

COVID-19 Immunogenicity Analysis Report  
MockENSEMBLE Study

USG COVID-19 Response Biostatistics Team

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# Chapter 1

## Tabular Description of Immunogenicity Data

### 1.1 Demographic and Clinical Characteristics at Baseline in the Baseline SARS-CoV-2 Negative Per-Protocol Cohort

Table 1. Demographic and Clinical Characteristics at Baseline in the Baseline SARS-CoV-2 Negative Per-Protocol Cohort

Characteristics	Vaccine (N = 828)	Placebo (N = 101)	Total (N = 929)
<b>Age</b>			
Age 18 - 59	406 (49.0%)	54 (53.5%)	460 (49.5%)
Age $\geq$ 60	422 (51.0%)	47 (46.5%)	469 (50.5%)
Mean (Range)	56.7 (18.0, 85.0)	55.1 (18.0, 85.0)	56.5 (18.0, 85.0)
<b>BMI</b>			
Mean $\pm$ SD	29.0 $\pm$ 4.5	30.0 $\pm$ 4.3	29.1 $\pm$ 4.4
<b>Risk for Severe Covid-19</b>			
At-risk	402 (48.6%)	50 (49.5%)	452 (48.7%)
Not at-risk	426 (51.4%)	51 (50.5%)	477 (51.3%)
<b>Age, Risk for Severe Covid-19</b>			
Age 18 - 59 At-risk	199 (24.0%)	27 (26.7%)	226 (24.3%)
Age 18 - 59 Not at-risk	207 (25.0%)	27 (26.7%)	234 (25.2%)
Age $\geq$ 60 At-risk	203 (24.5%)	23 (22.8%)	226 (24.3%)
Age $\geq$ 60 Not at-risk	219 (26.4%)	24 (23.8%)	243 (26.2%)
<b>Sex</b>			
Female	452 (54.6%)	49 (48.5%)	501 (53.9%)
Male	376 (45.4%)	52 (51.5%)	428 (46.1%)
<b>Hispanic or Latino ethnicity</b>			
Hispanic or Latino	338 (40.8%)	41 (40.6%)	379 (40.8%)
Not Hispanic or Latino	461 (55.7%)	59 (58.4%)	520 (56.0%)
Not reported and unknown	29 (3.5%)	1 (1.0%)	30 (3.2%)
<b>Race</b>			
White	468 (56.5%)	55 (54.5%)	523 (56.3%)

*(continued)*

Characteristics	Vaccine (N = 828)	Placebo (N = 101)	Total (N = 929)
Black or African American	292 (35.3%)	37 (36.6%)	329 (35.4%)
Asian	24 (2.9%)	2 (2.0%)	26 (2.8%)
American Indian or Alaska Native	2 (0.2%)		2 (0.2%)
Native Hawaiian or Other Pacific Islander	2 (0.2%)		2 (0.2%)
Multiracial	31 (3.7%)	6 (5.9%)	37 (4.0%)
Not reported and unknown	9 (1.1%)	1 (1.0%)	10 (1.1%)
<b>Underrepresented Minority Status in the U.S.</b>			
URM	200 (24.2%)	24 (23.8%)	224 (24.1%)
Non-URM	189 (22.8%)	26 (25.7%)	215 (23.1%)
<b>Country</b>			
United States	389 (47.0%)	50 (49.5%)	439 (47.3%)
Argentina	36 (4.3%)	5 (5.0%)	41 (4.4%)
Brazil	85 (10.3%)	12 (11.9%)	97 (10.4%)
Chile	9 (1.1%)	1 (1.0%)	10 (1.1%)
Columbia	60 (7.2%)	2 (2.0%)	62 (6.7%)
Mexico	5 (0.6%)	1 (1.0%)	6 (0.6%)
Peru	23 (2.8%)	5 (5.0%)	28 (3.0%)
South Africa	221 (26.7%)	25 (24.8%)	246 (26.5%)

This table summarizes the random subcohort, which was randomly sampled from the per-protocol cohort. The sampling was stratified by strata defined by enrollment characteristics: Assigned treatment arm × Baseline SARS-CoV-2 naïve vs. non-naïve status (defined by serostatus and NAAT testing) × Randomization strata. In the U.S. subcohort 8 baseline demographic strata are used; each of the Latin America and South Africa subcohorts includes 4 baseline demographic strata.

## 1.2 Demographic and Clinical Characteristics at Baseline in the Baseline SARS-CoV-2 Positive Per-Protocol Cohort

Table 2. Demographic and Clinical Characteristics at Baseline in the Baseline SARS-CoV-2 Positive Per-Protocol Cohort

Characteristics	Vaccine (N = 216)	Placebo (N = 219)	Total (N = 435)
<b>Age</b>			
Age 18 - 59	118 (54.6%)	111 (50.7%)	229 (52.6%)
Age ≥ 60	98 (45.4%)	108 (49.3%)	206 (47.4%)
Mean (Range)	55.0 (18.0, 85.0)	57.1 (18.0, 85.0)	56.0 (18.0, 85.0)
<b>BMI</b>			
Mean ± SD	29.1 ± 4.7	28.9 ± 4.8	29.0 ± 4.7
<b>Risk for Severe Covid-19</b>			
At-risk	112 (51.9%)	110 (50.2%)	222 (51.0%)
Not at-risk	104 (48.1%)	109 (49.8%)	213 (49.0%)
<b>Age, Risk for Severe Covid-19</b>			
Age 18 - 59 At-risk	64 (29.6%)	57 (26.0%)	121 (27.8%)
Age 18 - 59 Not at-risk	54 (25.0%)	54 (24.7%)	108 (24.8%)
Age ≥ 60 At-risk	48 (22.2%)	53 (24.2%)	101 (23.2%)
Age ≥ 60 Not at-risk	50 (23.1%)	55 (25.1%)	105 (24.1%)
<b>Sex</b>			
Female	133 (61.6%)	114 (52.1%)	247 (56.8%)
Male	83 (38.4%)	105 (47.9%)	188 (43.2%)
<b>Hispanic or Latino ethnicity</b>			
Hispanic or Latino	89 (41.2%)	85 (38.8%)	174 (40.0%)
Not Hispanic or Latino	115 (53.2%)	123 (56.2%)	238 (54.7%)
Not reported and unknown	12 (5.6%)	11 (5.0%)	23 (5.3%)
<b>Race</b>			
White	132 (61.1%)	118 (53.9%)	250 (57.5%)
Black or African American	73 (33.8%)	87 (39.7%)	160 (36.8%)
Asian	6 (2.8%)	5 (2.3%)	11 (2.5%)
American Indian or Alaska Native		2 (0.9%)	2 (0.5%)
Multiracial	5 (2.3%)	7 (3.2%)	12 (2.8%)
<b>Underrepresented Minority Status in the U.S.</b>			
URM	48 (22.2%)	49 (22.4%)	97 (22.3%)
Non-URM	50 (23.1%)	50 (22.8%)	100 (23.0%)
<b>Country</b>			
United States	98 (45.4%)	99 (45.2%)	197 (45.3%)
Argentina	13 (6.0%)	18 (8.2%)	31 (7.1%)
Brazil	25 (11.6%)	17 (7.8%)	42 (9.7%)
Chile	3 (1.4%)	4 (1.8%)	7 (1.6%)
Columbia	14 (6.5%)	14 (6.4%)	28 (6.4%)
Mexico		2 (0.9%)	2 (0.5%)
Peru	4 (1.9%)	5 (2.3%)	9 (2.1%)

South Africa	59 (27.3%)	60 (27.4%)	119 (27.4%)
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This table summarizes the random subcohort, which was randomly sampled from the per-protocol cohort. The sampling was stratified by strata defined by enrollment characteristics: Assigned treatment arm  $\times$  Baseline SARS-CoV-2 naïve vs. non-naïve status (defined by serostatus and NAAT testing)  $\times$  Randomization strata. In the U.S. subcohort 8 baseline demographic strata are used; each of the Latin America and South Africa subcohorts includes 4 baseline demographic strata.

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### 1.3 Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

Table 3. Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

U.S. Random Subcohort Sample Sizes (N=636 Participants) (Janssen Trial)																
	Baseline SARS-CoV-2 Negative								Baseline SARS-CoV-2 Positive							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
<b>Vaccine</b>																
Observed	47	51	57	45	50	40	51	48	8	17	10	13	15	16	9	10
Estimated	1550	936	794	539	1557	1021	869	535	155	120	97	61	155	140	97	37
<b>Placebo</b>																
Observed	7	6	5	6	7	6	6	11	11	13	14	14	14	11	11	
Estimated	1474	997	740	584	1514	984	772	568	160	105	71	74	174	107	102	59

Demographic covariate strata:

- 1. US URM, Age 18-59, Not at risk
- 2. US URM, Age 18-59, At risk
- 3. US URM, Age  $\geq 60$ , Not at risk
- 4. US URM, Age  $\geq 60$ , At risk
- 5. US White non-Hisp, Age 18-59, Not at risk
- 6. US White non-Hisp, Age 18-59, At risk
- 7. US White non-Hisp, Age  $\geq 60$ , Not at risk
- 8. US White non-Hisp, Age  $\geq 60$ , At risk

Observed = Numbers of participants sampled into the subcohort within baseline covariate strata.

Estimated = Estimated numbers of participants in the whole per-protocol cohort within baseline covariate strata, calculated using inverse probability weighting.

## 1.4 Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

Table 4. Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

Latin America and South Africa Random Subcohort Sample Sizes (N=728 Participants) (Janssen Trial)																
	Baseline SARS-CoV-2 Negative								Baseline SARS-CoV-2 Positive							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
<b>Vaccine</b>																
Observed	55	54	54	55	55	54	57	55	15	15	17	12	16	16	14	13
Estimated	2960	2037	1582	1041	1095	802	578	374	335	213	173	124	140	93	67	44
<b>Placebo</b>																
Observed	6	7	7	6	7	7	6	5	13	16	18	13	16	16	13	15
Estimated	2897	1997	1594	1134	1185	745	612	425	299	229	178	116	142	70	65	43

Demographic covariate strata:

- 1. Latin America, Age 18-59, Not at risk
- 2. Latin America, Age 18-59, At risk
- 3. Latin America, Age  $\geq 60$ , Not at risk
- 4. Latin America, Age  $\geq 60$ , At risk
- 5. South Africa, Age 18-59, Not at risk
- 6. South Africa, Age 18-59, At risk
- 7. South Africa, Age  $\geq 60$ , Not at risk
- 8. South Africa, Age  $\geq 60$ , At risk

Observed = Numbers of participants sampled into the subcohort within baseline covariate strata.

Estimated = Estimated numbers of participants in the whole per-protocol cohort within baseline covariate strata, calculated using inverse probability weighting.

## 1.5 Percentage of responders, and participants with concentrations $\geq 2\times$ LLOD or $\geq 4\times$ LLOD for binding antibody markers

Table 5a. Percentage of responders, and participants with concentrations  $\geq 2\times$  LLOD or  $\geq 4\times$  LLOD for binding antibody markers by All participants

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>All participants</b>								
	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	828	989.4/18270 = 5.4% (4.2%, 7.0%)	15356.4/18270 = 84.1% (80.8%, 86.8%)	13856.5/18270 = 75.8% (72.2%, 79.1%)
	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	828	9292.7/18270 = 50.9% (47.1%, 54.6%)	15452.1/18270 = 84.6% (81.4%, 87.3%)	13035.4/18270 = 71.3% (67.7%, 74.8%)
	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	828	8202.8/18270 = 44.9% (41.3%, 48.6%)	17793.1/18270 = 97.4% (95.6%, 98.5%)	16866.6/18270 = 92.3% (89.8%, 94.2%)
	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	216	204.8/2051 = 10.0% (6.2%, 15.6%)	1895.6/2051 = 92.4% (87.6%, 95.5%)	1758.2/2051 = 85.7% (79.7%, 90.2%)
	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	216	1375.9/2051 = 67.1% (59.6%, 73.8%)	1903.1/2051 = 92.8% (88.5%, 95.6%)	1738.6/2051 = 84.8% (78.8%, 89.3%)
	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	216	1205.5/2051 = 58.8% (51.2%, 65.9%)	2040.8/2051 = 99.5% (96.5%, 99.9%)	2004.6/2051 = 97.7% (95.0%, 99.0%)
	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	219	64.8/1994 = 3.2% (1.6%, 6.3%)	1582.2/1994 = 79.3% (72.3%, 85.0%)	1310.1/1994 = 65.7% (58.7%, 72.1%)
	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	219	929.1/1994 = 46.6% (39.8%, 53.5%)	1574.4/1994 = 79.0% (72.0%, 84.6%)	1259.9/1994 = 63.2% (55.7%, 70.1%)

Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	219	669.5/1994 = 33.6% (27.7%, 40.0%)	1881.6/1994 = 94.4% (89.5%, 97.1%)	1719.8/1994 = 86.3% (79.6%, 91.0%)
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.



Table 5b. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Age

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Age</b>								
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	406	158.5/11958 = 1.3% (0.5%, 3.2%)	9413.2/11958 = 78.7% (74.0%, 82.8%)	8256.8/11958 = 69.0% (63.9%, 73.8%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	406	4795/11958 = 40.1% (35.0%, 45.4%)	9469/11958 = 79.2% (74.6%, 83.2%)	7372.4/11958 = 61.7% (56.4%, 66.7%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	406	3719.7/11958 = 31.1% (26.4%, 36.3%)	11481.1/11958 = 96.0% (93.3%, 97.7%)	10614.8/11958 = 88.8% (85.1%, 91.6%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	118	99.5/1351 = 7.4% (3.3%, 15.5%)	1240.3/1351 = 91.8% (85.3%, 95.6%)	1150.6/1351 = 85.2% (77.0%, 90.8%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	118	775.4/1351 = 57.4% (47.0%, 67.1%)	1230.7/1351 = 91.1% (85.0%, 94.9%)	1092.5/1351 = 80.9% (72.4%, 87.2%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	118	651.6/1351 = 48.2% (38.1%, 58.5%)	1351/1351 = 100.0% (100.0%, 100.0%)	1314.8/1351 = 97.3% (93.6%, 98.9%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	111	0/1286 = 0.0% (0.0%, 0.0%)	941.8/1286 = 73.2% (63.1%, 81.4%)	700.4/1286 = 54.5% (44.8%, 63.8%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	111	428.9/1286 = 33.3% (24.7%, 43.3%)	923.4/1286 = 71.8% (61.6%, 80.1%)	664.7/1286 = 51.7% (41.2%, 62.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	111	208.7/1286 = 16.2% (9.8%, 25.7%)	1179.1/1286 = 91.7% (84.2%, 95.8%)	1022.7/1286 = 79.5% (69.5%, 86.9%)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	422	830.9/6312 = 13.2% (10.1%, 17.0%)	5943.2/6312 = 94.2% (90.9%, 96.3%)	5599.6/6312 = 88.7% (84.8%, 91.7%)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	422	4497.6/6312 = 71.3% (66.2%, 75.8%)	5983.1/6312 = 94.8% (91.8%, 96.7%)	5663/6312 = 89.7% (86.1%, 92.5%)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	422	4483.1/6312 = 71.0% (66.0%, 75.6%)	6312/6312 = 100.0% (100.0%, 100.0%)	6251.8/6312 = 99.0% (97.1%, 99.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age ≥ 60	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	105.3/700 = 15.0% (8.7%, 24.8%)	655.3/700 = 93.6% (84.5%, 97.5%)	607.6/700 = 86.8% (76.9%, 92.8%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	600.5/700 = 85.8% (76.7%, 91.7%)	672.4/700 = 96.1% (88.6%, 98.7%)	646.1/700 = 92.3% (84.5%, 96.4%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	553.8/700 = 79.1% (69.1%, 86.5%)	689.8/700 = 98.5% (90.0%, 99.8%)	689.8/700 = 98.5% (90.0%, 99.8%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	47	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	47	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	47	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	108	64.8/708 = 9.2% (4.6%, 17.5%)	640.4/708 = 90.5% (82.3%, 95.1%)	609.7/708 = 86.1% (77.5%, 91.8%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	108	500.3/708 = 70.7% (60.8%, 78.9%)	651/708 = 92.0% (84.6%, 96.0%)	595.2/708 = 84.1% (75.4%, 90.1%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	108	460.8/708 = 65.1% (54.8%, 74.1%)	702.5/708 = 99.2% (94.6%, 99.9%)	697.2/708 = 98.5% (93.9%, 99.6%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 5c. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Risk for Severe Covid-19</b>								
At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	402	506.9/7285 = 7.0% (4.9%, 9.7%)	6171/7285 = 84.7% (80.0%, 88.5%)	5552.3/7285 = 76.2% (71.0%, 80.7%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	402	3870.2/7285 = 53.1% (47.7%, 58.5%)	6120.9/7285 = 84.0% (79.2%, 87.9%)	5236.1/7285 = 71.9% (66.6%, 76.6%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	402	3260.9/7285 = 44.8% (39.7%, 50.0%)	7062.1/7285 = 96.9% (93.8%, 98.5%)	6765.9/7285 = 92.9% (89.1%, 95.4%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	112	78.4/832 = 9.4% (4.8%, 17.6%)	778.1/832 = 93.5% (87.4%, 96.8%)	709.2/832 = 85.2% (76.5%, 91.1%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	112	515.7/832 = 62.0% (51.8%, 71.2%)	751.9/832 = 90.4% (83.7%, 94.5%)	653.9/832 = 78.6% (69.4%, 85.6%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	112	439.2/832 = 52.8% (42.7%, 62.7%)	832/832 = 100.0% (100.0%, 100.0%)	795.8/832 = 95.7% (89.8%, 98.2%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	110	31.4/803 = 3.9% (1.5%, 9.6%)	638.9/803 = 79.6% (69.9%, 86.7%)	548.1/803 = 68.3% (57.7%, 77.2%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	110	396.1/803 = 49.3% (39.0%, 59.7%)	644.4/803 = 80.3% (70.4%, 87.4%)	517.5/803 = 64.4% (54.0%, 73.7%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	110	257.6/803 = 32.1% (23.8%, 41.7%)	772.7/803 = 96.2% (90.7%, 98.5%)	728.2/803 = 90.7% (82.7%, 95.2%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	426	482.5/10985 = 4.4% (2.9%, 6.5%)	9185.4/10985 = 83.6% (79.0%, 87.4%)	8304.1/10985 = 75.6% (70.6%, 80.0%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	426	5422.5/10985 = 49.4% (44.2%, 54.6%)	9331.2/10985 = 84.9% (80.5%, 88.5%)	7799.3/10985 = 71.0% (65.9%, 75.6%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	426	4941.9/10985 = 45.0% (40.0%, 50.1%)	10731.1/10985 = 97.7% (95.0%, 98.9%)	10100.7/10985 = 91.9% (88.4%, 94.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	104	126.4/1219 = 10.4% (5.4%, 19.0%)	1117.5/1219 = 91.7% (83.9%, 95.9%)	1048.9/1219 = 86.0% (77.1%, 91.9%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	104	860.1/1219 = 70.6% (59.6%, 79.6%)	1151.3/1219 = 94.4% (87.5%, 97.6%)	1084.8/1219 = 89.0% (80.0%, 94.2%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	104	766.2/1219 = 62.9% (52.0%, 72.6%)	1208.8/1219 = 99.2% (94.1%, 99.9%)	1208.8/1219 = 99.2% (94.1%, 99.9%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	109	33.4/1191 = 2.8% (1.0%, 7.4%)	943.3/1191 = 79.2% (68.8%, 86.8%)	762/1191 = 64.0% (54.4%, 72.5%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	109	533/1191 = 44.8% (35.8%, 54.0%)	929.9/1191 = 78.1% (67.9%, 85.7%)	742.3/1191 = 62.3% (51.7%, 71.9%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	109	411.9/1191 = 34.6% (26.7%, 43.5%)	1108.9/1191 = 93.1% (85.0%, 97.0%)	991.7/1191 = 83.3% (72.9%, 90.2%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 5d. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Age, Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Age, Risk for Severe Covid-19</b>								
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	199	63.2/4796 = 1.3% (0.3%, 5.3%)	3784.9/4796 = 78.9% (72.0%, 84.5%)	3323.6/4796 = 69.3% (61.9%, 75.8%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	199	2097.6/4796 = 43.7% (36.5%, 51.3%)	3743.3/4796 = 78.1% (71.0%, 83.7%)	3006.9/4796 = 62.7% (55.2%, 69.7%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	199	1499.9/4796 = 31.3% (24.7%, 38.7%)	4573.1/4796 = 95.4% (90.7%, 97.7%)	4283.7/4796 = 89.3% (83.6%, 93.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	64	28.4/566 = 5.0% (1.2%, 18.2%)	526.1/566 = 93.0% (85.4%, 96.8%)	469.1/566 = 82.9% (71.0%, 90.5%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	64	294.1/566 = 52.0% (38.5%, 65.1%)	503.3/566 = 88.9% (80.4%, 94.0%)	417.1/566 = 73.7% (61.4%, 83.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	64	253.4/566 = 44.8% (32.2%, 58.1%)	566/566 = 100.0% (100.0%, 100.0%)	529.8/566 = 93.6% (85.1%, 97.4%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	57	0/511 = 0.0% (0.0%, 0.0%)	364.1/511 = 71.2% (57.2%, 82.1%)	278.6/511 = 54.5% (39.8%, 68.5%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	57	211.4/511 = 41.4% (27.9%, 56.2%)	375/511 = 73.4% (59.2%, 84.0%)	283.5/511 = 55.5% (41.2%, 68.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	57	88.9/511 = 17.4% (8.7%, 31.7%)	480.7/511 = 94.1% (85.5%, 97.7%)	441.5/511 = 86.4% (74.2%, 93.4%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	207	95.3/7162 = 1.3% (0.4%, 4.1%)	5628.3/7162 = 78.6% (71.9%, 84.0%)	4933.2/7162 = 68.9% (61.7%, 75.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	207	2697.4/7162 = 37.7% (30.8%, 45.0%)	5725.7/7162 = 79.9% (73.5%, 85.1%)	4365.5/7162 = 61.0% (53.6%, 67.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	207	2219.8/7162 = 31.0% (24.6%, 38.2%)	6908.1/7162 = 96.5% (92.4%, 98.4%)	6331.1/7162 = 88.4% (83.1%, 92.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	54	71.1/785 = 9.1% (3.4%, 22.2%)	714.2/785 = 91.0% (79.7%, 96.3%)	681.5/785 = 86.8% (74.0%, 93.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	54	481.3/785 = 61.3% (45.9%, 74.7%)	727.5/785 = 92.7% (82.2%, 97.2%)	675.4/785 = 86.0% (72.7%, 93.5%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	54	398.2/785 = 50.7% (35.9%, 65.4%)	785/785 = 100.0% (100.0%, 100.0%)	785/785 = 100.0% (100.0%, 100.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	54	0/775 = 0.0% (0.0%, 0.0%)	577.7/775 = 74.5% (59.5%, 85.4%)	421.8/775 = 54.4% (41.5%, 66.8%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	54	217.5/775 = 28.1% (17.3%, 42.1%)	548.4/775 = 70.8% (56.0%, 82.1%)	381.2/775 = 49.2% (34.6%, 63.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	54	119.8/775 = 15.5% (7.3%, 29.7%)	698.4/775 = 90.1% (77.7%, 96.0%)	581.1/775 = 75.0% (59.7%, 85.8%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	203	443.7/2489 = 17.8% (12.7%, 24.4%)	2386.1/2489 = 95.9% (91.4%, 98.1%)	2228.7/2489 = 89.5% (84.2%, 93.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	203	1772.6/2489 = 71.2% (64.0%, 77.5%)	2377.5/2489 = 95.5% (91.1%, 97.8%)	2229.2/2489 = 89.6% (84.0%, 93.3%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	203	1761/2489 = 70.8% (63.6%, 77.0%)	2489/2489 = 100.0% (100.0%, 100.0%)	2482.2/2489 = 99.7% (98.1%, 100.0%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	50/266 = 18.8% (9.2%, 34.7%)	252/266 = 94.7% (77.4%, 99.0%)	240.2/266 = 90.3% (75.5%, 96.6%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	221.6/266 = 83.3% (69.3%, 91.7%)	248.6/266 = 93.5% (77.6%, 98.3%)	236.8/266 = 89.0% (74.6%, 95.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	185.8/266 = 69.9% (53.2%, 82.5%)	266/266 = 100.0% (100.0%, 100.0%)	266/266 = 100.0% (100.0%, 100.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	53	31.4/292 = 10.7% (4.1%, 25.4%)	274.8/292 = 94.1% (80.8%, 98.4%)	269.5/292 = 92.3% (79.3%, 97.4%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	53	184.7/292 = 63.2% (48.5%, 75.9%)	269.5/292 = 92.3% (79.3%, 97.4%)	234/292 = 80.1% (65.5%, 89.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	53	168.7/292 = 57.8% (42.5%, 71.7%)	292/292 = 100.0% (100.0%, 100.0%)	286.6/292 = 98.2% (87.4%, 99.8%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	219	387.2/3823 = 10.1% (6.6%, 15.2%)	3557.1/3823 = 93.0% (88.0%, 96.1%)	3371/3823 = 88.2% (82.3%, 92.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	219	2725/3823 = 71.3% (64.2%, 77.5%)	3605.6/3823 = 94.3% (89.8%, 96.9%)	3433.8/3823 = 89.8% (84.5%, 93.4%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	219	2722.1/3823 = 71.2% (64.2%, 77.3%)	3823/3823 = 100.0% (100.0%, 100.0%)	3769.6/3823 = 98.6% (95.2%, 99.6%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	55.3/434 = 12.7% (5.5%, 27.0%)	403.3/434 = 92.9% (79.1%, 97.9%)	367.4/434 = 84.7% (69.9%, 92.9%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	378.8/434 = 87.3% (73.7%, 94.4%)	423.8/434 = 97.7% (84.2%, 99.7%)	409.3/434 = 94.3% (82.2%, 98.4%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	368/434 = 84.8% (70.6%, 92.8%)	423.8/434 = 97.7% (84.2%, 99.7%)	423.8/434 = 97.7% (84.2%, 99.7%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	55	33.4/416 = 8.0% (2.9%, 20.6%)	365.6/416 = 87.9% (75.3%, 94.5%)	340.2/416 = 81.8% (68.6%, 90.2%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	55	315.6/416 = 75.9% (61.8%, 85.9%)	381.5/416 = 91.7% (80.7%, 96.7%)	361.2/416 = 86.8% (74.5%, 93.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	55	292/416 = 70.2% (55.8%, 81.5%)	410.5/416 = 98.7% (90.8%, 99.8%)	410.5/416 = 98.7% (90.8%, 99.8%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

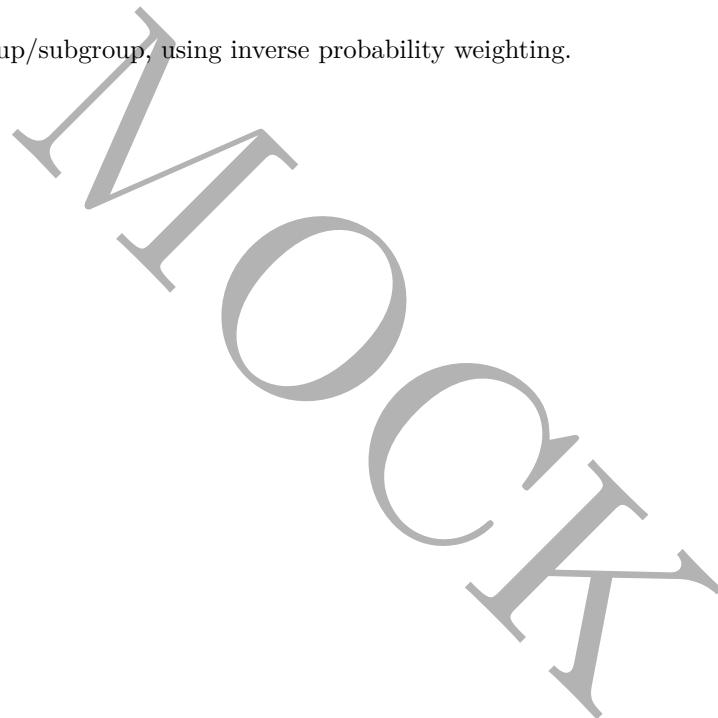


Table 5e. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Sex</b>								
Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	376	524.4/7813.3 = 6.7% (4.6%, 9.7%)	6474.9/7813.3 = 82.9% (77.6%, 87.1%)	5752.9/7813.3 = 73.6% (68.0%, 78.6%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	376	4203.5/7813.3 = 53.8% (48.1%, 59.4%)	6603/7813.3 = 84.5% (79.4%, 88.5%)	5574.9/7813.3 = 71.4% (65.6%, 76.5%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	376	3538.5/7813.3 = 45.3% (39.9%, 50.8%)	7601.8/7813.3 = 97.3% (93.7%, 98.9%)	7131.8/7813.3 = 91.3% (86.9%, 94.3%)
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	83	76/802.5 = 9.5% (4.2%, 20.0%)	747.6/802.5 = 93.2% (85.5%, 96.9%)	716.5/802.5 = 89.3% (80.9%, 94.3%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	83	532.4/802.5 = 66.3% (54.2%, 76.7%)	705.3/802.5 = 87.9% (78.0%, 93.7%)	653.5/802.5 = 81.4% (70.5%, 89.0%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	83	429.4/802.5 = 53.5% (41.3%, 65.3%)	792.3/802.5 = 98.7% (91.2%, 99.8%)	764.9/802.5 = 95.3% (88.7%, 98.1%)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	105	32.8/1003 = 3.3% (1.2%, 8.5%)	777.1/1003 = 77.5% (66.2%, 85.8%)	620.1/1003 = 61.8% (50.8%, 71.8%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	105	463.4/1003 = 46.2% (35.9%, 56.8%)	772.3/1003 = 77.0% (67.4%, 84.4%)	610.7/1003 = 60.9% (49.7%, 71.0%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	105	308/1003 = 30.7% (22.4%, 40.5%)	948.5/1003 = 94.6% (87.6%, 97.7%)	855.2/1003 = 85.3% (75.3%, 91.7%)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	465/10456.7 = 4.4% (3.0%, 6.5%)	8881.6/10456.7 = 84.9% (80.6%, 88.5%)	8103.5/10456.7 = 77.5% (72.6%, 81.7%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	5089.1/10456.7 = 48.7% (43.5%, 53.9%)	8849.1/10456.7 = 84.6% (80.3%, 88.1%)	7460.4/10456.7 = 71.3% (66.3%, 75.9%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	4664.3/10456.7 = 44.6% (39.6%, 49.8%)	10191.3/10456.7 = 97.5% (95.2%, 98.7%)	9734.8/10456.7 = 93.1% (89.9%, 95.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	133	128.9/1248.5 = 10.3% (5.8%, 17.7%)	1148/1248.5 = 92.0% (84.8%, 95.9%)	1041.7/1248.5 = 83.4% (74.8%, 89.5%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	133	843.4/1248.5 = 67.6% (57.9%, 75.9%)	1197.8/1248.5 = 95.9% (91.6%, 98.1%)	1085.1/1248.5 = 86.9% (79.5%, 91.9%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	133	776.1/1248.5 = 62.2% (52.5%, 71.0%)	1248.5/1248.5 = 100.0% (100.0%, 100.0%)	1239.7/1248.5 = 99.3% (95.1%, 99.9%)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	114	32/991 = 3.2% (1.2%, 8.2%)	805.1/991 = 81.2% (71.3%, 88.3%)	690/991 = 69.6% (59.1%, 78.4%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	114	465.7/991 = 47.0% (37.2%, 57.0%)	802.1/991 = 80.9% (70.7%, 88.2%)	649.2/991 = 65.5% (54.9%, 74.7%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	114	361.5/991 = 36.5% (27.5%, 46.6%)	933.2/991 = 94.2% (85.6%, 97.8%)	864.6/991 = 87.2% (77.3%, 93.2%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

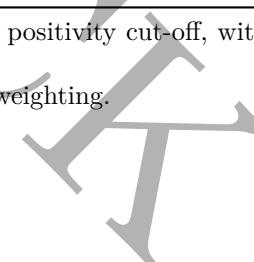


Table 5f. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Age, sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Age, sex</b>								
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	230	64.1/7076.4 = 0.9% (0.2%, 3.6%)	5661.9/7076.4 = 80.0% (73.8%, 85.0%)	4993.7/7076.4 = 70.6% (63.8%, 76.5%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	230	2791.4/7076.4 = 39.4% (32.8%, 46.6%)	5655.1/7076.4 = 79.9% (73.9%, 84.9%)	4457.3/7076.4 = 63.0% (56.1%, 69.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	230	2279.8/7076.4 = 32.2% (25.9%, 39.3%)	6811.1/7076.4 = 96.3% (92.9%, 98.1%)	6394/7076.4 = 90.4% (85.8%, 93.6%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	56.5/815.5 = 6.9% (2.5%, 17.9%)	735.5/815.5 = 90.2% (80.0%, 95.5%)	652.8/815.5 = 80.1% (67.8%, 88.4%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	458.9/815.5 = 56.3% (43.1%, 68.6%)	768.2/815.5 = 94.2% (87.6%, 97.4%)	678.1/815.5 = 83.1% (72.4%, 90.3%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	418.9/815.5 = 51.4% (38.4%, 64.2%)	815.5/815.5 = 100.0% (100.0%, 100.0%)	806.8/815.5 = 98.9% (92.5%, 99.9%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	52	0/588.8 = 0.0% (0.0%, 0.0%)	432.5/588.8 = 73.5% (58.5%, 84.5%)	332.3/588.8 = 56.4% (41.7%, 70.1%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	52	200.3/588.8 = 34.0% (21.8%, 48.9%)	423.4/588.8 = 71.9% (56.4%, 83.5%)	321.1/588.8 = 54.5% (39.6%, 68.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	52	114/588.8 = 19.4% (9.6%, 35.3%)	530.9/588.8 = 90.2% (76.3%, 96.3%)	467.8/588.8 = 79.4% (63.9%, 89.4%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	176	94.4/4881.6 = 1.9% (0.6%, 6.0%)	3751.3/4881.6 = 76.8% (69.1%, 83.1%)	3263.1/4881.6 = 66.8% (58.7%, 74.1%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	176	2003.6/4881.6 = 41.0% (33.5%, 49.1%)	3813.8/4881.6 = 78.1% (70.6%, 84.2%)	2915/4881.6 = 59.7% (51.6%, 67.4%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	176	1439.9/4881.6 = 29.5% (22.7%, 37.3%)	4670/4881.6 = 95.7% (90.0%, 98.2%)	4220.7/4881.6 = 86.5% (79.7%, 91.2%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	46	43/535.5 = 8.0% (2.3%, 24.6%)	504.8/535.5 = 94.3% (84.6%, 98.0%)	497.7/535.5 = 92.9% (83.1%, 97.2%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	46	316.5/535.5 = 59.1% (43.1%, 73.3%)	462.5/535.5 = 86.4% (72.7%, 93.8%)	414.4/535.5 = 77.4% (62.3%, 87.6%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	46	232.7/535.5 = 43.5% (28.2%, 60.0%)	535.5/535.5 = 100.0% (100.0%, 100.0%)	508.1/535.5 = 94.9% (86.4%, 98.2%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	59	0/697.2 = 0.0% (0.0%, 0.0%)	509.3/697.2 = 73.0% (57.8%, 84.3%)	368.1/697.2 = 52.8% (38.8%, 66.3%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	59	228.6/697.2 = 32.8% (20.9%, 47.3%)	499.9/697.2 = 71.7% (58.8%, 81.8%)	343.6/697.2 = 49.3% (35.1%, 63.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	59	94.7/697.2 = 13.6% (6.2%, 27.1%)	648.1/697.2 = 93.0% (83.0%, 97.3%)	554.9/697.2 = 79.6% (65.8%, 88.8%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	222	400.8/3380.2 = 11.9% (8.1%, 17.1%)	3219.6/3380.2 = 95.2% (90.8%, 97.6%)	3109.9/3380.2 = 92.0% (87.1%, 95.1%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	222	2297.7/3380.2 = 68.0% (60.8%, 74.4%)	3193.9/3380.2 = 94.5% (90.3%, 96.9%)	3003.1/3380.2 = 88.8% (83.5%, 92.6%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	222	2384.6/3380.2 = 70.5% (63.5%, 76.7%)	3380.2/3380.2 = 100.0% (100.0%, 100.0%)	3340.8/3380.2 = 98.8% (94.7%, 99.8%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	61	72.3/433 = 16.7% (8.7%, 29.8%)	412.5/433 = 95.3% (82.1%, 98.9%)	388.9/433 = 89.8% (77.6%, 95.7%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	61	384.5/433 = 88.8% (77.8%, 94.7%)	429.6/433 = 99.2% (94.4%, 99.9%)	407/433 = 94.0% (84.7%, 97.8%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	61	357.1/433 = 82.5% (70.7%, 90.2%)	433/433 = 100.0% (100.0%, 100.0%)	433/433 = 100.0% (100.0%, 100.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	62	32/402.2 = 7.9% (3.0%, 19.5%)	372.6/402.2 = 92.6% (80.7%, 97.4%)	357.7/402.2 = 88.9% (76.2%, 95.3%)
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	62	265.4/402.2 = 66.0% (52.2%, 77.5%)	378.7/402.2 = 94.1% (82.4%, 98.2%)	328.1/402.2 = 81.6% (68.5%, 90.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	62	247.4/402.2 = 61.5% (47.6%, 73.7%)	402.2/402.2 = 100.0% (100.0%, 100.0%)	396.9/402.2 = 98.7% (90.7%, 99.8%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	430.1/2931.8 = 14.7% (10.1%, 20.9%)	2723.6/2931.8 = 92.9% (87.1%, 96.2%)	2489.8/2931.8 = 84.9% (78.2%, 89.9%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	2199.9/2931.8 = 75.0% (67.6%, 81.3%)	2789.2/2931.8 = 95.1% (90.0%, 97.7%)	2659.9/2931.8 = 90.7% (85.1%, 94.4%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	2098.6/2931.8 = 71.6% (64.1%, 78.0%)	2931.8/2931.8 = 100.0% (100.0%, 100.0%)	2911/2931.8 = 99.3% (97.0%, 99.8%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	37	33/267 = 12.4% (4.5%, 29.8%)	242.8/267 = 90.9% (72.3%, 97.5%)	218.7/267 = 81.9% (62.9%, 92.4%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	37	216/267 = 80.9% (62.8%, 91.4%)	242.8/267 = 90.9% (72.3%, 97.5%)	239.1/267 = 89.5% (71.9%, 96.6%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	37	196.7/267 = 73.7% (55.4%, 86.3%)	256.8/267 = 96.2% (75.4%, 99.5%)	256.8/267 = 96.2% (75.4%, 99.5%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	46	32.8/305.8 = 10.7% (3.9%, 26.4%)	267.8/305.8 = 87.6% (72.8%, 94.9%)	252/305.8 = 82.4% (67.8%, 91.3%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	46	234.8/305.8 = 76.8% (61.3%, 87.4%)	272.4/305.8 = 89.1% (76.0%, 95.5%)	267.1/305.8 = 87.3% (74.0%, 94.3%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	46	213.3/305.8 = 69.8% (53.6%, 82.2%)	300.3/305.8 = 98.2% (87.6%, 99.8%)	300.3/305.8 = 98.2% (87.6%, 99.8%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 5g. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Hispanic or Latino ethnicity

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Hispanic or Latino ethnicity</b>								
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	338	455/9568.5 = 4.8% (3.2%, 7.1%)	7854.4/9568.5 = 82.1% (76.8%, 86.4%)	7186/9568.5 = 75.1% (69.4%, 80.0%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	338	4603.9/9568.5 = 48.1% (42.3%, 53.9%)	8160.5/9568.5 = 85.3% (80.3%, 89.2%)	6783.5/9568.5 = 70.9% (65.1%, 76.0%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	338	4307/9568.5 = 45.0% (39.4%, 50.8%)	9296.4/9568.5 = 97.2% (94.0%, 98.7%)	8933.2/9568.5 = 93.4% (89.4%, 95.9%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	89	77.7/1065.5 = 7.3% (3.2%, 15.8%)	1001.5/1065.5 = 94.0% (85.8%, 97.6%)	934/1065.5 = 87.7% (78.7%, 93.2%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	89	717/1065.5 = 67.3% (55.6%, 77.1%)	990.4/1065.5 = 92.9% (85.7%, 96.7%)	923.8/1065.5 = 86.7% (77.9%, 92.3%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	89	642.8/1065.5 = 60.3% (48.8%, 70.8%)	1055.4/1065.5 = 99.0% (93.3%, 99.9%)	1048.3/1065.5 = 98.4% (93.4%, 99.6%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	85	24.1/1009.2 = 2.4% (0.7%, 7.6%)	807.9/1009.2 = 80.1% (68.2%, 88.2%)	619.5/1009.2 = 61.4% (50.8%, 71.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	85	463.7/1009.2 = 45.9% (35.3%, 56.9%)	852.3/1009.2 = 84.4% (73.2%, 91.5%)	682.4/1009.2 = 67.6% (55.4%, 77.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	85	366.5/1009.2 = 36.3% (27.0%, 46.8%)	994.2/1009.2 = 98.5% (93.8%, 99.7%)	924.4/1009.2 = 91.6% (81.0%, 96.5%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	461	496.5/8024.2 = 6.2% (4.3%, 8.8%)	6936.2/8024.2 = 86.4% (82.4%, 89.7%)	6178.4/8024.2 = 77.0% (72.3%, 81.1%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	461	4232.1/8024.2 = 52.7% (47.9%, 57.6%)	6668.1/8024.2 = 83.1% (78.7%, 86.7%)	5661.5/8024.2 = 70.6% (65.7%, 75.0%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	461	3570.3/8024.2 = 44.5% (39.9%, 49.2%)	7819.5/8024.2 = 97.4% (94.9%, 98.7%)	7256.2/8024.2 = 90.4% (86.7%, 93.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	115	93.5/866.2 = 10.8% (6.0%, 18.7%)	793.3/866.2 = 91.6% (84.0%, 95.7%)	723.4/866.2 = 83.5% (73.7%, 90.1%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	115	572.3/866.2 = 66.1% (55.9%, 75.0%)	793.5/866.2 = 91.6% (84.4%, 95.7%)	705.3/866.2 = 81.4% (71.9%, 88.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	115	478.2/866.2 = 55.2% (45.1%, 64.9%)	866.2/866.2 = 100.0% (100.0%, 100.0%)	837.1/866.2 = 96.6% (91.2%, 98.8%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	123	31.8/891.1 = 3.6% (1.4%, 8.8%)	713.5/891.1 = 80.1% (71.4%, 86.6%)	629.9/891.1 = 70.7% (60.9%, 78.8%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	123	431.2/891.1 = 48.4% (39.1%, 57.8%)	651.5/891.1 = 73.1% (63.4%, 81.0%)	529.9/891.1 = 59.5% (49.6%, 68.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	123	283/891.1 = 31.8% (24.3%, 40.3%)	816.8/891.1 = 91.7% (83.9%, 95.9%)	747.8/891.1 = 83.9% (74.7%, 90.2%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	29	37.9/677.3 = 5.6% (1.2%, 21.8%)	565.8/677.3 = 83.5% (55.9%, 95.3%)	492.1/677.3 = 72.7% (46.4%, 89.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	29	456.7/677.3 = 67.4% (43.7%, 84.7%)	623.4/677.3 = 92.1% (57.2%, 99.0%)	590.5/677.3 = 87.2% (57.8%, 97.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	29	325.5/677.3 = 48.1% (27.6%, 69.1%)	677.3/677.3 = 100.0% (100.0%, 100.0%)	677.3/677.3 = 100.0% (100.0%, 100.0%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	12	33.6/119.2 = 28.2% (3.9%, 78.9%)	100.8/119.2 = 84.5% (37.3%, 98.0%)	100.8/119.2 = 84.5% (37.3%, 98.0%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	12	86.6/119.2 = 72.6% (26.3%, 95.2%)	119.2/119.2 = 100.0% (100.0%, 100.0%)	109.5/119.2 = 91.9% (37.3%, 99.5%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	12	84.4/119.2 = 70.8% (29.5%, 93.3%)	119.2/119.2 = 100.0% (100.0%, 100.0%)	119.2/119.2 = 100.0% (100.0%, 100.0%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	11	8.9/93.6 = 9.5% (0.7%, 62.8%)	60.8/93.6 = 64.9% (15.3%, 95.0%)	60.8/93.6 = 64.9% (15.3%, 95.0%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	34.2/93.6 = 36.5% (8.5%, 78.1%)	70.6/93.6 = 75.4% (15.3%, 98.1%)	47.6/93.6 = 50.9% (12.6%, 88.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	19.9/93.6 = 21.3% (4.0%, 63.6%)	70.6/93.6 = 75.4% (15.3%, 98.1%)	47.6/93.6 = 50.9% (12.6%, 88.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

MOCK

Table 5h. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Race

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Race</b>								
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	182	344.1/3868.9 = 8.9% (5.5%, 14.0%)	3336/3868.9 = 86.2% (79.7%, 90.9%)	3021.5/3868.9 = 78.1% (70.7%, 84.0%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	182	2051/3868.9 = 53.0% (45.4%, 60.5%)	3191.2/3868.9 = 82.5% (75.4%, 87.9%)	2664.7/3868.9 = 68.9% (61.1%, 75.7%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	182	1863.9/3868.9 = 48.2% (40.9%, 55.5%)	3699/3868.9 = 95.6% (90.5%, 98.0%)	3461.1/3868.9 = 89.5% (83.1%, 93.6%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	49	53/452.7 = 11.7% (4.8%, 25.8%)	407.2/452.7 = 90.0% (76.8%, 96.0%)	361.7/452.7 = 79.9% (63.2%, 90.2%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	49	295.6/452.7 = 65.3% (49.2%, 78.5%)	419.6/452.7 = 92.7% (80.5%, 97.5%)	357/452.7 = 78.9% (62.7%, 89.2%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	49	231/452.7 = 51.0% (35.9%, 66.0%)	452.7/452.7 = 100.0% (100.0%, 100.0%)	435.2/452.7 = 96.1% (85.4%, 99.1%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	48	23.9/411.4 = 5.8% (1.8%, 17.3%)	330.8/411.4 = 80.4% (67.3%, 89.1%)	300.6/411.4 = 73.1% (58.1%, 84.1%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	48	202.6/411.4 = 49.2% (35.1%, 63.5%)	306.6/411.4 = 74.5% (58.8%, 85.7%)	248.1/411.4 = 60.3% (44.9%, 73.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	48	119.4/411.4 = 29.0% (18.5%, 42.4%)	391.3/411.4 = 95.1% (80.8%, 98.9%)	358.2/411.4 = 87.1% (72.7%, 94.5%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	292	214.1/4498.2 = 4.8% (2.9%, 7.8%)	3908.7/4498.2 = 86.9% (81.4%, 91.0%)	3447.9/4498.2 = 76.7% (70.4%, 81.9%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	292	2424/4498.2 = 53.9% (47.6%, 60.1%)	3883.8/4498.2 = 86.3%	3382.8/4498.2 = 75.2% (68.8%, 80.6%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	292	1953.5/4498.2 = 43.4% (37.5%, 49.6%)	4483.3/4498.2 = 99.7% (97.7%, 100.0%)	4182.3/4498.2 = 93.0% (88.7%, 95.7%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	73	56.1/498.2 = 11.3% (4.8%, 24.4%)	445.3/498.2 = 89.4% (78.6%, 95.1%)	431.3/498.2 = 86.6% (75.6%, 93.0%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	73	303.3/498.2 = 60.9% (46.9%, 73.3%)	451.6/498.2 = 90.6% (80.8%, 95.7%)	422.1/498.2 = 84.7% (73.8%, 91.6%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	73	261/498.2 = 52.4% (39.3%, 65.2%)	498.2/498.2 = 100.0% (100.0%, 100.0%)	486.6/498.2 = 97.7% (91.1%, 99.4%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	87	7.9/558.5 = 1.4% (0.3%, 5.9%)	438.5/558.5 = 78.5% (65.0%, 87.8%)	382.5/558.5 = 68.5% (55.2%, 79.3%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	87	255.3/558.5 = 45.7% (34.3%, 57.6%)	404/558.5 = 72.3% (59.1%, 82.6%)	336.9/558.5 = 60.3% (47.6%, 71.8%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	87	167.3/558.5 = 30.0% (21.1%, 40.7%)	498.8/558.5 = 89.3% (78.6%, 95.0%)	442.8/558.5 = 79.3% (65.4%, 88.6%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	25.1/515.7 = 4.9% (1.0%, 20.5%)	396.8/515.7 = 76.9% (51.4%, 91.3%)	345/515.7 = 66.9% (42.3%, 84.8%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	200.4/515.7 = 38.9% (18.5%, 64.0%)	377.4/515.7 = 73.2% (49.1%, 88.6%)	249.9/515.7 = 48.5% (25.5%, 72.1%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	91.4/515.7 = 17.7% (6.9%, 38.7%)	495.8/515.7 = 96.1% (73.0%, 99.6%)	464.6/515.7 = 90.1% (63.5%, 97.9%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	3.7/51.8 = 7.1%	51.8/51.8 = 100.0%	51.8/51.8 = 100.0%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	45.9/51.8 = 88.8%	51.8/51.8 = 100.0%	45.9/51.8 = 88.8%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	41.2/51.8 = 79.5%	51.8/51.8 = 100.0%	51.8/51.8 = 100.0%
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	0/40.3 = 0.0% (0.0%, 0.0%)	40.3/40.3 = 100.0% (100.0%, 100.0%)	40.3/40.3 = 100.0% (100.0%, 100.0%)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	35.3/40.3 = 87.6% (5.1%, 99.9%)	40.3/40.3 = 100.0% (100.0%, 100.0%)	40.3/40.3 = 100.0% (100.0%, 100.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Asian American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	10/40.3 = 24.8% (0.7%, 93.9%)	40.3/40.3 = 100.0% (100.0%, 100.0%)	40.3/40.3 = 100.0% (100.0%, 100.0%)
Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/36.7 = 0.0%	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0/36.7 = 0.0%	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/29.1 = 0.0%	29.1/29.1 = 100.0%	29.1/29.1 = 100.0%
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	14.5/29.1 = 50.0%	29.1/29.1 = 100.0%	14.5/29.1 = 50.0%
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	14.5/29.1 = 50.0%	29.1/29.1 = 100.0%	29.1/29.1 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/56.1 = 0.0%	56.1/56.1 = 100.0%	56.1/56.1 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	18.4/56.1 = 32.7%	56.1/56.1 = 100.0%	56.1/56.1 = 100.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	18.4/56.1 = 32.7%	56.1/56.1 = 100.0%	56.1/56.1 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	18.9/676.7 = 2.8% (0.3%, 19.8%)	508.6/676.7 = 75.2% (48.2%, 90.8%)	483.1/676.7 = 71.4% (45.5%, 88.2%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	308.7/676.7 = 45.6% (26.4%, 66.2%)	631.3/676.7 = 93.3% (74.3%, 98.5%)	600.1/676.7 = 88.7% (67.7%, 96.7%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	276.3/676.7 = 40.8% (22.5%, 62.1%)	676.7/676.7 = 100.0% (100.0%, 100.0%)	651.2/676.7 = 96.2% (74.8%, 99.5%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	5	0/47.4 = 0.0%	47.4/47.4 = 100.0%	26.9/47.4 = 56.8%
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	5	26.9/47.4 = 56.8%	47.4/47.4 = 100.0%	47.4/47.4 = 100.0%
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	5	21.1/47.4 = 44.5%	37.3/47.4 = 78.5%	37.3/47.4 = 78.5%
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	7	0/64.2 = 0.0%	64.2/64.2 = 100.0%	51.8/64.2 = 80.6%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	7	20.7/64.2 = 32.3%	40.8/64.2 = 63.5%	20.7/64.2 = 32.3%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	7	17.5/64.2 = 27.3%	64.2/64.2 = 100.0%	51.8/64.2 = 80.6%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	0/153.3 = 0.0% (0.0%, 0.0%)	136.3/153.3 = 88.9% (17.7%, 99.7%)	121.5/153.3 = 79.3% (12.4%, 99.0%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	90.6/153.3 = 59.1% (4.1%, 98.0%)	143.1/153.3 = 93.4% (11.8%, 99.9%)	128.3/153.3 = 83.7% (11.8%, 99.5%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	74/153.3 = 48.3% (3.1%, 96.4%)	153.3/153.3 = 100.0% (100.0%, 100.0%)	138.4/153.3 = 90.3% (8.0%, 99.9%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

