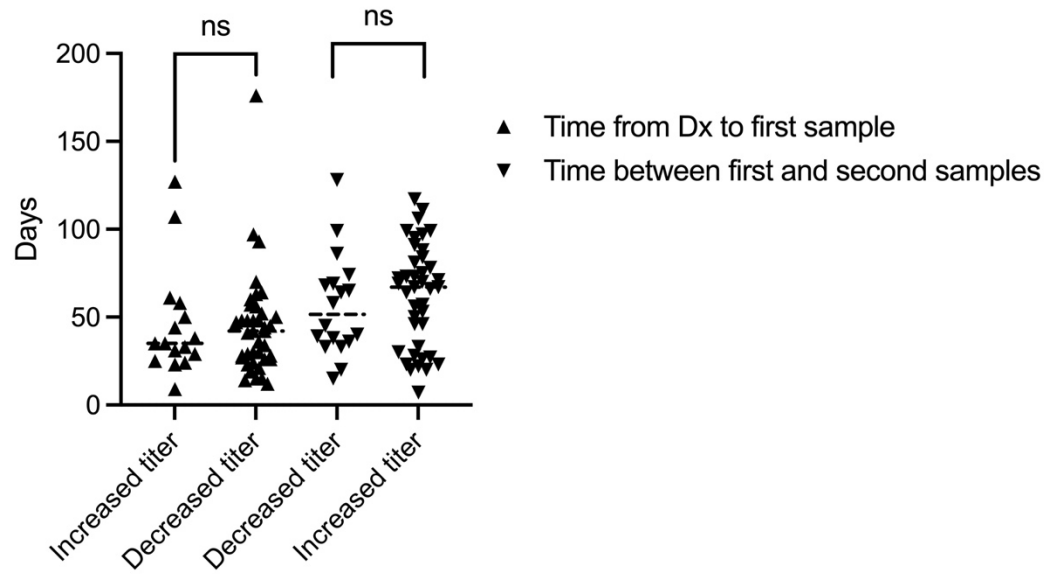


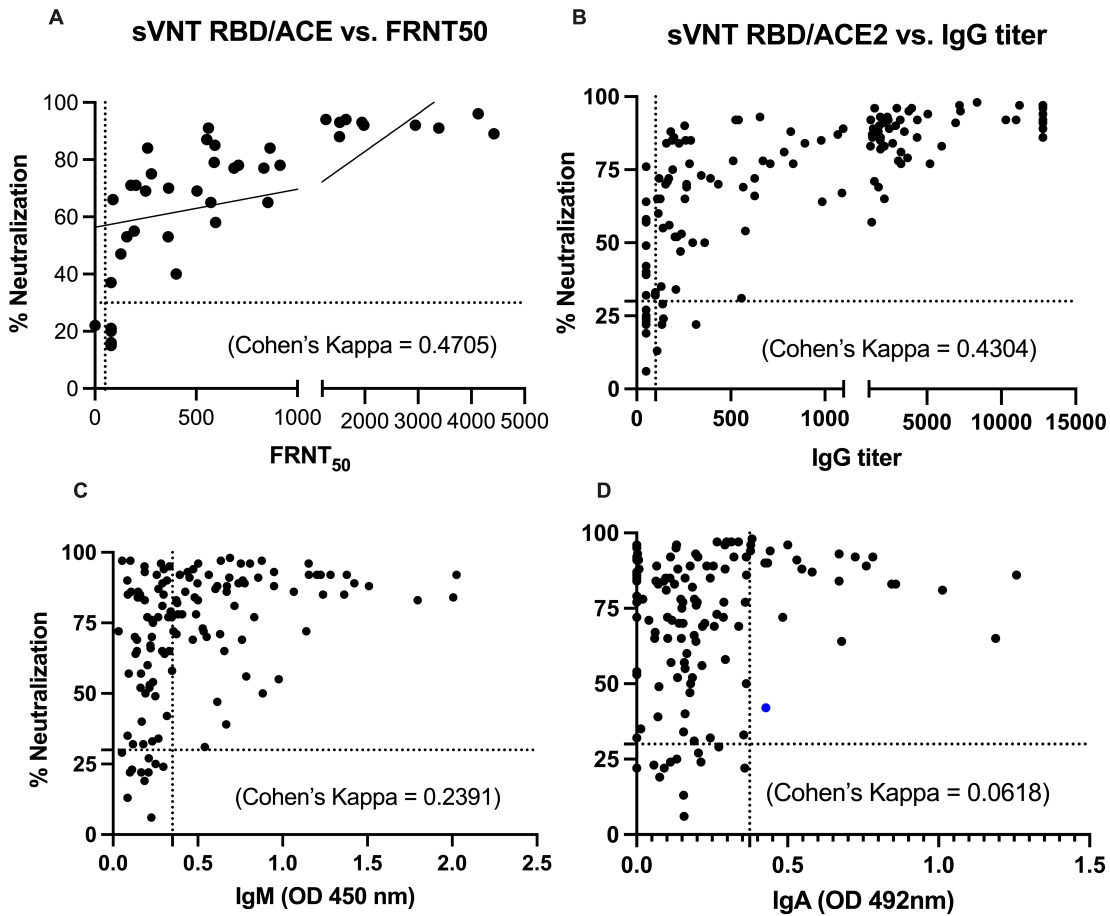
Supplementary figure 1

**Supplementary Figure S1: Antibody subclasses isotypes in a longitudinal cohort of 59 volunteers exposed to SARS-CoV-2.** Panel A shows the total anti-S antibodies in the second set of samples collected an average of 67.8 days after the first set of samples (an average of 108 days after PCR-confirmed SARS-CoV-2 infection). A third sample was collected from a subset of the participants (n=12) an average of 99.5 days after the second set of samples (an average of 207 days after infection). Two different patterns in the kinetics of the antibody response were identified: (1) 74.5% of samples showed a decrease in the binding from the time of the first to the second sampling (Panel B) and (2) 25.4% of samples showed increased values relative to the first sampling (Panel C). Panels D-G show the results of antibody binding for the different subclasses tested, with IgG1 being the predominant subclass. Panels H and I show the results for IgM and IgA isotypes. Statistical significance was determined by One-way ANOVA multiple comparisons test and unpaired T test to test for increase or decrease among samples.  $p < 0.05$  was considered significant. Sample 3 encompasses the 15 subjects from whom a collection of a third sample was completed. Panels D to I, includes the number of samples, from the initial cohort of 59 subjects before vaccination, that were positive for each of the antibody's subtype or subclasses as described in the results section.



