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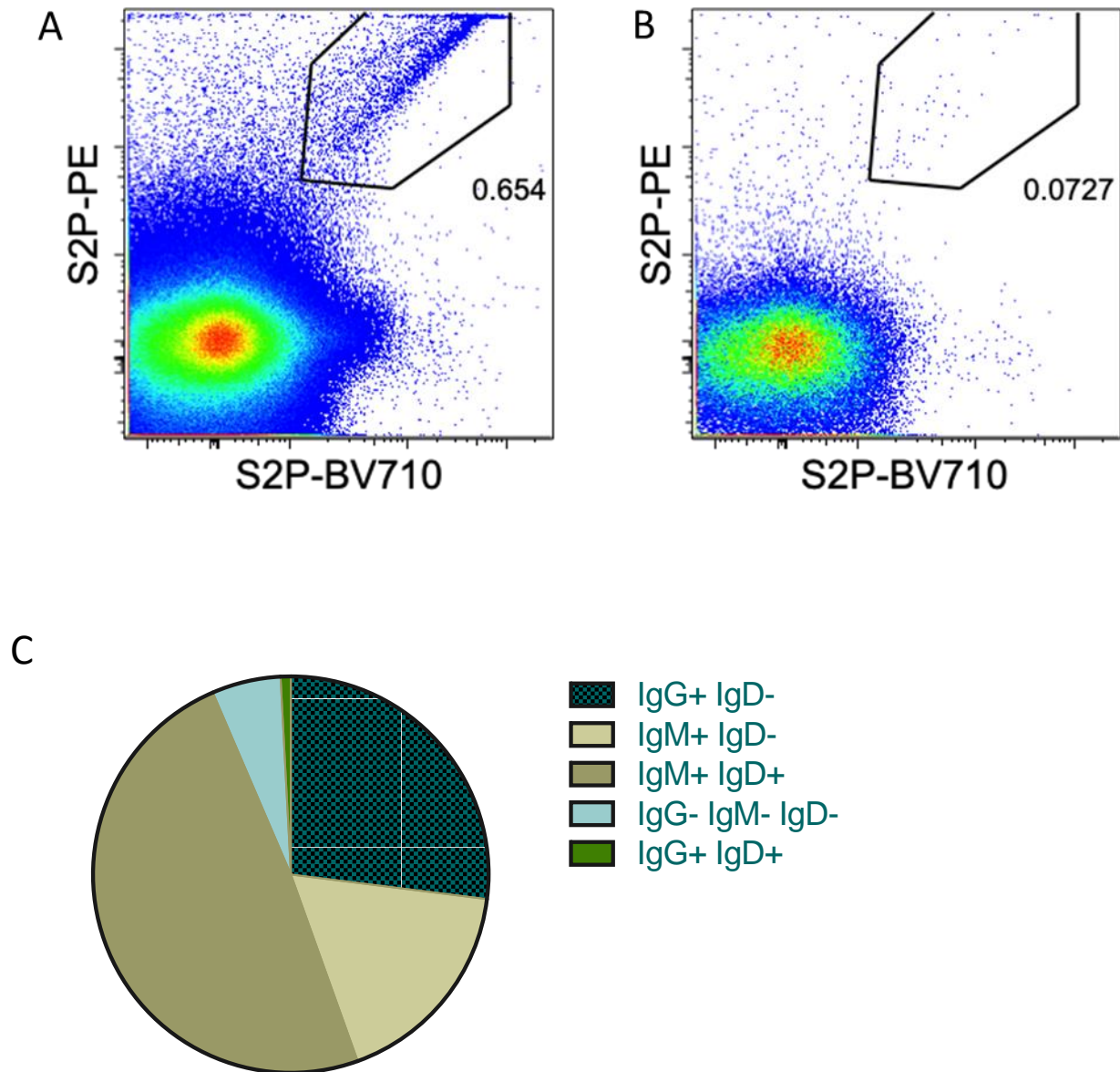
**Supplemental Information**