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Table 5i. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Underrepresented Minority Status in the U.S.</b>								
URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	198.5/3819 = 5.2% (3.0%, 8.8%)	3339.4/3819 = 87.4% (81.1%, 91.9%)	2999.4/3819 = 78.5% (71.4%, 84.3%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	2038.8/3819 = 53.4% (46.2%, 60.5%)	3386.2/3819 = 88.7% (82.3%, 92.9%)	2859.5/3819 = 74.9% (67.6%, 81.0%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	1677.2/3819 = 43.9% (37.3%, 50.7%)	3767.7/3819 = 98.7% (94.4%, 99.7%)	3566.8/3819 = 93.4% (87.8%, 96.5%)
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	43.5/433 = 10.0% (3.2%, 27.5%)	395.1/433 = 91.2% (80.3%, 96.4%)	376.3/433 = 86.9% (76.0%, 93.3%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	265.8/433 = 61.4% (44.5%, 75.9%)	371.3/433 = 85.7% (70.5%, 93.8%)	323.4/433 = 74.7% (57.7%, 86.5%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	227.6/433 = 52.6% (37.0%, 67.7%)	433/433 = 100.0% (100.0%, 100.0%)	425.9/433 = 98.4% (88.6%, 99.8%)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	49	5.3/410 = 1.3% (0.2%, 9.1%)	335.9/410 = 81.9% (65.7%, 91.5%)	320.9/410 = 78.3% (62.3%, 88.7%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	49	166.8/410 = 40.7% (26.6%, 56.5%)	312.3/410 = 76.2% (59.0%, 87.6%)	242.8/410 = 59.2% (42.9%, 73.7%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	49	134.9/410 = 32.9% (21.2%, 47.1%)	380.4/410 = 92.8% (77.2%, 98.0%)	356.4/410 = 86.9% (70.3%, 94.9%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	189	307.4/3982 = 7.7% (4.8%, 12.2%)	3355.7/3982 = 84.3% (77.5%, 89.3%)	3036.3/3982 = 76.2% (68.9%, 82.3%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	189	2062.8/3982 = 51.8% (44.4%, 59.1%)	3251.2/3982 = 81.6% (74.7%, 87.0%)	2639.8/3982 = 66.3% (58.7%, 73.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	189	1709.7/3982 = 42.9% (36.2%, 50.0%)	3812/3982 = 95.7% (90.8%, 98.1%)	3517.4/3982 = 88.3% (81.9%, 92.7%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	42.5/429 = 9.9% (4.0%, 22.6%)	383.5/429 = 89.4% (75.7%, 95.8%)	350/429 = 81.6% (66.8%, 90.7%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	283.9/429 = 66.2% (51.2%, 78.5%)	395.9/429 = 92.3% (79.6%, 97.3%)	355.6/429 = 82.9% (69.1%, 91.3%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	241.6/429 = 56.3% (41.4%, 70.1%)	429/429 = 100.0% (100.0%, 100.0%)	411.5/429 = 95.9% (84.8%, 99.0%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	50	23.9/442 = 5.4% (1.7%, 16.1%)	361.4/442 = 81.8% (69.4%, 89.9%)	318.8/442 = 72.1% (57.3%, 83.3%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	50	213.1/442 = 48.2% (34.5%, 62.2%)	337.2/442 = 76.3% (61.3%, 86.8%)	258.6/442 = 58.5% (43.7%, 71.9%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	50	127.1/442 = 28.8% (18.7%, 41.5%)	421.9/442 = 95.5% (82.0%, 99.0%)	376.4/442 = 85.2% (70.8%, 93.1%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 5j. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Age, Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Age, Underrepresented Minority Status in the U.S.</b>								
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	98	33/2486 = 1.3% (0.2%, 9.1%)	2020.3/2486 = 81.3% (71.8%, 88.1%)	1782/2486 = 71.7% (61.3%, 80.1%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	98	982.8/2486 = 39.5% (29.9%, 50.1%)	2079.1/2486 = 83.6% (74.1%, 90.1%)	1606.2/2486 = 64.6% (54.0%, 73.9%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	98	649/2486 = 26.1% (17.9%, 36.4%)	2434.7/2486 = 97.9% (91.4%, 99.5%)	2247.7/2486 = 90.4% (82.0%, 95.1%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	19.4/275 = 7.0% (0.8%, 41.1%)	246.8/275 = 89.7% (75.4%, 96.1%)	232.6/275 = 84.6% (70.3%, 92.7%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	126.9/275 = 46.1% (24.2%, 69.8%)	213.3/275 = 77.6% (55.0%, 90.7%)	179.8/275 = 65.4% (41.5%, 83.4%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	93.4/275 = 34.0% (15.2%, 59.6%)	275/275 = 100.0% (100.0%, 100.0%)	267.9/275 = 97.4% (82.0%, 99.7%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	0/265 = 0.0% (0.0%, 0.0%)	207.3/265 = 78.2% (53.8%, 91.7%)	197.7/265 = 74.6% (50.8%, 89.3%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	91.4/265 = 34.5% (16.6%, 58.2%)	178.2/265 = 67.2% (42.7%, 85.0%)	130/265 = 49.1% (27.2%, 71.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	43.6/265 = 16.5% (5.1%, 41.8%)	240.9/265 = 90.9% (65.7%, 98.1%)	216.8/265 = 81.8% (56.8%, 93.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	90	87.8/2578 = 3.4% (1.1%, 10.3%)	2036.9/2578 = 79.0% (69.1%, 86.4%)	1779.1/2578 = 69.0% (58.4%, 77.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	90	1020/2578 = 39.6% (29.8%, 50.2%)	1954.7/2578 = 75.8% (65.7%, 83.7%)	1427.9/2578 = 55.4% (44.7%, 65.6%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	90	716.7/2578 = 27.8% (19.3%, 38.2%)	2408/2578 = 93.4% (85.8%, 97.1%)	2113.4/2578 = 82.0% (72.3%, 88.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	31	20.7/295 = 7.0% (1.7%, 25.2%)	264/295 = 89.5% (71.5%, 96.7%)	244.9/295 = 83.0% (64.3%, 93.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	31	171.8/295 = 58.2% (39.2%, 75.0%)	265.6/295 = 90.0% (71.6%, 97.0%)	229/295 = 77.6% (58.3%, 89.6%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	31	143.9/295 = 48.8% (30.9%, 67.0%)	295/295 = 100.0% (100.0%, 100.0%)	277.5/295 = 94.1% (78.2%, 98.6%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	28	0/281 = 0.0% (0.0%, 0.0%)	215.1/281 = 76.5% (59.5%, 87.9%)	177.8/281 = 63.3% (42.9%, 79.8%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	28	97.5/281 = 34.7% (18.3%, 55.8%)	205.5/281 = 73.1% (52.4%, 87.1%)	137.6/281 = 49.0% (29.9%, 68.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	28	35.4/281 = 12.6% (4.3%, 31.4%)	260.9/281 = 92.9% (72.3%, 98.5%)	220.8/281 = 78.6% (57.3%, 90.9%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	102	165.5/1333 = 12.4% (7.3%, 20.4%)	1319.1/1333 = 99.0% (92.7%, 99.9%)	1217.4/1333 = 91.3% (84.0%, 95.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	102	1056.1/1333 = 79.2% (70.0%, 86.2%)	1307.1/1333 = 98.1% (92.3%, 99.5%)	1253.3/1333 = 94.0% (87.1%, 97.3%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	102	1028.2/1333 = 77.1% (67.8%, 84.4%)	1333/1333 = 100.0% (100.0%, 100.0%)	1319.1/1333 = 99.0% (92.7%, 99.9%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	24.1/158 = 15.2% (4.3%, 42.1%)	148.3/158 = 93.9% (62.7%, 99.3%)	143.6/158 = 90.9% (64.5%, 98.2%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	138.9/158 = 87.9% (63.6%, 96.8%)	158/158 = 100.0% (100.0%, 100.0%)	143.6/158 = 90.9% (64.5%, 98.2%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	134.2/158 = 85.0% (61.7%, 95.2%)	158/158 = 100.0% (100.0%, 100.0%)	158/158 = 100.0% (100.0%, 100.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	27	5.3/145 = 3.6% (0.4%, 24.1%)	128.6/145 = 88.7% (69.6%, 96.4%)	123.2/145 = 84.9% (66.1%, 94.2%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	27	75.4/145 = 52.0% (32.6%, 70.8%)	134.1/145 = 92.5% (73.1%, 98.2%)	112.8/145 = 77.8% (56.7%, 90.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	27	91.3/145 = 62.9% (42.1%, 79.8%)	139.5/145 = 96.2% (75.2%, 99.5%)	139.5/145 = 96.2% (75.2%, 99.5%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	99	219.6/1404 = 15.6% (9.6%, 24.5%)	1318.8/1404 = 93.9% (86.2%, 97.5%)	1257.2/1404 = 89.5% (81.3%, 94.4%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	99	1042.8/1404 = 74.3% (64.3%, 82.2%)	1296.5/1404 = 92.3% (84.5%, 96.4%)	1212/1404 = 86.3% (77.5%, 92.0%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	99	993/1404 = 70.7% (60.7%, 79.0%)	1404/1404 = 100.0% (100.0%, 100.0%)	1404/1404 = 100.0% (100.0%, 100.0%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	19	21.9/134 = 16.3% (4.6%, 44.1%)	119.5/134 = 89.2% (56.5%, 98.1%)	105/134 = 78.4% (47.4%, 93.6%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	19	112.1/134 = 83.7% (55.9%, 95.4%)	130.3/134 = 97.2% (80.2%, 99.7%)	126.6/134 = 94.5% (79.2%, 98.7%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	19	97.6/134 = 72.9% (44.0%, 90.2%)	134/134 = 100.0% (100.0%, 100.0%)	134/134 = 100.0% (100.0%, 100.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	23.9/161 = 14.9% (4.2%, 41.0%)	146.4/161 = 90.9% (65.3%, 98.2%)	141/161 = 87.6% (63.7%, 96.6%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	115.6/161 = 71.8% (48.6%, 87.3%)	131.7/161 = 81.8% (56.5%, 94.0%)	121/161 = 75.2% (51.2%, 89.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	91.7/161 = 57.0% (33.8%, 77.4%)	161/161 = 100.0% (100.0%, 100.0%)	155.6/161 = 96.7% (77.1%, 99.6%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 5k. Percentage of responders, and participants with concentrations  $\geq 2 \times$  LLOD or  $\geq 4 \times$  LLOD for binding antibody markers by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
<b>Country</b>								
United States	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	389	505.8/7801 = 6.5% (4.5%, 9.2%)	6695/7801 = 85.8% (81.4%, 89.3%)	6035.6/7801 = 77.4% (72.4%, 81.7%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	389	4101.7/7801 = 52.6% (47.4%, 57.7%)	6637.4/7801 = 85.1% (80.6%, 88.7%)	5499.3/7801 = 70.5% (65.3%, 75.2%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	389	3386.9/7801 = 43.4% (38.7%, 48.3%)	7579.7/7801 = 97.2% (94.4%, 98.6%)	7084.2/7801 = 90.8% (86.9%, 93.7%)
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	86/862 = 10.0% (4.9%, 19.4%)	778.6/862 = 90.3% (82.6%, 94.8%)	726.2/862 = 84.2% (75.7%, 90.2%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	549.7/862 = 63.8% (52.7%, 73.6%)	767.2/862 = 89.0% (80.1%, 94.2%)	679/862 = 78.8% (68.4%, 86.4%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	469.2/862 = 54.4% (43.7%, 64.8%)	862/862 = 100.0% (100.0%, 100.0%)	837.4/862 = 97.2% (91.5%, 99.1%)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	99	29.2/852 = 3.4% (1.3%, 9.0%)	697.3/852 = 81.8% (72.5%, 88.5%)	639.7/852 = 75.1% (64.8%, 83.1%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	99	379.9/852 = 44.6% (34.7%, 55.0%)	649.5/852 = 76.2% (65.5%, 84.4%)	501.4/852 = 58.8% (48.0%, 68.9%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	99	262/852 = 30.7% (22.8%, 40.0%)	802.4/852 = 94.2% (85.7%, 97.8%)	732.8/852 = 86.0% (76.2%, 92.2%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	36	115.4/1290.8 = 8.9% (3.5%, 21.0%)	1016.2/1290.8 = 78.7% (59.2%, 90.4%)	895.4/1290.8 = 69.4% (50.1%, 83.6%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	36	610.1/1290.8 = 47.3% (30.4%, 64.8%)	1177.7/1290.8 = 91.2% (75.4%, 97.2%)	994.6/1290.8 = 77.0% (58.3%, 89.0%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	36	623.4/1290.8 = 48.3% (31.5%, 65.5%)	1290.8/1290.8 = 100.0% (100.0%, 100.0%)	1290.8/1290.8 = 100.0% (100.0%, 100.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Argentina	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	13	36.5/176.9 = 20.7% (4.1%, 61.5%)	176.9/176.9 = 100.0% (100.0%, 100.0%)	152.5/176.9 = 86.2% (50.5%, 97.5%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	13	134.3/176.9 = 75.9% (42.2%, 93.2%)	176.9/176.9 = 100.0% (100.0%, 100.0%)	148.5/176.9 = 83.9% (47.8%, 96.8%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13	152.3/176.9 = 86.1% (50.9%, 97.4%)	176.9/176.9 = 100.0% (100.0%, 100.0%)	176.9/176.9 = 100.0% (100.0%, 100.0%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	18	8.9/211.7 = 4.2% (0.5%, 29.2%)	164.5/211.7 = 77.7% (44.9%, 93.7%)	154.6/211.7 = 73.0% (42.1%, 91.0%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	18	145.7/211.7 = 68.8% (39.0%, 88.4%)	211.7/211.7 = 100.0% (100.0%, 100.0%)	178.6/211.7 = 84.4% (56.4%, 95.7%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	18	145.7/211.7 = 68.8% (39.0%, 88.4%)	211.7/211.7 = 100.0% (100.0%, 100.0%)	197.4/211.7 = 93.2% (59.9%, 99.2%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	85	153.1/2960.6 = 5.2% (2.2%, 11.6%)	2431.1/2960.6 = 82.1% (71.2%, 89.5%)	2243.2/2960.6 = 75.8% (64.4%, 84.4%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	85	1560.3/2960.6 = 52.7% (41.3%, 63.8%)	2559.6/2960.6 = 86.5% (76.4%, 92.6%)	2266/2960.6 = 76.5% (65.3%, 85.0%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	85	1495.3/2960.6 = 50.5% (39.3%, 61.7%)	2831.3/2960.6 = 95.6% (86.9%, 98.6%)	2739.8/2960.6 = 92.5% (83.0%, 96.9%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	34.7/376.3 = 9.2% (2.7%, 27.2%)	343.8/376.3 = 91.4% (66.4%, 98.3%)	297.1/376.3 = 78.9% (54.7%, 92.1%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	274.7/376.3 = 73.0% (48.7%, 88.5%)	366.1/376.3 = 97.3% (81.0%, 99.7%)	343.8/376.3 = 91.4% (66.4%, 98.3%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	201.7/376.3 = 53.6% (32.1%, 73.9%)	366.1/376.3 = 97.3% (81.0%, 99.7%)	366.1/376.3 = 97.3% (81.0%, 99.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	17	9.9/240.7 = 4.1% (0.5%, 28.7%)	156.2/240.7 = 64.9% (34.9%, 86.4%)	104.6/240.7 = 43.5% (20.4%, 69.7%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	17	86/240.7 = 35.7% (16.4%, 61.1%)	203.4/240.7 = 84.5% (49.3%, 96.8%)	157.4/240.7 = 65.4% (35.7%, 86.5%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	17	48.5/240.7 = 20.1% (7.8%, 42.9%)	217.7/240.7 = 90.4% (49.4%, 98.9%)	194.7/240.7 = 80.9% (45.7%, 95.5%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	18.9/333.3 = 5.7% (0.4%, 48.2%)	333.3/333.3 = 100.0% (100.0%, 100.0%)	260.6/333.3 = 78.2% (27.0%, 97.2%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	158.7/333.3 = 47.6% (12.7%, 85.0%)	279.5/333.3 = 83.9% (24.7%, 98.8%)	279.5/333.3 = 83.9% (24.7%, 98.8%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	174.8/333.3 = 52.4% (15.0%, 87.3%)	333.3/333.3 = 100.0% (100.0%, 100.0%)	333.3/333.3 = 100.0% (100.0%, 100.0%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	3	0/43 = 0.0%	32.7/43 = 76.0%	32.7/43 = 76.0%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	3	10.3/43 = 24.0%	32.7/43 = 76.0%	32.7/43 = 76.0%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	3	10.3/43 = 24.0%	43/43 = 100.0%	43/43 = 100.0%
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	4	8.9/46.5 = 19.2% (0.2%, 97.3%)	46.5/46.5 = 100.0% (100.0%, 100.0%)	32.2/46.5 = 69.2% (1.4%, 99.7%)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	4	17.8/46.5 = 38.4% (1.0%, 97.5%)	32.2/46.5 = 69.2% (1.4%, 99.7%)	17.8/46.5 = 38.4% (1.0%, 97.5%)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	4	17.8/46.5 = 38.4% (1.0%, 97.5%)	46.5/46.5 = 100.0% (100.0%, 100.0%)	46.5/46.5 = 100.0% (100.0%, 100.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	60	37.9/2053.9 = 1.8% (0.4%, 7.3%)	1760.2/2053.9 = 85.7% (72.5%, 93.2%)	1631/2053.9 = 79.4% (65.5%, 88.7%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	60	993.5/2053.9 = 48.4% (35.0%, 61.9%)	1668.7/2053.9 = 81.2% (67.4%, 90.1%)	1370.2/2053.9 = 66.7% (52.5%, 78.4%)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	60	918/2053.9 = 44.7% (32.0%, 58.2%)	1962.4/2053.9 = 95.5% (83.1%, 98.9%)	1857.6/2053.9 = 90.4% (78.3%, 96.1%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	14	20.5/199.9 = 10.3% (2.0%, 39.2%)	199.9/199.9 = 100.0% (100.0%, 100.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	14	163.4/199.9 = 81.7% (42.8%, 96.4%)	199.9/199.9 = 100.0% (100.0%, 100.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	14	153.1/199.9 = 76.6% (40.4%, 94.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	0/224.2 = 0.0% (0.0%, 0.0%)	178.2/224.2 = 79.5% (40.9%, 95.6%)	103.6/224.2 = 46.2% (20.0%, 74.7%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	94.6/224.2 = 42.2% (17.4%, 71.8%)	163.9/224.2 = 73.1% (37.0%, 92.6%)	140.9/224.2 = 62.8% (30.3%, 86.8%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	48.4/224.2 = 21.6% (7.0%, 50.3%)	224.2/224.2 = 100.0% (100.0%, 100.0%)	178.2/224.2 = 79.5% (40.9%, 95.6%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	0/158.7 = 0.0%	121/158.7 = 76.2%	91.7/158.7 = 57.8%
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	67.2/158.7 = 42.3%	158.7/158.7 = 100.0%	67.2/158.7 = 42.3%
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	37.9/158.7 = 23.9%	158.7/158.7 = 100.0%	158.7/158.7 = 100.0%
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0/23.2 = 0.0%	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0/23.2 = 0.0%	23.2/23.2 = 100.0%	23.2/23.2 = 100.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	23	56.8/822.7 = 6.9% (2.0%, 21.1%)	546/822.7 = 66.4% (41.6%, 84.5%)	508.3/822.7 = 61.8% (37.7%, 81.2%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	23	327.9/822.7 = 39.9% (20.6%, 62.9%)	564.9/822.7 = 68.7% (43.4%, 86.2%)	473.4/822.7 = 57.5% (33.9%, 78.1%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	23	328/822.7 = 39.9% (20.9%, 62.5%)	822.7/822.7 = 100.0% (100.0%, 100.0%)	768.9/822.7 = 93.5% (62.2%, 99.2%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/48.9 = 0.0%	48.9/48.9 = 100.0%	48.9/48.9 = 100.0%
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	20.5/48.9 = 41.9%	48.9/48.9 = 100.0%	48.9/48.9 = 100.0%
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	34.7/48.9 = 71.0%	48.9/48.9 = 100.0%	48.9/48.9 = 100.0%
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	0/75.7 = 0.0% (0.0%, 0.0%)	52.7/75.7 = 69.6% (5.3%, 98.9%)	29.7/75.7 = 39.2% (3.9%, 91.2%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	29.7/75.7 = 39.2%	75.7/75.7 = 100.0% (100.0%, 100.0%)	52.7/75.7 = 69.6% (5.3%, 98.9%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	52.7/75.7 = 69.6% (5.3%, 98.9%)	75.7/75.7 = 100.0% (100.0%, 100.0%)	75.7/75.7 = 100.0% (100.0%, 100.0%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	221	101.5/2849 = 3.6% (2.0%, 6.3%)	2453.6/2849 = 86.1% (80.1%, 90.5%)	2190.8/2849 = 76.9% (70.3%, 82.4%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	221	1473.3/2849 = 51.7% (45.0%, 58.3%)	2405.7/2849 = 84.4% (78.2%, 89.1%)	2085.2/2849 = 73.2% (66.3%, 79.1%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	221	1238.5/2849 = 43.5% (37.1%, 50.1%)	2814.2/2849 = 98.8% (95.1%, 99.7%)	2633.3/2849 = 92.4% (87.2%, 95.6%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	59	27.1/344 = 7.9% (3.2%, 17.9%)	314.9/344 = 91.5% (78.6%, 96.9%)	300.9/344 = 87.5% (74.7%, 94.3%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	59	222.9/344 = 64.8% (50.5%, 76.9%)	311.5/344 = 90.5% (77.9%, 96.3%)	285.9/344 = 83.1% (70.3%, 91.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2xLLOD	% Greater than 4xLLOD
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	59	184.1/344 = 53.5% (40.0%, 66.6%)	344/344 = 100.0% (100.0%, 100.0%)	332.4/344 = 96.6% (87.3%, 99.2%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	60	7.9/320 = 2.5% (0.6%, 10.2%)	272.5/320 = 85.2% (72.4%, 92.6%)	231.5/320 = 72.3% (57.7%, 83.4%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	60	161/320 = 50.3% (36.8%, 63.8%)	223.8/320 = 69.9% (55.4%, 81.3%)	196.8/320 = 61.5% (47.2%, 74.0%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	60	94.4/320 = 29.5% (19.8%, 41.5%)	280.2/320 = 87.6% (73.8%, 94.6%)	271.4/320 = 84.8% (70.5%, 92.9%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.6 Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers

Table 6a. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by All participants

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>All participants</b>								
	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	828	989.4/18270 = 5.4% (4.2%, 7.0%)	4394.7/18270 = 24.1% (21.1%, 27.3%)	2490.1/18270 = 13.6% (11.4%, 16.3%)
	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	828	9292.7/18270 = 50.9% (47.1%, 54.6%)	15312.2/18270 = 83.8% (80.6%, 86.6%)	12678.8/18270 = 69.4% (65.7%, 72.9%)
	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	828	8202.8/18270 = 44.9% (41.3%, 48.6%)	16113.4/18270 = 88.2% (85.3%, 90.6%)	13546.5/18270 = 74.1% (70.5%, 77.5%)
	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	216	204.8/2051 = 10.0% (6.2%, 15.6%)	796.9/2051 = 38.9% (31.8%, 46.3%)	516.9/2051 = 25.2% (19.5%, 32.0%)
	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	216	1375.9/2051 = 67.1% (59.6%, 73.8%)	1883.8/2051 = 91.8% (87.1%, 94.9%)	1684.1/2051 = 82.1% (75.8%, 87.1%)
	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	216	1205.5/2051 = 58.8% (51.2%, 65.9%)	1985.6/2051 = 96.8% (93.7%, 98.4%)	1725.4/2051 = 84.1% (77.8%, 88.9%)
	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	101	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)	0/18222 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	219	64.8/1994 = 3.2% (1.6%, 6.3%)	348/1994 = 17.5% (12.8%, 23.4%)	152.7/1994 = 7.7% (4.9%, 11.7%)
	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	219	929.1/1994 = 46.6% (39.8%, 53.5%)	1545.5/1994 = 77.5% (70.5%, 83.3%)	1219.3/1994 = 61.1% (53.7%, 68.1%)

Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	219	669.5/1994 = 33.6% (27.7%, 40.0%)	1611/1994 = 80.8% (73.7%, 86.4%)	1206.2/1994 = 60.5% (53.0%, 67.5%)
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.



Table 6b. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Age

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age</b>								
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	406	158.5/11958 = 1.3% (0.5%, 3.2%)	1982.3/11958 = 16.6% (13.0%, 20.8%)	949.5/11958 = 7.9% (5.5%, 11.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	406	4795/11958 = 40.1% (35.0%, 45.4%)	9329.1/11958 = 78.0% (73.3%, 82.1%)	7091.4/11958 = 59.3% (54.0%, 64.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	406	3719.7/11958 = 31.1% (26.4%, 36.3%)	9954.3/11958 = 83.2% (78.9%, 86.8%)	7709.6/11958 = 64.5% (59.2%, 69.4%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	118	99.5/1351 = 7.4% (3.3%, 15.5%)	416.2/1351 = 30.8% (22.0%, 41.2%)	236.6/1351 = 17.5% (10.9%, 26.9%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	118	775.4/1351 = 57.4% (47.0%, 67.1%)	1211.4/1351 = 89.7% (82.9%, 93.9%)	1058.9/1351 = 78.4% (69.6%, 85.2%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	118	651.6/1351 = 48.2% (38.1%, 58.5%)	1295.7/1351 = 95.9% (91.6%, 98.1%)	1076.4/1351 = 79.7% (70.6%, 86.5%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)	0/11793 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	111	0/1286 = 0.0% (0.0%, 0.0%)	115.5/1286 = 9.0% (4.4%, 17.3%)	20.1/1286 = 1.6% (0.4%, 6.4%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	111	428.9/1286 = 33.3% (24.7%, 43.3%)	894.5/1286 = 69.6% (59.3%, 78.2%)	634.1/1286 = 49.3% (39.0%, 59.6%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	111	208.7/1286 = 16.2% (9.8%, 25.7%)	922.8/1286 = 71.8% (61.2%, 80.4%)	610.9/1286 = 47.5% (37.3%, 57.9%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	422	830.9/6312 = 13.2% (10.1%, 17.0%)	2412.4/6312 = 38.2% (33.3%, 43.4%)	1540.6/6312 = 24.4% (20.2%, 29.1%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	422	4497.6/6312 = 71.3% (66.2%, 75.8%)	5983.1/6312 = 94.8% (91.8%, 96.7%)	5587.4/6312 = 88.5% (84.6%, 91.5%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	422	4483.1/6312 = 71.0% (66.0%, 75.6%)	6159.2/6312 = 97.6% (94.9%, 98.9%)	5837/6312 = 92.5% (88.9%, 95.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age ≥ 60	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	105.3/700 = 15.0% (8.7%, 24.8%)	380.7/700 = 54.4% (43.8%, 64.6%)	280.3/700 = 40.0% (30.4%, 50.5%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	600.5/700 = 85.8% (76.7%, 91.7%)	672.4/700 = 96.1% (88.6%, 98.7%)	625.2/700 = 89.3% (80.2%, 94.5%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	553.8/700 = 79.1% (69.1%, 86.5%)	689.8/700 = 98.5% (90.0%, 99.8%)	649/700 = 92.7% (84.8%, 96.7%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	47	0/6429 = 0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	47	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	47	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)	0/6429 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	108	64.8/708 = 9.2% (4.6%, 17.5%)	232.5/708 = 32.8% (23.8%, 43.4%)	132.6/708 = 18.7% (11.7%, 28.6%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	108	500.3/708 = 70.7% (60.8%, 78.9%)	651/708 = 92.0% (84.6%, 96.0%)	585.3/708 = 82.7% (73.6%, 89.1%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	108	460.8/708 = 65.1% (54.8%, 74.1%)	688.3/708 = 97.2% (91.2%, 99.2%)	595.3/708 = 84.1% (74.9%, 90.3%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6c. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Risk for Severe Covid-19</b>								
At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	402	506.9/7285 = 7.0% (4.9%, 9.7%)	1891.3/7285 = 26.0% (21.7%, 30.7%)	1122.1/7285 = 15.4% (12.2%, 19.2%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	402	3870.2/7285 = 53.1% (47.7%, 58.5%)	6087.7/7285 = 83.6% (78.8%, 87.5%)	5146.8/7285 = 70.6% (65.3%, 75.5%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	402	3260.9/7285 = 44.8% (39.7%, 50.0%)	6531.1/7285 = 89.7% (85.4%, 92.8%)	5563.4/7285 = 76.4% (71.2%, 80.8%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	112	78.4/832 = 9.4% (4.8%, 17.6%)	240.9/832 = 29.0% (20.5%, 39.2%)	140.6/832 = 16.9% (10.5%, 26.1%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	112	515.7/832 = 62.0% (51.8%, 71.2%)	751.9/832 = 90.4% (83.7%, 94.5%)	639.7/832 = 76.9% (67.3%, 84.3%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	112	439.2/832 = 52.8% (42.7%, 62.7%)	787.1/832 = 94.6% (88.5%, 97.6%)	682.8/832 = 82.1% (73.8%, 88.1%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)	0/7434 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	110	31.4/803 = 3.9% (1.5%, 9.6%)	131.1/803 = 16.3% (10.2%, 25.2%)	58.6/803 = 7.3% (3.7%, 13.7%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	110	396.1/803 = 49.3% (39.0%, 59.7%)	630.1/803 = 78.5% (68.3%, 86.0%)	509.9/803 = 63.5% (53.2%, 72.7%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	110	257.6/803 = 32.1% (23.8%, 41.7%)	648.5/803 = 80.8% (70.6%, 88.0%)	479.9/803 = 59.8% (49.4%, 69.3%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	426	482.5/10985 = 4.4% (2.9%, 6.5%)	2503.4/10985 = 22.8% (18.9%, 27.3%)	1368/10985 = 12.5% (9.5%, 16.2%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	426	5422.5/10985 = 49.4% (44.2%, 54.6%)	9224.5/10985 = 84.0% (79.5%, 87.6%)	7532/10985 = 68.6% (63.4%, 73.3%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	426	4941.9/10985 = 45.0% (40.0%, 50.1%)	9582.3/10985 = 87.2% (83.0%, 90.5%)	7983.2/10985 = 72.7% (67.5%, 77.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	104	126.4/1219 = 10.4% (5.4%, 19.0%)	556/1219 = 45.6% (35.4%, 56.2%)	376.3/1219 = 30.9% (22.5%, 40.7%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	104	860.1/1219 = 70.6% (59.6%, 79.6%)	1131.9/1219 = 92.9% (85.2%, 96.7%)	1044.4/1219 = 85.7% (76.4%, 91.7%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	104	766.2/1219 = 62.9% (52.0%, 72.6%)	1198.5/1219 = 98.3% (93.3%, 99.6%)	1042.7/1219 = 85.5% (75.5%, 91.9%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	51	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)	0/10788 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	109	33.4/1191 = 2.8% (1.0%, 7.4%)	216.9/1191 = 18.2% (11.9%, 26.8%)	94.1/1191 = 7.9% (4.4%, 13.8%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	109	533/1191 = 44.8% (35.8%, 54.0%)	915.4/1191 = 76.9% (66.7%, 84.6%)	709.4/1191 = 59.6% (49.0%, 69.3%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	109	411.9/1191 = 34.6% (26.7%, 43.5%)	962.6/1191 = 80.8% (70.3%, 88.2%)	726.4/1191 = 61.0% (50.4%, 70.6%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6d. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Age, Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age, Risk for Severe Covid-19</b>								
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	199	63.2/4796 = 1.3% (0.3%, 5.3%)	908.1/4796 = 18.9% (13.8%, 25.4%)	346.1/4796 = 7.2% (4.2%, 12.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	199	2097.6/4796 = 43.7% (36.5%, 51.3%)	3710.1/4796 = 77.4% (70.3%, 83.1%)	2917.6/4796 = 60.8% (53.3%, 67.9%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	199	1499.9/4796 = 31.3% (24.7%, 38.7%)	4048.9/4796 = 84.4% (78.1%, 89.2%)	3228/4796 = 67.3% (59.9%, 73.9%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	64	28.4/566 = 5.0% (1.2%, 18.2%)	130.5/566 = 23.1% (13.4%, 36.7%)	75.5/566 = 13.3% (6.2%, 26.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	64	294.1/566 = 52.0% (38.5%, 65.1%)	503.3/566 = 88.9% (80.4%, 94.0%)	402.9/566 = 71.2% (58.2%, 81.4%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	64	253.4/566 = 44.8% (32.2%, 58.1%)	521.1/566 = 92.1% (83.1%, 96.5%)	436.6/566 = 77.1% (65.6%, 85.7%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)	0/4723 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	57	0/511 = 0.0% (0.0%, 0.0%)	40.6/511 = 8.0% (2.7%, 21.4%)	7.6/511 = 1.5% (0.2%, 10.4%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	57	211.4/511 = 41.4% (27.9%, 56.2%)	360.6/511 = 70.6% (55.8%, 82.0%)	275.9/511 = 54.0% (40.0%, 67.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	57	88.9/511 = 17.4% (8.7%, 31.7%)	370.8/511 = 72.6% (57.7%, 83.7%)	241.8/511 = 47.3% (33.6%, 61.4%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	207	95.3/7162 = 1.3% (0.4%, 4.1%)	1074.2/7162 = 15.0% (10.4%, 21.1%)	603.4/7162 = 8.4% (5.1%, 13.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	207	2697.4/7162 = 37.7% (30.8%, 45.0%)	5618.9/7162 = 78.5% (71.9%, 83.8%)	4173.8/7162 = 58.3% (50.9%, 65.3%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	207	2219.8/7162 = 31.0% (24.6%, 38.2%)	5905.4/7162 = 82.5% (76.3%, 87.3%)	4481.5/7162 = 62.6% (55.2%, 69.4%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	54	71.1/785 = 9.1% (3.4%, 22.2%)	285.7/785 = 36.4% (23.3%, 51.8%)	161.1/785 = 20.5% (11.0%, 35.0%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	54	481.3/785 = 61.3% (45.9%, 74.7%)	708.1/785 = 90.2% (78.8%, 95.8%)	656/785 = 83.6% (70.1%, 91.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	54	398.2/785 = 50.7% (35.9%, 65.4%)	774.7/785 = 98.7% (90.7%, 99.8%)	639.8/785 = 81.5% (66.8%, 90.6%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)	0/7070 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	54	0/775 = 0.0% (0.0%, 0.0%)	74.8/775 = 9.7% (3.8%, 22.5%)	12.4/775 = 1.6% (0.2%, 11.1%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	54	217.5/775 = 28.1% (17.3%, 42.1%)	533.9/775 = 68.9% (54.2%, 80.5%)	358.2/775 = 46.2% (32.1%, 61.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	54	119.8/775 = 15.5% (7.3%, 29.7%)	552/775 = 71.2% (55.9%, 82.9%)	369.1/775 = 47.6% (33.4%, 62.3%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	203	443.7/2489 = 17.8% (12.7%, 24.4%)	983.2/2489 = 39.5% (32.5%, 46.9%)	775.9/2489 = 31.2% (24.7%, 38.5%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	203	1772.6/2489 = 71.2% (64.0%, 77.5%)	2377.5/2489 = 95.5% (91.1%, 97.8%)	2229.2/2489 = 89.6% (84.0%, 93.3%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	203	1761/2489 = 70.8% (63.6%, 77.0%)	2482.2/2489 = 99.7% (98.1%, 100.0%)	2335.3/2489 = 93.8% (88.8%, 96.7%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	50/266 = 18.8% (9.2%, 34.7%)	110.4/266 = 41.5% (26.7%, 58.0%)	65.2/266 = 24.5% (13.6%, 40.1%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	221.6/266 = 83.3% (69.3%, 91.7%)	248.6/266 = 93.5% (77.6%, 98.3%)	236.8/266 = 89.0% (74.6%, 95.7%)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	185.8/266 = 69.9% (53.2%, 82.5%)	266/266 = 100.0% (100.0%, 100.0%)	246.1/266 = 92.5% (82.7%, 97.0%)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)	0/2711 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	53	31.4/292 = 10.7% (4.1%, 25.4%)	90.4/292 = 31.0% (18.6%, 46.8%)	50.9/292 = 17.4% (8.4%, 32.8%)
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	53	184.7/292 = 63.2% (48.5%, 75.9%)	269.5/292 = 92.3% (79.3%, 97.4%)	234/292 = 80.1% (65.5%, 89.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	53	168.7/292 = 57.8% (42.5%, 71.7%)	277.7/292 = 95.1% (80.7%, 98.9%)	238.1/292 = 81.5% (66.4%, 90.8%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	219	387.2/3823 = 10.1% (6.6%, 15.2%)	1429.2/3823 = 37.4% (30.7%, 44.6%)	764.7/3823 = 20.0% (14.8%, 26.5%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	219	2725/3823 = 71.3% (64.2%, 77.5%)	3605.6/3823 = 94.3% (89.8%, 96.9%)	3358.2/3823 = 87.8% (82.1%, 91.9%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	219	2722.1/3823 = 71.2% (64.2%, 77.3%)	3677/3823 = 96.2% (91.8%, 98.3%)	3501.6/3823 = 91.6% (86.2%, 95.0%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	55.3/434 = 12.7% (5.5%, 27.0%)	270.3/434 = 62.3% (47.7%, 75.0%)	215.1/434 = 49.6% (35.6%, 63.6%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	378.8/434 = 87.3% (73.7%, 94.4%)	423.8/434 = 97.7% (84.2%, 99.7%)	388.4/434 = 89.5% (75.5%, 95.9%)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	368/434 = 84.8% (70.6%, 92.8%)	423.8/434 = 97.7% (84.2%, 99.7%)	402.9/434 = 92.8% (79.2%, 97.8%)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)	0/3718 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	55	33.4/416 = 8.0% (2.9%, 20.6%)	142.1/416 = 34.2% (21.9%, 48.9%)	81.6/416 = 19.6% (10.4%, 33.9%)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	55	315.6/416 = 75.9% (61.8%, 85.9%)	381.5/416 = 91.7% (80.7%, 96.7%)	351.3/416 = 84.4% (71.2%, 92.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	55	292/416 = 70.2% (55.8%, 81.5%)	410.5/416 = 98.7% (90.8%, 99.8%)	357.2/416 = 85.9% (72.7%, 93.3%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6e. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Sex</b>								
Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	376	524.4/7813.3 = 6.7% (4.6%, 9.7%)	1857.8/7813.3 = 23.8% (19.5%, 28.7%)	1163.1/7813.3 = 14.9% (11.4%, 19.1%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	376	4203.5/7813.3 = 53.8% (48.1%, 59.4%)	6531.8/7813.3 = 83.6% (78.5%, 87.7%)	5437.1/7813.3 = 69.6% (63.8%, 74.8%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	376	3538.5/7813.3 = 45.3% (39.9%, 50.8%)	6873.5/7813.3 = 88.0% (83.2%, 91.5%)	5845.6/7813.3 = 74.8% (69.1%, 79.8%)
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	83	76/802.5 = 9.5% (4.2%, 20.0%)	329.2/802.5 = 41.0% (29.6%, 53.5%)	228.1/802.5 = 28.4% (18.8%, 40.5%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	83	532.4/802.5 = 66.3% (54.2%, 76.7%)	686/802.5 = 85.5% (74.9%, 92.1%)	609.8/802.5 = 76.0% (64.7%, 84.5%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	83	429.4/802.5 = 53.5% (41.3%, 65.3%)	745.8/802.5 = 92.9% (85.4%, 96.7%)	614.6/802.5 = 76.6% (63.9%, 85.8%)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)	0/9413.6 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	105	32.8/1003 = 3.3% (1.2%, 8.5%)	152.8/1003 = 15.2% (9.1%, 24.5%)	59.6/1003 = 5.9% (2.9%, 12.0%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	105	463.4/1003 = 46.2% (35.9%, 56.8%)	757.7/1003 = 75.5% (66.0%, 83.1%)	570.2/1003 = 56.8% (45.7%, 67.4%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	105	308/1003 = 30.7% (22.4%, 40.5%)	797.7/1003 = 79.5% (69.0%, 87.1%)	526.3/1003 = 52.5% (41.5%, 63.2%)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	465/10456.7 = 4.4% (3.0%, 6.5%)	2536.9/10456.7 = 24.3% (20.2%, 28.8%)	1327/10456.7 = 12.7% (9.8%, 16.3%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	5089.1/10456.7 = 48.7% (43.5%, 53.9%)	8780.4/10456.7 = 84.0% (79.6%, 87.6%)	7241.7/10456.7 = 69.3% (64.1%, 74.0%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	4664.3/10456.7 = 44.6% (39.6%, 49.8%)	9239.9/10456.7 = 88.4% (84.4%, 91.4%)	7700.9/10456.7 = 73.6% (68.6%, 78.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	133	128.9/1248.5 = 10.3% (5.8%, 17.7%)	467.7/1248.5 = 37.5% (28.8%, 47.0%)	288.8/1248.5 = 23.1% (16.3%, 31.7%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	133	843.4/1248.5 = 67.6% (57.9%, 75.9%)	1197.8/1248.5 = 95.9% (91.6%, 98.1%)	1074.3/1248.5 = 86.1% (78.5%, 91.3%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	133	776.1/1248.5 = 62.2% (52.5%, 71.0%)	1239.7/1248.5 = 99.3% (95.1%, 99.9%)	1110.9/1248.5 = 89.0% (82.0%, 93.5%)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	49	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)	0/8808.4 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	114	32/991 = 3.2% (1.2%, 8.2%)	195.2/991 = 19.7% (13.1%, 28.5%)	93/991 = 9.4% (5.2%, 16.4%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	114	465.7/991 = 47.0% (37.2%, 57.0%)	787.8/991 = 79.5% (69.0%, 87.1%)	649.2/991 = 65.5% (54.9%, 74.7%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	114	361.5/991 = 36.5% (27.5%, 46.6%)	813.3/991 = 82.1% (72.0%, 89.1%)	680/991 = 68.6% (58.1%, 77.5%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6f. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Age, sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age, sex</b>								
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	230	64.1/7076.4 = 0.9% (0.2%, 3.6%)	1189.1/7076.4 = 16.8% (12.2%, 22.7%)	492.2/7076.4 = 7.0% (4.1%, 11.7%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	230	2791.4/7076.4 = 39.4% (32.8%, 46.6%)	5586.5/7076.4 = 78.9% (72.7%, 84.0%)	4314.2/7076.4 = 61.0% (54.0%, 67.5%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	230	2279.8/7076.4 = 32.2% (25.9%, 39.3%)	5962.5/7076.4 = 84.3% (78.6%, 88.6%)	4551.5/7076.4 = 64.3% (57.3%, 70.7%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	56.5/815.5 = 6.9% (2.5%, 17.9%)	242.5/815.5 = 29.7% (19.1%, 43.2%)	130.6/815.5 = 16.0% (8.4%, 28.4%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	458.9/815.5 = 56.3% (43.1%, 68.6%)	768.2/815.5 = 94.2% (87.6%, 97.4%)	678.1/815.5 = 83.1% (72.4%, 90.3%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	418.9/815.5 = 51.4% (38.4%, 64.2%)	806.8/815.5 = 98.9% (92.5%, 99.9%)	704.8/815.5 = 86.4% (76.2%, 92.7%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)	0/5314.9 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	52	0/588.8 = 0.0% (0.0%, 0.0%)	53.7/588.8 = 9.1% (3.3%, 22.5%)	12.4/588.8 = 2.1% (0.3%, 14.3%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	52	200.3/588.8 = 34.0% (21.8%, 48.9%)	409.1/588.8 = 69.5% (53.7%, 81.7%)	321.1/588.8 = 54.5% (39.6%, 68.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	52	114/588.8 = 19.4% (9.6%, 35.3%)	425.4/588.8 = 72.2% (57.0%, 83.6%)	317.3/588.8 = 53.9% (39.2%, 67.9%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	176	94.4/4881.6 = 1.9% (0.6%, 6.0%)	793.2/4881.6 = 16.2% (11.3%, 22.8%)	457.2/4881.6 = 9.4% (5.6%, 15.3%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	176	2003.6/4881.6 = 41.0% (33.5%, 49.1%)	3742.6/4881.6 = 76.7% (69.0%, 82.9%)	2777.2/4881.6 = 56.9% (48.8%, 64.7%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	176	1439.9/4881.6 = 29.5% (22.7%, 37.3%)	3991.8/4881.6 = 81.8% (74.5%, 87.3%)	3158/4881.6 = 64.7% (56.6%, 72.1%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	46	43/535.5 = 8.0% (2.3%, 24.6%)	173.7/535.5 = 32.4% (18.9%, 49.7%)	106/535.5 = 19.8% (9.6%, 36.4%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	46	316.5/535.5 = 59.1% (43.1%, 73.3%)	443.2/535.5 = 82.8% (68.2%, 91.5%)	380.8/535.5 = 71.1% (56.1%, 82.6%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	46	232.7/535.5 = 43.5% (28.2%, 60.0%)	489/535.5 = 91.3% (81.0%, 96.3%)	371.6/535.5 = 69.4% (52.1%, 82.5%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)	0/6478.1 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	59	0/697.2 = 0.0% (0.0%, 0.0%)	61.8/697.2 = 8.9% (3.2%, 22.3%)	7.6/697.2 = 1.1% (0.1%, 7.8%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	59	228.6/697.2 = 32.8% (20.9%, 47.3%)	485.4/697.2 = 69.6% (56.8%, 79.9%)	313/697.2 = 44.9% (31.0%, 59.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	59	94.7/697.2 = 13.6% (6.2%, 27.1%)	497.4/697.2 = 71.3% (57.1%, 82.3%)	293.6/697.2 = 42.1% (28.7%, 56.8%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	222	400.8/3380.2 = 11.9% (8.1%, 17.1%)	1347.8/3380.2 = 39.9% (33.0%, 47.1%)	834.7/3380.2 = 24.7% (19.0%, 31.4%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	222	2297.7/3380.2 = 68.0% (60.8%, 74.4%)	3193.9/3380.2 = 94.5% (90.3%, 96.9%)	2927.5/3380.2 = 86.6% (80.7%, 90.9%)
Age $\geq$ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	222	2384.6/3380.2 = 70.5% (63.5%, 76.7%)	3277.4/3380.2 = 97.0% (92.5%, 98.8%)	3149.4/3380.2 = 93.2% (88.1%, 96.2%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	61	72.3/433 = 16.7% (8.7%, 29.8%)	225.2/433 = 52.0% (39.0%, 64.7%)	158.2/433 = 36.5% (25.3%, 49.5%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	61	384.5/433 = 88.8% (77.8%, 94.7%)	429.6/433 = 99.2% (94.4%, 99.9%)	396.3/433 = 91.5% (80.2%, 96.6%)
Age $\geq$ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	61	357.1/433 = 82.5% (70.7%, 90.2%)	433/433 = 100.0% (100.0%, 100.0%)	406.1/433 = 93.8% (84.0%, 97.7%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)	0/3493.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	62	32/402.2 = 7.9% (3.0%, 19.5%)	141.5/402.2 = 35.2% (23.2%, 49.3%)	80.6/402.2 = 20.0% (10.9%, 33.9%)
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	62	265.4/402.2 = 66.0% (52.2%, 77.5%)	378.7/402.2 = 94.1% (82.4%, 98.2%)	328.1/402.2 = 81.6% (68.5%, 90.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	62	247.4/402.2 = 61.5% (47.6%, 73.7%)	387.9/402.2 = 96.4% (85.8%, 99.2%)	362.7/402.2 = 90.2% (78.6%, 95.8%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	430.1/2931.8 = 14.7% (10.1%, 20.9%)	1064.6/2931.8 = 36.3% (29.3%, 43.9%)	705.9/2931.8 = 24.1% (18.2%, 31.1%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	2199.9/2931.8 = 75.0% (67.6%, 81.3%)	2789.2/2931.8 = 95.1% (90.0%, 97.7%)	2659.9/2931.8 = 90.7% (85.1%, 94.4%)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	2098.6/2931.8 = 71.6% (64.1%, 78.0%)	2881.7/2931.8 = 98.3% (93.9%, 99.5%)	2687.6/2931.8 = 91.7% (85.6%, 95.3%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	37	33/267 = 12.4% (4.5%, 29.8%)	155.5/267 = 58.3% (39.5%, 74.9%)	122.1/267 = 45.7% (28.5%, 64.1%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	37	216/267 = 80.9% (62.8%, 91.4%)	242.8/267 = 90.9% (72.3%, 97.5%)	228.9/267 = 85.7% (67.1%, 94.7%)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	37	196.7/267 = 73.7% (55.4%, 86.3%)	256.8/267 = 96.2% (75.4%, 99.5%)	243/267 = 91.0% (72.9%, 97.4%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)	0/2935.5 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	46	32.8/305.8 = 10.7% (3.9%, 26.4%)	91/305.8 = 29.8% (17.2%, 46.4%)	52/305.8 = 17.0% (7.6%, 33.7%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	46	234.8/305.8 = 76.8% (61.3%, 87.4%)	272.4/305.8 = 89.1% (76.0%, 95.5%)	257.2/305.8 = 84.1% (69.2%, 92.6%)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	46	213.3/305.8 = 69.8% (53.6%, 82.2%)	300.3/305.8 = 98.2% (87.6%, 99.8%)	232.7/305.8 = 76.1% (59.6%, 87.3%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6g. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Hispanic or Latino ethnicity

