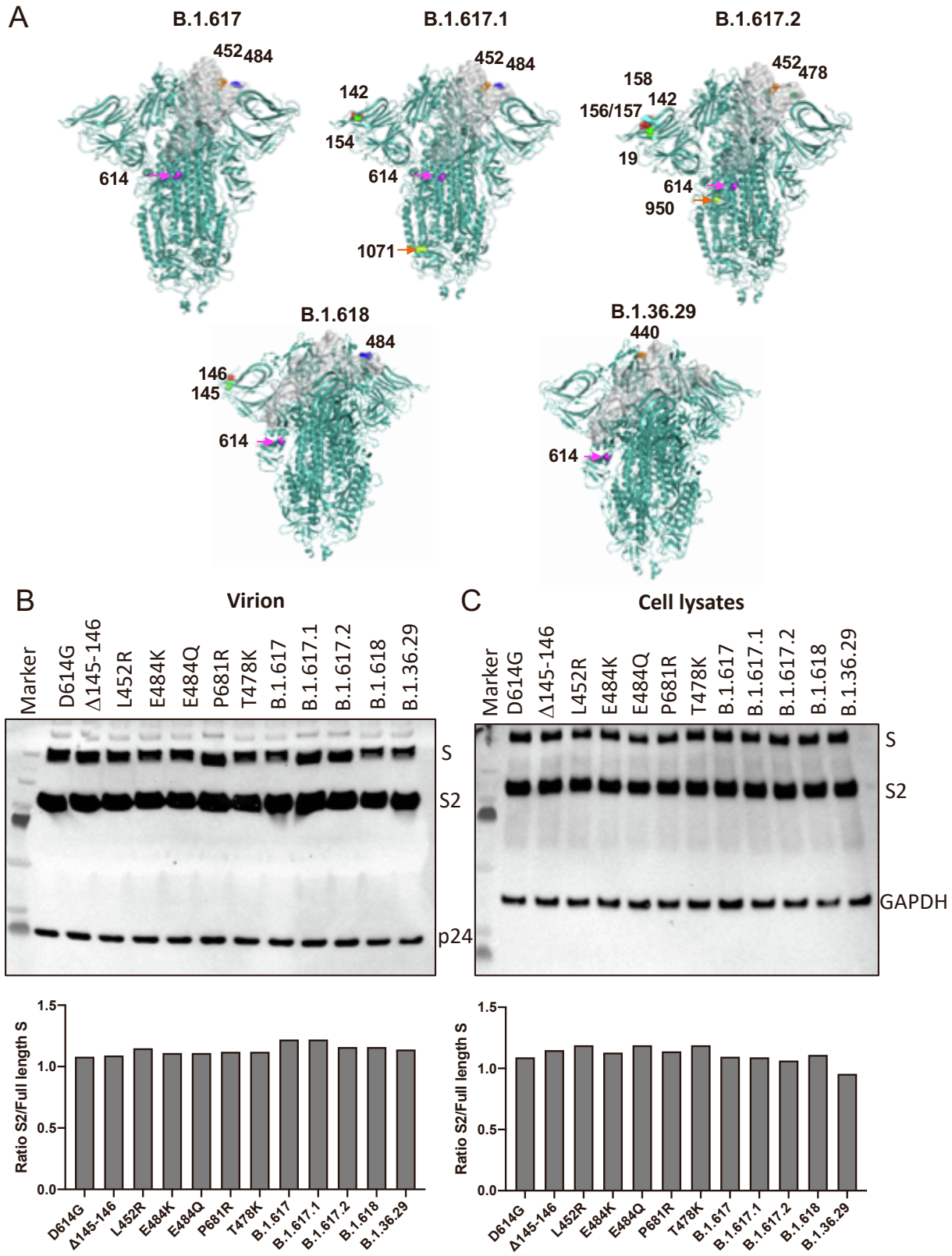
iScience, Volume *24*

Supplemental information

Partial resistance of SARS-CoV-2 Delta variants to vaccine-elicited antibodies and convalescent sera

Takuya Tada, Hao Zhou, Belinda M. Dcosta, Marie I. Samanovic, Mark J. Mulligan, and Nathaniel R. Landau