**Analysis of a SARS-CoV-2-Infected Individual Reveals**

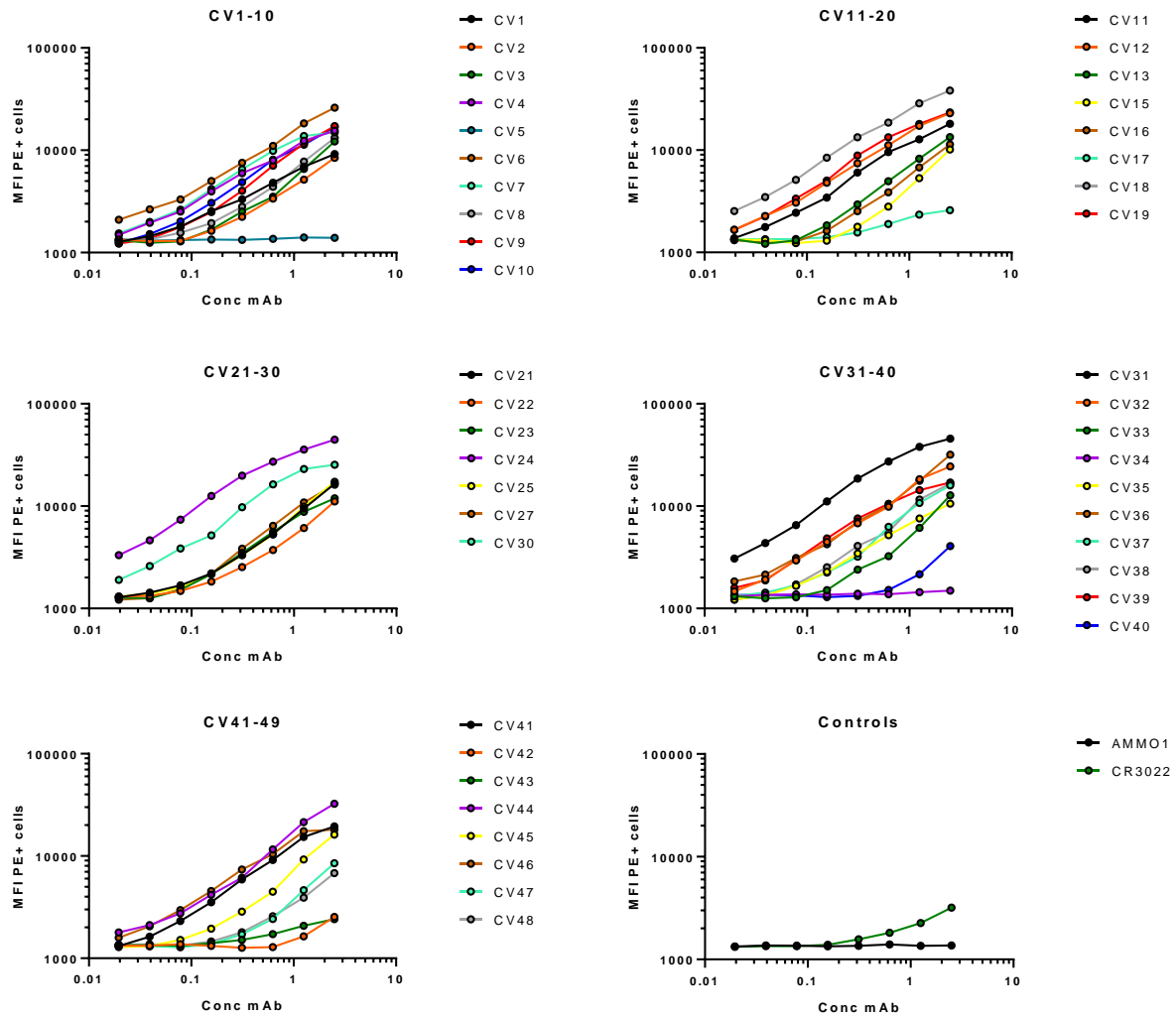
**Development of Potent Neutralizing Antibodies**

**with Limited Somatic Mutation**

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**Figure S1. Identification and isolation of SARS-CoV-2 specific B cells by flow cytometry, related to Figure 2.** Staining of PBMCs with S2P-probes gated on total live CD3<sup>-</sup> CD19<sup>+</sup> B cells indicating the frequency of S2P<sup>+</sup> B cells for the (A) confirmed SARS-CoV-2 donor ~3 weeks post-infection and (B) a pre-pandemic control subject. (C) the proportion of S2P<sup>+</sup> B cells analyzed from the SARS-CoV-2<sup>+</sup> participant by isotype expression.



**Figure S2. Staining of cell-surface expressed SARS-CoV-2 S, related to Figure 3.** The indicated mAbs were labeled with phycoerythrin (PE) and used to stain 293E cells transfected with wildtype SARS-Cov-2 S by flow cytometry at the indicated dilutions. The mean fluorescence intensity (MFI) of PE<sup>+</sup> cells is shown.

