

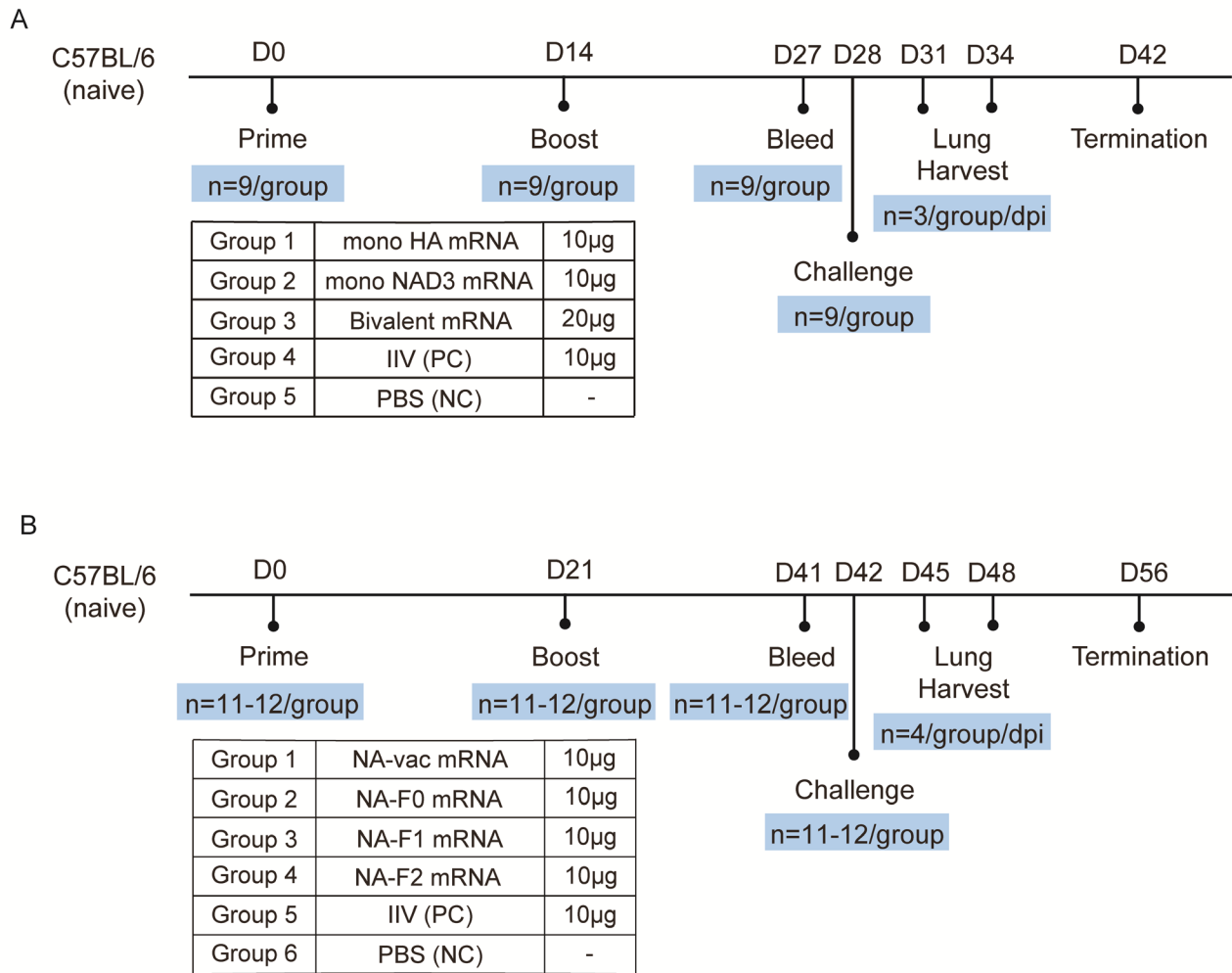


Fig. S1. Experimental design of the animal studies. (A) Initial animal study evaluating mRNA vaccines. Mice received prime and boost immunizations on days 0 and 14, respectively, followed by serum collection on day 27 and viral challenge on day 28. Lung tissues were collected at 3 and 6 dpi, and the remaining mice were monitored until termination on day 42. (B) Subsequent animal study evaluating the optimized NA mRNA antigens. Mice received prime and boost immunizations on days 0 and 21, respectively, followed by serum collection on day 41 and viral challenge on day 42. Lung tissues were collected at 3 and 6 dpi, and the remaining mice were monitored until termination on day 56. Group sizes and vaccine doses are indicated in the Fig. IIV, inactivated influenza vaccine; PC, positive control; NC, negative control.