Supplementary information

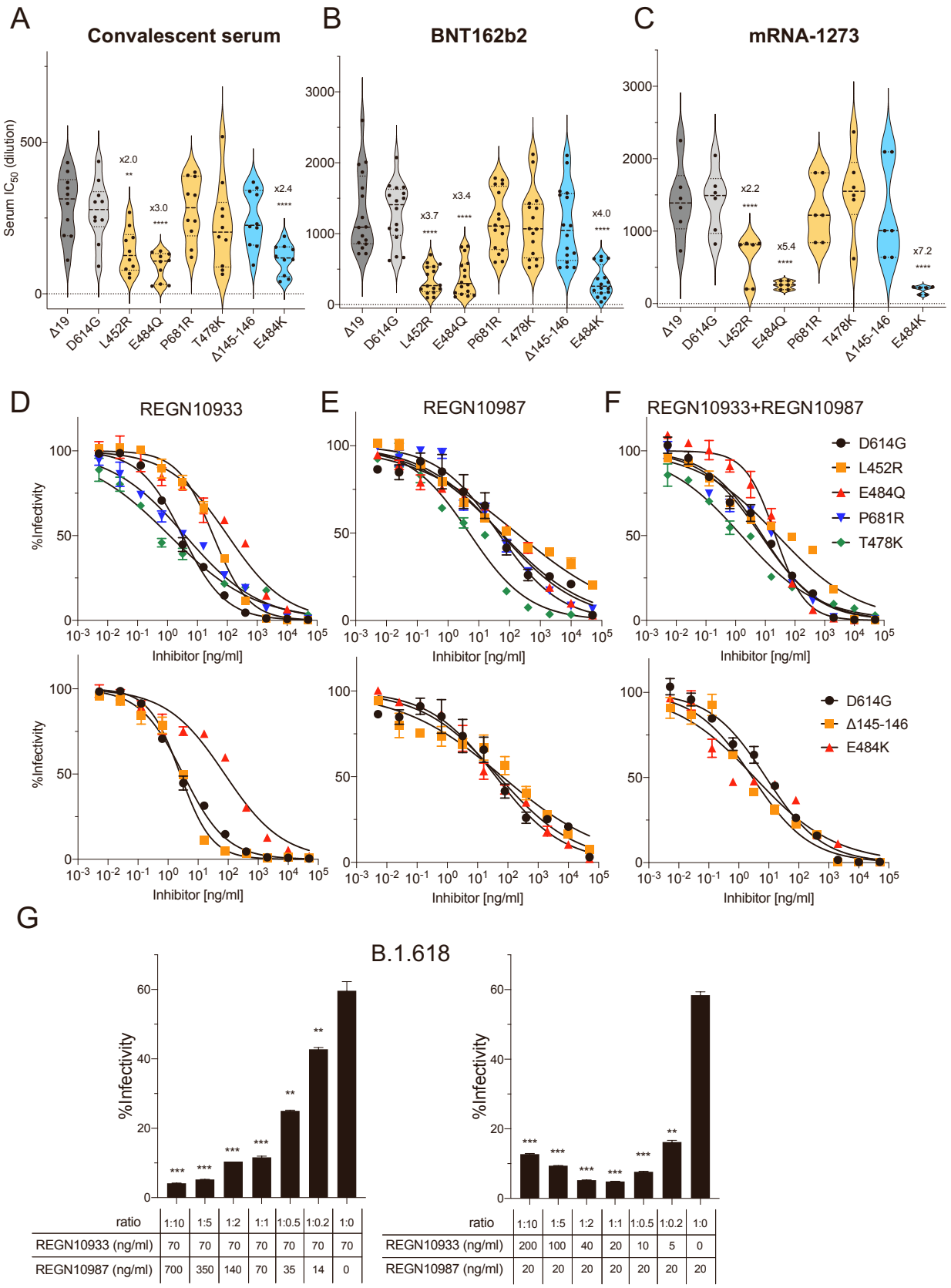


Supplemental Figure 1, Related to Figure 1. Location of the key mutated amino acids on the spike protein structure and Immunoblot analysis of spike protein in the cellular lysate and lentiviral particles.

(A) The 3D images indicate the location of the key mutations in B.1.617, B.1.617.1, B.1.617.2 B.1.618 and B.1.36.29 spikes. One representative RBD is shown in gray for simplicity.

(B) Pseudotyped viruses were produced by transfection of 293T cells. Two days post-transfection, virions were harvested and analyzed on an immunoblot probed with anti-spike antibody and anti-HIV-1 p24. The ratio of S2/full S was shown in the bottom.

(C) Cell lysates were probed with anti-spike and anti-GAPDH antibodies. The ratio of S2/full S was shown in the bottom.



ratio	1:10	1:5	1:2	1:1	1:0.5	1:0.2	1:0
REGN10933 (ng/ml)	70	70	70	70	70	70	70
REGN10987 (ng/ml)	700	350	140	70	35	14	0

ratio	1:10	1:5	1:2	1:1	1:0.5	1:0.2	1:0
REGN10933 (ng/ml)	200	100	40	20	10	5	0
REGN10987 (ng/ml)	20	20	20	20	20	20	20

Supplemental Figure 2, Related to Figure 2. Neutralization of individual single mutated spike protein variants by convalescent sera, antibodies elicited by mRNA vaccines and REGN antibodies.

(A) Neutralization of viruses pseudotyped by Δ19 (dark), D614G (gray), L452R (yellow), E484Q (yellow), P681R (yellow), T478K (yellow), Δ145-146 (light blue) and E484K (light blue) spikes by convalescent serum samples from 10 donors was tested. Each dot represents the IC50 for a single donor.

(B) Neutralizing titers of serum samples from BNT162b2 vaccinated individuals (n=16) was measured on the pseudotyped viruses. IC50 of neutralization of virus from individual donors are shown.

(C) Neutralizing titers of serum samples from mRNA-1273 vaccinated donors (n=6) was measured on the pseudotyped viruses. IC50 of neutralization of virus from individual donors are shown.

(D) Neutralization of viruses pseudotyped by D614G (black), L452R (yellow), E484Q (red), P681R (blue), T478K (green), Δ145-146 (yellow) and E484K (red) spikes pseudotyped viruses by REGN10933, and REGN10987 (E) and 1:1 mixture of REGN10933 and REGN10987 (F) was measured. The IC50 from REGN10933, REGN10987 and combination antibodies was shown.

(G) The effect of the monoclonal antibodies ratio on neutralization of variant B.1.618 was tested. The concentration of REGN10933 was held constant at its IC50 and titrating-in REGN10987 (left) or hold REGN10987 constant at its IC50 and titrating-in REGN10933 (right).