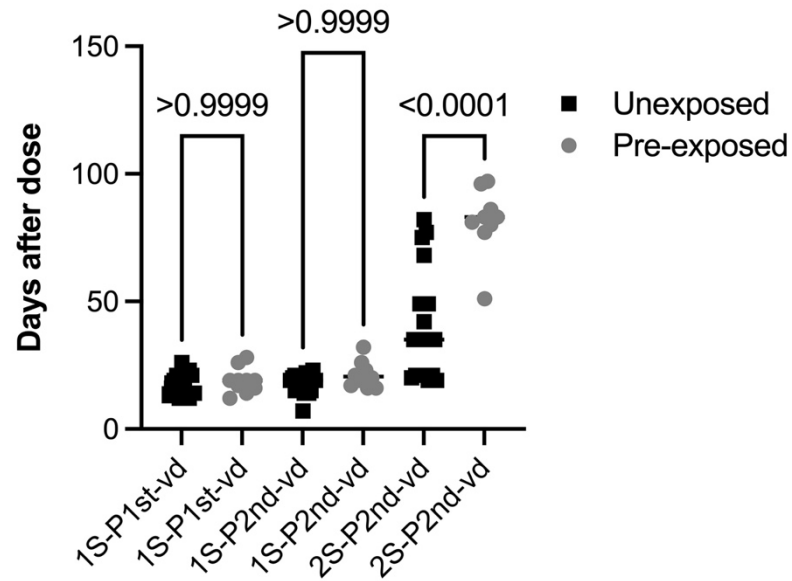
**Supplementary figure 2**

**Supplementary Figure S2: Time elapsed between diagnosis and sample collection was not significantly different between groups.** There were no significant differences in the time from diagnostic (Dx) to the first sample collection or between the first and the second samples collection in both groups. Statistical significance was determined by One-way ANOVA multiple comparisons test.  $p < 0.05$  was considered significant. Results are from the 59 subjects in the initial cohort before vaccination. From two subjects in the increased titer and from one in the decreased subgroups we were unable to establish the precise time of diagnostic.



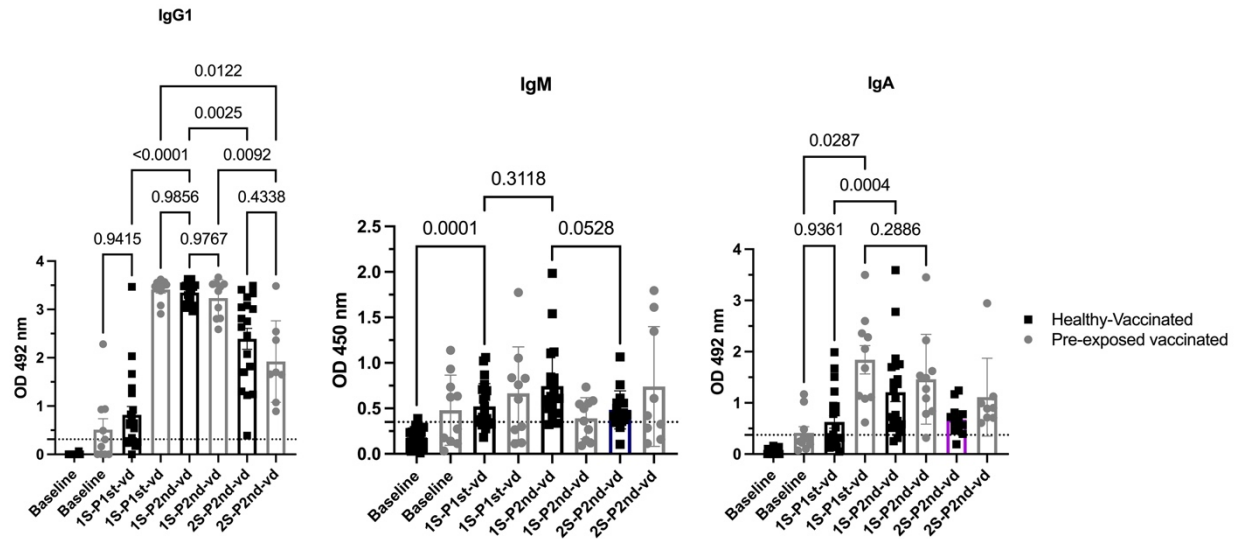
Supplementary figure 3

**Supplementary Figure S3: IgG titers—but not IgM or IgA—correlate with neutralization.** Panel A shows moderate agreement between the sVNT and Focus Reduction Neutralization Tests (FRNT) using the whole virus. Panel B also shows the correlation between the neutralization capacity measured with the surrogate viral neutralization test (sVNT) and the total IgG titers, confirming a moderate agreement. Panels C and D show a fair and a slight agreement between the neutralization activity and the IgM and IgA titers, respectively. All samples (n=131) from the 59 subjects in the initial cohort, before vaccination, were included in the analysis for figures in panels A, C and D. A subset of 41 samples with prior known FRNT results, were used for the correlation analysis showed in panel B. Cohen's Kappa agreement follow Landis and Koch scale. The values ( $\kappa$ ) were considered as follows: poor agreement,  $\kappa < 0.2$ ; fair agreement,  $\kappa = 0.21$  to  $0.4$ ; moderate agreement,  $\kappa = 0.41$  to  $0.6$ ; substantial agreement,  $\kappa = 0.61$  to  $0.8$ ; very good agreement,  $\kappa = 0.81$  to  $1.0$ .



### Supplementary figure S4

**Supplementary Figure S4: Time elapsed between sample collection after vaccination.** The time between the first and second samples after the 1<sup>st</sup> or the 2<sup>nd</sup> vaccine dose (1S-P1st-vd, 1S-P2st-vd) were similar in both groups (pre-exposed and unexposed vaccinated subgroups). However, the time of collection of the third sample (2S-P2nd-vd) was significantly longer for the pre-exposed group compared with the unexposed group. Statistical significance was determined by One-way ANOVA multiple comparisons test and unpaired T test to test for increase or decrease among samples.  $p < 0.05$  was considered significant. Unexposed and vaccinated group  $n=21$ . Pre-exposed and vaccinated group  $n=10$ .



**Supplementary figure 5**

**Supplementary Figure S5: IgG1, IgM and IgA are differentially boosted by the vaccination in healthy or pre-exposed vaccinated subgroups.** The boost of the IgG1 in both subgroups agrees with the total antibodies' changes showed in figure 3 after each vaccine dose. First vaccine dose induces a significant increase in the IgM values only in the unexposed healthy subjects. The first vaccine dose significantly boosted the IgA values in both groups. The increase in IgA titers was significantly higher in the pre-exposed vaccinated group compared to the healthy-vaccinated group. The second vaccine boost resulted in an additional significant increase in IgA titers only in the healthy-vaccinated group suggesting an advantage of the second shot in naïve individuals. Time between the first and second samples after the 1<sup>st</sup> or the 2<sup>nd</sup> vaccine dose (1S-P1st-vd, 1S-P2nd-vd) in pre-exposed and unexposed vaccinated subgroups. Statistical significance was determined by One-way ANOVA multiple comparisons test and unpaired T test to test for increase or decrease among samples.  $p < 0.05$  was considered significant.