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Hispanic or Latino ethnicity</b>								
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	338	455/9568.5 = 4.8% (3.2%, 7.1%)	2285.5/9568.5 = 23.9% (19.5%, 28.9%)	1270.2/9568.5 = 13.3% (10.0%, 17.4%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	338	4603.9/9568.5 = 48.1% (42.3%, 53.9%)	8053.8/9568.5 = 84.2% (79.1%, 88.2%)	6565.9/9568.5 = 68.6% (62.8%, 73.9%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	338	4307/9568.5 = 45.0% (39.4%, 50.8%)	8548.6/9568.5 = 89.3% (84.8%, 92.7%)	6941.2/9568.5 = 72.5% (66.8%, 77.6%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	89	77.7/1065.5 = 7.3% (3.2%, 15.8%)	403.5/1065.5 = 37.9% (27.9%, 49.0%)	260.4/1065.5 = 24.4% (16.7%, 34.3%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	89	717/1065.5 = 67.3% (55.6%, 77.1%)	971/1065.5 = 91.1% (83.0%, 95.6%)	880/1065.5 = 82.6% (73.2%, 89.2%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	89	642.8/1065.5 = 60.3% (48.8%, 70.8%)	1048.3/1065.5 = 98.4% (93.4%, 99.6%)	951.7/1065.5 = 89.3% (79.9%, 94.6%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	41	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)	0/9835.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	85	24.1/1009.2 = 2.4% (0.7%, 7.6%)	182.5/1009.2 = 18.1% (11.1%, 28.1%)	68/1009.2 = 6.7% (3.4%, 12.9%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	85	463.7/1009.2 = 45.9% (35.3%, 56.9%)	823.4/1009.2 = 81.6% (70.2%, 89.3%)	649.5/1009.2 = 64.4% (52.2%, 74.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	85	366.5/1009.2 = 36.3% (27.0%, 46.8%)	843.4/1009.2 = 83.6% (72.2%, 90.9%)	613.7/1009.2 = 60.8% (48.9%, 71.6%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	461	496.5/8024.2 = 6.2% (4.3%, 8.8%)	2032.4/8024.2 = 25.3% (21.4%, 29.8%)	1171.9/8024.2 = 14.6% (11.6%, 18.3%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	461	4232.1/8024.2 = 52.7% (47.9%, 57.6%)	6634.9/8024.2 = 82.7% (78.3%, 86.3%)	5560.2/8024.2 = 69.3% (64.4%, 73.8%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	461	3570.3/8024.2 = 44.5% (39.9%, 49.2%)	6941.3/8024.2 = 86.5% (82.4%, 89.8%)	6159.6/8024.2 = 76.8% (72.2%, 80.8%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	115	93.5/866.2 = 10.8% (6.0%, 18.7%)	327.9/866.2 = 37.9% (28.5%, 48.2%)	191/866.2 = 22.0% (15.0%, 31.1%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	115	572.3/866.2 = 66.1% (55.9%, 75.0%)	793.5/866.2 = 91.6% (84.4%, 95.7%)	694.5/866.2 = 80.2% (70.4%, 87.3%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	115	478.2/866.2 = 55.2% (45.1%, 64.9%)	818/866.2 = 94.4% (88.0%, 97.5%)	654.5/866.2 = 75.6% (65.1%, 83.7%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	59	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)	0/8175.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	123	31.8/891.1 = 3.6% (1.4%, 8.8%)	156.6/891.1 = 17.6% (11.6%, 25.7%)	75.8/891.1 = 8.5% (4.5%, 15.4%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	123	431.2/891.1 = 48.4% (39.1%, 57.8%)	651.5/891.1 = 73.1% (63.4%, 81.0%)	522.2/891.1 = 58.6% (48.9%, 67.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	123	283/891.1 = 31.8% (24.3%, 40.3%)	720/891.1 = 80.8% (71.5%, 87.6%)	560.1/891.1 = 62.8% (52.9%, 71.8%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	29	37.9/677.3 = 5.6% (1.2%, 21.8%)	76.8/677.3 = 11.3% (4.2%, 27.2%)	48/677.3 = 7.1% (2.0%, 22.4%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	29	456.7/677.3 = 67.4% (43.7%, 84.7%)	623.4/677.3 = 92.1% (57.2%, 99.0%)	552.7/677.3 = 81.6% (53.9%, 94.4%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	29	325.5/677.3 = 48.1% (27.6%, 69.1%)	623.4/677.3 = 92.1% (57.2%, 99.0%)	445.8/677.3 = 65.8% (41.3%, 84.1%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	12	33.6/119.2 = 28.2% (3.9%, 78.9%)	65.5/119.2 = 54.9% (16.3%, 88.4%)	65.5/119.2 = 54.9% (16.3%, 88.4%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	12	86.6/119.2 = 72.6% (26.3%, 95.2%)	119.2/119.2 = 100.0% (100.0%, 100.0%)	109.5/119.2 = 91.9% (37.3%, 99.5%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	12	84.4/119.2 = 70.8% (29.5%, 93.3%)	119.2/119.2 = 100.0% (100.0%, 100.0%)	119.2/119.2 = 100.0% (100.0%, 100.0%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/210.6 = 0.0%	0/210.6 = 0.0%	0/210.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	11	8.9/93.6 = 9.5% (0.7%, 62.8%)	8.9/93.6 = 9.5% (0.7%, 62.8%)	8.9/93.6 = 9.5% (0.7%, 62.8%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	34.2/93.6 = 36.5% (8.5%, 78.1%)	70.6/93.6 = 75.4% (15.3%, 98.1%)	47.6/93.6 = 50.9% (12.6%, 88.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	19.9/93.6 = 21.3% (4.0%, 63.6%)	47.6/93.6 = 50.9% (12.6%, 88.2%)	32.5/93.6 = 34.7% (8.5%, 75.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

MOCK

Table 6h. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Race

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Race</b>								
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	182	344.1/3868.9 = 8.9% (5.5%, 14.0%)	1098.1/3868.9 = 28.4% (22.0%, 35.8%)	631/3868.9 = 16.3% (11.5%, 22.7%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	182	2051/3868.9 = 53.0% (45.4%, 60.5%)	3191.2/3868.9 = 82.5% (75.4%, 87.9%)	2616.5/3868.9 = 67.6% (59.9%, 74.5%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	182	1863.9/3868.9 = 48.2% (40.9%, 55.5%)	3325.1/3868.9 = 85.9% (79.2%, 90.8%)	2906.3/3868.9 = 75.1% (67.7%, 81.3%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	49	53/452.7 = 11.7% (4.8%, 25.8%)	159.6/452.7 = 35.2% (21.7%, 51.7%)	67.1/452.7 = 14.8% (6.9%, 28.9%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	49	295.6/452.7 = 65.3% (49.2%, 78.5%)	419.6/452.7 = 92.7% (80.5%, 97.5%)	346.2/452.7 = 76.5% (59.9%, 87.6%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	49	231/452.7 = 51.0% (35.9%, 66.0%)	416.1/452.7 = 91.9% (79.7%, 97.0%)	318.8/452.7 = 70.4% (53.5%, 83.1%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)	0/3333.5 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	48	23.9/411.4 = 5.8% (1.8%, 17.3%)	107.4/411.4 = 26.1% (14.9%, 41.6%)	67.9/411.4 = 16.5% (8.1%, 30.6%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	48	202.6/411.4 = 49.2% (35.1%, 63.5%)	306.6/411.4 = 74.5% (58.8%, 85.7%)	240.4/411.4 = 58.4% (43.4%, 72.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	48	119.4/411.4 = 29.0% (18.5%, 42.4%)	358.2/411.4 = 87.1% (72.7%, 94.5%)	276.4/411.4 = 67.2% (51.2%, 80.0%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	292	214.1/4498.2 = 4.8% (2.9%, 7.8%)	1181/4498.2 = 26.3% (21.2%, 32.0%)	674.9/4498.2 = 15.0% (11.2%, 19.8%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	292	2424/4498.2 = 53.9% (47.6%, 60.1%)	3776.9/4498.2 = 84.0% (77.8%, 88.6%)	3329.7/4498.2 = 74.0% (67.6%, 79.5%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	292	1953.5/4498.2 = 43.4% (37.5%, 49.6%)	3930.8/4498.2 = 87.4% (81.7%, 91.5%)	3489.3/4498.2 = 77.6% (71.3%, 82.8%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	73	56.1/498.2 = 11.3% (4.8%, 24.4%)	201.3/498.2 = 40.4% (28.6%, 53.4%)	143.3/498.2 = 28.8% (18.3%, 42.1%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	73	303.3/498.2 = 60.9% (46.9%, 73.3%)	451.6/498.2 = 90.6% (80.8%, 95.7%)	422.1/498.2 = 84.7% (73.8%, 91.6%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	73	261/498.2 = 52.4% (39.3%, 65.2%)	486.6/498.2 = 97.7% (91.1%, 99.4%)	416.7/498.2 = 83.6% (73.2%, 90.5%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	37	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)	0/5061.1 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	87	7.9/558.5 = 1.4% (0.3%, 5.9%)	49.2/558.5 = 8.8% (4.8%, 15.5%)	7.9/558.5 = 1.4% (0.3%, 5.9%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	87	255.3/558.5 = 45.7% (34.3%, 57.6%)	389.5/558.5 = 69.7% (56.5%, 80.4%)	336.9/558.5 = 60.3% (47.6%, 71.8%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	87	167.3/558.5 = 30.0% (21.1%, 40.7%)	414.9/558.5 = 74.3% (60.8%, 84.3%)	329.5/558.5 = 59.0% (46.4%, 70.5%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	25.1/515.7 = 4.9% (1.0%, 20.5%)	48.9/515.7 = 9.5% (2.9%, 26.9%)	25.1/515.7 = 4.9% (1.0%, 20.5%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	200.4/515.7 = 38.9% (18.5%, 64.0%)	377.4/515.7 = 73.2% (49.1%, 88.6%)	249.9/515.7 = 48.5% (25.5%, 72.1%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	91.4/515.7 = 17.7% (6.9%, 38.7%)	398.1/515.7 = 77.2% (51.6%, 91.5%)	291.2/515.7 = 56.5% (31.7%, 78.4%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	3.7/51.8 = 7.1%	36.6/51.8 = 70.8%	30.8/51.8 = 59.6%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	45.9/51.8 = 88.8%	51.8/51.8 = 100.0%	45.9/51.8 = 88.8%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	41.2/51.8 = 79.5%	51.8/51.8 = 100.0%	51.8/51.8 = 100.0%
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0/298 = 0.0%	0/298 = 0.0%	0/298 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	0/40.3 = 0.0% (0.0%, 0.0%)	8.9/40.3 = 22.2% (0.2%, 97.6%)	0/40.3 = 0.0% (0.0%, 0.0%)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	35.3/40.3 = 87.6% (5.1%, 99.9%)	40.3/40.3 = 100.0% (100.0%, 100.0%)	40.3/40.3 = 100.0% (100.0%, 100.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Asian American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	10/40.3 = 24.8% (0.7%, 93.9%)	40.3/40.3 = 100.0% (100.0%, 100.0%)	18.9/40.3 = 47.0% (1.5%, 98.1%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/36.7 = 0.0%	0/36.7 = 0.0%	0/36.7 = 0.0%
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%	36.7/36.7 = 100.0%
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0/36.7 = 0.0%	36.7/36.7 = 100.0%	0/36.7 = 0.0%
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0/29.1 = 0.0%	0/29.1 = 0.0%	0/29.1 = 0.0%
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	14.5/29.1 = 50.0%	29.1/29.1 = 100.0%	14.5/29.1 = 50.0%
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	14.5/29.1 = 50.0%	14.5/29.1 = 50.0%	14.5/29.1 = 50.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/56.1 = 0.0%	0/56.1 = 0.0%	0/56.1 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	18.4/56.1 = 32.7%	56.1/56.1 = 100.0%	56.1/56.1 = 100.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	18.4/56.1 = 32.7%	56.1/56.1 = 100.0%	56.1/56.1 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	18.9/676.7 = 2.8% (0.3%, 19.8%)	40.6/676.7 = 6.0% (1.6%, 20.1%)	40.6/676.7 = 6.0% (1.6%, 20.1%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	308.7/676.7 = 45.6% (26.4%, 66.2%)	631.3/676.7 = 93.3% (74.3%, 98.5%)	600.1/676.7 = 88.7% (67.7%, 96.7%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	276.3/676.7 = 40.8% (22.5%, 62.1%)	651.2/676.7 = 96.2% (74.8%, 99.5%)	533.2/676.7 = 78.8% (52.8%, 92.5%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	5	0/47.4 = 0.0%	10.8/47.4 = 22.7%	10.8/47.4 = 22.7%
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	5	26.9/47.4 = 56.8%	47.4/47.4 = 100.0%	37.3/47.4 = 78.5%
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	5	21.1/47.4 = 44.5%	37.3/47.4 = 78.5%	26.9/47.4 = 56.8%
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	6	0/819.1 = 0.0%	0/819.1 = 0.0%	0/819.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	7	0/64.2 = 0.0%	15.4/64.2 = 23.9%	9.9/64.2 = 15.4%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	7	20.7/64.2 = 32.3%	40.8/64.2 = 63.5%	20.7/64.2 = 32.3%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	7	17.5/64.2 = 27.3%	51.8/64.2 = 80.6%	51.8/64.2 = 80.6%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	0/153.3 = 0.0% (0.0%, 0.0%)	16.9/153.3 = 11.1% (0.3%, 82.3%)	6.8/153.3 = 4.4% (0.0%, 82.9%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	90.6/153.3 = 59.1% (4.1%, 98.0%)	143.1/153.3 = 93.4% (11.8%, 99.9%)	128.3/153.3 = 83.7% (11.8%, 99.5%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	74/153.3 = 48.3% (3.1%, 96.4%)	138.4/153.3 = 90.3% (8.0%, 99.9%)	138.4/153.3 = 90.3% (8.0%, 99.9%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/102 = 0.0%	0/102 = 0.0%	0/102 = 0.0%

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

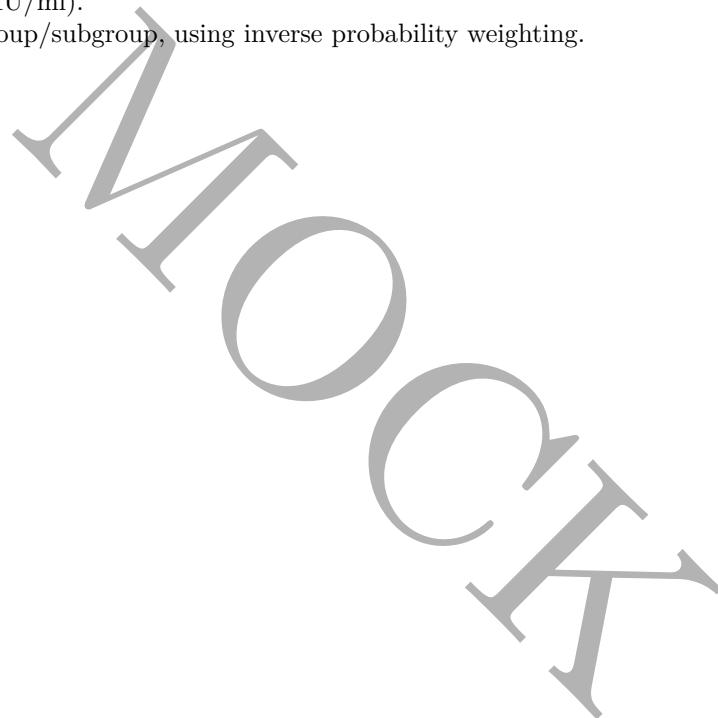


Table 6i. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Underrepresented Minority Status in the U.S.</b>								
URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	198.5/3819 = 5.2% (3.0%, 8.8%)	1019.3/3819 = 26.7% (20.9%, 33.4%)	431.2/3819 = 11.3% (7.7%, 16.3%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	2038.8/3819 = 53.4% (46.2%, 60.5%)	3334.8/3819 = 87.3% (80.8%, 91.9%)	2789.8/3819 = 73.1% (65.7%, 79.3%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	1677.2/3819 = 43.9% (37.3%, 50.7%)	3464.1/3819 = 90.7% (84.7%, 94.5%)	2932/3819 = 76.8% (69.7%, 82.6%)
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	43.5/433 = 10.0% (3.2%, 27.5%)	146.9/433 = 33.9% (21.3%, 49.4%)	103.7/433 = 24.0% (13.8%, 38.3%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	265.8/433 = 61.4% (44.5%, 75.9%)	351.9/433 = 81.3% (64.0%, 91.4%)	304/433 = 70.2% (52.6%, 83.4%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	227.6/433 = 52.6% (37.0%, 67.7%)	425.9/433 = 98.4% (88.6%, 99.8%)	361.9/433 = 83.6% (68.6%, 92.2%)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)	0/3795 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	49	5.3/410 = 1.3% (0.2%, 9.1%)	52.1/410 = 12.7% (5.8%, 25.5%)	10.6/410 = 2.6% (0.6%, 9.8%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	49	166.8/410 = 40.7% (26.6%, 56.5%)	297.7/410 = 72.6% (55.7%, 84.8%)	242.8/410 = 59.2% (42.9%, 73.7%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	49	134.9/410 = 32.9% (21.2%, 47.1%)	308.2/410 = 75.2% (58.1%, 86.9%)	240.6/410 = 58.7% (43.7%, 72.2%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	189	307.4/3982 = 7.7% (4.8%, 12.2%)	1011.4/3982 = 25.4% (19.5%, 32.3%)	527.3/3982 = 13.2% (9.2%, 18.8%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	189	2062.8/3982 = 51.8% (44.4%, 59.1%)	3251.2/3982 = 81.6% (74.7%, 87.0%)	2591.6/3982 = 65.1% (57.5%, 72.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	189	1709.7/3982 = 42.9% (36.2%, 50.0%)	3333.3/3982 = 83.7% (76.9%, 88.8%)	2883.4/3982 = 72.4% (65.1%, 78.7%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	42.5/429 = 9.9% (4.0%, 22.6%)	137.5/429 = 32.1% (19.7%, 47.6%)	67.4/429 = 15.7% (7.7%, 29.4%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	283.9/429 = 66.2% (51.2%, 78.5%)	395.9/429 = 92.3% (79.6%, 97.3%)	344.8/429 = 80.4% (65.7%, 89.8%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	241.6/429 = 56.3% (41.4%, 70.1%)	392.4/429 = 91.5% (78.9%, 96.8%)	329.4/429 = 76.8% (61.7%, 87.2%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	26	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)	0/3838 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	50	23.9/442 = 5.4% (1.7%, 16.1%)	107.4/442 = 24.3% (13.9%, 39.0%)	67.9/442 = 15.4% (7.6%, 28.5%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	50	213.1/442 = 48.2% (34.5%, 62.2%)	337.2/442 = 76.3% (61.3%, 86.8%)	251/442 = 56.8% (42.3%, 70.2%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	50	127.1/442 = 28.8% (18.7%, 41.5%)	376.4/442 = 85.2% (70.8%, 93.1%)	282.1/442 = 63.8% (48.6%, 76.8%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6j. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Age, Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age, Underrepresented Minority Status in the U.S.</b>								
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	98	33/2486 = 1.3% (0.2%, 9.1%)	447.4/2486 = 18.0% (11.3%, 27.4%)	154/2486 = 6.2% (2.7%, 13.7%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	98	982.8/2486 = 39.5% (29.9%, 50.1%)	2027.7/2486 = 81.6% (71.8%, 88.5%)	1536.5/2486 = 61.8% (51.2%, 71.4%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	98	649/2486 = 26.1% (17.9%, 36.4%)	2145/2486 = 86.3% (77.2%, 92.1%)	1638.9/2486 = 65.9% (55.5%, 75.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	19.4/275 = 7.0% (0.8%, 41.1%)	45.8/275 = 16.7% (4.6%, 45.4%)	26.4/275 = 9.6% (1.8%, 38.7%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	126.9/275 = 46.1% (24.2%, 69.8%)	193.9/275 = 70.5% (45.5%, 87.2%)	160.4/275 = 58.3% (34.2%, 79.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	93.4/275 = 34.0% (15.2%, 59.6%)	267.9/275 = 97.4% (82.0%, 99.7%)	213.3/275 = 77.6% (55.0%, 90.7%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)	0/2471 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	0/265 = 0.0% (0.0%, 0.0%)	14.5/265 = 5.5% (0.6%, 34.5%)	0/265 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	91.4/265 = 34.5% (16.6%, 58.2%)	163.6/265 = 61.7% (37.9%, 81.0%)	130/265 = 49.1% (27.2%, 71.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	43.6/265 = 16.5% (5.1%, 41.8%)	168.6/265 = 63.6% (39.5%, 82.4%)	106.4/265 = 40.1% (21.0%, 62.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	90	87.8/2578 = 3.4% (1.1%, 10.3%)	510/2578 = 19.8% (12.7%, 29.6%)	206.8/2578 = 8.0% (3.8%, 16.1%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	90	1020/2578 = 39.6% (29.8%, 50.2%)	1954.7/2578 = 75.8% (65.7%, 83.7%)	1396.7/2578 = 54.2% (43.6%, 64.4%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	90	716.7/2578 = 27.8% (19.3%, 38.2%)	1963.4/2578 = 76.2% (66.0%, 84.0%)	1581/2578 = 61.3% (50.7%, 70.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	31	20.7/295 = 7.0% (1.7%, 25.2%)	86.7/295 = 29.4% (15.3%, 48.9%)	31/295 = 10.5% (3.3%, 28.5%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	31	171.8/295 = 58.2% (39.2%, 75.0%)	265.6/295 = 90.0% (71.6%, 97.0%)	229/295 = 77.6% (58.3%, 89.6%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	31	143.9/295 = 48.8% (30.9%, 67.0%)	258.4/295 = 87.6% (69.9%, 95.6%)	209.9/295 = 71.2% (51.7%, 85.1%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)	0/2498 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	28	0/281 = 0.0% (0.0%, 0.0%)	44.9/281 = 16.0% (5.7%, 37.6%)	20.1/281 = 7.1% (1.5%, 27.7%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	28	97.5/281 = 34.7% (18.3%, 55.8%)	205.5/281 = 73.1% (52.4%, 87.1%)	130/281 = 46.3% (27.8%, 65.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	28	35.4/281 = 12.6% (4.3%, 31.4%)	220.8/281 = 78.6% (57.3%, 90.9%)	155.8/281 = 55.4% (35.2%, 74.0%)
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	102	165.5/1333 = 12.4% (7.3%, 20.4%)	571.9/1333 = 42.9% (33.5%, 52.9%)	277.2/1333 = 20.8% (14.1%, 29.6%)
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	102	1056.1/1333 = 79.2% (70.0%, 86.2%)	1307.1/1333 = 98.1% (92.3%, 99.5%)	1253.3/1333 = 94.0% (87.1%, 97.3%)
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	102	1028.2/1333 = 77.1% (67.8%, 84.4%)	1319.1/1333 = 99.0% (92.7%, 99.9%)	1293.2/1333 = 97.0% (90.9%, 99.1%)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	24.1/158 = 15.2% (4.3%, 42.1%)	101.1/158 = 64.0% (42.1%, 81.2%)	77.3/158 = 48.9% (28.8%, 69.4%)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	138.9/158 = 87.9% (63.6%, 96.8%)	158/158 = 100.0% (100.0%, 100.0%)	143.6/158 = 90.9% (64.5%, 98.2%)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	134.2/158 = 85.0% (61.7%, 95.2%)	158/158 = 100.0% (100.0%, 100.0%)	148.6/158 = 94.1% (77.9%, 98.6%)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	11	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)	0/1324 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	27	5.3/145 = 3.6% (0.4%, 24.1%)	37.5/145 = 25.9% (12.1%, 47.0%)	10.6/145 = 7.3% (1.7%, 26.2%)
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	27	75.4/145 = 52.0% (32.6%, 70.8%)	134.1/145 = 92.5% (73.1%, 98.2%)	112.8/145 = 77.8% (56.7%, 90.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	27	91.3/145 = 62.9% (42.1%, 79.8%)	139.5/145 = 96.2% (75.2%, 99.5%)	134.3/145 = 92.6% (72.4%, 98.3%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	99	219.6/1404 = 15.6% (9.6%, 24.5%)	501.4/1404 = 35.7% (26.6%, 46.0%)	320.5/1404 = 22.8% (15.5%, 32.2%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	99	1042.8/1404 = 74.3% (64.3%, 82.2%)	1296.5/1404 = 92.3% (84.5%, 96.4%)	1194.9/1404 = 85.1% (76.1%, 91.1%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	99	993/1404 = 70.7% (60.7%, 79.0%)	1369.9/1404 = 97.6% (90.6%, 99.4%)	1302.4/1404 = 92.8% (85.2%, 96.6%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	19	21.9/134 = 16.3% (4.6%, 44.1%)	50.8/134 = 37.9% (16.2%, 65.9%)	36.4/134 = 27.1% (9.8%, 56.0%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	19	112.1/134 = 83.7% (55.9%, 95.4%)	130.3/134 = 97.2% (80.2%, 99.7%)	115.8/134 = 86.4% (56.7%, 96.9%)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	19	97.6/134 = 72.9% (44.0%, 90.2%)	134/134 = 100.0% (100.0%, 100.0%)	119.5/134 = 89.2% (56.5%, 98.1%)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)	0/1340 = 0.0% (0.0%, 0.0%)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	23.9/161 = 14.9% (4.2%, 41.0%)	62.5/161 = 38.8% (19.2%, 62.9%)	47.8/161 = 29.7% (12.8%, 54.9%)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	115.6/161 = 71.8% (48.6%, 87.3%)	131.7/161 = 81.8% (56.5%, 94.0%)	121/161 = 75.2% (51.2%, 89.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	91.7/161 = 57.0% (33.8%, 77.4%)	155.6/161 = 96.7% (77.1%, 99.6%)	126.4/161 = 78.5% (53.8%, 92.0%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 6k. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Country</b>								
United States	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	389	505.8/7801 = 6.5% (4.5%, 9.2%)	2030.7/7801 = 26.0% (21.8%, 30.7%)	958.5/7801 = 12.3% (9.4%, 15.9%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	389	4101.7/7801 = 52.6% (47.4%, 57.7%)	6586/7801 = 84.4% (79.9%, 88.1%)	5381.5/7801 = 69.0% (63.8%, 73.7%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	389	3386.9/7801 = 43.4% (38.7%, 48.3%)	6797.4/7801 = 87.1% (82.8%, 90.5%)	5815.5/7801 = 74.5% (69.6%, 79.0%)
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	86/862 = 10.0% (4.9%, 19.4%)	284.4/862 = 33.0% (23.9%, 43.6%)	171.1/862 = 19.8% (13.0%, 29.1%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	549.7/862 = 63.8% (52.7%, 73.6%)	747.8/862 = 86.7% (76.9%, 92.8%)	648.8/862 = 75.3% (64.3%, 83.7%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	469.2/862 = 54.4% (43.7%, 64.8%)	818.4/862 = 94.9% (88.3%, 97.9%)	691.3/862 = 80.2% (70.3%, 87.4%)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)	0/7633 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	99	29.2/852 = 3.4% (1.3%, 9.0%)	159.5/852 = 18.7% (12.0%, 27.9%)	78.5/852 = 9.2% (5.0%, 16.4%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	99	379.9/852 = 44.6% (34.7%, 55.0%)	634.9/852 = 74.5% (63.8%, 82.9%)	493.8/852 = 58.0% (47.2%, 68.0%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	99	262/852 = 30.7% (22.8%, 40.0%)	684.6/852 = 80.4% (70.0%, 87.8%)	522.8/852 = 61.4% (50.9%, 70.9%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	36	115.4/1290.8 = 8.9% (3.5%, 21.0%)	313.7/1290.8 = 24.3% (12.9%, 40.9%)	241/1290.8 = 18.7% (9.4%, 33.6%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	36	610.1/1290.8 = 47.3% (30.4%, 64.8%)	1177.7/1290.8 = 91.2% (75.4%, 97.2%)	940.8/1290.8 = 72.9% (53.7%, 86.2%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	36	623.4/1290.8 = 48.3% (31.5%, 65.5%)	1253.1/1290.8 = 97.1% (80.7%, 99.6%)	1000.1/1290.8 = 77.5% (57.6%, 89.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Argentina	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	13	36.5/176.9 = 20.7% (4.1%, 61.5%)	128.1/176.9 = 72.4% (39.0%, 91.5%)	71.1/176.9 = 40.2% (14.3%, 72.9%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	13	134.3/176.9 = 75.9% (42.2%, 93.2%)	176.9/176.9 = 100.0% (100.0%, 100.0%)	148.5/176.9 = 83.9% (47.8%, 96.8%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13	152.3/176.9 = 86.1% (50.9%, 97.4%)	176.9/176.9 = 100.0% (100.0%, 100.0%)	176.9/176.9 = 100.0% (100.0%, 100.0%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)	0/1527.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	18	8.9/211.7 = 4.2% (0.5%, 29.2%)	60.9/211.7 = 28.7% (11.6%, 55.4%)	27.7/211.7 = 13.1% (3.7%, 37.5%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	18	145.7/211.7 = 68.8% (39.0%, 88.4%)	211.7/211.7 = 100.0% (100.0%, 100.0%)	155.6/211.7 = 73.5% (42.2%, 91.3%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	18	145.7/211.7 = 68.8% (39.0%, 88.4%)	197.4/211.7 = 93.2% (59.9%, 99.2%)	164.5/211.7 = 77.7% (44.9%, 93.7%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	85	153.1/2960.6 = 5.2% (2.2%, 11.6%)	612.2/2960.6 = 20.7% (13.1%, 31.0%)	524.3/2960.6 = 17.7% (10.7%, 27.8%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	85	1560.3/2960.6 = 52.7% (41.3%, 63.8%)	2505.7/2960.6 = 84.6% (74.1%, 91.4%)	2115.9/2960.6 = 71.5% (60.0%, 80.7%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	85	1495.3/2960.6 = 50.5% (39.3%, 61.7%)	2565.1/2960.6 = 86.6% (75.9%, 93.0%)	2213/2960.6 = 74.8% (63.6%, 83.4%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	34.7/376.3 = 9.2% (2.7%, 27.2%)	130.3/376.3 = 34.6% (17.8%, 56.5%)	97.7/376.3 = 26.0% (12.2%, 47.0%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	274.7/376.3 = 73.0% (48.7%, 88.5%)	366.1/376.3 = 97.3% (81.0%, 99.7%)	319.4/376.3 = 84.9% (62.0%, 95.1%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	201.7/376.3 = 53.6% (32.1%, 73.9%)	366.1/376.3 = 97.3% (81.0%, 99.7%)	274.7/376.3 = 73.0% (48.7%, 88.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)	0/3299.4 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	17	9.9/240.7 = 4.1% (0.5%, 28.7%)	28.7/240.7 = 11.9% (3.3%, 34.6%)	9.9/240.7 = 4.1% (0.5%, 28.7%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	17	86/240.7 = 35.7% (16.4%, 61.1%)	203.4/240.7 = 84.5% (49.3%, 96.8%)	147.5/240.7 = 61.3% (32.8%, 83.7%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	17	48.5/240.7 = 20.1% (7.8%, 42.9%)	180.4/240.7 = 74.9% (41.9%, 92.5%)	118.9/240.7 = 49.4% (24.2%, 74.9%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	18.9/333.3 = 5.7% (0.4%, 48.2%)	139.8/333.3 = 41.9% (10.2%, 82.1%)	72.7/333.3 = 21.8% (2.8%, 73.0%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	158.7/333.3 = 47.6% (12.7%, 85.0%)	279.5/333.3 = 83.9% (24.7%, 98.8%)	279.5/333.3 = 83.9% (24.7%, 98.8%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	174.8/333.3 = 52.4% (15.0%, 87.3%)	333.3/333.3 = 100.0% (100.0%, 100.0%)	241.8/333.3 = 72.5% (23.8%, 95.7%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	3	0/43 = 0.0%	0/43 = 0.0%	0/43 = 0.0%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	3	10.3/43 = 24.0%	32.7/43 = 76.0%	32.7/43 = 76.0%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	3	10.3/43 = 24.0%	43/43 = 100.0%	43/43 = 100.0%
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/482.8 = 0.0%	0/482.8 = 0.0%	0/482.8 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	4	8.9/46.5 = 19.2% (0.2%, 97.3%)	8.9/46.5 = 19.2% (0.2%, 97.3%)	8.9/46.5 = 19.2% (0.2%, 97.3%)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	4	17.8/46.5 = 38.4% (1.0%, 97.5%)	17.8/46.5 = 38.4% (1.0%, 97.5%)	17.8/46.5 = 38.4% (1.0%, 97.5%)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	4	17.8/46.5 = 38.4% (1.0%, 97.5%)	46.5/46.5 = 100.0% (100.0%, 100.0%)	17.8/46.5 = 38.4% (1.0%, 97.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	60	37.9/2053.9 = 1.8% (0.4%, 7.3%)	472.3/2053.9 = 23.0% (13.7%, 36.0%)	169.2/2053.9 = 8.2% (3.4%, 18.7%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	60	993.5/2053.9 = 48.4% (35.0%, 61.9%)	1668.7/2053.9 = 81.2% (67.4%, 90.1%)	1370.2/2053.9 = 66.7% (52.5%, 78.4%)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	60	918/2053.9 = 44.7% (32.0%, 58.2%)	1712.3/2053.9 = 83.4% (69.6%, 91.7%)	1386.4/2053.9 = 67.5% (53.2%, 79.2%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	14	20.5/199.9 = 10.3% (2.0%, 39.2%)	99.9/199.9 = 50.0% (21.2%, 78.7%)	67.2/199.9 = 33.6% (11.6%, 66.2%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	14	163.4/199.9 = 81.7% (42.8%, 96.4%)	199.9/199.9 = 100.0% (100.0%, 100.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	14	153.1/199.9 = 76.6% (40.4%, 94.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)	199.9/199.9 = 100.0% (100.0%, 100.0%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0/513 = 0.0%	0/513 = 0.0%	0/513 = 0.0%
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	0/224.2 = 0.0% (0.0%, 0.0%)	47.2/224.2 = 21.1% (5.2%, 56.6%)	9.9/224.2 = 4.4% (0.5%, 31.5%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	94.6/224.2 = 42.2% (17.4%, 71.8%)	163.9/224.2 = 73.1% (37.0%, 92.6%)	140.9/224.2 = 62.8% (30.3%, 86.8%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	48.4/224.2 = 21.6% (7.0%, 50.3%)	149.6/224.2 = 66.7% (32.8%, 89.2%)	108.7/224.2 = 48.5% (20.6%, 77.4%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	0/158.7 = 0.0%	18.9/158.7 = 11.9%	18.9/158.7 = 11.9%
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	67.2/158.7 = 42.3%	158.7/158.7 = 100.0%	67.2/158.7 = 42.3%
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	37.9/158.7 = 23.9%	129.4/158.7 = 81.5%	75.6/158.7 = 47.6%
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/227.7 = 0.0%	0/227.7 = 0.0%	0/227.7 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0/23.2 = 0.0%	0/23.2 = 0.0%	0/23.2 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0/23.2 = 0.0%	14.3/23.2 = 61.6%	14.3/23.2 = 61.6%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	23	56.8/822.7 = 6.9% (2.0%, 21.1%)	158.8/822.7 = 19.3% (7.4%, 41.6%)	86.1/822.7 = 10.5% (3.5%, 27.4%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	23	327.9/822.7 = 39.9% (20.6%, 62.9%)	564.9/822.7 = 68.7% (43.4%, 86.2%)	473.4/822.7 = 57.5% (33.9%, 78.1%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	23	328/822.7 = 39.9% (20.9%, 62.5%)	768.9/822.7 = 93.5% (62.2%, 99.2%)	540.4/822.7 = 65.7% (40.5%, 84.3%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/48.9 = 0.0%	10.2/48.9 = 20.8%	10.2/48.9 = 20.8%
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	20.5/48.9 = 41.9%	48.9/48.9 = 100.0%	48.9/48.9 = 100.0%
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	34.7/48.9 = 71.0%	48.9/48.9 = 100.0%	48.9/48.9 = 100.0%
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)	0/1571.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	0/75.7 = 0.0% (0.0%, 0.0%)	9.9/75.7 = 13.1% (0.4%, 85.0%)	9.9/75.7 = 13.1% (0.4%, 85.0%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	29.7/75.7 = 39.2% (3.9%, 91.2%)	75.7/75.7 = 100.0% (100.0%, 100.0%)	52.7/75.7 = 69.6% (5.3%, 98.9%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	52.7/75.7 = 69.6% (5.3%, 98.9%)	75.7/75.7 = 100.0% (100.0%, 100.0%)	52.7/75.7 = 69.6% (5.3%, 98.9%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	221	101.5/2849 = 3.6% (2.0%, 6.3%)	648.2/2849 = 22.8% (17.8%, 28.6%)	419.4/2849 = 14.7% (10.7%, 19.9%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	221	1473.3/2849 = 51.7% (45.0%, 58.3%)	2370.9/2849 = 83.2% (76.9%, 88.1%)	2050.4/2849 = 72.0% (65.0%, 78.0%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	221	1238.5/2849 = 43.5% (37.1%, 50.1%)	2554/2849 = 89.6% (84.0%, 93.4%)	2273.8/2849 = 79.8% (73.2%, 85.1%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	59	27.1/344 = 7.9% (3.2%, 17.9%)	144.1/344 = 41.9% (29.3%, 55.6%)	99.6/344 = 29.0% (18.1%, 42.8%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	59	222.9/344 = 64.8% (50.5%, 76.9%)	311.5/344 = 90.5% (77.9%, 96.3%)	285.9/344 = 83.1% (70.3%, 91.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	59	184.1/344 = 53.5% (40.0%, 66.6%)	332.4/344 = 96.6% (87.3%, 99.2%)	290.7/344 = 84.5% (71.9%, 92.1%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)	0/2967 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	60	7.9/320 = 2.5% (0.6%, 10.2%)	33/320 = 10.3% (5.2%, 19.3%)	7.9/320 = 2.5% (0.6%, 10.2%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	60	161/320 = 50.3% (36.8%, 63.8%)	223.8/320 = 69.9% (55.4%, 81.3%)	196.8/320 = 61.5% (47.2%, 74.0%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	60	94.4/320 = 29.5% (19.8%, 41.5%)	262.6/320 = 82.1% (68.0%, 90.8%)	206.5/320 = 64.5% (49.9%, 76.9%)

Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.7 Geometric mean titers (GMTs) and geometric mean concentrations (GMCs)

Table 7a. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by All participants

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>All participants</b>						
	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	828	0.05 (0.05, 0.05)
	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	828	0.80 (0.80, 0.80)
	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	828	0.15 (0.15, 0.15)
	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	216	0.05 (0.05, 0.05)
	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	216	0.81 (0.79, 0.83)
	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	216	0.16 (0.15, 0.16)
	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	101	0.05 (0.05, 0.05)
	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	101	0.80 (0.80, 0.80)
	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	101	0.15 (0.15, 0.15)
	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	219	0.05 (0.05, 0.05)
	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	219	0.81 (0.80, 0.82)
	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	219	0.16 (0.15, 0.16)
	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	828	1.32 (1.15, 1.51)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	828	15.36 (13.69, 17.23)	
	Vaccine	Negative	Anti Spike IgG (IU/ml)	828	8.72 (7.91, 9.61)	
	Vaccine	Positive	Anti N IgG (IU/ml)	216	2.57 (1.93, 3.41)	
	Vaccine	Positive	Anti RBD IgG (IU/ml)	216	29.48 (23.66, 36.73)	
	Vaccine	Positive	Anti Spike IgG (IU/ml)	216	16.09 (13.20, 19.61)	
	Placebo	Negative	Anti N IgG (IU/ml)	101	0.05 (0.05, 0.05)	
	Placebo	Negative	Anti RBD IgG (IU/ml)	101	0.80 (0.80, 0.80)	
	Placebo	Negative	Anti Spike IgG (IU/ml)	101	0.15 (0.15, 0.15)	
	Placebo	Positive	Anti N IgG (IU/ml)	219	0.86 (0.68, 1.09)	
	Placebo	Positive	Anti RBD IgG (IU/ml)	219	11.65 (9.69, 14.02)	
	Placebo	Positive	Anti Spike IgG (IU/ml)	219	5.75 (4.76, 6.94)	

Table 7b. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Age

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Age</b>						
Age 18 - 59	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	406	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	406	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	406	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	118	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	118	0.82 (0.79, 0.85)
Age 18 - 59	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	118	0.16 (0.15, 0.16)
Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	111	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	111	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	111	0.16 (0.15, 0.16)
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	406	0.86 (0.72, 1.03)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	406	9.74 (8.35, 11.36)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	406	5.43 (4.77, 6.19)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	118	1.98 (1.37, 2.87)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	118	21.69 (16.13, 29.17)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	118	11.89 (9.14, 15.47)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	111	0.52 (0.38, 0.70)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	111	7.18 (5.69, 9.06)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	111	3.39 (2.63, 4.38)
Age ≥ 60	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	422	0.05 (0.05, 0.05)
Age ≥ 60	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	422	0.80 (0.80, 0.80)
Age ≥ 60	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	422	0.15 (0.15, 0.15)
Age ≥ 60	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)
Age ≥ 60	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)
Age ≥ 60	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.16 (0.15, 0.17)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	47	0.05 (0.05, 0.05)
Age $\geq$ 60	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	47	0.80 (0.80, 0.80)
Age $\geq$ 60	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	47	0.15 (0.15, 0.15)
Age $\geq$ 60	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	108	0.05 (0.05, 0.05)
Age $\geq$ 60	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	108	0.82 (0.79, 0.86)
Age $\geq$ 60	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	108	0.15 (0.15, 0.15)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	422	2.94 (2.42, 3.56)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	422	36.39 (31.08, 42.62)
Age $\geq$ 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	422	21.35 (18.64, 24.46)
Age $\geq$ 60	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	4.23 (2.75, 6.49)
Age $\geq$ 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	53.29 (39.74, 71.46)
Age $\geq$ 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	28.84 (21.93, 37.94)
Age $\geq$ 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	47	0.05 (0.05, 0.05)
Age $\geq$ 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	47	0.80 (0.80, 0.80)
Age $\geq$ 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	47	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	108	2.16 (1.51, 3.09)
Age $\geq$ 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	108	28.11 (20.99, 37.63)
Age $\geq$ 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	108	14.99 (11.74, 19.14)

Table 7c. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Risk for Severe Covid-19</b>						
At-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	402	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	402	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	402	0.15 (0.15, 0.15)
At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	112	0.80 (0.79, 0.82)
At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	112	0.16 (0.15, 0.16)
At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)
At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	110	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	110	0.82 (0.79, 0.85)
At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	110	0.16 (0.15, 0.16)
At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	402	1.46 (1.20, 1.78)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	402	15.85 (13.43, 18.70)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	402	9.12 (7.92, 10.51)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	112	2.07 (1.53, 2.80)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	112	23.21 (17.03, 31.63)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	112	12.30 (9.73, 15.54)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	110	0.85 (0.61, 1.21)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	110	11.22 (8.57, 14.68)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	110	6.12 (4.69, 7.98)
Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	426	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	426	0.80 (0.80, 0.80)
Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	426	0.15 (0.15, 0.15)
Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	104	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	104	0.81 (0.78, 0.85)
Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	104	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	51	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	51	0.80 (0.80, 0.80)
Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	51	0.15 (0.15, 0.15)
Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	109	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	109	0.80 (0.80, 0.80)
Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	109	0.15 (0.15, 0.15)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	426	1.23 (1.03, 1.48)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	426	15.04 (12.86, 17.59)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	426	8.46 (7.41, 9.66)
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	104	2.98 (1.94, 4.58)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	104	34.71 (25.62, 47.02)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	104	19.33 (14.44, 25.88)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	51	0.05 (0.05, 0.05)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	51	0.80 (0.80, 0.80)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	51	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	109	0.86 (0.62, 1.18)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	109	11.96 (9.31, 15.36)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	109	5.52 (4.26, 7.15)

Table 7d. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Age, Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Age, Risk for Severe Covid-19</b>						
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	199	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	199	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	199	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	64	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	64	0.81 (0.79, 0.83)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	64	0.16 (0.15, 0.16)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	57	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	57	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	57	0.16 (0.15, 0.17)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	199	0.93 (0.72, 1.21)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	199	9.89 (7.92, 12.34)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	199	5.67 (4.68, 6.86)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	64	1.65 (1.12, 2.41)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	64	17.99 (12.05, 26.87)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	64	9.13 (6.79, 12.29)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	57	0.49 (0.31, 0.77)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	57	7.55 (5.25, 10.84)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	57	3.86 (2.71, 5.50)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	207	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	207	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	207	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	54	0.82 (0.77, 0.87)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	54	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	207	0.82 (0.64, 1.04)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	207	9.64 (7.82, 11.89)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	207	5.28 (4.43, 6.30)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	54	2.27 (1.28, 4.02)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	54	24.82 (16.32, 37.75)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	54	14.38 (9.65, 21.43)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	54	0.53 (0.35, 0.80)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	54	6.94 (5.12, 9.41)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	54	3.12 (2.19, 4.43)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	203	0.05 (0.05, 0.05)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	203	0.80 (0.80, 0.80)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	203	0.15 (0.15, 0.16)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	48	0.05 (0.05, 0.05)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)
Age $\geq$ 60 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	0.15 (0.15, 0.15)
Age $\geq$ 60 At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Age $\geq$ 60 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Age $\geq$ 60 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Age $\geq$ 60 At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	53	0.05 (0.05, 0.05)
Age $\geq$ 60 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	53	0.86 (0.79, 0.95)
Age $\geq$ 60 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	53	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	203	3.45 (2.61, 4.56)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	203	39.36 (31.46, 49.24)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	203	22.83 (18.96, 27.48)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	3.36 (2.06, 5.48)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	39.89 (25.40, 62.62)
Age $\geq$ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	23.14 (16.19, 33.08)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Age $\geq$ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	53	2.26 (1.37, 3.73)
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	53	22.45 (15.50, 32.53)
Age $\geq$ 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	53	13.68 (9.41, 19.88)
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	219	0.05 (0.05, 0.05)
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	219	0.80 (0.80, 0.80)
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	219	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)
Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	0.16 (0.15, 0.18)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)
Age $\geq$ 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	219	2.64 (2.04, 3.43)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	219	34.59 (27.86, 42.93)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	219	20.44 (16.92, 24.70)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	4.87 (2.61, 9.07)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	63.64 (43.39, 93.35)
Age $\geq$ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	33.02 (22.50, 48.44)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	55	2.09 (1.27, 3.44)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	55	32.91 (21.57, 50.20)
Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	55	15.99 (11.59, 22.07)

