

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 = 911)	Placebo (N = 109)	Total (N = 1020)
Age			
Age 18 - 59	455 (49.9%)	54 (49.5%)	509 (49.9%)
Age \geq 60	456 (50.1%)	55 (50.5%)	511 (50.1%)
Mean (Range)	55.5 (18.0, 85.0)	54.6 (18.0, 85.0)	55.4 (18.0, 85.0)
BMI			
Underweight BMI < 18.5	6 (0.7%)	2 (1.8%)	8 (0.8%)
Normal $18.5 \leq$ BMI < 25	155 (17.0%)	19 (17.4%)	174 (17.1%)
Overweight $25 \leq$ BMI < 30	362 (39.7%)	44 (40.4%)	406 (39.8%)
Obese BMI \geq 30	388 (42.6%)	44 (40.4%)	432 (42.4%)
Risk for Severe Covid-19			
At-risk	450 (49.4%)	53 (48.6%)	503 (49.3%)
Not at-risk	461 (50.6%)	56 (51.4%)	517 (50.7%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	224 (24.6%)	26 (23.9%)	250 (24.5%)
Age 18 - 59 Not at-risk	231 (25.4%)	28 (25.7%)	259 (25.4%)
Age \geq 60 At-risk	226 (24.8%)	27 (24.8%)	253 (24.8%)
Age \geq 60 Not at-risk	230 (25.2%)	28 (25.7%)	258 (25.3%)
Sex			
Female	519 (57.0%)	57 (52.3%)	576 (56.5%)
Male	392 (43.0%)	52 (47.7%)	444 (43.5%)
Hispanic or Latino ethnicity			
Hispanic or Latino	363 (39.8%)	42 (38.5%)	405 (39.7%)
Not Hispanic or Latino	488 (53.6%)	61 (56.0%)	549 (53.8%)

(continued)

Characteristics	Vaccine (N = 911)	Placebo (N = 109)	Total (N = 1020)
Not reported and unknown	60 (6.6%)	6 (5.5%)	66 (6.5%)
Race			
White	398 (43.7%)	49 (45.0%)	447 (43.8%)
Black or African American	333 (36.6%)	38 (34.9%)	371 (36.4%)
Asian	21 (2.3%)	2 (1.8%)	23 (2.3%)
American Indian or Alaska Native	124 (13.6%)	15 (13.8%)	139 (13.6%)
Native Hawaiian or Other Pacific Islander	3 (0.3%)		3 (0.3%)
Multiracial	23 (2.5%)		23 (2.3%)
Not reported and unknown	9 (1.0%)	5 (4.6%)	14 (1.4%)
Underrepresented Minority Status in the U.S.			
URM	227 (24.9%)	28 (25.7%)	255 (25.0%)
Non-URM	230 (25.2%)	28 (25.7%)	258 (25.3%)
Country			
United States	457 (50.2%)	56 (51.4%)	513 (50.3%)
Argentina	44 (4.8%)	8 (7.3%)	52 (5.1%)
Brazil	94 (10.3%)	10 (9.2%)	104 (10.2%)
Chile	19 (2.1%)		19 (1.9%)
Columbia	46 (5.0%)	8 (7.3%)	54 (5.3%)
Mexico	4 (0.4%)		4 (0.4%)
Peru	20 (2.2%)	1 (0.9%)	21 (2.1%)
South Africa	227 (24.9%)	26 (23.9%)	253 (24.8%)
HIV Infection			
Negative	842 (92.4%)	101 (92.7%)	943 (92.5%)
Positive	69 (7.6%)	8 (7.3%)	77 (7.5%)

This table summarizes characteristics of per-protocol participants in the immunogenicity subcohort, which was randomly sampled from the study cohort. The sampling was stratified by strata defined by enrollment characteristics: Assigned randomization arm × Baseline SARS-CoV-2 seronegative vs. seropositive × Randomization strata. The U.S. subcohort includes 8 baseline demographic strata; the Latin America and South Africa subcohorts each include 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 = 283)	Placebo (N = 280)	Total (N = 563)
Age			
Age 18 - 59	141 (49.8%)	141 (50.4%)	282 (50.1%)
Age ≥ 60	142 (50.2%)	139 (49.6%)	281 (49.9%)
Mean (Range)	56.3 (18.0, 85.0)	55.7 (18.0, 85.0)	56.0 (18.0, 85.0)
BMI			
Underweight BMI < 18.5	3 (1.1%)	3 (1.1%)	6 (1.1%)
Normal 18.5 ≤ BMI < 25	57 (20.1%)	51 (18.2%)	108 (19.2%)
Overweight 25 ≤ BMI < 30	111 (39.2%)	108 (38.6%)	219 (38.9%)
Obese BMI ≥ 30	112 (39.6%)	118 (42.1%)	230 (40.9%)
Risk for Severe Covid-19			
At-risk	141 (49.8%)	136 (48.6%)	277 (49.2%)
Not at-risk	142 (50.2%)	144 (51.4%)	286 (50.8%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	70 (24.7%)	69 (24.6%)	139 (24.7%)
Age 18 - 59 Not at-risk	71 (25.1%)	72 (25.7%)	143 (25.4%)
Age ≥ 60 At-risk	71 (25.1%)	67 (23.9%)	138 (24.5%)
Age ≥ 60 Not at-risk	71 (25.1%)	72 (25.7%)	143 (25.4%)
Sex			
Female	160 (56.5%)	152 (54.3%)	312 (55.4%)
Male	123 (43.5%)	128 (45.7%)	251 (44.6%)
Hispanic or Latino ethnicity			
Hispanic or Latino	116 (41.0%)	118 (42.1%)	234 (41.6%)
Not Hispanic or Latino	153 (54.1%)	151 (53.9%)	304 (54.0%)
Not reported and unknown	14 (4.9%)	11 (3.9%)	25 (4.4%)
Race			
White	112 (39.6%)	127 (45.4%)	239 (42.5%)
Black or African American	100 (35.3%)	96 (34.3%)	196 (34.8%)
Asian	7 (2.5%)	4 (1.4%)	11 (2.0%)
American Indian or Alaska Native	49 (17.3%)	39 (13.9%)	88 (15.6%)
Native Hawaiian or Other Pacific Islander	1 (0.4%)	1 (0.4%)	2 (0.4%)
Multiracial	10 (3.5%)	7 (2.5%)	17 (3.0%)
Not reported and unknown	4 (1.4%)	6 (2.1%)	10 (1.8%)
Underrepresented Minority Status in the U.S.			
URM	71 (25.1%)	72 (25.7%)	143 (25.4%)
Non-URM	69 (24.4%)	67 (23.9%)	136 (24.2%)
Country			
United States	140 (49.5%)	139 (49.6%)	279 (49.6%)
Argentina	18 (6.4%)	14 (5.0%)	32 (5.7%)
Brazil	22 (7.8%)	30 (10.7%)	52 (9.2%)
Chile	5 (1.8%)	7 (2.5%)	12 (2.1%)
Columbia	21 (7.4%)	11 (3.9%)	32 (5.7%)
Mexico		1 (0.4%)	1 (0.2%)

(continued)

Characteristics	Vaccine (N = 283)	Placebo (N = 280)	Total (N = 563)
Peru	6 (2.1%)	8 (2.9%)	14 (2.5%)
South Africa	71 (25.1%)	70 (25.0%)	141 (25.0%)
HIV Infection			
Negative	266 (94.0%)	258 (92.1%)	524 (93.1%)
Positive	17 (6.0%)	22 (7.9%)	39 (6.9%)

This table summarizes characteristics of per-protocol participants in the immunogenicity subcohort, which was randomly sampled from the study cohort. The sampling was stratified by strata defined by enrollment characteristics: Assigned randomization arm × Baseline SARS-CoV-2 seronegative vs. seropositive × Randomization strata. The U.S. subcohort includes 8 baseline demographic strata; the Latin America and South Africa subcohorts each include 4 baseline demographic strata.

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=792 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
Vaccine																
Observed	58	57	56	56	58	56	58	58	18	17	18	18	17	17	17	18
Estimated	1486	984	792	558	1736	1213	954	639	168	89	83	44	191	126	109	74
Placebo																
Observed	7	7	7	7	7	7	7	7	18	18	18	18	18	16	18	15
Estimated	1468	986	828	537	1745	1236	979	640	175	112	91	56	214	139	105	72

Demographic covariate strata:

1. US Underrepresented minority, Age 18-59, Absence of comorbidities
2. US Underrepresented minority, Age 18-59, Presence of comorbidities
3. US Underrepresented minority, Age ≥ 60 , Absence of comorbidities
4. US Underrepresented minority, Age ≥ 60 , Presence of comorbidities
5. US White non-Hisp, Age 18-59, Absence of comorbidities
6. US White non-Hisp, Age 18-59, Presence of comorbidities
7. US White non-Hisp, Age ≥ 60 , Absence of comorbidities
8. US White non-Hisp, Age ≥ 60 , Presence of comorbidities

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=791 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
Vaccine																
Observed	58	55	58	56	57	56	58	56	18	18	18	18	18	18	18	17
Estimated	3180	2096	1652	1085	1156	752	606	393	359	235	186	118	132	81	72	42
Placebo																
Observed	7	6	7	7	7	6	7	6	18	18	18	17	18	17	18	17
Estimated	3055	2028	1677	1090	1125	742	617	421	332	215	177	121	113	84	64	43

Demographic covariate strata:

1. Latin America, Age 18-59, Absence of comorbidities
2. Latin America, Age 18-59, Presence of comorbidities
3. Latin America, Age ≥ 60 , Absence of comorbidities
4. Latin America, Age ≥ 60 , Presence of comorbidities
5. South Africa, Age 18-59, Absence of comorbidities
6. South Africa, Age 18-59, Presence of comorbidities
7. South Africa, Age ≥ 60 , Absence of comorbidities
8. South Africa, Age ≥ 60 , Presence of comorbidities

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 $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
All participants								
	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	911	1157.7/19282 = 6.0% (4.6%, 7.9%)	2957/19282 = 15.3% (13.0%, 17.9%)	1627.6/19282 = 8.4% (6.8%, 10.5%)
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	911	9664.1/19282 = 50.1% (46.6%, 53.7%)	11207.3/19282 = 58.1% (54.5%, 61.7%)	8250/19282 = 42.8% (39.3%, 46.3%)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	911	7804/19282 = 40.5% (37.1%, 43.9%)	14067.4/19282 = 73.0% (69.5%, 76.2%)	9987.3/19282 = 51.8% (48.2%, 55.3%)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	155.7/2109 = 7.4% (4.9%, 11.0%)	421.5/2109 = 20.0% (15.7%, 25.1%)	211.5/2109 = 10.0% (6.8%, 14.5%)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	1386.4/2109 = 65.7% (59.1%, 71.9%)	1593.1/2109 = 75.5% (69.2%, 80.9%)	1151.7/2109 = 54.6% (47.9%, 61.2%)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	1156.7/2109 = 54.8% (48.4%, 61.1%)	1789/2109 = 84.8% (79.2%, 89.1%)	1454.3/2109 = 69.0% (62.2%, 75.0%)
	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	280	74.2/2113 = 3.5% (2.0%, 6.1%)	237.3/2113 = 11.2% (8.3%, 15.1%)	94.9/2113 = 4.5% (2.7%, 7.3%)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	854.8/2113 = 40.5% (35.0%, 46.1%)	998.5/2113 = 47.3% (41.2%, 53.4%)	660.1/2113 = 31.2% (26.3%, 36.6%)

Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	648.7/2113 = 30.7% (25.7%, 36.1%)	1143.1/2113 = 54.1% (47.9%, 60.2%)	792.2/2113 = 37.5% (32.1%, 43.2%)
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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 $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers by Age

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Age								
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	455	549.5/12603 = 4.4% (2.7%, 6.9%)	1259.8/12603 = 10.0% (7.4%, 13.4%)	698.5/12603 = 5.5% (3.7%, 8.2%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	455	4811.2/12603 = 38.2% (33.4%, 43.2%)	5979.4/12603 = 47.4% (42.4%, 52.5%)	4010.9/12603 = 31.8% (27.4%, 36.6%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	455	3511.8/12603 = 27.9% (23.6%, 32.6%)	7982.8/12603 = 63.3% (58.3%, 68.1%)	4925.4/12603 = 39.1% (34.3%, 44.1%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	47.7/1381 = 3.5% (1.4%, 8.1%)	131.8/1381 = 9.5% (5.4%, 16.2%)	78.9/1381 = 5.7% (2.6%, 12.1%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	794/1381 = 57.5% (48.3%, 66.2%)	928.8/1381 = 67.3% (58.2%, 75.2%)	606.7/1381 = 43.9% (35.0%, 53.3%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	530.9/1381 = 38.4% (29.8%, 47.9%)	1090.9/1381 = 79.0% (70.8%, 85.4%)	792.4/1381 = 57.4% (47.9%, 66.3%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	0/1384 = 0.0% (0.0%, 0.0%)	30/1384 = 2.2% (0.7%, 6.7%)	0/1384 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	339/1384 = 24.5% (18.1%, 32.3%)	452.4/1384 = 32.7% (25.1%, 41.3%)	201.6/1384 = 14.6% (9.4%, 21.8%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	179.1/1384 = 12.9% (7.8%, 20.7%)	524.1/1384 = 37.9% (29.7%, 46.8%)	269/1384 = 19.4% (13.2%, 27.7%)
Age \geq 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	456	608.2/6679 = 9.1% (6.6%, 12.4%)	1697.2/6679 = 25.4% (21.3%, 30.0%)	929.1/6679 = 13.9% (10.8%, 17.8%)
Age \geq 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	456	4852.9/6679 = 72.7% (67.9%, 76.9%)	5227.9/6679 = 78.3% (73.7%, 82.2%)	4239/6679 = 63.5% (58.5%, 68.2%)
Age \geq 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	456	4292.2/6679 = 64.3% (59.3%, 69.0%)	6084.6/6679 = 91.1% (87.7%, 93.6%)	5062/6679 = 75.8% (71.1%, 79.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age ≥ 60	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	108/728 = 14.8% (9.3%, 22.7%)	289.7/728 = 39.8% (31.1%, 49.2%)	132.6/728 = 18.2% (12.2%, 26.4%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	592.4/728 = 81.4% (73.1%, 87.5%)	664.2/728 = 91.2% (84.1%, 95.4%)	545/728 = 74.9% (66.0%, 82.1%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	625.8/728 = 86.0% (78.4%, 91.2%)	698.1/728 = 95.9% (89.6%, 98.4%)	661.9/728 = 90.9% (83.6%, 95.2%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	74.2/729 = 10.2% (5.7%, 17.5%)	207.3/729 = 28.4% (20.7%, 37.7%)	94.9/729 = 13.0% (7.9%, 20.8%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	515.9/729 = 70.8% (61.7%, 78.5%)	546.1/729 = 74.9% (66.0%, 82.1%)	458.5/729 = 62.9% (53.5%, 71.4%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	469.6/729 = 64.4% (55.2%, 72.6%)	619/729 = 84.9% (76.8%, 90.5%)	523.2/729 = 71.8% (62.9%, 79.2%)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Risk for Severe Covid-19								
At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	450	553.8/7720 = 7.2% (5.0%, 10.1%)	1328/7720 = 17.2% (13.9%, 21.1%)	690/7720 = 8.9% (6.6%, 12.1%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	450	4022.7/7720 = 52.1% (47.0%, 57.2%)	4649.7/7720 = 60.2% (55.0%, 65.2%)	3560.5/7720 = 46.1% (41.1%, 51.2%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	450	3172.2/7720 = 41.1% (36.3%, 46.1%)	5716.5/7720 = 74.0% (69.1%, 78.5%)	4055.4/7720 = 52.5% (47.4%, 57.6%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	93.7/809 = 11.6% (6.8%, 19.0%)	166/809 = 20.5% (14.5%, 28.1%)	102.7/809 = 12.7% (7.8%, 20.0%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	510.5/809 = 63.1% (53.7%, 71.6%)	582.7/809 = 72.0% (62.6%, 79.8%)	449.8/809 = 55.6% (46.3%, 64.5%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	449.1/809 = 55.5% (46.4%, 64.3%)	647.6/809 = 80.0% (70.6%, 87.0%)	548.9/809 = 67.8% (58.2%, 76.1%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	136	17.6/842 = 2.1% (0.7%, 5.9%)	62.9/842 = 7.5% (4.3%, 12.7%)	24.9/842 = 3.0% (1.2%, 6.8%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	136	353.8/842 = 42.0% (34.0%, 50.5%)	419.7/842 = 49.8% (41.1%, 58.6%)	256.8/842 = 30.5% (23.7%, 38.3%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	136	215.4/842 = 25.6% (19.6%, 32.6%)	460.6/842 = 54.7% (45.8%, 63.3%)	286.6/842 = 34.0% (27.0%, 41.9%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	461	603.9/11562 = 5.2% (3.4%, 7.9%)	1629/11562 = 14.1% (11.1%, 17.7%)	937.5/11562 = 8.1% (5.9%, 11.0%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	461	5641.4/11562 = 48.8% (44.0%, 53.7%)	6557.7/11562 = 56.7% (51.6%, 61.6%)	4689.5/11562 = 40.6% (35.9%, 45.3%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	461	4631.8/11562 = 40.1% (35.5%, 44.8%)	8350.9/11562 = 72.2% (67.3%, 76.7%)	5931.9/11562 = 51.3% (46.5%, 56.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	62/1300 = 4.8% (2.4%, 9.2%)	255.5/1300 = 19.7% (14.0%, 26.8%)	108.8/1300 = 8.4% (4.6%, 14.7%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	875.9/1300 = 67.4% (58.0%, 75.5%)	1010.4/1300 = 77.7% (68.8%, 84.7%)	701.9/1300 = 54.0% (44.7%, 63.0%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	707.5/1300 = 54.4% (45.6%, 63.0%)	1141.4/1300 = 87.8% (80.1%, 92.8%)	905.4/1300 = 69.6% (60.3%, 77.6%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	144	56.7/1271 = 4.5% (2.3%, 8.5%)	174.4/1271 = 13.7% (9.5%, 19.5%)	70.1/1271 = 5.5% (3.0%, 9.9%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	144	501.1/1271 = 39.4% (32.2%, 47.1%)	578.8/1271 = 45.5% (37.4%, 53.9%)	403.3/1271 = 31.7% (25.1%, 39.2%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	144	433.3/1271 = 34.1% (27.0%, 42.0%)	682.5/1271 = 53.7% (45.2%, 61.9%)	505.6/1271 = 39.8% (32.2%, 47.9%)

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.

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Age, Risk for Severe Covid-19								
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	224	262.6/5045 = 5.2% (2.9%, 9.3%)	571.3/5045 = 11.3% (7.7%, 16.4%)	311.1/5045 = 6.2% (3.6%, 10.3%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	224	2087.5/5045 = 41.4% (34.5%, 48.6%)	2527.7/5045 = 50.1% (43.0%, 57.2%)	1820.5/5045 = 36.1% (29.5%, 43.3%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	224	1478.9/5045 = 29.3% (23.2%, 36.3%)	3251.7/5045 = 64.5% (57.3%, 71.0%)	2057.6/5045 = 40.8% (33.9%, 48.0%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	40.3/531 = 7.6% (2.8%, 19.0%)	56.1/531 = 10.6% (4.8%, 21.5%)	40.3/531 = 7.6% (2.8%, 19.0%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	271.9/531 = 51.2% (38.4%, 63.8%)	320.2/531 = 60.3% (46.9%, 72.3%)	226.7/531 = 42.7% (30.6%, 55.8%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	214.6/531 = 40.4% (28.5%, 53.6%)	385.1/531 = 72.5% (59.0%, 82.9%)	295.5/531 = 55.6% (42.4%, 68.1%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	0/550 = 0.0% (0.0%, 0.0%)	6.2/550 = 1.1% (0.2%, 7.9%)	0/550 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	137.9/550 = 25.1% (15.6%, 37.6%)	192.8/550 = 35.0% (24.0%, 48.0%)	68.1/550 = 12.4% (5.9%, 24.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	44.2/550 = 8.0% (3.4%, 17.9%)	211.9/550 = 38.5% (26.9%, 51.6%)	81.8/550 = 14.9% (7.7%, 26.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	286.9/7558 = 3.8% (1.9%, 7.5%)	688.6/7558 = 9.1% (5.8%, 14.0%)	387.4/7558 = 5.1% (2.9%, 9.0%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	2723.7/7558 = 36.0% (29.7%, 42.9%)	3451.7/7558 = 45.7% (38.8%, 52.7%)	2190.5/7558 = 29.0% (23.1%, 35.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	2032.8/7558 = 26.9% (21.2%, 33.4%)	4731.1/7558 = 62.6% (55.5%, 69.1%)	2867.8/7558 = 37.9% (31.5%, 44.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	7.3/850 = 0.9% (0.1%, 6.1%)	75.7/850 = 8.9% (4.0%, 18.9%)	38.5/850 = 4.5% (1.3%, 14.9%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	522.2/850 = 61.4% (48.5%, 72.9%)	608.6/850 = 71.6% (59.0%, 81.5%)	380/850 = 44.7% (32.5%, 57.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	316.3/850 = 37.2% (25.6%, 50.5%)	705.7/850 = 83.0% (71.7%, 90.4%)	496.9/850 = 58.5% (45.4%, 70.5%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	0/834 = 0.0% (0.0%, 0.0%)	23.8/834 = 2.9% (0.7%, 10.7%)	0/834 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	201.1/834 = 24.1% (15.9%, 34.8%)	259.6/834 = 31.1% (21.2%, 43.2%)	133.4/834 = 16.0% (9.2%, 26.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	134.9/834 = 16.2% (8.7%, 28.2%)	312.2/834 = 37.4% (26.6%, 49.7%)	187.2/834 = 22.4% (13.7%, 34.5%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	226	291.2/2675 = 10.9% (7.2%, 16.2%)	756.7/2675 = 28.3% (22.3%, 35.2%)	378.9/2675 = 14.2% (9.9%, 19.9%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	1935.2/2675 = 72.3% (65.6%, 78.2%)	2121.9/2675 = 79.3% (72.9%, 84.6%)	1740/2675 = 65.0% (58.0%, 71.5%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	1693.2/2675 = 63.3% (56.2%, 69.8%)	2464.8/2675 = 92.1% (87.1%, 95.3%)	1997.8/2675 = 74.7% (67.9%, 80.4%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	53.4/278 = 19.2% (11.0%, 31.4%)	109.9/278 = 39.5% (27.8%, 52.6%)	62.4/278 = 22.4% (13.6%, 34.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	238.6/278 = 85.8% (74.3%, 92.7%)	262.4/278 = 94.4% (86.8%, 97.7%)	223.1/278 = 80.2% (67.4%, 88.9%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	234.5/278 = 84.4% (72.7%, 91.6%)	262.4/278 = 94.4% (82.6%, 98.4%)	253.4/278 = 91.1% (79.9%, 96.4%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	17.6/292 = 6.0% (2.0%, 16.7%)	56.7/292 = 19.4% (10.7%, 32.7%)	24.9/292 = 8.5% (3.5%, 19.2%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	215.9/292 = 73.9% (61.1%, 83.7%)	226.9/292 = 77.7% (65.0%, 86.8%)	188.7/292 = 64.6% (51.2%, 76.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	171.2/292 = 58.6% (45.1%, 70.9%)	248.7/292 = 85.2% (73.4%, 92.3%)	204.8/292 = 70.2% (57.0%, 80.6%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	317/4004 = 7.9% (4.9%, 12.6%)	940.4/4004 = 23.5% (18.2%, 29.8%)	550.1/4004 = 13.7% (9.6%, 19.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	2917.8/4004 = 72.9% (66.2%, 78.6%)	3106/4004 = 77.6% (71.1%, 82.9%)	2499/4004 = 62.4% (55.4%, 68.9%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	2599/4004 = 64.9% (57.9%, 71.3%)	3619.8/4004 = 90.4% (85.4%, 93.8%)	3064.1/4004 = 76.5% (70.0%, 82.0%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	54.6/450 = 12.1% (5.7%, 23.9%)	179.7/450 = 39.9% (28.1%, 53.1%)	70.3/450 = 15.6% (8.3%, 27.5%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	353.7/450 = 78.6% (66.5%, 87.2%)	401.8/450 = 89.3% (77.7%, 95.2%)	322/450 = 71.5% (59.0%, 81.5%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	391.3/450 = 87.0% (75.9%, 93.4%)	435.7/450 = 96.8% (86.1%, 99.3%)	408.5/450 = 90.8% (79.6%, 96.1%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	56.7/437 = 13.0% (6.5%, 24.2%)	150.7/437 = 34.5% (23.4%, 47.6%)	70.1/437 = 16.0% (8.6%, 28.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	299.9/437 = 68.6% (55.6%, 79.3%)	319.2/437 = 73.0% (60.2%, 82.9%)	269.8/437 = 61.7% (48.7%, 73.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	298.4/437 = 68.3% (55.5%, 78.8%)	370.3/437 = 84.7% (72.6%, 92.1%)	318.4/437 = 72.9% (60.3%, 82.6%)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Sex								
Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	392	574.1/8043.8 = 7.1% (4.8%, 10.4%)	1376.3/8043.8 = 17.1% (13.6%, 21.3%)	807/8043.8 = 10.0% (7.3%, 13.7%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	392	4209.6/8043.8 = 52.3% (46.8%, 57.8%)	5062.2/8043.8 = 62.9% (57.3%, 68.3%)	3589.1/8043.8 = 44.6% (39.2%, 50.1%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	392	3332.9/8043.8 = 41.4% (36.2%, 46.9%)	6056.8/8043.8 = 75.3% (70.0%, 80.0%)	4257.2/8043.8 = 52.9% (47.3%, 58.4%)
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	85.6/895.9 = 9.6% (5.5%, 16.2%)	168.9/895.9 = 18.8% (13.0%, 26.6%)	101.4/895.9 = 11.3% (6.9%, 18.0%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	540.6/895.9 = 60.3% (49.8%, 70.0%)	625.2/895.9 = 69.8% (59.1%, 78.7%)	441.3/895.9 = 49.3% (39.3%, 59.3%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	494.8/895.9 = 55.2% (45.0%, 65.0%)	762.3/895.9 = 85.1% (76.3%, 91.0%)	627.8/895.9 = 70.1% (59.6%, 78.8%)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	52	0/9698 = 0% (0.0%, 0.0%)	0/9698 = 0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	52	0/9698 = 0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	52	0/9698 = 0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	128	33.7/970 = 3.5% (1.4%, 8.2%)	113.3/970 = 11.7% (7.2%, 18.3%)	51.9/970 = 5.3% (2.6%, 10.6%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	128	375.1/970 = 38.7% (30.6%, 47.4%)	451.4/970 = 46.5% (37.4%, 55.9%)	297.7/970 = 30.7% (23.5%, 39.0%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	128	294.9/970 = 30.4% (23.0%, 39.0%)	516.9/970 = 53.3% (43.8%, 62.6%)	379.8/970 = 39.2% (30.7%, 48.3%)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	519	583.7/11238.2 = 5.2% (3.5%, 7.6%)	1580.7/11238.2 = 14.1% (11.1%, 17.6%)	820.6/11238.2 = 7.3% (5.3%, 9.9%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	519	5454.5/11238.2 = 48.5% (43.7%, 53.4%)	6145.1/11238.2 = 54.7% (49.7%, 59.6%)	4660.9/11238.2 = 41.5% (36.8%, 46.3%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	519	4471.1/11238.2 = 39.8% (35.3%, 44.4%)	8010.6/11238.2 = 71.3% (66.4%, 75.7%)	5730.1/11238.2 = 51.0% (46.2%, 55.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	160	70/1213.1 = 5.8% (3.0%, 10.8%)	252.6/1213.1 = 20.8% (14.8%, 28.5%)	110.1/1213.1 = 9.1% (5.0%, 16.0%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	845.8/1213.1 = 69.7% (60.7%, 77.5%)	967.9/1213.1 = 79.8% (71.7%, 86.0%)	710.5/1213.1 = 58.6% (49.3%, 67.3%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	661.9/1213.1 = 54.6% (45.8%, 63.1%)	1026.7/1213.1 = 84.6% (76.3%, 90.4%)	826.5/1213.1 = 68.1% (58.9%, 76.2%)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	152	40.6/1143 = 3.5% (1.6%, 7.5%)	124/1143 = 10.8% (6.9%, 16.6%)	43.1/1143 = 3.8% (1.8%, 7.7%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	479.8/1143 = 42.0% (33.8%, 50.6%)	547.1/1143 = 47.9% (39.2%, 56.6%)	362.4/1143 = 31.7% (24.5%, 40.0%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	353.8/1143 = 31.0% (23.8%, 39.2%)	626.2/1143 = 54.8% (45.8%, 63.4%)	412.4/1143 = 36.1% (28.4%, 44.5%)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Age, sex								
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	273	292.5/7725.2 = 3.8% (2.0%, 7.1%)	750.3/7725.2 = 9.7% (6.4%, 14.4%)	335.9/7725.2 = 4.3% (2.4%, 7.7%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	273	2929.2/7725.2 = 37.9% (31.8%, 44.5%)	3458.7/7725.2 = 44.8% (38.3%, 51.4%)	2472.2/7725.2 = 32.0% (26.3%, 38.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	273	2095.2/7725.2 = 27.1% (21.8%, 33.2%)	4757.1/7725.2 = 61.6% (55.0%, 67.8%)	3039.3/7725.2 = 39.3% (33.2%, 45.8%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	18.3/816.8 = 2.2% (0.5%, 9.8%)	91.9/816.8 = 11.3% (5.5%, 21.7%)	49.5/816.8 = 6.1% (2.0%, 16.7%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	525.6/816.8 = 64.3% (52.1%, 75.0%)	612/816.8 = 74.9% (63.8%, 83.5%)	416/816.8 = 50.9% (38.8%, 63.0%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	302.2/816.8 = 37.0% (26.1%, 49.4%)	643.4/816.8 = 78.8% (66.9%, 87.2%)	456.2/816.8 = 55.8% (43.4%, 67.6%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	74	0/736.2 = 0.0% (0.0%, 0.0%)	11.9/736.2 = 1.6% (0.2%, 11.1%)	0/736.2 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	74	208.7/736.2 = 28.4% (18.8%, 40.4%)	248.9/736.2 = 33.8% (23.2%, 46.3%)	126.1/736.2 = 17.1% (9.6%, 28.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	74	111.9/736.2 = 15.2% (7.9%, 27.2%)	281.8/736.2 = 38.3% (26.9%, 51.1%)	138.8/736.2 = 18.9% (10.7%, 31.2%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	182	257/4877.8 = 5.3% (2.7%, 10.2%)	509.6/4877.8 = 10.4% (6.7%, 15.9%)	362.6/4877.8 = 7.4% (4.3%, 12.6%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	182	1882/4877.8 = 38.6% (31.2%, 46.5%)	2520.7/4877.8 = 51.7% (43.6%, 59.6%)	1538.7/4877.8 = 31.5% (24.7%, 39.3%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	182	1416.6/4877.8 = 29.0% (22.3%, 36.8%)	3225.7/4877.8 = 66.1% (58.2%, 73.2%)	1886.1/4877.8 = 38.7% (31.2%, 46.7%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	60	29.4/564.2 = 5.2% (1.7%, 14.9%)	39.9/564.2 = 7.1% (2.9%, 16.4%)	29.4/564.2 = 5.2% (1.7%, 14.9%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60	268.4/564.2 = 47.6% (33.5%, 62.0%)	316.8/564.2 = 56.2% (41.3%, 69.9%)	190.7/564.2 = 33.8% (21.4%, 48.9%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	60	228.7/564.2 = 40.5% (27.3%, 55.3%)	447.5/564.2 = 79.3% (66.5%, 88.1%)	336.3/564.2 = 59.6% (45.0%, 72.7%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	0/647.8 = 0.0% (0.0%, 0.0%)	18.1/647.8 = 2.8% (0.6%, 11.5%)	0/647.8 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	130.2/647.8 = 20.1% (12.2%, 31.4%)	203.4/647.8 = 31.4% (20.8%, 44.3%)	75.4/647.8 = 11.6% (5.8%, 22.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	67.2/647.8 = 10.4% (4.5%, 22.0%)	242.4/647.8 = 37.4% (26.1%, 50.3%)	130.2/647.8 = 20.1% (11.6%, 32.6%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	246	291.2/3513 = 8.3% (5.2%, 12.9%)	830.4/3513 = 23.6% (18.4%, 29.9%)	484.7/3513 = 13.8% (9.8%, 19.1%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	246	2525.3/3513 = 71.9% (65.2%, 77.7%)	2686.4/3513 = 76.5% (70.0%, 81.9%)	2188.7/3513 = 62.3% (55.4%, 68.8%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	246	2375.9/3513 = 67.6% (61.0%, 73.6%)	3253.5/3513 = 92.6% (88.3%, 95.4%)	2690.8/3513 = 76.6% (70.4%, 81.8%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	79	51.7/396.3 = 13.1% (6.4%, 24.8%)	160.7/396.3 = 40.5% (28.6%, 53.7%)	60.6/396.3 = 15.3% (8.0%, 27.2%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	320.2/396.3 = 80.8% (68.8%, 88.9%)	355.8/396.3 = 89.8% (78.2%, 95.6%)	294.4/396.3 = 74.3% (61.4%, 84.0%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	359.7/396.3 = 90.8% (82.3%, 95.4%)	383.3/396.3 = 96.7% (89.3%, 99.0%)	370.4/396.3 = 93.5% (85.2%, 97.3%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	78	40.6/406.8 = 10.0% (4.6%, 20.3%)	112.1/406.8 = 27.6% (17.8%, 40.0%)	43.1/406.8 = 10.6% (5.1%, 20.9%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	78	271/406.8 = 66.6% (54.0%, 77.2%)	298.2/406.8 = 73.3% (60.8%, 82.9%)	236.3/406.8 = 58.1% (45.5%, 69.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	78	241.9/406.8 = 59.5% (47.5%, 70.4%)	344.4/406.8 = 84.7% (73.8%, 91.5%)	273.6/406.8 = 67.2% (55.3%, 77.3%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	210	317/3166 = 10.0% (6.4%, 15.4%)	866.8/3166 = 27.4% (21.3%, 34.4%)	444.4/3166 = 14.0% (9.6%, 20.1%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	210	2327.6/3166 = 73.5% (66.5%, 79.5%)	2541.5/3166 = 80.3% (73.6%, 85.6%)	2050.4/3166 = 64.8% (57.3%, 71.5%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	210	1916.4/3166 = 60.5% (53.0%, 67.6%)	2831.1/3166 = 89.4% (83.6%, 93.3%)	2371.1/3166 = 74.9% (67.6%, 81.0%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	56.2/331.7 = 17.0% (9.1%, 29.4%)	129/331.7 = 38.9% (26.7%, 52.6%)	72/331.7 = 21.7% (12.9%, 34.2%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	272.2/331.7 = 82.1% (69.1%, 90.4%)	308.4/331.7 = 93.0% (81.5%, 97.5%)	250.6/331.7 = 75.5% (62.1%, 85.3%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	266.1/331.7 = 80.2% (66.6%, 89.2%)	314.8/331.7 = 94.9% (80.7%, 98.8%)	291.5/331.7 = 87.9% (73.9%, 94.9%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	61	33.7/322.2 = 10.5% (4.3%, 23.3%)	95.2/322.2 = 29.6% (18.1%, 44.3%)	51.9/322.2 = 16.1% (7.9%, 30.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	61	244.8/322.2 = 76.0% (62.4%, 85.8%)	247.9/322.2 = 77.0% (63.4%, 86.6%)	222.2/322.2 = 69.0% (54.6%, 80.4%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	61	227.7/322.2 = 70.7% (56.3%, 81.9%)	274.6/322.2 = 85.2% (71.1%, 93.1%)	249.7/322.2 = 77.5% (63.4%, 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 5g. Percentage of responders, and participants with concentrations $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers by Hispanic or Latino ethnicity

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Hispanic or Latino ethnicity								
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	363	597.1/9982.2 = 6.0% (3.9%, 9.1%)	1404/9982.2 = 14.1% (10.7%, 18.2%)	776/9982.2 = 7.8% (5.4%, 11.1%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	363	4893/9982.2 = 49.0% (43.5%, 54.6%)	5673.3/9982.2 = 56.8% (51.1%, 62.4%)	4191.1/9982.2 = 42.0% (36.6%, 47.5%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	363	3899.8/9982.2 = 39.1% (34.0%, 44.4%)	7342.8/9982.2 = 73.6% (68.0%, 78.5%)	4986.5/9982.2 = 50.0% (44.4%, 55.5%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	116	91.5/1120.1 = 8.2% (4.4%, 14.6%)	227/1120.1 = 20.3% (14.0%, 28.4%)	118.5/1120.1 = 10.6% (5.8%, 18.4%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	116	762.1/1120.1 = 68.0% (57.4%, 77.1%)	831/1120.1 = 74.2% (63.9%, 82.3%)	639.6/1120.1 = 57.1% (46.6%, 67.0%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	116	615.9/1120.1 = 55.0% (44.9%, 64.7%)	939.6/1120.1 = 83.9% (74.6%, 90.2%)	755.7/1120.1 = 67.5% (56.7%, 76.6%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	118	35/1100.1 = 3.2% (1.2%, 7.9%)	130/1100.1 = 11.8% (7.7%, 17.7%)	44.8/1100.1 = 4.1% (1.8%, 9.1%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	118	417.4/1100.1 = 37.9% (30.2%, 46.3%)	510.1/1100.1 = 46.4% (37.4%, 55.6%)	346.6/1100.1 = 31.5% (24.3%, 39.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	118	341.7/1100.1 = 31.1% (23.6%, 39.6%)	564.9/1100.1 = 51.4% (42.1%, 60.5%)	404.4/1100.1 = 36.8% (28.8%, 45.6%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	488	507.8/8067.9 = 6.3% (4.4%, 8.9%)	1434.5/8067.9 = 17.8% (14.6%, 21.5%)	771.2/8067.9 = 9.6% (7.2%, 12.6%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	488	4252.4/8067.9 = 52.7% (48.0%, 57.4%)	4860.6/8067.9 = 60.2% (55.4%, 64.9%)	3672.7/8067.9 = 45.5% (40.9%, 50.2%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	488	3447/8067.9 = 42.7% (38.2%, 47.3%)	5860.9/8067.9 = 72.6% (67.9%, 76.9%)	4423.9/8067.9 = 54.8% (50.1%, 59.5%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	153	60/897 = 6.7% (3.9%, 11.2%)	168.6/897 = 18.8% (13.5%, 25.6%)	88.9/897 = 9.9% (6.1%, 15.6%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	153	563.7/897 = 62.8% (53.9%, 71.0%)	686/897 = 76.5% (68.1%, 83.2%)	462.8/897 = 51.6% (42.9%, 60.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	153	496.6/897 = 55.4% (47.0%, 63.5%)	768.8/897 = 85.7% (77.7%, 91.1%)	647.1/897 = 72.1% (63.6%, 79.3%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	151	35.7/925.2 = 3.9% (1.9%, 7.8%)	103.8/925.2 = 11.2% (7.0%, 17.5%)	46.6/925.2 = 5.0% (2.7%, 9.2%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	151	408.5/925.2 = 44.2% (35.9%, 52.8%)	454.4/925.2 = 49.1% (40.6%, 57.7%)	294.3/925.2 = 31.8% (24.7%, 39.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	151	297.7/925.2 = 32.2% (25.3%, 39.9%)	563.9/925.2 = 60.9% (51.9%, 69.3%)	378.4/925.2 = 40.9% (33.0%, 49.3%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	60	52.8/1231.9 = 4.3% (1.5%, 11.6%)	118.5/1231.9 = 9.6% (4.6%, 19.1%)	80.4/1231.9 = 6.5% (2.8%, 14.5%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	60	518.7/1231.9 = 42.1% (28.6%, 56.9%)	673.4/1231.9 = 54.7% (39.8%, 68.7%)	386.2/1231.9 = 31.4% (20.1%, 45.3%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	60	457.2/1231.9 = 37.1% (24.1%, 52.3%)	863.7/1231.9 = 70.1% (55.3%, 81.7%)	577/1231.9 = 46.8% (32.7%, 61.5%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	14	4.1/91.8 = 4.5% (0.4%, 35.6%)	25.9/91.8 = 28.2% (7.7%, 64.9%)	4.1/91.8 = 4.5% (0.4%, 35.6%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	14	60.6/91.8 = 66.0% (30.9%, 89.4%)	76.1/91.8 = 82.9% (39.8%, 97.2%)	49.4/91.8 = 53.8% (22.2%, 82.6%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	14	44.3/91.8 = 48.2% (18.8%, 78.9%)	80.6/91.8 = 87.8% (37.1%, 98.9%)	51.6/91.8 = 56.2% (23.5%, 84.3%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	3.6/87.7 = 4.1% (0.1%, 55.2%)	3.6/87.7 = 4.1% (0.1%, 55.2%)	3.6/87.7 = 4.1% (0.1%, 55.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	28.9/87.7 = 33.0% (5.3%, 81.3%)	33.9/87.7 = 38.6% (7.0%, 84.1%)	19.2/87.7 = 21.9% (2.6%, 74.6%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	9.4/87.7 = 10.7% (0.9%, 61.6%)	14.3/87.7 = 16.3% (2.0%, 65.2%)	9.4/87.7 = 10.7% (0.9%, 61.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times \text{LLOQ}$	% Greater than $4 \times \text{LLOQ}$
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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 $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers by Race