HEALTHY ECONOMY QUARTERS							
ID	Employee	Samples	Time Between First Dose and 1st Sample Post 2nd	Time Between First Dose and 2nd Sample Post 2nd	Time Between Second Dose and 1st Sample Post 2nd Vac	Time Between Second Dose and 2nd Sample Post 2nd Vac	Time Between First Dose and Last Sample
479.1	Baseline	13/24/20					
479.2	First Sample P21	4/13/21					
479.3	Second Dose	5/20/21	26	76	16	40	137
479.4	First Sample P21	5/20/21					
479.5	Second Sample P21	5/21/21					
479.6	Baseline	6/18/20					
479.7	First Dose	5/18/20					
479.8	Second Dose	5/21/21	21	70	14	42	
479.9	First Sample P21	5/24/21					
479.10	Second Sample P21	5/21/21					
479.11	Baseline	11/11/20					
479.12	First Dose	12/20/20					
479.13	Second Dose	1/14/21					
479.14	First Sample P21	1/14/21					
479.15	Second Sample P21	1/20/21					
479.16	Baseline	1/20/21					
479.17	First Dose	1/20/21					
479.18	Second Dose	1/20/21					
479.19	First Sample P21	1/20/21					
479.20	Second Sample P21	1/20/21					
479.21	Baseline	1/20/21					
479.22	First Dose	1/20/21					
479.23	Second Dose	1/20/21					
479.24	First Sample P21	1/20/21					
479.25	Second Sample P21	1/20/21					
479.26	Baseline	1/20/21					
479.27	First Dose	1/20/21					
479.28	Second Dose	1/20/21					
479.29	First Sample P21	1/20/21					
479.30	Second Sample P21	1/20/21					
479.31	Baseline	1/20/21					
479.32	First Dose	1/20/21					
479.33	Second Dose	1/20/21					
479.34	First Sample P21	1/20/21					
479.35	Second Sample P21	1/20/21					
479.36	Baseline	1/20/21					
479.37	First Dose	1/20/21					
479.38	Second Dose	1/20/21					
479.39	First Sample P21	1/20/21					
479.40	Second Sample P21	1/20/21					
479.41	Baseline	1/20/21					
479.42	First Dose	1/20/21					
479.43	Second Dose	1/20/21					
479.44	First Sample P21	1/20/21					
479.45	Second Sample P21	1/20/21					
479.46	Baseline	1/20/21					
479.47	First Dose	1/20/21					
479.48	Second Dose	1/20/21					
479.49	First Sample P21	1/20/21					
479.50	Second Sample P21	1/20/21					
479.51	Baseline	1/20/21					
479.52	First Dose	1/20/21					
479.53	Second Dose	1/20/21					
479.54	First Sample P21	1/20/21					
479.55	Second Sample P21	1/20/21					
479.56	Baseline	1/20/21					
479.57	First Dose	1/20/21					
479.58	Second Dose	1/20/21					
479.59	First Sample P21	1/20/21					
479.60	Second Sample P21	1/20/21					
479.61	Baseline	1/20/21					
479.62	First Dose	1/20/21					
479.63	Second Dose	1/20/21					
479.64	First Sample P21	1/20/21					
479.65	Second Sample P21	1/20/21					
479.66	Baseline	1/20/21					
479.67	First Dose	1/20/21					
479.68	Second Dose	1/20/21					
479.69	First Sample P21	1/20/21					
479.70	Second Sample P21	1/20/21					
479.71	Baseline	1/20/21					
479.72	First Dose	1/20/21					
479.73	Second Dose	1/20/21					
479.74	First Sample P21	1/20/21					
479.75	Second Sample P21	1/20/21					
479.76	Baseline	1/20/21					
479.77	First Dose	1/20/21					
479.78	Second Dose	1/20/21					
479.79	First Sample P21	1/20/21					
479.80	Second Sample P21	1/20/21					
479.81	Baseline	1/20/21					
479.82	First Dose	1/20/21					
479.83	Second Dose	1/20/21					
479.84	First Sample P21	1/20/21					
479.85	Second Sample P21	1/20/21					
479.86	Baseline	1/20/21					
479.87	First Dose	1/20/21					
479.88	Second Dose	1/20/21					
479.89	First Sample P21	1/20/21					
479.90	Second Sample P21	1/20/21					
479.91	Baseline	1/20/21					
479.92	First Dose	1/20/21					
479.93	Second Dose	1/20/21					
479.94	First Sample P21	1/20/21					
479.95	Second Sample P21	1/20/21					
479.96	Baseline	1/20/21					
479.97	First Dose	1/20/21					
479.98	Second Dose	1/20/21					
479.99	First Sample P21	1/20/21					
479.100	Second Sample P21	1/20/21					
479.101	Baseline	1/20/21					
479.102	First Dose	1/20/21					
479.103	Second Dose	1/20/21					
479.104	First Sample P21	1/20/21					
479.105	Second Sample P21	1/20/21					
479.106	Baseline	1/20/21					
479.107	First Dose	1/20/21					
479.108	Second Dose	1/20/21					
479.109	First Sample P21	1/20/21					
479.110	Second Sample P21	1/20/21					
479.111	Baseline	1/20/21					
479.112	First Dose	1/20/21					
479.113	Second Dose	1/20/21					
479.114	First Sample P21	1/20/21					
479.115	Second Sample P21	1/20/21					
479.116	Baseline	1/20/21					
479.117	First Dose	1/20/21					
479.118	Second Dose	1/20/21					
479.119	First Sample P21	1/20/21					
479.120	Second Sample P21	1/20/21					
479.121	Baseline	1/20/21					
479.122	First Dose	1/20/21					
479.123	Second Dose	1/20/21					
479.124	First Sample P21	1/20/21					
479.125	Second Sample P21	1/20/21					
479.126	Baseline	1/20/21					
479.127	First Dose	1/20/21					
479.128	Second Dose	1/20/21					
479.129	First Sample P21	1/20/21					
479.130	Second Sample P21	1/20/21					
479.131	Baseline	1/20/21					
479.132	First Dose	1/20/21					
479.133	Second Dose	1/20/21					
479.134	First Sample P21	1/20/21					
479.135	Second Sample P21	1/20/21					
479.136	Baseline	1/20/21					
479.137	First Dose	1/20/21					
479.138	Second Dose	1/20/21					
479.139	First Sample P21	1/20/21					
479.140	Second Sample P21	1/20/21					
479.141	Baseline	1/20/21					
479.142	First Dose	1/20/21					
479.143	Second Dose	1/20/21					
479.144	First Sample P21	1/20/21					
479.145	Second Sample P21	1/20/21					
479.146	Baseline	1/20/21					
479.147	First Dose	1/20/21					
479.148	Second Dose	1/20/21					
479.149	First Sample P21	1/20/21					
479.150	Second Sample P21	1/20/21					
479.151	Baseline	1/20/21					
479.152	First Dose	1/20/21					
479.153	Second Dose	1/20/21					
479.154	First Sample P21	1/20/21					
479.155	Second Sample P21	1/20/21					
479.156	Baseline	1/20/21					
479.157	First Dose	1/20/21					
479.158	Second Dose	1/20/21					
479.159	First Sample P21	1/20/21					
479.160	Second Sample P21	1/20/21					
479.161	Baseline	1/20/21					
479.162	First Dose	1/20/21					
479.163	Second Dose	1/20/21					
479.164	First Sample P21	1/20/21					
479.165	Second Sample P21	1/20/21					
479.166	Baseline	1/20/21					
479.167	First Dose	1/20/21					
479.168	Second Dose	1/20/21					
479.169	First Sample P21	1/20/21					
479.170	Second Sample P21	1/20/21					
479.171	Baseline	1/20/21					
479.172	First Dose	1/20/21					
479.173	Second Dose	1/20/21					
479.174	First Sample P21	1/20/21					
479.175	Second Sample P21	1/20/21					
479.176	Baseline	1/20/21					
479.177	First Dose	1/20/21					
479.178	Second Dose	1/20/21					
479.179	First Sample P21	1/20/21					
479.180	Second Sample P21	1/20/21					
479.181	Baseline	1/20/21					
479.182	First Dose	1/20/21					
479.183	Second Dose	1/20/21					
479.184	First Sample P21	1/20/21					
479.185	Second Sample P21	1/20/21					
479.186	Baseline	1/20/21					
479.187	First Dose	1/20/21					
479.188	Second Dose	1/20/21					
479.189	First Sample P21	1/20/21					
479.190	Second Sample P21	1/20/21					
479.191	Baseline	1/20/21					
479.192	First Dose	1/20/21					
479.193	Second Dose	1/20/21					
479.194	First Sample P21	1/20/21					
479.195	Second Sample P21	1/20/21					
479.196	Baseline	1/20/21					
479.197	First Dose	1/20/21					
479.198	Second Dose	1/20/21					
479.199	First Sample P21	1/20/21					
479.200	Second Sample P21	1/20/21					
479.201	Baseline	1/20/21					
479.202	First Dose	1/20/21					
479.203	Second Dose	1/20/21					
479.204	First Sample P21	1/20/21					
479.205	Second Sample P21	1/20/21					
479.206	Baseline	1/20/21					
479.207	First Dose	1/20/21					
479.208	Second Dose	1/20/21					
479.209	First Sample P21	1/20/21					
479.210	Second Sample P21	1/20/21					
479.211	Baseline	1/20/21					
479.212	First Dose	1/20/21					
479.213	Second Dose	1/20/21					
479.214	First Sample P21	1/20/21					
479.215	Second Sample P21	1/20/21					
479.216	Baseline	1/20/21					
479.217	First Dose	1/20/21					
479.218	Second Dose	1/20/21					
479.219	First Sample P21	1/20/21					

