

Supplemental Table 1: SARS-CoV-2 specific antibody rearrangements from set 1-3.

Set	CDR3 Amino acid sequence	IGHV	IGHJ
SET 1 - Sequences from converging clusters derived from antibody-positive COVID-19 patients with active infection (previously published cohort ⁵ , https://gateway-covid19.ireceptor.org/home ; study: IR-Binder-000001), n=23			
1	CVRDFYYLDYW	IGHV6-1	IGHJ4
1	CARGTEADFDYW	IGHV6-1	IGHJ4
1	CTRGTEADFDYW	IGHV6-1	IGHJ4
1	CAREENLGVCNIDSCSTVDSW	IGHV6-1	IGHJ4
1	CARGRSSGWFDYW	IGHV6-1	IGHJ4
1	CAEDAFDIW	IGHV3-30	IGHJ3
1	CAKGMIDYW	IGHV3-23	IGHJ4
1	CAREDFDSW	IGHV3-48	IGHJ4
1	CGDMPNDYW	IGHV3-48	IGHJ4
1	CARDRKDVW	IGHV3-21	IGHJ6
1	CARDRTAMTDSW	IGHV3-74	IGHJ4
1	CVKGVAGNFDYW	IGHV3-64D	IGHJ4
1	CAREALDAFDIW	IGHV3-30	IGHJ3
1	CARVVAGTAYYYGMDVW	IGHV3-21	IGHJ6
1	CARDYYDSSGYYYSYDYW	IGHV3-48	IGHJ4
1	CAKGAVAGDDAFDLW	IGHV3-30	IGHJ3
1	CARGAVAGDDAFDIW	IGHV3-30	IGHJ3
1	CARGSVVPRYYYYYMDVW	IGHV4-34	IGHJ6
1	CARQVWFGEDYYYGMDVW	IGHV4-59	IGHJ6
1	CARDHRGNYYFDYW	IGHV4-31	IGHJ4
1	CARGDHSYDFDYW	IGHV4-31	IGHJ4
1	CARGFVPYYYYYMDVW	IGHV4-34	IGHJ6
1	CARETRYYYGMDVW	IGHV4-34	IGHJ6
SET 2 - Non-neutralizing sequences (binding S-protein outside the receptor binding domain) retrieved from CoVAbDab ¹⁴ on July 3rd 2020, n=53			
2	CAKVSAIFWLGQGLSPIDVW	IGHV3-30	IGHJ6
2	CARPTIGYSYGSYDYW	IGHV3-7	IGHJ4
2	CARDWDYDILTGSWFGAFDIW	IGHV3-7	IGHJ3
2	CARDWDYDILTGSWFGAFDIW	IGHV3-7	IGHJ3
2	CARELFTAVAGKGGIDYW	IGHV4-39	IGHJ4
2	CARSSSRGFDYW	IGHV3-64	IGHJ4
2	SARGDRIQLWLLDAFDIW	IGHV4-39	IGHJ3
2	CAKIGLGLGGLRRYFDYW	IGHV3-23	IGHJ4
2	CGTRIMITWYSRRGMDGW	IGHV3-11	IGHJ6
2	CARERGDSSGYEITTANRRFGMDVW	IGHV1-46	IGHJ6
2	CARIPGWDRGTDRNWNDW	IGHV1-69	IGHJ6
2	CARTYSFDSSGYYDYW	IGHV1-69	IGHJ4
2	CARAFYDSNWSVGSYFDSW	IGHV3-30	IGHJ5
2	CAKDSVRREYTHARVPFDNW	IGHV3-9	IGHJ4
2	CAKSSKIFYLGESREVDYW	IGHV3-30	IGHJ4
2	CARATWLRGVMDVW	IGHV3-66	IGHJ6
2	CAKDVRYSSTSCYFSAFDIW	IGHV3-9	IGHJ3
2	CARGGGSYYYWFDPW	IGHV3-30	IGHJ3