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Race								
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	193	289.4/3803.8 = 7.6% (4.6%, 12.3%)	793.7/3803.8 = 20.9% (15.6%, 27.3%)	442.3/3803.8 = 11.6% (7.7%, 17.2%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	193	2108/3803.8 = 55.4% (47.9%, 62.7%)	2402.1/3803.8 = 63.1% (55.5%, 70.2%)	1876.4/3803.8 = 49.3% (42.0%, 56.7%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	193	1641.8/3803.8 = 43.2% (36.2%, 50.4%)	2848.4/3803.8 = 74.9% (67.4%, 81.1%)	2121.9/3803.8 = 55.8% (48.3%, 63.0%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	56	18.7/401.7 = 4.7% (1.7%, 12.2%)	65.7/401.7 = 16.3% (9.2%, 27.4%)	34.1/401.7 = 8.5% (3.5%, 19.3%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56	259.5/401.7 = 64.6% (49.9%, 77.0%)	322.7/401.7 = 80.3% (66.1%, 89.5%)	216.8/401.7 = 54.0% (39.6%, 67.7%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	56	203.9/401.7 = 50.7% (37.7%, 63.7%)	357/401.7 = 88.9% (75.1%, 95.5%)	294.6/401.7 = 73.3% (60.2%, 83.3%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	24	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	62	28.1/501.5 = 5.6% (2.4%, 12.6%)	68.4/501.5 = 13.6% (7.1%, 24.6%)	28.1/501.5 = 5.6% (2.4%, 12.6%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	62	197.3/501.5 = 39.4% (27.4%, 52.7%)	232.1/501.5 = 46.3% (33.5%, 59.6%)	141.3/501.5 = 28.2% (18.3%, 40.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	62	165.7/501.5 = 33.0% (22.9%, 45.1%)	302.3/501.5 = 60.3% (46.2%, 72.8%)	207.7/501.5 = 41.4% (29.7%, 54.2%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	333	298.3/4947.2 = 6.0% (3.9%, 9.2%)	777.2/4947.2 = 15.7% (12.1%, 20.2%)	446.1/4947.2 = 9.0% (6.4%, 12.6%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	333	2487.4/4947.2 = 50.3% (44.5%, 56.0%)	2914.1/4947.2 = 58.9% (53.0%, 64.6%)	2037.1/4947.2 = 41.2% (35.8%, 46.8%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	333	2096.6/4947.2 = 42.4% (36.9%, 48.0%)	3507.8/4947.2 = 70.9%	2590.3/4947.2 = 52.4% (46.6%, 58.1%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	100	45.9/485.2 = 9.5% (5.2%, 16.7%)	106.3/485.2 = 21.9% (14.4%, 31.8%)	55.4/485.2 = 11.4% (6.7%, 18.9%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	100	300.6/485.2 = 62.0% (51.0%, 71.8%)	345/485.2 = 71.1% (60.3%, 80.0%)	252.9/485.2 = 52.1% (41.8%, 62.3%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	100	285.2/485.2 = 58.8% (48.2%, 68.6%)	420.8/485.2 = 86.7% (77.1%, 92.7%)	361.5/485.2 = 74.5% (63.7%, 83.0%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	96	11.1/479.3 = 2.3% (0.7%, 7.4%)	33.4/479.3 = 7.0% (3.6%, 13.1%)	17.2/479.3 = 3.6% (1.4%, 8.7%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	96	242.5/479.3 = 50.6% (39.7%, 61.4%)	264.8/479.3 = 55.3% (44.1%, 65.9%)	169.4/479.3 = 35.3% (26.2%, 45.6%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	96	133.6/479.3 = 27.9% (19.8%, 37.7%)	270.6/479.3 = 56.5% (45.3%, 67.0%)	161.3/479.3 = 33.6% (24.7%, 44.0%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	21	0/363.1 = 0.0% (0.0%, 0.0%)	43.7/363.1 = 12.0% (3.0%, 37.7%)	20.3/363.1 = 5.6% (0.6%, 36.5%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	21	208.8/363.1 = 57.5% (31.3%, 80.1%)	229.3/363.1 = 63.1% (35.9%, 84.0%)	154.3/363.1 = 42.5% (19.4%, 69.4%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	21	185.7/363.1 = 51.1% (25.8%, 75.9%)	318/363.1 = 87.6% (62.0%, 96.8%)	215.6/363.1 = 59.4% (32.1%, 81.8%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	7	0/56.9 = 0.0%	14.6/56.9 = 25.7%	6.4/56.9 = 11.3%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	7	25.7/56.9 = 45.2%	25.7/56.9 = 45.2%	25.7/56.9 = 45.2%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	7	37/56.9 = 65.1%	56.9/56.9 = 100.0%	45.6/56.9 = 80.2%
Asian	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	0/40.1 = 0.0%	5.8/40.1 = 14.6%	0/40.1 = 0.0%
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	13/40.1 = 32.3%	13/40.1 = 32.3%	13/40.1 = 32.3%
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	13/40.1 = 32.3%	13/40.1 = 32.3%	13/40.1 = 32.3%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	124	170.4/4374.3 = 3.9% (1.6%, 9.2%)	484.4/4374.3 = 11.1% (6.8%, 17.6%)	246.8/4374.3 = 5.6% (2.8%, 11.2%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	124	2038.8/4374.3 = 46.6% (37.7%, 55.8%)	2437/4374.3 = 55.7% (46.2%, 64.9%)	1745.3/4374.3 = 39.9% (31.3%, 49.2%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	124	1560.1/4374.3 = 35.7% (27.6%, 44.6%)	2862.4/4374.3 = 65.4% (55.8%, 74.0%)	2085.7/4374.3 = 47.7% (38.6%, 56.9%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	70.2/621 = 11.3% (5.2%, 22.8%)	144.6/621 = 23.3% (13.8%, 36.6%)	90.2/621 = 14.5% (6.8%, 28.3%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	400.3/621 = 64.5% (49.1%, 77.3%)	459.4/621 = 74.0% (58.4%, 85.2%)	330.4/621 = 53.2% (38.2%, 67.6%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	340.4/621 = 54.8% (39.8%, 69.0%)	489.7/621 = 78.9% (64.0%, 88.7%)	399.6/621 = 64.3% (48.4%, 77.7%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	39	26.8/477.7 = 5.6% (1.7%, 16.6%)	53.6/477.7 = 11.2% (5.1%, 22.8%)	26.8/477.7 = 5.6% (1.7%, 16.6%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	39	156.3/477.7 = 32.7% (19.9%, 48.8%)	196.5/477.7 = 41.1% (26.4%, 57.7%)	122.7/477.7 = 25.7% (14.5%, 41.2%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	39	134.2/477.7 = 28.1% (16.1%, 44.3%)	196.7/477.7 = 41.2% (26.6%, 57.5%)	165.2/477.7 = 34.6% (21.0%, 51.2%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	3	0/99.8 = 0.0%	0/99.8 = 0.0%	0/99.8 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	3	0/99.8 = 0.0%	54.8/99.8 = 54.9%	0/99.8 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	3	54.8/99.8 = 54.9%	54.8/99.8 = 54.9%	54.8/99.8 = 54.9%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/19.9 = 0.0%	0/19.9 = 0.0%	0/19.9 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/7.1 = 0.0%	0/7.1 = 0.0%	0/7.1 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	23	0/410.5 = 0.0% (0.0%, 0.0%)	31.9/410.5 = 7.8% (2.1%, 25.0%)	10.4/410.5 = 2.5% (0.3%, 20.1%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	23	255.7/410.5 = 62.3% (37.9%, 81.7%)	277.2/410.5 = 67.5% (42.7%, 85.3%)	255.7/410.5 = 62.3% (37.9%, 81.7%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	23	190/410.5 = 46.3% (23.8%, 70.4%)	325.3/410.5 = 79.2% (54.5%, 92.4%)	268.5/410.5 = 65.4% (40.9%, 83.8%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	10	0/80.4 = 0.0%	12.8/80.4 = 15.9%	0/80.4 = 0.0%
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	10	51.6/80.4 = 64.2%	58/80.4 = 72.2%	40.4/80.4 = 50.2%
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10	46.8/80.4 = 58.2%	58/80.4 = 72.2%	46.8/80.4 = 58.2%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	0/62.1 = 0.0%	0/62.1 = 0.0%	0/62.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	32.5/62.1 = 52.2%	32.5/62.1 = 52.2%	25.3/62.1 = 40.8%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	3.6/62.1 = 5.7%	31.6/62.1 = 50.9%	19.7/62.1 = 31.7%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	71.3/235.5 = 30.3% (0.8%, 95.9%)	81.7/235.5 = 34.7% (1.3%, 95.6%)	71.3/235.5 = 30.3% (0.8%, 95.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	150.8/235.5 = 64.0% (4.0%, 98.7%)	150.8/235.5 = 64.0% (4.0%, 98.7%)	150.8/235.5 = 64.0% (4.0%, 98.7%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	105.8/235.5 = 44.9% (2.6%, 96.2%)	205.6/235.5 = 87.3% (6.0%, 99.9%)	122.3/235.5 = 51.9% (3.3%, 97.1%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0/20.9 = 0.0%	0/20.9 = 0.0%	0/20.9 = 0.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	20.9/20.9 = 100.0%	20.9/20.9 = 100.0%	16.4/20.9 = 78.5%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0/20.9 = 0.0%	18.4/20.9 = 88.2%	9.1/20.9 = 43.6%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	6	0/36.5 = 0.0% (0.0%, 0.0%)	4.8/36.5 = 13.1% (0.1%, 94.9%)	4.8/36.5 = 13.1% (0.1%, 94.9%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	6	9.6/36.5 = 26.3% (0.8%, 93.8%)	19.3/36.5 = 52.9% (2.2%, 98.2%)	4.8/36.5 = 13.1% (0.1%, 94.9%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	6	7.3/36.5 = 20.1% (0.5%, 92.6%)	31.6/36.5 = 86.5% (5.1%, 99.9%)	21.9/36.5 = 59.8% (2.5%, 98.8%)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Underrepresented Minority Status in the U.S.								
URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	289.5/3820 = 7.6% (4.7%, 11.9%)	572.8/3820 = 15.0% (10.8%, 20.4%)	366/3820 = 9.6% (6.4%, 14.1%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	1885.2/3820 = 49.4% (42.8%, 56.0%)	2188.8/3820 = 57.3% (50.5%, 63.8%)	1640.2/3820 = 42.9% (36.5%, 49.6%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1679.2/3820 = 44.0% (37.7%, 50.4%)	2923.4/3820 = 76.5% (70.0%, 82.0%)	2147/3820 = 56.2% (49.5%, 62.7%)
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	19.3/384 = 5.0% (2.0%, 12.2%)	86.6/384 = 22.5% (14.0%, 34.1%)	33.5/384 = 8.7% (4.5%, 16.3%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	258.4/384 = 67.3% (54.2%, 78.2%)	286.4/384 = 74.6% (61.0%, 84.6%)	207.6/384 = 54.1% (42.0%, 65.7%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	217.1/384 = 56.5% (44.5%, 67.8%)	322.8/384 = 84.1% (70.8%, 92.0%)	267.3/384 = 69.6% (56.6%, 80.1%)
URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	13.2/434 = 3.0% (1.0%, 9.3%)	42.8/434 = 9.9% (5.3%, 17.7%)	13.2/434 = 3.0% (1.0%, 9.3%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	205.3/434 = 47.3% (35.4%, 59.6%)	233.7/434 = 53.9% (41.3%, 65.9%)	165.3/434 = 38.1% (27.4%, 50.1%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	143.1/434 = 33.0% (24.1%, 43.2%)	269.9/434 = 62.2% (49.5%, 73.4%)	162.9/434 = 37.5% (28.1%, 48.0%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	338.8/4542 = 7.5% (4.7%, 11.6%)	880.1/4542 = 19.4% (14.8%, 24.9%)	491.7/4542 = 10.8% (7.4%, 15.6%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	2479.5/4542 = 54.6% (47.9%, 61.1%)	2801/4542 = 61.7% (54.9%, 68.0%)	2174/4542 = 47.9% (41.3%, 54.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	1912.5/4542 = 42.1% (35.9%, 48.6%)	3388.8/4542 = 74.6% (68.0%, 80.2%)	2493.4/4542 = 54.9% (48.2%, 61.4%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	69	22.9/500 = 4.6% (1.9%, 10.6%)	102.1/500 = 20.4% (12.9%, 30.8%)	44.6/500 = 8.9% (4.2%, 18.0%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	336/500 = 67.2% (54.1%, 78.1%)	409.8/500 = 82.0% (69.5%, 90.0%)	270.8/500 = 54.2% (41.2%, 66.6%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	257.9/500 = 51.6% (39.8%, 63.2%)	444.1/500 = 88.8% (76.8%, 95.0%)	352.8/500 = 70.6% (58.0%, 80.6%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	28.1/530 = 5.3% (2.3%, 11.9%)	79/530 = 14.9% (8.3%, 25.2%)	32.9/530 = 6.2% (2.9%, 13.0%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	218.6/530 = 41.2% (29.9%, 53.6%)	249.8/530 = 47.1% (35.2%, 59.4%)	157.8/530 = 29.8% (20.3%, 41.4%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	182.1/530 = 34.4% (24.8%, 45.4%)	323.5/530 = 61.0% (48.0%, 72.7%)	229/530 = 43.2% (32.2%, 54.9%)

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.

Table 5j. Percentage of responders, and participants with concentrations $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ 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 $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Age, Underrepresented Minority Status in the U.S.								
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	115	163.2/2470 = 6.6% (3.2%, 13.0%)	291.8/2470 = 11.8% (7.0%, 19.3%)	163.2/2470 = 6.6% (3.2%, 13.0%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	115	926.7/2470 = 37.5% (28.9%, 47.0%)	1123.9/2470 = 45.5% (36.3%, 55.0%)	806.4/2470 = 32.6% (24.5%, 42.0%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	115	729/2470 = 29.5% (21.6%, 38.8%)	1698.1/2470 = 68.7% (59.4%, 76.8%)	1080.5/2470 = 43.7% (34.7%, 53.3%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	5.2/257 = 2.0% (0.3%, 14.2%)	39.6/257 = 15.4% (6.5%, 32.3%)	5.2/257 = 2.0% (0.3%, 14.2%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	148/257 = 57.6% (39.9%, 73.5%)	176/257 = 68.5% (49.6%, 82.7%)	104.3/257 = 40.6% (25.4%, 57.8%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	104.3/257 = 40.6% (25.4%, 57.8%)	195.8/257 = 76.2% (57.2%, 88.4%)	142.7/257 = 55.5% (37.9%, 71.9%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	0/287 = 0.0% (0.0%, 0.0%)	6.2/287 = 2.2% (0.3%, 15.0%)	0/287 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	99.2/287 = 34.6% (20.0%, 52.8%)	121.3/287 = 42.3% (26.3%, 60.1%)	67.3/287 = 23.4% (11.6%, 41.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	38.1/287 = 13.3% (5.2%, 29.9%)	137.3/287 = 47.8% (31.0%, 65.1%)	47.8/287 = 16.7% (7.2%, 34.2%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	146.5/2949 = 5.0% (2.2%, 10.9%)	352.9/2949 = 12.0% (7.1%, 19.5%)	228/2949 = 7.7% (4.0%, 14.5%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	1254.7/2949 = 42.5% (33.5%, 52.1%)	1466.2/2949 = 49.7% (40.4%, 59.1%)	1086.6/2949 = 36.8% (28.3%, 46.3%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	868.8/2949 = 29.5% (21.6%, 38.7%)	1943.9/2949 = 65.9% (56.5%, 74.3%)	1246.5/2949 = 42.3% (33.3%, 51.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	34	0/317 = 0.0% (0.0%, 0.0%)	22.5/317 = 7.1% (1.7%, 25.5%)	11.2/317 = 3.5% (0.4%, 23.2%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34	201.5/317 = 63.6% (45.3%, 78.6%)	235/317 = 74.1% (55.6%, 86.8%)	149.2/317 = 47.1% (29.9%, 64.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	34	108.3/317 = 34.2% (19.4%, 52.9%)	261.1/317 = 82.4% (64.1%, 92.4%)	186.7/317 = 58.9% (41.3%, 74.5%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	34	0/353 = 0.0% (0.0%, 0.0%)	23.8/353 = 6.7% (1.6%, 24.4%)	0/353 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	34	100.6/353 = 28.5% (15.3%, 46.8%)	121.2/353 = 34.3% (19.8%, 52.6%)	56.2/353 = 15.9% (6.5%, 34.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	34	56.2/353 = 15.9% (6.5%, 34.0%)	167.8/353 = 47.5% (30.5%, 65.2%)	88.7/353 = 25.1% (12.7%, 43.6%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	112	126.3/1350 = 9.4% (5.2%, 16.4%)	280.9/1350 = 20.8% (14.2%, 29.5%)	202.8/1350 = 15.0% (9.4%, 23.2%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	112	958.5/1350 = 71.0% (61.7%, 78.8%)	1064.9/1350 = 78.9% (70.1%, 85.6%)	833.8/1350 = 61.8% (52.1%, 70.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	112	950.1/1350 = 70.4% (61.0%, 78.3%)	1225.3/1350 = 90.8% (83.4%, 95.0%)	1066.5/1350 = 79.0% (70.1%, 85.8%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	14.1/127 = 11.1% (3.8%, 28.3%)	46.9/127 = 37.0% (21.7%, 55.4%)	28.2/127 = 22.2% (10.7%, 40.6%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	110.4/127 = 87.0% (70.1%, 95.0%)	110.4/127 = 87.0% (70.1%, 95.0%)	103.4/127 = 81.4% (63.7%, 91.6%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	112.9/127 = 88.9% (71.7%, 96.2%)	127/127 = 100.0% (100.0%, 100.0%)	124.6/127 = 98.1% (86.6%, 99.8%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	13.2/147 = 9.0% (2.7%, 26.2%)	36.6/147 = 24.9% (12.6%, 43.2%)	13.2/147 = 9.0% (2.7%, 26.2%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	106.2/147 = 72.2% (54.0%, 85.2%)	112.4/147 = 76.5% (58.1%, 88.4%)	98/147 = 66.7% (48.5%, 81.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	105/147 = 71.4% (53.8%, 84.3%)	132.6/147 = 90.2% (75.1%, 96.6%)	115.1/147 = 78.3% (62.2%, 88.8%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	192.3/1593 = 12.1% (7.1%, 19.7%)	527.3/1593 = 33.1% (24.9%, 42.5%)	263.6/1593 = 16.5% (10.6%, 24.8%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	1224.8/1593 = 76.9% (68.2%, 83.8%)	1334.8/1593 = 83.8% (75.6%, 89.6%)	1087.4/1593 = 68.3% (59.0%, 76.3%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	1043.7/1593 = 65.5% (56.1%, 73.9%)	1444.8/1593 = 90.7% (83.4%, 95.0%)	1247/1593 = 78.3% (69.5%, 85.1%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	22.9/183 = 12.5% (5.0%, 28.0%)	79.6/183 = 43.5% (27.4%, 61.1%)	33.4/183 = 18.2% (8.4%, 35.1%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	134.5/183 = 73.5% (54.9%, 86.3%)	174.8/183 = 95.5% (83.1%, 98.9%)	121.7/183 = 66.5% (48.0%, 81.0%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	149.6/183 = 81.8% (64.9%, 91.6%)	183/183 = 100.0% (100.0%, 100.0%)	166.1/183 = 90.7% (73.2%, 97.2%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	33	28.1/177 = 15.9% (6.5%, 34.0%)	55.2/177 = 31.2% (17.2%, 49.8%)	32.9/177 = 18.6% (8.2%, 37.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	33	118/177 = 66.7% (47.9%, 81.3%)	128.6/177 = 72.7% (53.9%, 85.8%)	101.5/177 = 57.4% (39.1%, 73.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	33	125.9/177 = 71.1% (53.5%, 84.1%)	155.7/177 = 88.0% (70.5%, 95.7%)	140.3/177 = 79.3% (61.1%, 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 5k. Percentage of responders, and participants with concentrations $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Country								
United States	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	457	628.3/8362 = 7.5% (5.4%, 10.3%)	1452.9/8362 = 17.4% (14.2%, 21.1%)	857.7/8362 = 10.3% (7.8%, 13.4%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	457	4364.7/8362 = 52.2% (47.5%, 56.9%)	4989.8/8362 = 59.7% (54.9%, 64.3%)	3814.2/8362 = 45.6% (41.0%, 50.3%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	457	3591.6/8362 = 43.0% (38.5%, 47.5%)	6312.1/8362 = 75.5% (70.9%, 79.5%)	4640.4/8362 = 55.5% (50.7%, 60.1%)
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	42.2/884 = 4.8% (2.5%, 8.8%)	188.6/884 = 21.3% (15.5%, 28.7%)	78.1/884 = 8.8% (5.3%, 14.4%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	594.4/884 = 67.2% (58.1%, 75.2%)	696.2/884 = 78.8% (70.1%, 85.4%)	478.5/884 = 54.1% (45.2%, 62.8%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	475.1/884 = 53.7% (45.3%, 62.0%)	766.8/884 = 86.7% (78.6%, 92.1%)	620.1/884 = 70.1% (61.4%, 77.7%)
United States	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	41.4/964 = 4.3% (2.2%, 8.3%)	121.8/964 = 12.6% (8.2%, 18.9%)	46.2/964 = 4.8% (2.5%, 8.9%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	423.9/964 = 44.0% (35.7%, 52.6%)	483.5/964 = 50.2% (41.5%, 58.8%)	323.1/964 = 33.5% (26.2%, 41.7%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	325.3/964 = 33.7% (27.0%, 41.2%)	593.4/964 = 61.6% (52.6%, 69.8%)	392/964 = 40.7% (33.2%, 48.6%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	44	205.2/1575.6 = 13.0% (5.1%, 29.3%)	395.7/1575.6 = 25.1% (13.9%, 41.0%)	205.2/1575.6 = 13.0% (5.1%, 29.3%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	44	834/1575.6 = 52.9% (37.0%, 68.3%)	1119.9/1575.6 = 71.1% (53.8%, 83.8%)	748/1575.6 = 47.5% (32.2%, 63.2%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	44	586.4/1575.6 = 37.2% (23.5%, 53.4%)	1058.1/1575.6 = 67.2% (49.8%, 80.8%)	643.3/1575.6 = 40.8% (26.5%, 56.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Argentina	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	18	16.9/197.6 = 8.5% (1.7%, 33.5%)	50.7/197.6 = 25.6% (10.2%, 51.0%)	16.9/197.6 = 8.5% (1.7%, 33.5%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	154.3/197.6 = 78.1% (45.7%, 93.8%)	174.2/197.6 = 88.2% (58.9%, 97.5%)	154.3/197.6 = 78.1% (45.7%, 93.8%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	131.6/197.6 = 66.6% (37.2%, 87.0%)	197.6/197.6 = 100.0% (100.0%, 100.0%)	164.6/197.6 = 83.3% (48.6%, 96.3%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	14	0/147 = 0.0% (0.0%, 0.0%)	24.1/147 = 16.4% (4.3%, 46.3%)	0/147 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	104.7/147 = 71.2% (35.5%, 91.8%)	116.7/147 = 79.3% (39.6%, 95.7%)	75.8/147 = 51.6% (22.9%, 79.3%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	73.7/147 = 50.1% (22.6%, 77.5%)	123.2/147 = 83.8% (48.5%, 96.6%)	85.6/147 = 58.2% (27.4%, 83.8%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	94	134.5/3284.6 = 4.1% (1.8%, 9.0%)	342.5/3284.6 = 10.4% (5.8%, 17.9%)	210.8/3284.6 = 6.4% (3.3%, 12.1%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	94	1504.1/3284.6 = 45.8% (35.5%, 56.5%)	1597.7/3284.6 = 48.6% (38.1%, 59.3%)	1260.7/3284.6 = 38.4% (28.9%, 48.9%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	94	1306/3284.6 = 39.8% (30.1%, 50.3%)	2418.4/3284.6 = 73.6% (62.5%, 82.4%)	1656.8/3284.6 = 50.4% (40.0%, 60.9%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	22	23.4/308.2 = 7.6% (1.7%, 28.5%)	53.7/308.2 = 17.4% (5.8%, 42.0%)	43.3/308.2 = 14.1% (3.9%, 39.7%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	22	163.1/308.2 = 52.9% (29.8%, 74.8%)	209.2/308.2 = 67.9% (42.2%, 85.9%)	123.2/308.2 = 40.0% (20.4%, 63.4%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	22	125.9/308.2 = 40.9% (21.0%, 64.2%)	229.1/308.2 = 74.3% (48.9%, 89.8%)	178.8/308.2 = 58.0% (34.0%, 78.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Brazil	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	19.7/389.4 = 5.1% (1.2%, 18.9%)	29.5/389.4 = 7.6% (2.4%, 21.4%)	19.7/389.4 = 5.1% (1.2%, 18.9%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	111.4/389.4 = 28.6% (16.8%, 44.3%)	151.6/389.4 = 38.9% (24.0%, 56.3%)	104.2/389.4 = 26.8% (15.3%, 42.6%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	93.8/389.4 = 24.1% (12.1%, 42.3%)	144.5/389.4 = 37.1% (22.4%, 54.7%)	110.7/389.4 = 28.4% (15.5%, 46.2%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	19	47.9/652.7 = 7.3% (1.5%, 28.7%)	95.7/652.7 = 14.7% (4.9%, 36.6%)	95.7/652.7 = 14.7% (4.9%, 36.6%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	247.8/652.7 = 38.0% (18.7%, 61.9%)	285.9/652.7 = 43.8% (22.5%, 67.7%)	190.8/652.7 = 29.2% (12.8%, 53.7%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	181.2/652.7 = 27.8% (12.4%, 51.1%)	362.1/652.7 = 55.5% (30.7%, 77.8%)	247.8/652.7 = 38.0% (18.7%, 61.9%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	10.3/56.4 = 18.3%	10.3/56.4 = 18.3%	10.3/56.4 = 18.3%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	43.4/56.4 = 76.9%	43.4/56.4 = 76.9%	36.8/56.4 = 65.3%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	23.4/56.4 = 41.5%	43.4/56.4 = 76.9%	23.4/56.4 = 41.5%
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	7.1/82.7 = 8.6% (0.3%, 75.1%)	17/82.7 = 20.5% (1.6%, 80.0%)	7.1/82.7 = 8.6% (0.3%, 75.1%)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	28.9/82.7 = 34.9% (4.1%, 87.0%)	28.9/82.7 = 34.9% (4.1%, 87.0%)	17/82.7 = 20.5% (1.6%, 80.0%)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	17/82.7 = 20.5% (1.6%, 80.0%)	24.1/82.7 = 29.1% (3.4%, 82.7%)	24.1/82.7 = 29.1% (3.4%, 82.7%)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	46	28.5/1629 = 1.7% (0.2%, 12.1%)	171.4/1629 = 10.5% (4.6%, 22.4%)	28.5/1629 = 1.7% (0.2%, 12.1%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	46	735.4/1629 = 45.1% (30.5%, 60.7%)	928.3/1629 = 57.0% (40.9%, 71.7%)	623.6/1629 = 38.3% (24.8%, 53.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	46	619.1/1629 = 38.0% (24.3%, 54.0%)	1209.4/1629 = 74.2% (57.6%, 86.0%)	796/1629 = 48.9% (33.6%, 64.4%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	21	26.2/259.4 = 10.1% (2.7%, 31.2%)	46.8/259.4 = 18.1% (6.7%, 40.4%)	26.2/259.4 = 10.1% (2.7%, 31.2%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	21	153.5/259.4 = 59.2% (35.1%, 79.5%)	166.6/259.4 = 64.2% (39.1%, 83.4%)	123.6/259.4 = 47.6% (25.8%, 70.4%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	21	143.9/259.4 = 55.5% (31.7%, 77.0%)	196.8/259.4 = 75.9% (52.0%, 90.2%)	156.9/259.4 = 60.5% (35.4%, 81.0%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	0/123.6 = 0.0% (0.0%, 0.0%)	17/123.6 = 13.7% (2.3%, 51.5%)	0/123.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	26.8/123.6 = 21.7% (5.2%, 58.2%)	45.2/123.6 = 36.6% (10.6%, 73.8%)	26.8/123.6 = 21.7% (5.2%, 58.2%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	45.2/123.6 = 36.6% (10.6%, 73.8%)	74.1/123.6 = 60.0% (23.7%, 87.9%)	57.2/123.6 = 46.3% (15.5%, 80.2%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	4	0/133.2 = 0.0% (0.0%, 0.0%)	28.5/133.2 = 21.4% (0.2%, 97.6%)	0/133.2 = 0.0% (0.0%, 0.0%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	4	57/133.2 = 42.8% (1.0%, 98.2%)	95.1/133.2 = 71.4% (1.6%, 99.7%)	57/133.2 = 42.8% (1.0%, 98.2%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	4	28.5/133.2 = 21.4% (0.2%, 97.6%)	28.5/133.2 = 21.4% (0.2%, 97.6%)	28.5/133.2 = 21.4% (0.2%, 97.6%)
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/11.9 = 0.0%	0/11.9 = 0.0%	0/11.9 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0/11.9 = 0.0%	0/11.9 = 0.0%	0/11.9 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0/11.9 = 0.0%	0/11.9 = 0.0%	0/11.9 = 0.0%
Peru	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	20	0/737.9 = 0.0% (0.0%, 0.0%)	54.8/737.9 = 7.4% (0.9%, 41.9%)	0/737.9 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	20	466.1/737.9 = 63.2% (37.3%, 83.2%)	504.2/737.9 = 68.3% (41.6%, 86.7%)	411.3/737.9 = 55.7% (30.9%, 78.0%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20	246.1/737.9 = 33.4% (15.1%, 58.4%)	616.5/737.9 = 83.5% (55.7%, 95.3%)	432.7/737.9 = 58.6% (33.0%, 80.3%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	0/76.4 = 0.0% (0.0%, 0.0%)	16.9/76.4 = 22.1% (0.6%, 93.0%)	0/76.4 = 0.0% (0.0%, 0.0%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	8	0/90.3 = 0.0% (0.0%, 0.0%)	9.8/90.3 = 10.9% (0.6%, 70.4%)	9.8/90.3 = 10.9% (0.6%, 70.4%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	8	24.1/90.3 = 26.7% (4.7%, 72.9%)	24.1/90.3 = 26.7% (4.7%, 72.9%)	24.1/90.3 = 26.7% (4.7%, 72.9%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	8	24.1/90.3 = 26.7% (4.7%, 72.9%)	24.1/90.3 = 26.7% (4.7%, 72.9%)	24.1/90.3 = 26.7% (4.7%, 72.9%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	113.4/2907 = 3.9% (2.0%, 7.5%)	415.5/2907 = 14.3% (10.3%, 19.4%)	229.6/2907 = 7.9% (4.9%, 12.5%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	1455/2907 = 50.1% (43.3%, 56.8%)	1686.4/2907 = 58.0% (51.1%, 64.6%)	1144.5/2907 = 39.4% (33.3%, 45.8%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1245.1/2907 = 42.8% (36.5%, 49.4%)	2062.3/2907 = 70.9% (64.2%, 76.9%)	1541.9/2907 = 53.0% (46.4%, 59.6%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	36.7/327 = 11.2% (5.7%, 20.9%)	54.5/327 = 16.7% (9.5%, 27.6%)	36.7/327 = 11.2% (5.7%, 20.9%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	201.4/327 = 61.6% (48.5%, 73.2%)	227.2/327 = 69.5% (56.5%, 79.9%)	159/327 = 48.6% (36.6%, 60.8%)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	180.4/327 = 55.2% (42.7%, 67.0%)	278.9/327 = 85.3% (74.1%, 92.1%)	234.1/327 = 71.6% (58.6%, 81.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	6.1/304 = 2.0% (0.5%, 8.1%)	18.3/304 = 6.0% (2.7%, 12.8%)	12.2/304 = 4.0% (1.5%, 10.4%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	135.1/304 = 44.4% (33.0%, 56.5%)	148.5/304 = 48.9% (37.1%, 60.7%)	89.2/304 = 29.3% (20.5%, 40.1%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	69.7/304 = 22.9% (15.0%, 33.4%)	159.8/304 = 52.6% (40.5%, 64.3%)	98.6/304 = 32.4% (22.4%, 44.4%)

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 5l. Percentage of responders, and participants with concentrations $\geq 2 \times$ LLOQ or $\geq 4 \times$ LLOQ for binding antibody markers by HIV Infection

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
HIV Infection								
Negative	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	842	1103.1/18087.2 = 6.1% (4.6%, 8.1%)	2795.4/18087.2 = 15.5% (13.1%, 18.2%)	1522.2/18087.2 = 8.4% (6.7%, 10.6%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	842	9026.2/18087.2 = 49.9% (46.2%, 53.6%)	10430.7/18087.2 = 57.7% (53.9%, 61.4%)	7748.7/18087.2 = 42.8% (39.3%, 46.5%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	842	7267.9/18087.2 = 40.2% (36.7%, 43.7%)	13217.9/18087.2 = 73.1% (69.4%, 76.4%)	9364.2/18087.2 = 51.8% (48.1%, 55.5%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	266	146.6/2005.7 = 7.3% (4.8%, 11.1%)	406/2005.7 = 20.2% (15.8%, 25.6%)	202.5/2005.7 = 10.1% (6.8%, 14.8%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	266	1300.8/2005.7 = 64.9% (58.0%, 71.2%)	1497.1/2005.7 = 74.6% (68.1%, 80.3%)	1073.5/2005.7 = 53.5% (46.7%, 60.3%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	266	1103.8/2005.7 = 55.0% (48.4%, 61.5%)	1692.9/2005.7 = 84.4% (78.6%, 88.9%)	1386.8/2005.7 = 69.1% (62.2%, 75.3%)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	101	0/18112.5 = 0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	101	0/18112.5 = 0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	101	0/18112.5 = 0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	258	70.7/1961.3 = 3.6% (2.0%, 6.4%)	230.2/1961.3 = 11.7% (8.6%, 15.9%)	91.4/1961.3 = 4.7% (2.8%, 7.7%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	258	810/1961.3 = 41.3% (35.5%, 47.3%)	950.1/1961.3 = 48.4% (42.0%, 54.9%)	632.2/1961.3 = 32.2% (26.9%, 38.0%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	258	609.9/1961.3 = 31.1% (25.8%, 37.0%)	1078.1/1961.3 = 55.0% (48.4%, 61.4%)	744.6/1961.3 = 38.0% (32.2%, 44.1%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	69	54.6/1194.8 = 4.6% (1.6%, 12.4%)	161.6/1194.8 = 13.5% (7.3%, 23.6%)	105.3/1194.8 = 8.8% (4.2%, 17.7%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	69	637.9/1194.8 = 53.4% (39.3%, 67.0%)	776.6/1194.8 = 65.0% (50.1%, 77.5%)	501.3/1194.8 = 42.0% (28.9%, 56.3%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	69	536.1/1194.8 = 44.9% (31.5%, 59.0%)	849.5/1194.8 = 71.1% (55.7%, 82.8%)	623.2/1194.8 = 52.2% (38.2%, 65.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Positive	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	17	9/103.3 = 8.7% (1.4%, 38.9%)	15.5/103.3 = 15.0% (4.0%, 42.8%)	9/103.3 = 8.7% (1.4%, 38.9%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17	85.6/103.3 = 82.8% (50.4%, 95.8%)	96/103.3 = 92.9% (54.7%, 99.3%)	78.3/103.3 = 75.7% (43.3%, 92.7%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	17	52.9/103.3 = 51.2% (21.5%, 80.1%)	96/103.3 = 92.9% (54.7%, 99.3%)	67.6/103.3 = 65.4% (28.1%, 90.1%)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	22	3.6/151.7 = 2.3% (0.3%, 18.6%)	7.1/151.7 = 4.7% (1.0%, 19.8%)	3.6/151.7 = 2.3% (0.3%, 18.6%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	22	44.8/151.7 = 29.5% (12.4%, 55.4%)	48.3/151.7 = 31.9% (13.9%, 57.5%)	27.9/151.7 = 18.4% (7.1%, 39.8%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	22	38.8/151.7 = 25.6% (11.1%, 48.7%)	65/151.7 = 42.8% (20.9%, 67.9%)	47.6/151.7 = 31.4% (14.4%, 55.4%)

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
All participants								
	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	911	1157.7/19282 = 6.0% (4.6%, 7.9%)	4990.6/19282 = 25.9% (23.0%, 29.0%)	2957/19282 = 15.3% (13.0%, 17.9%)
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	911	9664.1/19282 = 50.1% (46.6%, 53.7%)	14435.1/19282 = 74.9% (71.4%, 78.0%)	11207.3/19282 = 58.1% (54.5%, 61.7%)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	911	7804/19282 = 40.5% (37.1%, 43.9%)	16636.8/19282 = 86.3% (83.3%, 88.8%)	14067.4/19282 = 73.0% (69.5%, 76.2%)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	155.7/2109 = 7.4% (4.9%, 11.0%)	785.2/2109 = 37.2% (31.0%, 43.9%)	421.5/2109 = 20.0% (15.7%, 25.1%)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	1386.4/2109 = 65.7% (59.1%, 71.9%)	1836.5/2109 = 87.1% (81.4%, 91.2%)	1593.1/2109 = 75.5% (69.2%, 80.9%)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	1156.7/2109 = 54.8% (48.4%, 61.1%)	1964.5/2109 = 93.1% (89.1%, 95.8%)	1789/2109 = 84.8% (79.2%, 89.1%)
	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)	0/19174 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	280	74.2/2113 = 3.5% (2.0%, 6.1%)	369.6/2113 = 17.5% (13.8%, 21.9%)	237.3/2113 = 11.2% (8.3%, 15.1%)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	854.8/2113 = 40.5% (35.0%, 46.1%)	1337.8/2113 = 63.3% (56.8%, 69.3%)	998.5/2113 = 47.3% (41.2%, 53.4%)

Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	648.7/2113 = 30.7% (25.7%, 36.1%)	1581.8/2113 = 74.9% (68.6%, 80.3%)	1143.1/2113 = 54.1% (47.9%, 60.2%)
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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.

