Supplemental information

SARS-CoV-2 variant B.1.617 is resistant

to bamlanivimab and evades antibodies

induced by infection and vaccination

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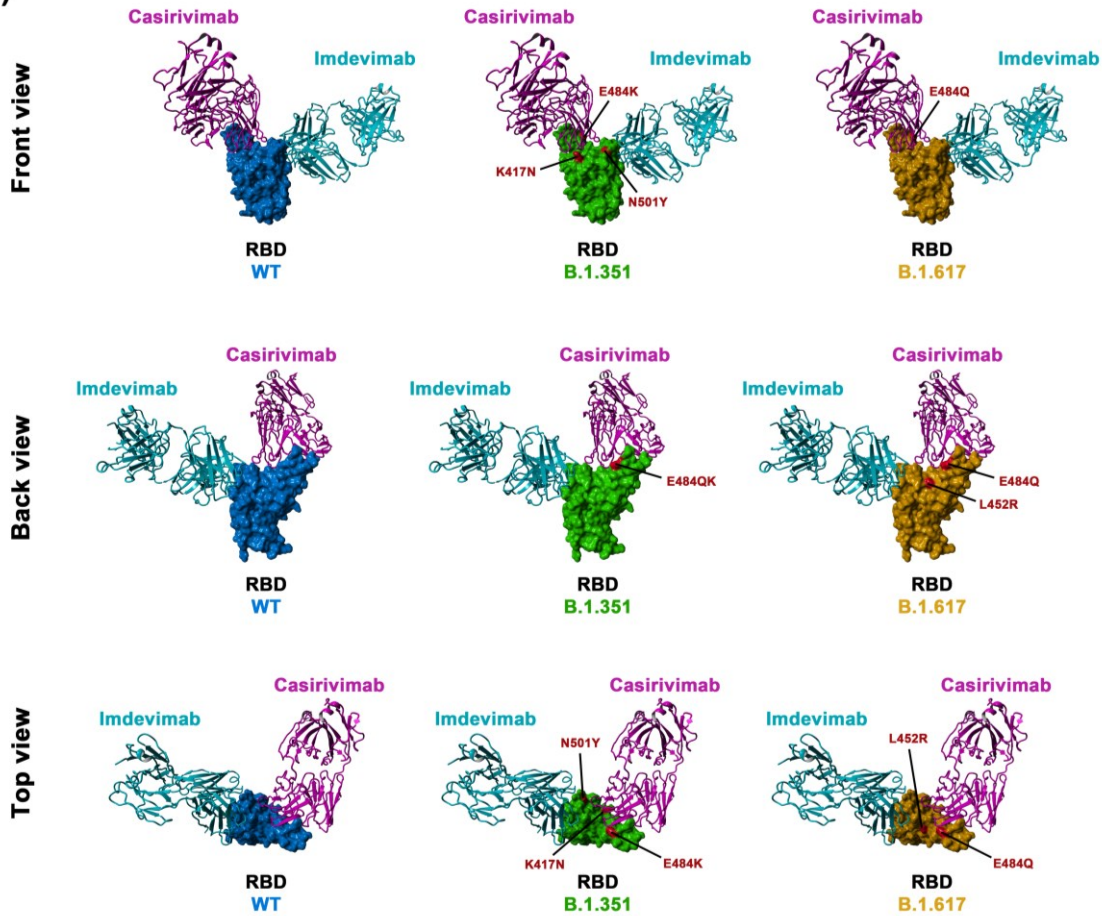
Figure S1
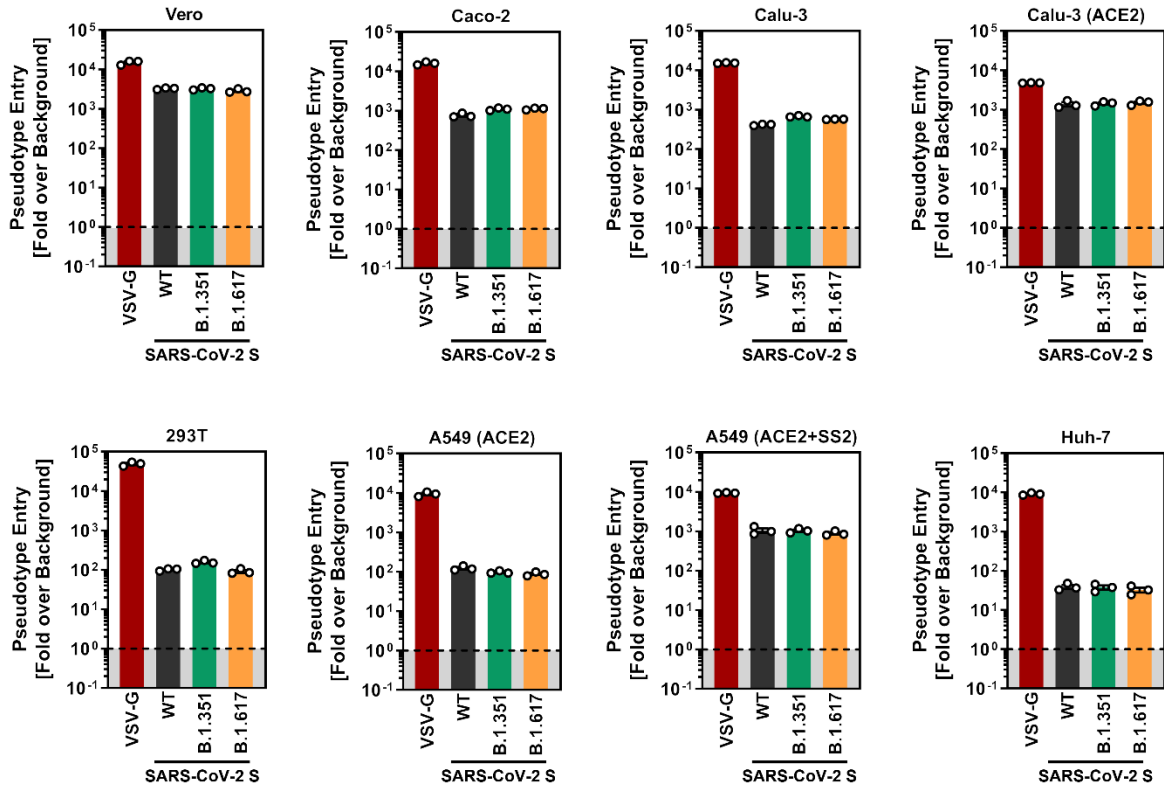
**Figure S1. Transduction data normalized against the assay background (related to Figure 2).**
The experiment was performed as described in the legend of Figure 1A. Presented are the average (mean) data from the same three biological replicates (each conducted with technical quadruplicates) as presented in Figure 2A