ID	DX	First dose vaccine	Time (days) between Dx and first vaccine dose	Months
384	9/8/20	12/28/20	111	3.7
367.7	10/10/20	1/8/21	90	3.0
218	10/14/20	1/7/21	85	2.8
376	7/30/20	1/22/21	176	5.9
313	8/10/20	1/26/21	169	5.6
382	8/28/20	1/23/21	148	4.9
511	11/23/20	1/29/21	67	2.2
512	11/23/20	1/29/21	67	2.2
294	7/13/20	1/30/21	201	6.7
297	3/15/20	2/3/21	310	10.3
Average			142.4	4.7



n=59	Summary results from 59 serial samples										Surrogate Vint ≥30%
	Numeric ID	Sample Date	OD mean	Est IgG titer	IgG1>242+	IgG2>186	IgG3>48+	IgG4>0.251+	IgA>0.374+	IgM>0.350+	
1	105	4/30/20	2.4548	3483	3.7	0.108	1.315	0.150	0.008	0.949	88
	105.2	5/2/20	1.331	>12800	0.182	0.066	0.437	-0.044	0.232	0.740	89
	105.3	7/10/20	1.818	1097	0.365	0.042	0.228	-0.037	0.254	0.498	89
	105.4	10/8/20	1.4	513	0.088	0.075	0.286	0.103	0.191	0.407	78
	112	4/27/20	2.1755	2094	3.01	0.005	0.170	0.095	0.530	0.856	91
2	112.2	8/4/20	2.5	3776	0.424	0.014	-0.015	0.493	0.130	0.186	95
	113	4/27/20	1.0806	287	0.01	0.037	0.060	0.036	0.110	1.363	85
	113.2	8/12/20	2.075	1746	-0.085	0.071	-0.073	-0.224	0.257	0.761	69
	148	5/11/20	2.249	2398	0.684	0.133	0.320	0.004	0.364	0.565	92
	148.2	8/5/20	2.37	2985	0.37	0.055	0.255	-0.035	0.560	0.562	96
5	137	4/30/20	1.037	265	0.12	-0.018	0.040	0.006	0.225	0.552	70
	137.2	6/2/20	2.417	3251	0.083	0.003	-0.016	-0.034	-0.098	0.716	81
	137.3	7/6/20	2.895	6934	0.62	0.128	0.029	0.006	0.006	0.685	91
	195	5/21/20	3.329	>12800	1.067	-0.007	0.255	1.336	0.132	0.807	96
	195.2	7/10/20	1.983	1479	0.702	0.026	0.073	0.163	-0.005	0.282	96
6	195.3	8/4/20	3.145	>12800	1.008	0.1208	-0.028	-0.059	0.292	1.154	96
	231	6/9/20	2.33	2897	0.513	0.034	0.150	0.072	0.425	0.765	90
	231.2	7/13/20	2.676	5200	0.178	0.024	0.031	0.055	0.153	0.346	77
	209	5/26/20	2.474	3698	0.297	0.005	0.062	0.043	-0.008	0.339	79
	209.2	7/13/20	1.761	986	0.116	0.111	-0.027	-0.028	0.196	0.303	64
9	209.3	8/31/20	0.5446	109	-0.127	0.035	-0.015	-0.063	0.103	0.311	65
	183	5/13/20	1.711	893	0.43	-0.025	0.070	0.030	0.670	2.006	84
	183.2	7/15/20	2.185	2133	0.119	0.148	0.052	0.199	0.845	1.797	83
	163	5/11/20	1.437	627	0.575	-0.055	0.090	0.230	0.190	0.222	66
	163.2	7/17/20	0.921	215	0.069	0.020	0.038	0.418	0.185	0.214	52
11	199	5/21/20	1.464	577	0.086	0.037	0.023	-0.073	-0.124	0.235	54
	199.2	7/18/20	1.816	1051	0.079	0.023	0.038	-0.008	0.061	0.220	67
	210	5/28/20	3.053	10304	0.732	0.180	0.033	0.024	-0.044	1.202	92
	210.2	7/20/20	2.86	720	0.095	0.009	0.086	-0.086	0.332	0.95	82
	229	8/5/20	2.103	1866	0.380	0.216	0.125	0.000	-0.082	0.159	85
14	229.2	7/20/20	2.115	1875	0.248	0.064	0.041	-0.023	-0.175	0.106	86
	166	5/11/20	1.783	1028	0.175	-0.045	0.142	0.114	0.160	0.977	55
	166.2	7/21/20	0.964	232	0.036	-0.032	0.035	-0.012	0.176	0.615	47
	156	5/11/20	1.759	832	0.515	0.2295	0.060	0.120	0.200	0.325	77
	156.2	7/22/20	1.307	433	0.174	0.056	0.032	0.123	0.154	0.129	70
16	156.3	9/24/20	0.224	n/a	0.206	0.113	0.013	0.125	0.158	0.093	57
	170	5/11/20	1.160	1280	1.11	0.106	0.175	0.315	0.760	1.423	89
	170.2	7/23/20	3.088	10990	0.694	0.158	0.134	0.616	0.782	0.258	92
	207	5/28/20	2.576	4335	0.389	0.0509	0.129	-0.049	-0.123	0.148	86
	207.2	7/19/20	1.872	1208	0.137	0.125	0.065	0.290	0.071	0.187	83
18	185	5/11/20	1.43	541	0.576	0.216	0.007	0.034	0.150	2.026	92
	185.2	7/24/20	1.948	1387	0.275	0.103	0.051	0.126	0.066	0.776	89
	185.3	9/11/20	0.8741	197	-0.096	0.082	-0.026	0.084	-0.093	0.426	86
	302	5/11/20	0.325	<100	-0.0289	0.074	0.003	-0.078	-0.090	0.209	22
	302.2	7/14/20	0.191	n/a	0.07504	0.052	0.074	0.019	0.157	0.225	6
20	203	5/21/20	1.579	710	0.1351	0.060	0.064	-0.068	-0.106	0.202	77
	203.2	7/24/20	2.188	2143	0.11187	0.092	0.053	0.078	0.148	0.141	65
	180	5/11/20	2.052	1675	0.05	-0.051	0.041	0.015	0.020	0.383	78