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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
Age								
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	455	549.5/12603 = 4.4% (2.7%, 6.9%)	2252.7/12603 = 17.9% (14.4%, 22.0%)	1259.8/12603 = 10.0% (7.4%, 13.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	455	4811.2/12603 = 38.2% (33.4%, 43.2%)	8452.4/12603 = 67.1% (62.1%, 71.6%)	5979.4/12603 = 47.4% (42.4%, 52.5%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	455	3511.8/12603 = 27.9% (23.6%, 32.6%)	10103.2/12603 = 80.2% (75.8%, 83.9%)	7982.8/12603 = 63.3% (58.3%, 68.1%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	47.7/1381 = 3.5% (1.4%, 8.1%)	386.4/1381 = 28.0% (20.3%, 37.3%)	131.8/1381 = 9.5% (5.4%, 16.2%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	794/1381 = 57.5% (48.3%, 66.2%)	1129.4/1381 = 81.8% (73.4%, 88.0%)	928.8/1381 = 67.3% (58.2%, 75.2%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	530.9/1381 = 38.4% (29.8%, 47.9%)	1236.5/1381 = 89.5% (83.4%, 93.6%)	1090.9/1381 = 79.0% (70.8%, 85.4%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)	0/12385 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	0/1384 = 0.0% (0.0%, 0.0%)	78.4/1384 = 5.7% (2.9%, 10.9%)	30/1384 = 2.2% (0.7%, 6.7%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	339/1384 = 24.5% (18.1%, 32.3%)	710.6/1384 = 51.3% (42.5%, 60.1%)	452.4/1384 = 32.7% (25.1%, 41.3%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	179.1/1384 = 12.9% (7.8%, 20.7%)	883.2/1384 = 63.8% (54.7%, 72.0%)	524.1/1384 = 37.9% (29.7%, 46.8%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	456	608.2/6679 = 9.1% (6.6%, 12.4%)	2737.9/6679 = 41.0% (36.2%, 46.0%)	1697.2/6679 = 25.4% (21.3%, 30.0%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	456	4852.9/6679 = 72.7% (67.9%, 76.9%)	5982.6/6679 = 89.6% (85.9%, 92.4%)	5227.9/6679 = 78.3% (73.7%, 82.2%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	456	4292.2/6679 = 64.3% (59.3%, 69.0%)	6533.6/6679 = 97.8% (95.7%, 98.9%)	6084.6/6679 = 91.1% (87.7%, 93.6%)

(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 (BAU/ml)	142	108/728 = 14.8% (9.3%, 22.7%)	398.8/728 = 54.8% (45.4%, 63.9%)	289.7/728 = 39.8% (31.1%, 49.2%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	592.4/728 = 81.4% (73.1%, 87.5%)	707.1/728 = 97.1% (91.3%, 99.1%)	664.2/728 = 91.2% (84.1%, 95.4%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	625.8/728 = 86.0% (78.4%, 91.2%)	728/728 = 100.0% (100.0%, 100.0%)	698.1/728 = 95.9% (89.6%, 98.4%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)	0/6789 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	74.2/729 = 10.2% (5.7%, 17.5%)	291.2/729 = 39.9% (31.3%, 49.3%)	207.3/729 = 28.4% (20.7%, 37.7%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	515.9/729 = 70.8% (61.7%, 78.5%)	627.1/729 = 86.0% (78.1%, 91.4%)	546.1/729 = 74.9% (66.0%, 82.1%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	469.6/729 = 64.4% (55.2%, 72.6%)	698.6/729 = 95.8% (90.4%, 98.2%)	619/729 = 84.9% (76.8%, 90.5%)

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 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
Risk for Severe Covid-19								
At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	450	553.8/7720 = 7.2% (5.0%, 10.1%)	2114/7720 = 27.4% (23.2%, 32.0%)	1328/7720 = 17.2% (13.9%, 21.1%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	450	4022.7/7720 = 52.1% (47.0%, 57.2%)	5815.5/7720 = 75.3% (70.5%, 79.6%)	4649.7/7720 = 60.2% (55.0%, 65.2%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	450	3172.2/7720 = 41.1% (36.3%, 46.1%)	6646.2/7720 = 86.1% (81.8%, 89.5%)	5716.5/7720 = 74.0% (69.1%, 78.5%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	93.7/809 = 11.6% (6.8%, 19.0%)	301/809 = 37.2% (28.8%, 46.5%)	166/809 = 20.5% (14.5%, 28.1%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	510.5/809 = 63.1% (53.7%, 71.6%)	699.8/809 = 86.5% (77.6%, 92.2%)	582.7/809 = 72.0% (62.6%, 79.8%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	449.1/809 = 55.5% (46.4%, 64.3%)	713.1/809 = 88.1% (79.3%, 93.5%)	647.6/809 = 80.0% (70.6%, 87.0%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)	0/7680 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	136	17.6/842 = 2.1% (0.7%, 5.9%)	105/842 = 12.5% (8.1%, 18.6%)	62.9/842 = 7.5% (4.3%, 12.7%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	136	353.8/842 = 42.0% (34.0%, 50.5%)	566.4/842 = 67.3% (58.0%, 75.4%)	419.7/842 = 49.8% (41.1%, 58.6%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	136	215.4/842 = 25.6% (19.6%, 32.6%)	676.3/842 = 80.3% (71.6%, 86.9%)	460.6/842 = 54.7% (45.8%, 63.3%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	461	603.9/11562 = 5.2% (3.4%, 7.9%)	2876.6/11562 = 24.9% (21.0%, 29.2%)	1629/11562 = 14.1% (11.1%, 17.7%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	461	5641.4/11562 = 48.8% (44.0%, 53.7%)	8619.6/11562 = 74.6% (69.7%, 78.9%)	6557.7/11562 = 56.7% (51.6%, 61.6%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	461	4631.8/11562 = 40.1% (35.5%, 44.8%)	9990.6/11562 = 86.4% (82.2%, 89.8%)	8350.9/11562 = 72.2% (67.3%, 76.7%)

(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 (BAU/ml)	142	62/1300 = 4.8% (2.4%, 9.2%)	484.3/1300 = 37.3% (28.8%, 46.5%)	255.5/1300 = 19.7% (14.0%, 26.8%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	875.9/1300 = 67.4% (58.0%, 75.5%)	1136.7/1300 = 87.4% (79.3%, 92.7%)	1010.4/1300 = 77.7% (68.8%, 84.7%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	707.5/1300 = 54.4% (45.6%, 63.0%)	1251.4/1300 = 96.3% (91.6%, 98.4%)	1141.4/1300 = 87.8% (80.1%, 92.8%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)	0/11494 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	144	56.7/1271 = 4.5% (2.3%, 8.5%)	264.7/1271 = 20.8% (15.6%, 27.2%)	174.4/1271 = 13.7% (9.5%, 19.5%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	144	501.1/1271 = 39.4% (32.2%, 47.1%)	771.4/1271 = 60.7% (51.7%, 69.0%)	578.8/1271 = 45.5% (37.4%, 53.9%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	144	433.3/1271 = 34.1% (27.0%, 42.0%)	905.5/1271 = 71.2% (62.2%, 78.8%)	682.5/1271 = 53.7% (45.2%, 61.9%)

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.

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
Age, Risk for Severe Covid-19								
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	224	262.6/5045 = 5.2% (2.9%, 9.3%)	995.9/5045 = 19.7% (14.7%, 26.0%)	571.3/5045 = 11.3% (7.7%, 16.4%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	224	2087.5/5045 = 41.4% (34.5%, 48.6%)	3352.3/5045 = 66.4% (59.5%, 72.8%)	2527.7/5045 = 50.1% (43.0%, 57.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	224	1478.9/5045 = 29.3% (23.2%, 36.3%)	4026.9/5045 = 79.8% (73.5%, 85.0%)	3251.7/5045 = 64.5% (57.3%, 71.0%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	40.3/531 = 7.6% (2.8%, 19.0%)	145.9/531 = 27.5% (17.3%, 40.7%)	56.1/531 = 10.6% (4.8%, 21.5%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	271.9/531 = 51.2% (38.4%, 63.8%)	428.4/531 = 80.7% (67.5%, 89.3%)	320.2/531 = 60.3% (46.9%, 72.3%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	214.6/531 = 40.4% (28.5%, 53.6%)	435.1/531 = 81.9% (68.8%, 90.3%)	385.1/531 = 72.5% (59.0%, 82.9%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)	0/4992 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	0/550 = 0.0% (0.0%, 0.0%)	21.1/550 = 3.8% (1.2%, 11.7%)	6.2/550 = 1.1% (0.2%, 7.9%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	137.9/550 = 25.1% (15.6%, 37.6%)	312/550 = 56.7% (43.9%, 68.7%)	192.8/550 = 35.0% (24.0%, 48.0%)

(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 (BAU/ml)	69	44.2/550 = 8.0% (3.4%, 17.9%)	391.9/550 = 71.3% (58.4%, 81.4%)	211.9/550 = 38.5% (26.9%, 51.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	286.9/7558 = 3.8% (1.9%, 7.5%)	1256.8/7558 = 16.6% (12.1%, 22.4%)	688.6/7558 = 9.1% (5.8%, 14.0%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	2723.7/7558 = 36.0% (29.7%, 42.9%)	5100.1/7558 = 67.5% (60.6%, 73.7%)	3451.7/7558 = 45.7% (38.8%, 52.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	2032.8/7558 = 26.9% (21.2%, 33.4%)	6076.3/7558 = 80.4% (74.1%, 85.5%)	4731.1/7558 = 62.6% (55.5%, 69.1%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	7.3/850 = 0.9% (0.1%, 6.1%)	240.5/850 = 28.3% (18.0%, 41.6%)	75.7/850 = 8.9% (4.0%, 18.9%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	522.2/850 = 61.4% (48.5%, 72.9%)	701/850 = 82.5% (70.5%, 90.3%)	608.6/850 = 71.6% (59.0%, 81.5%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	316.3/850 = 37.2% (25.6%, 50.5%)	801.4/850 = 94.3% (87.1%, 97.6%)	705.7/850 = 83.0% (71.7%, 90.4%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)	0/7393 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	0/834 = 0.0% (0.0%, 0.0%)	57.3/834 = 6.9% (2.9%, 15.2%)	23.8/834 = 2.9% (0.7%, 10.7%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	201.1/834 = 24.1% (15.9%, 34.8%)	398.6/834 = 47.8% (35.7%, 60.1%)	259.6/834 = 31.1% (21.2%, 43.2%)

(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 (BAU/ml)	72	134.9/834 = 16.2% (8.7%, 28.2%)	491.3/834 = 58.9% (46.2%, 70.5%)	312.2/834 = 37.4% (26.6%, 49.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	226	291.2/2675 = 10.9% (7.2%, 16.2%)	1118.1/2675 = 41.8% (35.1%, 48.8%)	756.7/2675 = 28.3% (22.3%, 35.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	1935.2/2675 = 72.3% (65.6%, 78.2%)	2463.2/2675 = 92.1% (87.2%, 95.2%)	2121.9/2675 = 79.3% (72.9%, 84.6%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	1693.2/2675 = 63.3% (56.2%, 69.8%)	2619.3/2675 = 97.9% (94.1%, 99.3%)	2464.8/2675 = 92.1% (87.1%, 95.3%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	53.4/278 = 19.2% (11.0%, 31.4%)	155/278 = 55.8% (42.7%, 68.1%)	109.9/278 = 39.5% (27.8%, 52.6%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	238.6/278 = 85.8% (74.3%, 92.7%)	271.4/278 = 97.6% (90.4%, 99.5%)	262.4/278 = 94.4% (86.8%, 97.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	234.5/278 = 84.4% (72.7%, 91.6%)	278/278 = 100.0% (100.0%, 100.0%)	262.4/278 = 94.4% (82.6%, 98.4%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)	0/2688 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	17.6/292 = 6.0% (2.0%, 16.7%)	83.8/292 = 28.7% (18.1%, 42.4%)	56.7/292 = 19.4% (10.7%, 32.7%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	215.9/292 = 73.9% (61.1%, 83.7%)	254.4/292 = 87.1% (75.3%, 93.7%)	226.9/292 = 77.7% (65.0%, 86.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	171.2/292 = 58.6% (45.1%, 70.9%)	284.4/292 = 97.4% (92.4%, 99.1%)	248.7/292 = 85.2% (73.4%, 92.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	317/4004 = 7.9% (4.9%, 12.6%)	1619.8/4004 = 40.5% (33.8%, 47.4%)	940.4/4004 = 23.5% (18.2%, 29.8%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	2917.8/4004 = 72.9% (66.2%, 78.6%)	3519.5/4004 = 87.9% (82.4%, 91.8%)	3106/4004 = 77.6% (71.1%, 82.9%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	2599/4004 = 64.9% (57.9%, 71.3%)	3914.3/4004 = 97.8% (94.5%, 99.1%)	3619.8/4004 = 90.4% (85.4%, 93.8%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	54.6/450 = 12.1% (5.7%, 23.9%)	243.8/450 = 54.2% (41.2%, 66.6%)	179.7/450 = 39.9% (28.1%, 53.1%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	353.7/450 = 78.6% (66.5%, 87.2%)	435.7/450 = 96.8% (86.1%, 99.3%)	401.8/450 = 89.3% (77.7%, 95.2%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	391.3/450 = 87.0% (75.9%, 93.4%)	450/450 = 100.0% (100.0%, 100.0%)	435.7/450 = 96.8% (86.1%, 99.3%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)	0/4101 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	56.7/437 = 13.0% (6.5%, 24.2%)	207.4/437 = 47.5% (35.1%, 60.2%)	150.7/437 = 34.5% (23.4%, 47.6%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	299.9/437 = 68.6% (55.6%, 79.3%)	372.8/437 = 85.3% (73.4%, 92.4%)	319.2/437 = 73.0% (60.2%, 82.9%)

(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 (BAU/ml)	72	298.4/437 = 68.3% (55.5%, 78.8%)	414.2/437 = 94.8% (85.3%, 98.3%)	370.3/437 = 84.7% (72.6%, 92.1%)

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 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
Sex								
Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	392	574.1/8043.8 = 7.1% (4.8%, 10.4%)	2165.4/8043.8 = 26.9% (22.5%, 31.9%)	1376.3/8043.8 = 17.1% (13.6%, 21.3%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	392	4209.6/8043.8 = 52.3% (46.8%, 57.8%)	6151.9/8043.8 = 76.5% (71.2%, 81.0%)	5062.2/8043.8 = 62.9% (57.3%, 68.3%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	392	3332.9/8043.8 = 41.4% (36.2%, 46.9%)	7130.9/8043.8 = 88.7% (84.2%, 91.9%)	6056.8/8043.8 = 75.3% (70.0%, 80.0%)
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	85.6/895.9 = 9.6% (5.5%, 16.2%)	367.7/895.9 = 41.0% (31.5%, 51.3%)	168.9/895.9 = 18.8% (13.0%, 26.6%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	540.6/895.9 = 60.3% (49.8%, 70.0%)	744.5/895.9 = 83.1% (72.7%, 90.1%)	625.2/895.9 = 69.8% (59.1%, 78.7%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	494.8/895.9 = 55.2% (45.0%, 65.0%)	812.6/895.9 = 90.7% (82.6%, 95.3%)	762.3/895.9 = 85.1% (76.3%, 91.0%)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	52	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	52	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	52	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)	0/9698 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	128	33.7/970 = 3.5% (1.4%, 8.2%)	168.6/970 = 17.4% (11.9%, 24.7%)	113.3/970 = 11.7% (7.2%, 18.3%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	128	375.1/970 = 38.7% (30.6%, 47.4%)	648.5/970 = 66.9% (56.7%, 75.6%)	451.4/970 = 46.5% (37.4%, 55.9%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	128	294.9/970 = 30.4% (23.0%, 39.0%)	640.5/970 = 66.0% (55.9%, 74.9%)	516.9/970 = 53.3% (43.8%, 62.6%)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	519	583.7/11238.2 = 5.2% (3.5%, 7.6%)	2825.2/11238.2 = 25.1% (21.3%, 29.4%)	1580.7/11238.2 = 14.1% (11.1%, 17.6%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	519	5454.5/11238.2 = 48.5% (43.7%, 53.4%)	8283.2/11238.2 = 73.7% (68.9%, 78.0%)	6145.1/11238.2 = 54.7% (49.7%, 59.6%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	519	4471.1/11238.2 = 39.8% (35.3%, 44.4%)	9505.8/11238.2 = 84.6% (80.3%, 88.0%)	8010.6/11238.2 = 71.3% (66.4%, 75.7%)

(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 (BAU/ml)	160	70/1213.1 = 5.8% (3.0%, 10.8%)	417.6/1213.1 = 34.4% (26.3%, 43.6%)	252.6/1213.1 = 20.8% (14.8%, 28.5%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	845.8/1213.1 = 69.7% (60.7%, 77.5%)	1092/1213.1 = 90.0% (82.8%, 94.4%)	967.9/1213.1 = 79.8% (71.7%, 86.0%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	661.9/1213.1 = 54.6% (45.8%, 63.1%)	1151.9/1213.1 = 95.0% (89.4%, 97.7%)	1026.7/1213.1 = 84.6% (76.3%, 90.4%)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	57	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)	0/9476 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	152	40.6/1143 = 3.5% (1.6%, 7.5%)	201/1143 = 17.6% (12.4%, 24.3%)	124/1143 = 10.8% (6.9%, 16.6%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	479.8/1143 = 42.0% (33.8%, 50.6%)	689.3/1143 = 60.3% (51.1%, 68.8%)	547.1/1143 = 47.9% (39.2%, 56.6%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	353.8/1143 = 31.0% (23.8%, 39.2%)	941.4/1143 = 82.4% (73.8%, 88.6%)	626.2/1143 = 54.8% (45.8%, 63.4%)

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
Age, sex								
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	273	292.5/7725.2 = 3.8% (2.0%, 7.1%)	1373.9/7725.2 = 17.8% (13.3%, 23.3%)	750.3/7725.2 = 9.7% (6.4%, 14.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	273	2929.2/7725.2 = 37.9% (31.8%, 44.5%)	5154.6/7725.2 = 66.7% (60.3%, 72.6%)	3458.7/7725.2 = 44.8% (38.3%, 51.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	273	2095.2/7725.2 = 27.1% (21.8%, 33.2%)	6052/7725.2 = 78.3% (72.4%, 83.3%)	4757.1/7725.2 = 61.6% (55.0%, 67.8%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	18.3/816.8 = 2.2% (0.5%, 9.8%)	214.7/816.8 = 26.3% (16.6%, 39.0%)	91.9/816.8 = 11.3% (5.5%, 21.7%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	525.6/816.8 = 64.3% (52.1%, 75.0%)	699.9/816.8 = 85.7% (75.3%, 92.2%)	612/816.8 = 74.9% (63.8%, 83.5%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	302.2/816.8 = 37.0% (26.1%, 49.4%)	755.6/816.8 = 92.5% (84.3%, 96.6%)	643.4/816.8 = 78.8% (66.9%, 87.2%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)	0/6103.6 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	74	0/736.2 = 0.0% (0.0%, 0.0%)	45.4/736.2 = 6.2% (2.3%, 15.3%)	11.9/736.2 = 1.6% (0.2%, 11.1%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	74	208.7/736.2 = 28.4% (18.8%, 40.4%)	345.3/736.2 = 46.9% (34.8%, 59.4%)	248.9/736.2 = 33.8% (23.2%, 46.3%)

(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 (BAU/ml)	74	111.9/736.2 = 15.2% (7.9%, 27.2%)	543.2/736.2 = 73.8% (61.2%, 83.4%)	281.8/736.2 = 38.3% (26.9%, 51.1%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	182	257/4877.8 = 5.3% (2.7%, 10.2%)	878.8/4877.8 = 18.0% (12.8%, 24.8%)	509.6/4877.8 = 10.4% (6.7%, 15.9%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	182	1882/4877.8 = 38.6% (31.2%, 46.5%)	3297.8/4877.8 = 67.6% (59.8%, 74.6%)	2520.7/4877.8 = 51.7% (43.6%, 59.6%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	182	1416.6/4877.8 = 29.0% (22.3%, 36.8%)	4051.2/4877.8 = 83.1% (76.1%, 88.3%)	3225.7/4877.8 = 66.1% (58.2%, 73.2%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	60	29.4/564.2 = 5.2% (1.7%, 14.9%)	171.7/564.2 = 30.4% (18.8%, 45.2%)	39.9/564.2 = 7.1% (2.9%, 16.4%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60	268.4/564.2 = 47.6% (33.5%, 62.0%)	429.6/564.2 = 76.1% (60.8%, 86.8%)	316.8/564.2 = 56.2% (41.3%, 69.9%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	60	228.7/564.2 = 40.5% (27.3%, 55.3%)	480.9/564.2 = 85.2% (72.8%, 92.6%)	447.5/564.2 = 79.3% (66.5%, 88.1%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)	0/6281.4 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	0/647.8 = 0.0% (0.0%, 0.0%)	33/647.8 = 5.1% (1.8%, 13.6%)	18.1/647.8 = 2.8% (0.6%, 11.5%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	130.2/647.8 = 20.1% (12.2%, 31.4%)	365.3/647.8 = 56.4% (43.1%, 68.9%)	203.4/647.8 = 31.4% (20.8%, 44.3%)

(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 (BAU/ml)	67	67.2/647.8 = 10.4% (4.5%, 22.0%)	340/647.8 = 52.5% (39.5%, 65.2%)	242.4/647.8 = 37.4% (26.1%, 50.3%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	246	291.2/3513 = 8.3% (5.2%, 12.9%)	1451.3/3513 = 41.3% (34.8%, 48.2%)	830.4/3513 = 23.6% (18.4%, 29.9%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	246	2525.3/3513 = 71.9% (65.2%, 77.7%)	3128.6/3513 = 89.1% (83.6%, 92.9%)	2686.4/3513 = 76.5% (70.0%, 81.9%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	246	2375.9/3513 = 67.6% (61.0%, 73.6%)	3453.9/3513 = 98.3% (94.6%, 99.5%)	3253.5/3513 = 92.6% (88.3%, 95.4%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	79	51.7/396.3 = 13.1% (6.4%, 24.8%)	202.9/396.3 = 51.2% (38.4%, 63.8%)	160.7/396.3 = 40.5% (28.6%, 53.7%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	320.2/396.3 = 80.8% (68.8%, 88.9%)	392.2/396.3 = 99.0% (92.7%, 99.9%)	355.8/396.3 = 89.8% (78.2%, 95.6%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	359.7/396.3 = 90.8% (82.3%, 95.4%)	396.3/396.3 = 100.0% (100.0%, 100.0%)	383.3/396.3 = 96.7% (89.3%, 99.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	29	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)	0/3372.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	78	40.6/406.8 = 10.0% (4.6%, 20.3%)	155.7/406.8 = 38.3% (27.4%, 50.4%)	112.1/406.8 = 27.6% (17.8%, 40.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	78	271/406.8 = 66.6% (54.0%, 77.2%)	344/406.8 = 84.6% (73.4%, 91.6%)	298.2/406.8 = 73.3% (60.8%, 82.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	78	241.9/406.8 = 59.5% (47.5%, 70.4%)	398.2/406.8 = 97.9% (93.4%, 99.3%)	344.4/406.8 = 84.7% (73.8%, 91.5%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	210	317/3166 = 10.0% (6.4%, 15.4%)	1286.6/3166 = 40.6% (33.6%, 48.1%)	866.8/3166 = 27.4% (21.3%, 34.4%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	210	2327.6/3166 = 73.5% (66.5%, 79.5%)	2854.1/3166 = 90.1% (84.8%, 93.8%)	2541.5/3166 = 80.3% (73.6%, 85.6%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	210	1916.4/3166 = 60.5% (53.0%, 67.6%)	3079.7/3166 = 97.3% (93.8%, 98.8%)	2831.1/3166 = 89.4% (83.6%, 93.3%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	56.2/331.7 = 17.0% (9.1%, 29.4%)	195.9/331.7 = 59.1% (45.1%, 71.7%)	129/331.7 = 38.9% (26.7%, 52.6%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	272.2/331.7 = 82.1% (69.1%, 90.4%)	314.9/331.7 = 94.9% (82.4%, 98.7%)	308.4/331.7 = 93.0% (81.5%, 97.5%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	266.1/331.7 = 80.2% (66.6%, 89.2%)	331.7/331.7 = 100.0% (100.0%, 100.0%)	314.8/331.7 = 94.9% (80.7%, 98.8%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)	0/3416.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	61	33.7/322.2 = 10.5% (4.3%, 23.3%)	135.6/322.2 = 42.1% (28.8%, 56.6%)	95.2/322.2 = 29.6% (18.1%, 44.3%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	61	244.8/322.2 = 76.0% (62.4%, 85.8%)	283.1/322.2 = 87.9% (74.4%, 94.8%)	247.9/322.2 = 77.0% (63.4%, 86.6%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	61	227.7/322.2 = 70.7% (56.3%, 81.9%)	300.4/322.2 = 93.2% (80.9%, 97.8%)	274.6/322.2 = 85.2% (71.1%, 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 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
Hispanic or Latino ethnicity								
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	363	597.1/9982.2 = 6.0% (3.9%, 9.1%)	2381.6/9982.2 = 23.9% (19.5%, 28.8%)	1404/9982.2 = 14.1% (10.7%, 18.2%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	363	4893/9982.2 = 49.0% (43.5%, 54.6%)	7532.3/9982.2 = 75.5% (70.0%, 80.2%)	5673.3/9982.2 = 56.8% (51.1%, 62.4%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	363	3899.8/9982.2 = 39.1% (34.0%, 44.4%)	8729.8/9982.2 = 87.5% (82.8%, 91.0%)	7342.8/9982.2 = 73.6% (68.0%, 78.5%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	116	91.5/1120.1 = 8.2% (4.4%, 14.6%)	419.9/1120.1 = 37.5% (28.0%, 48.0%)	227/1120.1 = 20.3% (14.0%, 28.4%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	116	762.1/1120.1 = 68.0% (57.4%, 77.1%)	960/1120.1 = 85.7% (76.0%, 91.9%)	831/1120.1 = 74.2% (63.9%, 82.3%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	116	615.9/1120.1 = 55.0% (44.9%, 64.7%)	1034.7/1120.1 = 92.4% (85.6%, 96.1%)	939.6/1120.1 = 83.9% (74.6%, 90.2%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	42	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)	0/9862.5 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	118	35/1100.1 = 3.2% (1.2%, 7.9%)	163.3/1100.1 = 14.8% (10.3%, 20.9%)	130/1100.1 = 11.8% (7.7%, 17.7%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	118	417.4/1100.1 = 37.9% (30.2%, 46.3%)	695.5/1100.1 = 63.2% (53.2%, 72.2%)	510.1/1100.1 = 46.4% (37.4%, 55.6%)

(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 (BAU/ml)	118	341.7/1100.1 = 31.1% (23.6%, 39.6%)	785.6/1100.1 = 71.4% (61.3%, 79.8%)	564.9/1100.1 = 51.4% (42.1%, 60.5%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	488	507.8/8067.9 = 6.3% (4.4%, 8.9%)	2388.1/8067.9 = 29.6% (25.6%, 34.0%)	1434.5/8067.9 = 17.8% (14.6%, 21.5%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	488	4252.4/8067.9 = 52.7% (48.0%, 57.4%)	6012.9/8067.9 = 74.5% (69.9%, 78.6%)	4860.6/8067.9 = 60.2% (55.4%, 64.9%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	488	3447/8067.9 = 42.7% (38.2%, 47.3%)	6857/8067.9 = 85.0% (80.7%, 88.4%)	5860.9/8067.9 = 72.6% (67.9%, 76.9%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	153	60/897 = 6.7% (3.9%, 11.2%)	321.1/897 = 35.8% (28.1%, 44.3%)	168.6/897 = 18.8% (13.5%, 25.6%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	153	563.7/897 = 62.8% (53.9%, 71.0%)	784.8/897 = 87.5% (79.8%, 92.5%)	686/897 = 76.5% (68.1%, 83.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	153	496.6/897 = 55.4% (47.0%, 63.5%)	838/897 = 93.4% (86.6%, 96.9%)	768.8/897 = 85.7% (77.7%, 91.1%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	61	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)	0/8500.9 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	151	35.7/925.2 = 3.9% (1.9%, 7.8%)	197/925.2 = 21.3% (15.2%, 28.9%)	103.8/925.2 = 11.2% (7.0%, 17.5%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	151	408.5/925.2 = 44.2% (35.9%, 52.8%)	603.4/925.2 = 65.2% (56.1%, 73.4%)	454.4/925.2 = 49.1% (40.6%, 57.7%)

(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 (BAU/ml)	151	297.7/925.2 = 32.2% (25.3%, 39.9%)	731.9/925.2 = 79.1% (70.4%, 85.8%)	563.9/925.2 = 60.9% (51.9%, 69.3%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	60	52.8/1231.9 = 4.3% (1.5%, 11.6%)	221/1231.9 = 17.9% (10.1%, 29.8%)	118.5/1231.9 = 9.6% (4.6%, 19.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	60	518.7/1231.9 = 42.1% (28.6%, 56.9%)	889.8/1231.9 = 72.2% (57.6%, 83.3%)	673.4/1231.9 = 54.7% (39.8%, 68.7%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	60	457.2/1231.9 = 37.1% (24.1%, 52.3%)	1050/1231.9 = 85.2% (70.7%, 93.3%)	863.7/1231.9 = 70.1% (55.3%, 81.7%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	14	4.1/91.8 = 4.5% (0.4%, 35.6%)	44.3/91.8 = 48.2% (18.8%, 78.9%)	25.9/91.8 = 28.2% (7.7%, 64.9%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	14	60.6/91.8 = 66.0% (30.9%, 89.4%)	91.8/91.8 = 100.0% (100.0%, 100.0%)	76.1/91.8 = 82.9% (39.8%, 97.2%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	14	44.3/91.8 = 48.2% (18.8%, 78.9%)	91.8/91.8 = 100.0% (100.0%, 100.0%)	80.6/91.8 = 87.8% (37.1%, 98.9%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	6	0/810.6 = 0.0%	0/810.6 = 0.0%	0/810.6 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	3.6/87.7 = 4.1% (0.1%, 55.2%)	9.4/87.7 = 10.7% (0.9%, 61.6%)	3.6/87.7 = 4.1% (0.1%, 55.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	28.9/87.7 = 33.0% (5.3%, 81.3%)	38.8/87.7 = 44.3% (8.7%, 86.9%)	33.9/87.7 = 38.6% (7.0%, 84.1%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	9.4/87.7 = 10.7% (0.9%, 61.6%)	64.3/87.7 = 73.3% (13.8%, 97.9%)	14.3/87.7 = 16.3% (2.0%, 65.2%)

(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.

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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
Race								
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	193	289.4/3803.8 = 7.6% (4.6%, 12.3%)	1206.2/3803.8 = 31.7% (25.4%, 38.8%)	793.7/3803.8 = 20.9% (15.6%, 27.3%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	193	2108/3803.8 = 55.4% (47.9%, 62.7%)	2943.6/3803.8 = 77.4% (70.0%, 83.4%)	2402.1/3803.8 = 63.1% (55.5%, 70.2%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	193	1641.8/3803.8 = 43.2% (36.2%, 50.4%)	3333.2/3803.8 = 87.6% (80.8%, 92.3%)	2848.4/3803.8 = 74.9% (67.4%, 81.1%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	56	18.7/401.7 = 4.7% (1.7%, 12.2%)	133.7/401.7 = 33.3% (21.8%, 47.1%)	65.7/401.7 = 16.3% (9.2%, 27.4%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56	259.5/401.7 = 64.6% (49.9%, 77.0%)	360.3/401.7 = 89.7% (76.1%, 96.0%)	322.7/401.7 = 80.3% (66.1%, 89.5%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	56	203.9/401.7 = 50.7% (37.7%, 63.7%)	383.1/401.7 = 95.4% (82.0%, 98.9%)	357/401.7 = 88.9% (75.1%, 95.5%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	24	0/3917 = 0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)	0/3917 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	62	28.1/501.5 = 5.6% (2.4%, 12.6%)	122.1/501.5 = 24.4% (14.9%, 37.1%)	68.4/501.5 = 13.6% (7.1%, 24.6%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	62	197.3/501.5 = 39.4% (27.4%, 52.7%)	332.5/501.5 = 66.3% (51.8%, 78.3%)	232.1/501.5 = 46.3% (33.5%, 59.6%)

(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 (BAU/ml)	62	165.7/501.5 = 33.0% (22.9%, 45.1%)	400.4/501.5 = 79.8% (65.1%, 89.4%)	302.3/501.5 = 60.3% (46.2%, 72.8%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	333	298.3/4947.2 = 6.0% (3.9%, 9.2%)	1319.1/4947.2 = 26.7% (22.0%, 31.9%)	777.2/4947.2 = 15.7% (12.1%, 20.2%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	333	2487.4/4947.2 = 50.3% (44.5%, 56.0%)	3615.8/4947.2 = 73.1% (67.5%, 78.0%)	2914.1/4947.2 = 58.9% (53.0%, 64.6%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	333	2096.6/4947.2 = 42.4% (36.9%, 48.0%)	4175.6/4947.2 = 84.4% (79.2%, 88.5%)	3507.8/4947.2 = 70.9% (65.1%, 76.1%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	100	45.9/485.2 = 9.5% (5.2%, 16.7%)	189.1/485.2 = 39.0% (29.3%, 49.6%)	106.3/485.2 = 21.9% (14.4%, 31.8%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	100	300.6/485.2 = 62.0% (51.0%, 71.8%)	420/485.2 = 86.6% (76.9%, 92.6%)	345/485.2 = 71.1% (60.3%, 80.0%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	100	285.2/485.2 = 58.8% (48.2%, 68.6%)	448.5/485.2 = 92.4% (83.7%, 96.7%)	420.8/485.2 = 86.7% (77.1%, 92.7%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 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 (BAU/ml)	38	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)	0/4445.6 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	96	11.1/479.3 = 2.3% (0.7%, 7.4%)	69.6/479.3 = 14.5% (8.9%, 22.7%)	33.4/479.3 = 7.0% (3.6%, 13.1%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	96	242.5/479.3 = 50.6% (39.7%, 61.4%)	305.8/479.3 = 63.8% (52.0%, 74.2%)	264.8/479.3 = 55.3% (44.1%, 65.9%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	96	133.6/479.3 = 27.9% (19.8%, 37.7%)	359.2/479.3 = 74.9% (64.1%, 83.4%)	270.6/479.3 = 56.5% (45.3%, 67.0%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	21	0/363.1 = 0.0% (0.0%, 0.0%)	95.7/363.1 = 26.4% (9.8%, 54.1%)	43.7/363.1 = 12.0% (3.0%, 37.7%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	21	208.8/363.1 = 57.5% (31.3%, 80.1%)	307.6/363.1 = 84.7% (59.8%, 95.4%)	229.3/363.1 = 63.1% (35.9%, 84.0%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	21	185.7/363.1 = 51.1% (25.8%, 75.9%)	331.5/363.1 = 91.3% (64.4%, 98.4%)	318/363.1 = 87.6% (62.0%, 96.8%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	7	0/56.9 = 0.0%	19.1/56.9 = 33.6%	14.6/56.9 = 25.7%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	7	25.7/56.9 = 45.2%	56.9/56.9 = 100.0%	25.7/56.9 = 45.2%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	7	37/56.9 = 65.1%	56.9/56.9 = 100.0%	56.9/56.9 = 100.0%
Asian	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/228 = 0.0%	0/228 = 0.0%	0/228 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	0/40.1 = 0.0%	5.8/40.1 = 14.6%	5.8/40.1 = 14.6%
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	13/40.1 = 32.3%	13/40.1 = 32.3%	13/40.1 = 32.3%
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	13/40.1 = 32.3%	21.6/40.1 = 54.0%	13/40.1 = 32.3%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	124	170.4/4374.3 = 3.9% (1.6%, 9.2%)	1013.2/4374.3 = 23.2% (16.5%, 31.4%)	484.4/4374.3 = 11.1% (6.8%, 17.6%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	124	2038.8/4374.3 = 46.6% (37.7%, 55.8%)	3298.9/4374.3 = 75.4% (65.9%, 83.0%)	2437/4374.3 = 55.7% (46.2%, 64.9%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	124	1560.1/4374.3 = 35.7% (27.6%, 44.6%)	3596.9/4374.3 = 82.2% (73.1%, 88.7%)	2862.4/4374.3 = 65.4% (55.8%, 74.0%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	70.2/621 = 11.3% (5.2%, 22.8%)	256.8/621 = 41.3% (27.5%, 56.7%)	144.6/621 = 23.3% (13.8%, 36.6%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	400.3/621 = 64.5% (49.1%, 77.3%)	522/621 = 84.1% (68.0%, 92.9%)	459.4/621 = 74.0% (58.4%, 85.2%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	340.4/621 = 54.8% (39.8%, 69.0%)	568.8/621 = 91.6% (80.1%, 96.7%)	489.7/621 = 78.9% (64.0%, 88.7%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)	0/4311 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	39	26.8/477.7 = 5.6% (1.7%, 16.6%)	63.4/477.7 = 13.3% (6.6%, 24.9%)	53.6/477.7 = 11.2% (5.1%, 22.8%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	39	156.3/477.7 = 32.7% (19.9%, 48.8%)	308/477.7 = 64.5% (46.8%, 78.9%)	196.5/477.7 = 41.1% (26.4%, 57.7%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	39	134.2/477.7 = 28.1% (16.1%, 44.3%)	331.5/477.7 = 69.4% (51.2%, 83.0%)	196.7/477.7 = 41.2% (26.6%, 57.5%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	3	0/99.8 = 0.0%	0/99.8 = 0.0%	0/99.8 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	3	0/99.8 = 0.0%	54.8/99.8 = 54.9%	54.8/99.8 = 54.9%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	3	54.8/99.8 = 54.9%	80.4/99.8 = 80.6%	54.8/99.8 = 54.9%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/19.9 = 0.0%	19.9/19.9 = 100.0%	0/19.9 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%	19.9/19.9 = 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	Positive	Anti Spike IgG (BAU/ml)	1	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%	19.9/19.9 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/7.1 = 0.0%	0/7.1 = 0.0%	0/7.1 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%	7.1/7.1 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	23	0/410.5 = 0.0% (0.0%, 0.0%)	100/410.5 = 24.3% (9.3%, 50.4%)	31.9/410.5 = 7.8% (2.1%, 25.0%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	23	255.7/410.5 = 62.3% (37.9%, 81.7%)	305.9/410.5 = 74.5% (49.5%, 89.7%)	277.2/410.5 = 67.5% (42.7%, 85.3%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	23	190/410.5 = 46.3% (23.8%, 70.4%)	325.3/410.5 = 79.2% (54.5%, 92.4%)	325.3/410.5 = 79.2% (54.5%, 92.4%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	10	0/80.4 = 0.0%	37.9/80.4 = 47.2%	12.8/80.4 = 15.9%
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	10	51.6/80.4 = 64.2%	67.4/80.4 = 83.8%	58/80.4 = 72.2%
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10	46.8/80.4 = 58.2%	67.4/80.4 = 83.8%	58/80.4 = 72.2%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	0/62.1 = 0.0%	3.6/62.1 = 5.7%	0/62.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	32.5/62.1 = 52.2%	32.5/62.1 = 52.2%	32.5/62.1 = 52.2%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	3.6/62.1 = 5.7%	43.7/62.1 = 70.3%	31.6/62.1 = 50.9%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	71.3/235.5 = 30.3% (0.8%, 95.9%)	112.3/235.5 = 47.7% (2.9%, 96.5%)	81.7/235.5 = 34.7% (1.3%, 95.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	150.8/235.5 = 64.0% (4.0%, 98.7%)	235.5/235.5 = 100.0% (100.0%, 100.0%)	150.8/235.5 = 64.0% (4.0%, 98.7%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	105.8/235.5 = 44.9% (2.6%, 96.2%)	235.5/235.5 = 100.0% (100.0%, 100.0%)	205.6/235.5 = 87.3% (6.0%, 99.9%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0/20.9 = 0.0%	0/20.9 = 0.0%	0/20.9 = 0.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	20.9/20.9 = 100.0%	20.9/20.9 = 100.0%	20.9/20.9 = 100.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0/20.9 = 0.0%	20.9/20.9 = 100.0%	18.4/20.9 = 88.2%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0/1295.7 = 0.0%	0/1295.7 = 0.0%	0/1295.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	6	0/36.5 = 0.0% (0.0%, 0.0%)	9.6/36.5 = 26.3% (0.8%, 93.8%)	4.8/36.5 = 13.1% (0.1%, 94.9%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	6	9.6/36.5 = 26.3% (0.8%, 93.8%)	26.8/36.5 = 73.4% (2.1%, 99.7%)	19.3/36.5 = 52.9% (2.2%, 98.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	6	7.3/36.5 = 20.1% (0.5%, 92.6%)	36.5/36.5 = 100.0% (100.0%, 100.0%)	31.6/36.5 = 86.5% (5.1%, 99.9%)

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.