Table 7e. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Sex</b>						
Male	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	376	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	376	0.80 (0.80, 0.80)
Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	376	0.15 (0.15, 0.15)
Male	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	83	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	83	0.82 (0.77, 0.87)
Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	83	0.16 (0.15, 0.16)
Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	105	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	105	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	105	0.16 (0.15, 0.16)
Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	376	1.32 (1.06, 1.64)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	376	15.46 (12.91, 18.51)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	376	8.85 (7.53, 10.39)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	83	2.80 (1.85, 4.24)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	83	26.83 (18.11, 39.74)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	83	13.81 (9.77, 19.51)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	105	0.73 (0.51, 1.06)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	105	10.40 (7.92, 13.65)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	105	5.14 (3.95, 6.70)
Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	452	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)
Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	133	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	133	0.80 (0.79, 0.81)
Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	133	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	49	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	49	0.15 (0.15, 0.15)
Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	114	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	114	0.82 (0.79, 0.84)
Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	114	0.15 (0.15, 0.16)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	1.32 (1.11, 1.57)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	15.28 (13.06, 17.88)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	8.62 (7.55, 9.85)
Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	133	2.43 (1.69, 3.50)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	133	31.32 (24.32, 40.34)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	133	17.75 (14.07, 22.40)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	49	0.80 (0.80, 0.80)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	49	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	114	1.00 (0.71, 1.41)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	114	13.08 (10.02, 17.07)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	114	6.44 (4.80, 8.63)

MOCK

Table 7f. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Age, sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Age, sex</b>						
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	230	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	230	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	230	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	0.80 (0.79, 0.82)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	0.16 (0.15, 0.16)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.06)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.16)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	230	0.87 (0.69, 1.08)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	230	10.26 (8.40, 12.53)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	230	5.55 (4.71, 6.55)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	1.80 (1.11, 2.90)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	23.36 (16.53, 33.00)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	13.03 (9.55, 17.76)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	52	0.55 (0.35, 0.86)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	52	7.95 (5.66, 11.15)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	52	3.63 (2.40, 5.49)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	176	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	176	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	176	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	46	0.83 (0.76, 0.91)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	59	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	59	0.16 (0.15, 0.16)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	176	0.86 (0.65, 1.15)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	176	9.04 (7.14, 11.44)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	176	5.26 (4.27, 6.48)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	46	2.31 (1.38, 3.86)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	46	19.38 (11.72, 32.06)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	46	10.35 (6.60, 16.22)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	59	0.49 (0.32, 0.76)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	59	6.59 (4.90, 8.86)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	59	3.21 (2.38, 4.31)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	222	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	222	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	222	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	61	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	61	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	61	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	62	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	62	0.85 (0.79, 0.90)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	62	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	222	3.18 (2.50, 4.05)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	222	35.23 (28.25, 43.93)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	222	21.64 (17.95, 26.10)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	61	4.29 (2.55, 7.23)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	61	54.44 (40.05, 74.00)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	61	31.81 (23.60, 42.87)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	62	2.42 (1.56, 3.75)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	62	27.13 (19.06, 38.62)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	62	14.90 (11.24, 19.75)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	200	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Male	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	37	0.05 (0.05, 0.05)
Age $\geq$ 60 Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	37	0.80 (0.80, 0.80)
Age $\geq$ 60 Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	37	0.17 (0.14, 0.19)
Age $\geq$ 60 Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
Age $\geq$ 60 Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
Age $\geq$ 60 Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
Age $\geq$ 60 Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)
Age $\geq$ 60 Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	46	0.80 (0.80, 0.80)
Age $\geq$ 60 Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	2.67 (1.97, 3.63)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	37.78 (30.14, 47.37)
Age $\geq$ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	21.02 (17.27, 25.59)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	37	4.13 (2.07, 8.21)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	37	51.48 (29.38, 90.19)
Age $\geq$ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	37	24.62 (15.32, 39.55)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
Age $\geq$ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	46	1.86 (1.02, 3.37)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	46	29.44 (18.13, 47.83)
Age $\geq$ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	46	15.12 (9.90, 23.09)

Table 7g. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Hispanic or Latino ethnicity

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Hispanic or Latino ethnicity</b>						
Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	338	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	338	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	338	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	89	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	89	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	89	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	41	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	41	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	41	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	85	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	85	0.81 (0.79, 0.83)
Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	85	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	338	1.28 (1.04, 1.58)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	338	14.93 (12.46, 17.90)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	338	8.59 (7.39, 9.99)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	89	2.49 (1.71, 3.61)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	89	30.57 (22.06, 42.36)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	89	17.20 (13.10, 22.59)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	41	0.05 (0.05, 0.05)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	41	0.80 (0.80, 0.80)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	41	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	85	0.82 (0.58, 1.16)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	85	12.07 (9.28, 15.70)
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	85	6.50 (4.95, 8.54)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	461	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	461	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	461	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	115	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	115	0.83 (0.78, 0.88)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	115	0.16 (0.15, 0.17)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	59	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	59	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	123	0.05 (0.05, 0.06)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	123	0.80 (0.79, 0.81)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	123	0.16 (0.15, 0.16)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	461	1.39 (1.17, 1.66)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	461	15.36 (13.29, 17.75)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	461	8.78 (7.71, 10.00)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	115	2.37 (1.63, 3.43)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	115	26.21 (19.51, 35.22)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	115	13.64 (10.38, 17.94)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	59	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	59	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	123	0.94 (0.67, 1.30)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	123	11.34 (8.56, 15.04)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	123	5.50 (4.22, 7.15)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	29	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	29	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	29	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	29	1.06 (0.55, 2.02)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	29	22.84 (13.70, 38.06)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	29	9.81 (5.52, 17.43)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	12	6.25 (0.85, 45.79)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	12	50.07 (22.02, 113.87)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	12	29.33 (11.65, 73.85)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	11	0.61 (0.13, 2.88)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	10.30 (3.83, 27.68)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	2.35 (0.76, 7.30)

Table 7h. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Race

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Race</b>						
White Non-Hispanic	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	182	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	182	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	182	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	49	0.84 (0.76, 0.94)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	49	0.16 (0.15, 0.18)
White Non-Hispanic	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	48	0.05 (0.04, 0.06)
White Non-Hispanic	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	48	0.16 (0.15, 0.17)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	182	1.57 (1.18, 2.10)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	182	15.57 (12.38, 19.57)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	182	9.23 (7.44, 11.44)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	49	2.06 (1.16, 3.67)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	49	25.29 (16.31, 39.22)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	49	11.18 (7.40, 16.88)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	48	1.22 (0.71, 2.09)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	48	12.63 (8.29, 19.23)
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	48	6.46 (4.24, 9.85)
Black or African American	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	292	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	292	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	292	0.15 (0.15, 0.15)
Black or African American	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	73	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	73	0.81 (0.78, 0.84)
Black or African American	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	73	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	37	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	37	0.80 (0.80, 0.80)
Black or African American	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	37	0.15 (0.15, 0.15)
Black or African American	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	87	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	87	0.80 (0.79, 0.81)
Black or African American	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	87	0.15 (0.15, 0.16)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	292	1.34 (1.08, 1.67)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	292	16.12 (13.34, 19.48)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	292	8.84 (7.56, 10.33)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	73	2.81 (1.53, 5.14)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	73	25.33 (16.90, 37.98)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	73	15.74 (10.89, 22.75)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	37	0.05 (0.05, 0.05)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	37	0.80 (0.80, 0.80)
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	37	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	87	0.72 (0.48, 1.08)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	87	10.52 (7.35, 15.06)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	87	4.55 (3.28, 6.33)
Asian	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Asian	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	5	0.06 (0.04, 0.09)
Asian	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.86 (0.44, 1.67)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	8.78 (4.66, 16.54)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	4.47 (2.66, 7.53)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	7.79 (4.13, 14.68)
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	114.96 (37.39, 353.40)
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	48.85 (19.56, 121.99)
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	2.16 (1.11, 4.21)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	23.71 (16.52, 34.04)
Asian	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	5.69 (2.89, 11.21)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	1.41 (0.84, 2.37)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	32.02 (10.36, 98.94)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	2.07 (2.01, 2.13)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0.45 (0.38, 0.53)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	14.90 (4.04, 54.97)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	4.30 (0.99, 18.63)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	1.22 (0.46, 3.22)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	14.69 (11.72, 18.43)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	12.59 (5.79, 27.39)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)
Multiracial	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	5	0.18 (0.14, 0.24)
Multiracial	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)
Multiracial	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	7	0.05 (0.04, 0.06)
Multiracial	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	7	0.86 (0.74, 1.00)
Multiracial	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	7	0.15 (0.15, 0.15)
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	0.58 (0.29, 1.18)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	15.12 (10.46, 21.86)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	8.04 (5.45, 11.85)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	5	1.35 (0.31, 5.83)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	5	37.20 (9.71, 142.51)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	5	9.39 (1.35, 65.29)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	7	1.28 (0.42, 3.89)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	7	10.24 (3.36, 31.23)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	7	5.66 (2.21, 14.50)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	1.23 (0.56, 2.70)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	16.04 (7.38, 34.86)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	8.76 (4.62, 16.59)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)

Table 7i. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Underrepresented Minority Status in the U.S.</b>						
URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	200	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	0.15 (0.15, 0.15)
URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	48	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	49	0.81 (0.79, 0.83)
URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	49	0.15 (0.15, 0.15)
URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	200	1.39 (1.09, 1.77)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	15.93 (13.24, 19.17)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	8.86 (7.46, 10.52)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	48	2.83 (1.41, 5.66)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	23.44 (14.15, 38.81)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	14.89 (9.76, 22.72)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	49	0.88 (0.55, 1.40)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	49	9.78 (6.34, 15.08)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	49	4.97 (3.50, 7.07)
Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	189	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	189	0.80 (0.80, 0.80)
Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	189	0.15 (0.15, 0.15)
Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	0.84 (0.75, 0.95)
Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	0.17 (0.15, 0.18)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	26	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	26	0.80 (0.80, 0.80)
Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	26	0.15 (0.15, 0.15)
Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	50	0.05 (0.04, 0.06)
Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	50	0.81 (0.79, 0.82)
Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	50	0.16 (0.15, 0.17)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	189	1.39 (1.06, 1.82)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	189	14.39 (11.54, 17.93)
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	189	8.15 (6.61, 10.06)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	50	2.05 (1.18, 3.56)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	26.26 (17.53, 39.33)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	13.04 (8.82, 19.28)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	26	0.05 (0.05, 0.05)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	26	0.80 (0.80, 0.80)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	26	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	50	1.20 (0.72, 2.01)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	50	12.37 (8.32, 18.39)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	50	6.13 (4.11, 9.14)

Table 7j. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Age, Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Age, Underrepresented Minority Status in the U.S.</b>						
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	98	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	22	0.05 (0.04, 0.05)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	98	0.88 (0.63, 1.24)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	98	9.70 (7.52, 12.51)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	98	5.38 (4.25, 6.81)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	1.87 (0.72, 4.86)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	13.62 (6.64, 27.94)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	8.77 (4.77, 16.11)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	0.64 (0.33, 1.23)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	6.51 (3.57, 11.89)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	2.88 (1.79, 4.63)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	90	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	90	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	90	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	31	0.87 (0.74, 1.02)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	31	0.16 (0.15, 0.17)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	28	0.05 (0.04, 0.06)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	28	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	28	0.16 (0.15, 0.17)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	90	0.89 (0.62, 1.29)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	90	8.12 (6.08, 10.85)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	90	4.79 (3.57, 6.42)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	31	2.05 (1.10, 3.82)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	31	19.63 (12.10, 31.87)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	31	10.04 (6.34, 15.89)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	28	0.79 (0.43, 1.44)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	28	7.37 (5.05, 10.77)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	28	3.48 (2.12, 5.70)
Age $\geq$ 60 URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	102	0.05 (0.05, 0.05)
Age $\geq$ 60 URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	102	0.80 (0.80, 0.80)
Age $\geq$ 60 URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	102	0.15 (0.15, 0.15)
Age $\geq$ 60 URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Age $\geq$ 60 URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Age $\geq$ 60 URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Age $\geq$ 60 URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)
Age $\geq$ 60 URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Age $\geq$ 60 URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)
Age $\geq$ 60 URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age $\geq$ 60 URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	27	0.83 (0.77, 0.89)
Age $\geq$ 60 URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	102	3.25 (2.40, 4.39)
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	102	40.21 (31.99, 50.55)
Age $\geq$ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	102	22.44 (18.05, 27.89)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	5.80 (2.31, 14.56)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	60.30 (34.52, 105.34)
Age $\geq$ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	37.42 (24.28, 57.66)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Age $\geq$ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	27	1.56 (0.89, 2.75)
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	27	20.55 (12.25, 34.46)
Age $\geq$ 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	27	13.46 (8.59, 21.07)
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	99	0.05 (0.05, 0.05)
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	99	0.80 (0.80, 0.80)
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	99	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	19	0.05 (0.05, 0.05)
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	19	0.80 (0.80, 0.80)
Age $\geq$ 60 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	19	0.18 (0.13, 0.23)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	22	0.05 (0.04, 0.06)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	22	0.82 (0.77, 0.87)
Age $\geq$ 60 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	99	3.11 (2.18, 4.45)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	99	41.09 (29.78, 56.70)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	99	21.69 (16.96, 27.72)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	19	2.05 (0.67, 6.27)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	19	49.80 (24.21, 102.42)
Age $\geq$ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	19	23.20 (11.21, 48.03)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	22	2.52 (1.00, 6.33)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22	30.51 (13.08, 71.14)
Age $\geq$ 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	22	16.47 (8.60, 31.55)

Table 7k. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
<b>Country</b>						
United States	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	389	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	389	0.80 (0.80, 0.80)
United States	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	389	0.15 (0.15, 0.15)
United States	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.82 (0.78, 0.87)
United States	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.16 (0.15, 0.17)
United States	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)
United States	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)
United States	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	99	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	99	0.81 (0.79, 0.82)
United States	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	99	0.16 (0.15, 0.16)
United States	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	389	1.39 (1.16, 1.67)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	389	15.12 (13.09, 17.47)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	389	8.49 (7.41, 9.73)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	2.41 (1.54, 3.76)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	24.80 (17.95, 34.27)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	13.94 (10.45, 18.59)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	99	1.03 (0.73, 1.46)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	99	11.05 (8.24, 14.80)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	99	5.54 (4.24, 7.24)
Argentina	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)
Argentina	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Argentina	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	18	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	18	0.84 (0.76, 0.93)
Argentina	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	18	0.15 (0.15, 0.15)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	36	1.38 (0.71, 2.70)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	36	19.19 (11.20, 32.88)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	36	10.74 (7.31, 15.77)
Argentina	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	13	5.19 (1.91, 14.09)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	13	45.74 (16.93, 123.56)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13	25.94 (14.46, 46.55)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	18	1.38 (0.56, 3.40)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	18	23.56 (13.78, 40.27)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	18	13.48 (7.67, 23.69)
Brazil	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	85	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	85	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	85	0.15 (0.15, 0.15)
Brazil	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	17	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	17	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	17	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	85	1.28 (0.84, 1.94)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	85	17.39 (11.93, 25.34)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	85	9.03 (6.63, 12.28)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	25	2.05 (0.98, 4.31)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	38.85 (22.28, 67.75)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	15.63 (8.19, 29.85)
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	17	0.46 (0.22, 0.99)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	17	9.99 (5.68, 17.58)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	17	3.95 (2.06, 7.57)
Chile	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Chile	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	9	1.79 (0.51, 6.24)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	20.27 (5.83, 70.47)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	8.33 (4.34, 15.98)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	3	0.67 (0.27, 1.66)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	3	7.13 (3.47, 14.64)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	3	6.75 (4.21, 10.81)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	4	1.20 (0.19, 7.55)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	4	10.73 (2.28, 50.51)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	4	6.23 (2.12, 18.29)
Columbia	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	60	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	60	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	60	0.15 (0.15, 0.15)
Columbia	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Columbia	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Columbia	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	60	1.43 (0.96, 2.14)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	60	11.96 (8.16, 17.53)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	60	7.80 (5.21, 11.68)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	14	4.06 (1.79, 9.24)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	14	48.92 (25.94, 92.25)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	14	27.05 (17.14, 42.69)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	0.58 (0.21, 1.61)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	9.75 (5.33, 17.84)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	4.25 (1.94, 9.28)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Mexico	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	0.88 (0.22, 3.41)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	10.67 (3.76, 30.29)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	4.92 (1.69, 14.31)
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0.34 (0.11, 1.05)
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	11.01 (2.34, 51.78)
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	3.63 (1.34, 9.83)
Peru	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	23	0.16 (0.15, 0.16)
Peru	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Peru	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Peru	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	5	0.05 (0.04, 0.07)
Peru	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)

(continued)

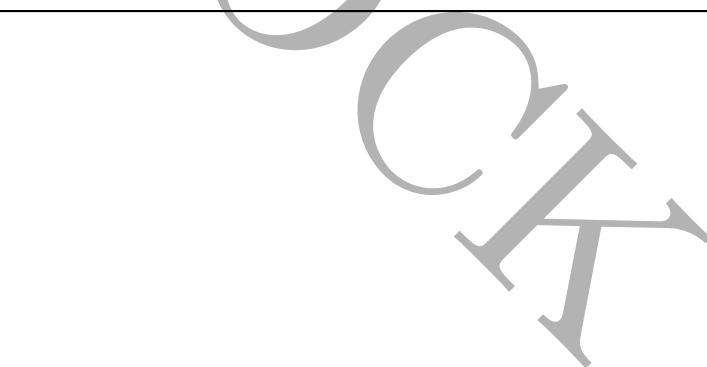
Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	23	0.77 (0.31, 1.92)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	23	11.69 (5.54, 24.69)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	23	8.71 (4.79, 15.83)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	1.98 (0.66, 5.93)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	32.29 (6.99, 149.14)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	21.42 (6.48, 70.86)
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Peru	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	5	0.67 (0.17, 2.68)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	5	14.55 (6.70, 31.58)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5	13.22 (4.98, 35.10)
South Africa	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	221	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	221	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	221	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
South Africa	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	59	0.82 (0.78, 0.85)
South Africa	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	59	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	60	0.05 (0.05, 0.06)
South Africa	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	60	0.80 (0.79, 0.82)
South Africa	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	60	0.16 (0.15, 0.16)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	221	1.25 (1.01, 1.56)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	221	16.28 (13.35, 19.86)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	221	9.25 (7.89, 10.84)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	59	2.53 (1.53, 4.19)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	59	23.55 (15.73, 35.26)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	59	14.73 (10.51, 20.63)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	60	0.86 (0.58, 1.29)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	60	10.35 (6.74, 15.91)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	60	4.98 (3.49, 7.11)



## 1.8 Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination

Table 8a. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by All participants

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>All participants</b>								
	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	828	0.05 (0.05, 0.05)	1.32 (1.15, 1.51)	1.54 (1.45, 1.64)
	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	828	0.80 (0.80, 0.80)	15.36 (13.69, 17.23)	9.23 (8.27, 10.30)
	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	828	0.15 (0.15, 0.15)	8.72 (7.91, 9.61)	9.79 (8.90, 10.76)
	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	216	0.05 (0.05, 0.05)	2.57 (1.93, 3.41)	2.15 (1.79, 2.58)
	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	216	0.81 (0.79, 0.83)	29.48 (23.66, 36.73)	16.85 (13.47, 21.07)
	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	216	0.16 (0.15, 0.16)	16.09 (13.20, 19.61)	17.78 (14.57, 21.69)
	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	101	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	101	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	101	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	219	0.05 (0.05, 0.05)	0.86 (0.68, 1.09)	1.32 (1.21, 1.45)
	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	219	0.81 (0.80, 0.82)	11.65 (9.69, 14.02)	6.75 (5.61, 8.13)
	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	219	0.16 (0.15, 0.16)	5.75 (4.76, 6.94)	6.63 (5.56, 7.91)

Table 8b. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Age</b>								
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	406	0.05 (0.05, 0.05)	0.86 (0.72, 1.03)	1.29 (1.20, 1.38)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	406	0.80 (0.80, 0.80)	9.74 (8.35, 11.36)	5.96 (5.16, 6.89)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	406	0.15 (0.15, 0.15)	5.43 (4.77, 6.19)	6.15 (5.43, 6.96)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	118	0.05 (0.05, 0.05)	1.98 (1.37, 2.87)	1.78 (1.40, 2.27)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	118	0.82 (0.79, 0.85)	21.69 (16.13, 29.17)	12.32 (9.12, 16.64)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	118	0.16 (0.15, 0.16)	11.89 (9.14, 15.47)	13.05 (10.00, 17.03)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	111	0.05 (0.05, 0.05)	0.52 (0.38, 0.70)	1.11 (1.03, 1.19)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	111	0.80 (0.80, 0.80)	7.18 (5.69, 9.06)	4.14 (3.27, 5.24)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	111	0.16 (0.15, 0.16)	3.39 (2.63, 4.38)	3.98 (3.16, 5.03)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	422	0.05 (0.05, 0.05)	2.94 (2.42, 3.56)	2.18 (1.92, 2.46)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	422	0.80 (0.80, 0.80)	36.39 (31.08, 42.62)	21.15 (18.05, 24.78)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	422	0.15 (0.15, 0.15)	21.35 (18.64, 24.46)	23.61 (20.57, 27.11)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age $\geq$ 60	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)	4.23 (2.75, 6.49)	3.07 (2.34, 4.04)
Age $\geq$ 60	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)	53.29 (39.74, 71.46)	30.81 (22.82, 41.61)
Age $\geq$ 60	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.16 (0.15, 0.17)	28.84 (21.93, 37.94)	32.29 (24.67, 42.27)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	47	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	47	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	47	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	108	0.05 (0.05, 0.05)	2.16 (1.51, 3.09)	1.82 (1.47, 2.26)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	108	0.82 (0.79, 0.86)	28.11 (20.99, 37.63)	16.41 (12.28, 21.93)
Age $\geq$ 60	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	108	0.15 (0.15, 0.15)	14.99 (11.74, 19.14)	16.72 (13.09, 21.35)

Table 8c. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Risk for Severe Covid-19</b>								
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	402	0.05 (0.05, 0.05)	1.46 (1.20, 1.78)	1.64 (1.49, 1.80)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	402	0.80 (0.80, 0.80)	15.85 (13.43, 18.70)	9.63 (8.25, 11.23)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	402	0.15 (0.15, 0.15)	9.12 (7.92, 10.51)	10.34 (9.04, 11.83)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)	2.07 (1.53, 2.80)	1.68 (1.39, 2.02)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	112	0.80 (0.79, 0.82)	23.21 (17.03, 31.63)	13.45 (9.85, 18.38)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	112	0.16 (0.15, 0.16)	12.30 (9.73, 15.54)	13.49 (10.62, 17.12)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	110	0.05 (0.05, 0.05)	0.85 (0.61, 1.21)	1.32 (1.15, 1.51)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	110	0.82 (0.79, 0.85)	11.22 (8.57, 14.68)	6.66 (5.11, 8.67)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	110	0.16 (0.15, 0.16)	6.12 (4.69, 7.98)	6.77 (5.17, 8.85)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	426	0.05 (0.05, 0.05)	1.23 (1.03, 1.48)	1.48 (1.37, 1.61)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	426	0.80 (0.80, 0.80)	15.04 (12.86, 17.59)	8.98 (7.72, 10.44)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	426	0.15 (0.15, 0.15)	8.46 (7.41, 9.66)	9.44 (8.29, 10.75)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	104	0.05 (0.05, 0.05)	2.98 (1.94, 4.58)	2.54 (1.92, 3.37)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	104	0.81 (0.78, 0.85)	34.71 (25.62, 47.02)	19.64 (14.41, 26.78)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	104	0.16 (0.15, 0.16)	19.33 (14.44, 25.88)	21.47 (16.04, 28.75)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	51	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	51	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	51	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	109	0.05 (0.05, 0.05)	0.86 (0.62, 1.18)	1.33 (1.18, 1.49)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	109	0.80 (0.80, 0.80)	11.96 (9.31, 15.36)	6.82 (5.28, 8.79)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	109	0.15 (0.15, 0.15)	5.52 (4.26, 7.15)	6.54 (5.18, 8.25)

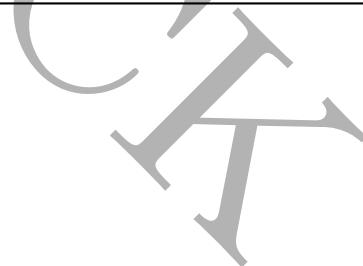


Table 8d. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Age, Risk for Severe Covid-19</b>								
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	199	0.05 (0.05, 0.05)	0.93 (0.72, 1.21)	1.31 (1.19, 1.45)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	199	0.80 (0.80, 0.80)	9.89 (7.92, 12.34)	6.16 (5.04, 7.53)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	199	0.15 (0.15, 0.15)	5.67 (4.68, 6.86)	6.48 (5.42, 7.75)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	64	0.05 (0.05, 0.05)	1.65 (1.12, 2.41)	1.48 (1.18, 1.84)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	64	0.81 (0.79, 0.83)	17.99 (12.05, 26.87)	10.45 (6.99, 15.61)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	64	0.16 (0.15, 0.16)	9.13 (6.79, 12.29)	9.95 (7.33, 13.50)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	57	0.05 (0.05, 0.05)	0.49 (0.31, 0.77)	1.10 (1.00, 1.22)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	57	0.80 (0.80, 0.80)	7.55 (5.25, 10.84)	4.56 (3.21, 6.46)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	57	0.16 (0.15, 0.17)	3.86 (2.71, 5.50)	4.28 (3.00, 6.11)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	207	0.05 (0.05, 0.05)	0.82 (0.64, 1.04)	1.27 (1.16, 1.40)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	207	0.80 (0.80, 0.80)	9.64 (7.82, 11.89)	5.83 (4.77, 7.13)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	207	0.15 (0.15, 0.15)	5.28 (4.43, 6.30)	5.94 (5.02, 7.03)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)	2.27 (1.28, 4.02)	2.04 (1.40, 2.99)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	54	0.82 (0.77, 0.87)	24.82 (16.32, 37.75)	13.88 (9.05, 21.29)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	54	0.16 (0.15, 0.16)	14.38 (9.65, 21.43)	15.87 (10.62, 23.72)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)	0.53 (0.35, 0.80)	1.12 (1.01, 1.23)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)	6.94 (5.12, 9.41)	3.89 (2.84, 5.32)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)	3.12 (2.19, 4.43)	3.80 (2.79, 5.17)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	203	0.05 (0.05, 0.05)	3.45 (2.61, 4.56)	2.52 (2.07, 3.08)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	203	0.80 (0.80, 0.80)	39.36 (31.46, 49.24)	22.76 (18.13, 28.57)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	203	0.15 (0.15, 0.16)	22.83 (18.96, 27.48)	25.43 (21.13, 30.61)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	48	0.05 (0.05, 0.05)	3.36 (2.06, 5.48)	2.20 (1.56, 3.10)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)	39.89 (25.40, 62.62)	23.05 (14.47, 36.71)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	0.15 (0.15, 0.15)	23.14 (16.19, 33.08)	25.76 (18.02, 36.82)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	53	0.05 (0.05, 0.05)	2.26 (1.37, 3.73)	1.82 (1.31, 2.52)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	53	0.86 (0.79, 0.95)	22.45 (15.50, 32.53)	12.92 (8.81, 18.95)
Age $\geq$ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	53	0.15 (0.15, 0.15)	13.68 (9.41, 19.88)	15.09 (10.29, 22.12)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	219	0.05 (0.05, 0.05)	2.64 (2.04, 3.43)	1.98 (1.69, 2.31)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	219	0.80 (0.80, 0.80)	34.59 (27.86, 42.93)	20.16 (16.25, 25.01)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	219	0.15 (0.15, 0.15)	20.44 (16.92, 24.70)	22.50 (18.54, 27.29)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)	4.87 (2.61, 9.07)	3.77 (2.56, 5.55)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)	63.64 (43.39, 93.35)	36.82 (24.91, 54.42)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	0.16 (0.15, 0.18)	33.02 (22.50, 48.44)	37.09 (25.51, 53.95)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)	2.09 (1.27, 3.44)	1.83 (1.37, 2.43)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)	32.91 (21.57, 50.20)	19.42 (12.85, 29.34)
Age $\geq$ 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)	15.99 (11.59, 22.07)	17.97 (13.08, 24.69)

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Table 8e. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Sex</b>								
Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	376	0.05 (0.05, 0.05)	1.32 (1.06, 1.64)	1.59 (1.44, 1.76)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	376	0.80 (0.80, 0.80)	15.46 (12.91, 18.51)	9.40 (7.95, 11.12)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	376	0.15 (0.15, 0.15)	8.85 (7.53, 10.39)	10.00 (8.58, 11.65)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	83	0.05 (0.05, 0.05)	2.80 (1.85, 4.24)	2.23 (1.70, 2.92)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	83	0.82 (0.77, 0.87)	26.83 (18.11, 39.74)	14.99 (10.03, 22.40)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	83	0.16 (0.15, 0.16)	13.81 (9.77, 19.51)	15.13 (10.66, 21.46)
Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	105	0.05 (0.05, 0.05)	0.73 (0.51, 1.06)	1.27 (1.12, 1.44)
Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	105	0.80 (0.80, 0.80)	10.40 (7.92, 13.65)	6.14 (4.72, 7.98)
Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	105	0.16 (0.15, 0.16)	5.14 (3.95, 6.70)	5.78 (4.46, 7.48)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	452	0.05 (0.05, 0.05)	1.32 (1.11, 1.57)	1.51 (1.39, 1.63)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)	15.28 (13.06, 17.88)	9.11 (7.81, 10.61)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)	8.62 (7.55, 9.85)	9.63 (8.45, 10.98)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	133	0.05 (0.05, 0.05)	2.43 (1.69, 3.50)	2.10 (1.65, 2.68)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	133	0.80 (0.79, 0.81)	31.32 (24.32, 40.34)	18.16 (14.08, 23.43)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	133	0.16 (0.15, 0.16)	17.75 (14.07, 22.40)	19.72 (15.63, 24.90)
Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	49	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	49	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	114	0.05 (0.05, 0.05)	1.00 (0.71, 1.41)	1.38 (1.20, 1.58)
Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	114	0.82 (0.79, 0.84)	13.08 (10.02, 17.07)	7.44 (5.63, 9.83)
Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	114	0.15 (0.15, 0.16)	6.44 (4.80, 8.63)	7.62 (5.86, 9.90)

Table 8f. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, sex

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Age, sex</b>								
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	230	0.05 (0.05, 0.05)	0.87 (0.69, 1.08)	1.27 (1.17, 1.39)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	230	0.80 (0.80, 0.80)	10.26 (8.40, 12.53)	6.20 (5.11, 7.52)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	230	0.15 (0.15, 0.15)	5.55 (4.71, 6.55)	6.25 (5.32, 7.34)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)	1.80 (1.11, 2.90)	1.73 (1.26, 2.38)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	0.80 (0.79, 0.82)	23.36 (16.53, 33.00)	13.45 (9.49, 19.07)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	0.16 (0.15, 0.16)	13.03 (9.55, 17.76)	14.46 (10.59, 19.73)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.06)	0.55 (0.35, 0.86)	1.12 (1.00, 1.25)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)	7.95 (5.66, 11.15)	4.51 (3.16, 6.45)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.16)	3.63 (2.40, 5.49)	4.50 (3.14, 6.43)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	176	0.05 (0.05, 0.05)	0.86 (0.65, 1.15)	1.31 (1.17, 1.47)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	176	0.80 (0.80, 0.80)	9.04 (7.14, 11.44)	5.63 (4.54, 6.97)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	176	0.15 (0.15, 0.15)	5.26 (4.27, 6.48)	6.01 (4.96, 7.29)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)	2.31 (1.38, 3.86)	1.86 (1.32, 2.63)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	46	0.83 (0.76, 0.91)	19.38 (11.72, 32.06)	10.78 (6.47, 17.94)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)	10.35 (6.60, 16.22)	11.17 (7.05, 17.68)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)	0.49 (0.32, 0.76)	1.10 (1.01, 1.21)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	59	0.80 (0.80, 0.80)	6.59 (4.90, 8.86)	3.85 (2.89, 5.12)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	59	0.16 (0.15, 0.16)	3.21 (2.38, 4.31)	3.60 (2.70, 4.79)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	222	0.05 (0.05, 0.05)	3.18 (2.50, 4.05)	2.15 (1.83, 2.53)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	222	0.80 (0.80, 0.80)	35.23 (28.25, 43.93)	20.34 (16.27, 25.44)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	222	0.15 (0.15, 0.15)	21.64 (17.95, 26.10)	23.87 (19.72, 28.89)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	61	0.05 (0.05, 0.05)	4.29 (2.55, 7.23)	3.01 (2.11, 4.30)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	61	0.80 (0.80, 0.80)	54.44 (40.05, 74.00)	31.97 (23.57, 43.35)
Age $\geq$ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	61	0.15 (0.15, 0.15)	31.81 (23.60, 42.87)	35.40 (26.27, 47.71)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	62	0.05 (0.05, 0.05)	2.42 (1.56, 3.75)	1.87 (1.42, 2.45)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	62	0.85 (0.79, 0.90)	27.13 (19.06, 38.62)	15.46 (10.72, 22.30)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	62	0.15 (0.15, 0.15)	14.90 (11.24, 19.75)	16.48 (12.35, 21.98)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	200	0.05 (0.05, 0.05)	2.67 (1.97, 3.63)	2.20 (1.82, 2.66)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	0.80 (0.80, 0.80)	37.78 (30.14, 47.37)	22.11 (17.68, 27.66)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	0.15 (0.15, 0.16)	21.02 (17.27, 25.59)	23.32 (19.11, 28.45)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	37	0.05 (0.05, 0.05)	4.13 (2.07, 8.21)	3.18 (2.11, 4.81)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	37	0.80 (0.80, 0.80)	51.48 (29.38, 90.19)	29.03 (16.12, 52.30)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	37	0.17 (0.14, 0.19)	24.62 (15.32, 39.55)	27.82 (17.61, 43.96)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age $\geq$ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)	1.86 (1.02, 3.37)	1.77 (1.25, 2.49)
Age $\geq$ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	46	0.80 (0.80, 0.80)	29.44 (18.13, 47.83)	17.76 (11.23, 28.09)
Age $\geq$ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)	15.12 (9.90, 23.09)	17.05 (11.24, 25.85)

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Table 8g. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Hispanic or Latino ethnicity

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Hispanic or Latino ethnicity</b>								
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	338	0.05 (0.05, 0.05)	1.28 (1.04, 1.58)	1.53 (1.40, 1.68)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	338	0.80 (0.80, 0.80)	14.93 (12.46, 17.90)	9.00 (7.57, 10.71)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	338	0.15 (0.15, 0.15)	8.59 (7.39, 9.99)	9.67 (8.37, 11.18)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	89	0.05 (0.05, 0.05)	2.49 (1.71, 3.61)	2.02 (1.61, 2.52)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	89	0.80 (0.80, 0.80)	30.57 (22.06, 42.36)	17.39 (12.42, 24.33)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	89	0.15 (0.15, 0.15)	17.20 (13.10, 22.59)	19.19 (14.64, 25.15)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	41	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	41	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	41	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	85	0.05 (0.05, 0.05)	0.82 (0.58, 1.16)	1.30 (1.15, 1.48)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	85	0.81 (0.79, 0.83)	12.07 (9.28, 15.70)	6.85 (5.22, 8.98)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	85	0.15 (0.15, 0.15)	6.50 (4.95, 8.54)	7.17 (5.46, 9.41)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	461	0.05 (0.05, 0.05)	1.39 (1.17, 1.66)	1.58 (1.45, 1.72)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	461	0.80 (0.80, 0.80)	15.36 (13.29, 17.75)	9.24 (8.06, 10.60)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	461	0.15 (0.15, 0.15)	8.78 (7.71, 10.00)	9.86 (8.70, 11.18)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	115	0.05 (0.05, 0.05)	2.37 (1.63, 3.43)	2.02 (1.64, 2.50)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	115	0.83 (0.78, 0.88)	26.21 (19.51, 35.22)	15.02 (11.21, 20.13)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	115	0.16 (0.15, 0.17)	13.64 (10.38, 17.94)	14.89 (11.26, 19.70)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	59	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	59	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	123	0.05 (0.05, 0.06)	0.94 (0.67, 1.30)	1.34 (1.17, 1.53)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	123	0.80 (0.79, 0.81)	11.34 (8.56, 15.04)	6.76 (5.14, 8.89)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	123	0.16 (0.15, 0.16)	5.50 (4.22, 7.15)	6.54 (5.17, 8.27)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	29	0.05 (0.05, 0.05)	1.06 (0.55, 2.02)	1.30 (0.98, 1.72)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	29	0.80 (0.80, 0.80)	22.84 (13.70, 38.06)	12.92 (7.46, 22.40)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	29	0.15 (0.15, 0.15)	9.81 (5.52, 17.43)	10.60 (5.78, 19.42)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)	6.25 (0.85, 45.79)	5.83 (1.36, 24.95)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)	50.07 (22.02, 113.87)	29.23 (12.85, 66.47)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)	29.33 (11.65, 73.85)	32.65 (12.97, 82.20)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)	0.61 (0.13, 2.88)	1.39 (0.74, 2.60)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)	10.30 (3.83, 27.68)	5.74 (2.02, 16.29)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)	2.35 (0.76, 7.30)	3.25 (1.26, 8.35)

Table 8h. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Race

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Race</b>								
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	182	0.05 (0.05, 0.05)	1.57 (1.18, 2.10)	1.73 (1.48, 2.02)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	182	0.80 (0.80, 0.80)	15.57 (12.38, 19.57)	9.47 (7.63, 11.76)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	182	0.15 (0.15, 0.15)	9.23 (7.44, 11.44)	10.58 (8.64, 12.96)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)	2.06 (1.16, 3.67)	1.89 (1.37, 2.60)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	49	0.84 (0.76, 0.94)	25.29 (16.31, 39.22)	13.91 (8.94, 21.65)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	49	0.16 (0.15, 0.18)	11.18 (7.40, 16.88)	12.01 (7.84, 18.39)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	48	0.05 (0.04, 0.06)	1.22 (0.71, 2.09)	1.62 (1.24, 2.11)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)	12.63 (8.29, 19.23)	7.13 (4.65, 10.93)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	48	0.16 (0.15, 0.17)	6.46 (4.24, 9.85)	7.86 (5.46, 11.32)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	292	0.05 (0.05, 0.05)	1.34 (1.08, 1.67)	1.55 (1.41, 1.71)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	292	0.80 (0.80, 0.80)	16.12 (13.34, 19.48)	9.61 (8.04, 11.49)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	292	0.15 (0.15, 0.15)	8.84 (7.56, 10.33)	9.61 (8.16, 11.32)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	73	0.05 (0.05, 0.05)	2.81 (1.53, 5.14)	2.41 (1.55, 3.76)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	73	0.81 (0.78, 0.84)	25.33 (16.90, 37.98)	15.11 (10.17, 22.44)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	73	0.15 (0.15, 0.15)	15.74 (10.89, 22.75)	17.49 (12.09, 25.29)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	37	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	37	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	37	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	87	0.05 (0.05, 0.05)	0.72 (0.48, 1.08)	1.12 (1.04, 1.21)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	87	0.80 (0.79, 0.81)	10.52 (7.35, 15.06)	6.31 (4.42, 9.02)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	87	0.15 (0.15, 0.16)	4.55 (3.28, 6.33)	5.37 (3.99, 7.22)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	0.86 (0.44, 1.67)	1.21 (0.98, 1.48)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	8.78 (4.66, 16.54)	5.36 (2.97, 9.68)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	4.47 (2.66, 7.53)	4.93 (2.95, 8.24)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)	7.79 (4.13, 14.68)	3.30 (1.62, 6.74)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)	114.96 (37.39, 353.40)	67.10 (21.83, 206.29)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)	48.85 (19.56, 121.99)	54.37 (21.77, 135.79)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	5	0.06 (0.04, 0.09)	2.16 (1.11, 4.21)	1.32 (0.81, 2.16)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	23.71 (16.52, 34.04)	13.84 (9.64, 19.87)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	5.69 (2.89, 11.21)	6.34 (3.22, 12.48)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	1.41 (0.84, 2.37)	1.00 (1.00, 1.00)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	32.02 (10.36, 98.94)	18.69 (6.05, 57.75)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	2.07 (2.01, 2.13)	2.31 (2.24, 2.37)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	0.45 (0.38, 0.53)	1.00 (1.00, 1.00)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	14.90 (4.04, 54.97)	8.70 (2.36, 32.09)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	4.30 (0.99, 18.63)	3.63 (0.56, 23.49)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	1.22 (0.46, 3.22)	1.00 (1.00, 1.00)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	14.69 (11.72, 18.43)	8.58 (6.84, 10.76)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	12.59 (5.79, 27.39)	14.02 (6.44, 30.48)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)	0.58 (0.29, 1.18)	1.15 (0.96, 1.38)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)	15.12 (10.46, 21.86)	8.66 (5.93, 12.66)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)	8.04 (5.45, 11.85)	8.90 (6.02, 13.17)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	1.35 (0.31, 5.83)	1.59 (0.72, 3.50)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	37.20 (9.71, 142.51)	21.72 (5.67, 83.19)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	5	0.18 (0.14, 0.24)	9.39 (1.35, 65.29)	11.38 (1.81, 71.68)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	7	0.05 (0.04, 0.06)	1.28 (0.42, 3.89)	1.42 (0.84, 2.41)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	7	0.86 (0.74, 1.00)	10.24 (3.36, 31.23)	4.96 (1.41, 17.50)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	7	0.15 (0.15, 0.15)	5.66 (2.21, 14.50)	6.30 (2.46, 16.14)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)	1.23 (0.56, 2.70)	1.16 (0.93, 1.45)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)	16.04 (7.38, 34.86)	9.85 (4.72, 20.56)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)	8.76 (4.62, 16.59)	9.65 (5.04, 18.50)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

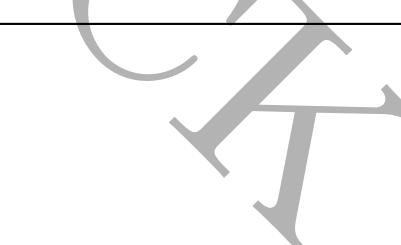


Table 8i. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Underrepresented Minority Status in the U.S.</b>								
URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	200	0.05 (0.05, 0.05)	1.39 (1.09, 1.77)	1.54 (1.38, 1.71)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	200	0.80 (0.80, 0.80)	15.93 (13.24, 19.17)	9.41 (7.87, 11.25)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	200	0.15 (0.15, 0.15)	8.86 (7.46, 10.52)	9.90 (8.38, 11.70)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	48	0.05 (0.05, 0.05)	2.83 (1.41, 5.66)	2.25 (1.29, 3.93)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	48	0.80 (0.80, 0.80)	23.44 (14.15, 38.81)	13.00 (7.60, 22.22)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	48	0.15 (0.15, 0.15)	14.89 (9.76, 22.72)	16.50 (10.80, 25.21)
URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	49	0.05 (0.05, 0.05)	0.88 (0.55, 1.40)	1.17 (1.04, 1.31)
URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	49	0.81 (0.79, 0.83)	9.78 (6.34, 15.08)	5.81 (3.86, 8.77)
URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	49	0.15 (0.15, 0.15)	4.97 (3.50, 7.07)	5.53 (3.94, 7.77)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	189	0.05 (0.05, 0.05)	1.39 (1.06, 1.82)	1.61 (1.40, 1.84)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	189	0.80 (0.80, 0.80)	14.39 (11.54, 17.93)	8.80 (7.16, 10.82)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	189	0.15 (0.15, 0.15)	8.15 (6.61, 10.06)	9.31 (7.63, 11.36)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)	2.05 (1.18, 3.56)	1.84 (1.33, 2.53)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	50	0.84 (0.75, 0.95)	26.26 (17.53, 39.33)	14.39 (9.57, 21.64)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	50	0.17 (0.15, 0.18)	13.04 (8.82, 19.28)	13.98 (9.29, 21.03)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	26	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	26	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	26	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	50	0.05 (0.04, 0.06)	1.20 (0.72, 2.01)	1.56 (1.22, 2.00)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	50	0.81 (0.79, 0.82)	12.37 (8.32, 18.39)	7.00 (4.68, 10.47)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	50	0.16 (0.15, 0.17)	6.13 (4.11, 9.14)	7.40 (5.22, 10.51)



Table 8j. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, Underrepresented Minority Status in the U.S.