2	CARAGYSSSWYGVRGVDPW	IGHV4-34	IGHJ3
2	CAKGSDIVVVPVGNWFDPW	IGHV3-30	IGHJ5
2	CARVQRYYPDSSGFYGRRFDIW	IGHV4-61	IGHJ4
2	CARSGGGSYRGPFDYW	IGHV3-30	IGHJ4
2	CAKDFKGGSSSWYTPEIEYGMDVW	IGHV3-30	IGHJ6
2	CARLIRHEAHTYCSGGSCYSPDYYYGMDV	IGHV7-4-1	IGHJ6
2	CARWGGGMQYLDVW	IGHV3-30-3	IGHJ6
2	CAKDLGYDILTGLGGYYYYYGMDVW	IGHV3-30	IGHJ6
2	CARVRGSYYLFDYW	IGHV3-30	IGHJ4
2	CARAGRYSDDGAFDIW	IGHV1-46	IGHJ3
2	CARSISGSYLGAFDIW	IGHV3-30	IGHJ4
2	CVRGGVSGPNSFDMW	IGHV3-30	IGHJ4
2	CARDFNSYQLLWYYYYYGMDVW	IGHV3-7	IGHJ6
2	CARQSSFYSSGWYSYGMDVW	IGHV5-51	IGHJ6
2	CARVDYSGSYGWGWFDPW	IGHV1-2	IGHJ5
2	CAREYYYDSSVYPYYYYAMDVW	IGHV1-2	IGHJ6
2	CTTDRVYDIWGSYRYLDYW	IGHV3-15	IGHJ4
2	CARVWGYCSGGSCYVDAFDIW	IGHV1-3	IGHJ3
2	CATAPPYSPPSSWFDPW	IGHV1-24	IGHJ5
2	CARDHHYDFWSGYSSYYYYYGMDVW	IGHV4-30-4	IGHJ6
2	CARSFGGSYYYGMDVW	IGHV3-30	IGHJ6
2	CAREARDYYGSGSLDYW	IGHV1-2	IGHJ4
2	CARDSVAGIYYYYYGMDVW	IGHV1-18	IGHJ6
2	CARSYGGSYYYGMDVW	IGHV3-30-3	IGHJ6
2	CARTPLSLRLRYNWYFDLW	IGHV4-38	IGHJ2
2	CARDLTITTAGTDYYYGMDVW	IGHV1-2	IGHJ6
2	CVRGGVSGPNAFDIW	IGHV3-30	IGHJ3
2	CARTKGGSYFAPFDYW	IGHV3-30	IGHJ4
2	CARDRGYAATFGVFDYW	IGHV1-18	IGHJ4
2	CARVTVVHFDYW	IGHV3-30	IGHJ4
2	CARDLTSTSSSPYSYYYGMDVW	IGHV1-46	IGHJ6
2	CVRGGVSGPNSFDMW	IGHV3-30	IGHJ4
2	CARVGLWWLGHPDVFDIW	IGHV1-18	IGHJ3
2	CARDLVEDTAMVTGAAAGTW	IGHV1-69	IGHJ4
2	CARDIMFGDDWLQKQPDYW	IGHV3-33	IGHJ4
SET 3 - Neutralizing SARS-CoV-2 specific antibodies retrieved from CoVAbDab ¹⁴ on July 3rd 2020, n=74			
3	CATSTAVAGTPDLFDYYYGMDVW	IGHV1-24	IGHJ6
3	CARDRIAPVGKFFGWYFDLW	IGHV4-59	IGHJ2
3	CARGAEYYDFWSGYYSAYFDYW	IGHV3-64	IGHJ4
3	CARDRGTTMVPFDYW	IGHV3-11	IGHJ4
3	CTTARWDWYFDLW	IGHV3-15	IGHJ2
3	CARDHGMAAAGYNYW	IGHV3-66	IGHJ4
3	CANMVRGVYEDDYW	IGHV4-4	IGHJ4
3	CARTPFYYDSSGYLDYW	IGHV1-69	IGHJ4
3	CARGELGIPYGMDVW	IGHV3-66	IGHJ6
3	CARALPYGDLHFDYW	IGHV3-66	IGHJ4
3	CASGSDYGDYLLVYW	IGHV3-30	IGHJ4
3	CARGSRYDWNQNNWFDPW	IGHV1-2	IGHJ5
3	CAREGYCSGGSCYSGYYYYYGMDVW	IGHV1-18	IGHJ6