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
Underrepresented Minority Status in the U.S.								
URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	289.5/3820 = 7.6% (4.7%, 11.9%)	997.9/3820 = 26.1% (20.8%, 32.3%)	572.8/3820 = 15.0% (10.8%, 20.4%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	1885.2/3820 = 49.4% (42.8%, 56.0%)	2861.6/3820 = 74.9% (68.4%, 80.5%)	2188.8/3820 = 57.3% (50.5%, 63.8%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1679.2/3820 = 44.0% (37.7%, 50.4%)	3352.9/3820 = 87.8% (82.2%, 91.8%)	2923.4/3820 = 76.5% (70.0%, 82.0%)
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	19.3/384 = 5.0% (2.0%, 12.2%)	132.1/384 = 34.4% (24.1%, 46.4%)	86.6/384 = 22.5% (14.0%, 34.1%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	258.4/384 = 67.3% (54.2%, 78.2%)	344.2/384 = 89.6% (76.8%, 95.8%)	286.4/384 = 74.6% (61.0%, 84.6%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	217.1/384 = 56.5% (44.5%, 67.8%)	341.4/384 = 88.9% (75.8%, 95.3%)	322.8/384 = 84.1% (70.8%, 92.0%)
URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)	0/3819 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	13.2/434 = 3.0% (1.0%, 9.3%)	77/434 = 17.7% (10.9%, 27.6%)	42.8/434 = 9.9% (5.3%, 17.7%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	205.3/434 = 47.3% (35.4%, 59.6%)	287.4/434 = 66.2% (53.4%, 77.0%)	233.7/434 = 53.9% (41.3%, 65.9%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	143.1/434 = 33.0% (24.1%, 43.2%)	348.1/434 = 80.2% (67.5%, 88.8%)	269.9/434 = 62.2% (49.5%, 73.4%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	338.8/4542 = 7.5% (4.7%, 11.6%)	1415.6/4542 = 31.2% (25.5%, 37.4%)	880.1/4542 = 19.4% (14.8%, 24.9%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	2479.5/4542 = 54.6% (47.9%, 61.1%)	3543.8/4542 = 78.0% (71.6%, 83.3%)	2801/4542 = 61.7% (54.9%, 68.0%)

(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 (BAU/ml)	230	1912.5/4542 = 42.1% (35.9%, 48.6%)	4001.5/4542 = 88.1% (82.6%, 92.1%)	3388.8/4542 = 74.6% (68.0%, 80.2%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	69	22.9/500 = 4.6% (1.9%, 10.6%)	185.5/500 = 37.1% (26.2%, 49.5%)	102.1/500 = 20.4% (12.9%, 30.8%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	336/500 = 67.2% (54.1%, 78.1%)	458.6/500 = 91.7% (80.4%, 96.8%)	409.8/500 = 82.0% (69.5%, 90.0%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	257.9/500 = 51.6% (39.8%, 63.2%)	481.4/500 = 96.3% (85.3%, 99.1%)	444.1/500 = 88.8% (76.8%, 95.0%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)	0/4600 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	28.1/530 = 5.3% (2.3%, 11.9%)	143.4/530 = 27.1% (17.8%, 38.9%)	79/530 = 14.9% (8.3%, 25.2%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	218.6/530 = 41.2% (29.9%, 53.6%)	350.2/530 = 66.1% (52.7%, 77.3%)	249.8/530 = 47.1% (35.2%, 59.4%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	182.1/530 = 34.4% (24.8%, 45.4%)	447.3/530 = 84.4% (71.5%, 92.1%)	323.5/530 = 61.0% (48.0%, 72.7%)

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
Age, Underrepresented Minority Status in the U.S.								
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	115	163.2/2470 = 6.6% (3.2%, 13.0%)	463.4/2470 = 18.8% (12.5%, 27.2%)	291.8/2470 = 11.8% (7.0%, 19.3%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	115	926.7/2470 = 37.5% (28.9%, 47.0%)	1646.3/2470 = 66.7% (57.3%, 74.9%)	1123.9/2470 = 45.5% (36.3%, 55.0%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	115	729/2470 = 29.5% (21.6%, 38.8%)	2041.2/2470 = 82.6% (74.3%, 88.7%)	1698.1/2470 = 68.7% (59.4%, 76.8%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	5.2/257 = 2.0% (0.3%, 14.2%)	59.4/257 = 23.1% (11.6%, 40.7%)	39.6/257 = 15.4% (6.5%, 32.3%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	148/257 = 57.6% (39.9%, 73.5%)	219.7/257 = 85.5% (66.6%, 94.6%)	176/257 = 68.5% (49.6%, 82.7%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	104.3/257 = 40.6% (25.4%, 57.8%)	214.4/257 = 83.4% (64.6%, 93.3%)	195.8/257 = 76.2% (57.2%, 88.4%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)	0/2454 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	0/287 = 0.0% (0.0%, 0.0%)	22.2/287 = 7.7% (2.3%, 23.2%)	6.2/287 = 2.2% (0.3%, 15.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	99.2/287 = 34.6% (20.0%, 52.8%)	156.7/287 = 54.6% (37.3%, 70.9%)	121.3/287 = 42.3% (26.3%, 60.1%)

(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 (BAU/ml)	36	38.1/287 = 13.3% (5.2%, 29.9%)	201.1/287 = 70.1% (52.0%, 83.5%)	137.3/287 = 47.8% (31.0%, 65.1%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	146.5/2949 = 5.0% (2.2%, 10.9%)	619.1/2949 = 21.0% (14.3%, 29.7%)	352.9/2949 = 12.0% (7.1%, 19.5%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	1254.7/2949 = 42.5% (33.5%, 52.1%)	2093.6/2949 = 71.0% (61.7%, 78.8%)	1466.2/2949 = 49.7% (40.4%, 59.1%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	868.8/2949 = 29.5% (21.6%, 38.7%)	2441.4/2949 = 82.8% (74.5%, 88.8%)	1943.9/2949 = 65.9% (56.5%, 74.3%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	34	0/317 = 0.0% (0.0%, 0.0%)	78.4/317 = 24.7% (12.3%, 43.6%)	22.5/317 = 7.1% (1.7%, 25.5%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34	201.5/317 = 63.6% (45.3%, 78.6%)	279.7/317 = 88.2% (70.6%, 95.9%)	235/317 = 74.1% (55.6%, 86.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	34	108.3/317 = 34.2% (19.4%, 52.9%)	298.4/317 = 94.1% (77.1%, 98.7%)	261.1/317 = 82.4% (64.1%, 92.4%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)	0/2981 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	34	0/353 = 0.0% (0.0%, 0.0%)	56.2/353 = 15.9% (6.5%, 34.0%)	23.8/353 = 6.7% (1.6%, 24.4%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	34	100.6/353 = 28.5% (15.3%, 46.8%)	200.3/353 = 56.7% (38.8%, 73.1%)	121.2/353 = 34.3% (19.8%, 52.6%)

(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 (BAU/ml)	34	56.2/353 = 15.9% (6.5%, 34.0%)	276.2/353 = 78.2% (59.8%, 89.7%)	167.8/353 = 47.5% (30.5%, 65.2%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	112	126.3/1350 = 9.4% (5.2%, 16.4%)	534.5/1350 = 39.6% (30.7%, 49.2%)	280.9/1350 = 20.8% (14.2%, 29.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	112	958.5/1350 = 71.0% (61.7%, 78.8%)	1215.3/1350 = 90.0% (82.6%, 94.5%)	1064.9/1350 = 78.9% (70.1%, 85.6%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	112	950.1/1350 = 70.4% (61.0%, 78.3%)	1311.8/1350 = 97.2% (91.3%, 99.1%)	1225.3/1350 = 90.8% (83.4%, 95.0%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	14.1/127 = 11.1% (3.8%, 28.3%)	72.7/127 = 57.3% (39.3%, 73.5%)	46.9/127 = 37.0% (21.7%, 55.4%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	110.4/127 = 87.0% (70.1%, 95.0%)	124.6/127 = 98.1% (86.6%, 99.8%)	110.4/127 = 87.0% (70.1%, 95.0%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	112.9/127 = 88.9% (71.7%, 96.2%)	127/127 = 100.0% (100.0%, 100.0%)	127/127 = 100.0% (100.0%, 100.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)	0/1365 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	13.2/147 = 9.0% (2.7%, 26.2%)	54.8/147 = 37.3% (22.4%, 55.1%)	36.6/147 = 24.9% (12.6%, 43.2%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	106.2/147 = 72.2% (54.0%, 85.2%)	130.7/147 = 88.9% (72.0%, 96.1%)	112.4/147 = 76.5% (58.1%, 88.4%)

(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 (BAU/ml)	36	105/147 = 71.4% (53.8%, 84.3%)	147/147 = 100.0% (100.0%, 100.0%)	132.6/147 = 90.2% (75.1%, 96.6%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	192.3/1593 = 12.1% (7.1%, 19.7%)	796.5/1593 = 50.0% (40.7%, 59.3%)	527.3/1593 = 33.1% (24.9%, 42.5%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	1224.8/1593 = 76.9% (68.2%, 83.8%)	1450.2/1593 = 91.0% (83.9%, 95.2%)	1334.8/1593 = 83.8% (75.6%, 89.6%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	1043.7/1593 = 65.5% (56.1%, 73.9%)	1560.1/1593 = 97.9%	1444.8/1593 = 90.7% (83.4%, 95.0%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	22.9/183 = 12.5% (5.0%, 28.0%)	107/183 = 58.5% (40.4%, 74.5%)	79.6/183 = 43.5% (27.4%, 61.1%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	134.5/183 = 73.5% (54.9%, 86.3%)	178.9/183 = 97.8% (84.5%, 99.7%)	174.8/183 = 95.5% (83.1%, 98.9%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	149.6/183 = 81.8% (64.9%, 91.6%)	183/183 = 100.0% (100.0%, 100.0%)	183/183 = 100.0% (100.0%, 100.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)	0/1619 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	33	28.1/177 = 15.9% (6.5%, 34.0%)	87.1/177 = 49.2% (32.0%, 66.7%)	55.2/177 = 31.2% (17.2%, 49.8%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	33	118/177 = 66.7% (47.9%, 81.3%)	149.9/177 = 84.7% (66.6%, 93.9%)	128.6/177 = 72.7% (53.9%, 85.8%)

(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 (BAU/ml)	33	125.9/177 = 71.1% (53.5%, 84.1%)	171.2/177 = 96.7% (78.2%, 99.6%)	155.7/177 = 88.0% (70.5%, 95.7%)

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
Country								
United States	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	457	628.3/8362 = 7.5% (5.4%, 10.3%)	2413.5/8362 = 28.9% (24.9%, 33.2%)	1452.9/8362 = 17.4% (14.2%, 21.1%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	457	4364.7/8362 = 52.2% (47.5%, 56.9%)	6405.5/8362 = 76.6% (72.1%, 80.6%)	4989.8/8362 = 59.7% (54.9%, 64.3%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	457	3591.6/8362 = 43.0% (38.5%, 47.5%)	7354.4/8362 = 87.9% (84.2%, 90.9%)	6312.1/8362 = 75.5% (70.9%, 79.5%)
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	42.2/884 = 4.8% (2.5%, 8.8%)	317.6/884 = 35.9% (28.2%, 44.5%)	188.6/884 = 21.3% (15.5%, 28.7%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	594.4/884 = 67.2% (58.1%, 75.2%)	802.8/884 = 90.8% (83.3%, 95.1%)	696.2/884 = 78.8% (70.1%, 85.4%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	475.1/884 = 53.7% (45.3%, 62.0%)	822.8/884 = 93.1% (86.1%, 96.7%)	766.8/884 = 86.7% (78.6%, 92.1%)
United States	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)	0/8419 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	41.4/964 = 4.3% (2.2%, 8.3%)	220.4/964 = 22.9% (16.7%, 30.5%)	121.8/964 = 12.6% (8.2%, 18.9%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	423.9/964 = 44.0% (35.7%, 52.6%)	637.6/964 = 66.1% (57.0%, 74.2%)	483.5/964 = 50.2% (41.5%, 58.8%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	325.3/964 = 33.7% (27.0%, 41.2%)	795.4/964 = 82.5% (74.1%, 88.6%)	593.4/964 = 61.6% (52.6%, 69.8%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	44	205.2/1575.6 = 13.0% (5.1%, 29.3%)	612.7/1575.6 = 38.9% (24.7%, 55.2%)	395.7/1575.6 = 25.1% (13.9%, 41.0%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	44	834/1575.6 = 52.9% (37.0%, 68.3%)	1298.8/1575.6 = 82.4% (65.0%, 92.2%)	1119.9/1575.6 = 71.1% (53.8%, 83.8%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	44	586.4/1575.6 = 37.2% (23.5%, 53.4%)	1263.4/1575.6 = 80.2% (62.4%, 90.8%)	1058.1/1575.6 = 67.2% (49.8%, 80.8%)

(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 (BAU/ml)	18	16.9/197.6 = 8.5% (1.7%, 33.5%)	97.1/197.6 = 49.1% (24.2%, 74.5%)	50.7/197.6 = 25.6% (10.2%, 51.0%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	154.3/197.6 = 78.1% (45.7%, 93.8%)	184.6/197.6 = 93.4% (60.7%, 99.2%)	174.2/197.6 = 88.2% (58.9%, 97.5%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	131.6/197.6 = 66.6% (37.2%, 87.0%)	197.6/197.6 = 100.0% (100.0%, 100.0%)	197.6/197.6 = 100.0% (100.0%, 100.0%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)	0/2226.4 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	14	0/147 = 0.0% (0.0%, 0.0%)	31.2/147 = 21.2% (6.6%, 50.4%)	24.1/147 = 16.4% (4.3%, 46.3%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	104.7/147 = 71.2% (35.5%, 91.8%)	135.1/147 = 91.9% (52.0%, 99.2%)	116.7/147 = 79.3% (39.6%, 95.7%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	73.7/147 = 50.1% (22.6%, 77.5%)	123.2/147 = 83.8% (48.5%, 96.6%)	123.2/147 = 83.8% (48.5%, 96.6%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	94	134.5/3284.6 = 4.1% (1.8%, 9.0%)	540.3/3284.6 = 16.4% (10.3%, 25.3%)	342.5/3284.6 = 10.4% (5.8%, 17.9%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	94	1504.1/3284.6 = 45.8% (35.5%, 56.5%)	2464/3284.6 = 75.0% (64.0%, 83.5%)	1597.7/3284.6 = 48.6% (38.1%, 59.3%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	94	1306/3284.6 = 39.8% (30.1%, 50.3%)	2857.4/3284.6 = 87.0% (76.9%, 93.1%)	2418.4/3284.6 = 73.6% (62.5%, 82.4%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	22	23.4/308.2 = 7.6% (1.7%, 28.5%)	96.7/308.2 = 31.4% (14.9%, 54.5%)	53.7/308.2 = 17.4% (5.8%, 42.0%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	22	163.1/308.2 = 52.9% (29.8%, 74.8%)	235.3/308.2 = 76.3% (49.3%, 91.5%)	209.2/308.2 = 67.9% (42.2%, 85.9%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	22	125.9/308.2 = 40.9% (21.0%, 64.2%)	282.1/308.2 = 91.5% (69.9%, 98.1%)	229.1/308.2 = 74.3% (48.9%, 89.8%)

(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 (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	10	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)	0/2468.6 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	19.7/389.4 = 5.1% (1.2%, 18.9%)	29.5/389.4 = 7.6% (2.4%, 21.4%)	29.5/389.4 = 7.6% (2.4%, 21.4%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	111.4/389.4 = 28.6% (16.8%, 44.3%)	198.3/389.4 = 50.9% (32.6%, 69.0%)	151.6/389.4 = 38.9% (24.0%, 56.3%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	93.8/389.4 = 24.1% (12.1%, 42.3%)	245/389.4 = 62.9% (42.4%, 79.6%)	144.5/389.4 = 37.1% (22.4%, 54.7%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	19	47.9/652.7 = 7.3% (1.5%, 28.7%)	152.7/652.7 = 23.4% (9.7%, 46.6%)	95.7/652.7 = 14.7% (4.9%, 36.6%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	247.8/652.7 = 38.0% (18.7%, 61.9%)	314.3/652.7 = 48.2% (25.7%, 71.4%)	285.9/652.7 = 43.8% (22.5%, 67.7%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	181.2/652.7 = 27.8% (12.4%, 51.1%)	538.3/652.7 = 82.5% (55.1%, 94.8%)	362.1/652.7 = 55.5% (30.7%, 77.8%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	10.3/56.4 = 18.3%	10.3/56.4 = 18.3%	10.3/56.4 = 18.3%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	43.4/56.4 = 76.9%	56.4/56.4 = 100.0%	43.4/56.4 = 76.9%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	23.4/56.4 = 41.5%	43.4/56.4 = 76.9%	43.4/56.4 = 76.9%
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	7.1/82.7 = 8.6% (0.3%, 75.1%)	17/82.7 = 20.5% (1.6%, 80.0%)	17/82.7 = 20.5% (1.6%, 80.0%)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	28.9/82.7 = 34.9% (4.1%, 87.0%)	28.9/82.7 = 34.9% (4.1%, 87.0%)	28.9/82.7 = 34.9% (4.1%, 87.0%)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	17/82.7 = 20.5% (1.6%, 80.0%)	45.8/82.7 = 55.4% (8.4%, 94.4%)	24.1/82.7 = 29.1% (3.4%, 82.7%)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	46	28.5/1629 = 1.7% (0.2%, 12.1%)	311.7/1629 = 19.1% (10.1%, 33.3%)	171.4/1629 = 10.5% (4.6%, 22.4%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	46	735.4/1629 = 45.1% (30.5%, 60.7%)	1264.7/1629 = 77.6% (61.3%, 88.4%)	928.3/1629 = 57.0% (40.9%, 71.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	46	619.1/1629 = 38.0% (24.3%, 54.0%)	1481.2/1629 = 90.9% (74.6%, 97.2%)	1209.4/1629 = 74.2% (57.6%, 86.0%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	21	26.2/259.4 = 10.1% (2.7%, 31.2%)	73.3/259.4 = 28.3% (12.0%, 53.3%)	46.8/259.4 = 18.1% (6.7%, 40.4%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	21	153.5/259.4 = 59.2% (35.1%, 79.5%)	209.9/259.4 = 80.9% (56.6%, 93.2%)	166.6/259.4 = 64.2% (39.1%, 83.4%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	21	143.9/259.4 = 55.5% (31.7%, 77.0%)	233.3/259.4 = 89.9% (65.1%, 97.7%)	196.8/259.4 = 75.9% (52.0%, 90.2%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)	0/2817 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	0/123.6 = 0.0% (0.0%, 0.0%)	26.8/123.6 = 21.7% (5.2%, 58.2%)	17/123.6 = 13.7% (2.3%, 51.5%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	26.8/123.6 = 21.7% (5.2%, 58.2%)	86.1/123.6 = 69.6% (29.0%, 92.8%)	45.2/123.6 = 36.6% (10.6%, 73.8%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	45.2/123.6 = 36.6% (10.6%, 73.8%)	93.2/123.6 = 75.4% (30.9%, 95.5%)	74.1/123.6 = 60.0% (23.7%, 87.9%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	4	0/133.2 = 0.0% (0.0%, 0.0%)	28.5/133.2 = 21.4% (0.2%, 97.6%)	28.5/133.2 = 21.4% (0.2%, 97.6%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	4	57/133.2 = 42.8% (1.0%, 98.2%)	95.1/133.2 = 71.4% (1.6%, 99.7%)	95.1/133.2 = 71.4% (1.6%, 99.7%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	4	28.5/133.2 = 21.4% (0.2%, 97.6%)	57/133.2 = 42.8% (1.0%, 98.2%)	28.5/133.2 = 21.4% (0.2%, 97.6%)
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/11.9 = 0.0%	0/11.9 = 0.0%	0/11.9 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0/11.9 = 0.0%	11.9/11.9 = 100.0%	0/11.9 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0/11.9 = 0.0%	11.9/11.9 = 100.0%	0/11.9 = 0.0%
Peru	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	20	0/737.9 = 0.0% (0.0%, 0.0%)	178.9/737.9 = 24.2% (9.1%, 50.6%)	54.8/737.9 = 7.4% (0.9%, 41.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	20	466.1/737.9 = 63.2% (37.3%, 83.2%)	561.7/737.9 = 76.1% (47.9%, 91.7%)	504.2/737.9 = 68.3% (41.6%, 86.7%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20	246.1/737.9 = 33.4% (15.1%, 58.4%)	616.5/737.9 = 83.5% (55.7%, 95.3%)	616.5/737.9 = 83.5% (55.7%, 95.3%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	0/76.4 = 0.0% (0.0%, 0.0%)	69.8/76.4 = 91.4% (8.3%, 99.9%)	16.9/76.4 = 22.1% (0.6%, 93.0%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)	76.4/76.4 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/338 = 0.0%	0/338 = 0.0%	0/338 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	8	0/90.3 = 0.0% (0.0%, 0.0%)	9.8/90.3 = 10.9% (0.6%, 70.4%)	9.8/90.3 = 10.9% (0.6%, 70.4%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	8	24.1/90.3 = 26.7% (4.7%, 72.9%)	48/90.3 = 53.1% (12.2%, 90.2%)	24.1/90.3 = 26.7% (4.7%, 72.9%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	8	24.1/90.3 = 26.7% (4.7%, 72.9%)	48/90.3 = 53.1% (12.2%, 90.2%)	24.1/90.3 = 26.7% (4.7%, 72.9%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	113.4/2907 = 3.9% (2.0%, 7.5%)	752.4/2907 = 25.9% (20.5%, 32.1%)	415.5/2907 = 14.3% (10.3%, 19.4%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	1455/2907 = 50.1% (43.3%, 56.8%)	2030.9/2907 = 69.9% (63.0%, 75.9%)	1686.4/2907 = 58.0% (51.1%, 64.6%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1245.1/2907 = 42.8% (36.5%, 49.4%)	2468.6/2907 = 84.9% (78.9%, 89.4%)	2062.3/2907 = 70.9% (64.2%, 76.9%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	36.7/327 = 11.2% (5.7%, 20.9%)	120.4/327 = 36.8% (25.7%, 49.5%)	54.5/327 = 16.7% (9.5%, 27.6%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	201.4/327 = 61.6% (48.5%, 73.2%)	271.2/327 = 82.9% (70.5%, 90.8%)	227.2/327 = 69.5% (56.5%, 79.9%)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	180.4/327 = 55.2% (42.7%, 67.0%)	309/327 = 94.5% (86.6%, 97.8%)	278.9/327 = 85.3% (74.1%, 92.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)	0/2905 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	6.1/304 = 2.0% (0.5%, 8.1%)	35/304 = 11.5% (6.7%, 19.1%)	18.3/304 = 6.0% (2.7%, 12.8%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	135.1/304 = 44.4% (33.0%, 56.5%)	191.9/304 = 63.1% (50.5%, 74.2%)	148.5/304 = 48.9% (37.1%, 60.7%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	69.7/304 = 22.9% (15.0%, 33.4%)	219.3/304 = 72.1% (59.3%, 82.1%)	159.8/304 = 52.6% (40.5%, 64.3%)

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 6l. Percentage of responders, and participants with 2-fold rise, and participants with 4-fold rise for binding antibody markers by HIV Infection

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
HIV Infection								
Negative	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	842	1103.1/18087.2 = 6.1% (4.6%, 8.1%)	4778.2/18087.2 = 26.4% (23.4%, 29.7%)	2795.4/18087.2 = 15.5% (13.1%, 18.2%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	842	9026.2/18087.2 = 49.9% (46.2%, 53.6%)	13563.8/18087.2 = 75.0% (71.4%, 78.3%)	10430.7/18087.2 = 57.7% (53.9%, 61.4%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	842	7267.9/18087.2 = 40.2% (36.7%, 43.7%)	15621/18087.2 = 86.4% (83.3%, 89.0%)	13217.9/18087.2 = 73.1% (69.4%, 76.4%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	266	146.6/2005.7 = 7.3% (4.8%, 11.1%)	756.4/2005.7 = 37.7% (31.3%, 44.6%)	406/2005.7 = 20.2% (15.8%, 25.6%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	266	1300.8/2005.7 = 64.9% (58.0%, 71.2%)	1740.5/2005.7 = 86.8% (80.8%, 91.1%)	1497.1/2005.7 = 74.6% (68.1%, 80.3%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	266	1103.8/2005.7 = 55.0% (48.4%, 61.5%)	1861.2/2005.7 = 92.8% (88.5%, 95.6%)	1692.9/2005.7 = 84.4% (78.6%, 88.9%)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	101	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	101	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	101	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)	0/18112.5 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	258	70.7/1961.3 = 3.6% (2.0%, 6.4%)	357.5/1961.3 = 18.2% (14.3%, 23.0%)	230.2/1961.3 = 11.7% (8.6%, 15.9%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	258	810/1961.3 = 41.3% (35.5%, 47.3%)	1242.6/1961.3 = 63.4% (56.6%, 69.6%)	950.1/1961.3 = 48.4% (42.0%, 54.9%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	258	609.9/1961.3 = 31.1% (25.8%, 37.0%)	1485.2/1961.3 = 75.7% (69.1%, 81.3%)	1078.1/1961.3 = 55.0% (48.4%, 61.4%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	69	54.6/1194.8 = 4.6% (1.6%, 12.4%)	212.5/1194.8 = 17.8% (10.5%, 28.4%)	161.6/1194.8 = 13.5% (7.3%, 23.6%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	69	637.9/1194.8 = 53.4% (39.3%, 67.0%)	871.3/1194.8 = 72.9% (57.4%, 84.4%)	776.6/1194.8 = 65.0% (50.1%, 77.5%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	69	536.1/1194.8 = 44.9% (31.5%, 59.0%)	1015.8/1194.8 = 85.0% (70.2%, 93.2%)	849.5/1194.8 = 71.1% (55.7%, 82.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Positive	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	17	9/103.3 = 8.7% (1.4%, 38.9%)	28.9/103.3 = 27.9% (9.9%, 57.8%)	15.5/103.3 = 15.0% (4.0%, 42.8%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17	85.6/103.3 = 82.8% (50.4%, 95.8%)	96/103.3 = 92.9% (54.7%, 99.3%)	96/103.3 = 92.9% (54.7%, 99.3%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	17	52.9/103.3 = 51.2% (21.5%, 80.1%)	103.3/103.3 = 100.0% (100.0%, 100.0%)	96/103.3 = 92.9% (54.7%, 99.3%)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)	0/1061.5 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	22	3.6/151.7 = 2.3% (0.3%, 18.6%)	12.2/151.7 = 8.0% (2.1%, 26.0%)	7.1/151.7 = 4.7% (1.0%, 19.8%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	22	44.8/151.7 = 29.5% (12.4%, 55.4%)	95.2/151.7 = 62.7% (33.4%, 85.0%)	48.3/151.7 = 31.9% (13.9%, 57.5%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	22	38.8/151.7 = 25.6% (11.1%, 48.7%)	96.6/151.7 = 63.7% (33.0%, 86.2%)	65/151.7 = 42.8% (20.9%, 67.9%)

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
All participants						
	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	911	0.05 (0.05, 0.05)
	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	911	0.80 (0.80, 0.80)
	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	911	0.15 (0.15, 0.15)
	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	283	0.05 (0.05, 0.05)
	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	0.80 (0.80, 0.80)
	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	0.15 (0.15, 0.16)
	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	109	0.05 (0.05, 0.05)
	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0.80 (0.80, 0.80)
	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0.15 (0.15, 0.15)
	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	280	0.05 (0.05, 0.05)
	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	0.80 (0.80, 0.80)
	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	0.15 (0.15, 0.16)
	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	911	1.33 (1.17, 1.52)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	911	14.47 (12.98, 16.14)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	911	8.18 (7.46, 8.97)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	2.14 (1.72, 2.67)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	26.56 (21.85, 32.29)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	13.07 (11.35, 15.06)
	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	109	0.05 (0.05, 0.05)
	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0.80 (0.80, 0.80)
	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0.15 (0.15, 0.15)
	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	280	0.84 (0.69, 1.01)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	9.84 (8.15, 11.88)
	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	5.13 (4.36, 6.04)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age						
Age 18 - 59	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	455	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	455	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	455	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.16)
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	455	0.90 (0.76, 1.07)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	455	9.55 (8.25, 11.06)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	455	5.37 (4.74, 6.09)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	1.40 (1.04, 1.88)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	17.86 (13.67, 23.33)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	8.29 (6.89, 9.96)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0.05 (0.05, 0.05)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0.80 (0.80, 0.80)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0.15 (0.15, 0.15)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	0.47 (0.37, 0.58)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	5.54 (4.36, 7.04)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	2.86 (2.32, 3.52)
Age \geq 60	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	456	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	456	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	456	0.15 (0.15, 0.15)
Age \geq 60	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	55	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0.15 (0.15, 0.15)
Age \geq 60	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	139	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)
Age \geq 60	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.16)
Age \geq 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	456	2.78 (2.32, 3.32)
Age \geq 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	456	31.69 (27.34, 36.75)
Age \geq 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	456	18.09 (16.01, 20.45)
Age \geq 60	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	4.80 (3.57, 6.46)
Age \geq 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	56.44 (44.32, 71.87)
Age \geq 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	31.06 (25.45, 37.90)
Age \geq 60	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0.05 (0.05, 0.05)
Age \geq 60	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0.80 (0.80, 0.80)
Age \geq 60	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	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 (BAU/ml)	139	2.54 (1.84, 3.53)
Age \geq 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	29.32 (22.06, 38.97)
Age \geq 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	15.61 (12.29, 19.83)

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
Risk for Severe Covid-19						
At-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	450	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	450	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	450	0.15 (0.15, 0.15)
At-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	0.16 (0.15, 0.16)
At-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	53	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0.15 (0.15, 0.15)
At-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	136	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	136	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	136	0.15 (0.15, 0.16)
At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	450	1.56 (1.30, 1.86)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	450	15.81 (13.47, 18.57)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	450	7.94 (6.97, 9.05)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	2.09 (1.47, 2.98)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	24.44 (17.92, 33.34)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	12.41 (9.76, 15.78)
At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	53	0.05 (0.05, 0.05)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0.80 (0.80, 0.80)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0.15 (0.15, 0.15)
At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	136	0.65 (0.49, 0.86)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	136	9.28 (7.20, 11.96)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	136	4.72 (3.83, 5.83)
Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	461	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	461	0.80 (0.80, 0.80)
Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	461	0.15 (0.15, 0.15)
Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.80 (0.80, 0.80)
Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not at-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)
Not at-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	144	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	144	0.80 (0.79, 0.80)
Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	144	0.15 (0.15, 0.16)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	461	1.20 (1.01, 1.44)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	461	13.64 (11.78, 15.79)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	461	8.35 (7.36, 9.48)
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	2.18 (1.64, 2.88)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	27.98 (21.77, 35.96)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	13.51 (11.35, 16.07)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	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 (BAU/ml)	144	0.99 (0.77, 1.28)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	144	10.24 (7.86, 13.33)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	144	5.42 (4.30, 6.84)

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
Age, Risk for Severe Covid-19						
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	224	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	224	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	224	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.06)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	224	1.06 (0.83, 1.35)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	224	10.69 (8.56, 13.35)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	224	5.14 (4.30, 6.14)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	1.34 (0.82, 2.19)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	15.18 (9.86, 23.36)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	8.10 (5.81, 11.31)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	0.36 (0.25, 0.52)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	5.30 (3.79, 7.40)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	2.67 (2.03, 3.51)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	231	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	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 1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	72	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.16 (0.15, 0.16)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	0.81 (0.64, 1.03)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	8.86 (7.30, 10.76)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	5.54 (4.67, 6.57)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	1.44 (1.00, 2.08)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	19.76 (14.06, 27.78)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	8.40 (6.78, 10.41)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	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 (BAU/ml)	72	0.55 (0.41, 0.74)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	5.71 (4.10, 7.95)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	2.99 (2.23, 4.01)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	226	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.16 (0.15, 0.17)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	27	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	67	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	226	3.21 (2.55, 4.05)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	33.11 (27.26, 40.22)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	18.01 (15.25, 21.28)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	4.90 (3.26, 7.36)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	60.73 (42.95, 85.87)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	28.02 (21.59, 36.38)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	67	1.97 (1.33, 2.90)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	26.69 (18.92, 37.65)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	13.86 (10.54, 18.22)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	230	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	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 (BAU/ml)	71	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	72	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.79, 0.82)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	2.52 (1.95, 3.25)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	30.78 (24.96, 37.96)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	18.15 (15.30, 21.53)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	4.74 (3.15, 7.14)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	53.94 (38.88, 74.83)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	33.09 (25.05, 43.72)

(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 (BAU/ml)	28	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	3.02 (1.87, 4.87)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	31.23 (20.62, 47.29)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	16.90 (11.85, 24.09)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Sex						
Male	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	392	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	392	0.80 (0.80, 0.80)
Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	392	0.15 (0.15, 0.15)
Male	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	123	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	0.80 (0.80, 0.80)
Male	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	0.15 (0.15, 0.16)
Male	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	52	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	52	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	52	0.15 (0.15, 0.15)
Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	128	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	128	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	128	0.15 (0.15, 0.15)
Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	392	1.41 (1.15, 1.73)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	392	16.37 (13.76, 19.49)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	392	8.73 (7.54, 10.09)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	2.30 (1.66, 3.20)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	23.95 (17.14, 33.47)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	12.71 (9.91, 16.30)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	52	0.05 (0.05, 0.05)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	52	0.80 (0.80, 0.80)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	52	0.15 (0.15, 0.15)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	128	0.73 (0.53, 1.00)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	128	9.40 (7.01, 12.60)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	128	4.39 (3.35, 5.76)
Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	519	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	519	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	519	0.15 (0.15, 0.15)
Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	160	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	57	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	57	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	57	0.15 (0.15, 0.15)
Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	152	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	0.80 (0.79, 0.81)
Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	0.16 (0.15, 0.16)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	519	1.28 (1.08, 1.52)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	519	13.25 (11.45, 15.34)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	519	7.82 (6.88, 8.88)
Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	160	2.03 (1.50, 2.76)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	28.67 (22.49, 36.55)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	13.35 (11.06, 16.12)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	57	0.05 (0.05, 0.05)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	57	0.80 (0.80, 0.80)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	57	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 (BAU/ml)	152	0.94 (0.73, 1.22)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	10.24 (7.78, 13.49)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	5.85 (4.66, 7.35)

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
Age, sex						
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	273	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	273	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	273	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	81	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	74	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	74	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	74	0.16 (0.15, 0.16)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	273	0.91 (0.73, 1.13)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	273	9.05 (7.52, 10.90)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	273	5.17 (4.40, 6.07)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	1.38 (0.92, 2.06)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	21.07 (15.37, 28.90)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	8.37 (6.71, 10.44)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	74	0.54 (0.40, 0.74)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	74	6.09 (4.26, 8.71)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	74	3.45 (2.62, 4.56)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	182	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	182	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	182	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	60	0.05 (0.05, 0.06)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	60	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 (BAU/ml)	26	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	67	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	182	0.90 (0.68, 1.18)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	182	10.40 (8.20, 13.20)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	182	5.72 (4.69, 6.98)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	60	1.43 (0.93, 2.21)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60	14.05 (8.88, 22.23)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	60	8.17 (5.94, 11.23)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	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 (BAU/ml)	67	0.39 (0.28, 0.55)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	4.97 (3.62, 6.83)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	2.30 (1.71, 3.10)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	246	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	246	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	246	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	79	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	0.16 (0.15, 0.16)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	29	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	29	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	29	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	78	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	78	0.80 (0.79, 0.82)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	78	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	246	2.73 (2.14, 3.49)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	246	30.62 (24.97, 37.56)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	246	19.44 (16.44, 22.98)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	79	4.53 (3.04, 6.75)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	54.10 (38.94, 75.17)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	34.94 (27.39, 44.56)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	29	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	29	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	29	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	78	2.59 (1.76, 3.80)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	78	26.20 (18.50, 37.11)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	78	15.21 (11.19, 20.68)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	210	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	210	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	210	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age ≥ 60 Male	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	63	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	0.16 (0.15, 0.16)
Age ≥ 60 Male	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
Age ≥ 60 Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	61	0.15 (0.15, 0.15)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	210	2.83 (2.17, 3.69)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	210	32.93 (26.53, 40.87)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	210	16.71 (13.99, 19.96)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	5.15 (3.32, 7.99)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	59.36 (41.55, 84.79)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	26.98 (19.55, 37.24)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	61	2.49 (1.44, 4.29)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	61	33.80 (21.20, 53.90)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	61	16.12 (11.18, 23.25)