with the difference that this time transduction was normalized against signals obtained from cells inoculated with particles bearing no viral glycoprotein (background, set as 1). Further, transduction data of particles bearing VSV-G are included. Error bars indicate the SEM.
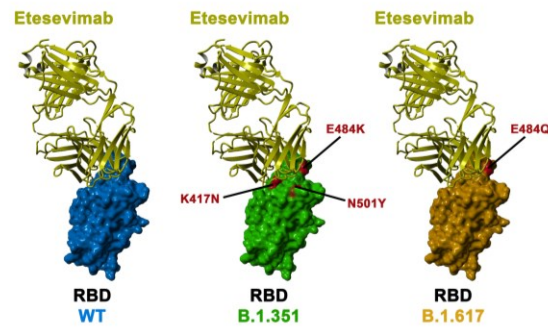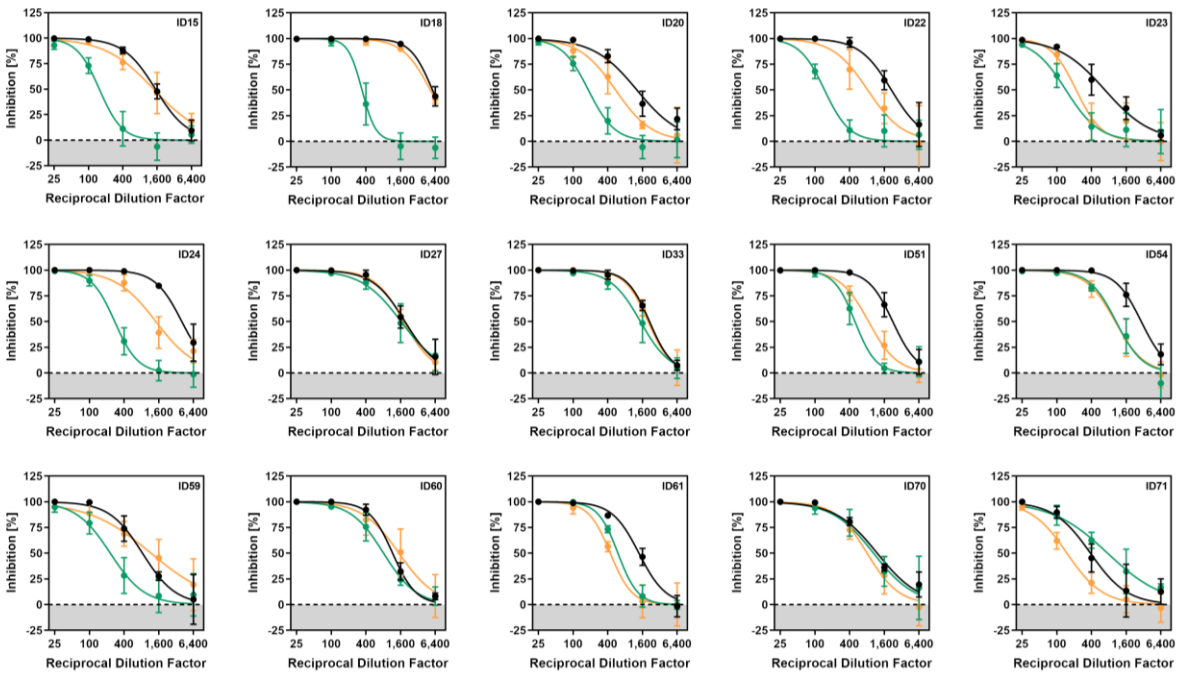
Figure S2
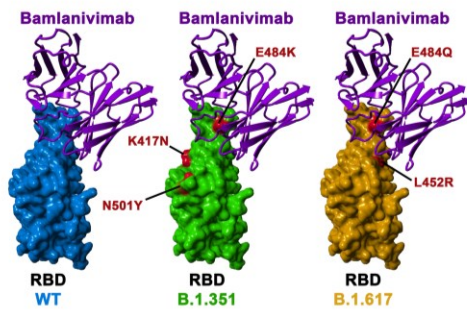
Figure S2. Location of SARS-2-S B.1.351 and B.1.617 RBD mutations with respect to the binding interface of Casirivimab and Imdevimab (A), Bamlanivimab (B) and Etesevimab (C) (related to Figure 4).