	180.2	7/25/20	1.905	1622	0.031	0.048	0.018	0.089	0.114	0.165	57
	179	5/11/20	1.265	401	0.01	-0.056	0.079	0.090	0.040	0.374	71
22	179.2	8/7/20	0.856	191	0.023	0.039	0.016	-0.024	0.150	0.235	75
	179.3	9/25/20	0.299	n/a	0.042	0.069	0.014	0.095	0.197	0.229	76
	162	5/11/20	2.122	2704	0.48	-0.038	0.320	0.085	0.090	0.481	84
	162.2	7/28/20	1.979	1466	0.083	0.101	0.047	-0.186	0.117	0.631	71
	201	5/21/20	0.544	108	0.054	0.047	0.080	-0.089	0.155	0.085	13
24	201.2	7/29/20	0.643	130	-0.077	0.009	0.048	-0.010	0.014	0.085	35
	225	5/16/20	3.034	>12800	1.177	0.074	0.045	0.353	0.314	0.102	97
	275.2	8/8/20	3.099	11220	1.016	0.048	0.079	0.184	0.266	0.053	97
	171	5/11/20	2.477	3251	0.41	-0.034	0.185	0.300	0.360	0.833	77
	171.2	8/14/20	2.385	3069	-0.08	0.033	0.099	-0.042	0.146	0.489	78
27	181	5/11/20	1.715	256	0.06	-0.036	0.055	0.060	0.656	0.65	65
	181.2	8/25/20	0.37	<100	-0.156	0.093	-0.074	0.025	0.074	0.249	49
	214	5/28/20	3.483	>12800	2.695	0.112	2.710	-0.006	1.258	1.066	86
	214.2	8/27/20	2.117	1884	0.427	0.046	0.772	-0.034	0.185	0.378	82
	176	5/11/20	2.512	2313	0.45	-0.041	0.550	0.028	0.670	0.949	89
30	176.2	9/5/20	0.851	189	0.142	0.093	0.157	0.012	0.244	0.087	85
	318	8/19/20	3.205	>12800	1.631	0.050	0.189	-0.079	0.322	1.283	92
	318.2	9/18/20	2.112	1869	1.197	0.077	0.063	-0.049	0.003	0.439	91
	322	8/24/20	3.219	>12800	2.09	0.469	0.312	0.024	0.442	0.473	94
	322.2	9/19/20	2.267	2473	0.869	0.619	0.137	-0.074	0.177	0.291	89
32	393	9/2/20	0.624	125	0.05565	-0.002	0.040	-0.077	1.189	0.289	65
	393.2	9/22/20	0.425	<100	0.04785	0.165	0.027	-0.082	0.679	0.123	64
	276	7/16/20	0.804	208	0.00334	0.071	0.025	0.350	0.155	0.288	34
	276.2	9/23/20	0.076	n/a	0.05869	0.111	0.018	0.398	0.133	0.251	25
	403	9/10/20	1.658	819	0.292	0.022	0.035	0.734	0.547	1.509	88
34	403.2	9/25/20	1.757	980	0.444	0.146	0.078	0.109	0.160	1.238	85
	284	7/21/20	3.205	>12800	0.835	-0.013	1.447	-0.065	0.071	0.451	91
	284.2	9/26/20	1.027	260	0.376	0.039	0.037	-0.050	0.096	0.298	85
	391	9/1/20	2.409	3202	1.499	-0.010	0.124	-0.067	0.112	0.394	92
	391.2	9/29/20	1.921	1319	0.729	0.001	0.043	-0.080	-0.029	0.168	87
37	397	9/4/20	0.791	120	-0.016	0.079	0.086	-0.073	0.095	0.386	72
	397.2	10/3/20	0.575	115	0.084	0.083	0.027	-0.052	0.166	0.203	60
	390	8/31/20	1.876	1217	0.503	0.018	0.587	0.128	0.363	1.378	92
	390.2	10/9/20	1.413	525	0.365	0.068	0.333	0.134	0.203	1.224	92
	410	9/12/20	0.947	225	0.228	-0.028	0.021	-0.056	0.064	0.182	84
39	410.2	10/5/20	0.752	158	0.3137	-0.086	0.032	-0.055	-0.014	0.145	84
	417	9/16/20	1.179	343	0.283	0.028	0.508	0.092	0.265	0.529	73
	417.2	10/6/20	1.069	281	0.235	0.190	0.250	-0.029	0.289	0.266	77
	261	6/22/20	3.185	>12800	2.652	-0.098	0.125	0.006	0.337	0.877	97
	261.2	6/29/20	2.528	3981	2.490	0.085	1.791	-0.002	0.378	0.753	96
42	265	4/22/20	0.209	n/a	0.095	0.030	0.117	0.036	0.428	0.317	42
	265.2	6/29/20	2.075	1738	1.089	0.058	0.381	-0.025	0.293	0.672	88
	192	5/12/20	0.977	218	0.032	-0.047	0.057	-0.066	0.040	0.216	53
	192.2	8/4/20	0.410	<100	0.169	-0.025	0.018	0.122	-0.099	0.178	32
	192.3	12/9/20	0.162	n/a	0.053	0.060	0.056	-0.192	0.160	0.169	40
44	376	9/10/20	2.660	5058	0.646	-0.016	0.031	0.054	0.377	0.299	94
	376.2	12/18/20	0.389	118	0.002	0.034	0.061	0.018	0.02	0.032	72
	300	8/7/20	0.802	173	-0.006	0.123	0.006	0.119	0.216	0.786	56
	300.2	9/14/20	1.101	298	-0.129	0.062	-0.040	-0.035	0.363	0.882	50
	300.3	9/5/21	0.441	n/a	0.223	0.325	0.019	0.012	0.213	0.89	24
46	312	8/17/20	0.745	998	0.486	0.056	0.121	0.038	0.858	0.500	83
	312.2	8/13/20	1.465	566	0.468	0.056	0.177	0.036	0.218	0.67	68
	312.3	12/21/20	0.351	<100	0.053	0.025	0.017	-0.188	0.294	0.348	58
	367	11/2/20	2.578	4351	1.514	0.090	0.509	3.0895	0.724	1.155	92
	367.2	12/18/20	2.155	2018	0.686	0.115995	0.078	0.712	0.125	0.673	

