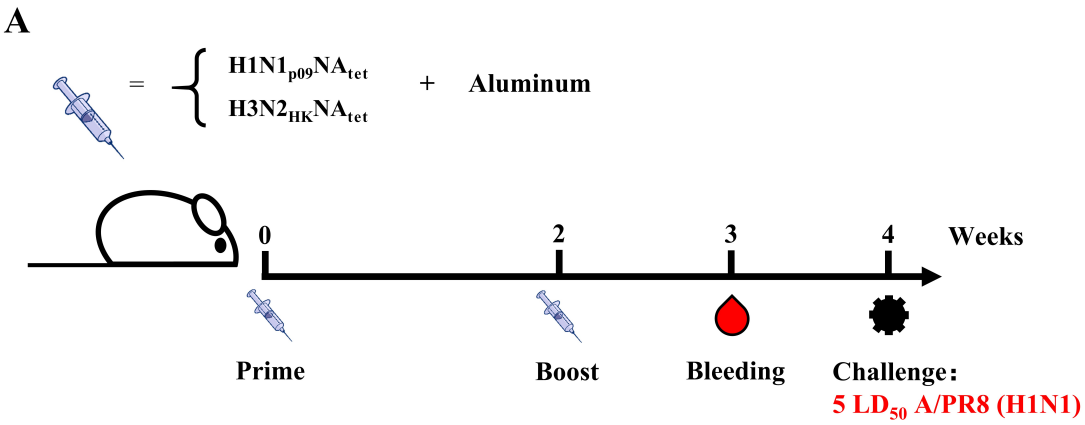
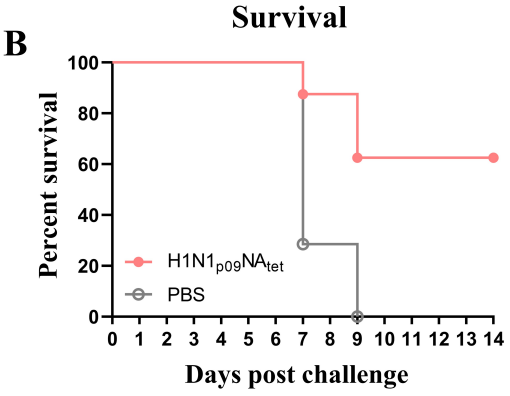
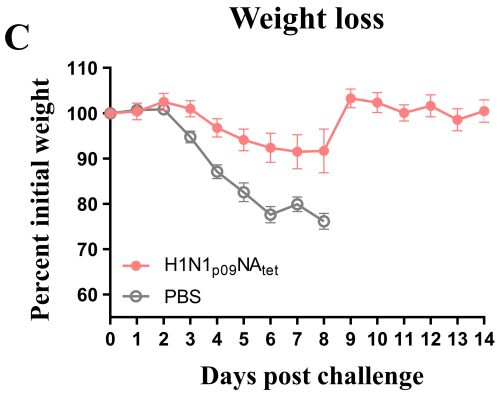
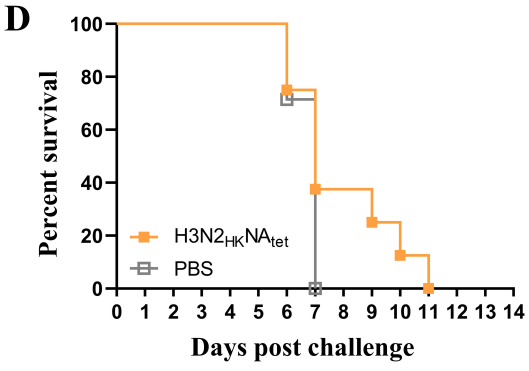

A
H1N1PR8NAtet
B
H1N1PR8NAmono
C
H5N1VNNAtet
D
H5N1VNNAmono
E
H7N9SHNAtet
F
H7N9SHNAmono
IgG1
IgG2a
IgG2b
IgG3
IgA
IgM
OD 405 nm
0
1
2
3
4
1:100
1:400
1:1600
1:6400
1:25600
1:102400
1:409600
Serum dilution

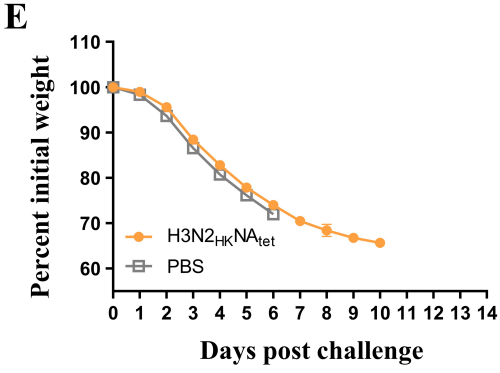
Figure S2


A
= { H1N1p09NAtet
H3N2HKNAtet
+ Aluminum
0
2
3
4
Weeks
Prime
Boost
Bleeding
Challenge:
5 LD50 A/PR8 (H1N1)


B
Survival
Percent survival
Days post challenge
H1N1p09NAtet
PBS


C
Weight loss
Percent initial weight
Days post challenge
H1N1p09NAtet
PBS


D
Percent survival
Days post challenge
H3N2HKNAtet
PBS


E
Percent initial weight
Days post challenge
H3N2HKNAtet
PBS