The protein models of the SARS-2-S receptor-binding domain (RBD, blue) in complex with antibodies Casirivimab (pink) and Imdevimab (turquoise) were constructed based on the 6XDG template (Hansen et al., 2020), while the protein models of the SARS-2-S RBD in complex with antibody Bamlanivimab (purple) and Etesevimab (yellow) were based on the PDB: 7L3N (Jones et al., 2020) and PDB: 7C01 (Shi et al., 2020) template, respectively. Residues highlighted in red indicate amino acid variations found in the SARS-CoV-2 variants.

Figure S3
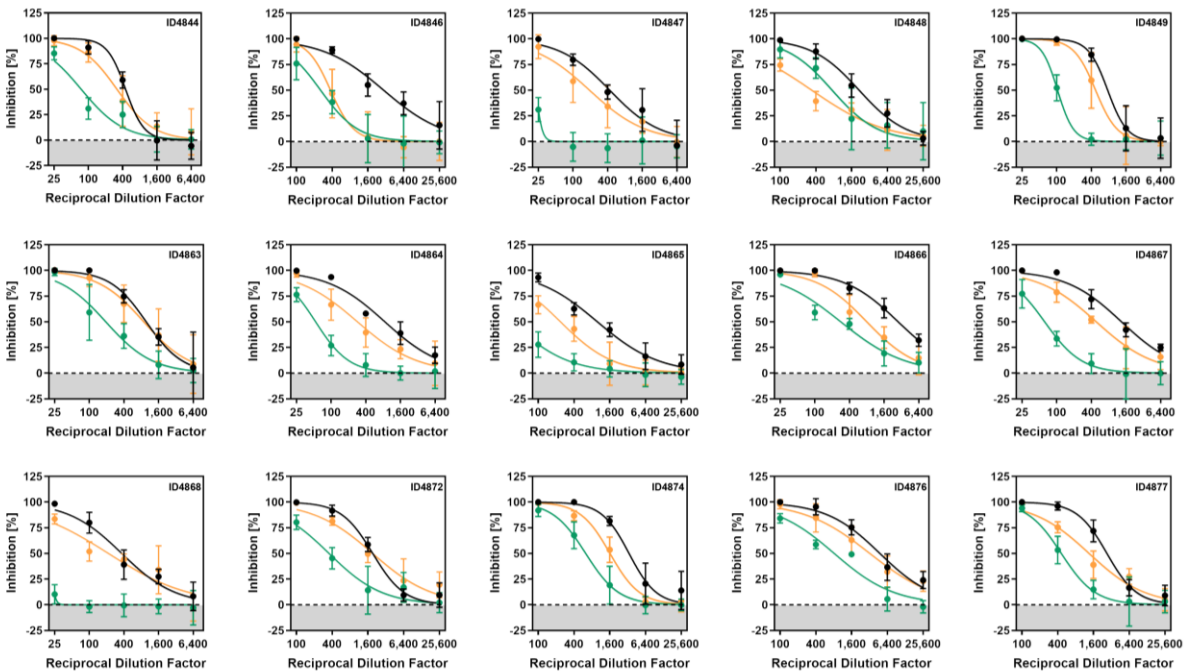
Figure S3. Individual neutralization data (related to Figure 5).