**Table S1. Neutralizing activity and gene usage of cloned mAbs, related to figures 2 and 3. mAbs shaded with the same color are clonally related.**

mAb	IC50 (µg/ml)	Isotype	VH gene	AA mutations	VH/VL gene	AA mutations
CV1	15±6.4 n=6	IgG	IGHV4-38*02	0	IGLV1-44*01	0
CV2	>50	IgG	IGHV3-30*04	0	IGKV3-15*01	0
CV3	>50	IgG	IGHV7-4-1*02	7	IGKV1-39*01	7
CV4	>50	IgG	IGHV3-30*01	0	IGKV1-5*03	0
CV5	>50	N/D	IGHV1-46*01	3	IGKV4-1*01	1
CV6	>50	N/D	IGHV1-24*01	0	IGKV3-20*01	0
CV7	>50	IgG	IGH3-30*01	0	IGKV1-5*03	0
CV8	>50	IgG	IGHV1-18*01	0	IGKV3-20*01	0
CV9	>50	IgG	IGHV4-39*01	0	IGLV2-14*01	1
CV10	>50	IgG	IGHV4-59*01	1	IGKV3-20*01	1
CV11	>50	IgG	IGHV4-31*03	0	IGKV3-11*01	0
CV12	>50	IgG	IGHV3-30*04	15	IGKV2-30*01	6
CV13	>50	IgG	IGH7-4-1*02	7	IGKV1-39*01	7
CV15	>50	IgG	IGHV3-7*01	0	IGLV2-11*01	0
CV16	>50	IgG	IGHV5-51*01	0	IGKV3-20*01	0
CV17	>50	N/D	IGHV1-2*02	0	IGLV2-23*01	0
CV18	>50	IgG	IGHV1-24*01	0	IGLV1-51*01	0
CV19	>50	N/D	IGHV1-2*02	0	IGKV3-20*01	0
CV21	>50	IgG	IGHV3-15*01	0	IGKV3-11*01	0
CV22	>50	N/D	IGHV3-21*01	0	IGLV4-69*01	0
CV23	>50	IgG	IGHV1-3*01	0	IGLV3-25*03	0
CV24	>50	IgG	IGHV1-24*01	0	IGLV1-51*01	0
CV25	>50	IgG	IGHV4-30-4*01	0	IGKV3-15*01	0
CV26	>50	IgG	IGHV3-30-3*01	0	IGKV1-17*01	0
CV27	>50	IgG	IGHV3-30*04	1	IGLV2-14*01	1
CV30	0.03±0.02 n=6	IgG	IGHV3-53*01	2	IGKV3-20*01	0
CV31	>50	IgG	IGHV1-24*01	0	IGLV1-51*01	0
CV32	>50	IgG	IGHV1-2*02	2	IGLV1-51*01	0
CV33	>50	IgG	IGHV1-18*01	1	IGLV1-40*1	0
CV34	>50	IgG	IGHV3-30-3*01	0	IGLV3-12*02	0
CV35	20.7 n=1	IgG	IGHV4-38*02	0	IGLV1-44*01	0
CV36	>50	IgG	IGHV1-2*02	3	IGLV3-25*03	1
CV37	>50	IgG	IGHV1-18*01	0	IGKV1-33*01	0
CV38	>50	IgG	IGHV3-30*04	0	IGKV3-11*01	0
CV39	>50	IgG	IGHV3-30*04	14	IGKV2-30*01	2
CV40	>50	IgG	IGHV1-18*01	2	IGKV1-17*01	0
CV41	>50	IgG	IGHV3-30*04	0	IGKV3-15*01	0

CV42	>50	IgG	IGHV1-18*01	1	IGKV1-39*01	1
CV43	>50	IgG	IGHV3-30*04	0	IGLV6-57*02	0
CV44	>50	IgG	IGHV1-46*01	0	IGLV3-25*03	1
CV45	>50	IgG	IGHV1-18*01	0	IGLV1-40*01	0
CV46	>50	IgG	IGHV3-30*04	15	IGKV2-30*01	5
CV47	>50	IgG	IGHV1-18*01	2	IGKV1-17*01	0
CV48	>50	IgG	IGHV1-69*09	3	IGKV2-30*01	1
CV50	N/D	IgG	IGHV3-33*01	0	IGLV3-10*01	0

\*N/D: not determined

**Table S2. Kinetic analyses of the ACE2 and CV30 IgG interactions with SARS-CoV-2 RBD, related to figure 4.**

Ligand	Analyte	$K_D$ (M X10 <sup>-9</sup> )	$k_{on}$ (1/Ms)X10 <sup>4</sup>	$K_{on}$ errorX10 <sup>3</sup>	$k_{off}$ (1/s)X10 <sup>-3</sup>	$k_{off}$ error X 10 <sup>-5</sup>
ACE2 ectodomain	SARS-CoV -2 RBD	4.40	50.8	15.1	2.22	1.99
CV30 IgG	SARS-CoV -2 RBD	3.63	8.36	2.97	0.30	0.30