3	CARVLP MYGDYLDYW	IGHV3-66	IGHJ4
3	CAKDGGKLWVYYFDYW	IGHV3-30-3	IGHJ4
3	CARPQGGSSWYRDYYYGMDVW	IGHV7-4-1	IGHJ6
3	CARAVVGIVVPAAGRRAFDIW	IGHV4-38-2	IGHJ3
3	CAKDGGQYYDFW SGYLGARTNPHYYYYM	IGHV3-30	IGHJ6
3	CARDLVWATVSGTMDVW	IGHV1-2	IGHJ6
3	CARVEWAAAGTFYW	IGHV3-66	IGHJ4
3	CARDSEYYDILTGYLAPTHYYYYYMDVW	IGHV3-30	IGHJ6
3	CARDLERAGGMDVW	IGHV3-53	IGHJ6
3	CAREAYGMDVW	IGHV3-53	IGHJ6
3	CARGPRGCSSTSCYGSYFDYW	IGHV1-69	IGHJ4
3	CARDLDTMGGMDVW	IGHV3-53	IGHJ6
3	CAKDTGYCGDDCYIKLIRGGPDYW	IGHV3-23	IGHJ4
3	CASLPVVPAAIGPLPAFDIW	IGHV3-30	IGHJ3
3	CAKEGRPSDIVVVVAFDYW	IGHV3-30	IGHJ4
3	CARDYGDFYFDYW	IGHV3-53	IGHJ4
3	CASPASRGYSGYDHGYYYYYMDVW	IGHV1-2	IGHJ6
3	CAAPHCSGGSCLD AFDIW	IGHV1-58	IGHJ3
3	CARRGDGSSSIYYNYMDVW	IGHV3-11	IGHJ6
3	CAREFGDPEWYFDYW	IGHV3-30	IGHJ4
3	CARDSPFSALGASNDYW	IGHV1-2	IGHJ4
3	CARGNRLLYCSSTSCYLDAVRQGYYYYY	IGHV1-69	IGHJ6
3	CAKAGVRGIAAAGPDLNFDHW	IGHV3-9	IGHJ4
3	CVRDYGDFYFDYW	IGHV3-53	IGHJ4
3	CARDYGDYYFDYW	IGHV3-53	IGHJ4
3	CARKPLLYSDFSPGAFDIW	IGHV4-34	IGHJ3
3	CARKPLLYSNLSPGAFDIW	IGHV4-34	IGHJ3
3	CARGE GWELPYDYW	IGHV3-53	IGHJ4
3	CVRDGGRRPGDAFDIW	IGHV4-4	IGHJ3
3	CARSFRDDPRIAVAGPADAFDIW	IGHV5-51	IGHJ3
3	CAREDYDSSGSFDYW	IGHV3-30	IGHJ4
3	CTRW DGWSQH DYW	IGHV3-49	IGHJ4
3	CARDPIWFGELLSPPFVHFDYW	IGHV3-30	IGHJ4
3	CARANHETTMDTYYYYYYMDVW	IGHV1-46	IGHJ6
3	CAREGMGMAAAGTW	IGHV3-53	IGHJ4
3	CARAPLFPTGVL AGDYYYGMDVW	IGHV1-2	IGHJ6
3	CARESGDTTMAFDYW	IGHV3-53	IGHJ4
3	CARDLSAAFDIW	IGHV3-53	IGHJ3
3	CAREGARVGATYDTYYFDYW	IGHV3-48	IGHJ4
3	CAAPYCSGGSCSDAFDIW	IGHV1-58	IGHJ3
3	CATAHPRRIQGVFFLGPGVW	IGHV1-2	IGHJ6
3	CANHPLASGDDYYHYMDVW	IGHV3-23	IGHJ6
3	CARVNQAVTTPFSMDVW	IGHV1-69	IGHJ6
3	CARGGDTAMGPEYFDYW	IGHV4-4	IGHJ4
3	CASSSGYLFHSDYW	IGHV3-30	IGHJ4
3	CARDLYYYGMDVW	IGHV3-66	IGHJ6
3	CAREGEVEGYNDFW SGYSRDRYYFDYW	IGHV3-53	IGHJ4
3	CAREGEVEGYDFW SGYSRDRYYFDYW	IGHV3-53	IGHJ4
3	CARERGYDGGKTPPFLG	IGHV3-21	IGHJ4
3	CARVGGAHSGYDGSFDYW	IGHV3-53	IGHJ4