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
Hispanic or Latino ethnicity						
Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	363	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	363	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	363	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	116	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	116	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	116	0.15 (0.15, 0.16)
Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	42	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	42	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	42	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	118	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	118	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	118	0.15 (0.15, 0.16)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	363	1.24 (1.01, 1.51)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	363	13.82 (11.71, 16.30)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	363	7.86 (6.86, 9.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	116	2.32 (1.65, 3.26)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	116	26.78 (19.76, 36.30)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	116	12.53 (10.17, 15.44)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	42	0.05 (0.05, 0.05)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	42	0.80 (0.80, 0.80)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	42	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	118	0.77 (0.58, 1.01)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	118	9.48 (7.08, 12.68)
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	118	4.85 (3.72, 6.31)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	488	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	488	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	488	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	153	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	153	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	153	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	61	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	151	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	151	0.80 (0.79, 0.81)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	151	0.16 (0.15, 0.16)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	488	1.51 (1.27, 1.81)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	488	15.69 (13.38, 18.40)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	488	8.79 (7.64, 10.13)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	153	1.89 (1.41, 2.53)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	153	26.01 (20.00, 33.82)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	153	14.07 (11.35, 17.44)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	61	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 (BAU/ml)	151	0.96 (0.73, 1.27)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	151	10.48 (8.06, 13.64)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	151	5.75 (4.64, 7.13)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	60	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	60	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	6	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	11	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (BAU/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 (BAU/ml)	60	1.09 (0.69, 1.70)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	60	12.43 (8.85, 17.44)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	60	7.10 (4.86, 10.36)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	14	2.80 (1.13, 6.96)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	14	29.59 (15.98, 54.79)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	14	10.72 (6.45, 17.82)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	6	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	0.56 (0.23, 1.38)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	8.19 (4.42, 15.17)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	3.15 (2.01, 4.95)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Race						
White Non-Hispanic	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	193	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	193	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	193	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	56	0.16 (0.15, 0.16)
White Non-Hispanic	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	24	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	62	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	62	0.80 (0.79, 0.82)
White Non-Hispanic	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	62	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	193	1.84 (1.38, 2.44)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	193	18.31 (14.14, 23.72)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	193	9.34 (7.48, 11.67)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	56	1.83 (1.23, 2.70)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56	27.99 (19.20, 40.81)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	56	14.63 (10.76, 19.88)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	24	0.05 (0.05, 0.05)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0.80 (0.80, 0.80)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	62	1.00 (0.64, 1.56)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	62	10.01 (6.80, 14.76)
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	62	5.83 (4.14, 8.20)
Black or African American	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	333	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	333	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	333	0.15 (0.15, 0.15)
Black or African American	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	100	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	100	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	100	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	38	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0.80 (0.80, 0.80)
Black or African American	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	38	0.15 (0.15, 0.15)
Black or African American	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	96	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	96	0.80 (0.80, 0.80)
Black or African American	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	96	0.16 (0.15, 0.16)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	333	1.29 (1.03, 1.60)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	333	13.75 (11.55, 16.36)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	333	8.11 (6.97, 9.43)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	100	1.96 (1.34, 2.88)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	100	24.23 (17.83, 32.93)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	100	14.46 (11.10, 18.83)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	38	0.05 (0.05, 0.05)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0.80 (0.80, 0.80)
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	38	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 (BAU/ml)	96	0.91 (0.68, 1.23)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	96	11.14 (7.81, 15.89)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	96	4.98 (3.90, 6.35)
Asian	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	21	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	21	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	21	0.15 (0.15, 0.15)
Asian	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	7	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	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 (BAU/ml)	21	1.61 (0.84, 3.08)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	21	16.69 (8.31, 33.50)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	21	9.64 (6.27, 14.83)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	7	3.12 (0.94, 10.31)
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	7	21.92 (8.79, 54.69)
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	7	23.40 (9.38, 58.39)
Asian	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Asian	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Asian	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Asian	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	0.34 (0.06, 2.04)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	3.63 (0.62, 21.35)
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	2.71 (0.53, 13.79)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	124	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	124	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	124	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	Vaccine	Positive	Anti N IgG (BAU/ml)	49	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	0.16 (0.15, 0.16)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	39	0.05 (0.05, 0.06)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	39	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	39	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	124	1.18 (0.87, 1.60)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	124	12.85 (9.70, 17.02)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	124	6.88 (5.38, 8.79)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	2.38 (1.38, 4.08)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	25.27 (15.59, 40.95)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	11.67 (8.44, 16.13)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	39	0.76 (0.49, 1.18)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	39	8.92 (5.60, 14.21)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	39	5.00 (3.26, 7.67)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	3	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	3	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	3	0.15 (0.15, 0.15)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Native Hawaiian or Other Pacific Islander	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	3	0.39 (0.08, 1.87)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	3	3.41 (0.70, 16.52)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	3	6.23 (2.02, 19.16)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	6.73 (6.73, 6.73)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	107.54 (107.54, 107.54)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	13.43 (13.43, 13.43)
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	2.52 (2.52, 2.52)
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	63.28 (63.28, 63.28)
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	21.28 (21.28, 21.28)
Multiracial	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)
Multiracial	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	10	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	23	1.54 (0.83, 2.82)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	23	19.56 (9.39, 40.78)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	23	9.62 (4.93, 18.76)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	10	1.68 (0.41, 6.85)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	10	32.75 (7.95, 134.97)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10	10.67 (4.02, 28.37)
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.83 (0.37, 1.83)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	11.65 (3.46, 39.16)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	3.14 (1.02, 9.68)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	6	0.08 (0.03, 0.17)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	2.98 (0.67, 13.30)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	29.76 (11.11, 79.67)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	11.63 (5.81, 23.28)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	2.41 (2.06, 2.82)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	37.90 (24.01, 59.81)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	5.84 (3.71, 9.18)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	6	1.68 (0.64, 4.44)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	6	11.32 (4.11, 31.19)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	6	9.46 (4.71, 18.99)

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
Underrepresented Minority Status in the U.S.						
URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)
URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	72	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.16)
URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	1.25 (0.97, 1.62)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	14.08 (11.40, 17.39)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	9.21 (7.79, 10.89)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	1.95 (1.29, 2.93)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	29.35 (21.01, 41.00)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	12.32 (9.28, 16.37)
URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	1.10 (0.76, 1.58)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	11.50 (7.90, 16.73)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	5.78 (4.45, 7.50)
Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	230	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	0.80 (0.80, 0.80)
Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	0.15 (0.15, 0.15)
Non-URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)
Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Non-URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0.15 (0.15, 0.15)
Non-URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	67	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.79, 0.82)
Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.15 (0.15, 0.15)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	230	1.86 (1.47, 2.35)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	17.82 (14.33, 22.15)
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	9.42 (7.89, 11.24)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	69	2.08 (1.45, 2.97)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	30.59 (21.75, 43.03)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	14.27 (10.93, 18.63)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	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 (BAU/ml)	67	1.09 (0.72, 1.66)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	10.28 (7.13, 14.83)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	6.21 (4.60, 8.38)

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
Age, Underrepresented Minority Status in the U.S.						
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	115	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	115	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	115	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.04, 0.06)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	115	0.85 (0.60, 1.21)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	115	9.16 (6.94, 12.08)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	115	6.01 (4.82, 7.50)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	1.30 (0.75, 2.23)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	19.24 (12.44, 29.76)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	7.48 (5.07, 11.03)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	0.69 (0.43, 1.10)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	6.41 (3.89, 10.58)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	3.26 (2.32, 4.56)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	114	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	34	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	34	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	34	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	34	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	34	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	1.29 (0.94, 1.77)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	11.24 (8.41, 15.03)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	6.20 (4.88, 7.87)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	34	1.17 (0.71, 1.92)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34	20.85 (13.26, 32.78)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	34	9.21 (6.46, 13.13)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/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 (BAU/ml)	34	0.60 (0.36, 1.03)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	34	6.64 (4.10, 10.76)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	34	3.77 (2.53, 5.60)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	112	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	112	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	112	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	112	2.52 (1.78, 3.56)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	112	30.93 (22.67, 42.19)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	112	20.10 (15.82, 25.53)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	4.43 (2.55, 7.72)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	68.98 (43.68, 108.95)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	33.87 (25.77, 44.53)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	2.73 (1.60, 4.65)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	35.99 (22.56, 57.39)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	17.69 (12.70, 24.63)
Age \geq 60 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	116	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	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 (BAU/ml)	35	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	0.16 (0.15, 0.17)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	33	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	33	0.82 (0.78, 0.85)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	33	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	3.65 (2.64, 5.03)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	41.82 (30.81, 56.76)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	20.44 (16.06, 26.01)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	5.61 (3.69, 8.53)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	59.44 (36.44, 96.98)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	30.49 (21.15, 43.96)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	33	3.57 (1.93, 6.60)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	33	24.58 (14.92, 40.48)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	33	16.81 (11.43, 24.72)



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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Country						
United States	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	457	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	457	0.80 (0.80, 0.80)
United States	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	457	0.15 (0.15, 0.15)
United States	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	140	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	0.80 (0.80, 0.80)
United States	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	0.15 (0.15, 0.16)
United States	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
United States	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)
United States	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	139	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)
United States	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.16)
United States	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	457	1.55 (1.30, 1.84)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	457	16.00 (13.74, 18.64)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	457	9.32 (8.25, 10.54)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	2.02 (1.54, 2.64)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	30.05 (23.60, 38.25)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	13.39 (11.02, 16.27)
United States	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
United States	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
United States	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)
United States	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	1.10 (0.83, 1.45)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	10.81 (8.32, 14.06)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	6.01 (4.91, 7.36)
Argentina	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	44	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	44	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	44	0.15 (0.15, 0.15)
Argentina	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	18	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	0.16 (0.15, 0.17)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)
Argentina	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	14	0.06 (0.04, 0.08)
Argentina	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	44	2.04 (1.09, 3.82)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	44	19.30 (11.49, 32.41)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	44	6.52 (4.05, 10.48)
Argentina	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	18	4.17 (2.16, 8.06)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	42.29 (20.94, 85.41)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	21.84 (12.95, 36.84)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	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 (BAU/ml)	14	1.30 (0.58, 2.93)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	24.23 (10.57, 55.50)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	7.51 (3.38, 16.70)
Brazil	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	94	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	94	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	94	0.15 (0.15, 0.15)
Brazil	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	22	0.05 (0.04, 0.06)
Brazil	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	22	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	22	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	10	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	10	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	30	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	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 (BAU/ml)	94	1.02 (0.73, 1.43)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	94	12.18 (9.20, 16.13)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	94	7.66 (5.99, 9.81)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	22	1.74 (0.80, 3.81)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	22	17.16 (9.55, 30.84)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	22	9.37 (5.90, 14.89)
Brazil	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	10	0.05 (0.05, 0.05)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	10	0.15 (0.15, 0.15)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	0.55 (0.33, 0.91)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	7.30 (4.38, 12.15)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	3.85 (2.21, 6.71)
Chile	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	19	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	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 (BAU/ml)	5	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	19	1.03 (0.42, 2.52)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	9.62 (4.24, 21.83)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	6.32 (3.34, 11.94)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	1.70 (0.42, 6.88)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	21.86 (9.28, 51.50)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	8.88 (2.34, 33.70)
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.54 (0.13, 2.25)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	5.98 (1.73, 20.66)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	3.26 (1.19, 8.97)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Columbia	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	46	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	46	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	46	0.15 (0.15, 0.15)
Columbia	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	21	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	21	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	21	0.15 (0.15, 0.15)
Columbia	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)
Columbia	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	11	0.06 (0.04, 0.07)
Columbia	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	0.15 (0.15, 0.15)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	46	0.97 (0.56, 1.66)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	46	13.18 (9.09, 19.11)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	46	7.77 (5.18, 11.66)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	21	1.60 (0.70, 3.65)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	21	21.29 (9.96, 45.50)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	21	10.72 (6.01, 19.12)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	11	0.76 (0.29, 1.99)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	10.12 (4.26, 24.03)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	6.65 (3.04, 14.53)
Mexico	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)
Mexico	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	4	0.55 (0.12, 2.50)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	4	11.23 (1.81, 69.77)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	4	3.02 (0.84, 10.87)
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.66 (0.66, 0.66)
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	7.35 (7.35, 7.35)
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	3.25 (3.25, 3.25)
Peru	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	20	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	20	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20	0.15 (0.15, 0.15)
Peru	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	6	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)
Peru	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Peru	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)
Peru	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	20	1.30 (0.66, 2.59)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	20	14.59 (6.65, 32.02)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20	6.94 (3.94, 12.22)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	7.45 (5.22, 10.64)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	101.11 (37.70, 271.20)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	21.18 (11.84, 37.90)
Peru	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Peru	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Peru	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	8	0.48 (0.14, 1.58)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	8	5.67 (1.47, 21.88)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	8	3.13 (1.06, 9.28)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
South Africa	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)
South Africa	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.16 (0.15, 0.16)
South Africa	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.16 (0.15, 0.17)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	1.24 (0.97, 1.58)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	13.14 (10.71, 16.12)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	8.16 (6.81, 9.76)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	2.01 (1.31, 3.08)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	19.58 (13.52, 28.34)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	13.75 (10.28, 18.40)
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0.05 (0.05, 0.05)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0.80 (0.80, 0.80)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0.15 (0.15, 0.15)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	0.69 (0.49, 0.99)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	9.37 (6.65, 13.21)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	4.49 (3.44, 5.86)

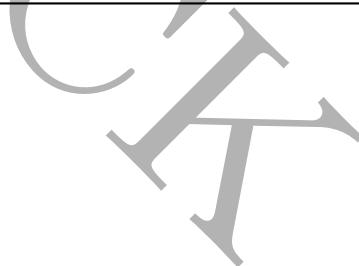


Table 7l. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by HIV Infection

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
HIV Infection						
Negative	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	842	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	842	0.80 (0.80, 0.80)
Negative	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	842	0.15 (0.15, 0.15)
Negative	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	266	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	266	0.80 (0.80, 0.80)
Negative	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	266	0.15 (0.15, 0.16)
Negative	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	101	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	101	0.80 (0.80, 0.80)
Negative	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	101	0.15 (0.15, 0.15)
Negative	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	258	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	258	0.80 (0.80, 0.80)
Negative	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	258	0.15 (0.15, 0.16)
Negative	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	842	1.34 (1.17, 1.53)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	842	14.49 (12.94, 16.22)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	842	8.16 (7.42, 8.97)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	266	2.12 (1.69, 2.66)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	266	26.25 (21.45, 32.12)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	266	13.06 (11.29, 15.12)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	101	0.05 (0.05, 0.05)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	101	0.80 (0.80, 0.80)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	101	0.15 (0.15, 0.15)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	258	0.87 (0.71, 1.07)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	258	10.07 (8.23, 12.33)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	258	5.27 (4.43, 6.27)
Positive	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)
Positive	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)
Positive	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	17	0.06 (0.04, 0.09)
Positive	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	17	0.17 (0.15, 0.19)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Positive	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Positive	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)
Positive	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	22	0.05 (0.05, 0.05)
Positive	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	22	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	22	0.15 (0.15, 0.15)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	69	1.22 (0.75, 1.99)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	69	14.23 (9.07, 22.31)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	69	8.59 (5.43, 13.59)
Positive	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	17	2.61 (1.14, 6.00)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17	33.53 (15.84, 70.99)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	17	13.29 (7.30, 24.20)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	22	0.49 (0.29, 0.84)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	22	7.31 (3.97, 13.44)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	22	3.64 (1.80, 7.35)

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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
All participants								
	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	911	0.05 (0.05, 0.05)	1.33 (1.17, 1.52)	1.60 (1.50, 1.70)
	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	911	0.80 (0.80, 0.80)	14.47 (12.98, 16.14)	6.17 (5.59, 6.81)
	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	911	0.15 (0.15, 0.15)	8.18 (7.46, 8.97)	8.85 (8.08, 9.69)
	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	283	0.05 (0.05, 0.05)	2.14 (1.72, 2.67)	1.86 (1.66, 2.08)
	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	0.80 (0.80, 0.80)	26.56 (21.85, 32.29)	10.72 (8.86, 12.98)
	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	0.15 (0.15, 0.16)	13.07 (11.35, 15.06)	13.94 (12.05, 16.12)
	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	109	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 (BAU/ml)	109	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 (BAU/ml)	109	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 (BAU/ml)	280	0.05 (0.05, 0.05)	0.84 (0.69, 1.01)	1.36 (1.26, 1.46)
	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	0.80 (0.80, 0.80)	9.84 (8.15, 11.88)	4.36 (3.70, 5.15)
	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	0.15 (0.15, 0.16)	5.13 (4.36, 6.04)	5.52 (4.71, 6.48)

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
Age								
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	455	0.05 (0.05, 0.05)	0.90 (0.76, 1.07)	1.36 (1.27, 1.46)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	455	0.80 (0.80, 0.80)	9.55 (8.25, 11.06)	4.18 (3.67, 4.76)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	455	0.15 (0.15, 0.15)	5.37 (4.74, 6.09)	5.82 (5.15, 6.58)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)	1.40 (1.04, 1.88)	1.48 (1.30, 1.69)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	17.86 (13.67, 23.33)	7.32 (5.65, 9.48)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)	8.29 (6.89, 9.96)	8.75 (7.23, 10.59)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	141	0.05 (0.05, 0.05)	0.47 (0.37, 0.58)	1.07 (1.02, 1.13)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	5.54 (4.36, 7.04)	2.60 (2.13, 3.18)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.16)	2.86 (2.32, 3.52)	3.06 (2.50, 3.75)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	456	0.05 (0.05, 0.05)	2.78 (2.32, 3.32)	2.16 (1.93, 2.42)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	456	0.80 (0.80, 0.80)	31.69 (27.34, 36.75)	12.89 (11.19, 14.86)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	456	0.15 (0.15, 0.15)	18.09 (16.01, 20.45)	19.49 (17.22, 22.06)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age ≥ 60	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)	4.80 (3.57, 6.46)	2.86 (2.31, 3.55)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.80 (0.80, 0.80)	56.44 (44.32, 71.87)	22.14 (17.28, 28.38)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.16 (0.15, 0.16)	31.06 (25.45, 37.90)	33.70 (27.62, 41.13)
Age ≥ 60	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	55	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	139	0.05 (0.05, 0.05)	2.54 (1.84, 3.53)	2.13 (1.76, 2.57)
Age ≥ 60	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)	29.32 (22.06, 38.97)	11.62 (8.80, 15.35)
Age ≥ 60	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.16)	15.61 (12.29, 19.83)	16.93 (13.36, 21.46)

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
Risk for Severe Covid-19								
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	450	0.05 (0.05, 0.05)	1.56 (1.30, 1.86)	1.68 (1.53, 1.84)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	450	0.80 (0.80, 0.80)	15.81 (13.47, 18.57)	6.67 (5.75, 7.74)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	450	0.15 (0.15, 0.15)	7.94 (6.97, 9.05)	8.78 (7.75, 9.94)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)	2.09 (1.47, 2.98)	1.92 (1.62, 2.29)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	24.44 (17.92, 33.34)	10.36 (7.80, 13.77)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	0.16 (0.15, 0.16)	12.41 (9.76, 15.78)	13.04 (10.13, 16.77)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	53	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 (BAU/ml)	53	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 (BAU/ml)	53	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 (BAU/ml)	136	0.05 (0.05, 0.05)	0.65 (0.49, 0.86)	1.24 (1.13, 1.36)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	136	0.80 (0.80, 0.80)	9.28 (7.20, 11.96)	4.28 (3.48, 5.27)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	136	0.15 (0.15, 0.16)	4.72 (3.83, 5.83)	5.31 (4.40, 6.42)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	461	0.05 (0.05, 0.05)	1.20 (1.01, 1.44)	1.54 (1.42, 1.68)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	461	0.80 (0.80, 0.80)	13.64 (11.78, 15.79)	5.86 (5.14, 6.68)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	461	0.15 (0.15, 0.15)	8.35 (7.36, 9.48)	8.90 (7.84, 10.10)

(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 (BAU/ml)	142	0.05 (0.05, 0.05)	2.18 (1.64, 2.88)	1.82 (1.57, 2.12)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.80 (0.80, 0.80)	27.98 (21.77, 35.96)	10.95 (8.49, 14.14)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.15 (0.15, 0.15)	13.51 (11.35, 16.07)	14.53 (12.18, 17.33)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	56	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 (BAU/ml)	56	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 (BAU/ml)	56	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 (BAU/ml)	144	0.05 (0.05, 0.05)	0.99 (0.77, 1.28)	1.45 (1.30, 1.61)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	144	0.80 (0.79, 0.80)	10.24 (7.86, 13.33)	4.41 (3.48, 5.60)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	144	0.15 (0.15, 0.16)	5.42 (4.30, 6.84)	5.67 (4.49, 7.16)

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
Age, Risk for Severe Covid-19								
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	224	0.05 (0.05, 0.05)	1.06 (0.83, 1.35)	1.43 (1.28, 1.61)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	224	0.80 (0.80, 0.80)	10.69 (8.56, 13.35)	4.65 (3.80, 5.69)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	224	0.15 (0.15, 0.15)	5.14 (4.30, 6.14)	5.77 (4.89, 6.82)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.06)	1.34 (0.82, 2.19)	1.53 (1.24, 1.89)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)	15.18 (9.86, 23.36)	6.68 (4.54, 9.85)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)	8.10 (5.81, 11.31)	8.37 (5.88, 11.91)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	69	0.05 (0.05, 0.05)	0.36 (0.25, 0.52)	1.05 (0.99, 1.12)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	5.30 (3.79, 7.40)	2.65 (2.06, 3.40)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)	2.67 (2.03, 3.51)	3.06 (2.42, 3.89)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	231	0.05 (0.05, 0.05)	0.81 (0.64, 1.03)	1.31 (1.20, 1.44)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	0.80 (0.80, 0.80)	8.86 (7.30, 10.76)	3.89 (3.28, 4.61)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	0.15 (0.15, 0.15)	5.54 (4.67, 6.57)	5.86 (4.94, 6.95)

(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 (BAU/ml)	71	0.05 (0.05, 0.05)	1.44 (1.00, 2.08)	1.45 (1.23, 1.71)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	19.76 (14.06, 27.78)	7.74 (5.49, 10.92)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	8.40 (6.78, 10.41)	9.00 (7.23, 11.20)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	72	0.05 (0.05, 0.05)	0.55 (0.41, 0.74)	1.09 (1.01, 1.17)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)	5.71 (4.10, 7.95)	2.57 (1.93, 3.44)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.16 (0.15, 0.16)	2.99 (2.23, 4.01)	3.06 (2.28, 4.11)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	226	0.05 (0.05, 0.05)	3.21 (2.55, 4.05)	2.26 (1.92, 2.66)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	0.80 (0.80, 0.80)	33.11 (27.26, 40.22)	13.19 (10.87, 16.00)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	0.15 (0.15, 0.15)	18.01 (15.25, 21.28)	19.35 (16.32, 22.94)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	4.90 (3.26, 7.36)	2.96 (2.20, 3.98)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	60.73 (42.95, 85.87)	23.93 (16.85, 34.00)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.16 (0.15, 0.17)	28.02 (21.59, 36.38)	30.41 (23.43, 39.49)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	67	0.05 (0.05, 0.05)	1.97 (1.33, 2.90)	1.67 (1.32, 2.12)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.80, 0.80)	26.69 (18.92, 37.65)	10.62 (7.56, 14.91)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.16 (0.15, 0.16)	13.86 (10.54, 18.22)	14.96 (11.37, 19.70)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	230	0.05 (0.05, 0.05)	2.52 (1.95, 3.25)	2.09 (1.79, 2.44)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	0.80 (0.80, 0.80)	30.78 (24.96, 37.96)	12.70 (10.41, 15.49)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	230	0.15 (0.15, 0.15)	18.15 (15.30, 21.53)	19.58 (16.48, 23.26)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	4.74 (3.15, 7.14)	2.81 (2.08, 3.78)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	53.94 (38.88, 74.83)	21.10 (15.05, 29.59)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	33.09 (25.05, 43.72)	35.91 (27.18, 47.44)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	28	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	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 (BAU/ml)	72	0.05 (0.05, 0.05)	3.02 (1.87, 4.87)	2.50 (1.90, 3.27)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.79, 0.82)	31.23 (20.62, 47.29)	12.35 (8.24, 18.51)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.15)	16.90 (11.85, 24.09)	18.39 (12.97, 26.08)

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
Sex								
Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	392	0.05 (0.05, 0.05)	1.41 (1.15, 1.73)	1.68 (1.51, 1.86)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	392	0.80 (0.80, 0.80)	16.37 (13.76, 19.49)	6.94 (5.92, 8.15)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	392	0.15 (0.15, 0.15)	8.73 (7.54, 10.09)	9.42 (8.17, 10.85)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	123	0.05 (0.05, 0.05)	2.30 (1.66, 3.20)	1.94 (1.63, 2.30)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	0.80 (0.80, 0.80)	23.95 (17.14, 33.47)	9.76 (7.08, 13.45)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	0.15 (0.15, 0.16)	12.71 (9.91, 16.30)	13.57 (10.52, 17.50)
Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	128	0.05 (0.05, 0.05)	0.73 (0.53, 1.00)	1.37 (1.21, 1.55)
Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	128	0.80 (0.80, 0.80)	9.40 (7.01, 12.60)	4.40 (3.45, 5.62)
Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	128	0.15 (0.15, 0.15)	4.39 (3.35, 5.76)	4.87 (3.78, 6.28)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	519	0.05 (0.05, 0.05)	1.28 (1.08, 1.52)	1.54 (1.43, 1.66)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	519	0.80 (0.80, 0.80)	13.25 (11.45, 15.34)	5.67 (4.97, 6.47)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	519	0.15 (0.15, 0.15)	7.82 (6.88, 8.88)	8.46 (7.46, 9.61)

(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 (BAU/ml)	160	0.05 (0.05, 0.05)	2.03 (1.50, 2.76)	1.80 (1.54, 2.12)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	0.80 (0.80, 0.80)	28.67 (22.49, 36.55)	11.49 (9.02, 14.65)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	0.15 (0.15, 0.16)	13.35 (11.06, 16.12)	14.22 (11.70, 17.28)
Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	57	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 (BAU/ml)	57	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 (BAU/ml)	57	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 (BAU/ml)	152	0.05 (0.05, 0.05)	0.94 (0.73, 1.22)	1.35 (1.22, 1.50)
Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	0.80 (0.79, 0.81)	10.24 (7.78, 13.49)	4.32 (3.34, 5.59)
Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	0.16 (0.15, 0.16)	5.85 (4.66, 7.35)	6.14 (4.86, 7.77)

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
Age, sex								
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	273	0.05 (0.05, 0.05)	0.91 (0.73, 1.13)	1.33 (1.22, 1.45)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	273	0.80 (0.80, 0.80)	9.05 (7.52, 10.90)	3.98 (3.38, 4.68)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	273	0.15 (0.15, 0.15)	5.17 (4.40, 6.07)	5.60 (4.77, 6.56)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	81	0.05 (0.05, 0.05)	1.38 (0.92, 2.06)	1.47 (1.23, 1.75)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	0.80 (0.80, 0.80)	21.07 (15.37, 28.90)	8.50 (6.21, 11.64)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)	8.37 (6.71, 10.44)	8.83 (7.00, 11.14)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	74	0.05 (0.05, 0.05)	0.54 (0.40, 0.74)	1.07 (1.00, 1.14)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	74	0.80 (0.80, 0.80)	6.09 (4.26, 8.71)	2.71 (1.96, 3.74)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	74	0.16 (0.15, 0.16)	3.45 (2.62, 4.56)	3.56 (2.67, 4.75)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	182	0.05 (0.05, 0.05)	0.90 (0.68, 1.18)	1.41 (1.25, 1.61)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	182	0.80 (0.80, 0.80)	10.40 (8.20, 13.20)	4.52 (3.64, 5.60)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	182	0.15 (0.15, 0.15)	5.72 (4.69, 6.98)	6.20 (5.13, 7.50)

(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 (BAU/ml)	60	0.05 (0.05, 0.06)	1.43 (0.93, 2.21)	1.50 (1.24, 1.81)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)	14.05 (8.88, 22.23)	5.89 (3.83, 9.07)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	60	0.15 (0.15, 0.15)	8.17 (5.94, 11.23)	8.63 (6.21, 12.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	67	0.05 (0.05, 0.05)	0.39 (0.28, 0.55)	1.08 (1.00, 1.17)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.80, 0.80)	4.97 (3.62, 6.83)	2.49 (1.97, 3.15)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.15 (0.15, 0.15)	2.30 (1.71, 3.10)	2.58 (1.97, 3.38)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	246	0.05 (0.05, 0.05)	2.73 (2.14, 3.49)	2.13 (1.83, 2.49)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	246	0.80 (0.80, 0.80)	30.62 (24.97, 37.56)	12.40 (10.16, 15.13)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	246	0.15 (0.15, 0.15)	19.44 (16.44, 22.98)	21.03 (17.77, 24.89)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	79	0.05 (0.05, 0.05)	4.53 (3.04, 6.75)	2.76 (2.02, 3.76)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	0.80 (0.80, 0.80)	54.10 (38.94, 75.17)	21.41 (15.38, 29.80)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	0.16 (0.15, 0.16)	34.94 (27.39, 44.56)	37.92 (29.73, 48.36)

(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 (BAU/ml)	29	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 (BAU/ml)	29	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 (BAU/ml)	29	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 (BAU/ml)	78	0.05 (0.05, 0.05)	2.59 (1.76, 3.80)	2.05 (1.62, 2.60)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	78	0.80 (0.79, 0.82)	26.20 (18.50, 37.11)	10.09 (7.05, 14.43)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	78	0.15 (0.15, 0.16)	15.21 (11.19, 20.68)	16.52 (12.15, 22.45)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	210	0.05 (0.05, 0.05)	2.83 (2.17, 3.69)	2.19 (1.85, 2.59)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	210	0.80 (0.80, 0.80)	32.93 (26.53, 40.87)	13.47 (10.98, 16.52)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	210	0.15 (0.15, 0.15)	16.71 (13.99, 19.96)	17.91 (14.94, 21.47)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	63	0.05 (0.05, 0.05)	5.15 (3.32, 7.99)	2.99 (2.23, 4.02)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	0.80 (0.80, 0.80)	59.36 (41.55, 84.79)	23.05 (15.84, 33.53)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	0.16 (0.15, 0.16)	26.98 (19.55, 37.24)	29.28 (21.22, 40.42)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	26	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 ≥ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)	2.49 (1.44, 4.29)	2.22 (1.64, 3.01)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)	33.80 (21.20, 53.90)	13.90 (9.03, 21.40)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	61	0.15 (0.15, 0.15)	16.12 (11.18, 23.25)	17.47 (12.21, 25.01)

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
Hispanic or Latino ethnicity								
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	363	0.05 (0.05, 0.05)	1.24 (1.01, 1.51)	1.54 (1.40, 1.69)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	363	0.80 (0.80, 0.80)	13.82 (11.71, 16.30)	5.86 (5.04, 6.82)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	363	0.15 (0.15, 0.15)	7.86 (6.86, 9.00)	8.45 (7.37, 9.68)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	116	0.05 (0.05, 0.05)	2.32 (1.65, 3.26)	1.90 (1.58, 2.27)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	116	0.80 (0.80, 0.80)	26.78 (19.76, 36.30)	10.73 (7.96, 14.46)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	116	0.15 (0.15, 0.16)	12.53 (10.17, 15.44)	13.24 (10.64, 16.47)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	42	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 (BAU/ml)	42	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 (BAU/ml)	42	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 (BAU/ml)	118	0.05 (0.05, 0.05)	0.77 (0.58, 1.01)	1.33 (1.19, 1.47)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	118	0.80 (0.80, 0.80)	9.48 (7.08, 12.68)	4.39 (3.42, 5.63)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	118	0.15 (0.15, 0.16)	4.85 (3.72, 6.31)	5.38 (4.18, 6.92)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	488	0.05 (0.05, 0.05)	1.51 (1.27, 1.81)	1.71 (1.57, 1.87)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	488	0.80 (0.80, 0.80)	15.69 (13.38, 18.40)	6.81 (5.92, 7.85)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	488	0.15 (0.15, 0.15)	8.79 (7.64, 10.13)	9.53 (8.34, 10.90)

(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 (BAU/ml)	153	0.05 (0.05, 0.05)	1.89 (1.41, 2.53)	1.78 (1.55, 2.05)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	153	0.80 (0.80, 0.80)	26.01 (20.00, 33.82)	10.62 (8.22, 13.70)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	153	0.16 (0.15, 0.16)	14.07 (11.35, 17.44)	15.14 (12.20, 18.78)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	61	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 (BAU/ml)	61	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 (BAU/ml)	61	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 (BAU/ml)	151	0.05 (0.05, 0.05)	0.96 (0.73, 1.27)	1.42 (1.26, 1.59)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	151	0.80 (0.79, 0.81)	10.48 (8.06, 13.64)	4.53 (3.56, 5.78)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	151	0.16 (0.15, 0.16)	5.75 (4.64, 7.13)	6.05 (4.86, 7.53)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	60	0.05 (0.05, 0.05)	1.09 (0.69, 1.70)	1.35 (1.15, 1.59)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)	12.43 (8.85, 17.44)	4.89 (3.45, 6.92)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	60	0.15 (0.15, 0.15)	7.10 (4.86, 10.36)	7.93 (5.47, 11.48)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)	2.80 (1.13, 6.96)	2.17 (1.33, 3.54)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)	29.59 (15.98, 54.79)	11.78 (6.36, 21.81)

(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 (BAU/ml)	14	0.15 (0.15, 0.15)	10.72 (6.45, 17.82)	11.63 (7.00, 19.34)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	6	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 (BAU/ml)	6	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 (BAU/ml)	6	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 (BAU/ml)	11	0.05 (0.05, 0.05)	0.56 (0.23, 1.38)	1.21 (0.91, 1.60)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)	8.19 (4.42, 15.17)	2.68 (1.27, 5.64)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	0.15 (0.15, 0.15)	3.15 (2.01, 4.95)	2.94 (1.62, 5.36)



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
Race								
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	193	0.05 (0.05, 0.05)	1.84 (1.38, 2.44)	1.81 (1.57, 2.08)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	193	0.80 (0.80, 0.80)	18.31 (14.14, 23.72)	7.85 (6.23, 9.90)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	193	0.15 (0.15, 0.15)	9.34 (7.48, 11.67)	10.17 (8.28, 12.48)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)	1.83 (1.23, 2.70)	1.63 (1.34, 1.98)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)	27.99 (19.20, 40.81)	11.20 (7.69, 16.30)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	56	0.16 (0.15, 0.16)	14.63 (10.76, 19.88)	15.71 (11.44, 21.56)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	24	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 (BAU/ml)	24	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 (BAU/ml)	24	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 (BAU/ml)	62	0.05 (0.05, 0.05)	1.00 (0.64, 1.56)	1.50 (1.25, 1.81)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	62	0.80 (0.79, 0.82)	10.01 (6.80, 14.76)	4.22 (2.93, 6.09)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	62	0.15 (0.15, 0.15)	5.83 (4.14, 8.20)	6.24 (4.43, 8.81)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	333	0.05 (0.05, 0.05)	1.29 (1.03, 1.60)	1.64 (1.47, 1.82)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	333	0.80 (0.80, 0.80)	13.75 (11.55, 16.36)	5.91 (5.06, 6.91)

(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 (BAU/ml)	333	0.15 (0.15, 0.15)	8.11 (6.97, 9.43)	8.68 (7.44, 10.11)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	100	0.05 (0.05, 0.05)	1.96 (1.34, 2.88)	1.94 (1.60, 2.34)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	100	0.80 (0.80, 0.80)	24.23 (17.83, 32.93)	9.89 (7.35, 13.31)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	100	0.15 (0.15, 0.16)	14.46 (11.10, 18.83)	15.42 (11.81, 20.13)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	38	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 (BAU/ml)	38	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 (BAU/ml)	38	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 (BAU/ml)	96	0.05 (0.05, 0.05)	0.91 (0.68, 1.23)	1.27 (1.13, 1.41)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	96	0.80 (0.80, 0.80)	11.14 (7.81, 15.89)	5.00 (3.65, 6.85)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	96	0.16 (0.15, 0.16)	4.98 (3.90, 6.35)	5.06 (3.91, 6.54)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	21	0.05 (0.05, 0.05)	1.61 (0.84, 3.08)	1.47 (1.08, 1.99)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	21	0.80 (0.80, 0.80)	16.69 (8.31, 33.50)	6.88 (3.60, 13.15)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	21	0.15 (0.15, 0.15)	9.64 (6.27, 14.83)	9.92 (6.17, 15.95)

(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 (BAU/ml)	7	0.05 (0.05, 0.05)	3.12 (0.94, 10.31)	1.80 (0.93, 3.49)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)	21.92 (8.79, 54.69)	8.73 (3.50, 21.77)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)	23.40 (9.38, 58.39)	25.39 (10.18, 63.37)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	4	0.05 (0.05, 0.05)	0.34 (0.06, 2.04)	1.34 (0.75, 2.41)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)	3.63 (0.62, 21.35)	2.51 (0.71, 8.83)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)	2.71 (0.53, 13.79)	3.42 (0.79, 14.83)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	124	0.05 (0.05, 0.05)	1.18 (0.87, 1.60)	1.46 (1.27, 1.66)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	124	0.80 (0.80, 0.80)	12.85 (9.70, 17.02)	5.60 (4.37, 7.17)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	124	0.15 (0.15, 0.15)	6.88 (5.38, 8.79)	7.42 (5.80, 9.48)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	49	0.05 (0.05, 0.05)	2.38 (1.38, 4.08)	2.13 (1.60, 2.84)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	0.80 (0.80, 0.80)	25.27 (15.59, 40.95)	10.54 (6.64, 16.73)

(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	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	0.16 (0.15, 0.16)	11.67 (8.44, 16.13)	12.29 (8.77, 17.23)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	39	0.05 (0.05, 0.06)	0.76 (0.49, 1.18)	1.33 (1.10, 1.60)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	39	0.80 (0.80, 0.80)	8.92 (5.60, 14.21)	3.85 (2.52, 5.88)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	39	0.15 (0.15, 0.15)	5.00 (3.26, 7.67)	4.99 (3.18, 7.85)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	3	0.05 (0.05, 0.05)	0.39 (0.08, 1.87)	1.00 (1.00, 1.00)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	3	0.80 (0.80, 0.80)	3.41 (0.70, 16.52)	2.28 (0.93, 5.57)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	3	0.15 (0.15, 0.15)	6.23 (2.02, 19.16)	6.08 (1.68, 21.94)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	6.73 (6.73, 6.73)	3.00 (3.00, 3.00)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	107.54 (107.54, 107.54)	42.81 (42.81, 42.81)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	13.43 (13.43, 13.43)	14.57 (14.57, 14.57)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	2.52 (2.52, 2.52)	1.00 (1.00, 1.00)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	63.28 (63.28, 63.28)	25.19 (25.19, 25.19)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	21.28 (21.28, 21.28)	23.09 (23.09, 23.09)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)	1.54 (0.83, 2.82)	1.39 (1.09, 1.78)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)	19.56 (9.39, 40.78)	8.75 (4.58, 16.73)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)	9.62 (4.93, 18.76)	10.62 (5.50, 20.51)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	10	0.05 (0.05, 0.05)	1.68 (0.41, 6.85)	1.81 (1.17, 2.80)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)	32.75 (7.95, 134.97)	13.84 (3.61, 53.07)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10	0.15 (0.15, 0.15)	10.67 (4.02, 28.37)	11.62 (4.39, 30.75)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.05 (0.05, 0.05)	0.83 (0.37, 1.83)	1.06 (0.95, 1.18)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)	11.65 (3.46, 39.16)	4.14 (1.21, 14.19)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)	3.14 (1.02, 9.68)	3.92 (1.54, 9.97)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)	2.98 (0.67, 13.30)	2.67 (1.05, 6.78)

(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	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)	29.76 (11.11, 79.67)	11.85 (4.42, 31.71)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)	11.63 (5.81, 23.28)	12.62 (6.31, 25.26)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)	2.41 (2.06, 2.82)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)	37.90 (24.01, 59.81)	15.09 (9.56, 23.81)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)	5.84 (3.71, 9.18)	6.34 (4.03, 9.96)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	5	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 (BAU/ml)	5	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 (BAU/ml)	5	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 (BAU/ml)	6	0.08 (0.03, 0.17)	1.68 (0.64, 4.44)	1.53 (0.85, 2.76)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)	11.32 (4.11, 31.19)	4.45 (1.59, 12.46)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)	9.46 (4.71, 18.99)	10.26 (5.11, 20.61)

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
Underrepresented Minority Status in the U.S.								
URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)	1.25 (0.97, 1.62)	1.62 (1.43, 1.84)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)	14.08 (11.40, 17.39)	6.21 (5.16, 7.49)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)	9.21 (7.79, 10.89)	9.84 (8.30, 11.67)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	1.95 (1.29, 2.93)	1.84 (1.49, 2.27)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	29.35 (21.01, 41.00)	11.49 (8.18, 16.15)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	12.32 (9.28, 16.37)	13.17 (9.86, 17.58)
URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	72	0.05 (0.05, 0.05)	1.10 (0.76, 1.58)	1.34 (1.17, 1.54)
URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)	11.50 (7.90, 16.73)	5.22 (3.74, 7.28)
URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.16)	5.78 (4.45, 7.50)	6.16 (4.72, 8.05)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	230	0.05 (0.05, 0.05)	1.86 (1.47, 2.35)	1.77 (1.56, 2.00)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	230	0.80 (0.80, 0.80)	17.82 (14.33, 22.15)	7.56 (6.19, 9.23)

(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 (BAU/ml)	230	0.15 (0.15, 0.15)	9.42 (7.89, 11.24)	10.09 (8.44, 12.07)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)	2.08 (1.45, 2.97)	1.77 (1.47, 2.13)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	30.59 (21.75, 43.03)	12.23 (8.70, 17.18)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	0.16 (0.15, 0.16)	14.27 (10.93, 18.63)	15.36 (11.68, 20.19)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	28	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 (BAU/ml)	67	0.05 (0.05, 0.05)	1.09 (0.72, 1.66)	1.57 (1.31, 1.87)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	67	0.80 (0.79, 0.82)	10.28 (7.13, 14.83)	4.35 (3.09, 6.11)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	67	0.15 (0.15, 0.15)	6.21 (4.60, 8.38)	6.67 (4.93, 9.01)