Previous Natural Infected Vaccinated Volunteers									
Numeric ID	Timepoint	Date	OD mean	CoVlgG Est titer	sVNT > 30%	IgG1>.242+	IgA>0.374+	IgM>0.350	Vaccine
384.2	Sample Baseline	12/16/20	1.037	265	69	0.162	0.338	0.141	Pfizer
384.3	Sample First Dose	1/13/21	2.806	6586	98	3.476	3.497	0.302	
384.4	23 d post 2nd dose	2/10/21	2.848	7114	98	3.524	3.453	0.148	
384.5	51 d post 2nd dose	3/10/2021 (71 dpv)	2.2202	2273	97	1.650	2.944	0.160	
367.2	Sample Baseline	12/18/20	2.155	2018	83	0.928	0.221	0.273	Pfizer
367.3	Sample First Dose	1/22/2021 (14 dpv)	3.164	12617	98	3.570	2.282	0.112	
367.4	20 d post 2nd dose	2/25/2021 (48dpv)	2.4670	3558	97	3.522	1.623	0.268	
367.5	96 d post 2nd dose	5/12/21 (124 dpv)	2.0004	1525	97	1.698	0.903	0.609	
218	Sample Baseline	11/2/20	1.253	392	72	-0.087	0.484	1.139	Pfizer
218.3	Sample First Dose	2/4/2021 (28dpv)	2.794	6444	98	3.489	1.110	0.601	
218.4	20 d post 2nd dose	2/25/2021 (49dpv)	2.5759	4336	97	3.536	1.488	0.361	
218.5	96 d post 2nd dose	5/12/21 (124 dpv)	1.9884	1492	97	2.540	0.608	0.419	
376.2	Sample Baseline	12/18/20	0.589	118	72	0.002	0.102	0.032	Moderna
376.3	Sample First Dose	2/10/2021 (19dpv)	2.693	5366	98	3.513	2.359	0.265	
376.4	18 d post 2nd dose	3/12/2021 (49dpv)	2.3341	2795	97	3.377	2.223	0.120	
376.5	74 d post 2nd dose	5/7/21 (105 dpv)	2.1959	2174	96	2.366	0.714	0.284	
313.3	Sample Baseline	1/12/21	2.854	7191	97	2.281	0.298	0.635	Pfizer
313.4	Sample First Dose	2/12/2021 (17dpv)	2.443	3408	99	3.554	0.617	0.122	
313.5	16 d post 2nd dose	3/4/2021 (37dpv)	2.7405	5847	97	3.466	0.840	0.090	
313.6	77 d post 2nd dose	5/4/2021 (98 dpv)	2.4636	3536	98	3.485	0.888	0.327	
382.3	Sample Baseline	1/14/21	0.194	n/a	39	-0.025	0.070	0.624	Pfizer
382.4	Sample First Dose	2/4/21 (12dpv)	2.8173	6722	98	3.524	2.056	0.759	
382.5	19 d post 2nd dose	3/4/2021 (40dpv)	2.5915	4461	97	3.037	1.273	0.499	
382.6	83 d post 2nd dose	5/7/21 (104 dpv)	1.7845	1030	96	0.893	0.707	1.611	
511	Sample Baseline	1/27/21	1.6438	798	81	0.490	1.170	0.932	Pfizer
511.2	Sample First Dose	2/17/2021 (19dpv)	2.636	4836	98	3.384	1.678	0.836	
511.3	25 d post 2nd dose	3/17/2021 (47 dpv)	2.6989	5421	97	2.589	1.089	0.558	
511.4	83 d post 2nd dose	5/13/21 (104 dpv)	1.6635	827	96	1.076	1.125	1.347	
512	Sample Baseline	1/27/21	0.5396	107	46	0.004	0.192	0.734	Pfizer
512.2	Sample First Dose	2/17/2021 (19dpv)	2.596	4498	98	2.909	2.599	1.773	
512.3	25 d post 2nd dose	3/17/2021 (47dpv)	2.6937	5370	89	2.815	1.530	0.735	
512.4	83 d post 2nd dose	5/13/21 (104 dpv)	1.8261	1111	96	1.660	0.993	1.795	
294.2	Sample Baseline	12/11/21	1.535	6550	90	0.309	0.249	0.176	Moderna
294.3	Sample First Dose	2/25/2021 (26 dpv)	1.9255	1331	97	3.621	1.080	1.053	
294.4	Sample Second Dose	3/31/2021 (60dpv)	2.3998	3150	98	2.806	0.318	0.546	
297	Sample Baseline	8/7/20	2.932	8279	96	0.937	1.024	0.114	Moderna
297.2	Sample First Dose	2/22/2021 (19dpv)	2.9251	8176	97	3.081	1.139	0.831	
297.3	Sample Second Dose	3/20/2021 (45dpv)	2.5652	4253	97	3.665	0.784	0.585	