3	CARDFGEFYFDYW	IGHV3-53	IGHJ4
3	CARDSSEVRDHPGHPGRSVGAFDIW	IGHV3-66	IGHJ3
3	CARDLLDPQLDDAFDIW	IGHV1-69	IGHJ3
3	CAKEPIGQPLLWWDYW	IGHV3-23	IGHJ4
3	CARDLMAYGMDVW	IGHV3-53	IGHJ6
3	CARDYGDFYFDFW	IGHV3-66	IGHJ4
3	CARDLDVYGLDVW	IGHV3-53	IGHJ6
3	CARDFGDFYFDYW	IGHV3-53	IGHJ4
3	CARDLDVSGGMDVW	IGHV3-53	IGHJ6
3	CAREAYGMDVW	IGHV3-53	IGHJ6
3	CARVPYCSSTSCHRDWYFDLW	IGHV1-2	IGHJ2

Supplemental Table 2: Basic characteristics of healthy, cancer and COVID-19 cohort used for repertoire mining.

Cohort	Number of samples	Age mean/median (min-max)	Original productive repertoire		Normalized repertoire		Subcohorts
			Reads mean/median (min/max)	Unique amino acid clonotypes mean/meadian (min-max)	Reads mean/median (min/max)	Unique amino acid clonotypes mean/meadian (min-max)	
COVID-19 active	49 (19 patients)	63/67 (29-85)	92608/87784 (1319-385641)	3044/1968 (90-13172)	9124/9636 (5571-10025)	1602/1460 (50-3387)	12% mild/moderate disease (n=6 samples/4 patients), 22% severe disease (n=11 samples/4 patients), 65% fatal disease (n=32 samples/11 patients)
COVID-19 recovered	19 (19 patients)	40/34 (25-70)	85648/99111 (22941-142933)	3059/3161 (786-5836)	9070/9229 (6718-9972)	1984/2250 (699-3109)	NA
Healthy <60 years	167	37/37 (1-59)	32740/29742 (5213-140786)	2379/2035 (45-9762)	9409/9775 (5298-10532)	1652/1747 (43-3431)	2% <20 years (n=4), 34% 20-29 years (n=57), 20% 30-39 years (n=34), 24% 40-49 years (n=40), 19% 50-59 years (n=32)
Healthy >60 years	33	73/72 (60-87)	31486/30606 (17705-65504)	1081/916 (111-4961)	9800/9944 (7643-1000)	876/799 (66-2416)	42% 60-69 years (n=14), 33 % 70-79 years (n=11), 24 % >80 years (n=8)
Blood cancer	236	65/65 (39-89)	43745/31383 (5032-552993)	348/24 (1-11164)	9919/9994 (6055-10950)	211/910 (1-3864)	29% treated (n=68), 71% untreated (n=168)
Solid cancer	264	60/61 (13-83)	40692/42245 (5146-79911)	588/4375 (32-3438)	9958/9980 (8914-10274)	532/499 (7-2481)	61% treated (n=161), 39% untreated (n=103)