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
Age, Underrepresented Minority Status in the U.S.								
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	115	0.05 (0.05, 0.05)	0.85 (0.60, 1.21)	1.42 (1.22, 1.65)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	115	0.80 (0.80, 0.80)	9.16 (6.94, 12.08)	4.10 (3.21, 5.23)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	115	0.15 (0.15, 0.15)	6.01 (4.82, 7.50)	6.42 (5.13, 8.03)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)	1.30 (0.75, 2.23)	1.47 (1.15, 1.88)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	19.24 (12.44, 29.76)	7.48 (4.79, 11.69)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)	7.48 (5.07, 11.03)	7.93 (5.33, 11.78)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	14	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 (BAU/ml)	14	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 (BAU/ml)	14	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 (BAU/ml)	36	0.05 (0.04, 0.06)	0.69 (0.43, 1.10)	1.09 (0.99, 1.21)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)	6.41 (3.89, 10.58)	3.22 (2.11, 4.90)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)	3.26 (2.32, 4.56)	3.44 (2.43, 4.87)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	114	0.05 (0.05, 0.05)	1.29 (0.94, 1.77)	1.47 (1.26, 1.71)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	0.80 (0.80, 0.80)	11.24 (8.41, 15.03)	4.84 (3.71, 6.30)

(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 (BAU/ml)	114	0.15 (0.15, 0.15)	6.20 (4.88, 7.87)	6.62 (5.21, 8.42)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	34	0.05 (0.05, 0.05)	1.17 (0.71, 1.92)	1.36 (1.10, 1.67)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34	0.80 (0.80, 0.80)	20.85 (13.26, 32.78)	8.41 (5.37, 13.17)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	34	0.15 (0.15, 0.15)	9.21 (6.46, 13.13)	9.86 (6.83, 14.24)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	34	0.05 (0.05, 0.05)	0.60 (0.36, 1.03)	1.23 (1.03, 1.46)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	34	0.80 (0.80, 0.80)	6.64 (4.10, 10.76)	2.90 (1.87, 4.50)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	34	0.15 (0.15, 0.15)	3.77 (2.53, 5.60)	4.03 (2.71, 6.01)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	112	0.05 (0.05, 0.05)	2.52 (1.78, 3.56)	2.08 (1.67, 2.58)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	112	0.80 (0.80, 0.80)	30.93 (22.67, 42.19)	13.32 (10.09, 17.57)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	112	0.15 (0.15, 0.15)	20.10 (15.82, 25.53)	21.54 (16.87, 27.51)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)	4.43 (2.55, 7.72)	2.89 (1.97, 4.24)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)	68.98 (43.68, 108.95)	27.36 (17.30, 43.29)

(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 (BAU/ml)	36	0.15 (0.15, 0.15)	33.87 (25.77, 44.53)	36.76 (27.97, 48.33)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	14	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 (BAU/ml)	14	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 (BAU/ml)	14	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 (BAU/ml)	36	0.05 (0.05, 0.05)	2.73 (1.60, 4.65)	2.00 (1.42, 2.82)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)	35.99 (22.56, 57.39)	13.44 (8.12, 22.24)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.16 (0.15, 0.16)	17.69 (12.70, 24.63)	19.20 (13.78, 26.73)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	116	0.05 (0.05, 0.05)	3.65 (2.64, 5.03)	2.50 (2.04, 3.05)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	0.80 (0.80, 0.80)	41.82 (30.81, 56.76)	17.27 (12.94, 23.04)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	0.15 (0.15, 0.15)	20.44 (16.06, 26.01)	22.04 (17.27, 28.13)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)	5.61 (3.69, 8.53)	2.82 (2.00, 3.96)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	59.44 (36.44, 96.98)	23.36 (14.22, 38.38)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	0.16 (0.15, 0.17)	30.49 (21.15, 43.96)	33.09 (22.95, 47.71)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	14	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 (BAU/ml)	14	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 ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	33	0.05 (0.05, 0.05)	3.57 (1.93, 6.60)	2.53 (1.71, 3.73)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	33	0.82 (0.78, 0.85)	24.58 (14.92, 40.48)	9.73 (5.90, 16.04)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	33	0.15 (0.15, 0.15)	16.81 (11.43, 24.72)	18.14 (12.26, 26.83)

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
Country								
United States	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	457	0.05 (0.05, 0.05)	1.55 (1.30, 1.84)	1.70 (1.56, 1.86)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	457	0.80 (0.80, 0.80)	16.00 (13.74, 18.64)	6.91 (6.02, 7.93)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	457	0.15 (0.15, 0.15)	9.32 (8.25, 10.54)	9.98 (8.81, 11.30)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	140	0.05 (0.05, 0.05)	2.02 (1.54, 2.64)	1.80 (1.57, 2.07)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	0.80 (0.80, 0.80)	30.05 (23.60, 38.25)	11.90 (9.34, 15.17)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	0.15 (0.15, 0.16)	13.39 (11.02, 16.27)	14.36 (11.77, 17.53)
United States	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	56	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 (BAU/ml)	56	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 (BAU/ml)	56	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 (BAU/ml)	139	0.05 (0.05, 0.05)	1.10 (0.83, 1.45)	1.46 (1.30, 1.64)
United States	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)	10.81 (8.32, 14.06)	4.72 (3.71, 6.00)
United States	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.16)	6.01 (4.91, 7.36)	6.43 (5.24, 7.90)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	44	0.05 (0.05, 0.05)	2.04 (1.09, 3.82)	2.01 (1.45, 2.78)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	44	0.80 (0.80, 0.80)	19.30 (11.49, 32.41)	8.31 (5.23, 13.20)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	44	0.15 (0.15, 0.15)	6.52 (4.05, 10.48)	7.38 (4.78, 11.40)

(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 (BAU/ml)	18	0.05 (0.05, 0.05)	4.17 (2.16, 8.06)	2.32 (1.39, 3.87)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)	42.29 (20.94, 85.41)	18.16 (9.90, 33.31)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	0.16 (0.15, 0.17)	21.84 (12.95, 36.84)	23.71 (14.06, 39.98)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	8	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 (BAU/ml)	8	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 (BAU/ml)	8	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 (BAU/ml)	14	0.06 (0.04, 0.08)	1.30 (0.58, 2.93)	1.39 (1.01, 1.92)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)	24.23 (10.57, 55.50)	10.59 (5.12, 21.87)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)	7.51 (3.38, 16.70)	9.28 (4.96, 17.38)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	94	0.05 (0.05, 0.05)	1.02 (0.73, 1.43)	1.35 (1.18, 1.55)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	94	0.80 (0.80, 0.80)	12.18 (9.20, 16.13)	4.98 (3.84, 6.45)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	94	0.15 (0.15, 0.15)	7.66 (5.99, 9.81)	8.00 (6.16, 10.38)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	22	0.05 (0.04, 0.06)	1.74 (0.80, 3.81)	1.71 (1.16, 2.53)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	22	0.80 (0.80, 0.80)	17.16 (9.55, 30.84)	6.53 (3.57, 11.94)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	22	0.15 (0.15, 0.15)	9.37 (5.90, 14.89)	9.86 (6.07, 16.01)

(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 (BAU/ml)	10	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 (BAU/ml)	10	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 (BAU/ml)	10	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 (BAU/ml)	30	0.05 (0.05, 0.05)	0.55 (0.33, 0.91)	1.21 (0.99, 1.47)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	0.80 (0.80, 0.80)	7.30 (4.38, 12.15)	3.22 (2.06, 5.02)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	0.15 (0.15, 0.15)	3.85 (2.21, 6.71)	4.31 (2.53, 7.37)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	19	0.05 (0.05, 0.05)	1.03 (0.42, 2.52)	1.78 (1.11, 2.86)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	0.80 (0.80, 0.80)	9.62 (4.24, 21.83)	4.23 (1.97, 9.12)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	0.15 (0.15, 0.15)	6.32 (3.34, 11.94)	6.83 (3.63, 12.83)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)	1.70 (0.42, 6.88)	1.60 (0.68, 3.81)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)	21.86 (9.28, 51.50)	8.70 (3.69, 20.50)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)	8.88 (2.34, 33.70)	8.68 (2.05, 36.82)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	7	0.05 (0.05, 0.05)	0.54 (0.13, 2.25)	1.57 (0.86, 2.88)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	7	0.80 (0.80, 0.80)	5.98 (1.73, 20.66)	2.72 (0.98, 7.54)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	7	0.15 (0.15, 0.15)	3.26 (1.19, 8.97)	3.30 (1.20, 9.08)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	46	0.05 (0.05, 0.05)	0.97 (0.56, 1.66)	1.41 (1.12, 1.77)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	46	0.80 (0.80, 0.80)	13.18 (9.09, 19.11)	5.21 (3.65, 7.44)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	46	0.15 (0.15, 0.15)	7.77 (5.18, 11.66)	8.74 (5.98, 12.76)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	21	0.05 (0.05, 0.05)	1.60 (0.70, 3.65)	1.70 (1.15, 2.50)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	21	0.80 (0.80, 0.80)	21.29 (9.96, 45.50)	9.10 (4.48, 18.51)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	21	0.15 (0.15, 0.15)	10.72 (6.01, 19.12)	11.51 (6.40, 20.67)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	8	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 (BAU/ml)	8	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 (BAU/ml)	8	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 (BAU/ml)	11	0.06 (0.04, 0.07)	0.76 (0.29, 1.99)	1.43 (0.98, 2.08)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)	10.12 (4.26, 24.03)	4.12 (1.81, 9.37)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	11	0.15 (0.15, 0.15)	6.65 (3.04, 14.53)	6.26 (2.53, 15.50)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)	0.55 (0.12, 2.50)	1.41 (0.76, 2.60)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)	11.23 (1.81, 69.77)	6.21 (1.60, 24.15)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)	3.02 (0.84, 10.87)	2.90 (0.75, 11.23)

(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	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	0.66 (0.66, 0.66)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	7.35 (7.35, 7.35)	2.92 (2.92, 2.92)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	3.25 (3.25, 3.25)	3.52 (3.52, 3.52)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	20	0.05 (0.05, 0.05)	1.30 (0.66, 2.59)	1.34 (1.04, 1.74)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	20	0.80 (0.80, 0.80)	14.59 (6.65, 32.02)	7.16 (3.83, 13.39)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20	0.15 (0.15, 0.15)	6.94 (3.94, 12.22)	8.08 (4.93, 13.23)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	6	0.05 (0.05, 0.05)	7.45 (5.22, 10.64)	3.36 (2.39, 4.73)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)	101.11 (37.70, 271.20)	40.25 (15.01, 107.96)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)	21.18 (11.84, 37.90)	22.99 (12.85, 41.13)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	1	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 (BAU/ml)	1	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 (BAU/ml)	1	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 (BAU/ml)	8	0.05 (0.05, 0.05)	0.48 (0.14, 1.58)	1.26 (0.82, 1.94)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)	5.67 (1.47, 21.88)	3.48 (1.23, 9.85)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)	3.13 (1.06, 9.28)	3.73 (1.32, 10.49)

(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	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)	1.24 (0.97, 1.58)	1.56 (1.40, 1.75)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)	13.14 (10.71, 16.12)	5.57 (4.62, 6.72)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)	8.16 (6.81, 9.76)	8.91 (7.47, 10.62)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	2.01 (1.31, 3.08)	1.84 (1.47, 2.29)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	19.58 (13.52, 28.34)	8.14 (5.74, 11.53)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.16 (0.15, 0.16)	13.75 (10.28, 18.40)	14.50 (10.72, 19.62)
South Africa	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	26	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 (BAU/ml)	26	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 (BAU/ml)	26	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.05)	0.69 (0.49, 0.99)	1.22 (1.09, 1.36)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)	9.37 (6.65, 13.21)	4.12 (3.07, 5.53)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.16 (0.15, 0.17)	4.49 (3.44, 5.86)	4.55 (3.42, 6.04)

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
HIV Infection								
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	842	0.05 (0.05, 0.05)	1.34 (1.17, 1.53)	1.61 (1.51, 1.71)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	842	0.80 (0.80, 0.80)	14.49 (12.94, 16.22)	6.18 (5.58, 6.85)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	842	0.15 (0.15, 0.15)	8.16 (7.42, 8.97)	8.81 (8.02, 9.67)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	266	0.05 (0.05, 0.05)	2.12 (1.69, 2.66)	1.87 (1.66, 2.10)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	266	0.80 (0.80, 0.80)	26.25 (21.45, 32.12)	10.56 (8.66, 12.88)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	266	0.15 (0.15, 0.16)	13.06 (11.29, 15.12)	13.91 (11.97, 16.17)
Negative	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	101	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Negative	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	101	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Negative	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	101	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	258	0.05 (0.05, 0.05)	0.87 (0.71, 1.07)	1.38 (1.27, 1.49)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	258	0.80 (0.80, 0.80)	10.07 (8.23, 12.33)	4.46 (3.74, 5.33)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	258	0.15 (0.15, 0.16)	5.27 (4.43, 6.27)	5.66 (4.78, 6.71)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)	1.22 (0.75, 1.99)	1.45 (1.19, 1.77)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	14.23 (9.07, 22.31)	6.08 (4.07, 9.06)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)	8.59 (5.43, 13.59)	9.44 (6.16, 14.46)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	17	0.06 (0.04, 0.09)	2.61 (1.14, 6.00)	1.69 (1.03, 2.76)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17	0.80 (0.80, 0.80)	33.53 (15.84, 70.99)	14.48 (7.52, 27.87)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	17	0.17 (0.15, 0.19)	13.29 (7.30, 24.20)	14.42 (7.92, 26.26)
Positive	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	8	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Positive	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (BAU/ml)	8	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (BAU/ml)	8	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	22	0.05 (0.05, 0.05)	0.49 (0.29, 0.84)	1.15 (0.97, 1.36)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	22	0.80 (0.80, 0.80)	7.31 (3.97, 13.44)	3.23 (1.87, 5.58)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	22	0.15 (0.15, 0.15)	3.64 (1.80, 7.35)	4.02 (2.07, 7.79)



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
Age							
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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	Vaccine	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.98 (0.94, 1.02)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.02 (1.00, 1.04)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.98 (0.93, 1.05)

(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 (BAU/ml)	0.80 (0.79, 0.81)	0.80 (0.80, 0.80)	1.01 (0.99, 1.02)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.16)	1.00 (0.98, 1.01)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2.78 (2.32, 3.32)	0.90 (0.76, 1.07)	3.07 (2.39, 3.93)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	31.69 (27.34, 36.75)	9.55 (8.25, 11.06)	3.32 (2.69, 4.09)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18.09 (16.01, 20.45)	5.37 (4.74, 6.09)	3.37 (2.83, 4.01)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4.80 (3.57, 6.46)	1.40 (1.04, 1.88)	3.43 (2.26, 5.21)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	56.44 (44.32, 71.87)	17.86 (13.67, 23.33)	3.16 (2.20, 4.53)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	31.06 (25.45, 37.90)	8.29 (6.89, 9.96)	3.75 (2.86, 4.91)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	2.54 (1.84, 3.53)	0.47 (0.37, 0.58)	5.46 (3.67, 8.12)

(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 vs Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	29.32 (22.06, 38.97)	5.54 (4.36, 7.04)	5.29 (3.65, 7.68)
Age \geq 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	15.61 (12.29, 19.83)	2.86 (2.32, 3.52)	5.46 (3.98, 7.50)

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
Risk for Severe Covid-19							
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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	Vaccine	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.05 (0.99, 1.11)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.02 (1.00, 1.04)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.99 (0.93, 1.06)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.80)	1.00 (0.99, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.16)	1.00 (0.98, 1.01)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.56 (1.30, 1.86)	1.20 (1.01, 1.44)	1.29 (1.00, 1.66)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	15.81 (13.47, 18.57)	13.64 (11.78, 15.79)	1.16 (0.93, 1.44)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	7.94 (6.97, 9.05)	8.35 (7.36, 9.48)	0.95 (0.79, 1.14)

(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 (BAU/ml)	2.09 (1.47, 2.98)	2.18 (1.64, 2.88)	0.96 (0.61, 1.51)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	24.44 (17.92, 33.34)	27.98 (21.77, 35.96)	0.87 (0.59, 1.30)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	12.41 (9.76, 15.78)	13.51 (11.35, 16.07)	0.92 (0.68, 1.24)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.65 (0.49, 0.86)	0.99 (0.77, 1.28)	0.66 (0.45, 0.96)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	9.28 (7.20, 11.96)	10.24 (7.86, 13.33)	0.91 (0.63, 1.31)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4.72 (3.83, 5.83)	5.42 (4.30, 6.84)	0.87 (0.64, 1.19)

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
Age 18 - 59, Risk for Severe Covid-19							
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.06)	0.05 (0.05, 0.05)	1.07 (0.97, 1.17)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/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	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.16)	0.99 (0.97, 1.01)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.06 (0.83, 1.35)	0.81 (0.64, 1.03)	1.30 (0.93, 1.83)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	10.69 (8.56, 13.35)	8.86 (7.30, 10.76)	1.21 (0.90, 1.62)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	5.14 (4.30, 6.14)	5.54 (4.67, 6.57)	0.93 (0.73, 1.19)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1.34 (0.82, 2.19)	1.44 (1.00, 2.08)	0.93 (0.50, 1.72)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	15.18 (9.86, 23.36)	19.76 (14.06, 27.78)	0.77 (0.44, 1.33)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	8.10 (5.81, 11.31)	8.40 (6.78, 10.41)	0.96 (0.65, 1.43)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.36 (0.25, 0.52)	0.55 (0.41, 0.74)	0.65 (0.41, 1.04)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5.30 (3.79, 7.40)	5.71 (4.10, 7.95)	0.93 (0.58, 1.49)

(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 (BAU/ml)	2.67 (2.03, 3.51)	2.99 (2.23, 4.01)	0.89 (0.60, 1.34)

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Table 9d. The ratios of GMTs/GMCs between groups by Age ≥ 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
Age ≥ 60, Risk for Severe Covid-19							
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 1	Vaccine	Negative	Anti RBD IgG (BAU/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 1	Vaccine	Negative	Anti Spike IgG (BAU/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 1	Vaccine	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.02 (0.98, 1.06)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	0.16 (0.15, 0.17)	0.15 (0.15, 0.15)	1.05 (0.99, 1.12)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (BAU/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 1	Placebo	Negative	Anti RBD IgG (BAU/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 1	Placebo	Negative	Anti Spike IgG (BAU/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 1	Placebo	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.05 (0.96, 1.13)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.82)	0.99 (0.97, 1.01)

(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 (BAU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.01 (0.99, 1.03)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	3.21 (2.55, 4.05)	2.52 (1.95, 3.25)	1.27 (0.90, 1.80)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	33.11 (27.26, 40.22)	30.78 (24.96, 37.96)	1.08 (0.81, 1.43)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18.01 (15.25, 21.28)	18.15 (15.30, 21.53)	0.99 (0.78, 1.26)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4.90 (3.26, 7.36)	4.74 (3.15, 7.14)	1.03 (0.58, 1.84)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	60.73 (42.95, 85.87)	53.94 (38.88, 74.83)	1.13 (0.70, 1.81)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	28.02 (21.59, 36.38)	33.09 (25.05, 43.72)	0.85 (0.58, 1.24)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	1.97 (1.33, 2.90)	3.02 (1.87, 4.87)	0.65 (0.35, 1.21)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	26.69 (18.92, 37.65)	31.23 (20.62, 47.29)	0.85 (0.50, 1.47)

(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 (BAU/ml)	13.86 (10.54, 18.22)	16.90 (11.85, 24.09)	0.82 (0.52, 1.28)

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
Sex							
Male vs Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.04 (0.99, 1.10)
Male vs Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.16)	1.00 (0.98, 1.02)
Male vs Female	Day 1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.99 (0.93, 1.06)
Male vs Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.81)	1.00 (0.99, 1.00)
Male vs Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.16)	0.99 (0.97, 1.01)
Male vs Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.41 (1.15, 1.73)	1.28 (1.08, 1.52)	1.10 (0.84, 1.44)
Male vs Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	16.37 (13.76, 19.49)	13.25 (11.45, 15.34)	1.24 (0.98, 1.56)
Male vs Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	8.73 (7.54, 10.09)	7.82 (6.88, 8.88)	1.12 (0.91, 1.36)

(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 (BAU/ml)	2.30 (1.66, 3.20)	2.03 (1.50, 2.76)	1.13 (0.71, 1.79)
Male vs Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	23.95 (17.14, 33.47)	28.67 (22.49, 36.55)	0.84 (0.55, 1.28)
Male vs Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	12.71 (9.91, 16.30)	13.35 (11.06, 16.12)	0.95 (0.68, 1.32)
Male vs Female	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.73 (0.53, 1.00)	0.94 (0.73, 1.22)	0.77 (0.50, 1.19)
Male vs Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	9.40 (7.01, 12.60)	10.24 (7.78, 13.49)	0.92 (0.60, 1.40)
Male vs Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4.39 (3.35, 5.76)	5.85 (4.66, 7.35)	0.75 (0.51, 1.10)

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
Hispanic or Latino ethnicity							
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.02 (0.97, 1.07)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.16 (0.15, 0.16)	1.00 (0.98, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.05 (0.98, 1.13)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.81)	1.00 (0.99, 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
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.16 (0.15, 0.16)	0.99 (0.97, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.24 (1.01, 1.51)	1.51 (1.27, 1.81)	0.82 (0.62, 1.07)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13.82 (11.71, 16.30)	15.69 (13.38, 18.40)	0.88 (0.70, 1.11)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	7.86 (6.86, 9.00)	8.79 (7.64, 10.13)	0.89 (0.73, 1.09)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	2.32 (1.65, 3.26)	1.89 (1.41, 2.53)	1.23 (0.78, 1.93)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	26.78 (19.76, 36.30)	26.01 (20.00, 33.82)	1.03 (0.69, 1.55)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	12.53 (10.17, 15.44)	14.07 (11.35, 17.44)	0.89 (0.66, 1.21)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.77 (0.58, 1.01)	0.96 (0.73, 1.27)	0.80 (0.54, 1.19)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	9.48 (7.08, 12.68)	10.48 (8.06, 13.64)	0.90 (0.61, 1.34)

(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 (BAU/ml)	4.85 (3.72, 6.31)	5.75 (4.64, 7.13)	0.84 (0.59, 1.19)

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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
Underrepresented Minority Status in the U.S.							
URM vs Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.02 (0.99, 1.05)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/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	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.16 (0.15, 0.16)	0.99 (0.96, 1.01)
URM vs Non-URM	Day 1	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.03 (0.95, 1.12)
URM vs Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.82)	0.99 (0.98, 1.01)
URM vs Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.15)	1.01 (0.99, 1.02)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.25 (0.97, 1.62)	1.86 (1.47, 2.35)	0.67 (0.48, 0.95)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	14.08 (11.40, 17.39)	17.82 (14.33, 22.15)	0.79 (0.58, 1.07)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9.21 (7.79, 10.89)	9.42 (7.89, 11.24)	0.98 (0.77, 1.25)

(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 (BAU/ml)	1.95 (1.29, 2.93)	2.08 (1.45, 2.97)	0.94 (0.54, 1.61)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29.35 (21.01, 41.00)	30.59 (21.75, 43.03)	0.96 (0.60, 1.55)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	12.32 (9.28, 16.37)	14.27 (10.93, 18.63)	0.86 (0.58, 1.27)
URM vs Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/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 (BAU/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 (BAU/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 (BAU/ml)	1.10 (0.76, 1.58)	1.09 (0.72, 1.66)	1.00 (0.58, 1.74)
URM vs Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	11.50 (7.90, 16.73)	10.28 (7.13, 14.83)	1.12 (0.66, 1.89)
URM vs Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5.78 (4.45, 7.50)	6.21 (4.60, 8.38)	0.93 (0.63, 1.39)

Table 9h. The ratios of GMTs/GMCs between groups by HIV Infection

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
HIV Infection							
Positive vs Negative	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	0.06 (0.04, 0.09)	0.05 (0.05, 0.05)	1.28 (0.87, 1.88)
Positive vs Negative	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	0.17 (0.15, 0.19)	0.15 (0.15, 0.16)	1.08 (0.96, 1.21)
Positive vs Negative	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.96 (0.93, 1.00)
Positive vs Negative	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (0.99, 1.00)
Positive vs Negative	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.16)	0.99 (0.98, 1.00)
Positive vs Negative	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.22 (0.75, 1.99)	1.34 (1.17, 1.53)	0.91 (0.55, 1.52)
Positive vs Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	14.23 (9.07, 22.31)	14.49 (12.94, 16.22)	0.98 (0.62, 1.57)
Positive vs Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	8.59 (5.43, 13.59)	8.16 (7.42, 8.97)	1.05 (0.66, 1.69)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Positive vs Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	2.61 (1.14, 6.00)	2.12 (1.69, 2.66)	1.23 (0.52, 2.93)
Positive vs Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	33.53 (15.84, 70.99)	26.25 (21.45, 32.12)	1.28 (0.59, 2.79)
Positive vs Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	13.29 (7.30, 24.20)	13.06 (11.29, 15.12)	1.02 (0.55, 1.89)
Positive vs Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	0.49 (0.29, 0.84)	0.87 (0.71, 1.07)	0.57 (0.32, 1.02)
Positive vs Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7.31 (3.97, 13.44)	10.07 (8.23, 12.33)	0.73 (0.38, 1.40)
Positive vs Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	3.64 (1.80, 7.35)	5.27 (4.43, 6.27)	0.69 (0.33, 1.45)

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
Arm							
Vaccine vs Placebo	Negative	-	Day 29	Anti N IgG (BAU/ml)	0.06 (0.05, 0.08)	0.26 (0.23, 0.29)	0.15 (0.13, 0.18)
Vaccine vs Placebo	Negative	-	Day 29	Anti RBD IgG (BAU/ml)	0.5 (0.47, 0.54)	0.75 (0.71, 0.78)	0.58 (0.54, 0.62)
Vaccine vs Placebo	Negative	-	Day 29	Anti Spike IgG (BAU/ml)	0.4 (0.37, 0.44)	0.86 (0.83, 0.89)	0.73 (0.69, 0.76)
Vaccine vs Placebo	Positive	-	Day 29	Anti N IgG (BAU/ml)	0.04 (0, 0.08)	0.2 (0.12, 0.27)	0.09 (0.03, 0.15)
Vaccine vs Placebo	Positive	-	Day 29	Anti RBD IgG (BAU/ml)	0.25 (0.17, 0.33)	0.24 (0.15, 0.31)	0.28 (0.19, 0.36)
Vaccine vs Placebo	Positive	-	Day 29	Anti Spike IgG (BAU/ml)	0.24 (0.16, 0.32)	0.18 (0.12, 0.25)	0.31 (0.22, 0.38)

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
Baseline SARS-CoV-2							
Positive vs Negative	-	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.01 (-0.02, 0.05)	0.11 (0.04, 0.19)	0.05 (0, 0.1)
Positive vs Negative	-	Placebo	Day 29	Anti N IgG (BAU/ml)	0.04 (0.02, 0.06)	0.17 (0.14, 0.22)	0.11 (0.08, 0.15)
Positive vs Negative	-	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.16 (0.08, 0.23)	0.12 (0.06, 0.18)	0.17 (0.1, 0.24)
Positive vs Negative	-	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.4 (0.35, 0.46)	0.63 (0.57, 0.69)	0.47 (0.41, 0.53)
Positive vs Negative	-	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.14 (0.07, 0.22)	0.07 (0.02, 0.11)	0.12 (0.05, 0.17)
Positive vs Negative	-	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0.31 (0.26, 0.36)	0.75 (0.69, 0.8)	0.54 (0.48, 0.6)

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
Age							
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.05 (0.01, 0.08)	0.23 (0.17, 0.29)	0.15 (0.1, 0.21)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.34 (0.28, 0.41)	0.23 (0.17, 0.28)	0.31 (0.24, 0.37)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.36 (0.3, 0.43)	0.18 (0.13, 0.22)	0.28 (0.22, 0.33)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.11 (0.04, 0.2)	0.27 (0.14, 0.39)	0.3 (0.19, 0.41)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0.1 (0.06, 0.17)	0.34 (0.24, 0.44)	0.26 (0.17, 0.36)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.24 (0.12, 0.35)	0.15 (0.07, 0.24)	0.24 (0.13, 0.34)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.46 (0.34, 0.56)	0.35 (0.23, 0.45)	0.42 (0.3, 0.53)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.48 (0.35, 0.58)	0.1 (0.06, 0.17)	0.17 (0.08, 0.25)

(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 (BAU/ml)	0.51 (0.39, 0.61)	0.32 (0.22, 0.41)	0.47 (0.35, 0.57)

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
Risk for Severe Covid-19							
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.02 (-0.01, 0.05)	0.03 (-0.04, 0.09)	0.03 (-0.02, 0.08)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.03 (-0.04, 0.1)	0.01 (-0.06, 0.07)	0.04 (-0.04, 0.11)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.01 (-0.06, 0.08)	0 (-0.06, 0.05)	0.02 (-0.05, 0.08)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.07 (0, 0.15)	0 (-0.13, 0.12)	0.01 (-0.08, 0.1)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.02 (-0.07, 0.02)	-0.08 (-0.16, 0)	-0.06 (-0.13, 0.01)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.04 (-0.17, 0.08)	-0.01 (-0.11, 0.09)	-0.06 (-0.17, 0.06)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.03 (-0.09, 0.14)	0.07 (-0.06, 0.19)	0.04 (-0.08, 0.16)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.01 (-0.11, 0.14)	-0.08 (-0.17, -0.01)	-0.08 (-0.18, 0.03)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.09 (-0.18, 0.01)	0.09 (-0.03, 0.2)	0.01 (-0.11, 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
Age 18 - 59, Risk for Severe Covid-19							
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.01 (-0.03, 0.06)	0.03 (-0.05, 0.11)	0.02 (-0.04, 0.08)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti N IgG (BAU/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 (BAU/ml)	0.05 (-0.04, 0.15)	-0.01 (-0.1, 0.08)	0.04 (-0.06, 0.14)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (BAU/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 (BAU/ml)	0.02 (-0.07, 0.11)	-0.01 (-0.09, 0.08)	0.02 (-0.08, 0.11)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (BAU/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 (BAU/ml)	0.07 (0, 0.18)	-0.01 (-0.18, 0.16)	0.02 (-0.1, 0.14)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	-0.03 (-0.12, 0.06)	-0.02 (-0.1, 0.05)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.1 (-0.27, 0.08)	-0.02 (-0.17, 0.13)	-0.11 (-0.28, 0.06)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.01 (-0.13, 0.16)	0.09 (-0.09, 0.26)	0.04 (-0.12, 0.2)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.03 (-0.15, 0.21)	-0.12 (-0.26, -0.01)	-0.1 (-0.26, 0.05)

(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 (BAU/ml)	-0.08 (-0.21, 0.04)	0.12 (-0.05, 0.29)	0.01 (-0.16, 0.18)

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 ≥ 60 , Risk for Severe Covid-19

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age ≥ 60, Risk for Severe Covid-19							
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.03 (-0.03, 0.09)	0.01 (-0.08, 0.11)	0.05 (-0.04, 0.13)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.01 (-0.09, 0.08)	0.04 (-0.02, 0.1)	0.02 (-0.07, 0.1)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	-0.02 (-0.11, 0.08)	0 (-0.04, 0.04)	0.02 (-0.04, 0.08)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.07 (-0.07, 0.21)	0.02 (-0.16, 0.2)	0 (-0.18, 0.17)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.07 (-0.19, 0.06)	-0.19 (-0.35, 0)	-0.15 (-0.31, 0.02)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.07 (-0.07, 0.21)	0.01 (-0.07, 0.12)	0.05 (-0.05, 0.17)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.05 (-0.11, 0.22)	0.02 (-0.12, 0.15)	0.05 (-0.11, 0.2)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	-0.03 (-0.16, 0.11)	0 (0, 0)	-0.02 (-0.14, 0.09)

(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 (BAU/ml)	-0.1 (-0.27, 0.08)	0.03 (-0.04, 0.12)	0 (-0.13, 0.15)

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
Sex							
Male vs Female	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.02 (-0.01, 0.06)	0.02 (-0.04, 0.08)	0.03 (-0.02, 0.08)
Male vs Female	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.04 (-0.04, 0.11)	0.03 (-0.04, 0.09)	0.08 (0.01, 0.16)
Male vs Female	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.02 (-0.05, 0.09)	0.04 (-0.02, 0.09)	0.04 (-0.03, 0.11)
Male vs Female	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.04 (-0.03, 0.11)	0.07 (-0.07, 0.2)	-0.02 (-0.12, 0.08)
Male vs Female	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (-0.05, 0.05)	0 (-0.09, 0.09)	0.01 (-0.06, 0.09)
Male vs Female	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.09 (-0.22, 0.04)	-0.07 (-0.18, 0.03)	-0.1 (-0.22, 0.02)
Male vs Female	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.03 (-0.15, 0.09)	0.07 (-0.07, 0.19)	-0.01 (-0.14, 0.11)
Male vs Female	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.01 (-0.13, 0.14)	-0.04 (-0.13, 0.03)	0 (-0.1, 0.11)
Male vs Female	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.01 (-0.12, 0.11)	-0.16 (-0.28, -0.04)	-0.01 (-0.14, 0.11)

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
Hispanic or Latino ethnicity							
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0 (-0.04, 0.03)	-0.06 (-0.12, 0.01)	-0.04 (-0.09, 0.02)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti N IgG (BAU/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 (BAU/ml)	-0.04 (-0.11, 0.04)	0.01 (-0.06, 0.08)	-0.03 (-0.11, 0.04)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti RBD IgG (BAU/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 (BAU/ml)	-0.04 (-0.11, 0.03)	0.02 (-0.03, 0.08)	0.01 (-0.06, 0.08)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti Spike IgG (BAU/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 (BAU/ml)	0.01 (-0.04, 0.09)	0.02 (-0.11, 0.15)	0.01 (-0.08, 0.11)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.01 (-0.05, 0.04)	-0.06 (-0.15, 0.02)	0.01 (-0.07, 0.08)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.05 (-0.08, 0.18)	-0.02 (-0.13, 0.08)	-0.02 (-0.15, 0.09)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.06 (-0.18, 0.06)	-0.02 (-0.15, 0.11)	-0.03 (-0.15, 0.1)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0 (-0.13, 0.12)	-0.01 (-0.09, 0.07)	-0.02 (-0.13, 0.08)

(continued)

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 (BAU/ml)	-0.01 (-0.12, 0.1)	-0.08 (-0.2, 0.04)	-0.1 (-0.22, 0.03)

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
Underrepresented Minority Status in the U.S.							
URM vs Non-URM	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	0 (-0.05, 0.05)	-0.05 (-0.13, 0.03)	-0.04 (-0.11, 0.03)
URM vs Non-URM	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.05 (-0.15, 0.04)	-0.03 (-0.12, 0.05)	-0.04 (-0.14, 0.05)
URM vs Non-URM	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.02 (-0.07, 0.11)	0 (-0.07, 0.07)	0.02 (-0.07, 0.1)
URM vs Non-URM	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0 (-0.06, 0.08)	-0.03 (-0.19, 0.14)	0.02 (-0.11, 0.16)
URM vs Non-URM	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.02 (-0.09, 0.05)	-0.09 (-0.23, 0.04)	-0.05 (-0.16, 0.05)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0 (-0.17, 0.17)	-0.02 (-0.16, 0.11)	-0.07 (-0.23, 0.09)
URM vs Non-URM	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.06 (-0.11, 0.23)	0 (-0.17, 0.17)	0.07 (-0.11, 0.24)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.05 (-0.12, 0.21)	-0.07 (-0.21, 0.05)	-0.05 (-0.19, 0.1)
URM vs Non-URM	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.01 (-0.15, 0.13)	-0.04 (-0.19, 0.11)	0.01 (-0.16, 0.18)

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

Table 10j. Differences in the responder rates, 2FRs, 4FRs between the groups by HIV Infection

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
HIV Infection							
Positive vs Negative	Negative	Vaccine	Day 29	Anti N IgG (BAU/ml)	-0.02 (-0.05, 0.06)	-0.09 (-0.17, 0.02)	-0.02 (-0.09, 0.08)
Positive vs Negative	Negative	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Positive vs Negative	Negative	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.03 (-0.11, 0.18)	-0.02 (-0.18, 0.1)	0.07 (-0.08, 0.2)
Positive vs Negative	Negative	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Positive vs Negative	Negative	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.05 (-0.09, 0.19)	-0.01 (-0.16, 0.07)	-0.02 (-0.18, 0.1)
Positive vs Negative	Negative	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Positive vs Negative	Positive	Vaccine	Day 29	Anti N IgG (BAU/ml)	0.01 (-0.07, 0.32)	-0.1 (-0.29, 0.21)	-0.05 (-0.17, 0.23)
Positive vs Negative	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.01 (-0.05, 0.15)	-0.1 (-0.18, 0.08)	-0.07 (-0.13, 0.08)
Positive vs Negative	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.18 (-0.15, 0.33)	0.06 (-0.32, 0.15)	0.18 (-0.2, 0.27)
Positive vs Negative	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.12 (-0.3, 0.15)	-0.01 (-0.31, 0.23)	-0.17 (-0.36, 0.1)
Positive vs Negative	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	-0.04 (-0.34, 0.26)	0.07 (0.04, 0.11)	0.08 (-0.3, 0.17)
Positive vs Negative	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.06 (-0.21, 0.18)	-0.12 (-0.43, 0.11)	-0.12 (-0.35, 0.14)

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 (BAU/ml)	911	1157.7/19282 = 6.0% (4.6%, 7.9%)	1.33 (1.17, 1.52)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.06 (0.05, 0.08)	28.47 (25.04, 32.37)
Day 29	Anti RBD IgG (BAU/ml)	911	9664.1/19282 = 50.1% (46.6%, 53.7%)	14.47 (12.98, 16.14)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.5 (0.47, 0.54)	18.16 (16.29, 20.25)
Day 29	Anti Spike IgG (BAU/ml)	911	7804/19282 = 40.5% (37.1%, 43.9%)	8.18 (7.46, 8.97)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.4 (0.37, 0.44)	53.21 (48.52, 58.36)

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			
		N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR
Day 29	Anti N IgG (BAU/ml)	283	155.7/2109 = 7.4% (4.9%, 11.0%)	2.14 (1.72, 2.67)	280	74.2/2113 = 3.5% (2.0%, 6.1%)	0.84 (0.69, 1.01)	0.04 (0, 0.08)	2.56 (1.91, 3.42)
Day 29	Anti RBD IgG (BAU/ml)	283	1386.4/2109 = 65.7% (59.1%, 71.9%)	26.56 (21.85, 32.29)	280	854.8/2113 = 40.5% (35.0%, 46.1%)	9.84 (8.15, 11.88)	0.25 (0.17, 0.33)	2.70 (2.06, 3.54)
Day 29	Anti Spike IgG (BAU/ml)	283	1156.7/2109 = 54.8% (48.4%, 61.1%)	13.07 (11.35, 15.06)	280	648.7/2113 = 30.7% (25.7%, 36.1%)	5.13 (4.36, 6.04)	0.24 (0.16, 0.32)	2.55 (2.05, 3.16)