#### Cutoff values

CoVlgG endpoint limit of detection = 100-12800

CoVlgG cutoff >.5 Positive

Cut-off Borderline IgG = 0.312-.49

Cut-off IgG1= 0.242

Cut-off IgG3= 0.48

Cut-off IgG4= 0.251

Cut-off IgA= 0.374

Cut-off IgM= 0.350

Cut-off IgM Borderline= 0.229 - 0.349

Healthy Vaccinated Volunteers									
Numeric ID	Timepoint	Date	OD mean	CoVlgG Est titer	sVNT>30%	IgG1>242+	IgA>0.374+	IgM>0.350	Vaccine
479	Sample Baseline	12/28/20	0.049	n/a	10	-0.098	-0.119	0.282	Moderna
479.2	Sample First Dose	1/19/2021 (26dpv)	2.1150	1878	46	0.917	0.317	0.389	
479.3	16 d post 2nd dose	2/5/2021 (41dpv)	3.0060	9470	97	3.477	1.399	0.337	
479.4	49 d post 2nd dose	3/10/2021 (75 dpv)	2.0446	1653	97	2.076	0.618	0.759	
479.5	110 d post 2nd dose	5/10/21 (137 dpv)	1.9715	1447	93	0.790	0.614	1.142	
112	Sample Baseline	4/28/20	0.0663	n/a	19	-0.114	0.022	0.292	Moderna
112.2	Sample First Dose	1/20/2021 (21 dpv)	2.9999	9365	96	3.468	0.820	0.763	
112.3	14 d post 2nd dose	2/10/2021 (42 dpv)	2.721	5640	98	3.626	1.102	0.633	
112.4	45 d post 2nd dose	3/10/2021 (69dpv)	2.3291	2770	97	3.492		0.375	
2	Sample Baseline	12/21/20	0.008	n/a	10	-0.168	0.160	0.137	
2.2	Sample First Dose	1/12/2021 (13 dpv)	1.328	449	46	0.173	0.936	0.342	Pfizer
2.3	15 d post 2nd dose	2/4/2021 (36 dpv)	2.6808	5246	98	3.149	1.280	1.541	
2.4	34 d post 2nd dose	2/24/2021 (56 dpv)	2.5260	3961	97	3.080	0.568	0.590	
2.5	92 d post 2nd dose	4/22/2021 (113 dpv)	2.3787	3031	96	1.070	0.432	0.263	
3	Sample Baseline	12/21/20	0.007	n/a	19	0.064	0.098	0.315	
3.2	Sample First Dose	1/12/2021 (13 dpv)	2.024	1592	49	1.372	1.221	0.403	Pfizer
3.3	15 d post 2nd dose	2/4/2021 (36 dpv)	2.6703	5147	98	3.233	1.726	0.675	
3.4	34 d post 2nd dose	2/24/2021 (56 dpv)	2.2177	2263	97	3.046	1.167	0.344	
3.5	92 d post 2nd dose	4/22/2021 (113 dpv)	2.0937	1807	97	1.043	1.412	0.517	
243	Sample Baseline	7/14/20	0.110	n/a	22	-0.072	-0.021	0.201	
243.2	Sample First Dose	1/14/2021 (15dpv)	2.144	1981	76	1.265	0.942	0.327	Pfizer
243.3	15 d post 2nd dose	2/4/2021 (36 dpv)	2.7023	5456	97	3.074	1.866	0.611	
243.4	35 d post 2nd dose	2/24/2021 (57 dpv)	2.4217	3278	97	3.009	0.726	0.415	
258	Sample Baseline	1/4/21	-0.004	n/a	20	-0.376	0.039	0.062	
258.2	Sample First Dose	1/22/2021 (18 dpv)	2.0730	1740	50	0.539	0.125	0.346	
258.3	22 d post 2nd dose	2/16/21 (43 dpv)	2.868	7375	97	3.409	0.510	0.539	Pfizer
258.4	49 d post 2nd dose	3/15/2021 (70 dpv)	2.2390	2352	96	1.702		0.501	
258.5	113 d post 2nd dose	5/18/21 (134 dpv)	1.7816	1025					
119	Sample Baseline	1/4/21	0.023	n/a	21	-0.312	0.034	0.240	
119.2	Sample First Dose	1/22/2021 (18 dpv)	0.8700	196	29	0.254	0.052	0.330	
119.3	18 d post 2nd dose	2/12/2021 (39 dpv)	2.7140	5573	97	3.546	0.535	0.447	Pfizer
119.4	49 d post 2nd dose	3/15/2021 (70 dpv)	2.0232	1589	93	1.242			
119.5	115 s post 2nd dose	5/20/21	1.7546	976					
190	Sample Baseline	5/19/20	0.135	n/a	23	-0.124	-0.116	0.105	
190.2	Sample First Dose	1/21/2021 (12 dpv)	0.6352	126	28	-0.012	0.138	0.182	Pfizer
190.3	21 d post 2nd dose	2/22/2021 (45 dpv)	2.5927	4471	97	3.112	0.316	0.322	
190.4	82 d post 2nd dose	4/22/2021 (103 dpv)	1.7373	929	95				
453	Sample Baseline	1/11/21	-0.003	n/a	12	-0.095	-0.112	0.053	
453.2	Sample First Dose	2/3/2021 (23 dpv)	1.808	1076	76	0.649	0.139	0.525	
453.3	19 d post 2nd dose	2/22/2021 (43 dpv)	2.672	5163	97	3.028	0.251	0.496	Pfizer
453.4	77 d post 2nd dose	4/21/2021 (100 dpv)	1.276	409	86				
6	Sample Baseline	1/13/21	-0.001	n/a	15	-0.110	0.139	0.133	
6.2	Sample First Dose	1/28/2021 (16 dpv)	1.301	455	65	0.276	0.156	0.317	
6.3	14 d post 2nd dose	2/16/21 (34 dpv)	2.758	6039	98	3.424	0.942	0.540	
6.4	21 d post 2nd dose	2/23/2021 (42dpv)	2.538	4051	96	3.090	0.649	0.384	Pfizer
6.5	61 d post 2nd dose	4/21/2021 (99 dpv)	1.838	1137	90	0.389	0.459	0.105	
383	Sample Baseline	1/13/21	-0.010	n/a	4	-0.124	-0.024	0.235	
383.2	Sample First Dose	2/5/2021 (23 dpv)	2.412	3217	71	2.031	0.284	1.022	
383.3	17 d post 2nd dose	2/22/2021 (40 dpv)	2.433	3346	98	3.082	0.433	0.787	