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Age, Underrepresented Minority Status in the U.S.</b>								
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)	0.88 (0.63, 1.24)	1.29 (1.14, 1.46)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)	9.70 (7.52, 12.51)	5.79 (4.54, 7.38)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	98	0.15 (0.15, 0.15)	5.38 (4.25, 6.81)	6.03 (4.81, 7.55)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	1.87 (0.72, 4.86)	1.68 (0.76, 3.74)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	13.62 (6.64, 27.94)	7.33 (3.38, 15.89)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	8.77 (4.77, 16.11)	9.69 (5.26, 17.85)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	22	0.05 (0.04, 0.05)	0.64 (0.33, 1.23)	1.05 (0.95, 1.17)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)	6.51 (3.57, 11.89)	3.96 (2.26, 6.93)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)	2.88 (1.79, 4.63)	3.16 (2.00, 5.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	90	0.05 (0.05, 0.05)	0.89 (0.62, 1.29)	1.36 (1.16, 1.60)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	90	0.80 (0.80, 0.80)	8.12 (6.08, 10.85)	5.16 (3.98, 6.70)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	90	0.15 (0.15, 0.15)	4.79 (3.57, 6.42)	5.59 (4.25, 7.34)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)	2.05 (1.10, 3.82)	1.66 (1.16, 2.38)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	31	0.87 (0.74, 1.02)	19.63 (12.10, 31.87)	10.49 (6.43, 17.12)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	31	0.16 (0.15, 0.17)	10.04 (6.34, 15.89)	10.58 (6.48, 17.27)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	28	0.05 (0.04, 0.06)	0.79 (0.43, 1.44)	1.25 (1.00, 1.57)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	28	0.80 (0.80, 0.80)	7.37 (5.05, 10.77)	4.09 (2.72, 6.14)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	28	0.16 (0.15, 0.17)	3.48 (2.12, 5.70)	4.38 (2.95, 6.51)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	102	0.05 (0.05, 0.05)	3.25 (2.40, 4.39)	2.13 (1.74, 2.61)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	102	0.80 (0.80, 0.80)	40.21 (31.99, 50.55)	23.28 (18.44, 29.38)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	102	0.15 (0.15, 0.15)	22.44 (18.05, 27.89)	24.98 (20.09, 31.04)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)	5.80 (2.31, 14.56)	3.74 (2.01, 6.95)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)	60.30 (34.52, 105.34)	35.20 (20.15, 61.49)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)	37.42 (24.28, 57.66)	41.65 (27.03, 64.19)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	1.56 (0.89, 2.75)	1.41 (1.09, 1.83)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	27	0.83 (0.77, 0.89)	20.55 (12.25, 34.46)	11.73 (6.89, 19.98)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	13.46 (8.59, 21.07)	15.39 (10.11, 23.43)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	99	0.05 (0.05, 0.05)	3.11 (2.18, 4.45)	2.17 (1.71, 2.76)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	99	0.80 (0.80, 0.80)	41.09 (29.78, 56.70)	23.44 (16.84, 32.64)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	99	0.15 (0.15, 0.15)	21.69 (16.96, 27.72)	23.80 (18.47, 30.66)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	19	0.05 (0.05, 0.05)	2.05 (0.67, 6.27)	2.30 (1.21, 4.37)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	19	0.80 (0.80, 0.80)	49.80 (24.21, 102.42)	28.87 (13.99, 59.55)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	19	0.18 (0.13, 0.23)	23.20 (11.21, 48.03)	25.83 (12.48, 53.46)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age $\geq$ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age $\geq$ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	22	0.05 (0.04, 0.06)	2.52 (1.00, 6.33)	2.30 (1.33, 3.98)
Age $\geq$ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	22	0.82 (0.77, 0.87)	30.51 (13.08, 71.14)	17.93 (7.85, 40.94)
Age $\geq$ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)	16.47 (8.60, 31.55)	18.50 (9.71, 35.25)

Table 8k. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
<b>Country</b>								
United States	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	389	0.05 (0.05, 0.05)	1.39 (1.16, 1.67)	1.57 (1.44, 1.71)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	389	0.80 (0.80, 0.80)	15.12 (13.09, 17.47)	9.09 (7.93, 10.43)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	389	0.15 (0.15, 0.15)	8.49 (7.41, 9.73)	9.60 (8.42, 10.93)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)	2.41 (1.54, 3.76)	2.03 (1.47, 2.81)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.82 (0.78, 0.87)	24.80 (17.95, 34.27)	13.67 (9.76, 19.16)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.16 (0.15, 0.17)	13.94 (10.45, 18.59)	15.19 (11.32, 20.40)
United States	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	50	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	50	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	50	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	99	0.05 (0.05, 0.05)	1.03 (0.73, 1.46)	1.36 (1.18, 1.56)
United States	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	99	0.81 (0.79, 0.82)	11.05 (8.24, 14.80)	6.40 (4.80, 8.54)
United States	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	99	0.16 (0.15, 0.16)	5.54 (4.24, 7.24)	6.44 (5.04, 8.22)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	1.38 (0.71, 2.70)	1.72 (1.25, 2.36)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)	19.19 (11.20, 32.88)	11.52 (6.84, 19.39)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	10.74 (7.31, 15.77)	11.82 (8.00, 17.47)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)	5.19 (1.91, 14.09)	3.61 (1.84, 7.09)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)	45.74 (16.93, 123.56)	26.70 (9.88, 72.12)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)	25.94 (14.46, 46.55)	28.88 (16.10, 51.81)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	18	0.05 (0.05, 0.05)	1.38 (0.56, 3.40)	1.59 (1.09, 2.31)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	18	0.84 (0.76, 0.93)	23.56 (13.78, 40.27)	13.75 (8.05, 23.51)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	18	0.15 (0.15, 0.15)	13.48 (7.67, 23.69)	14.76 (8.25, 26.41)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	85	0.05 (0.05, 0.05)	1.28 (0.84, 1.94)	1.60 (1.29, 1.98)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	85	0.80 (0.80, 0.80)	17.39 (11.93, 25.34)	10.63 (7.42, 15.22)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	85	0.15 (0.15, 0.15)	9.03 (6.63, 12.28)	10.13 (7.49, 13.69)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	2.05 (0.98, 4.31)	1.99 (1.35, 2.92)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	38.85 (22.28, 67.75)	22.45 (12.79, 39.38)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	15.63 (8.19, 29.85)	17.59 (9.27, 33.39)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	17	0.05 (0.05, 0.05)	0.46 (0.22, 0.99)	1.22 (0.95, 1.56)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	17	0.80 (0.80, 0.80)	9.99 (5.68, 17.58)	5.99 (3.47, 10.34)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	17	0.15 (0.15, 0.15)	3.95 (2.06, 7.57)	4.62 (2.58, 8.29)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)	1.79 (0.51, 6.24)	2.04 (1.05, 3.97)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)	20.27 (5.83, 70.47)	11.11 (2.99, 41.33)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)	8.33 (4.34, 15.98)	9.27 (4.83, 17.79)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)	0.67 (0.27, 1.66)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)	7.13 (3.47, 14.64)	3.76 (1.58, 8.97)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)	6.75 (4.21, 10.81)	7.51 (4.69, 12.03)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Chile	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	1.20 (0.19, 7.55)	1.94 (0.57, 6.56)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	10.73 (2.28, 50.51)	4.58 (0.78, 26.97)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	6.23 (2.12, 18.29)	6.93 (2.36, 20.36)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	60	0.05 (0.05, 0.05)	1.43 (0.96, 2.14)	1.36 (1.17, 1.59)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	60	0.80 (0.80, 0.80)	11.96 (8.16, 17.53)	7.32 (5.16, 10.40)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	60	0.15 (0.15, 0.15)	7.80 (5.21, 11.68)	8.89 (6.09, 12.98)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)	4.06 (1.79, 9.24)	2.51 (1.40, 4.51)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)	48.92 (25.94, 92.25)	28.56 (15.14, 53.85)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)	27.05 (17.14, 42.69)	30.11 (19.08, 47.52)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)	0.58 (0.21, 1.61)	1.28 (0.98, 1.67)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)	9.75 (5.33, 17.84)	5.06 (2.55, 10.06)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)	4.25 (1.94, 9.28)	4.76 (2.24, 10.12)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	0.88 (0.22, 3.41)	1.22 (0.82, 1.81)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	10.67 (3.76, 30.29)	6.23 (2.19, 17.68)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	4.92 (1.69, 14.31)	5.07 (1.65, 15.52)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	0.34 (0.11, 1.05)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	11.01 (2.34, 51.78)	5.50 (0.90, 33.75)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	3.63 (1.34, 9.83)	3.39 (0.92, 12.41)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)	0.77 (0.31, 1.92)	1.48 (1.08, 2.03)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)	11.69 (5.54, 24.69)	6.98 (3.38, 14.39)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	23	0.16 (0.15, 0.16)	8.71 (4.79, 15.83)	9.73 (5.37, 17.63)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	1.98 (0.66, 5.93)	1.52 (0.72, 3.20)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	32.29 (6.99, 149.14)	18.85 (4.08, 87.06)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	21.42 (6.48, 70.86)	23.84 (7.21, 78.88)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Peru	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	5	0.05 (0.04, 0.07)	0.67 (0.17, 2.68)	1.28 (0.79, 2.07)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	14.55 (6.70, 31.58)	8.49 (3.91, 18.43)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	13.22 (4.98, 35.10)	14.71 (5.54, 39.07)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	221	0.05 (0.05, 0.05)	1.25 (1.01, 1.56)	1.47 (1.33, 1.61)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	221	0.80 (0.80, 0.80)	16.28 (13.35, 19.86)	9.63 (7.95, 11.66)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	221	0.15 (0.15, 0.15)	9.25 (7.89, 10.84)	10.26 (8.77, 12.02)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	59	0.05 (0.05, 0.05)	2.53 (1.53, 4.19)	2.16 (1.65, 2.84)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	59	0.82 (0.78, 0.85)	23.55 (15.73, 35.26)	14.31 (9.79, 20.92)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	59	0.15 (0.15, 0.15)	14.73 (10.51, 20.63)	16.35 (11.66, 22.93)
South Africa	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
South Africa	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
South Africa	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	60	0.05 (0.05, 0.06)	0.86 (0.58, 1.29)	1.16 (1.02, 1.32)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	60	0.80 (0.79, 0.82)	10.35 (6.74, 15.91)	6.61 (4.47, 9.78)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	60	0.16 (0.15, 0.16)	4.98 (3.49, 7.11)	6.04 (4.49, 8.12)

## 1.9 The ratios of GMTs/GMCs between groups

Table 9a. The ratios of GMTs/GMCs between groups by Age

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Age</b>							
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.82 (0.79, 0.85)	0.98 (0.94, 1.01)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.17)	0.16 (0.15, 0.16)	1.02 (0.96, 1.07)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (0.93, 1.08)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.82 (0.79, 0.86)	0.80 (0.80, 0.80)	1.03 (1.00, 1.07)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.16)	0.99 (0.97, 1.01)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2.94 (2.42, 3.56)	0.86 (0.72, 1.03)	3.40 (2.61, 4.42)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	36.39 (31.08, 42.62)	9.74 (8.35, 11.36)	3.74 (3.00, 4.66)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	21.35 (18.64, 24.46)	5.43 (4.77, 6.19)	3.93 (3.26, 4.74)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4.23 (2.75, 6.49)	1.98 (1.37, 2.87)	2.13 (1.21, 3.75)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	53.29 (39.74, 71.46)	21.69 (16.13, 29.17)	2.46 (1.62, 3.73)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	28.84 (21.93, 37.94)	11.89 (9.14, 15.47)	2.43 (1.66, 3.55)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2.16 (1.51, 3.09)	0.52 (0.38, 0.70)	4.19 (2.62, 6.70)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	28.11 (20.99, 37.63)	7.18 (5.69, 9.06)	3.92 (2.70, 5.69)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14.99 (11.74, 19.14)	3.39 (2.63, 4.38)	4.42 (3.10, 6.29)

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Table 9b. The ratios of GMTs/GMCs between groups by Risk for Severe Covid-19

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Risk for Severe Covid-19</b>							
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.79, 0.82)	0.81 (0.78, 0.85)	0.99 (0.95, 1.03)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.16 (0.15, 0.16)	0.99 (0.95, 1.02)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.97 (0.90, 1.03)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.82 (0.79, 0.85)	0.80 (0.80, 0.80)	1.03 (1.00, 1.06)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.02 (0.99, 1.05)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.46 (1.20, 1.78)	1.23 (1.03, 1.48)	1.19 (0.91, 1.55)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15.85 (13.43, 18.70)	15.04 (12.86, 17.59)	1.05 (0.84, 1.32)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9.12 (7.92, 10.51)	8.46 (7.41, 9.66)	1.08 (0.89, 1.31)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.07 (1.53, 2.80)	2.98 (1.94, 4.58)	0.69 (0.41, 1.17)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23.21 (17.03, 31.63)	34.71 (25.62, 47.02)	0.67 (0.43, 1.03)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	12.30 (9.73, 15.54)	19.33 (14.44, 25.88)	0.64 (0.44, 0.92)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.85 (0.61, 1.21)	0.86 (0.62, 1.18)	0.99 (0.62, 1.59)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11.22 (8.57, 14.68)	11.96 (9.31, 15.36)	0.94 (0.65, 1.36)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6.12 (4.69, 7.98)	5.52 (4.26, 7.15)	1.11 (0.76, 1.61)

Table 9c. The ratios of GMTs/GMCs between groups by Age 18 - 59, Risk for Severe Covid-19

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Age 18 - 59, Risk for Severe Covid-19</b>							
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.81 (0.79, 0.83)	0.82 (0.77, 0.87)	0.98 (0.92, 1.05)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.16 (0.15, 0.16)	1.00 (0.97, 1.03)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.96 (0.88, 1.05)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.17)	0.15 (0.15, 0.15)	1.03 (0.98, 1.08)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	0.93 (0.72, 1.21)	0.82 (0.64, 1.04)	1.14 (0.80, 1.63)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9.89 (7.92, 12.34)	9.64 (7.82, 11.89)	1.03 (0.76, 1.39)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5.67 (4.68, 6.86)	5.28 (4.43, 6.30)	1.07 (0.83, 1.39)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	1.65 (1.12, 2.41)	2.27 (1.28, 4.02)	0.72 (0.36, 1.44)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	17.99 (12.05, 26.87)	24.82 (16.32, 37.75)	0.72 (0.41, 1.29)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	9.13 (6.79, 12.29)	14.38 (9.65, 21.43)	0.64 (0.39, 1.04)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.49 (0.31, 0.77)	0.53 (0.35, 0.80)	0.92 (0.50, 1.69)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	7.55 (5.25, 10.84)	6.94 (5.12, 9.41)	1.09 (0.68, 1.74)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3.86 (2.71, 5.50)	3.12 (2.19, 4.43)	1.24 (0.75, 2.04)

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Table 9d. The ratios of GMTs/GMCs between groups by Age  $\geq$  60, Risk for Severe Covid-19

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Age <math>\geq</math> 60, Risk for Severe Covid-19</b>							
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.15)	1.01 (0.99, 1.02)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.18)	0.96 (0.88, 1.04)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.98 (0.89, 1.08)
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.86 (0.79, 0.95)	0.80 (0.80, 0.80)	1.09 (0.99, 1.19)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	3.45 (2.61, 4.56)	2.64 (2.04, 3.43)	1.30 (0.89, 1.91)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	39.36 (31.46, 49.24)	34.59 (27.86, 42.93)	1.14 (0.83, 1.55)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	22.83 (18.96, 27.48)	20.44 (16.92, 24.70)	1.12 (0.86, 1.46)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	3.36 (2.06, 5.48)	4.87 (2.61, 9.07)	0.69 (0.31, 1.52)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	39.89 (25.40, 62.62)	63.64 (43.39, 93.35)	0.63 (0.35, 1.13)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23.14 (16.19, 33.08)	33.02 (22.50, 48.44)	0.70 (0.41, 1.18)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2.26 (1.37, 3.73)	2.09 (1.27, 3.44)	1.08 (0.53, 2.19)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	22.45 (15.50, 32.53)	32.91 (21.57, 50.20)	0.68 (0.39, 1.20)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	13.68 (9.41, 19.88)	15.99 (11.59, 22.07)	0.86 (0.52, 1.40)

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Table 9e. The ratios of GMTs/GMCs between groups by Sex

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Sex</b>							
Male vs Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
Male vs Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.82 (0.77, 0.87)	0.80 (0.79, 0.81)	1.02 (0.96, 1.09)
Male vs Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.16 (0.15, 0.16)	1.01 (0.96, 1.06)
Male vs Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.96 (0.89, 1.04)
Male vs Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.82 (0.79, 0.84)	0.98 (0.95, 1.00)
Male vs Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.16)	1.01 (0.98, 1.03)
Male vs Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.32 (1.06, 1.64)	1.32 (1.11, 1.57)	1.00 (0.75, 1.33)
Male vs Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15.46 (12.91, 18.51)	15.28 (13.06, 17.88)	1.01 (0.79, 1.29)
Male vs Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.85 (7.53, 10.39)	8.62 (7.55, 9.85)	1.03 (0.83, 1.28)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Male vs Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.80 (1.85, 4.24)	2.43 (1.69, 3.50)	1.15 (0.67, 1.97)
Male vs Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	26.83 (18.11, 39.74)	31.32 (24.32, 40.34)	0.86 (0.54, 1.36)
Male vs Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13.81 (9.77, 19.51)	17.75 (14.07, 22.40)	0.78 (0.51, 1.18)
Male vs Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.73 (0.51, 1.06)	1.00 (0.71, 1.41)	0.73 (0.43, 1.25)
Male vs Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	10.40 (7.92, 13.65)	13.08 (10.02, 17.07)	0.79 (0.54, 1.18)
Male vs Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5.14 (3.95, 6.70)	6.44 (4.80, 8.63)	0.80 (0.53, 1.20)

Table 9f. The ratios of GMTs/GMCs between groups by Hispanic or Latino ethnicity

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Hispanic or Latino ethnicity</b>							
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.83 (0.78, 0.88)	0.96 (0.91, 1.02)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.17)	0.96 (0.92, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.06)	0.93 (0.86, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.81 (0.79, 0.83)	0.80 (0.79, 0.81)	1.01 (0.98, 1.03)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.16)	0.98 (0.95, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.28 (1.04, 1.58)	1.39 (1.17, 1.66)	0.92 (0.70, 1.21)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	14.93 (12.46, 17.90)	15.36 (13.29, 17.75)	0.97 (0.77, 1.23)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.59 (7.39, 9.99)	8.78 (7.71, 10.00)	0.98 (0.80, 1.20)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.49 (1.71, 3.61)	2.37 (1.63, 3.43)	1.05 (0.62, 1.79)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	30.57 (22.06, 42.36)	26.21 (19.51, 35.22)	1.17 (0.75, 1.81)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	17.20 (13.10, 22.59)	13.64 (10.38, 17.94)	1.26 (0.86, 1.86)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.82 (0.58, 1.16)	0.94 (0.67, 1.30)	0.88 (0.54, 1.41)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12.07 (9.28, 15.70)	11.34 (8.56, 15.04)	1.06 (0.72, 1.57)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6.50 (4.95, 8.54)	5.50 (4.22, 7.15)	1.18 (0.80, 1.74)

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Table 9g. The ratios of GMTs/GMCs between groups by Underrepresented Minority Status in the U.S.

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
<b>Underrepresented Minority Status in the U.S.</b>							
URM vs Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.84 (0.75, 0.95)	0.94 (0.84, 1.06)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.17 (0.15, 0.18)	0.93 (0.84, 1.02)
URM vs Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.04, 0.06)	0.96 (0.83, 1.10)
URM vs Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.81 (0.79, 0.83)	0.81 (0.79, 0.82)	1.00 (0.97, 1.04)
URM vs Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.17)	0.97 (0.92, 1.03)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.39 (1.09, 1.77)	1.39 (1.06, 1.82)	1.00 (0.70, 1.44)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15.93 (13.24, 19.17)	14.39 (11.54, 17.93)	1.11 (0.83, 1.48)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.86 (7.46, 10.52)	8.15 (6.61, 10.06)	1.09 (0.83, 1.42)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
URM vs Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.83 (1.41, 5.66)	2.05 (1.18, 3.56)	1.38 (0.57, 3.35)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23.44 (14.15, 38.81)	26.26 (17.53, 39.33)	0.89 (0.47, 1.70)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	14.89 (9.76, 22.72)	13.04 (8.82, 19.28)	1.14 (0.64, 2.03)
URM vs Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.88 (0.55, 1.40)	1.20 (0.72, 2.01)	0.73 (0.36, 1.46)
URM vs Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	9.78 (6.34, 15.08)	12.37 (8.32, 18.39)	0.79 (0.44, 1.42)
URM vs Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	4.97 (3.50, 7.07)	6.13 (4.11, 9.14)	0.81 (0.48, 1.38)

## 1.10 Differences in the responder rates, 2FRs, 4FRs between the groups

Table 10a. Differences in the responder rates, 2FRs, 4FRs between the groups by Arm

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Arm</b>							
Vaccine vs Placebo	Negative	-	Day 29	Anti N IgG (IU/ml)	0.05 (0.04, 0.07)	0.24 (0.21, 0.27)	0.14 (0.11, 0.16)
Vaccine vs Placebo	Negative	-	Day 29	Anti RBD IgG (IU/ml)	0.51 (0.47, 0.55)	0.84 (0.81, 0.87)	0.69 (0.66, 0.73)
Vaccine vs Placebo	Negative	-	Day 29	Anti Spike IgG (IU/ml)	0.45 (0.41, 0.49)	0.88 (0.85, 0.91)	0.74 (0.71, 0.77)
Vaccine vs Placebo	Positive	-	Day 29	Anti N IgG (IU/ml)	0.07 (0.02, 0.13)	0.21 (0.12, 0.3)	0.18 (0.11, 0.25)
Vaccine vs Placebo	Positive	-	Day 29	Anti RBD IgG (IU/ml)	0.2 (0.1, 0.3)	0.14 (0.07, 0.22)	0.21 (0.12, 0.3)
Vaccine vs Placebo	Positive	-	Day 29	Anti Spike IgG (IU/ml)	0.25 (0.15, 0.34)	0.16 (0.1, 0.23)	0.24 (0.14, 0.33)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10b. Differences in the responder rates, 2FRs, 4FRs between the groups by Baseline SARS-CoV-2

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Baseline SARS-CoV-2</b>							
Positive vs Negative	-	Vaccine	Day 29	Anti N IgG (IU/ml)	0.05 (0, 0.1)	0.15 (0.07, 0.23)	0.12 (0.05, 0.19)
Positive vs Negative	-	Placebo	Day 29	Anti N IgG (IU/ml)	0.03 (0.02, 0.06)	0.17 (0.13, 0.23)	0.08 (0.05, 0.12)
Positive vs Negative	-	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.16 (0.08, 0.24)	0.08 (0.03, 0.12)	0.13 (0.05, 0.19)
Positive vs Negative	-	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.47 (0.4, 0.54)	0.78 (0.7, 0.83)	0.61 (0.54, 0.68)
Positive vs Negative	-	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.14 (0.05, 0.22)	0.09 (0.05, 0.12)	0.1 (0.03, 0.16)
Positive vs Negative	-	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.34 (0.28, 0.4)	0.81 (0.74, 0.86)	0.6 (0.53, 0.67)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10c. Differences in the responder rates, 2FRs, 4FRs between the groups by Age

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age</b>							
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	0.12 (0.08, 0.16)	0.22 (0.15, 0.28)	0.16 (0.11, 0.22)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.31 (0.24, 0.38)	0.17 (0.12, 0.22)	0.29 (0.23, 0.35)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.4 (0.33, 0.46)	0.14 (0.1, 0.19)	0.28 (0.22, 0.34)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.08 (-0.03, 0.18)	0.24 (0.09, 0.37)	0.23 (0.09, 0.35)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.09 (0.05, 0.17)	0.24 (0.12, 0.35)	0.17 (0.09, 0.27)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.28 (0.15, 0.4)	0.06 (-0.02, 0.14)	0.11 (0, 0.21)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.37 (0.23, 0.49)	0.22 (0.11, 0.33)	0.33 (0.2, 0.45)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.31 (0.17, 0.43)	0.03 (-0.06, 0.07)	0.13 (0.03, 0.23)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.49 (0.35, 0.6)	0.25 (0.15, 0.36)	0.37 (0.23, 0.49)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10d. Differences in the responder rates, 2FRs, 4FRs between the groups by Risk for Severe Covid-19

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Risk for Severe Covid-19</b>							
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	0.03 (0, 0.06)	0.03 (-0.03, 0.09)	0.03 (-0.02, 0.08)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.04 (-0.04, 0.11)	0 (-0.06, 0.06)	0.02 (-0.05, 0.09)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0 (-0.07, 0.07)	0.02 (-0.03, 0.08)	0.04 (-0.03, 0.1)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.01 (-0.11, 0.09)	-0.17 (-0.3, -0.02)	-0.14 (-0.26, -0.02)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.01 (-0.04, 0.07)	-0.02 (-0.12, 0.09)	-0.01 (-0.08, 0.07)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.09 (-0.22, 0.06)	-0.02 (-0.1, 0.06)	-0.09 (-0.2, 0.03)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.05 (-0.09, 0.18)	0.02 (-0.11, 0.14)	0.04 (-0.1, 0.18)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.1 (-0.24, 0.05)	-0.04 (-0.1, 0.02)	-0.03 (-0.14, 0.08)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	-0.02 (-0.15, 0.1)	0 (-0.13, 0.13)	-0.01 (-0.15, 0.13)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10e. Differences in the responder rates, 2FRs, 4FRs between the groups by Age 18 - 59, Risk for Severe Covid-19

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age 18 - 59, Risk for Severe Covid-19</b>							
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	0 (-0.03, 0.04)	0.04 (-0.04, 0.12)	-0.01 (-0.07, 0.05)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.06 (-0.04, 0.16)	-0.01 (-0.1, 0.08)	0.03 (-0.08, 0.13)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0 (-0.09, 0.1)	0.02 (-0.06, 0.1)	0.05 (-0.05, 0.15)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.04 (-0.18, 0.1)	-0.13 (-0.32, 0.06)	-0.07 (-0.23, 0.09)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	-0.02 (-0.16, 0.13)	0 (-0.1, 0.09)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.09 (-0.28, 0.11)	-0.01 (-0.12, 0.11)	-0.12 (-0.28, 0.05)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.13 (-0.06, 0.32)	0.02 (-0.17, 0.2)	0.08 (-0.13, 0.27)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.06 (-0.25, 0.14)	-0.07 (-0.16, 0.02)	-0.04 (-0.19, 0.13)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.02 (-0.15, 0.18)	0.01 (-0.18, 0.2)	0 (-0.2, 0.2)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.



Table 10f. Differences in the responder rates, 2FRs, 4FRs between the groups by Age  $\geq 60$ , Risk for Severe Covid-19

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Age <math>\geq 60</math>, Risk for Severe Covid-19</b>							
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	0.08 (0.01, 0.15)	0.02 (-0.08, 0.12)	0.11 (0.02, 0.2)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0 (-0.1, 0.09)	0.01 (-0.04, 0.06)	0.02 (-0.05, 0.09)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0 (-0.1, 0.09)	0.04 (0.01, 0.08)	0.02 (-0.04, 0.08)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.06 (-0.11, 0.24)	-0.21 (-0.4, 0.01)	-0.25 (-0.43, -0.04)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.03 (-0.11, 0.18)	-0.03 (-0.22, 0.17)	-0.02 (-0.19, 0.16)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.04 (-0.2, 0.12)	-0.04 (-0.2, 0.1)	0 (-0.16, 0.15)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.13 (-0.3, 0.06)	0.01 (-0.13, 0.13)	-0.04 (-0.21, 0.12)
Age $\geq 60$ At-risk vs Age $\geq 60$ Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.15 (-0.33, 0.04)	0.02 (0, 0.16)	0 (-0.11, 0.14)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age $\geq$ 60 At-risk vs Age $\geq$ 60 Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	-0.12 (-0.31, 0.08)	-0.04 (-0.18, 0.05)	-0.04 (-0.21, 0.12)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.



Table 10g. Differences in the responder rates, 2FRs, 4FRs between the groups by Sex

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Sex</b>							
Male vs Female	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	0.02 (-0.01, 0.06)	0 (-0.07, 0.06)	0.02 (-0.03, 0.07)
Male vs Female	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.05 (-0.03, 0.13)	0 (-0.07, 0.06)	0 (-0.07, 0.08)
Male vs Female	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.01 (-0.07, 0.08)	0 (-0.06, 0.05)	0.01 (-0.06, 0.08)
Male vs Female	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.01 (-0.1, 0.11)	0.04 (-0.11, 0.19)	0.05 (-0.08, 0.19)
Male vs Female	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0 (-0.05, 0.06)	-0.04 (-0.15, 0.07)	-0.03 (-0.11, 0.04)
Male vs Female	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.01 (-0.16, 0.13)	-0.1 (-0.21, -0.03)	-0.1 (-0.22, 0.01)
Male vs Female	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.01 (-0.15, 0.14)	-0.04 (-0.16, 0.09)	-0.09 (-0.23, 0.06)
Male vs Female	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.09 (-0.24, 0.07)	-0.06 (-0.14, -0.01)	-0.12 (-0.26, -0.01)
Male vs Female	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	-0.06 (-0.19, 0.08)	-0.03 (-0.15, 0.1)	-0.16 (-0.3, -0.01)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10h. Differences in the responder rates, 2FRs, 4FRs between the groups by Hispanic or Latino ethnicity

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Hispanic or Latino ethnicity</b>							
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.01 (-0.04, 0.02)	-0.01 (-0.08, 0.05)	-0.01 (-0.06, 0.04)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.05 (-0.12, 0.03)	0.01 (-0.05, 0.07)	-0.01 (-0.08, 0.07)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.01 (-0.07, 0.08)	0.03 (-0.03, 0.08)	-0.04 (-0.11, 0.03)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.03 (-0.12, 0.06)	0 (-0.14, 0.15)	0.02 (-0.1, 0.14)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	-0.01 (-0.07, 0.04)	0.01 (-0.1, 0.12)	-0.02 (-0.09, 0.06)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.01 (-0.13, 0.15)	0 (-0.1, 0.08)	0.02 (-0.09, 0.14)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.02 (-0.17, 0.12)	0.08 (-0.05, 0.21)	0.06 (-0.09, 0.2)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.05 (-0.1, 0.2)	0.04 (-0.02, 0.11)	0.14 (0.01, 0.25)

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Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.05 (-0.08, 0.17)	0.03 (-0.11, 0.15)	-0.02 (-0.17, 0.13)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

Table 10i. Differences in the responder rates, 2FRs, 4FRs between the groups by Underrepresented Minority Status in the U.S.

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
<b>Underrepresented Minority Status in the U.S.</b>							
URM vs Non-URM	Negative	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.03 (-0.07, 0.02)	0.01 (-0.08, 0.1)	-0.02 (-0.09, 0.05)
URM vs Non-URM	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.02 (-0.09, 0.12)	0.06 (-0.03, 0.14)	0.08 (-0.02, 0.18)
URM vs Non-URM	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.01 (-0.09, 0.11)	0.07 (-0.01, 0.15)	0.04 (-0.05, 0.14)
URM vs Non-URM	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0 (-0.14, 0.19)	0.02 (-0.18, 0.22)	0.08 (-0.09, 0.25)
URM vs Non-URM	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	-0.04 (-0.15, 0.05)	-0.12 (-0.28, 0.05)	-0.13 (-0.26, -0.02)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.05 (-0.26, 0.16)	-0.11 (-0.29, 0.05)	-0.1 (-0.3, 0.1)
URM vs Non-URM	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.08 (-0.27, 0.13)	-0.04 (-0.24, 0.16)	0.02 (-0.19, 0.23)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.04 (-0.25, 0.17)	0.07 (-0.04, 0.2)	0.07 (-0.11, 0.24)
URM vs Non-URM	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.04 (-0.13, 0.22)	-0.1 (-0.29, 0.08)	-0.05 (-0.25, 0.15)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.11 Antibody levels in the baseline SARS-CoV-2 negative per-protocol cohort (vaccine vs. placebo)

Table 11. Antibody levels in the baseline SARS-CoV-2 negative per-protocol cohort (vaccine vs. placebo)

Visit	Marker	Baseline SARS-CoV-2 Negative						Comparison	
		N	Resp rate	Vaccine	Placebo	N	Resp rate	GMT/GMC	Resp Rate Difference
Day 29	Anti N IgG (IU/ml)	828	989.4/18270 = 5.4% (4.2%, 7.0%)	1.32 (1.15, 1.51)	101	0/18222 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.05 (0.04, 0.07)	28.12 (24.57, 32.17)
Day 29	Anti RBD IgG (IU/ml)	828	9292.7/18270 = 50.9% (47.1%, 54.6%)	15.36 (13.69, 17.23)	101	0/18222 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.51 (0.47, 0.55)	19.27 (17.18, 21.62)
Day 29	Anti Spike IgG (IU/ml)	828	8202.8/18270 = 44.9% (41.3%, 48.6%)	8.72 (7.91, 9.61)	101	0/18222 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.45 (0.41, 0.49)	56.68 (51.40, 62.51)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.12 Antibody levels in the baseline SARS-CoV-2 positive per-protocol cohort (vaccine vs. placebo)

Table 12. Antibody levels in the baseline SARS-CoV-2 positive per-protocol cohort (vaccine vs. placebo)

Visit	Marker	Baseline SARS-CoV-2 Positive								
		Vaccine				Placebo				Comparison
		N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR	
Day 29	Anti N IgG (IU/ml)	216	204.8/2051 = 10.0% (6.2%, 15.6%)	2.57 (1.93, 3.41)	219	64.8/1994 = 3.2% (1.6%, 6.3%)	0.86 (0.68, 1.09)	0.07 (0.02, 0.13)	3.00 (2.07, 4.33)	
Day 29	Anti RBD IgG (IU/ml)	216	1375.9/2051 = 67.1% (59.6%, 73.8%)	29.48 (23.66, 36.73)	219	929.1/1994 = 46.6% (39.8%, 53.5%)	11.65 (9.69, 14.02)	0.2 (0.1, 0.3)	2.53 (1.90, 3.37)	
Day 29	Anti Spike IgG (IU/ml)	216	1205.5/2051 = 58.8% (51.2%, 65.9%)	16.09 (13.20, 19.61)	219	669.5/1994 = 33.6% (27.7%, 40.0%)	5.75 (4.76, 6.94)	0.25 (0.15, 0.34)	2.80 (2.13, 3.68)	

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.13 Antibody levels in the per-protocol cohort (vaccine recipients)

Table 13. Antibody levels in the per-protocol cohort (vaccine recipients)

Visit	Marker	Vaccine Recipients						Comparison	
		Baseline SARS-CoV-2 Positive			Baseline SARS-CoV-2 Negative				
N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR		
Day 29	Anti N IgG (IU/ml)	216	204.8/2051 = 10.0% (6.2%, 15.6%)	2.57 (1.93, 3.41)	828	989.4/18270 = 5.4% (4.2%, 7.0%)	1.32 (1.15, 1.51)	0.05 (0, 0.1)	1.95 (1.42, 2.67)
Day 29	Anti RBD IgG (IU/ml)	216	1375.9/2051 = 67.1% (59.6%, 73.8%)	29.48 (23.66, 36.73)	828	9292.7/18270 = 50.9% (47.1%, 54.6%)	15.36 (13.69, 17.23)	0.16 (0.08, 0.24)	1.92 (1.50, 2.46)
Day 29	Anti Spike IgG (IU/ml)	216	1205.5/2051 = 58.8% (51.2%, 65.9%)	16.09 (13.20, 19.61)	828	8202.8/18270 = 44.9% (41.3%, 48.6%)	8.72 (7.91, 9.61)	0.14 (0.05, 0.22)	1.85 (1.48, 2.30)

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

## 1.14 Antibody levels in the per-protocol cohort (placebo recipients)

Table 14. Antibody levels in the per-protocol cohort (placebo recipients)

Visit	Marker	Placebo Recipients							
		Baseline SARS-CoV-2 Positive				Baseline SARS-CoV-2 Negative			Comparison
N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR		
Day 29	Anti N IgG (IU/ml)	219 64.8/1994 = 3.2% (1.6%, 6.3%)	0.86 (0.68, 1.09)	101 0/18222 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.03 (0.02, 0.06)	18.29 (14.44, 23.16)		
Day 29	Anti RBD IgG (IU/ml)	219 929.1/1994 = 46.6% (39.8%, 53.5%)	11.65 (9.69, 14.02)	101 0/18222 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.47 (0.4, 0.54)	14.62 (12.16, 17.59)		
Day 29	Anti Spike IgG (IU/ml)	219 669.5/1994 = 33.6% (27.7%, 40.0%)	5.75 (4.76, 6.94)	101 0/18222 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.34 (0.28, 0.4)	37.39 (30.97, 45.14)		

Percentages are calculated for the whole per-protocol group/subgroup, using inverse probability weighting.

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## Chapter 2

# Graphical Description of Immunogenicity Data

### 2.1 Pairs plots of antibody markers for overall per-protocol cohort

#### 2.1.1 Baseline SARS-CoV-2 Negative

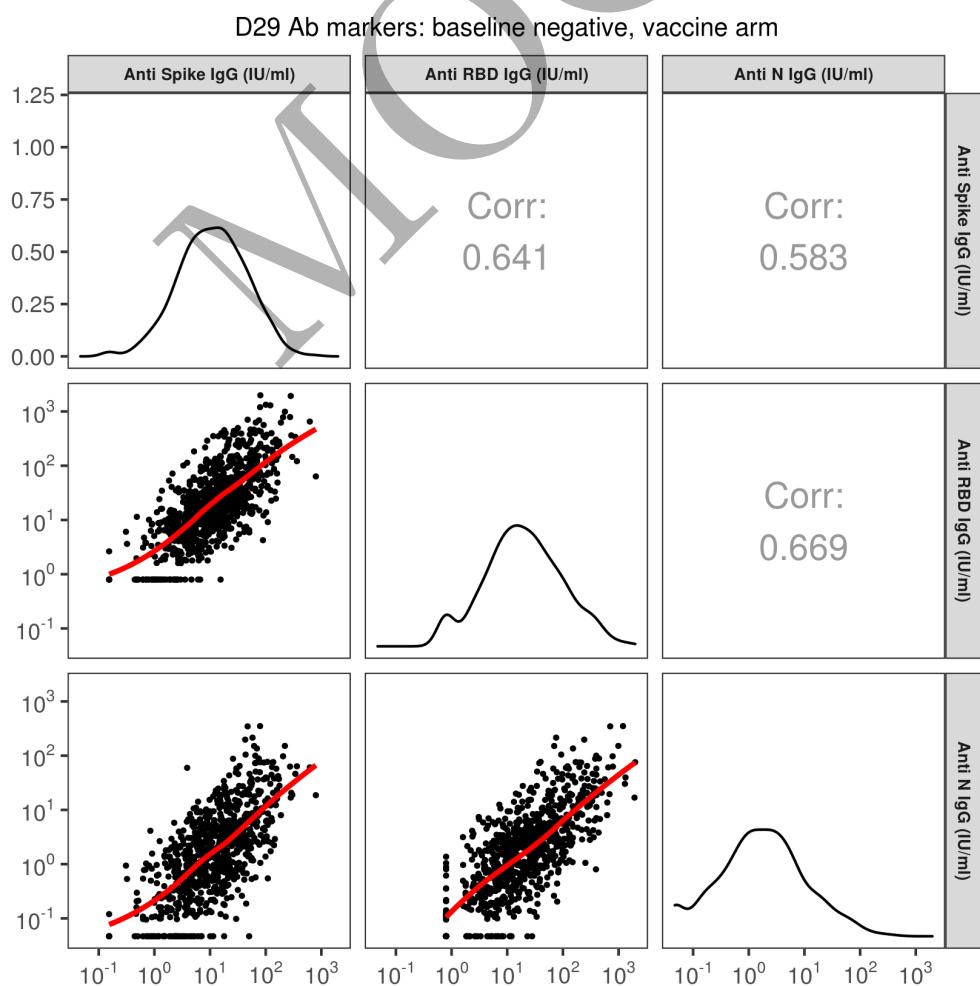


Figure 2.1: Pair plots of D29 Ab markers: baseline negative vaccine arm

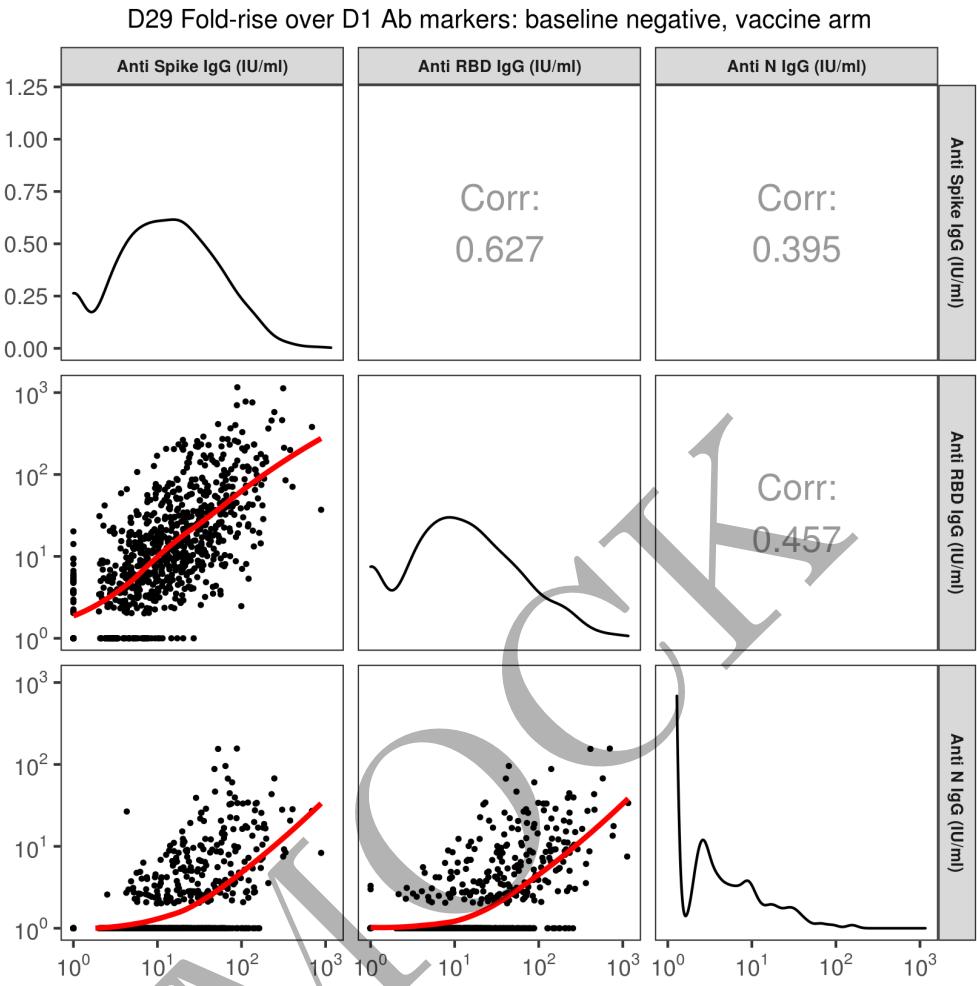


Figure 2.2: Pair plots of D29 fold-rise over D1 Ab markers: baseline negative vaccine arm

### 2.1.2 Baseline SARS-CoV-2 Positive

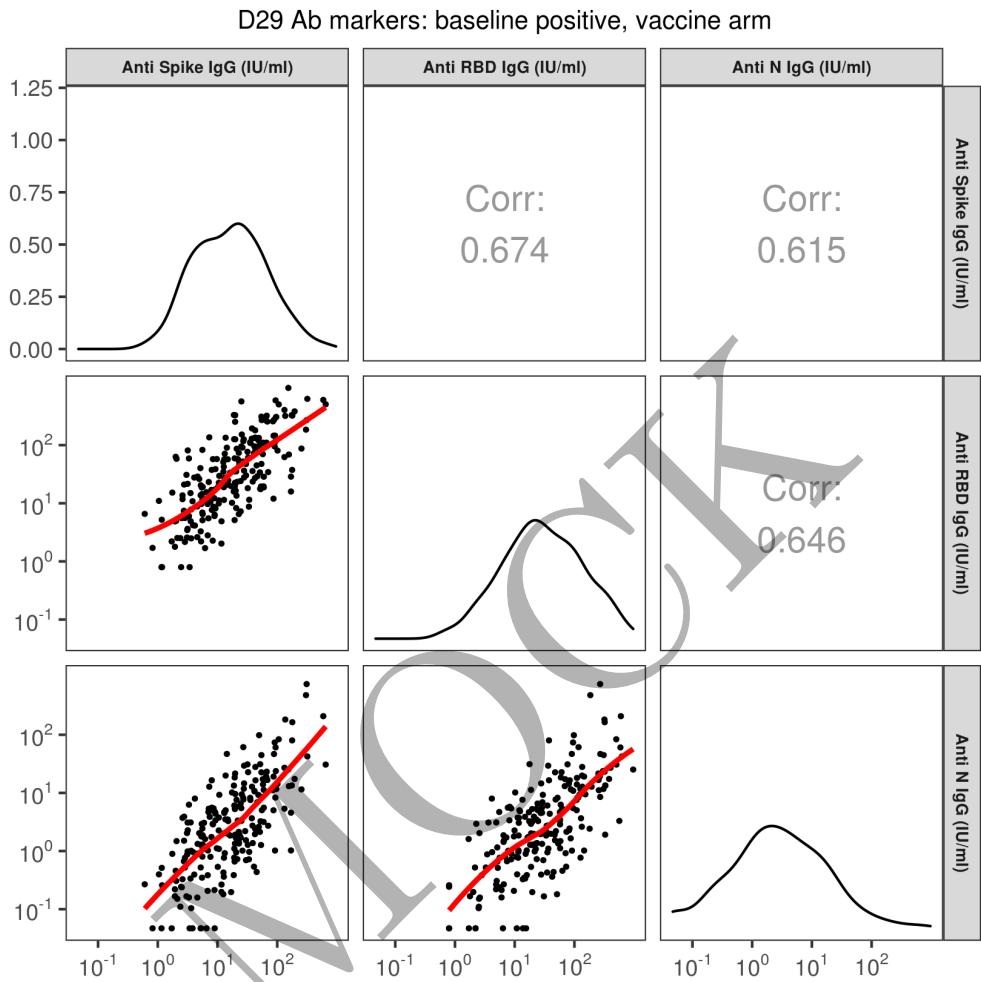


Figure 2.3: Pair plots of D29 Ab markers: baseline positive vaccine arm

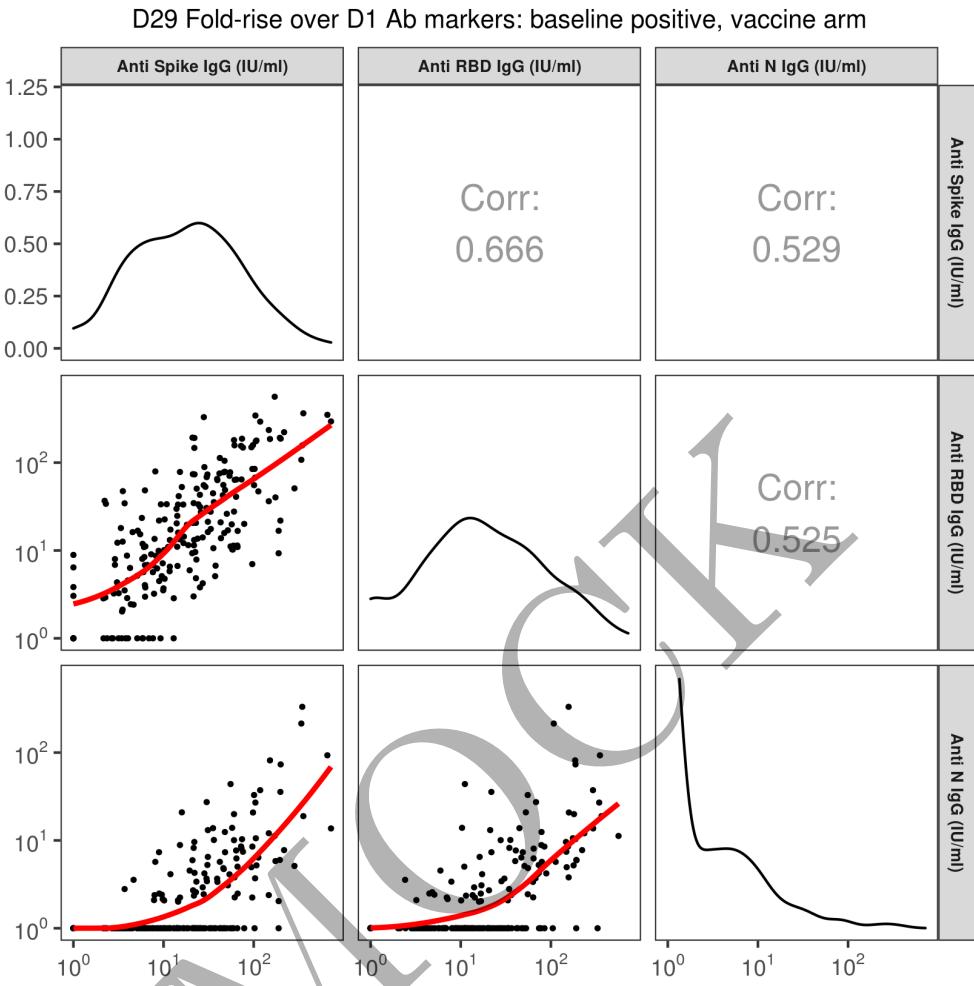


Figure 2.4: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm

### 2.1.3 Baseline SARS-CoV-2 Positive Placebo Arm

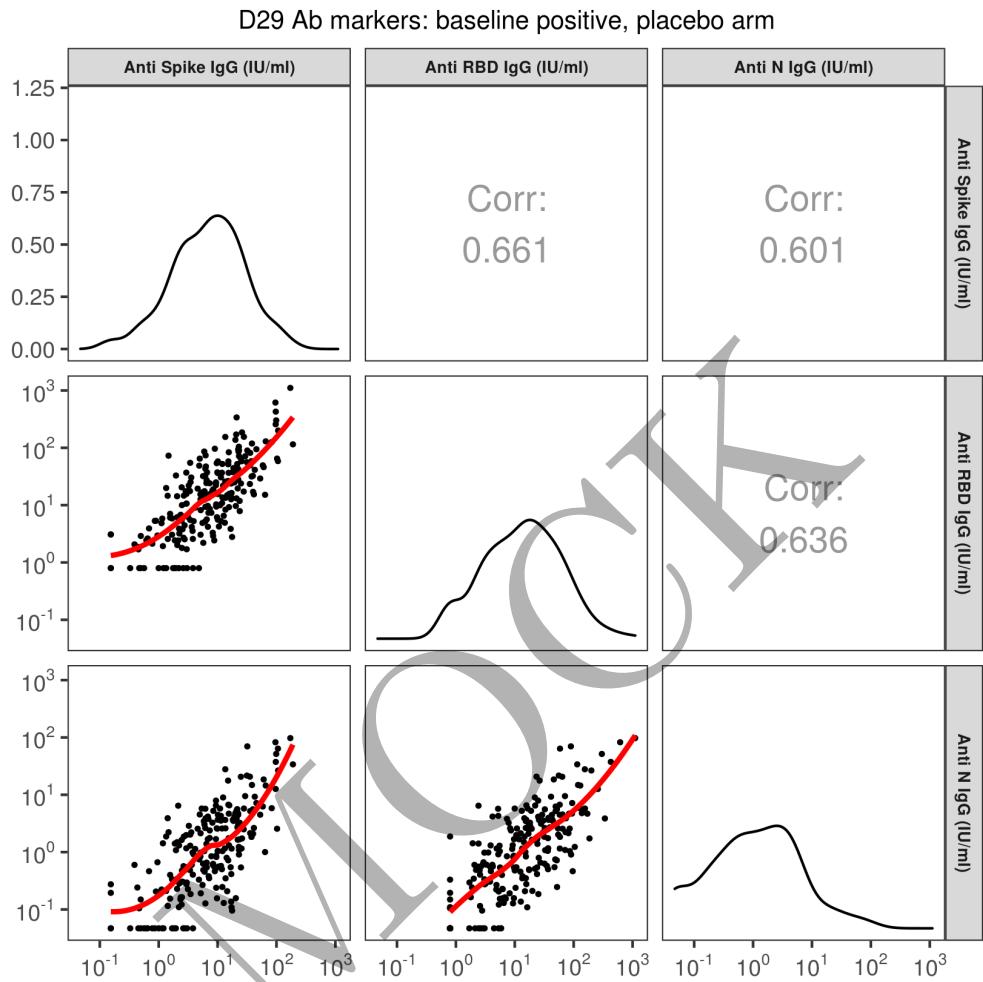


Figure 2.5: Pair plots of D29 Ab markers: baseline positive placebo arm

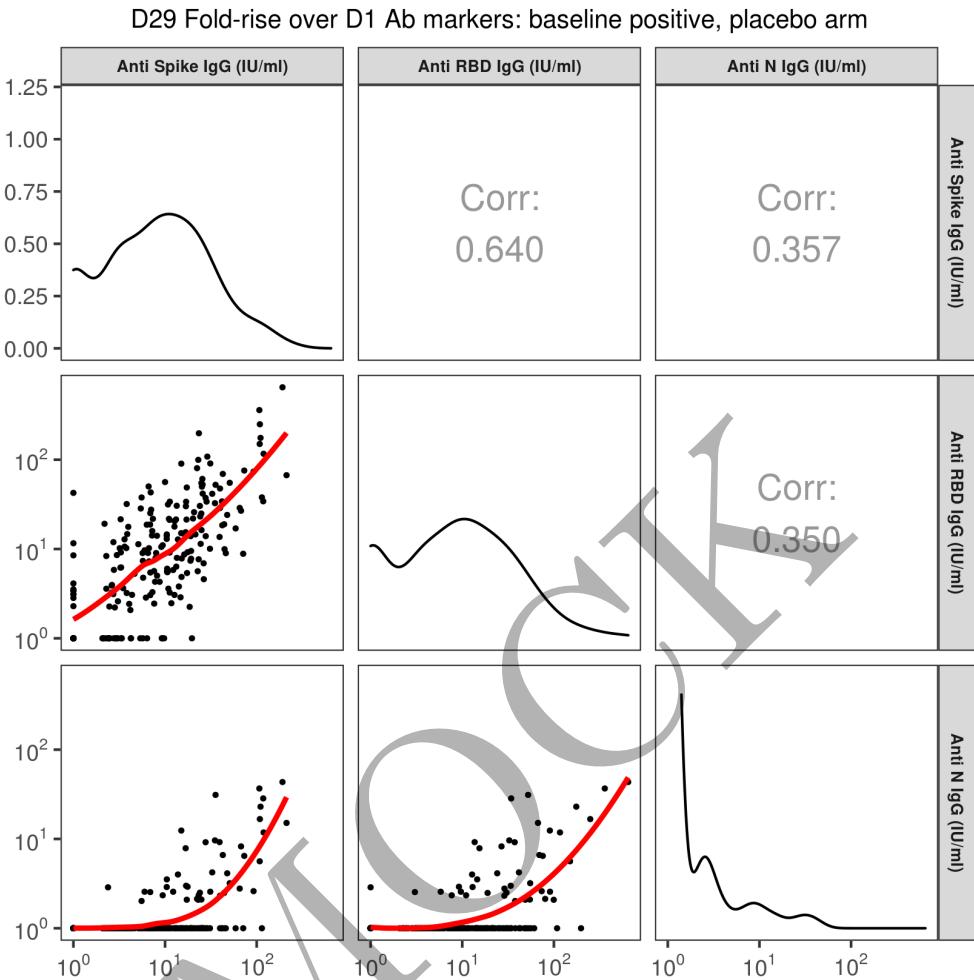


Figure 2.6: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive placebo arm

## 2.2 RCDF plots of antibody markers for overall per-protocol cohort

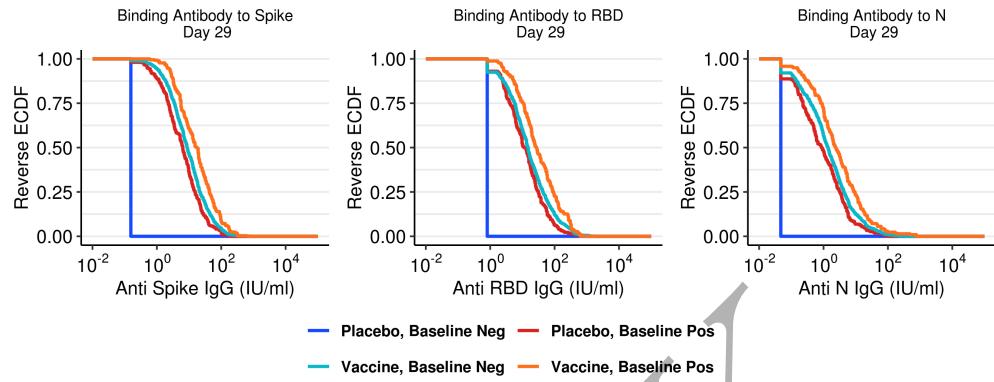


Figure 2.7: RCDF plots for D29 Ab markers: by baseline status x randomization arm