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	N	Vaccine Recipients			Comparison	
			Baseline SARS-CoV-2 Positive	Baseline SARS-CoV-2 Negative	Resp Rate Difference		
Day 29	Anti N IgG (BAU/ml)	283	155.7/2109 = 7.4% (4.9%, 11.0%)	2.14 (1.72, 2.67)	911	1157.7/19282 = 6.0% (4.6%, 7.9%)	1.33 (1.17, 1.52) 0.01 (-0.02, 0.05) 1.61 (1.24, 2.07)
Day 29	Anti RBD IgG (BAU/ml)	283	1386.4/2109 = 65.7% (59.1%, 71.9%)	26.56 (21.85, 32.29)	911	9664.1/19282 = 50.1% (46.6%, 53.7%)	14.47 (12.98, 16.14) 0.16 (0.08, 0.23) 1.84 (1.47, 2.30)
Day 29	Anti Spike IgG (BAU/ml)	283	1156.7/2109 = 54.8% (48.4%, 61.1%)	13.07 (11.35, 15.06)	911	7804/19282 = 40.5% (37.1%, 43.9%)	8.18 (7.46, 8.97) 0.14 (0.07, 0.22) 1.60 (1.35, 1.89)

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			
		N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR
Day 29	Anti N IgG (BAU/ml)	280	74.2/2113 = 3.5% (2.0%, 6.1%)	0.84 (0.69, 1.01)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.04 (0.02, 0.06)	17.87 (14.79, 21.59)
Day 29	Anti RBD IgG (BAU/ml)	280	854.8/2113 = 40.5% (35.0%, 46.1%)	9.84 (8.15, 11.88)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.4 (0.35, 0.46)	12.35 (10.23, 14.91)
Day 29	Anti Spike IgG (BAU/ml)	280	648.7/2113 = 30.7% (25.7%, 36.1%)	5.13 (4.36, 6.04)	109	0/19174 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.31 (0.26, 0.36)	33.37 (28.35, 39.27)

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

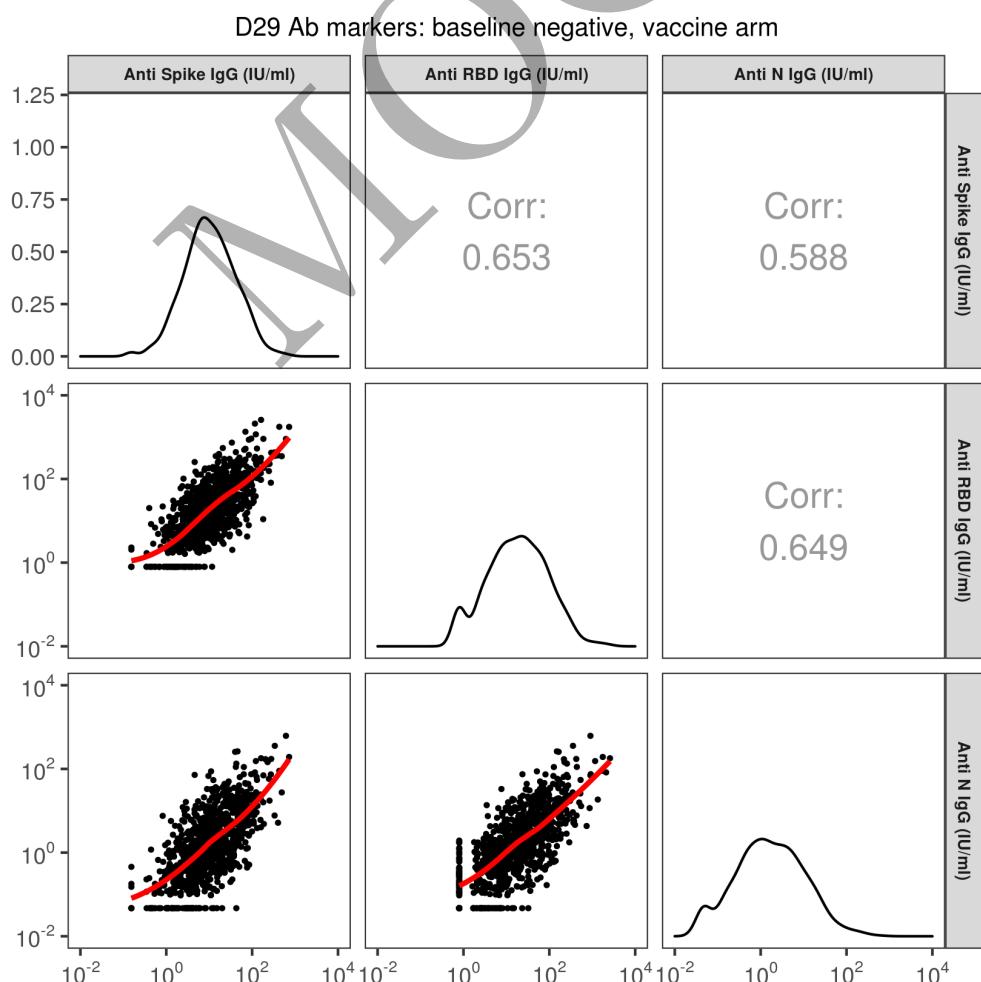


Figure 2.1: Pair plots of D29 Ab markers: baseline negative vaccine arm

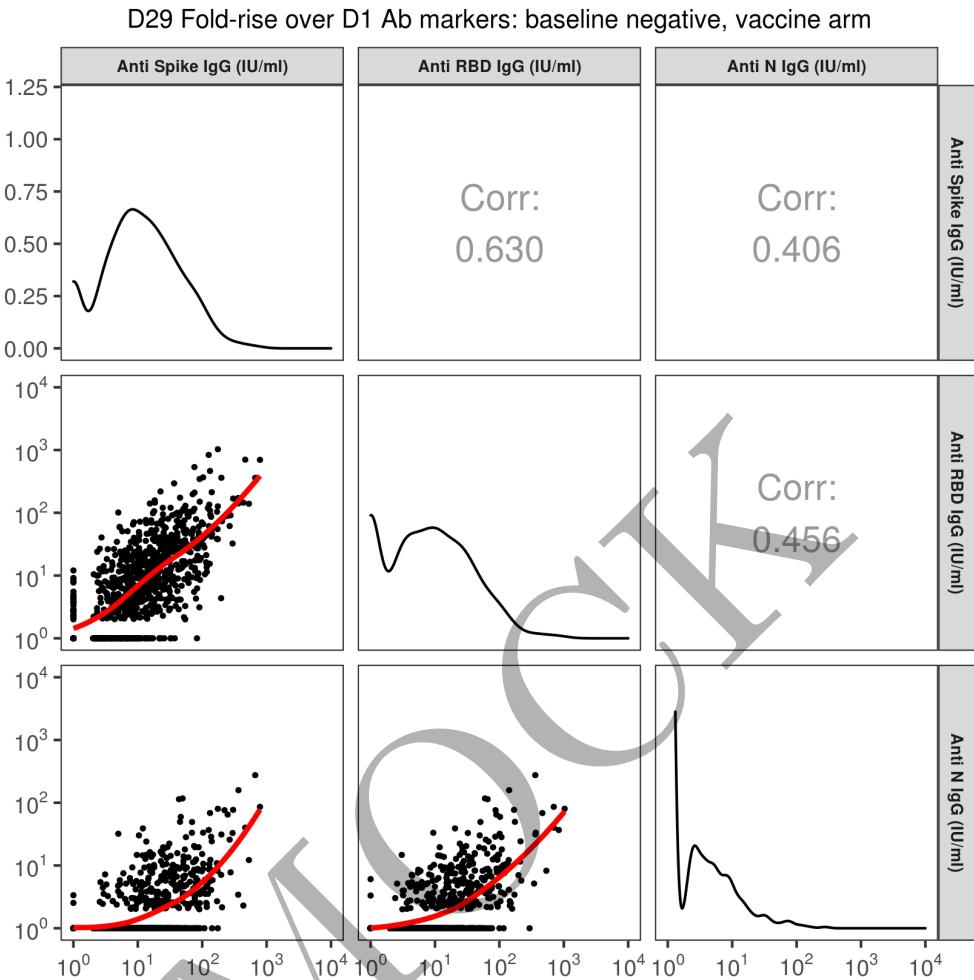


Figure 2.2: Pair plots of D29 fold-rise over D1 Ab markers: baseline negative vaccine arm

2.1.2 Baseline SARS-CoV-2 Positive

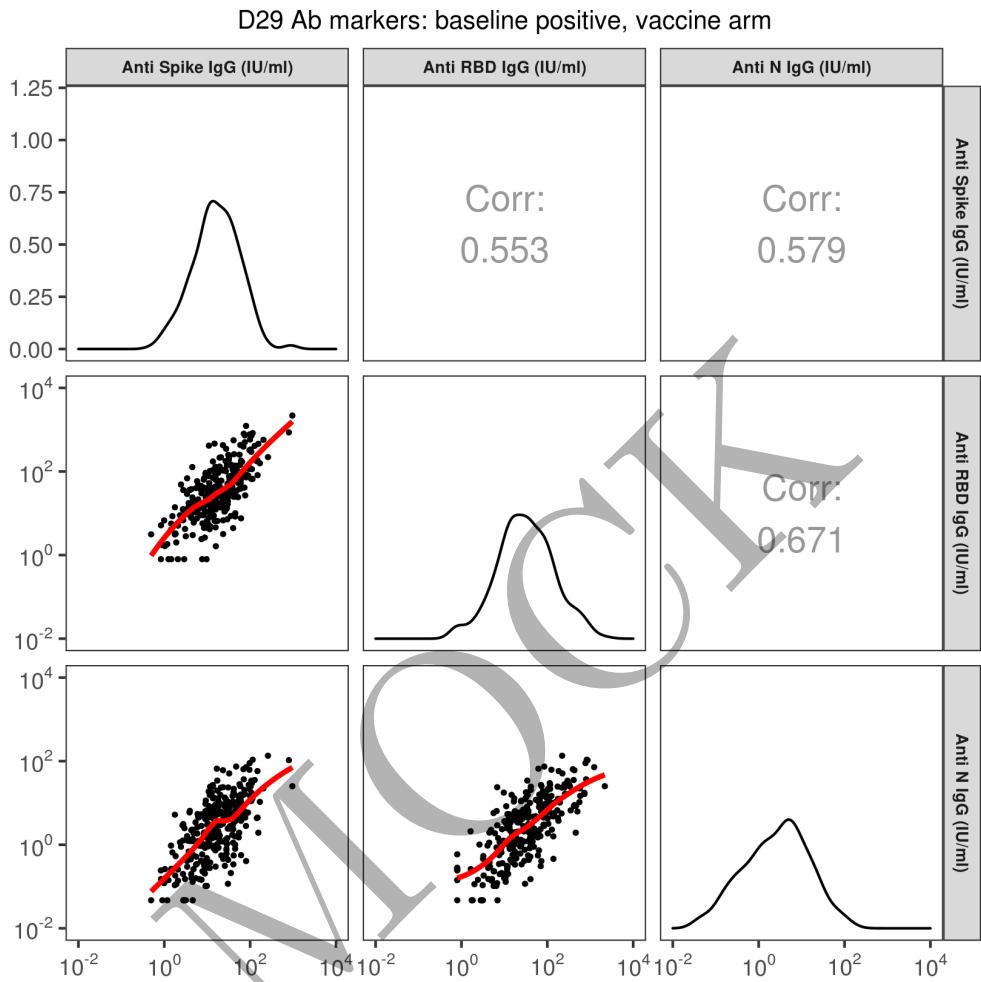


Figure 2.3: Pair plots of D29 Ab markers: baseline positive vaccine arm

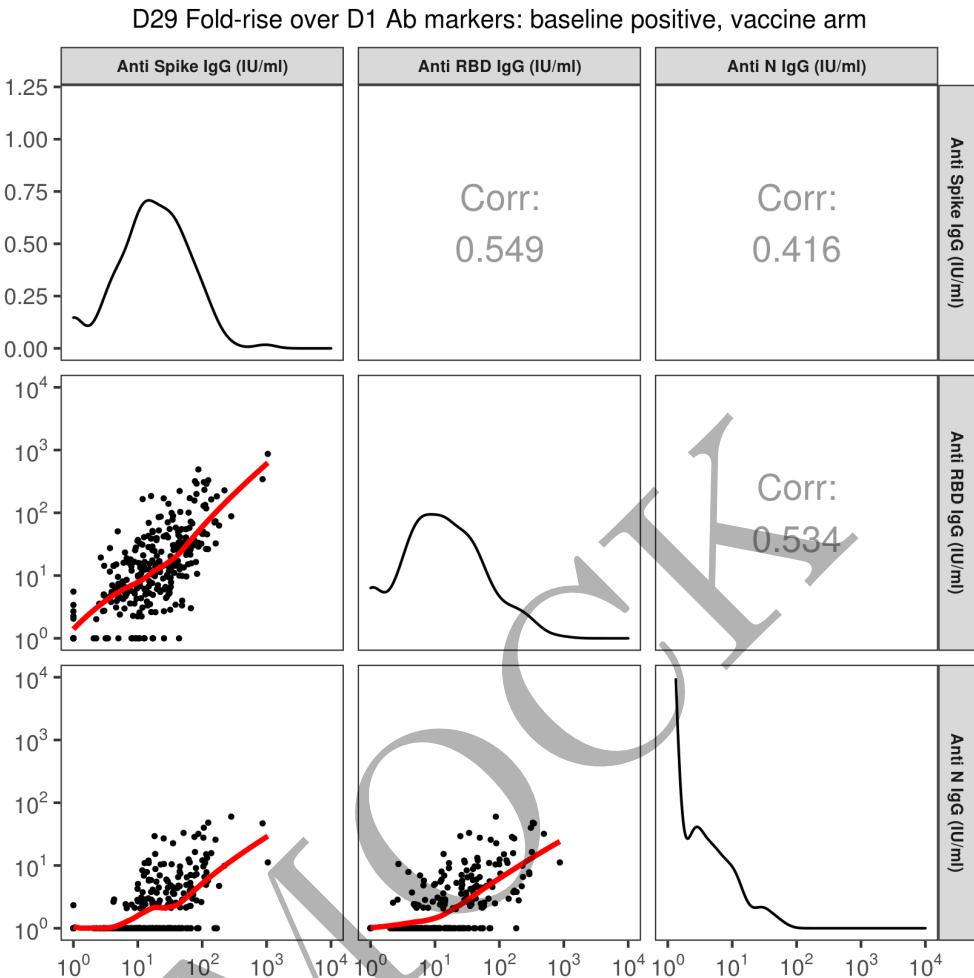


Figure 2.4: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm

2.1.3 Baseline SARS-CoV-2 Positive Placebo Arm

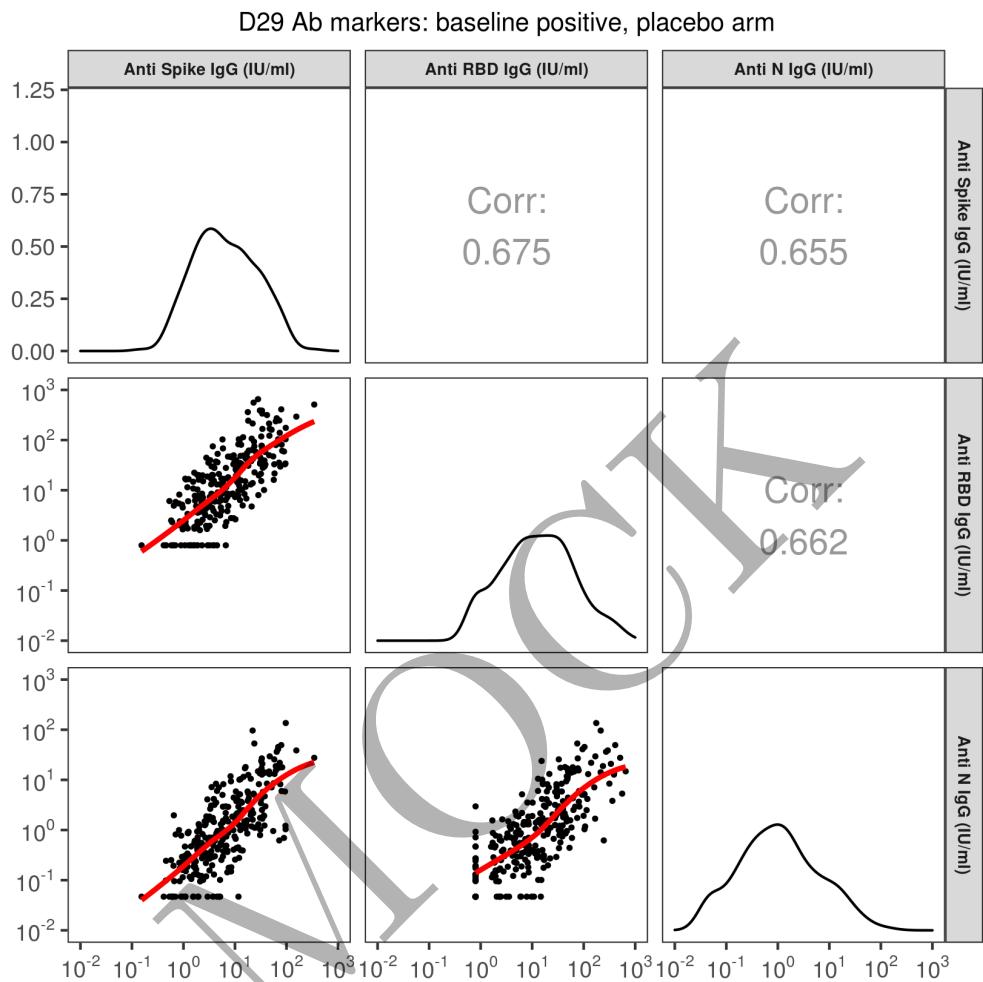


Figure 2.5: Pair plots of D29 Ab markers: baseline positive placebo arm

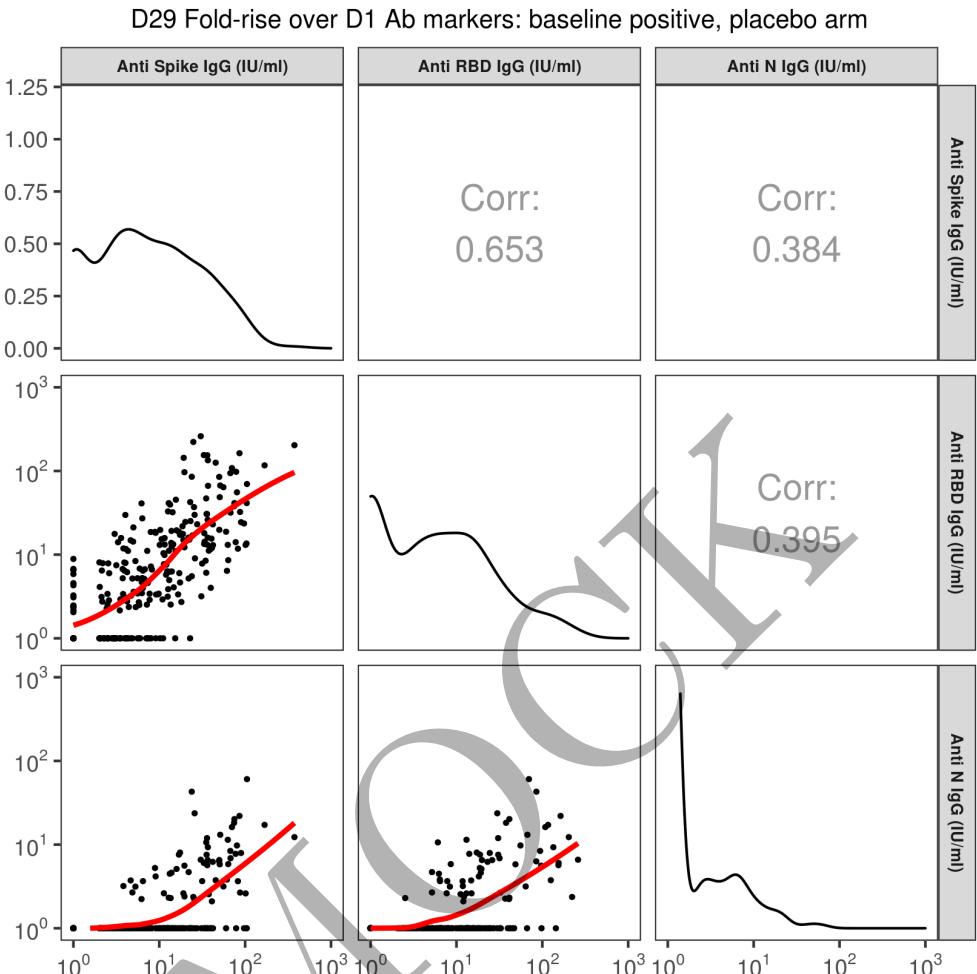


Figure 2.6: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive placebo arm

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

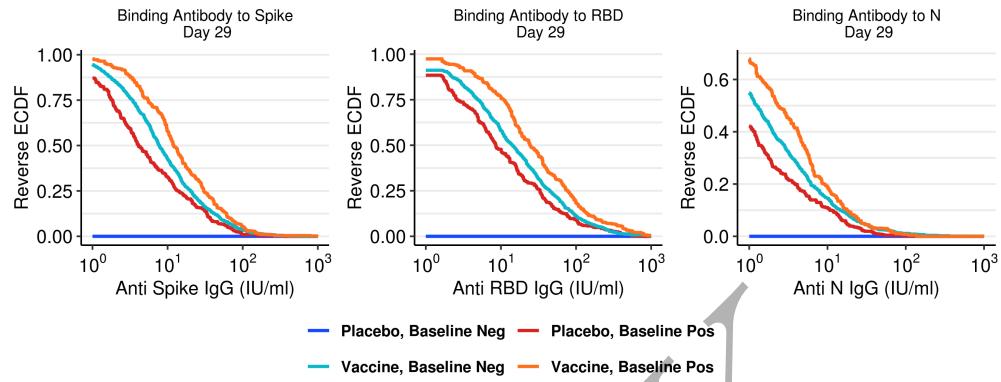


Figure 2.7: RCDF plots for D29 Ab markers: by baseline status x randomization arm

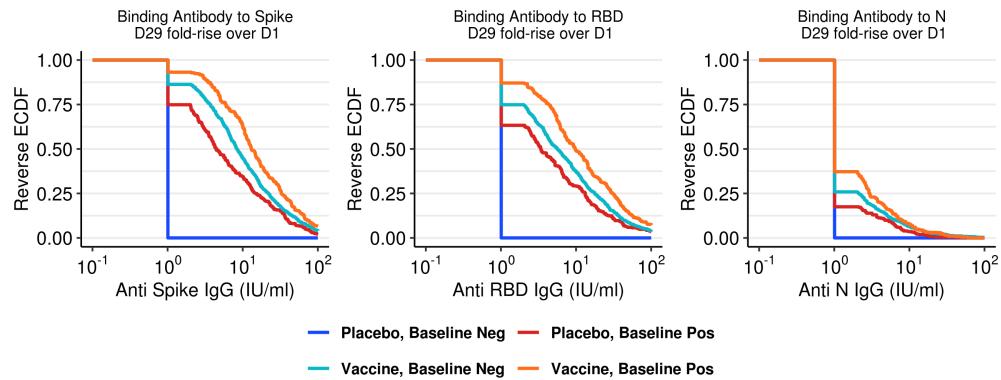


Figure 2.8: RCDF plots for D29 fold-rise over D1 Ab markers: by baseline status x randomization arm

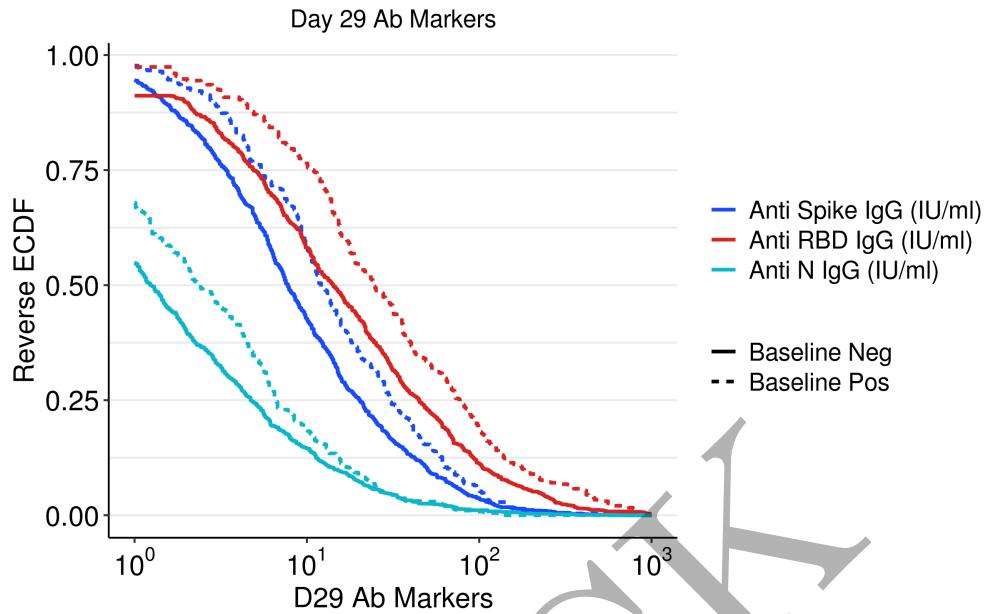


Figure 2.9: RCDF plots for D29 bAb markers: by baseline status for the vaccine arm

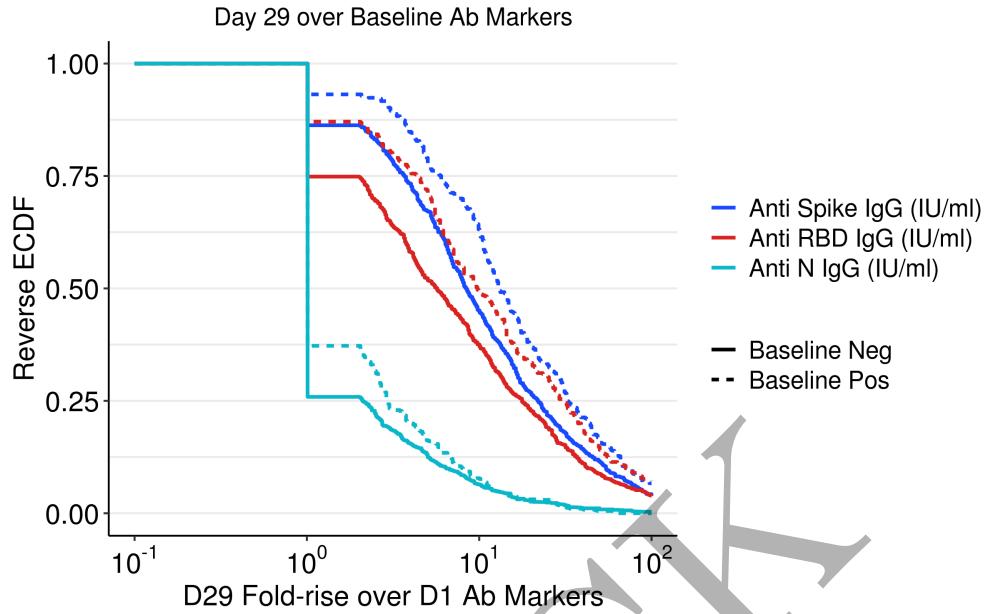


Figure 2.10: RCDF plots for D29 over D1 fold-rise bAb markers: by baseline status for the vaccine arm

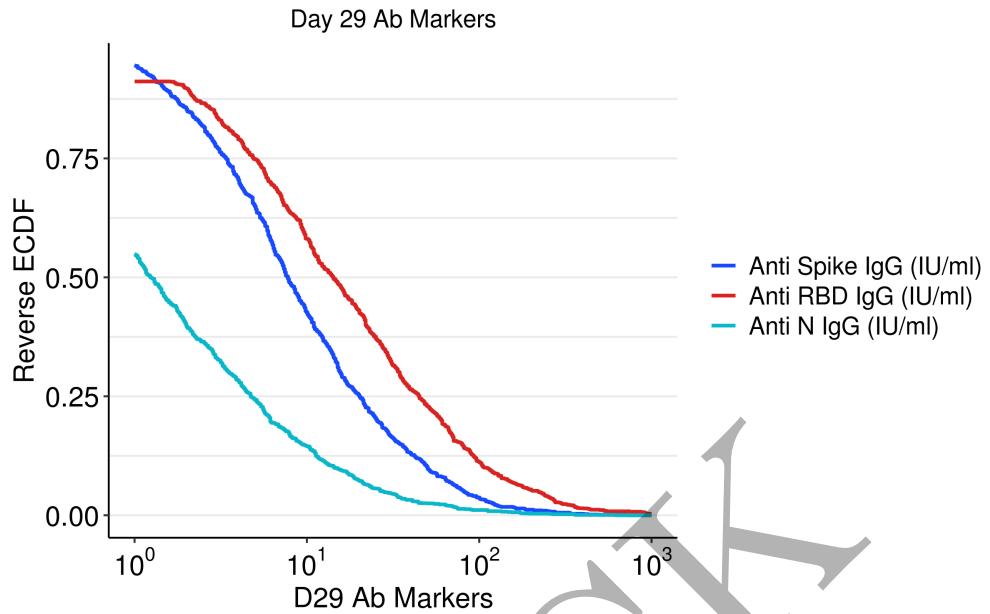


Figure 2.11: RCDF plots for D29 bAb markers: baseline negative vaccine arm

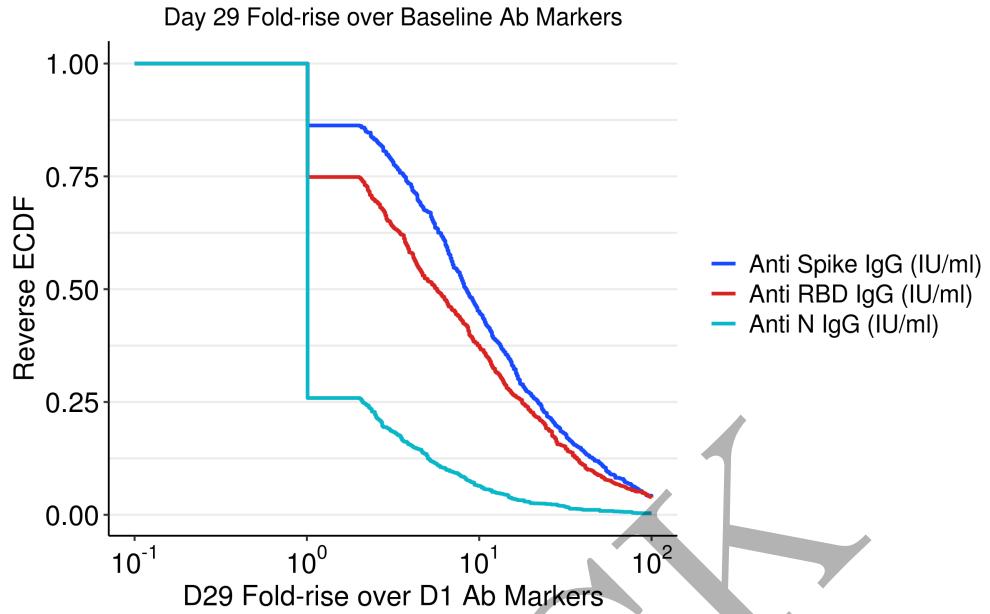


Figure 2.12: RCDF plots for D29 fold-rise over D1 bAb markers: baseline negative vaccine arm

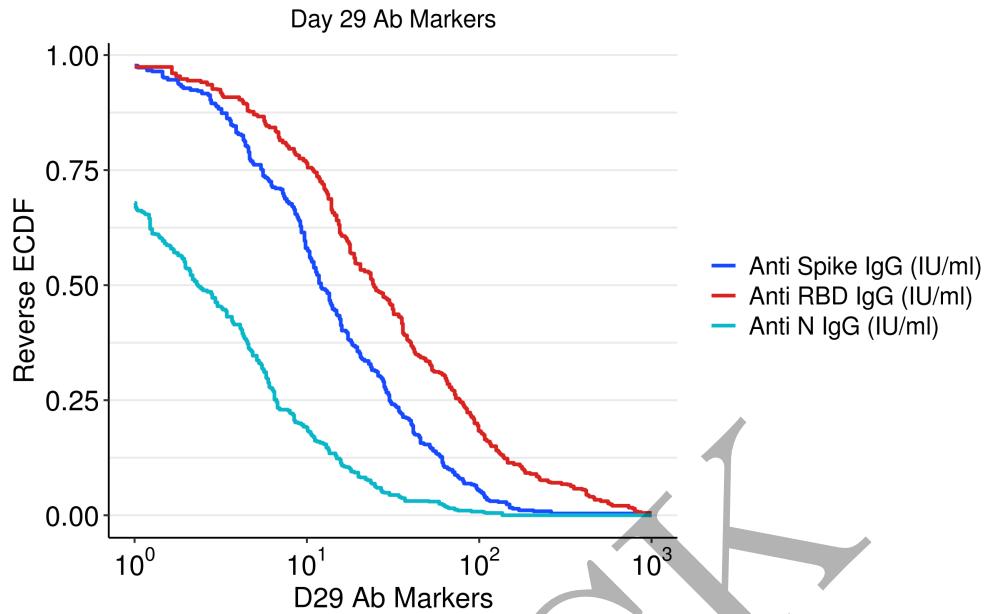


Figure 2.13: RCDF plots for D29 bAb markers: baseline positive vaccine arm

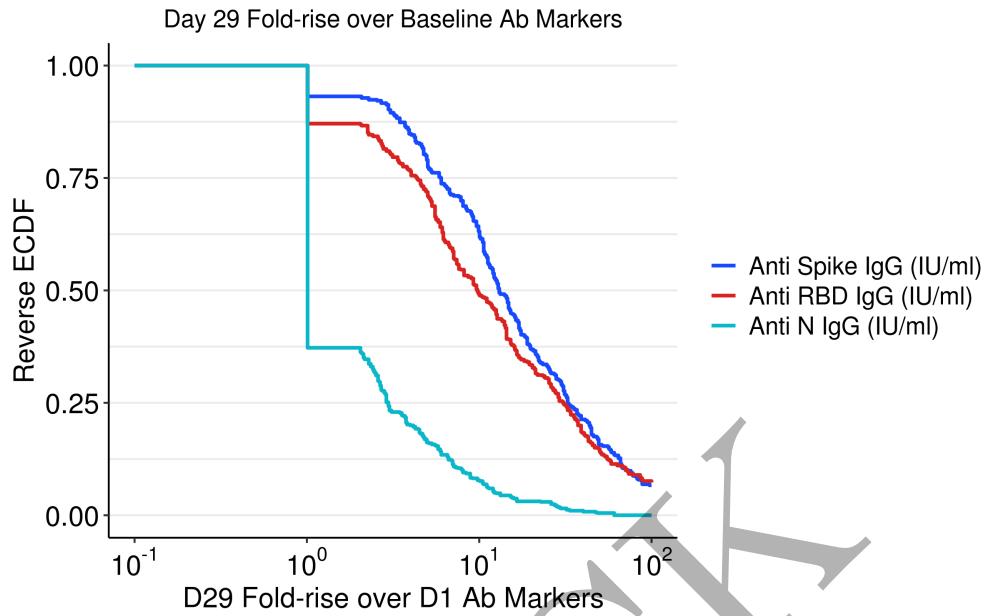


Figure 2.14: RCDF plots for D29 fold-rise over D1 bAb markers: baseline positive vaccine arm

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

2.3.1 Baseline SARS-CoV-2 Negative

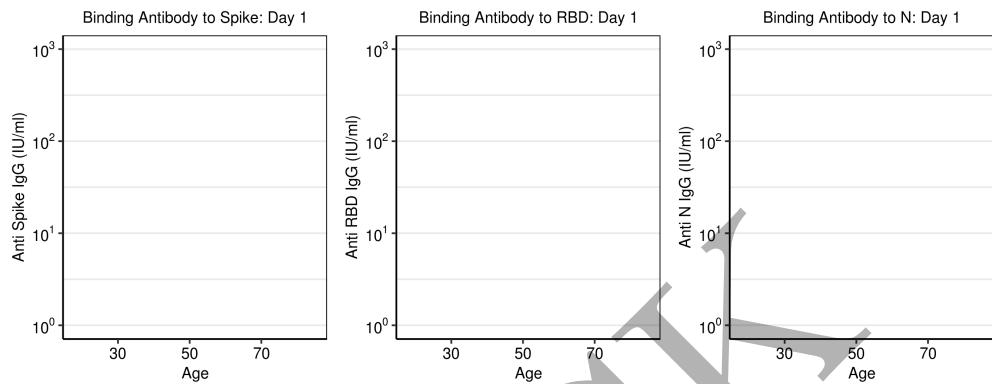


Figure 2.15: Scatter plots for D1 Ab markers vs. age: baseline negative vaccine arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT 273

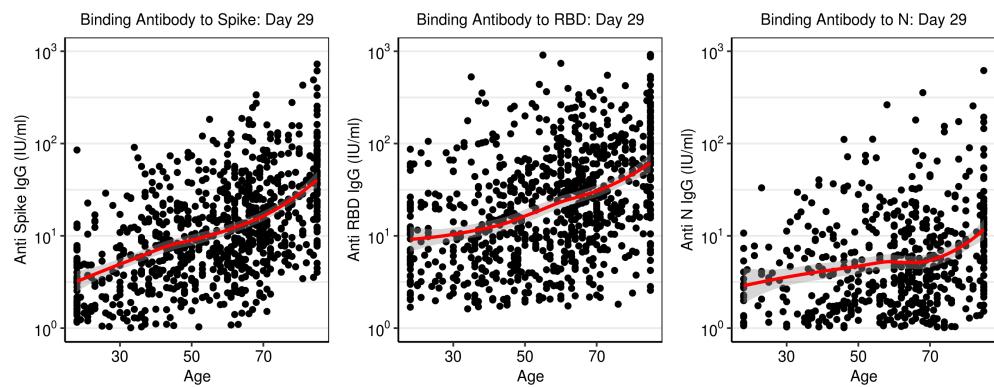


Figure 2.16: Scatter plots for D29 Ab markers vs. age: baseline negative vaccine arm

2.3.2 Baseline SARS-CoV-2 Positive

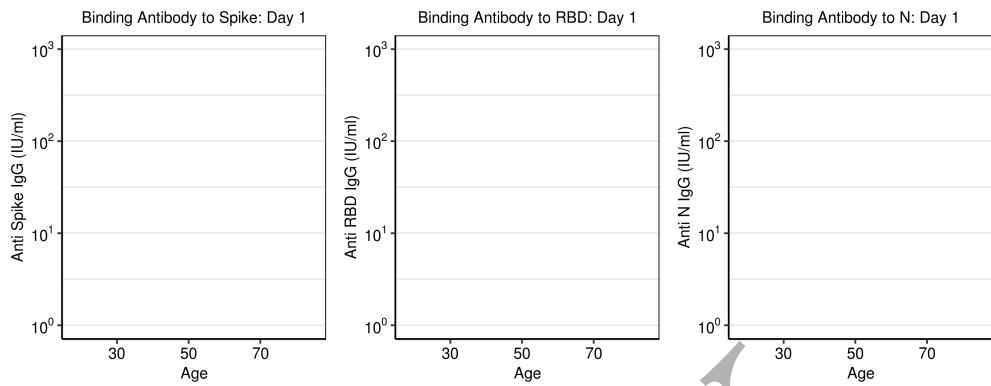


Figure 2.17: Scatter plots for D1 Ab markers vs. age: baseline positive vaccine arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT275

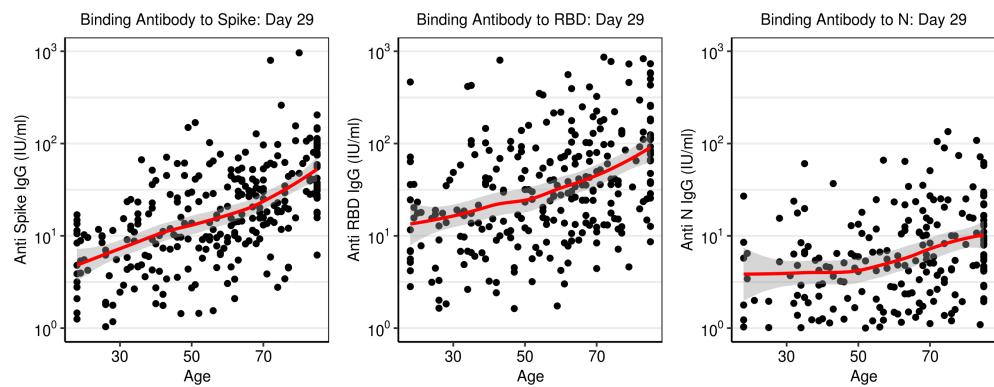


Figure 2.18: Scatter plots for D29 Ab markers vs. age: baseline positive vaccine arm