383.4	75 d post 2nd dose	4/21/2021 (98 dpv)	1.751	970	95				Pfizer
450	Sample Baseline	1/13/21	-0.005	n/a	4	-0.071	-0.079	0.067	
450.2	Sample First Dose	2/3/2021 (21 dpv)	1.791	1043	70	0.651	0.282	0.695	
450.3	19 d post 2nd dose	2/22/2021 (40 dpv)	2.600	4531	95	2.960	0.592	1.101	
450.4	35 d post 2nd dose	3/10/2021 (56dpv)	2.1228	1905	89	1.226		0.613	
450.5	96 d post 2nd dose	5/10/21 (117 dpv)	1.4567	568	46	0.330	0.504	0.596	Pfizer
110	Sample Baseline	1/13/21	0.006	n/a	18	-0.137	0.085	0.030	
110.2	Sample First Dose	2/3/2021 (23 dpv)	1.564	691	44	0.278	0.383	0.275	
110.3	19 d post 2nd dose	2/22/2021 (40 dpv)	2.519	3909	97	3.298	0.725	0.608	
110.4	35 d post 2nd dose	3/10/2021 (56dpv)	2.1813	2118	95	1.304		0.358	
110.5	96 d post 2nd dose	5/10/21 (117 dpv)	1.9259	1332	70	0.478	0.557	0.322	
480	Sample Baseline	1/13/21	-0.004	n/a	29	-0.002	-0.110	0.113	Pfizer
480.2	Sample First Dose	2/3/2021 (21 dpv)	1.826	1111	60	0.827	0.313	0.460	
480.3	19 d post 2nd dose	2/22/2021 (40 dpv)	2.618	4685	97	3.500	0.765	0.561	
480.4	35 d post 2nd dose	3/10/2021 (56dpv)	2.2003	2193	96	2.634		0.437	
480.5	96 d post 2nd dose	5/10/21 (117 dpv)	2.0802	1763	93	1.2325	0.417	0.490	
10	Sample Baseline	1/19/21	0.0094	n/a	24	-0.059	0.100	0.389	Pfizer
10.2	Sample First Dose	2/4/21 (14 dpv)	1.5188	636	61	0.624	1.509	0.868	
10.3	7 d post 2nd dose	2/18/21 (28 dpv)	2.7957	6464	97	3.562	2.780	0.779	
10.4	21 d post 2nd dose	3/4/2021 (42dpv)	2.5257	3959	96	1.817	0.779	0.452	
10.5	60 d post 2nd dose	4/12/2021 (81 dpv)	1.8359	1131	92	0.307	0.547	0.451	
116	Sample Baseline	12/21/20	0.057	n/a	0	-0.011	0.033	0.133	Pfizer
116.2	Sample First Dose	2/4/21 (14 dpv)	1.727	928	66	0.607	0.273	0.633	
116.3	7 d post 2nd dose	2/18/21 (28 dpv)	3.049	10239	97	3.494	0.583	1.984	
116.4	21 d post 2nd dose	3/4/2021 (42dpv)	2.6355	4832	97	3.255	0.190	1.065	
116.5	60 d post 2nd dose	4/12/2021 (101dpv)	2.3693	2980	97	1.784	0.250	0.334	
380	Sample Baseline	12/21/20	0.049	n/a	25	-0.098	-0.040	0.229	Pfizer
380.2	Sample First Dose	2/4/21 (14 dpv)	1.1782	343	61	0.240	0.330	0.601	
380.3	7 d post 2nd dose	2/18/21 (28 dpv)	2.787	6362	97	3.559	1.699	0.835	
380.4	21 d post 2nd dose	3/4/2021 (42dpv)	2.4966	3755	96	2.811	0.655	0.428	
380.5	60 d post 2nd dose	4/12/2021 (81 dpv)	2.2685	2482	97	1.328	0.825	0.235	
8	Sample Baseline	1/20/21	0.007	n/a	26	-0.066	0.078	0.258	Pfizer
8.2	Sample First Dose	2/4/21 (14 dpv)	0.998	247	70	0.340	1.672	0.376	
8.3	7 d post 2nd dose	2/18/21 (28 dpv)	2.665	5101	97	3.375	1.463	0.427	
8.4	20 d post 2nd dose	3/3/2021 (41dpv)	2.6953	5387	96	2.460	0.477	0.291	
8.5	63 d post 2nd dose	4/14/2021 (83 dpv)	1.8998	1270	95	0.498	0.222	0.452	
117	Sample Baseline	8/10/20	0.082	n/a	22	-0.020	0.096	0.237	Pfizer
117.2	Sample First Dose	2/4/21 (12 dpv)	0.949	226	55	0.236	0.520	0.348	
117.3	6 d post 2nd dose	2/19/21 (27 dpv)	2.510	3848	97	3.631	1.755	1.120	
117.4	19 d post 2nd dose	3/4/2021 (40dpv)	2.6655	5102	97	3.409	0.811	0.559	
117.5	58 d post 2nd dose	4/12/2021 (79 dpv)	2.3352	2801	97	1.827	0.291	0.482	
254	Sample Baseline	1/13/21	0.009	n/a	18	-0.099	0.002	0.160	Pfizer
254.2	Sample First Dose	2/4/21 (12 dpv)	1.525	643	57	0.761	0.786	0.707	
254.3	10 d post 2nd dose	2/23/2021 (33 dpv)	2.629	5101	98	3.631	1.369	0.845	
254.4	19 d post 2nd dose	3/4/2021 (40dpv)	2.6047	4569	96	3.331	0.396	0.377	
254.5	58 d post 2nd dose	4/12/2021 (79 dpv)	2.2378	2347	97	1.3268	0.461	0.902	
513	Sample Baseline	1/28/21	0.038	n/a	17	-0.072	0.072	0.011	Moderna
513.2	Sample First Dose	2/16/21 (19DPV)	2.189	2148	79	1.664	1.987	1.060	
513.3	7 d post 2nd dose	3/4/2021 (35dpv)	2.7381	5821	97	3.466	3.591	0.597	
513.4	68 d post 2nd dose	5/4/2021 (96 dpv)	2.3635	3239	98	2.7565	1.241	0.5576	

**Cutoff values**  
 CoVigG endpoint      limit of detection = 100-12800  
 CoVigG cutoff > .5 Positive  
 Cut-off Borderline IgG = 0.312- .49  
 Cut-off IgG1= 0.242  
 Cut-off IgG3= 0.48  
 Cut-off IgG4= 0.251  
 Cut-off IgA= 0.374  
 Cut-off IgM= 0.350  
 Cut-off IgM Borderline= 0.229 - 0.349