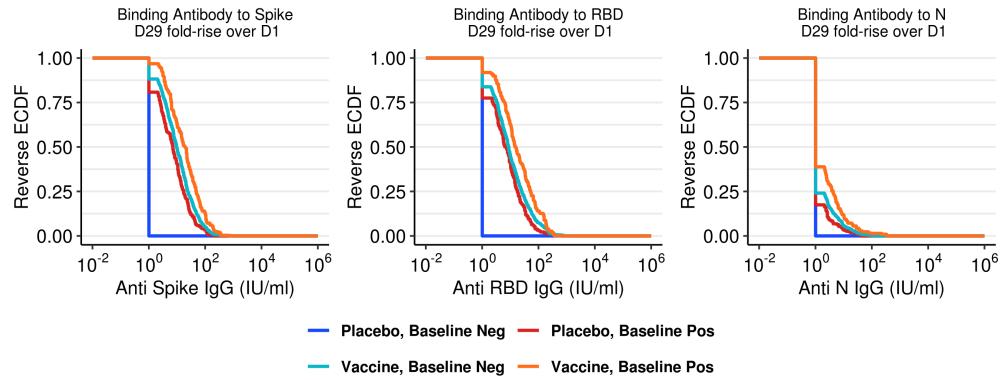


Figure 2.8: RCDF plots for D29 fold-rise over D1 Ab markers: by baseline status x randomization arm

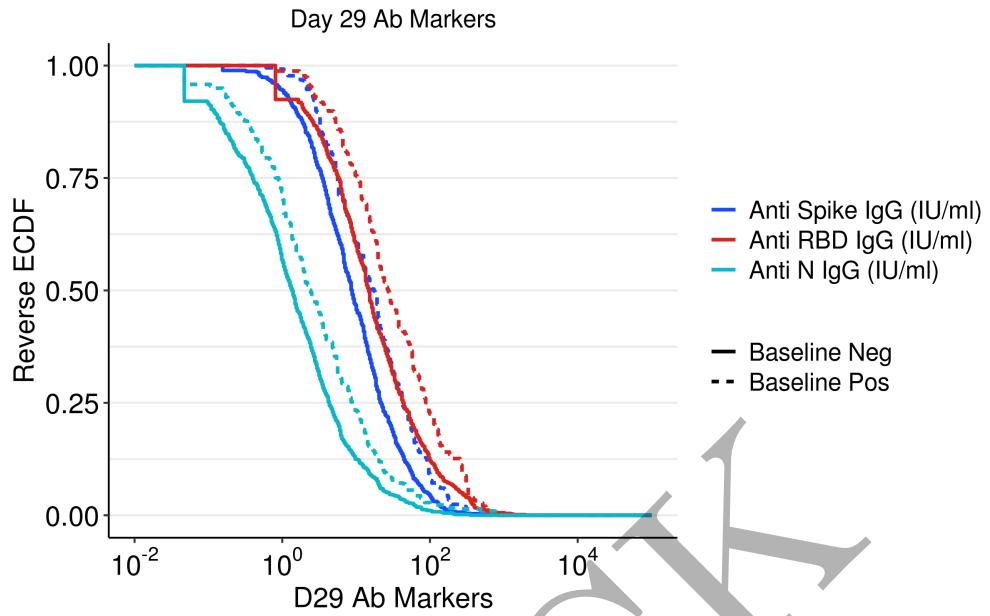


Figure 2.9: RCDF plots for D29 bAb markers: by baseline status for the vaccine arm

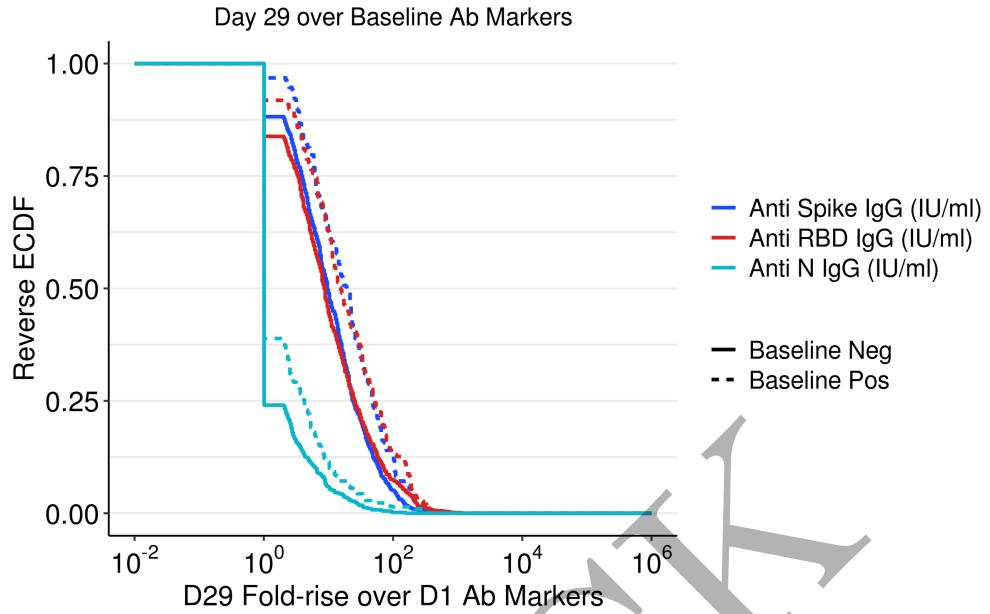


Figure 2.10: RCDF plots for D29 over D1 fold-rise bAb markers: by baseline status for the vaccine arm

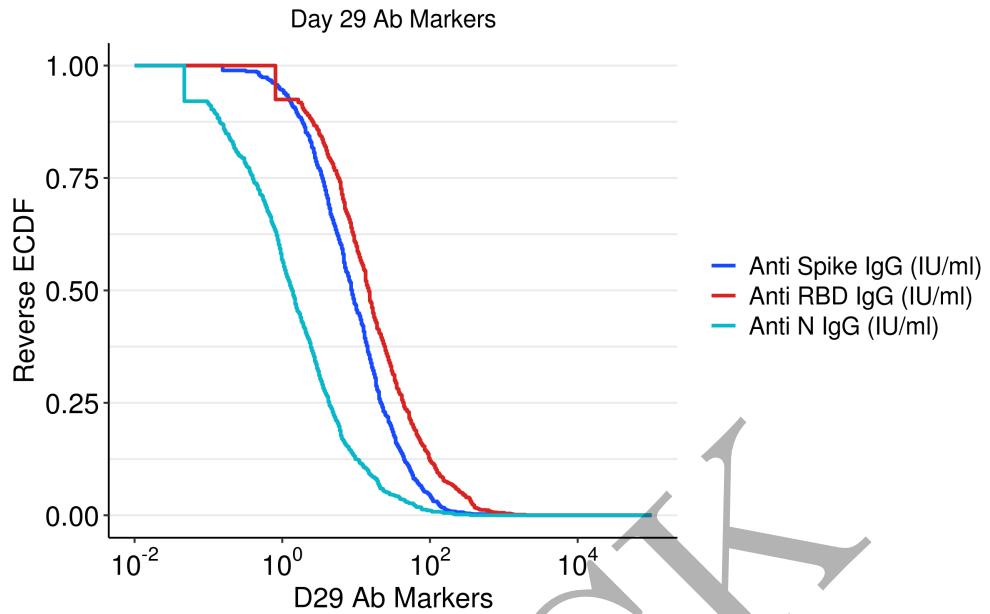


Figure 2.11: RCDF plots for D29 bAb markers: baseline negative vaccine arm

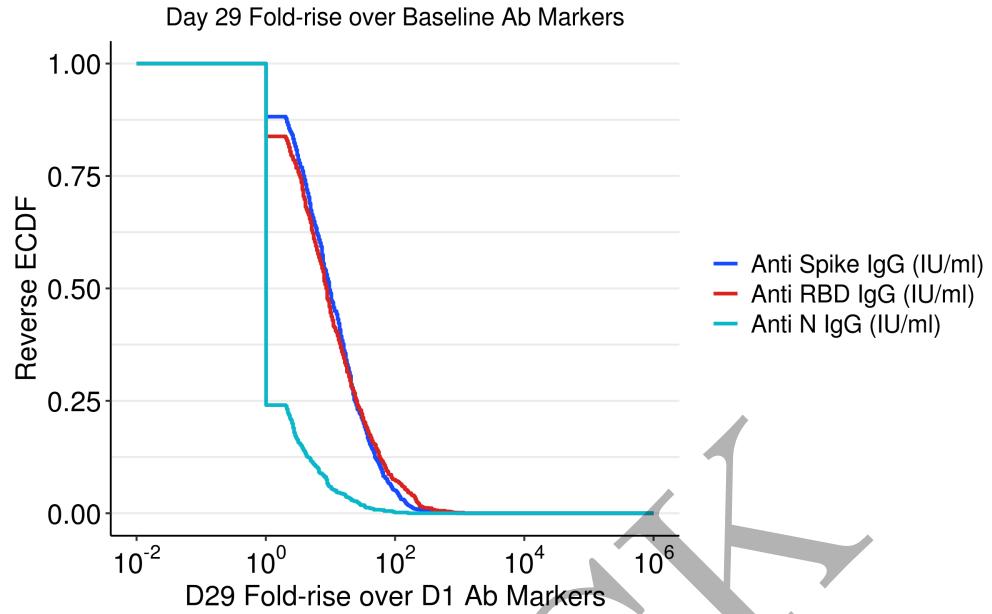


Figure 2.12: RCDF plots for D29 fold-rise over D1 bAb markers: baseline negative vaccine arm

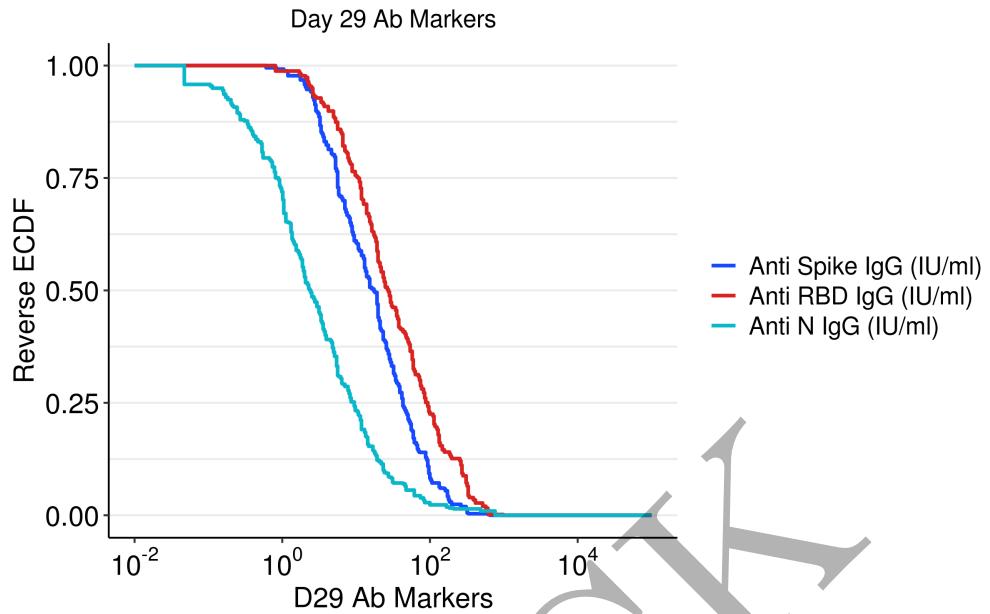


Figure 2.13: RCDF plots for D29 bAb markers: baseline positive vaccine arm

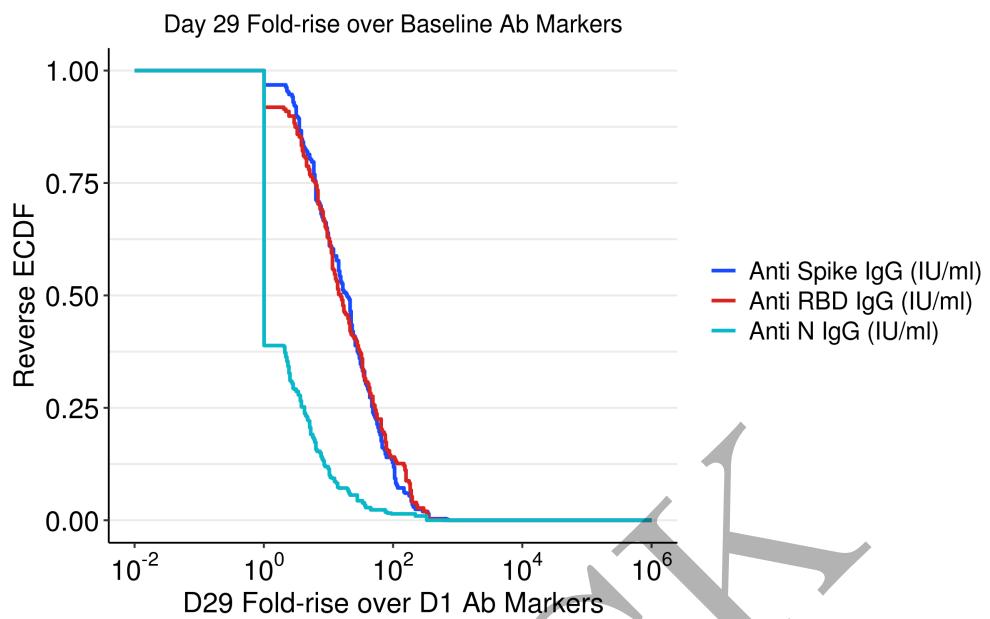


Figure 2.14: RCDF plots for D29 fold-rise over D1 bAb markers: baseline/positive vaccine arm

## 2.3 Scatter plots of antibody markers versus age for overall per-protocol cohort

### 2.3.1 Baseline SARS-CoV-2 Negative

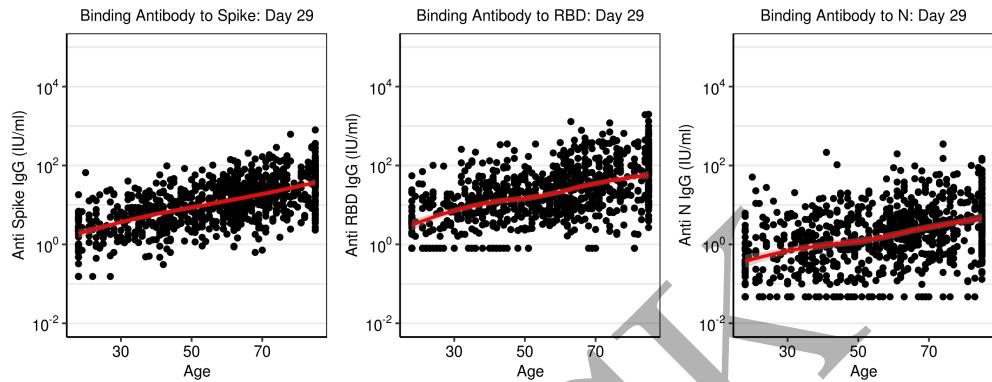


Figure 2.15: Scatter plots for D29 Ab markers vs. age: baseline negative vaccine arm

### 2.3.2 Baseline SARS-CoV-2 Positive

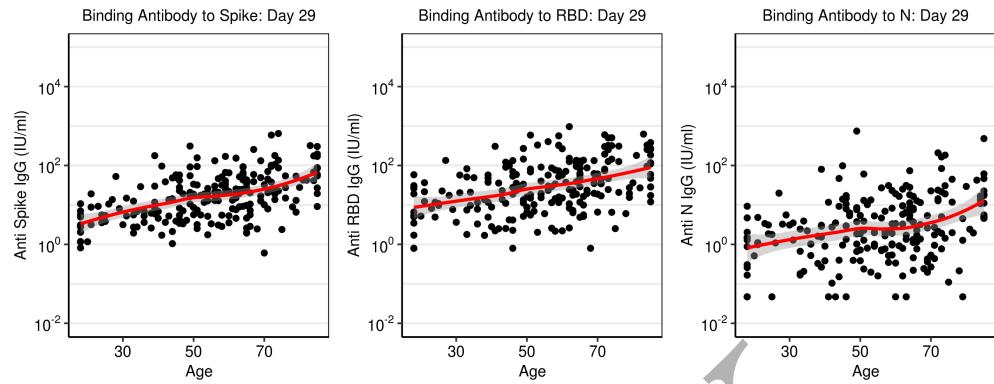


Figure 2.16: Scatter plots for D29 Ab markers vs. age: baseline positive vaccine arm

### 2.3.3 Baseline SARS-CoV-2 Positive Placebo Arm

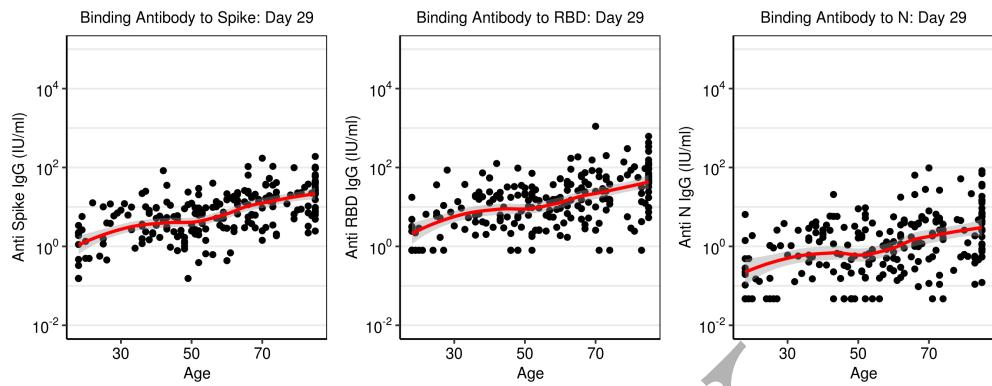


Figure 2.17: Scatter plots for D29 Ab markers vs. age: baseline positive placebo arm

## 2.4 Box plots of antibody markers for overall per-protocol cohort

### 2.4.1 Baseline SARS-CoV-2 Negative

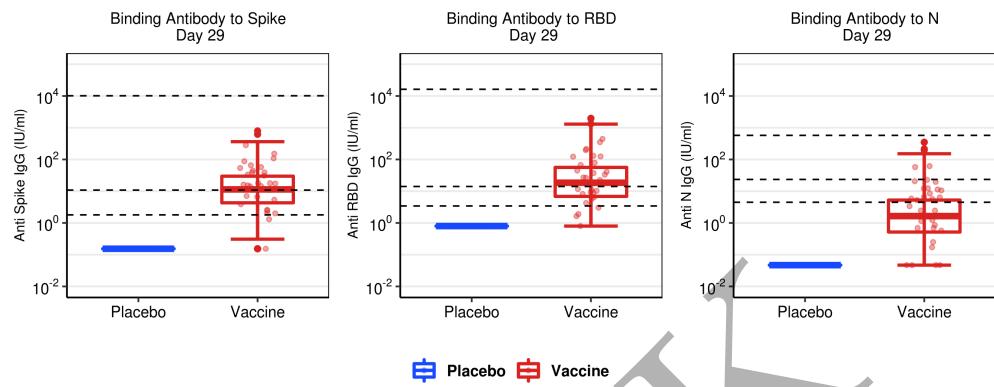


Figure 2.18: Boxplots of D29 Ab markers: baseline negative vaccine + placebo arms. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

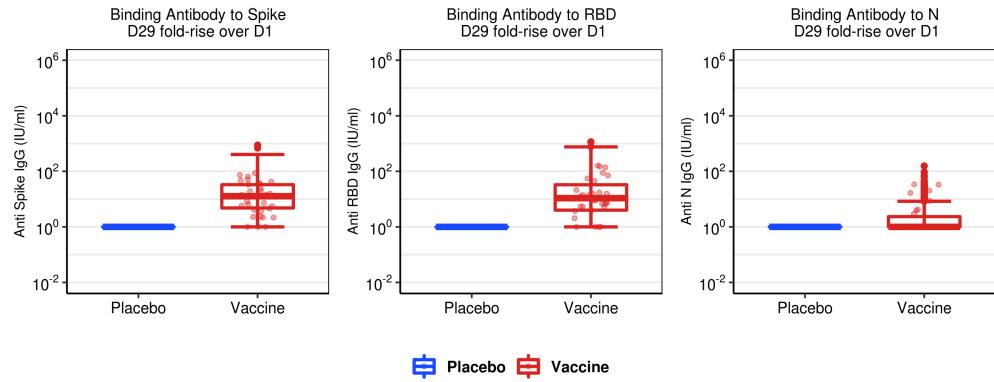


Figure 2.19: Boxplots of D29 fold-rise over D1 Ab markers: baseline negative vaccine + placebo arms

### 2.4.2 Baseline SARS-CoV-2 Positive

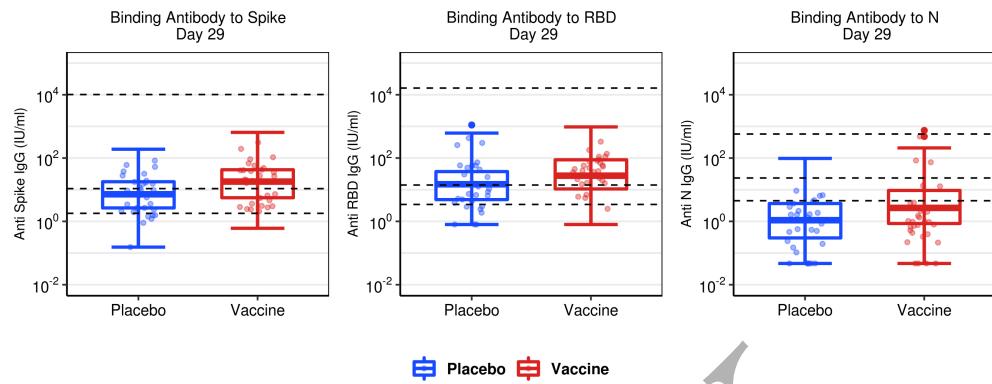


Figure 2.20: Boxplots of D29 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

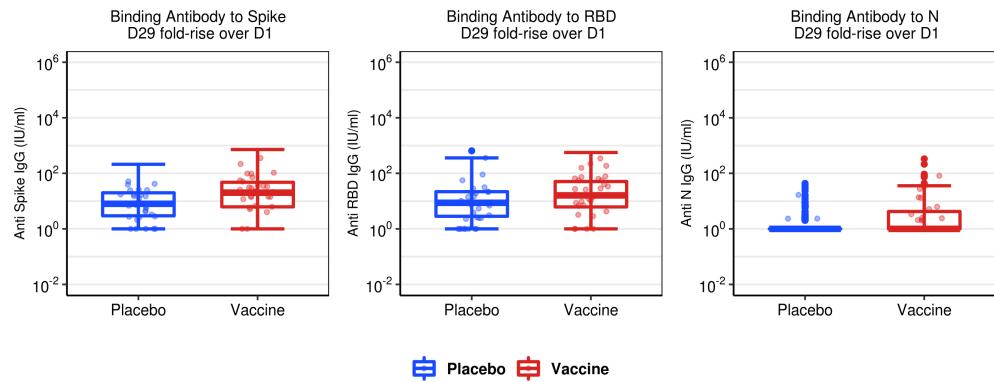


Figure 2.21: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine + placebo arms

### 2.4.3 Baseline negative vs. positive vaccine recipients

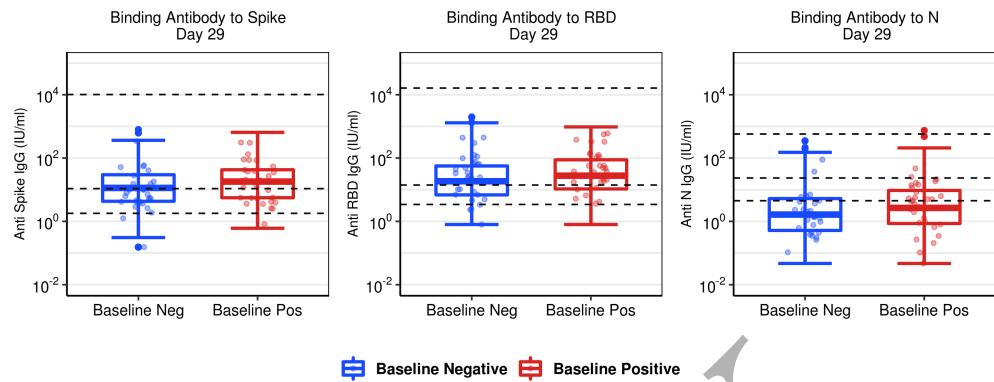


Figure 2.22: Boxplots of D29 Ab markers: baseline positive + negative vaccine arm. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

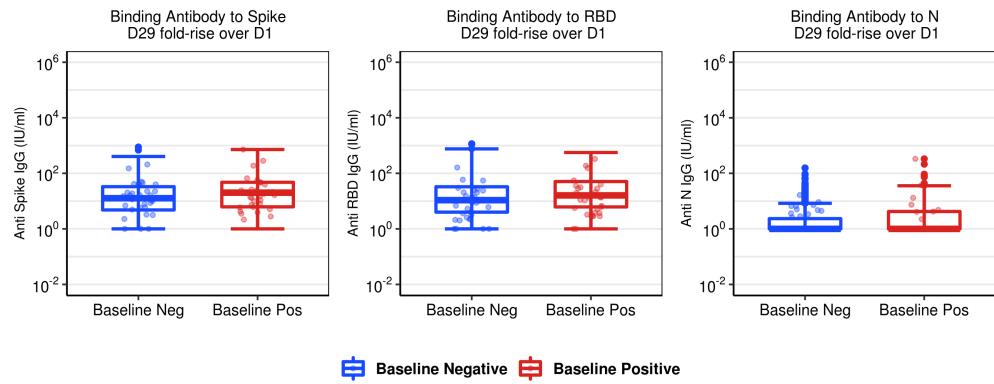


Figure 2.23: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative vaccine arm

#### 2.4.4 Baseline negative vs. positive placebo recipients

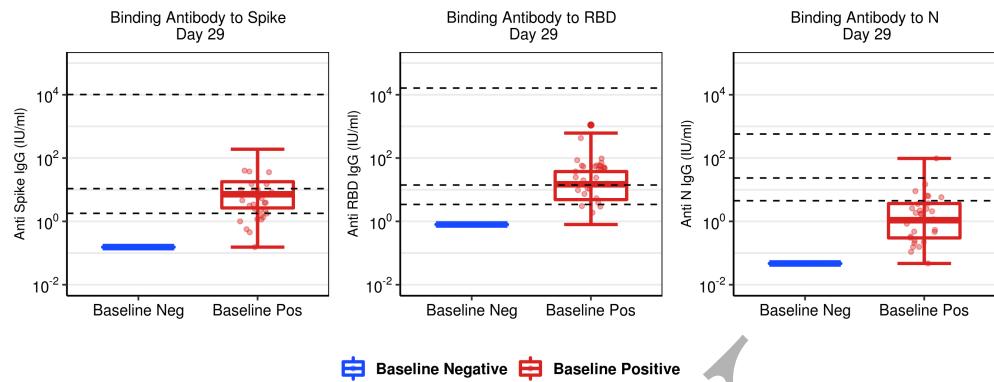


Figure 2.24: Boxplots of D29 Ab markers: baseline positive + negative placebo arm. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

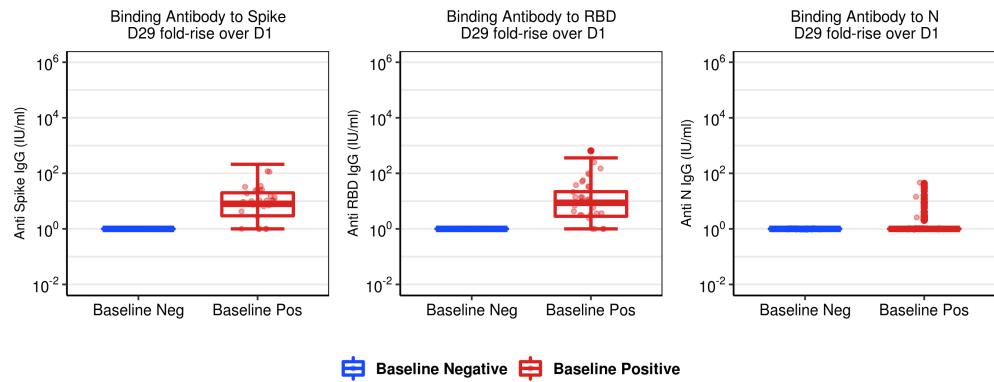


Figure 2.25: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative placebo arm

## 2.5 Spaghetti plots of antibody markers over time for the overall per-protocol cohort

### 2.5.1 Baseline SARS-CoV-2 Negative

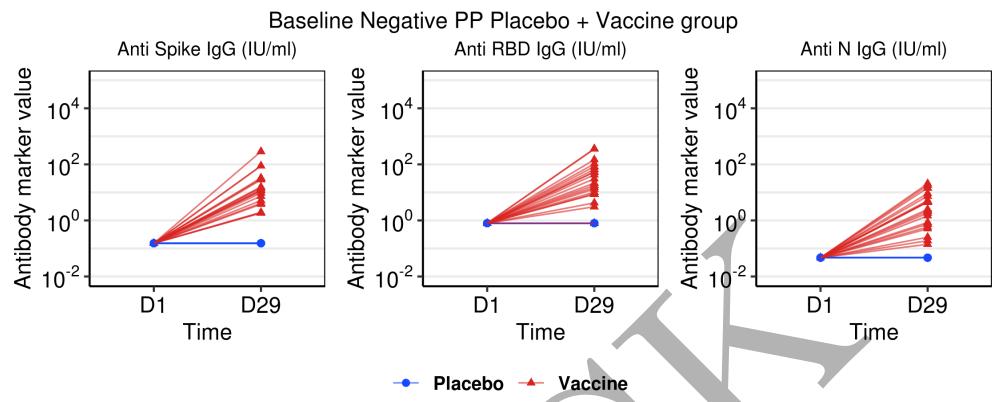


Figure 2.26: Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

### 2.5.2 Baseline SARS-CoV-2 Positive

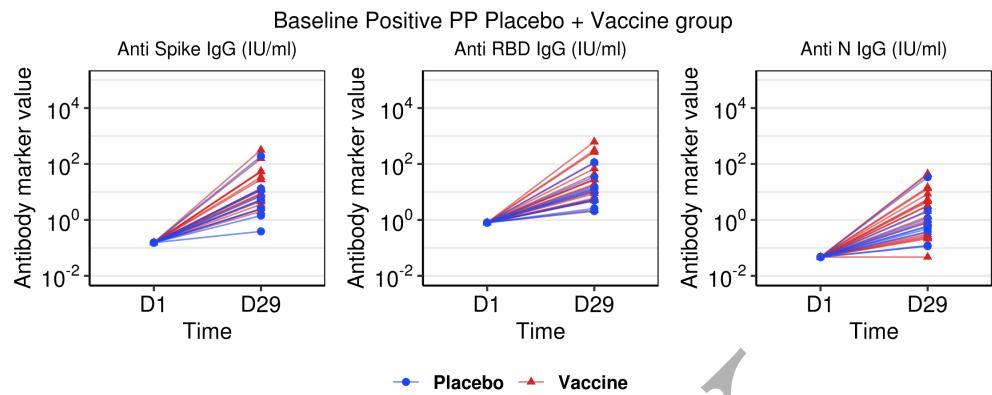


Figure 2.27: Spaghetti plots of Ab markers over time: baseline positive vaccine + placebo arm

## 2.6 RCDF plots of antibody markers by demographics for per-protocol cohort

### 2.6.1 Baseline SARS-CoV-2 Negative

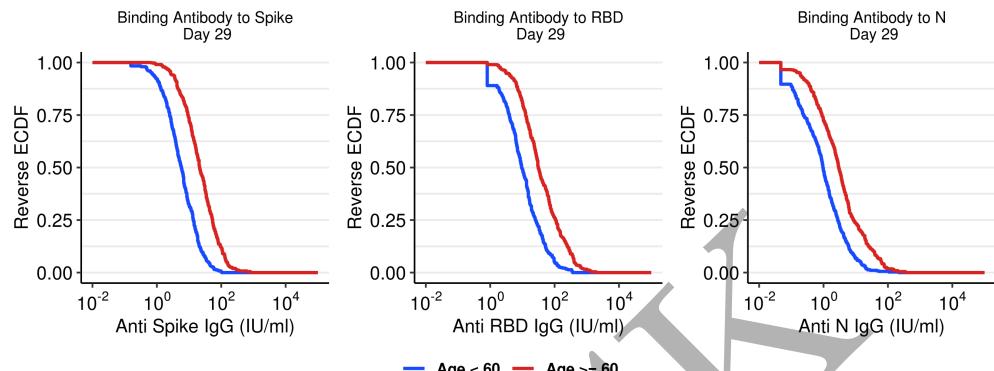


Figure 2.28: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age groups.

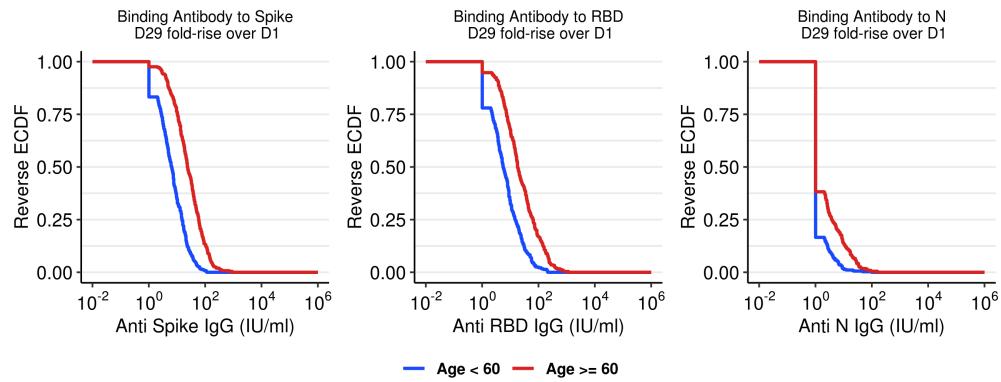


Figure 2.29: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age groups.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT269

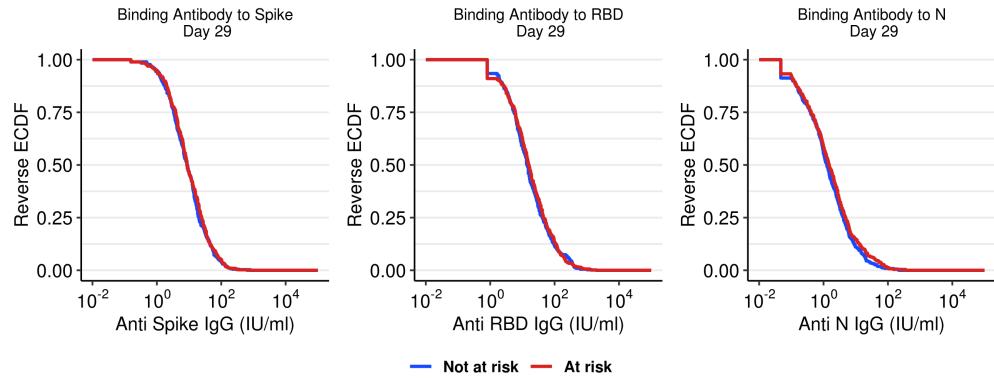


Figure 2.30: RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

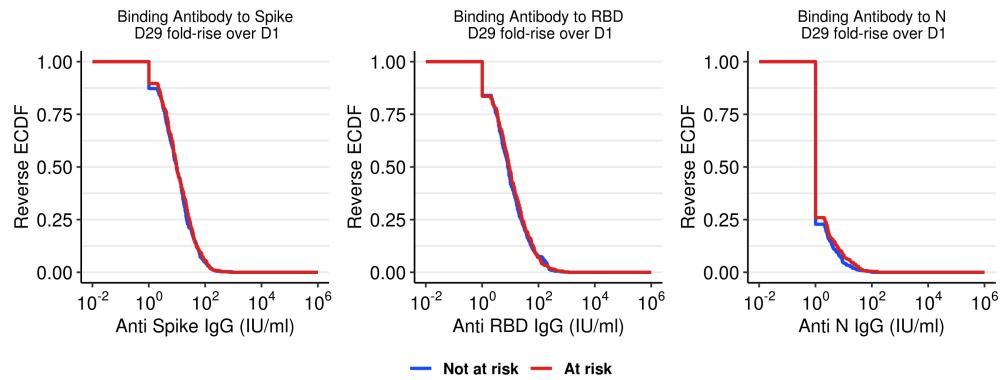


Figure 2.31: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT271

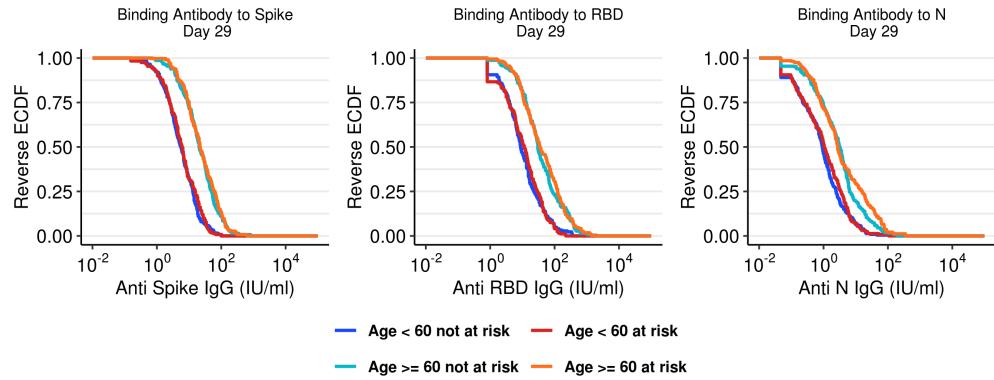


Figure 2.32: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

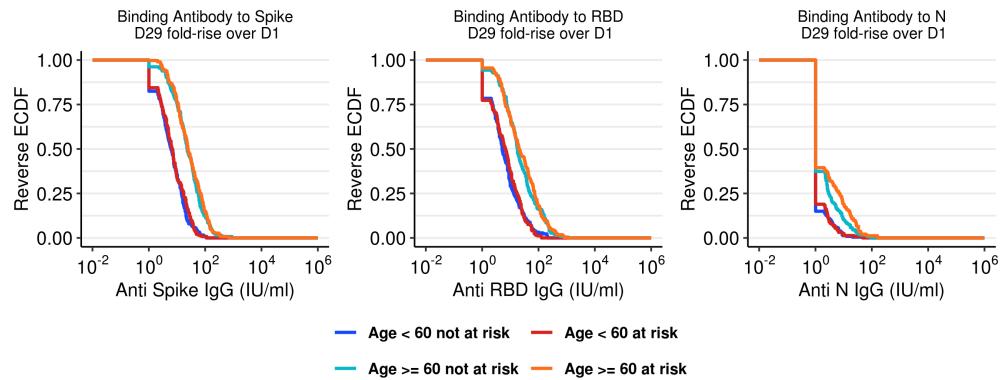


Figure 2.33: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT273

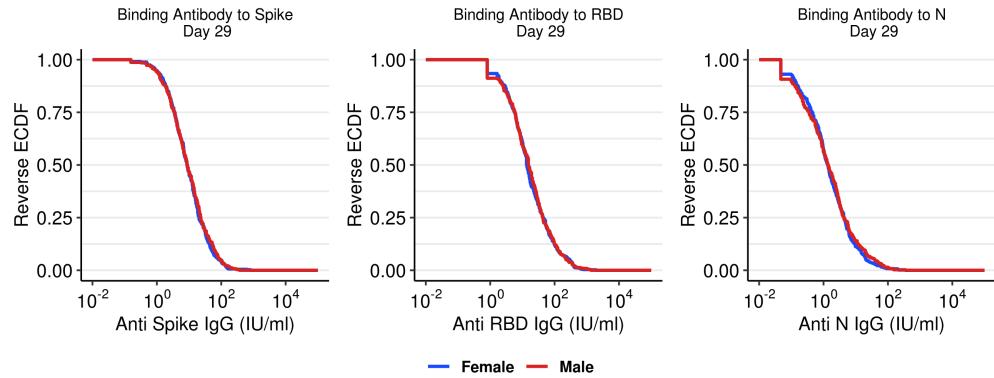


Figure 2.34: RCDF plots for D29 Ab markers: baseline negative vaccine arm by sex assigned at birth.