Pseudotypes bearing the indicated S proteins were incubated (30 min, 37 °C) with different dilutions of plasma derived from COVID-19 patients (A) or individuals vaccinated with the Pfizer/BioNTech vaccine Comirnaty/BNT162b2 (B) and inoculated onto Vero target cells. Transduction efficiency was quantified by

measuring virus-encoded luciferase activity in cell lysates at 16-18 h posttransduction. Presented are the data from a single representative experiment conducted with technical Quadruplicates. For normalization, inhibition of S protein-driven entry in samples without plasma was set as 0 %. Error bars indicate the SD. The data were further used to calculated the plasma/serum dilution that leads to 50% reduction in S protein-driven cell entry (neutralizing titer, NT50, shown in Figure 5).

Table S1

Table S1: COVID-19 patient data (related to Figure 5).

ID	Symptoms before hospital admission (days)	Symptoms before ICU admission (days)	WHO classification upon ICU admission				Age	Sex	Diabetes	Hypertension	Cardiac disease	Chronic lung disease	Cerebrovascular disease	Chronic kidney disease	Immunosupression	Cancer	Obesity	Smoking
			mild	moderate	severe	critical												
SI 15	ND	ND	-	-	-	x	65	M			x					x		
SI 16	ND	ND	-	x	-	x	71	M								x		
SI 18	2	11	-	-	-	x	74	F	x	x						x		
SI 20	ND	ND	-	-	-	x	61	M	x			x						
SI 22	5	5	-	-	-	x	25	F									x	
SI 23	2	8	-	-	x	-	69	F	x									
SI 24	4	8	-	-	-	x	61	M		x								x
SI 27	ND	ND	-	-	-	x	52	M	x	x								
SI 33	1	14	-	-	-	x	75	M	x	x	x							
SI 51	4	12	-	-	-	x	71	M										
SI 54	8	7	-	-	-	x	58	F		x		x				x		
SI 59	6	3	-	-	-	x	46	M		x	x			x				x
SI 60	5	6	-	-	-	x	61	F				x						
SI 61	7	2	-	-	-	x	50	M				x					x	
SI 70	ND	ND	-	-	x	-	34	F										
SI 71	5	3	-	x	-	-	54	M		x								

ND =Not determined

Table S2

Table S1: BNT162b2-vaccinated patient data (related to Figure 5).

BNT162b2-vaccinated patient data. Serological data shows antibody titer against spike (IgG) protein determined by quantitative ELISA (SARS-CoV-2-QuantiVac; Euroimmun, Lübeck, Germany) according to the manufacturer's instructions. Antibody levels are expressed as RU/mL assessed from a calibration curve with values above 10 RU/mL defined as positive, values beyond the standard curve are expressed as >120 RU/mL.

ID	Age (years)	Sex	Time since 2nd vaccination (days)	Spike-IgG
4844	47	F	31	>120
4846	28	F	29	>120
4847	57	F	26	>120
4848	29	M	26	>120
4849	39	M	24	>120
4863	58	F	26	>120
4864	53	F	26	>120
4865	57	M	25	>120
4866	59	F	29	>120
4867	52	F	30	34,4
4868	56	F	30	119.6
4872	37	F	25	>120
4874	26	F	29	>120
4876	27	F	30	>120
4877	29	F	28	>120