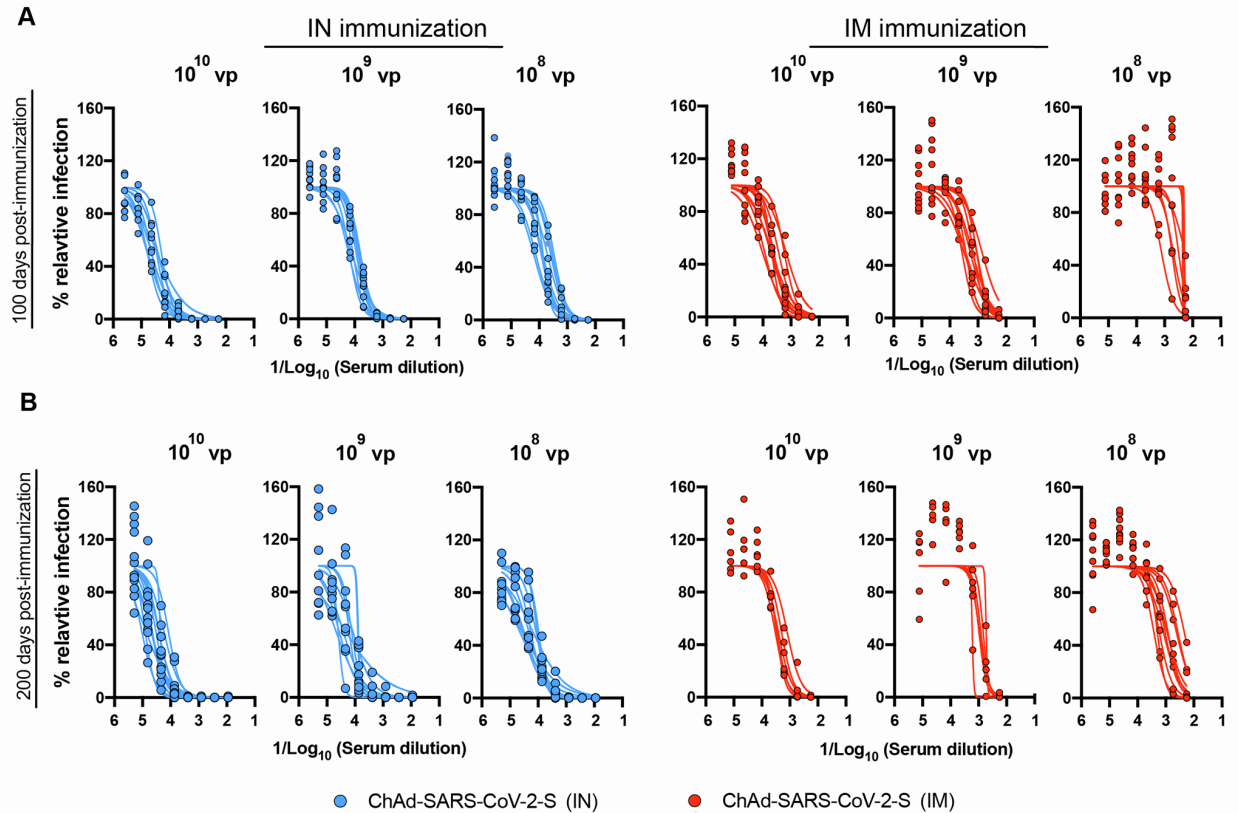


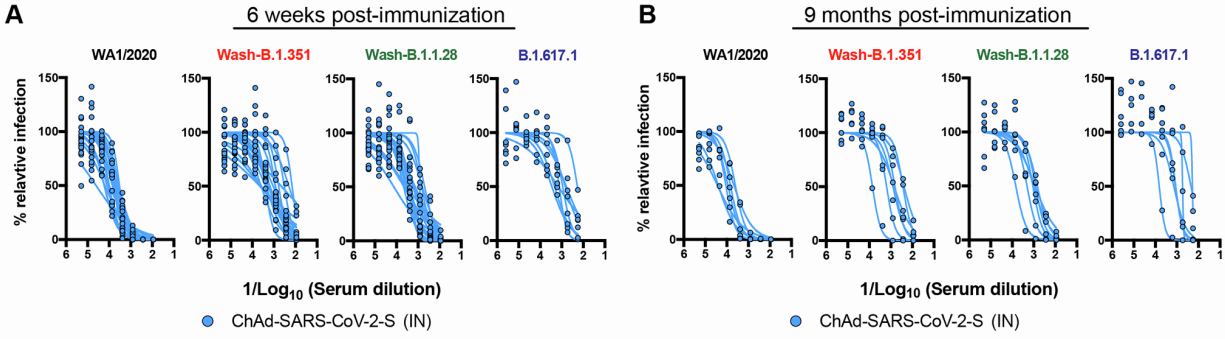
**Supplemental information**

**An intranasal vaccine durably protects  
against SARS-CoV-2 variants in mice**

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**Figure S1. ChAd-SARS-CoV-2-S vaccine induces neutralizing antibodies as measured by FRNT. Related to Figure 1.** Five-week old female BALB/c mice were immunized via IN or IM route with a single  $10^{10}$ ,  $10^9$ , or  $10^8$  dose of ChAd-SARS-CoV-2-S. Serum samples from ChAd-SARS-CoV-2-S vaccinated mice were collected at days 100 (A) or 200 (B) after immunization and assayed for neutralizing activity by FRNT. Serum neutralization curves corresponding to individual mice are shown for the indicated vaccines ( $n = 6-14$  per group). Each point represents the mean of two technical replicates.



**Figure S2. ChAd-SARS-CoV-2-S vaccine induces neutralizing antibodies as measured by FRNT. Related to Figure 4.** Five-week-old K18-hACE2 female mice were immunized with  $10^9$  vp ChAd-control or ChAd-SARS-CoV-2-S via an IN route. Serum samples were collected at six weeks (**A**) or nine months (**B**) after immunization and assayed for neutralizing activity against WA1/2020, Wash-B.1.351, Wash-B.1.1.28, or B.1.617.1 by FRNT. Serum neutralization curves corresponding to individual mice are shown for the indicated vaccines ( $n = 7-20$  per group). Each point represents the mean of two technical replicates.