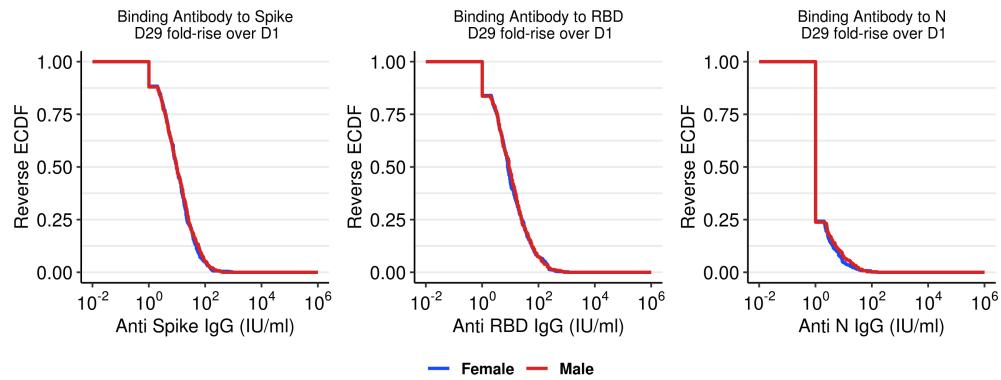


Figure 2.35: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT275

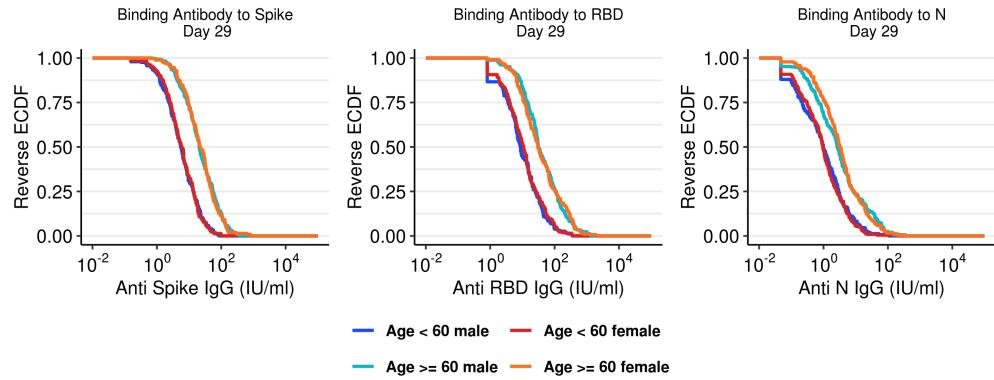


Figure 2.36: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

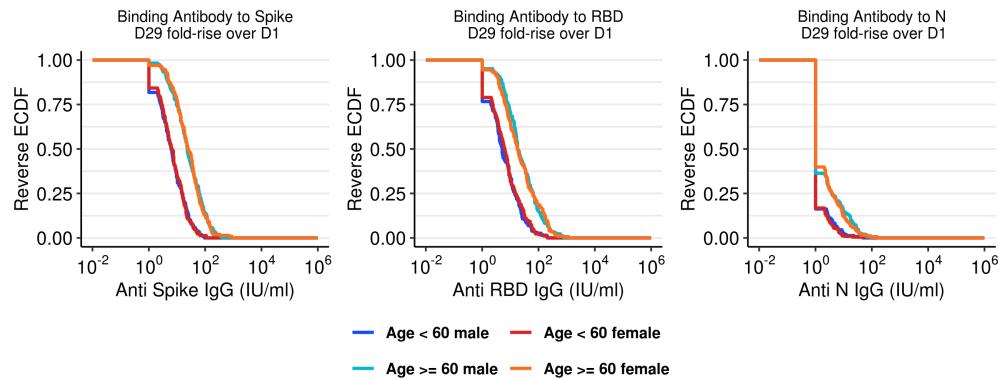


Figure 2.37: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT277

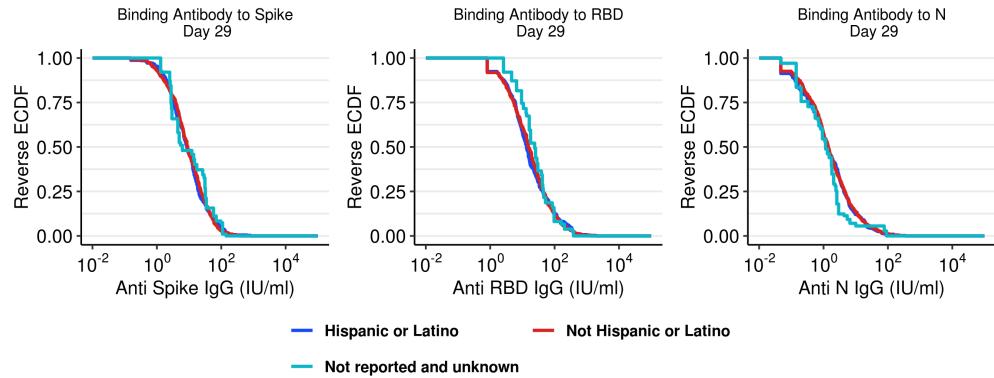


Figure 2.38: RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

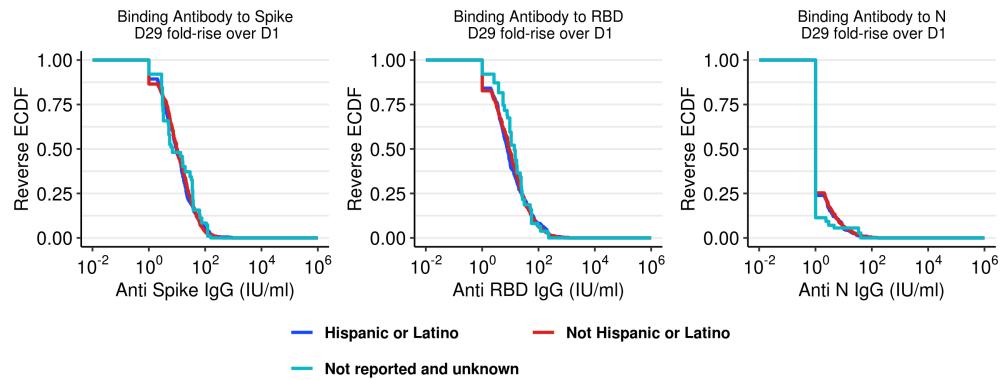


Figure 2.39: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT279

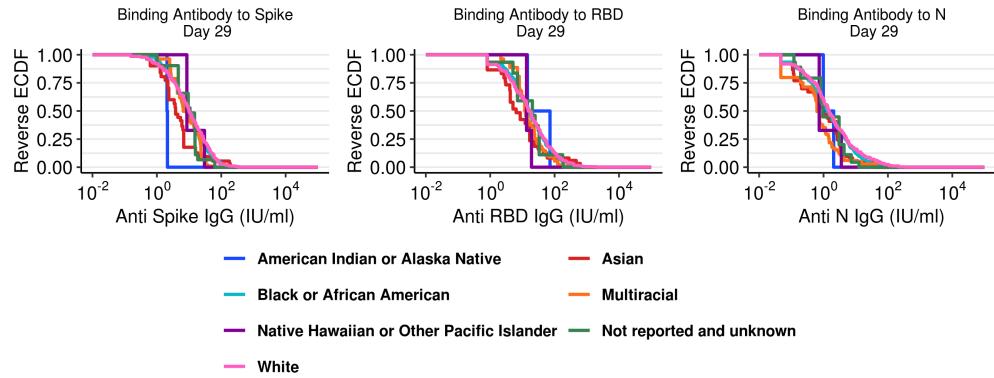


Figure 2.40: RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

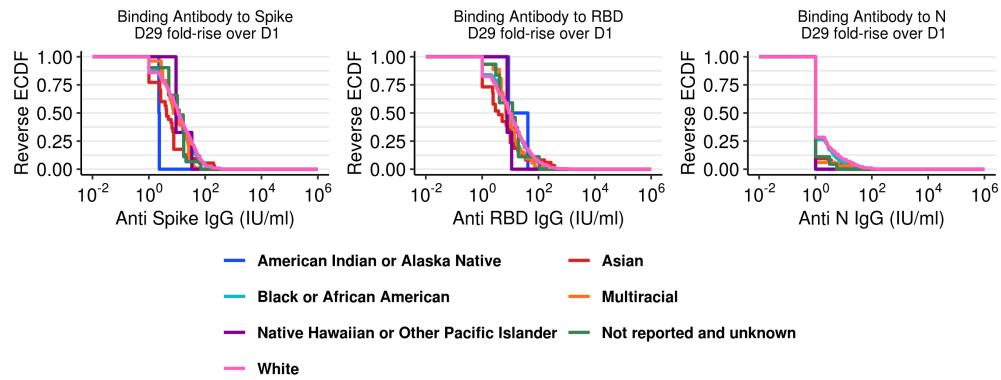


Figure 2.41: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by race.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT281

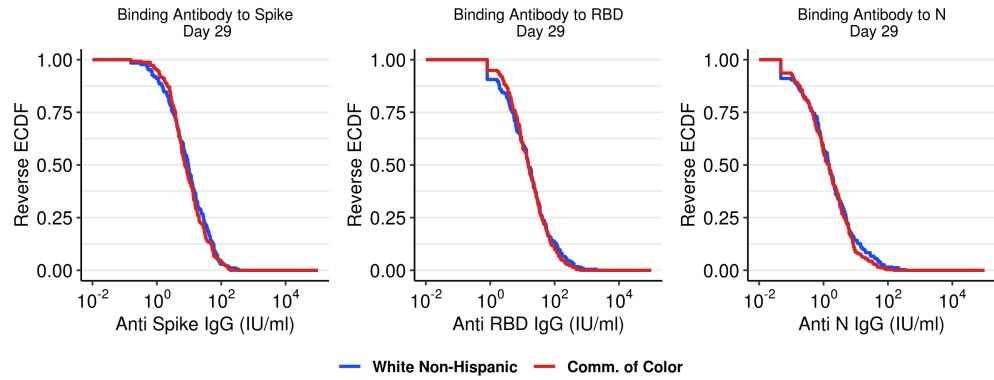


Figure 2.42: RCDF plots for D29 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

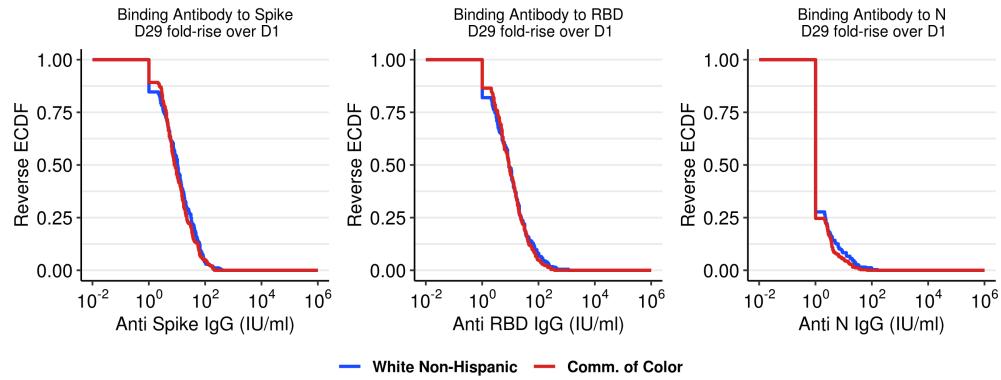


Figure 2.43: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT283

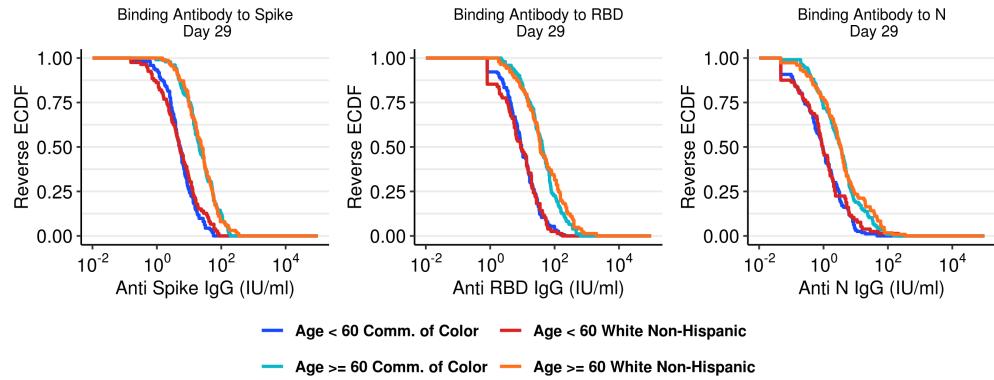


Figure 2.44: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

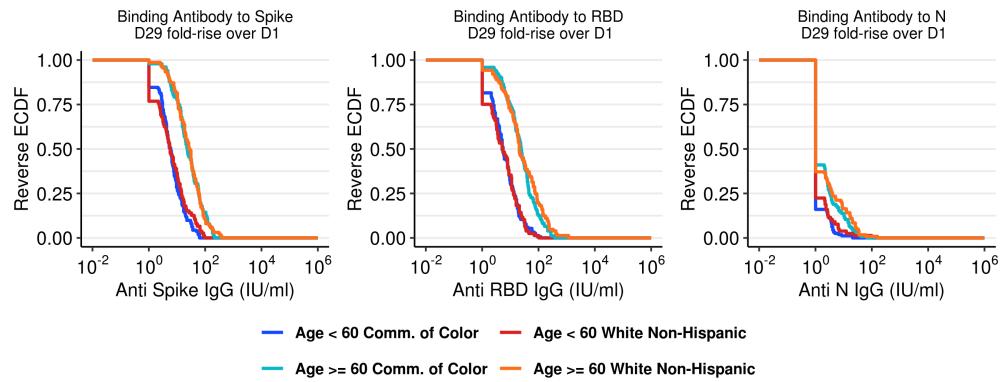


Figure 2.45: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT285

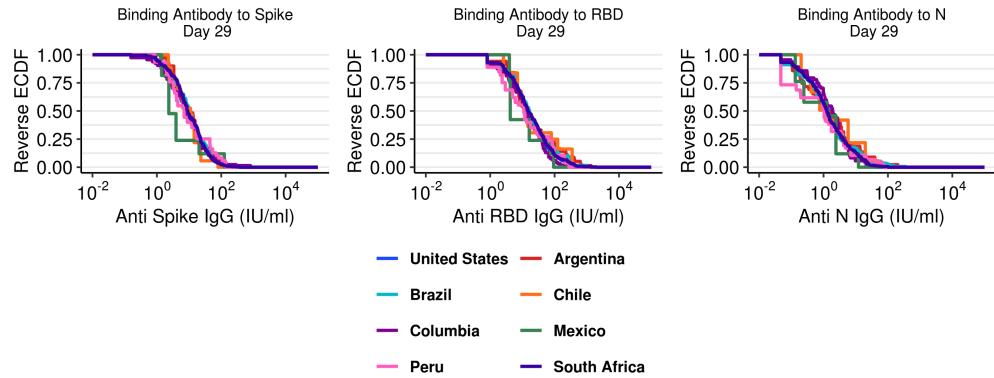


Figure 2.46: RCDF plots for D29 Ab markers: baseline negative vaccine arm by country of residence.

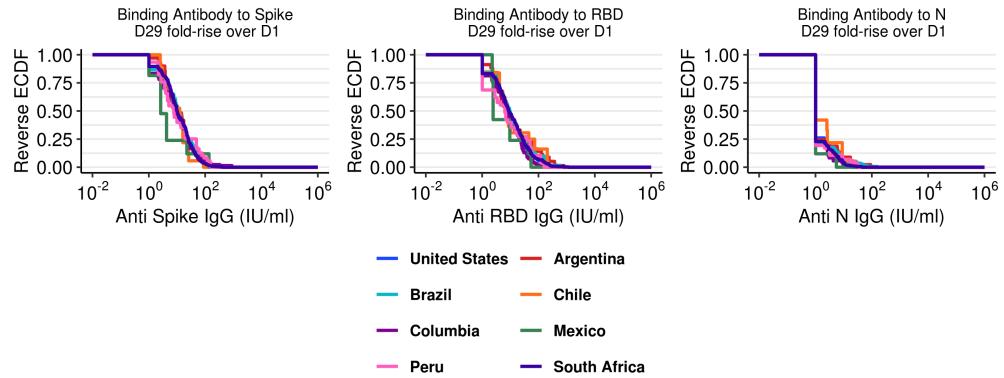


Figure 2.47: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by country of residence.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT287

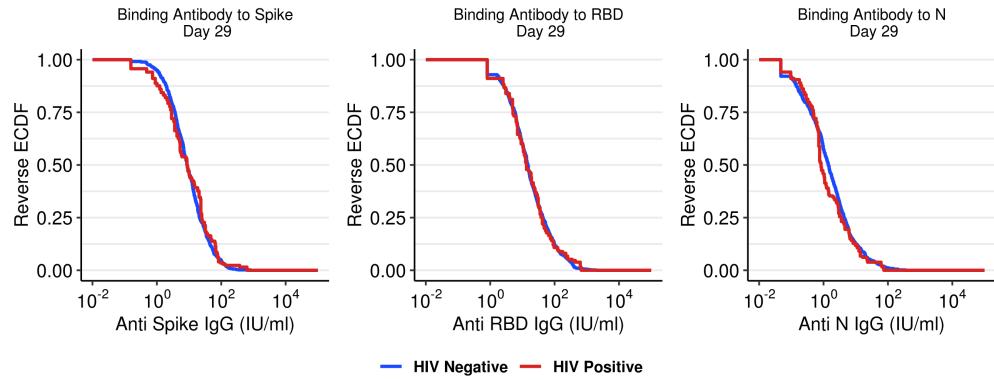


Figure 2.48: RCDF plots for D29 Ab markers: baseline negative vaccine arm by HIV positivity.

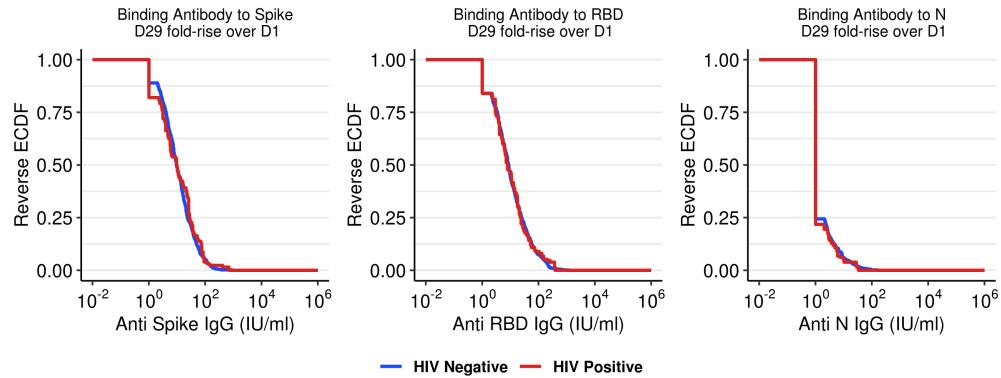


Figure 2.49: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by HIV positivity.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT289

### 2.6.2 Baseline SARS-CoV-2 Positive

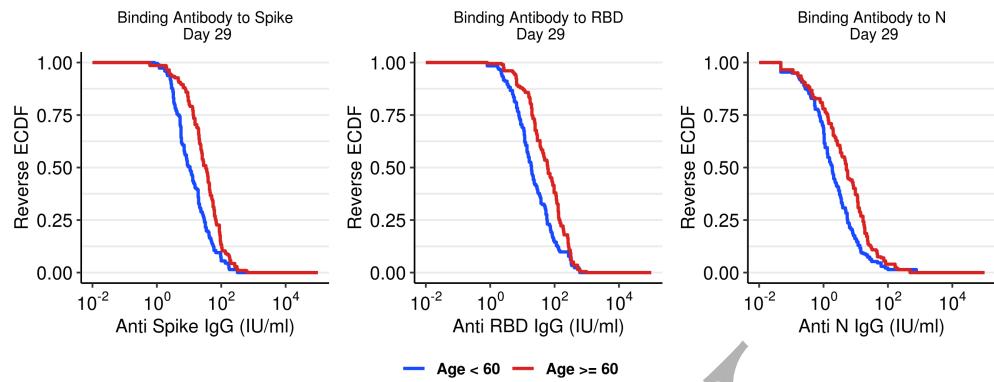


Figure 2.50: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age groups.

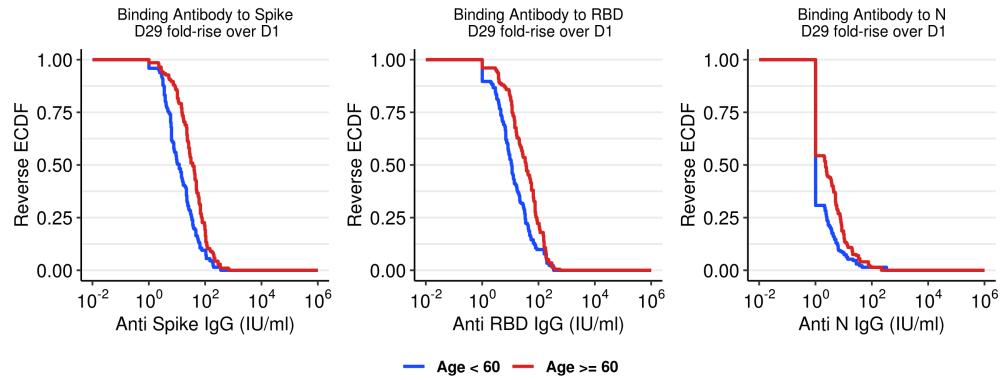


Figure 2.51: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age groups.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT291

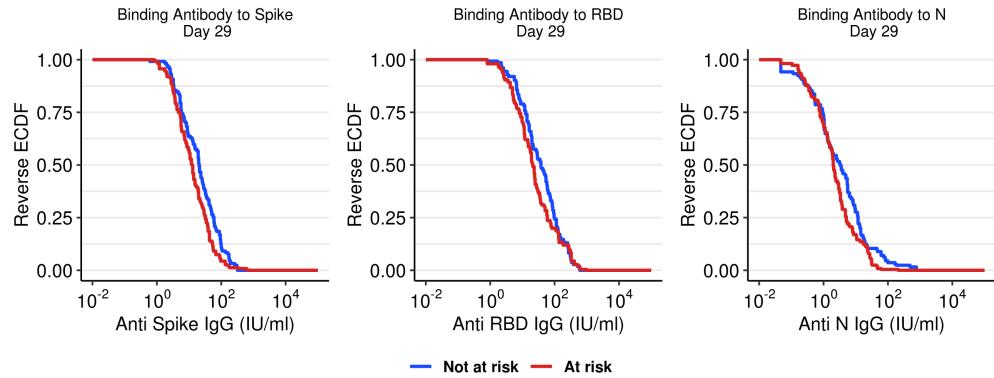


Figure 2.52: RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

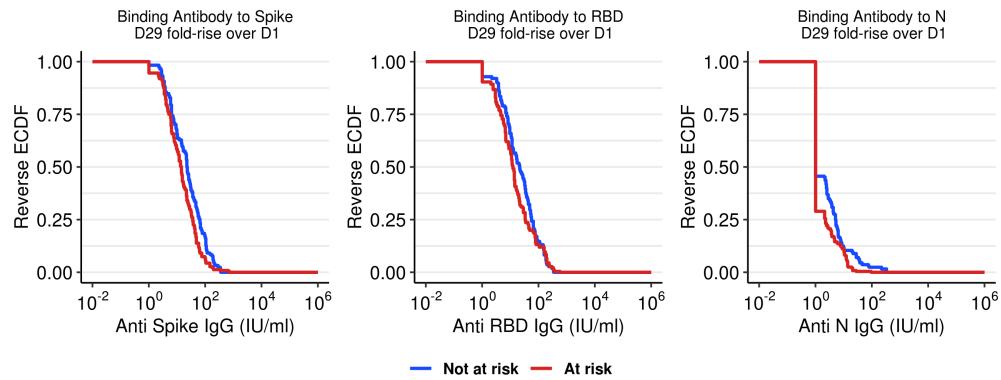


Figure 2.53: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT293

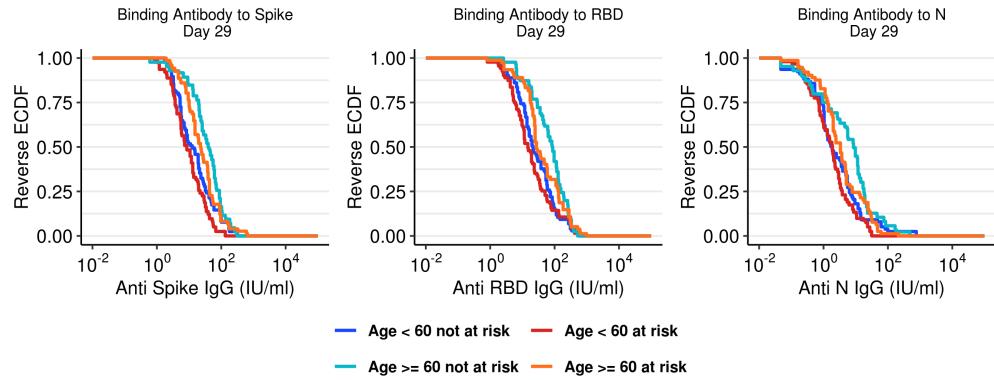


Figure 2.54: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

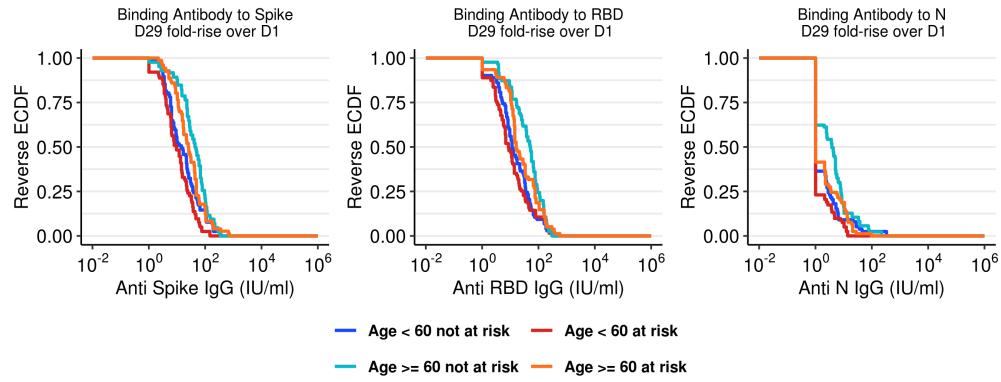


Figure 2.55: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT295

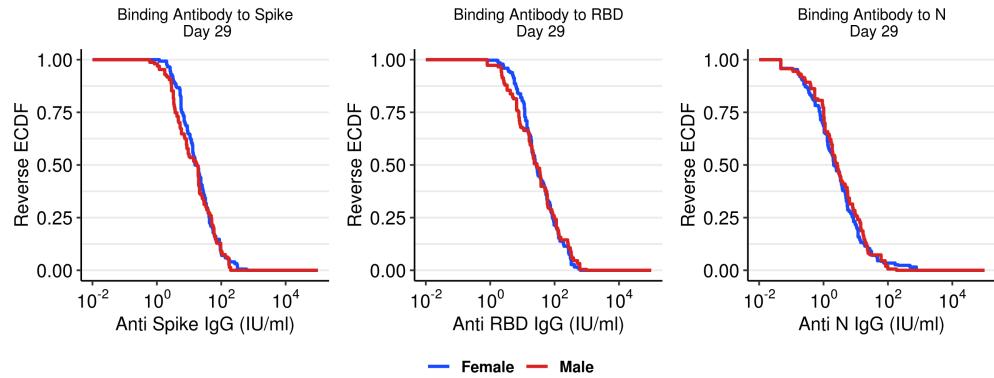


Figure 2.56: RCDF plots for D29 Ab markers: baseline positive vaccine arm by sex assigned at birth.

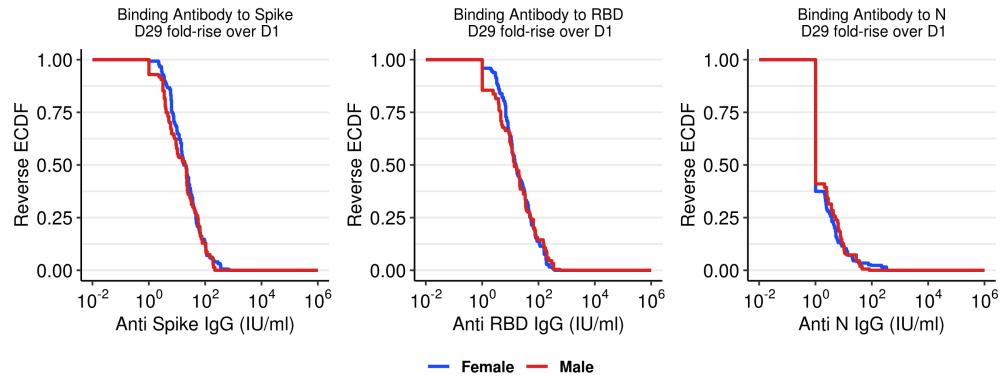


Figure 2.57: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT297

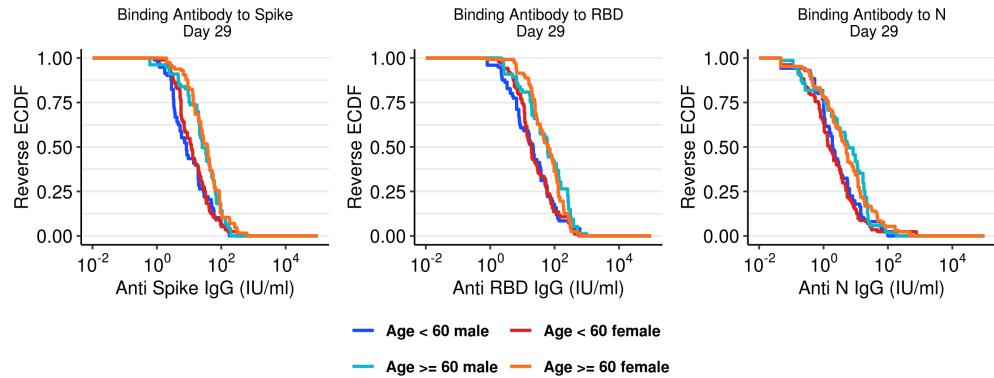


Figure 2.58: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

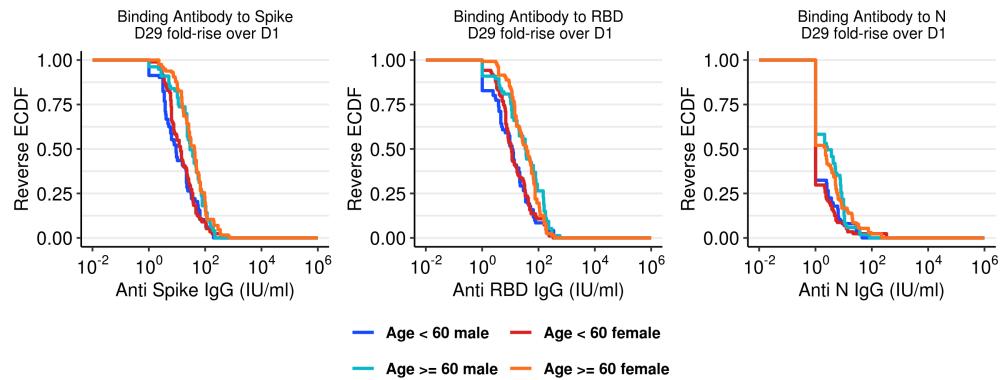


Figure 2.59: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT299

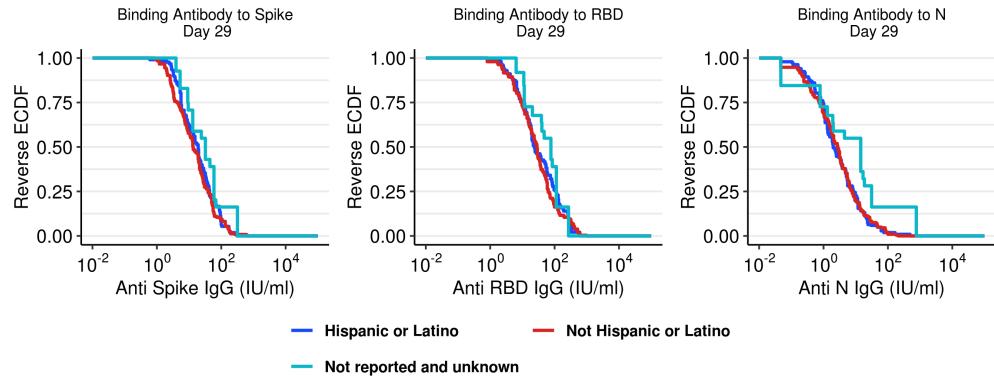


Figure 2.60: RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

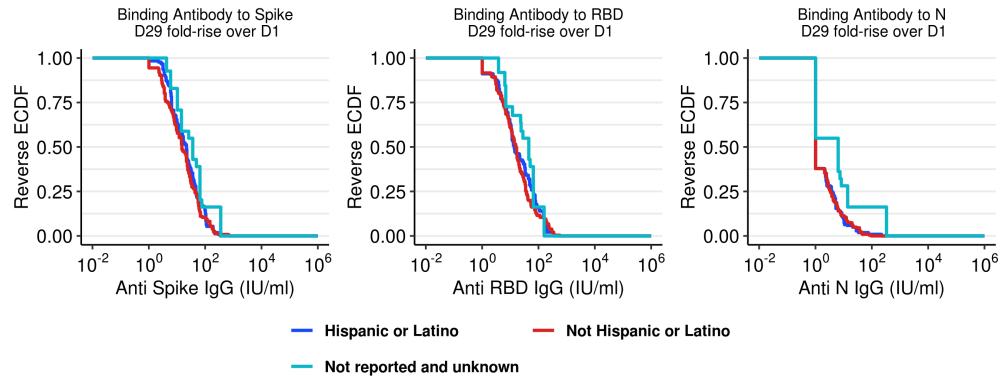


Figure 2.61: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT301

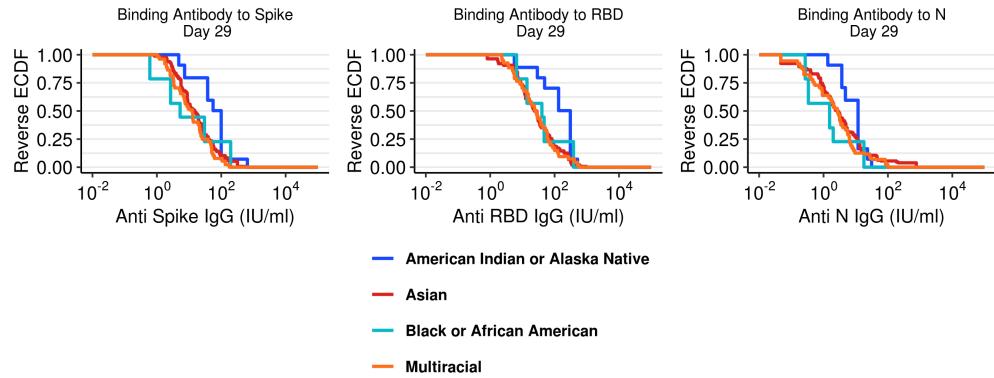


Figure 2.62: RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

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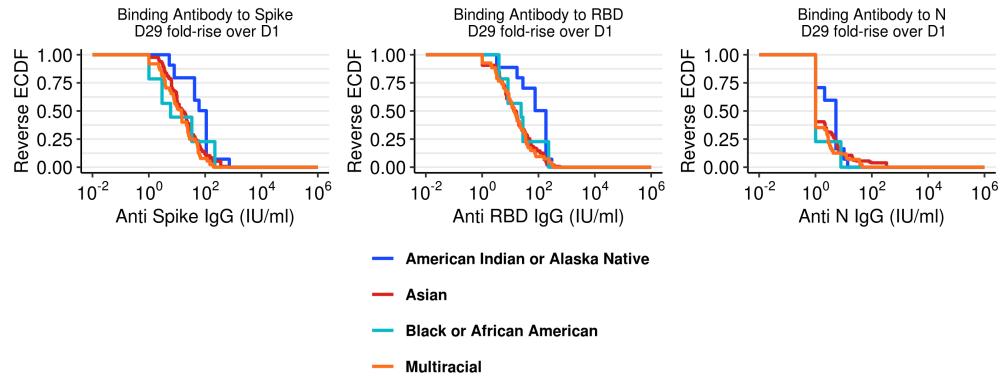


Figure 2.63: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT303

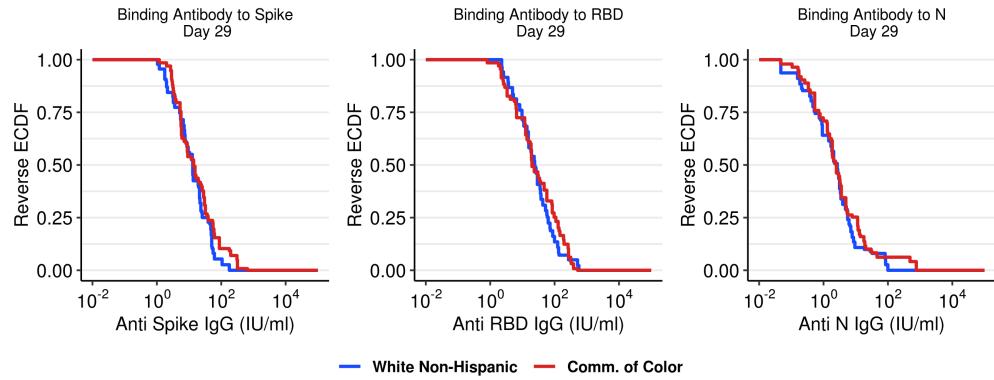


Figure 2.64: RCDF plots for D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

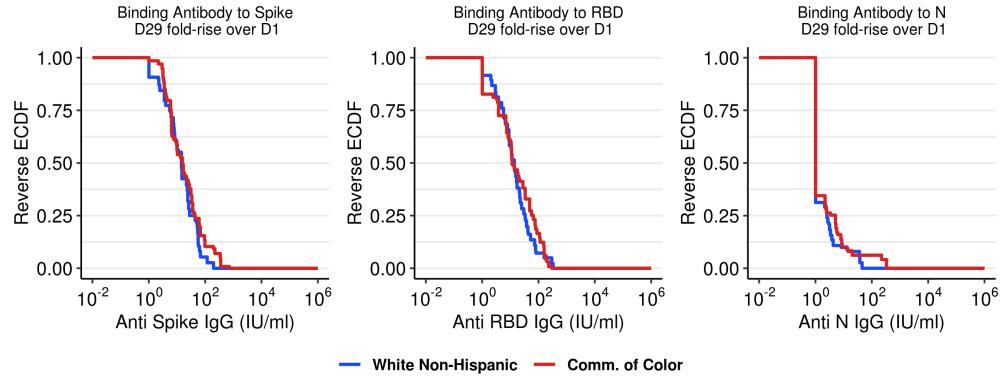


Figure 2.65: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT305

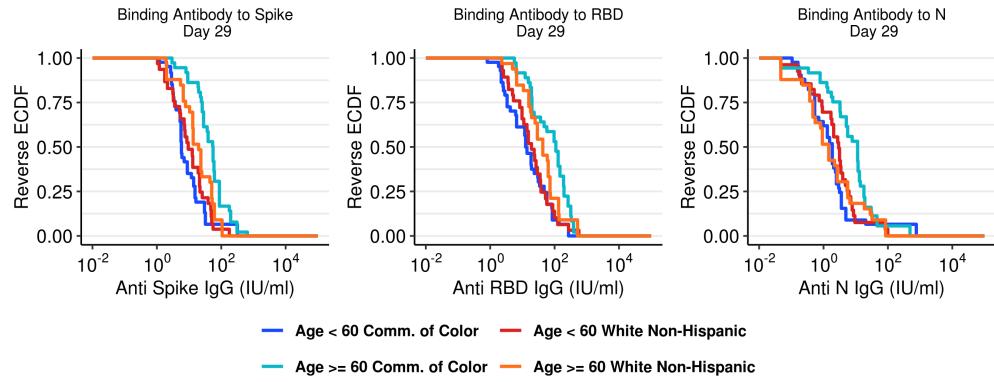


Figure 2.66: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

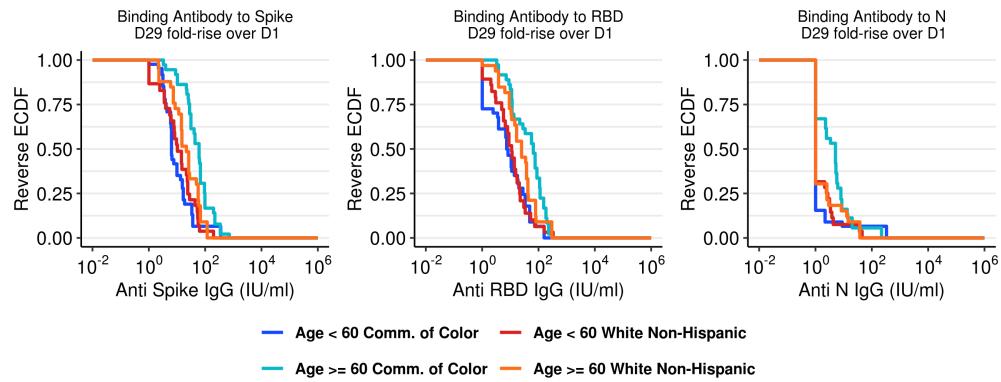


Figure 2.67: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT307

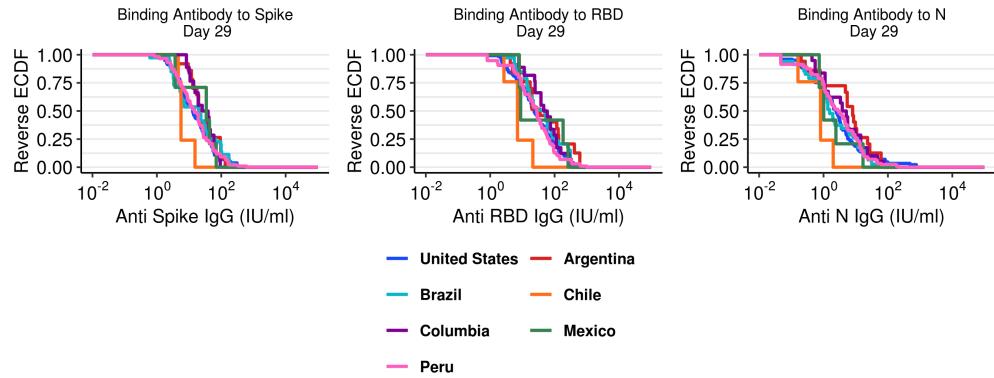


Figure 2.68: RCDF plots for D29 Ab markers: baseline positive vaccine arm by country of residence.

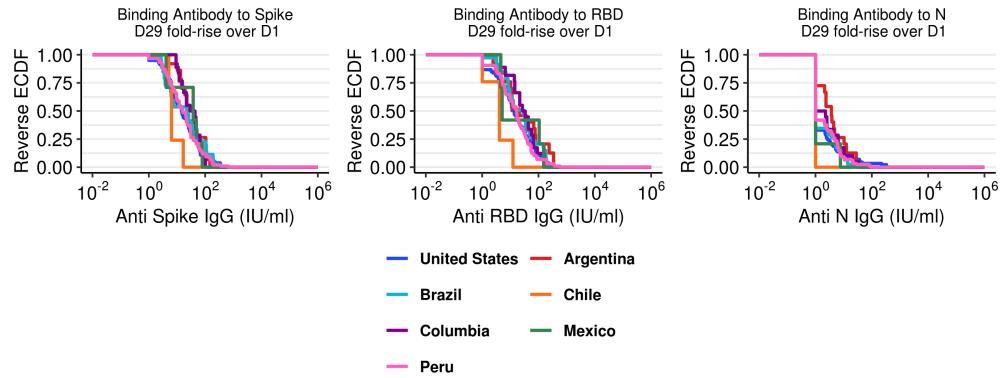


Figure 2.69: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT309

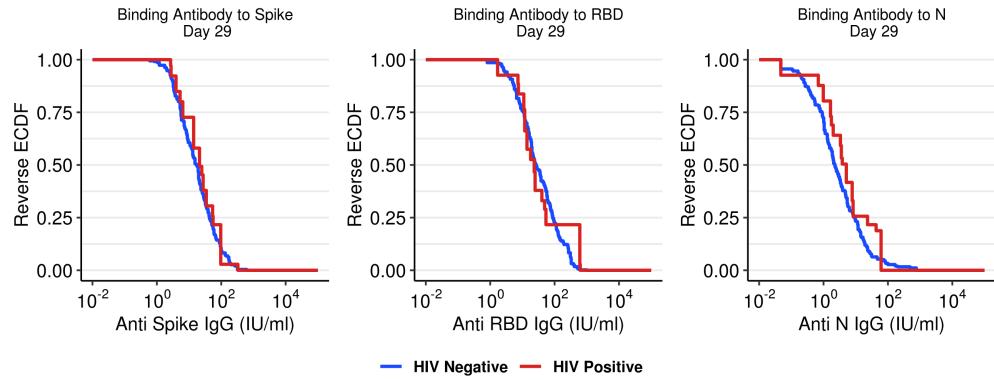


Figure 2.70: RCDF plots for D29 Ab markers: baseline positive vaccine arm by HIV positivity.

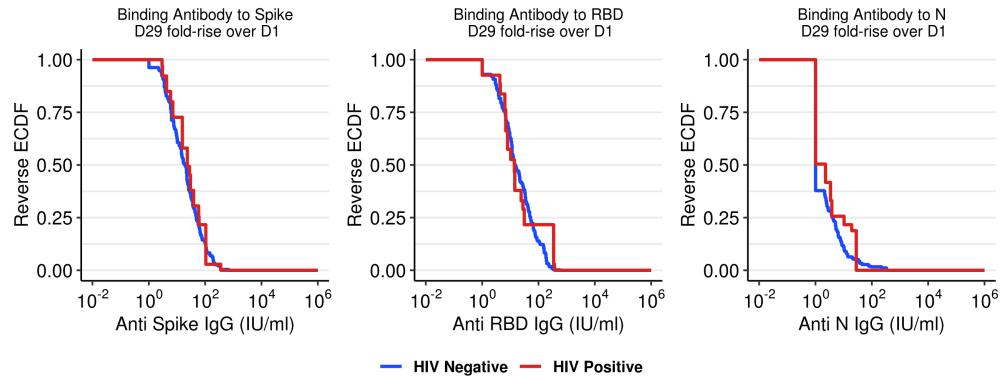


Figure 2.71: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT311

### 2.6.3 Baseline SARS-CoV-2 Positive Placebo Arm

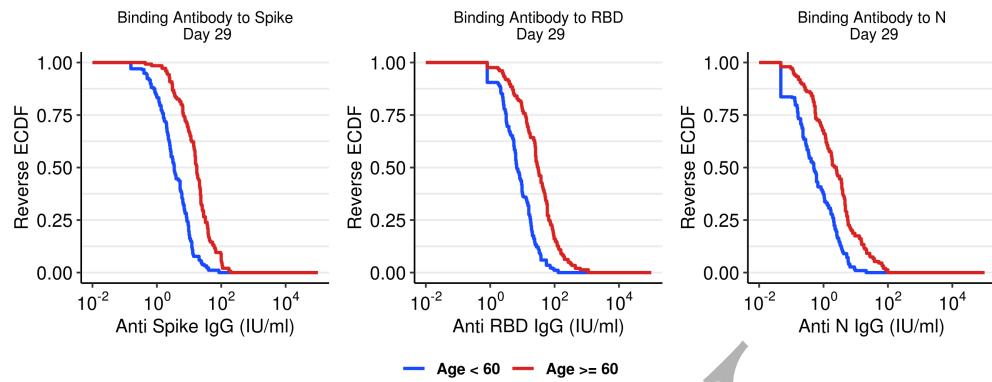


Figure 2.72: RCDF plots for D29 Ab markers: baseline positive placebo arm by age groups.

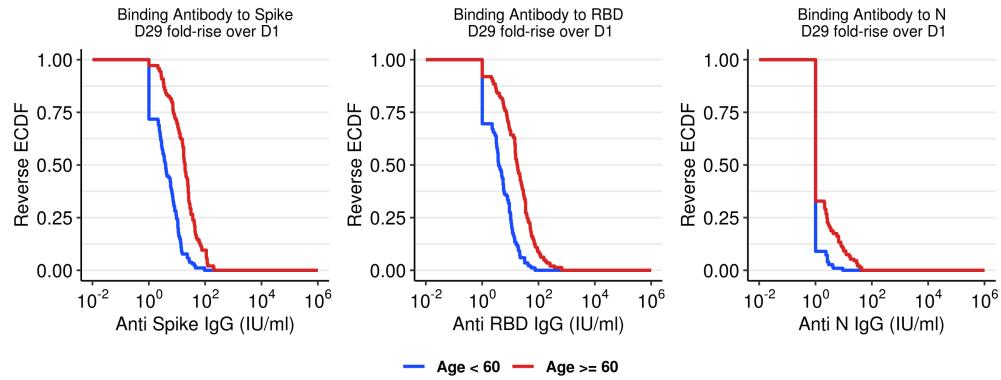


Figure 2.73: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age groups.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT313

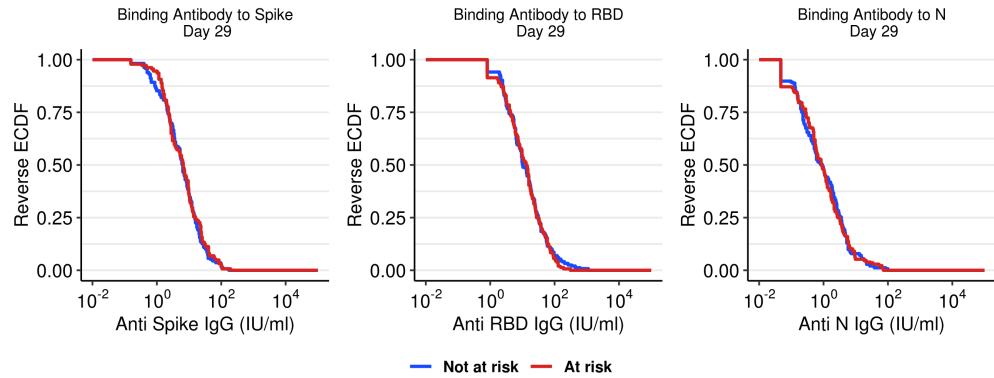


Figure 2.74: RCDF plots for D29 Ab markers: baseline positive placebo arm by high-risk condition.

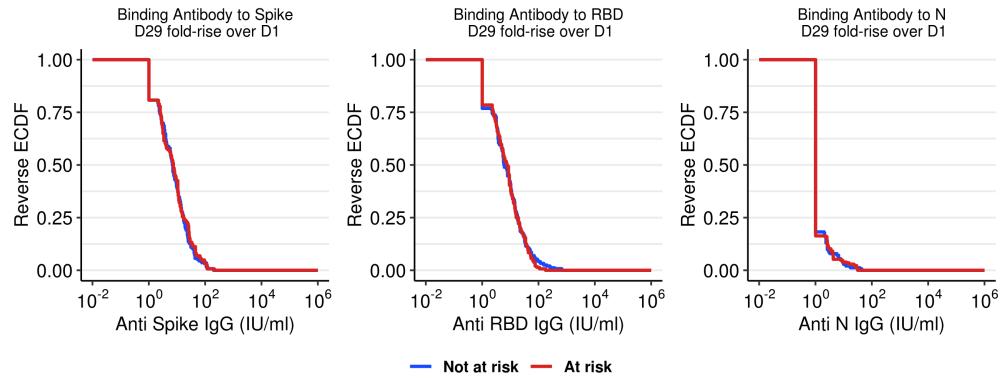


Figure 2.75: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT315

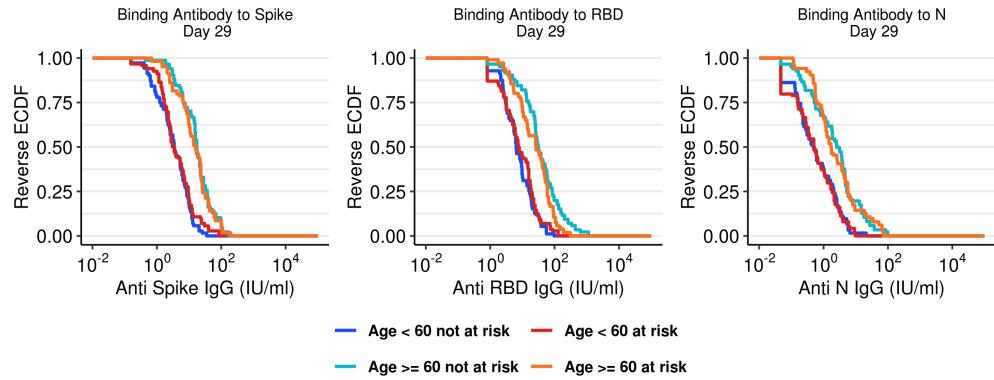


Figure 2.76: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and high-risk condition.

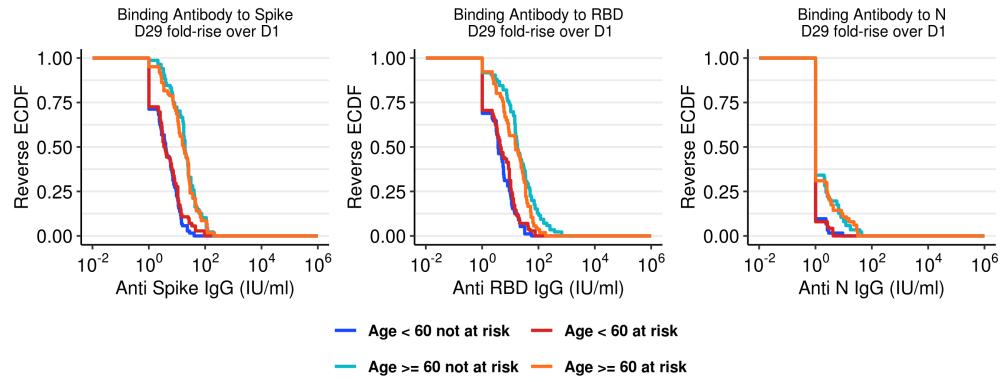


Figure 2.77: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and high-risk condition.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT317

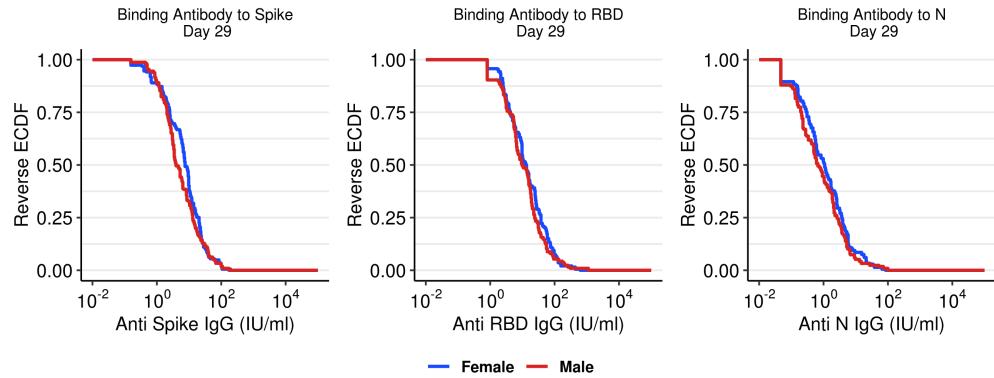


Figure 2.78: RCDF plots for D29 Ab markers: baseline positive placebo arm by sex assigned at birth.

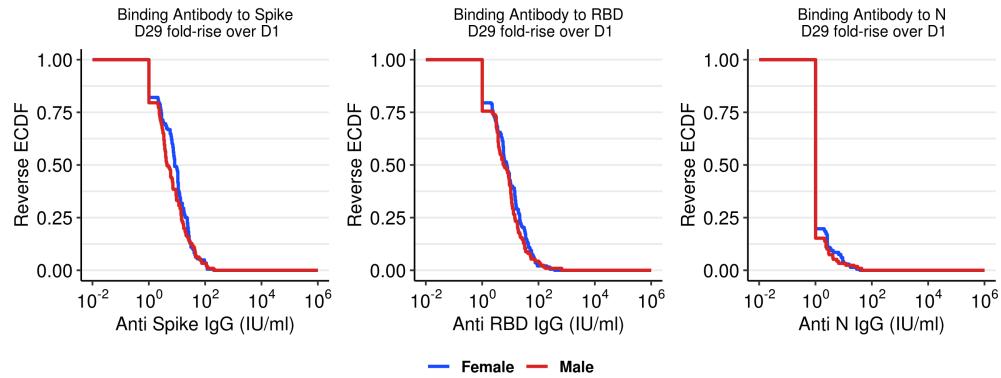


Figure 2.79: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by sex assigned at birth.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT319

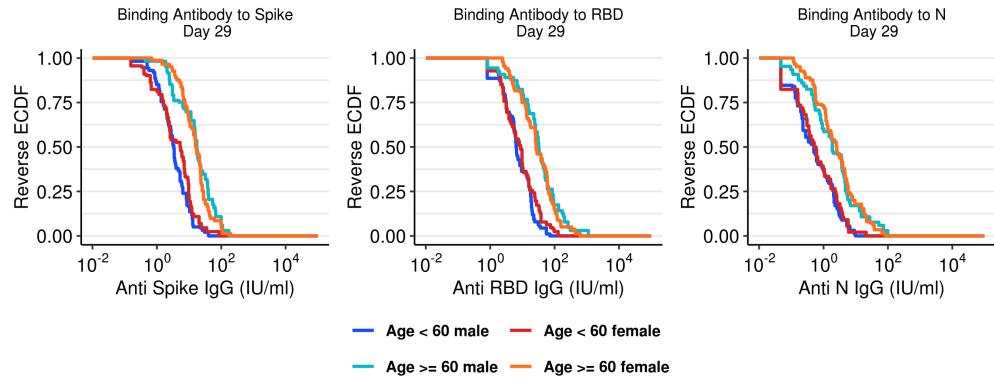


Figure 2.80: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

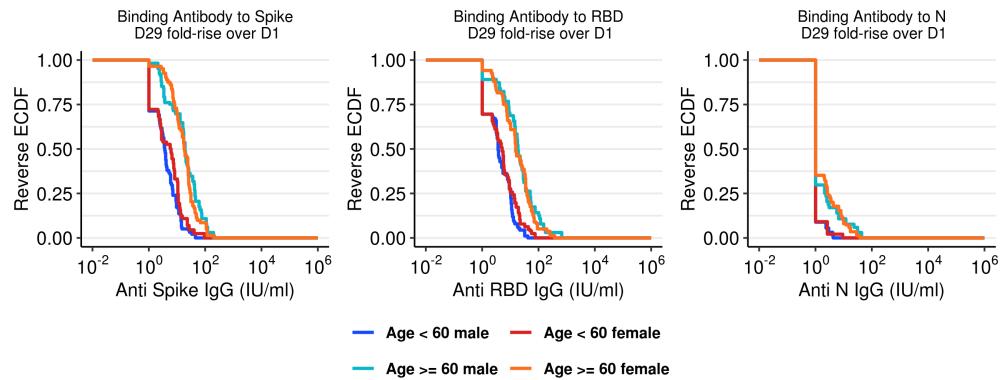


Figure 2.81: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT321

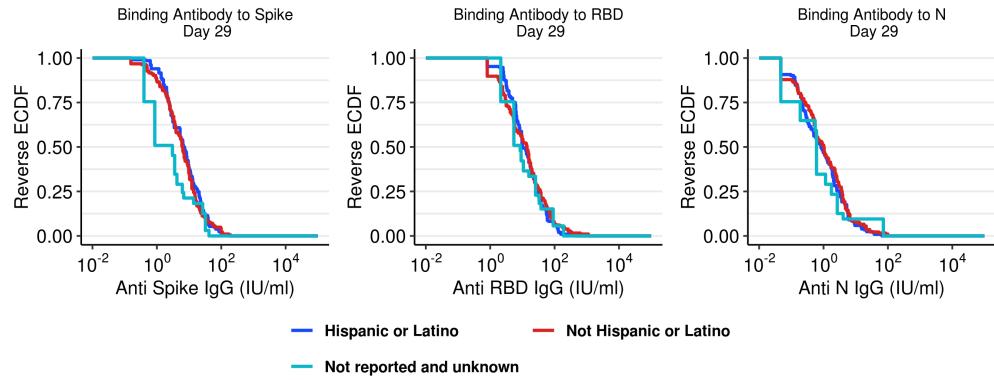


Figure 2.82: RCDF plots for D29 Ab markers: baseline positive placebo arm by ethnicity.

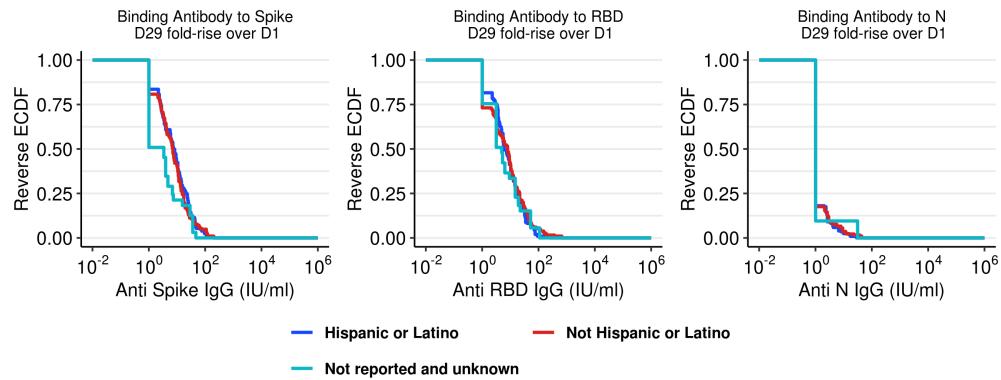


Figure 2.83: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by ethnicity.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT323

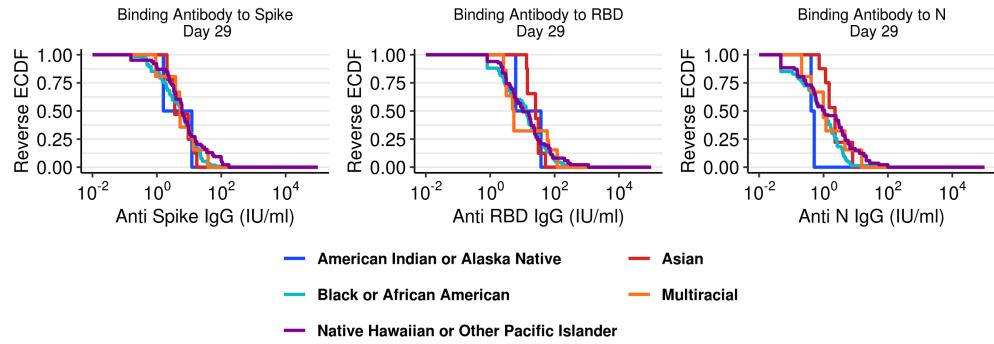


Figure 2.84: RCDF plots for D29 Ab markers: baseline positive placebo arm by race.

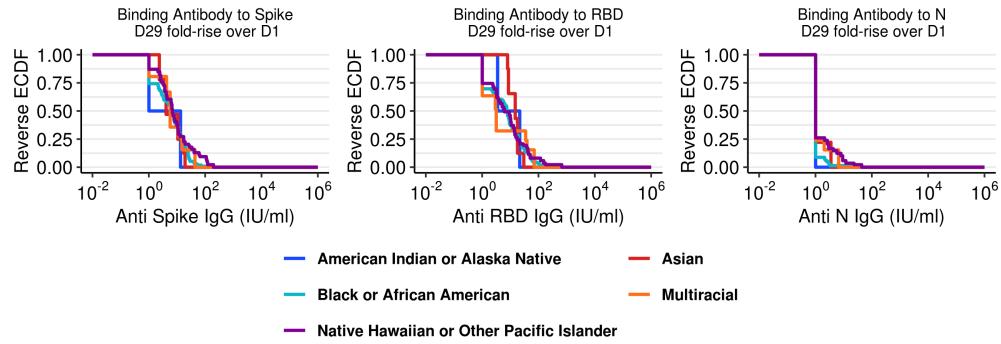


Figure 2.85: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by race.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT325

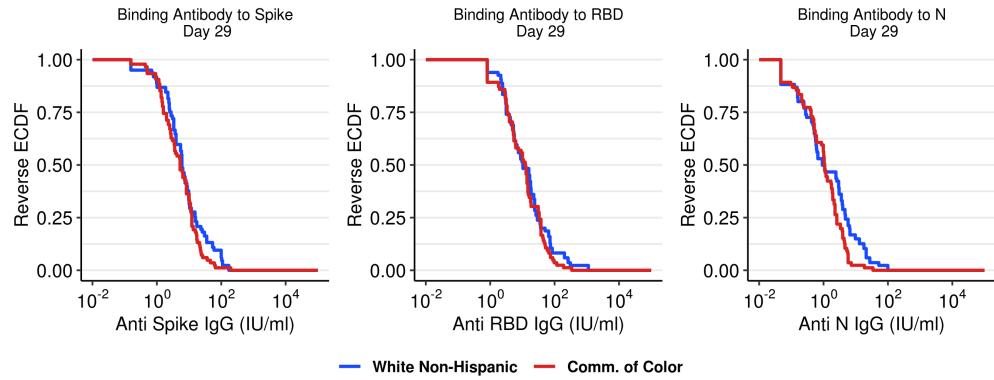


Figure 2.86: RCDF plots for D29 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

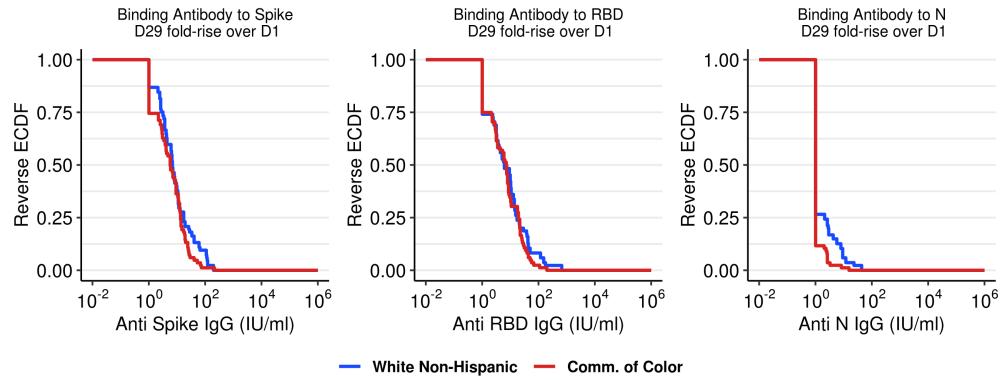


Figure 2.87: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT327

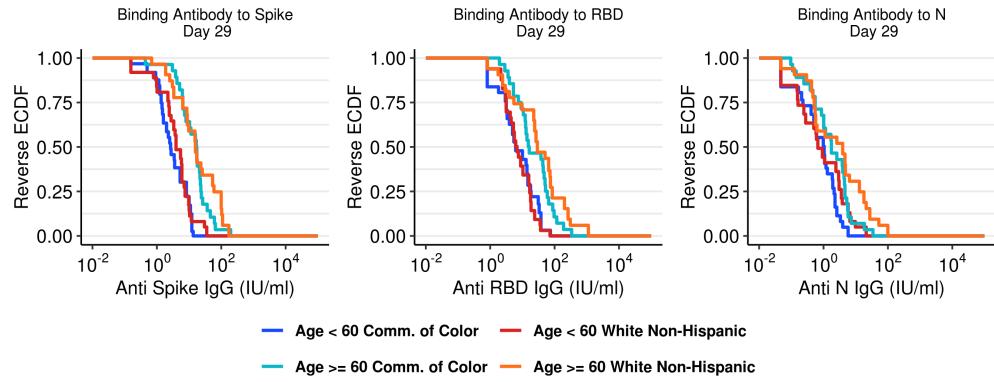


Figure 2.88: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

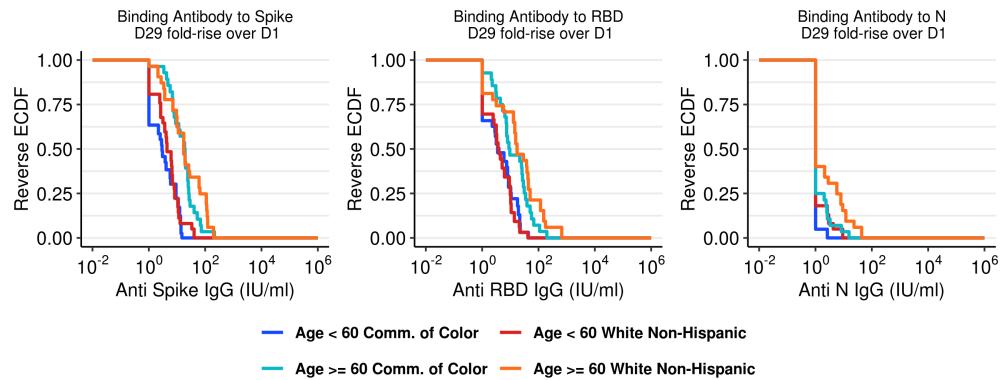


Figure 2.89: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT329

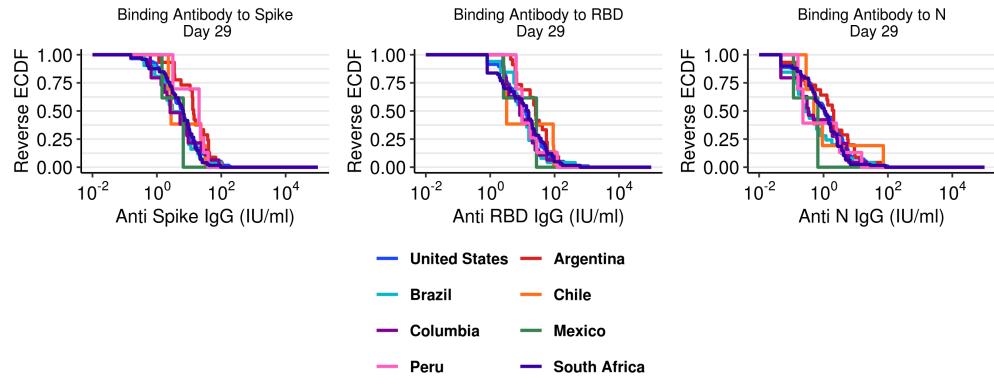


Figure 2.90: RCDF plots for D29 Ab markers: baseline positive placebo arm by country of residence.

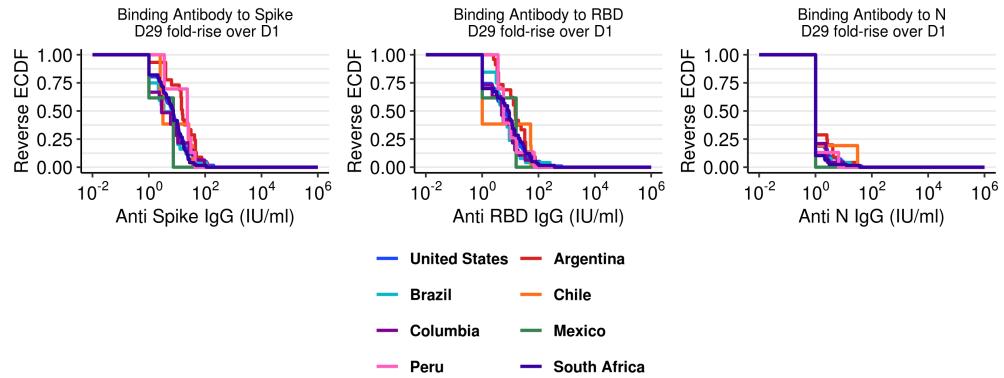


Figure 2.91: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by country of residence.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT331

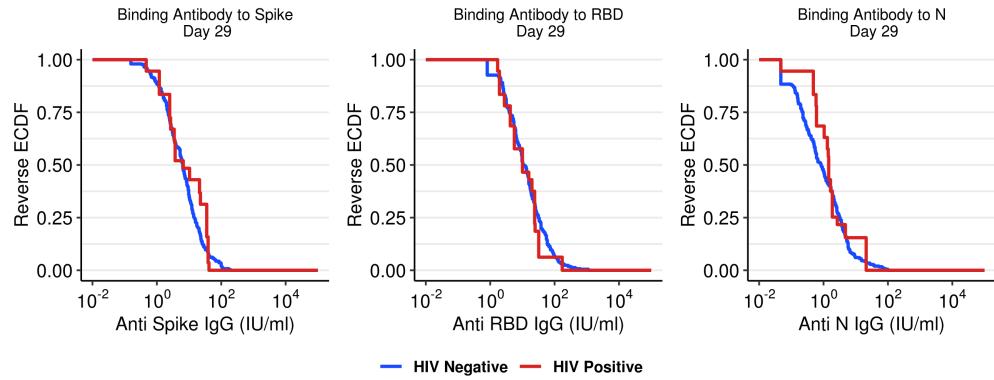


Figure 2.92: RCDF plots for D29 Ab markers: baseline positive placebo arm by HIV positivity.

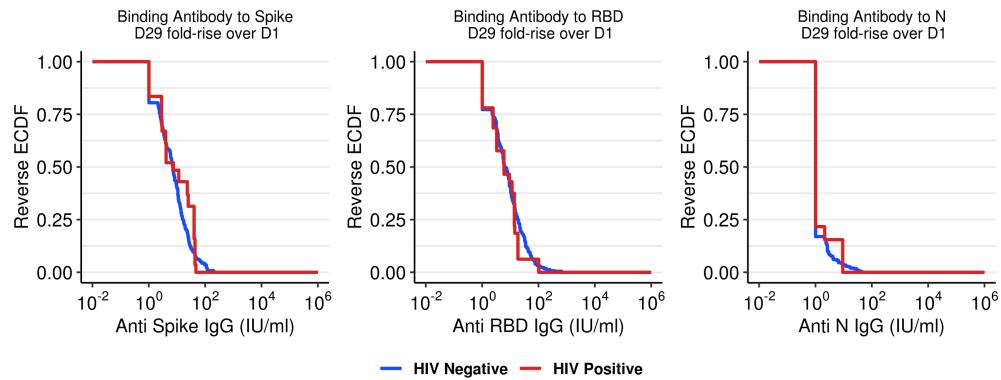


Figure 2.93: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by HIV positivity.

## 2.7 Boxplots of antibody markers by demographics for per-protocol cohort

### 2.7.1 Baseline SARS-CoV-2 Negative

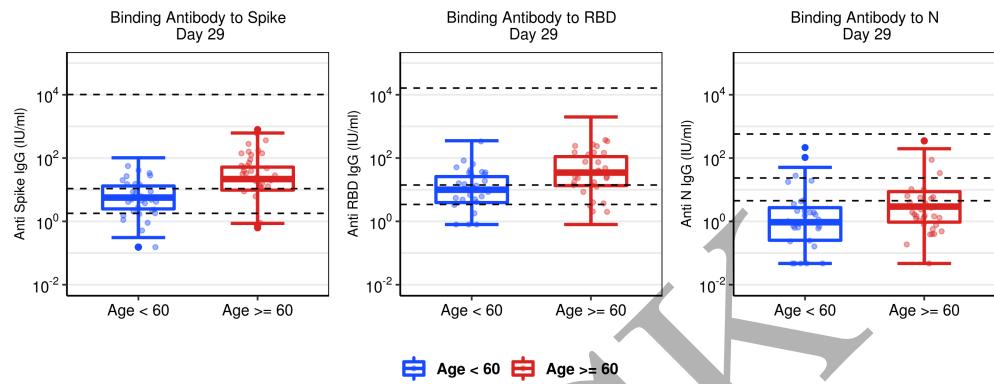


Figure 2.94: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age group. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

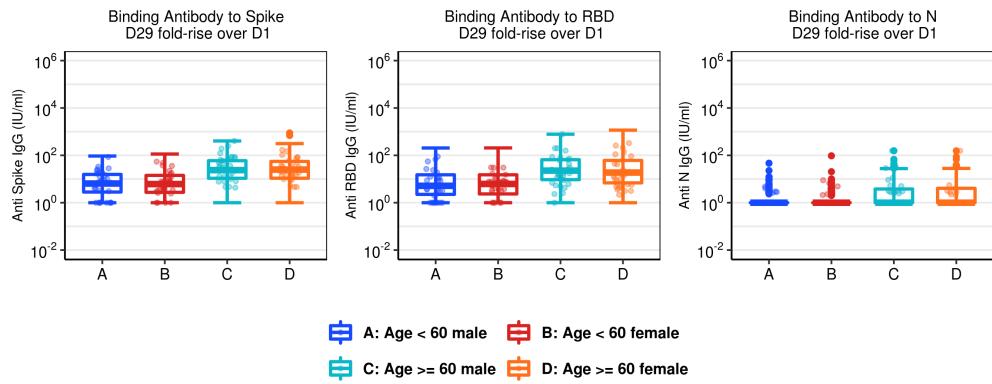


Figure 2.95: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT335

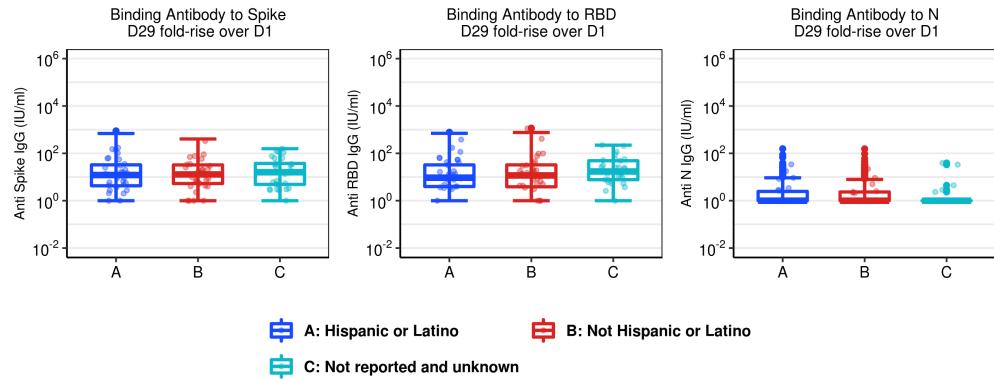


Figure 2.96: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by ethnicity.

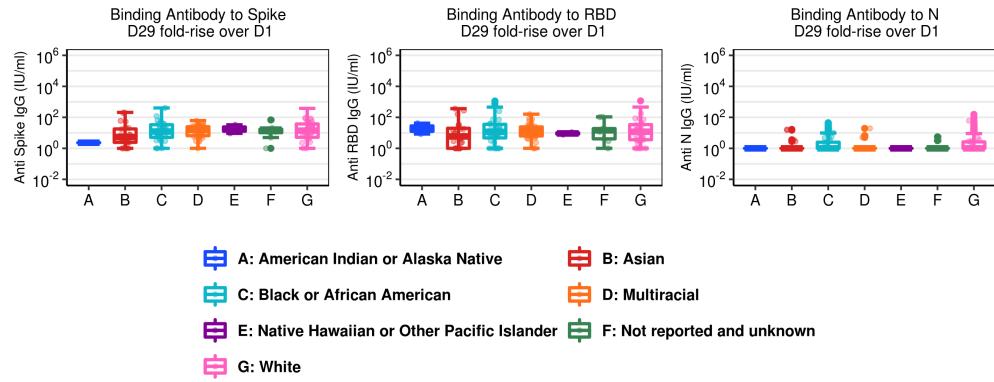


Figure 2.97: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by race.

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## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT337

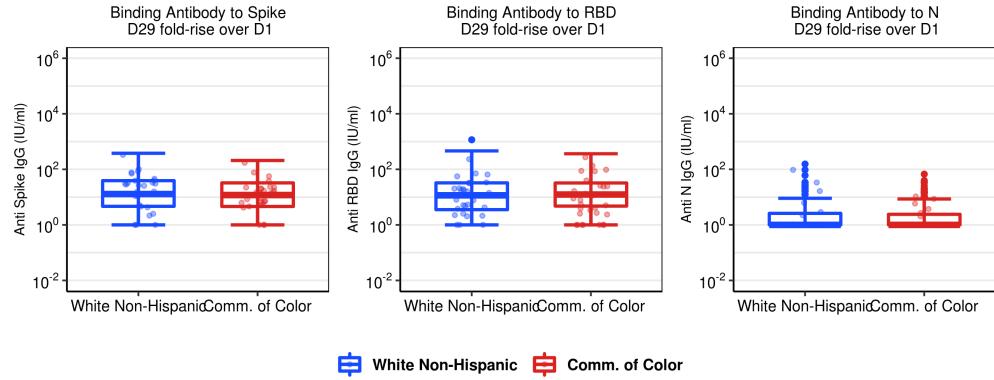


Figure 2.98: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

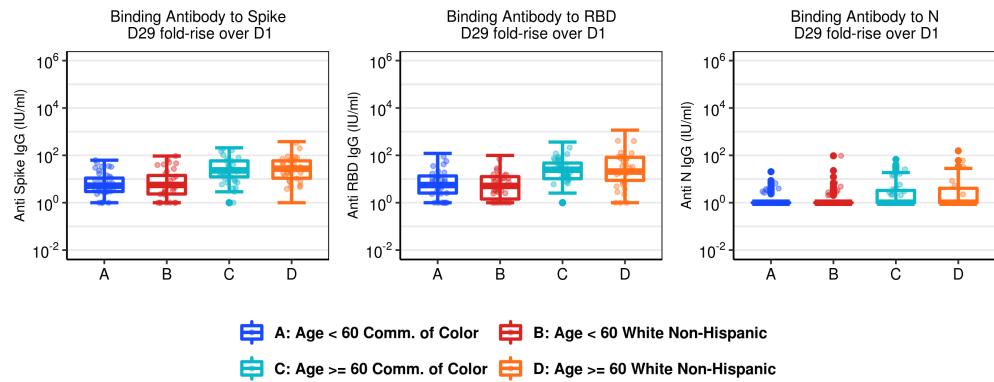


Figure 2.99: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT339

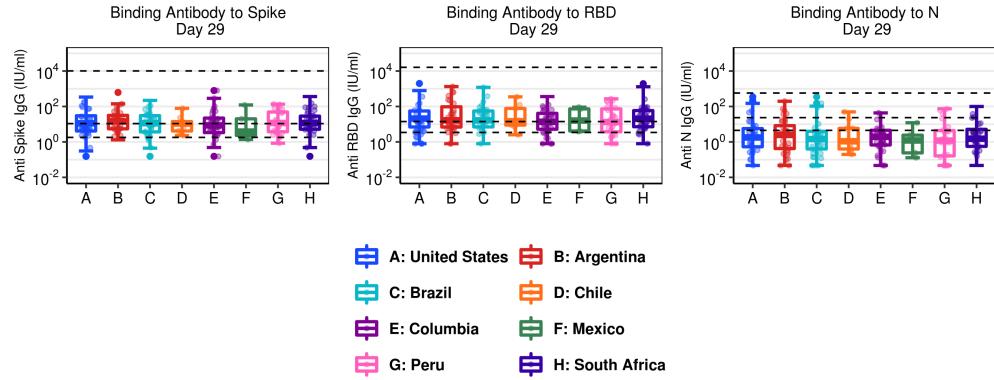


Figure 2.100: Boxplots of D29 Ab markers: Baseline negative vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

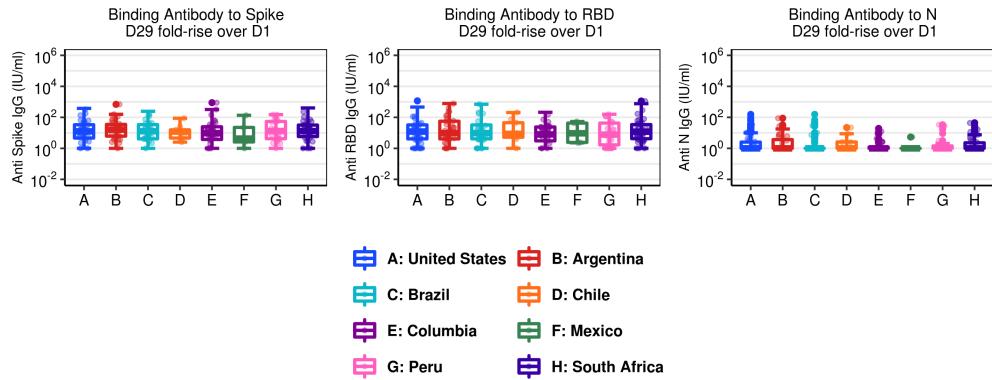


Figure 2.101: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by country of residence.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT341

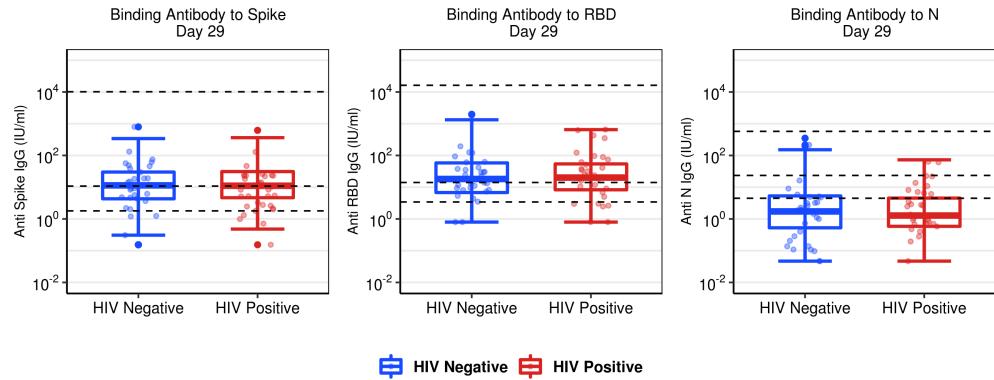


Figure 2.102: Boxplots of D29 Ab markers: Baseline negative vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

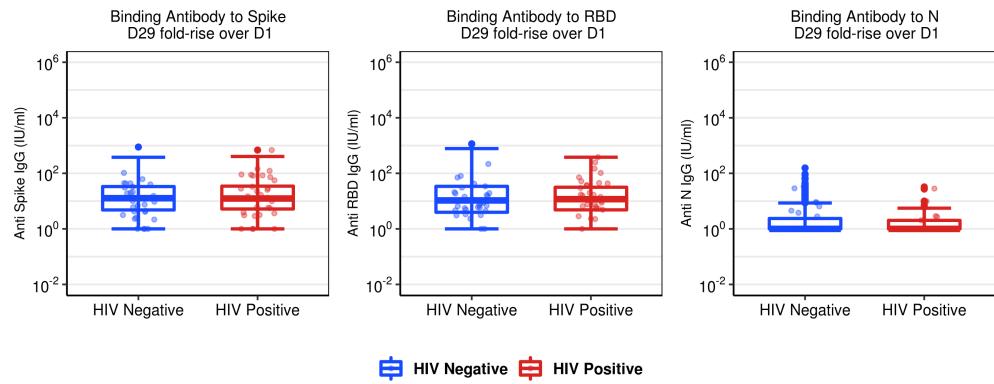


Figure 2.103: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by HIV positivity.

### 2.7.2 Baseline SARS-CoV-2 Positive

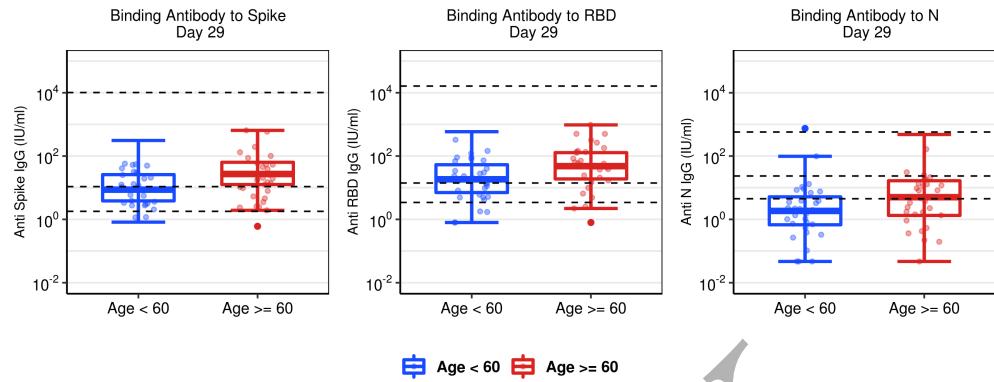


Figure 2.104: Boxplots of D29 Ab markers: baseline positive vaccine arm by age group. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

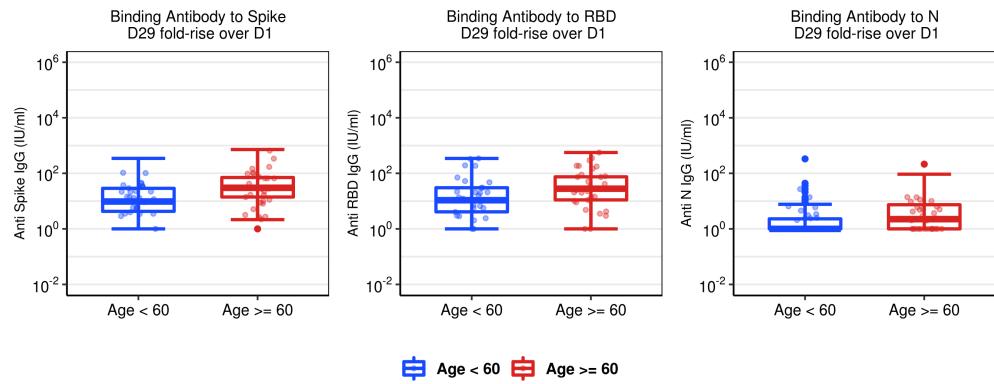


Figure 2.105: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age group.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT345

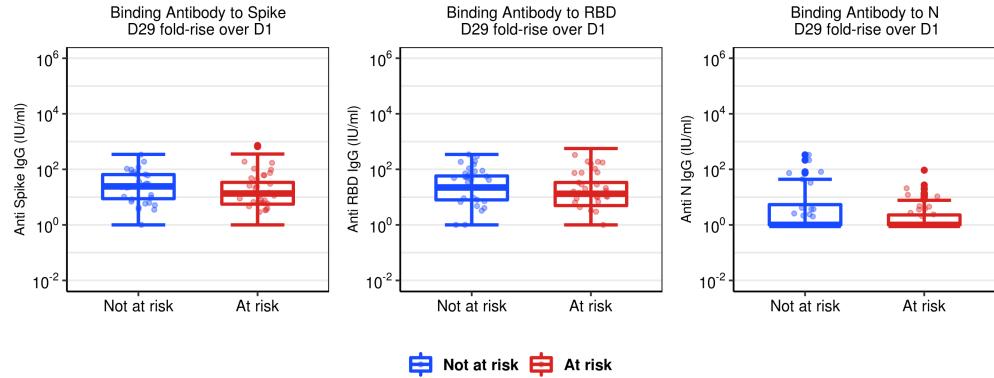


Figure 2.106: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

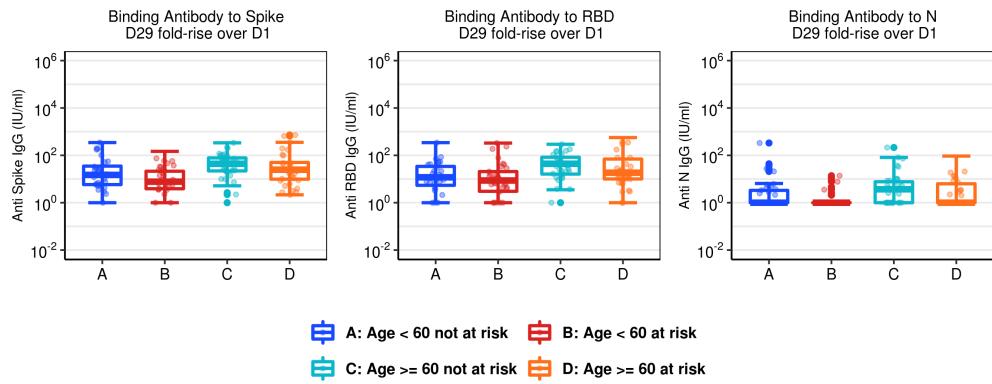


Figure 2.107: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT347

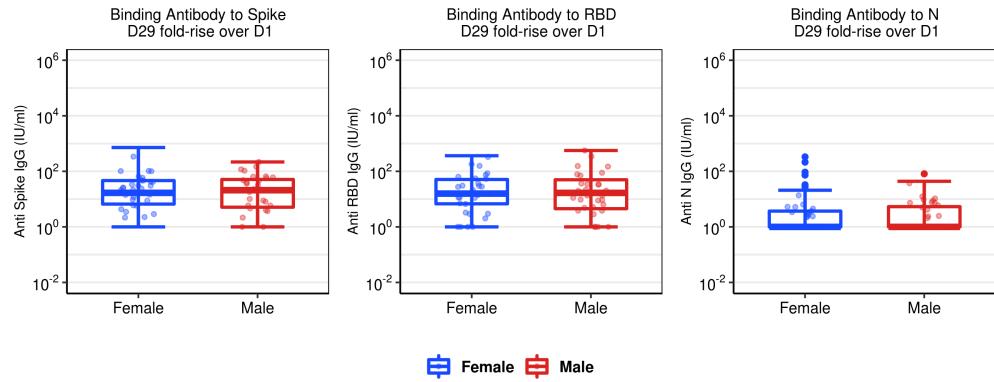


Figure 2.108: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

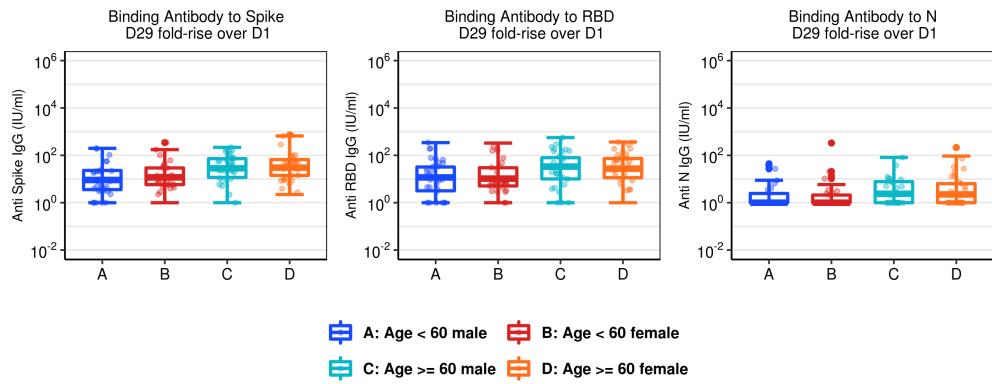


Figure 2.109: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT349

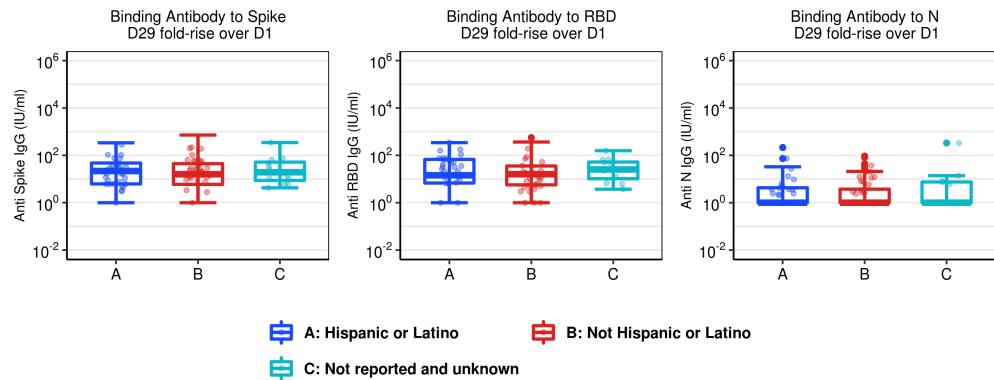


Figure 2.110: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

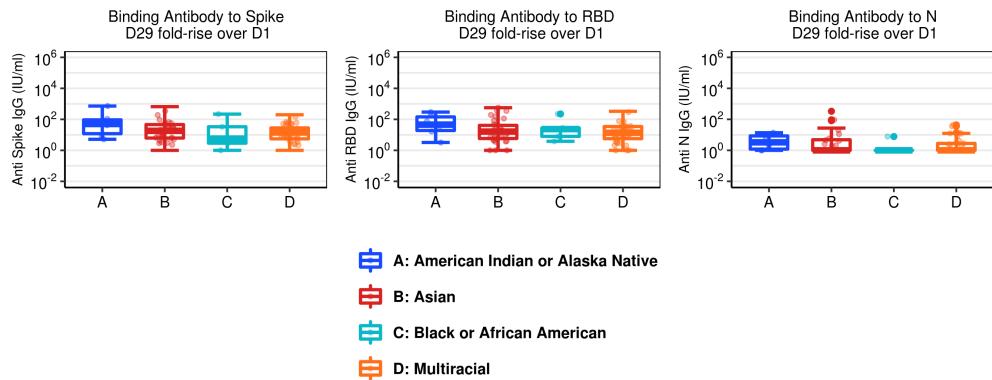


Figure 2.111: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT351

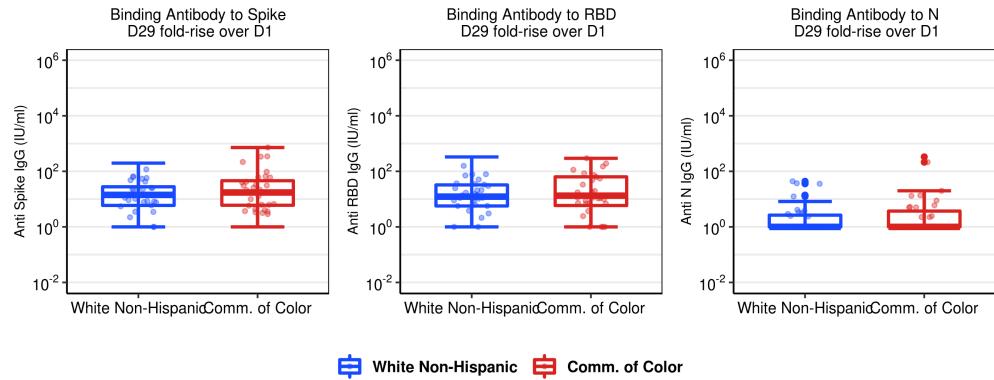


Figure 2.112: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

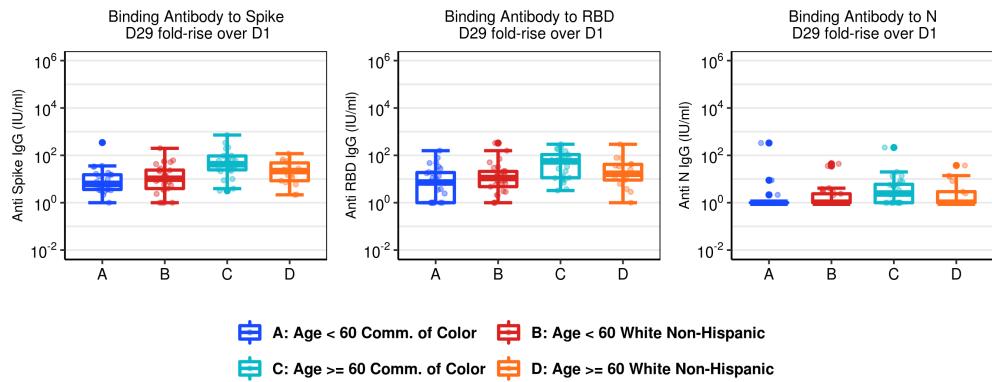


Figure 2.113: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT353

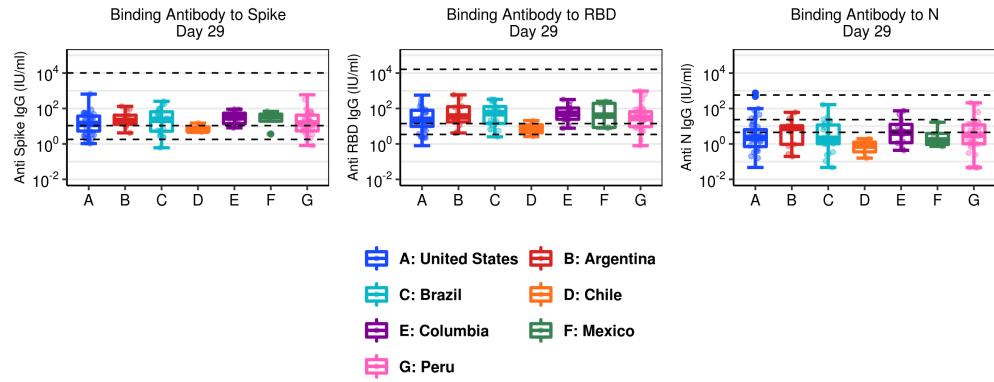


Figure 2.114: Boxplots of D29 Ab markers: baseline positive vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

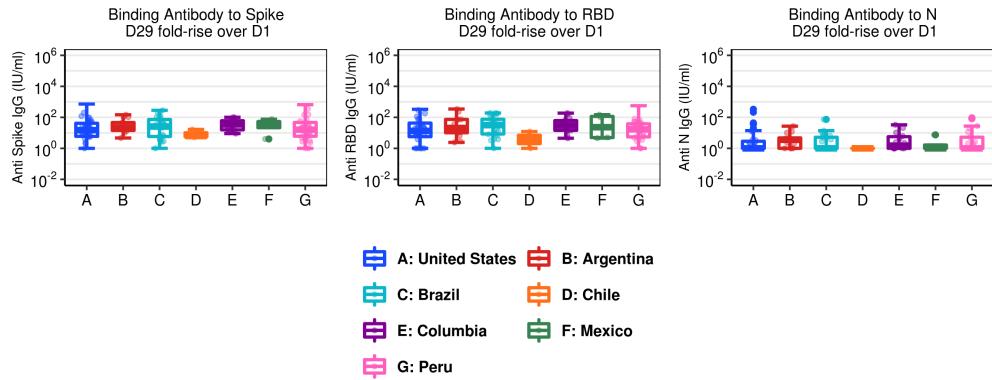


Figure 2.115: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

## 2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT355

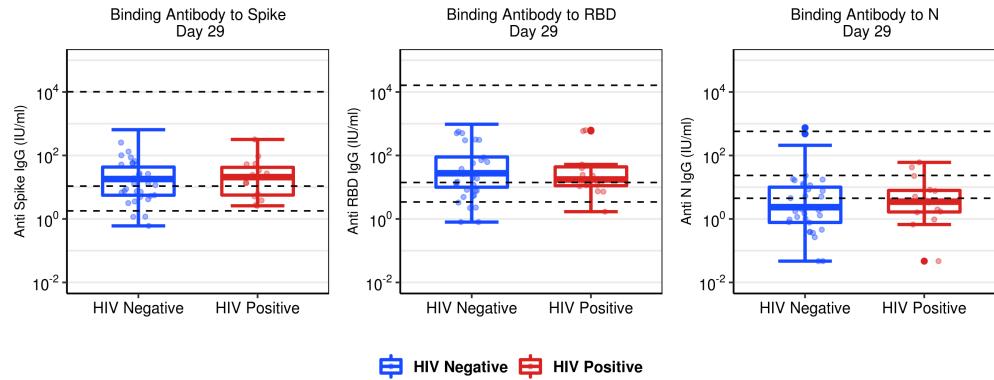


Figure 2.116: Boxplots of D29 Ab markers: baseline positive vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, LLOQ, and positivity cutoffs for binding antibody assays.

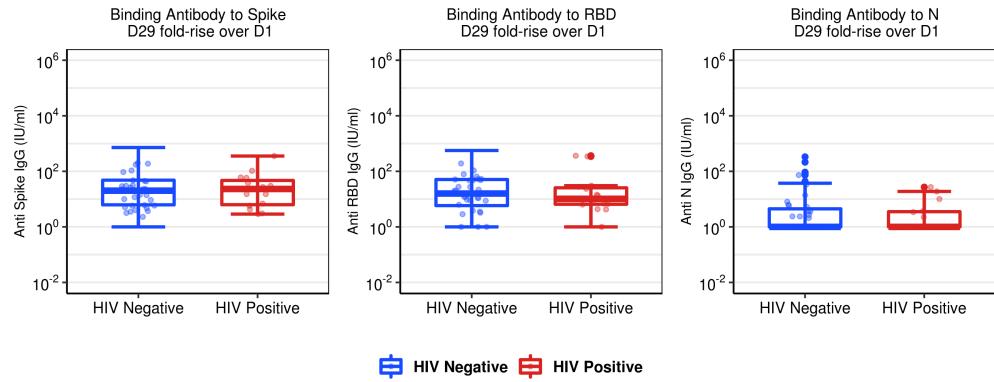


Figure 2.117: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

# Chapter 3

## Appendix

- This report was built from the [CoVPN/correlates\\_reporting](#) repository with commit hash b1f0aa5c1c08c9e31f27eaaf1df18c8ea13eb4ed. A diff of the changes introduced by that commit may be viewed at [https://github.com/CoVPN/correlates\\_reporting/commit/b1f0aa5c1c08c9e31f27eaaf1df18c8ea13eb4ed](https://github.com/CoVPN/correlates_reporting/commit/b1f0aa5c1c08c9e31f27eaaf1df18c8ea13eb4ed)
- The sha256 hash sum of the raw input file, “COVID\_ENSEMBLE\_practicedata.csv”: 0e648bb86f6c48fe9872f6892501b8
- The sha256 hash sum of the processed file, “janssen\_pooled\_mock\_data\_processed.csv”: 25085dd2638f91a29d0c001b2a7b1b2dc1f6088ebe026a874c4462ed0ef6f3f4