2.3.3 Baseline SARS-CoV-2 Positive Placebo Arm

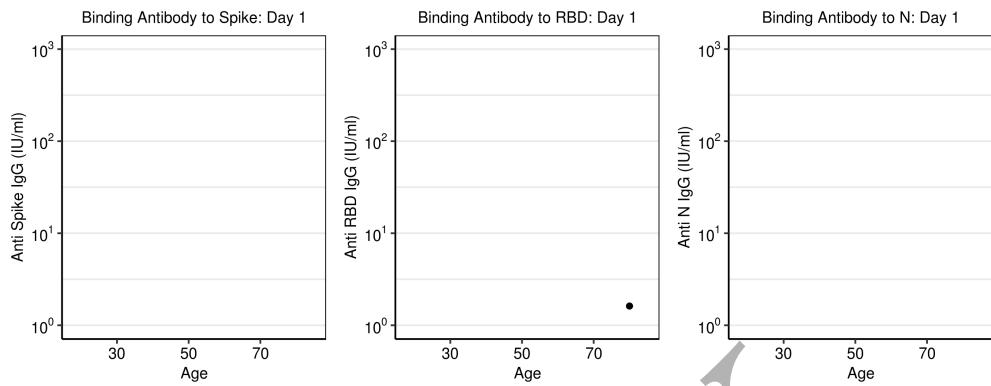


Figure 2.19: Scatter plots for D1 Ab markers vs. age: baseline positive placebo arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT277

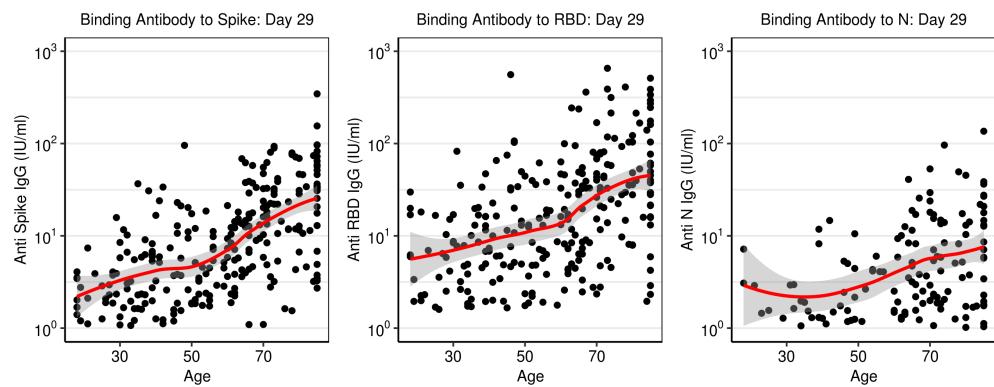


Figure 2.20: Scatter plots for D29 Ab markers vs. age: baseline positive placebo arm

2.3.4 Baseline SARS-CoV-2 Negative Placebo Arm

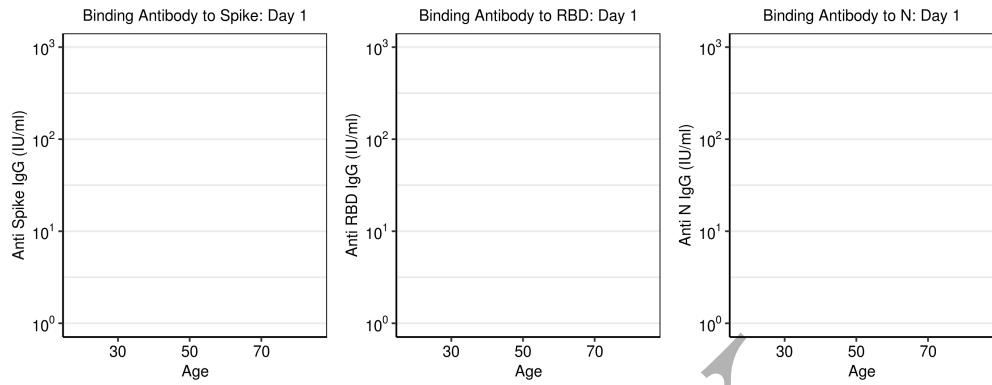


Figure 2.21: Scatter plots for D1 Ab markers vs. age: baseline negative placebo arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT279

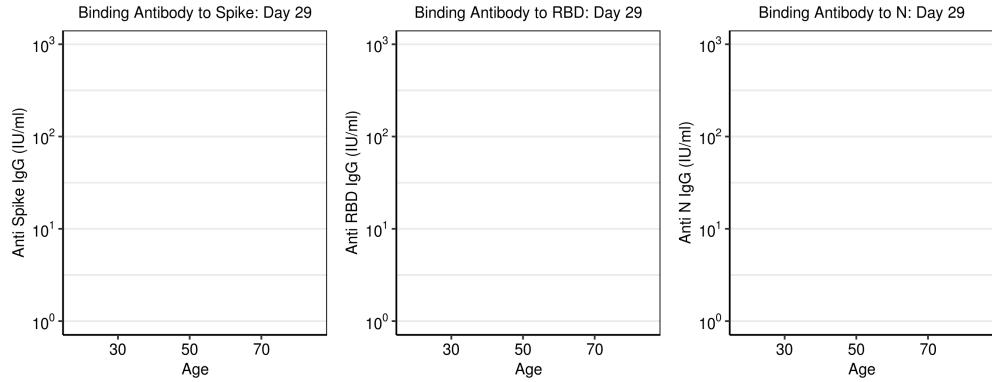


Figure 2.22: Scatter plots for D29 Ab markers vs. age: baseline negative placebo arm

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

2.4.1 Baseline SARS-CoV-2 Negative

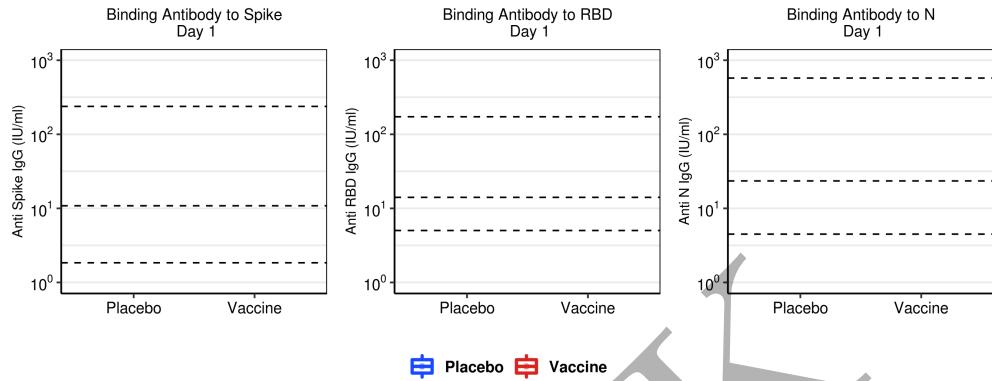


Figure 2.23: Boxplots of D1 Ab markers: baseline negative vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

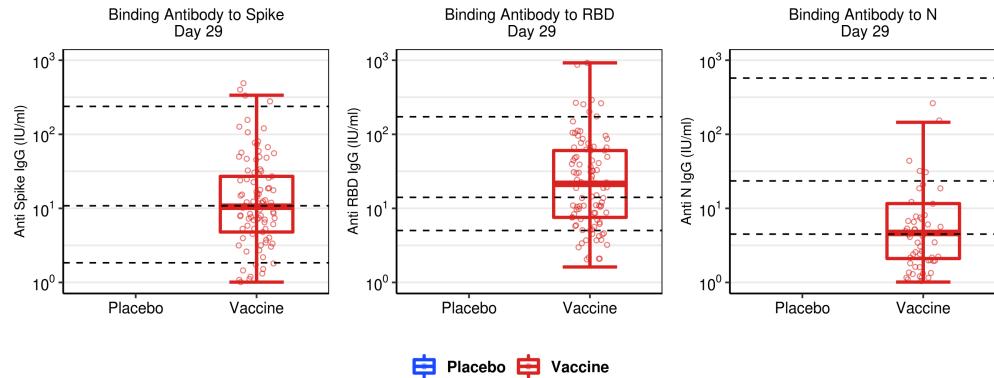


Figure 2.24: Boxplots of D29 Ab markers: baseline negative vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

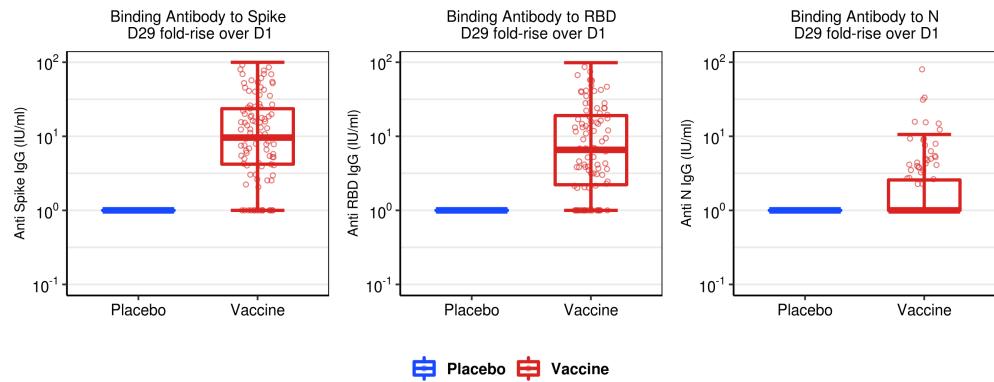


Figure 2.25: Boxplots of D29 fold-rise over D1 Ab markers: baseline negative vaccine + placebo arms

2.4.2 Baseline SARS-CoV-2 Positive

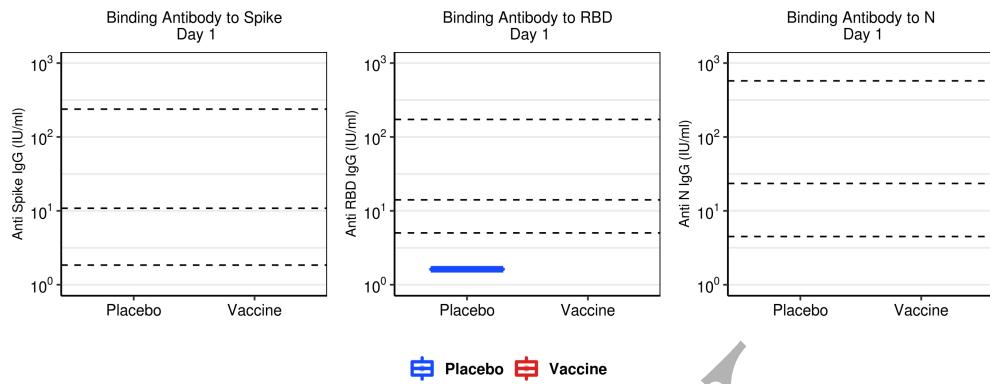


Figure 2.26: Boxplots of D1 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

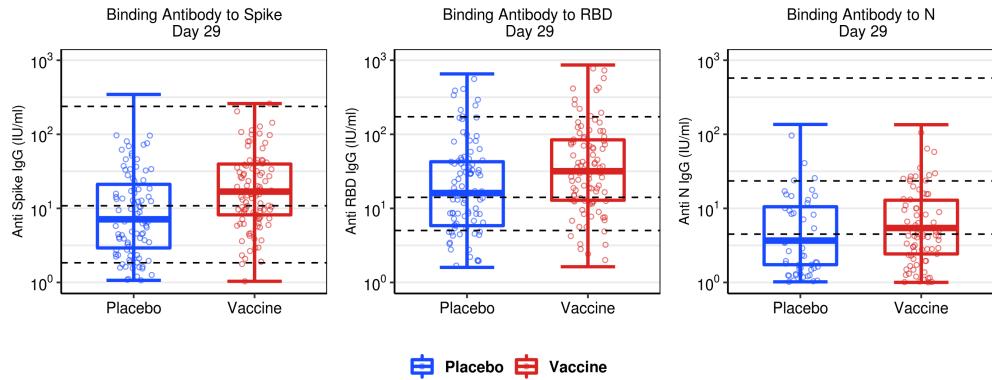


Figure 2.27: Boxplots of D29 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

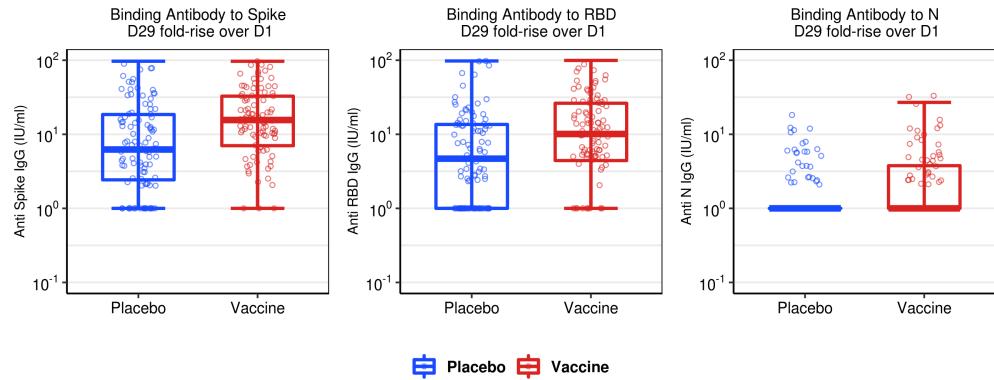


Figure 2.28: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine + placebo arms

2.4.3 Baseline negative vs. positive vaccine recipients

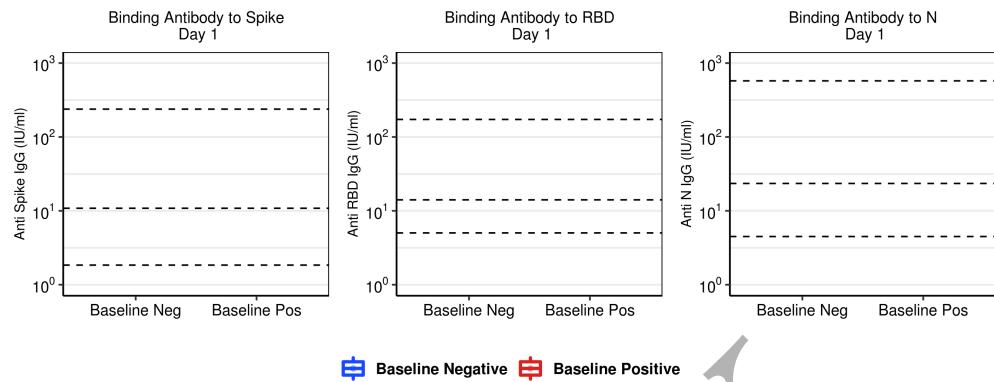


Figure 2.29: Boxplots of D1 Ab markers: baseline positive + negative vaccine arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

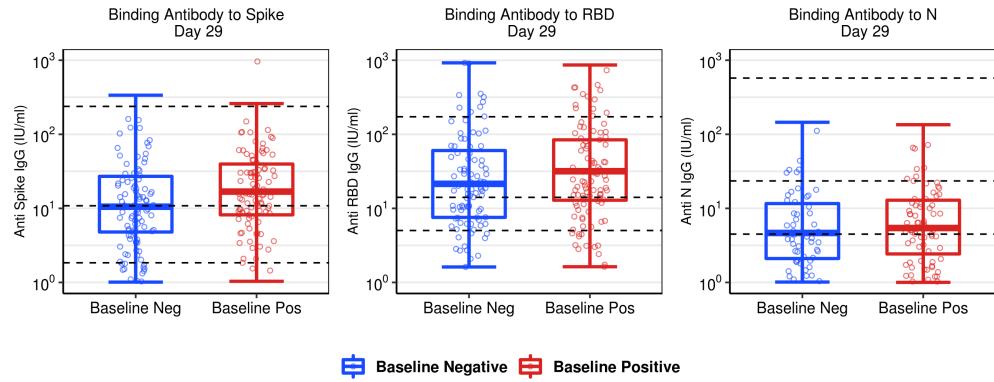


Figure 2.30: Boxplots of D29 Ab markers: baseline positive + negative vaccine arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

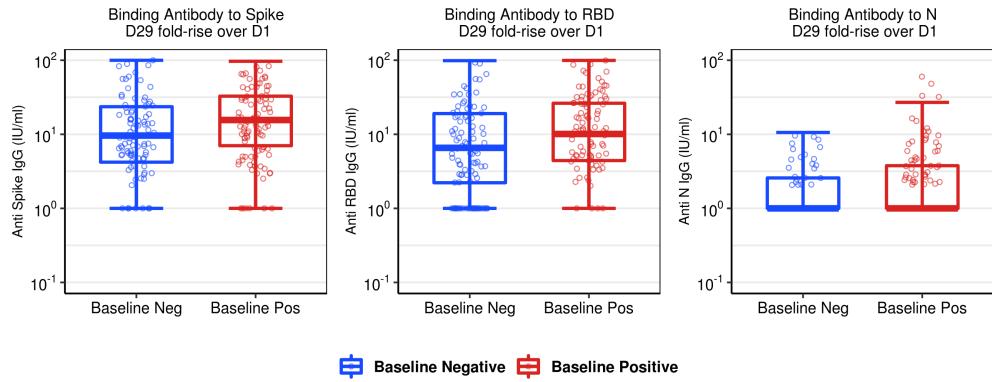


Figure 2.31: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative vaccine arm

2.4.4 Baseline negative vs. positive placebo recipients

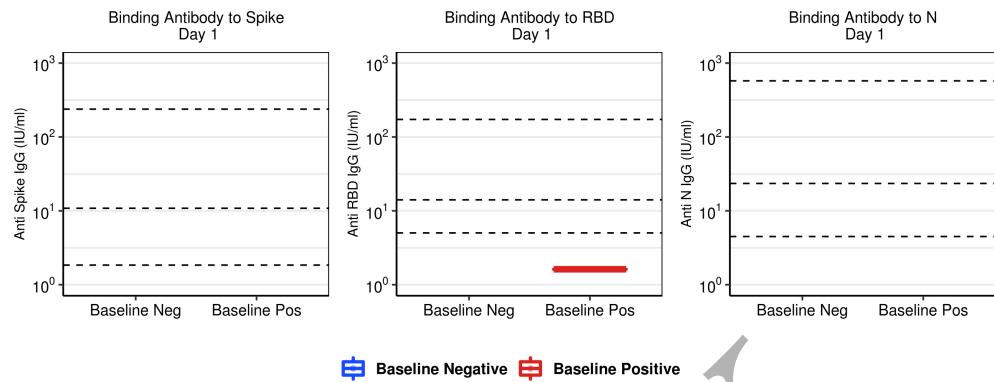


Figure 2.32: Boxplots of D1 Ab markers: baseline positive + negative placebo arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

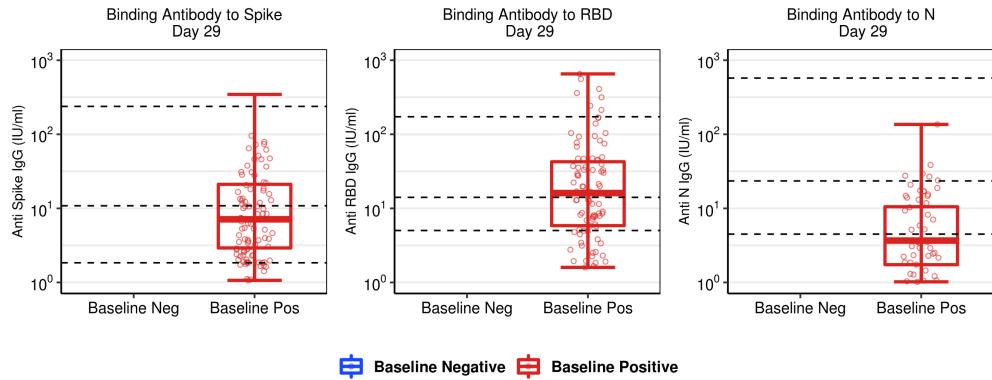


Figure 2.33: Boxplots of D29 Ab markers: baseline positive + negative placebo arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

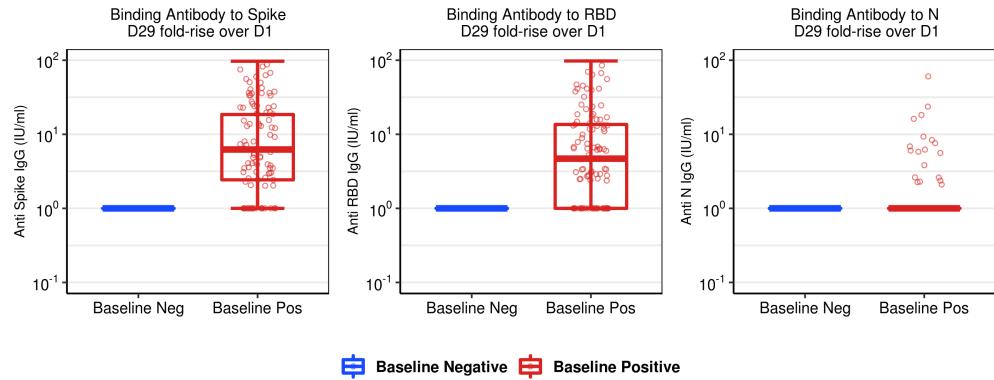


Figure 2.34: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative placebo arm

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

2.5.1 Baseline SARS-CoV-2 Negative

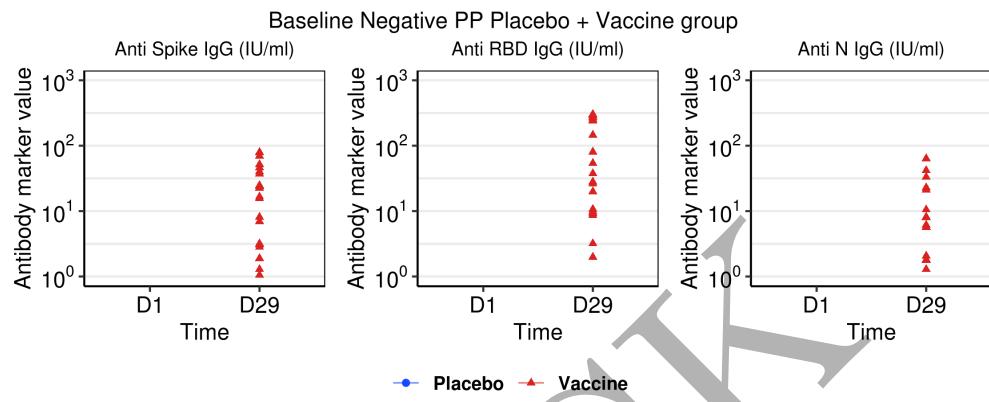


Figure 2.35: Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

2.5.2 Baseline SARS-CoV-2 Positive

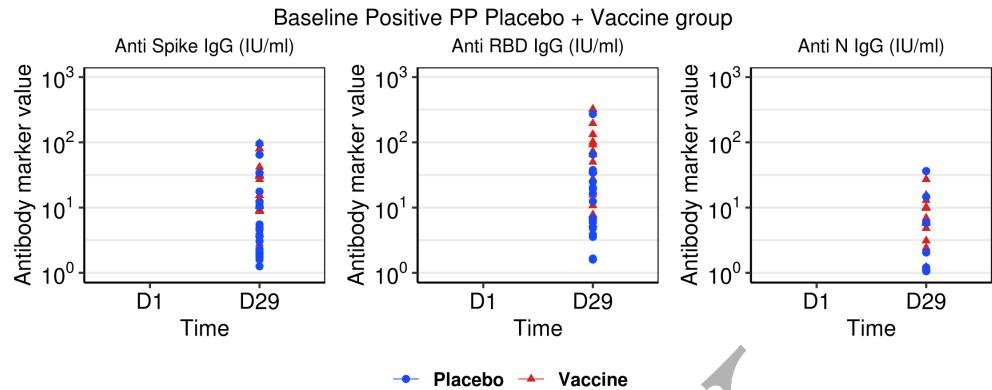


Figure 2.36: Spaghetti plots of Ab markers over time: baseline positive vaccine + placebo arm

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

2.6.1 Baseline SARS-CoV-2 Negative

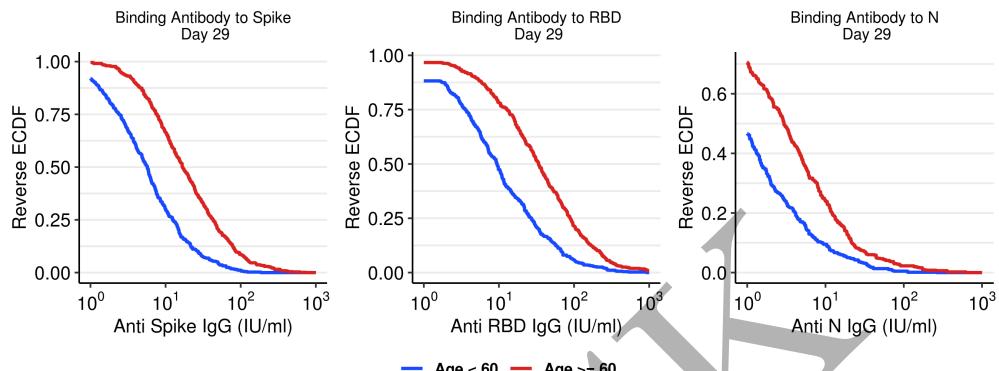


Figure 2.37: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age groups.

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

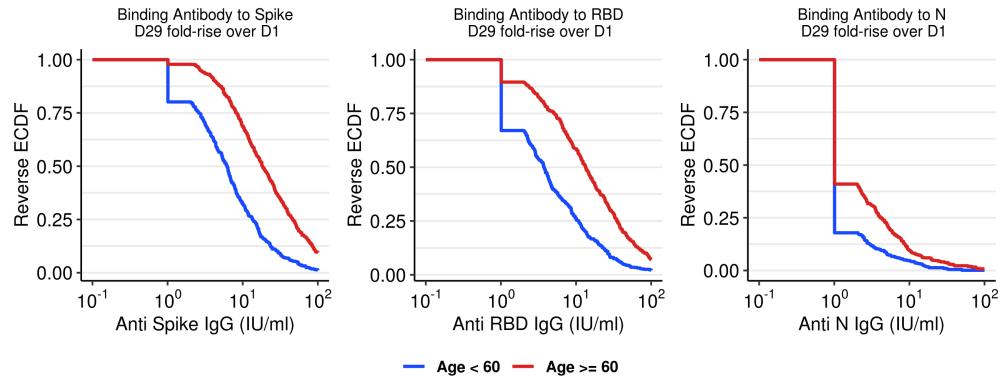


Figure 2.38: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age groups.

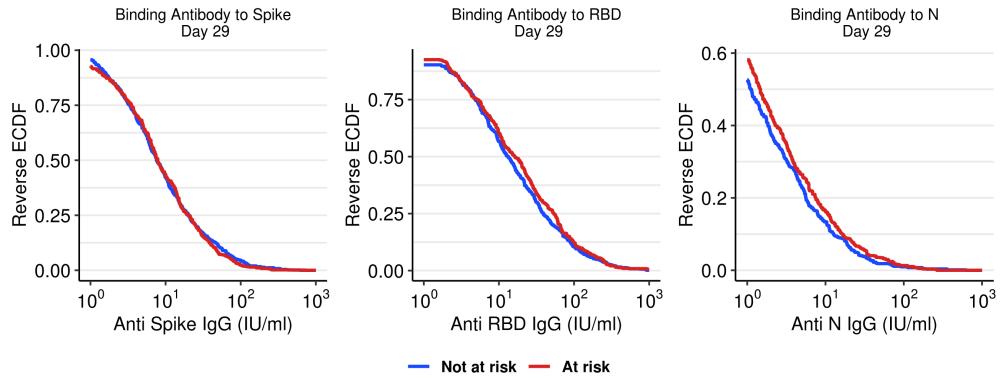


Figure 2.39: RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

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

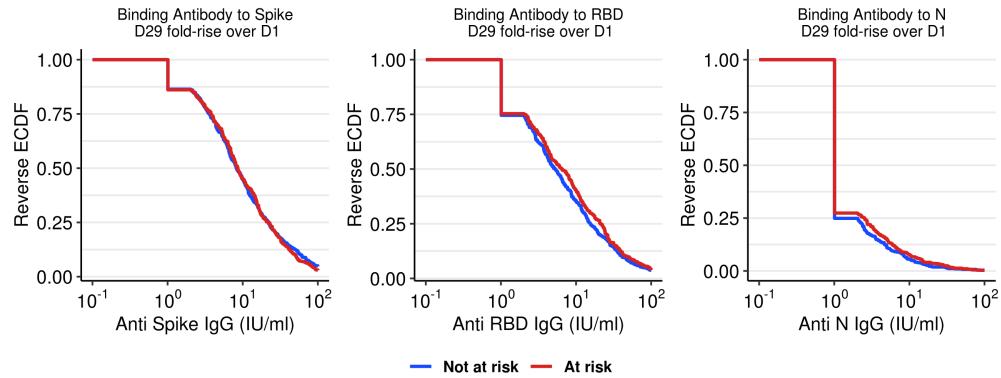


Figure 2.40: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by high-risk condition.

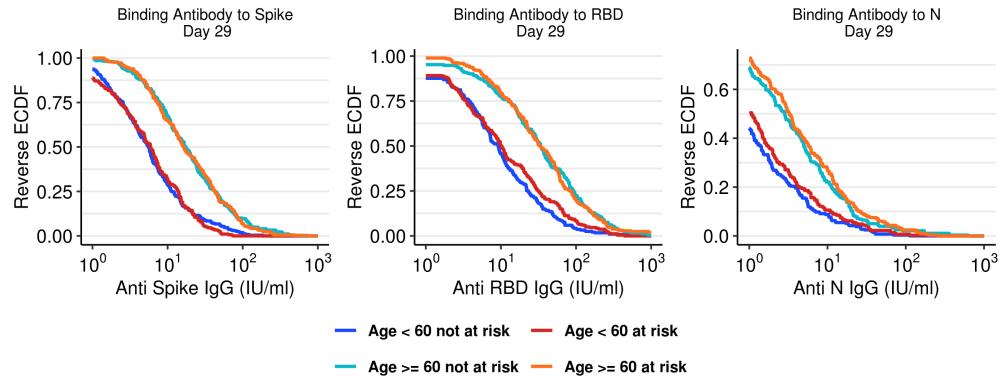


Figure 2.41: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

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

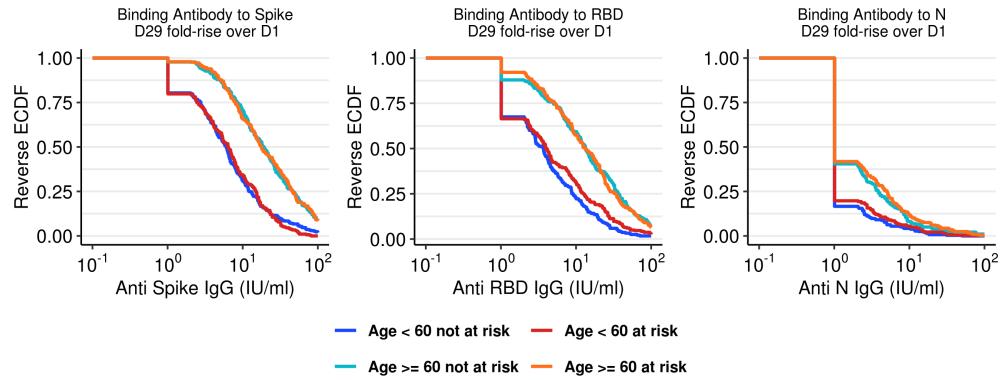


Figure 2.42: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and high-risk condition.

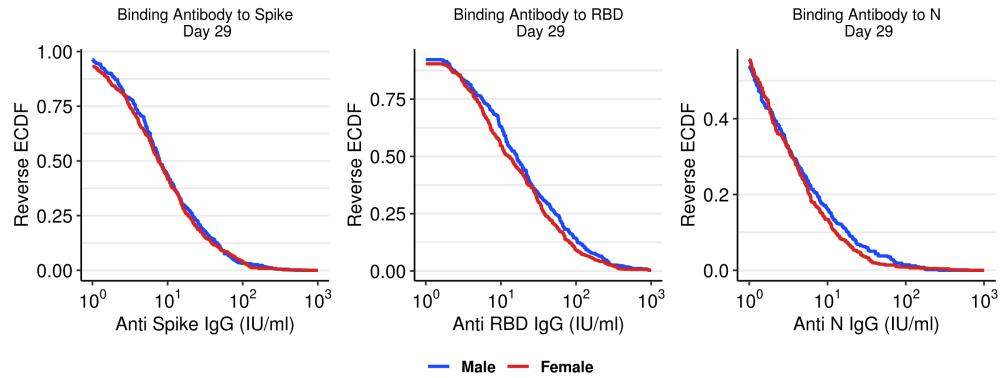


Figure 2.43: RCDF plots for D29 Ab markers: baseline negative vaccine arm by sex assigned at birth.

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

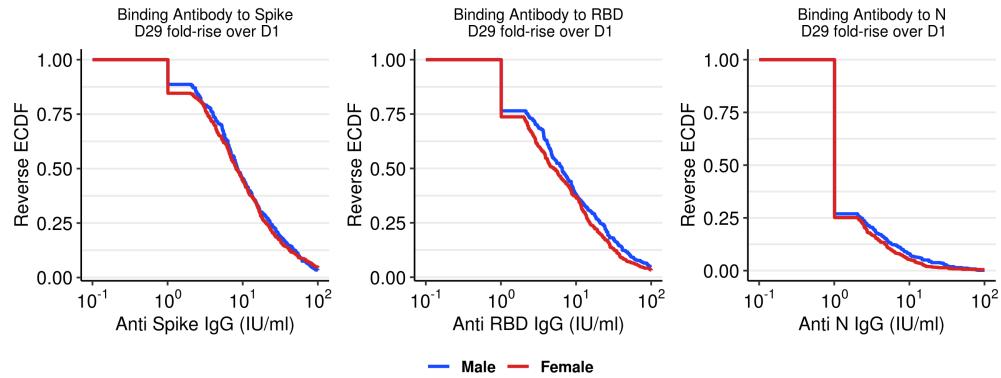


Figure 2.44: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

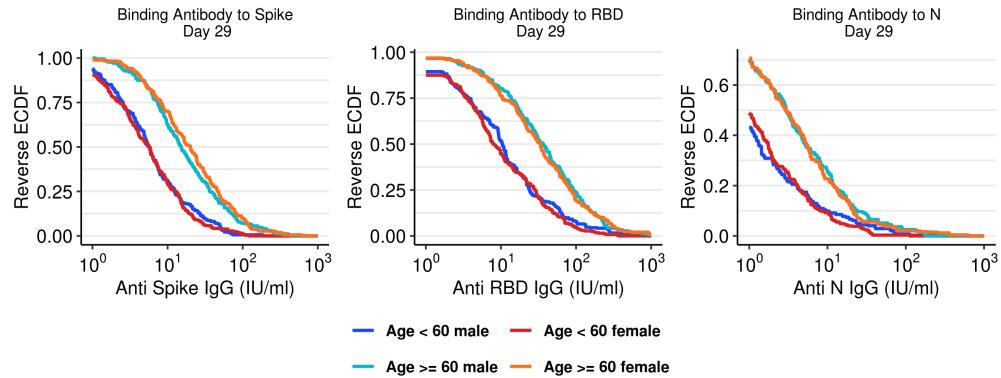


Figure 2.45: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

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

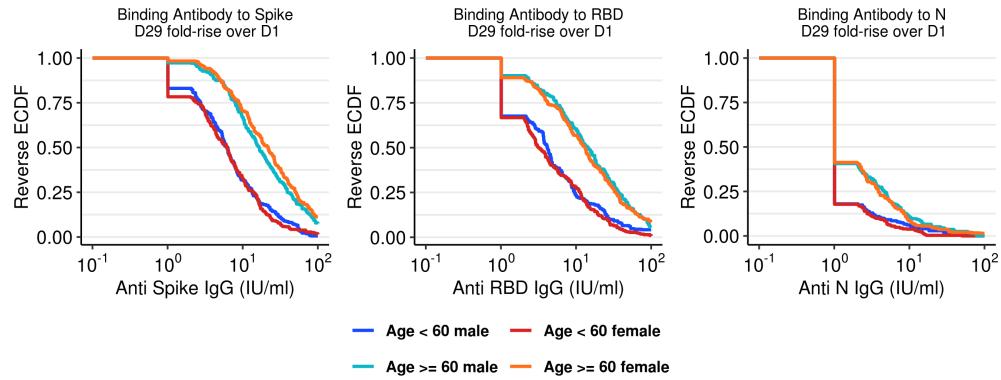


Figure 2.46: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

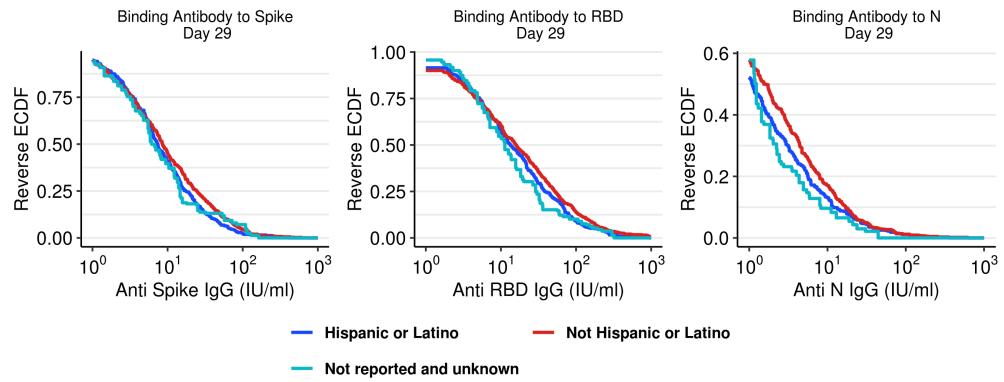


Figure 2.47: RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

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

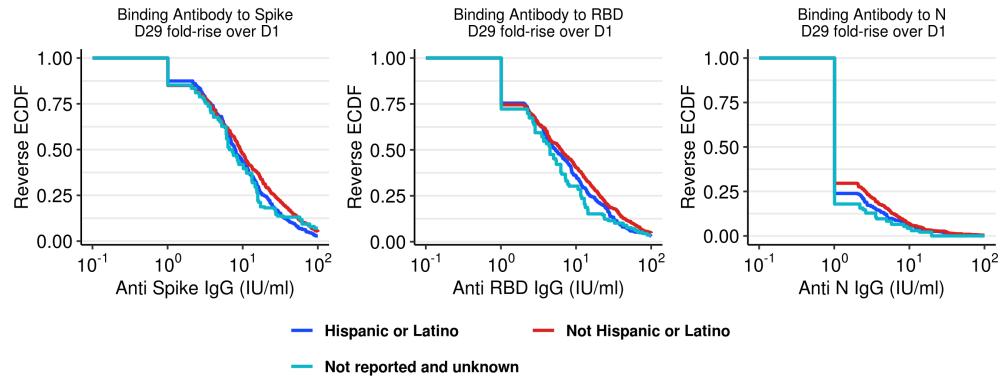


Figure 2.48: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

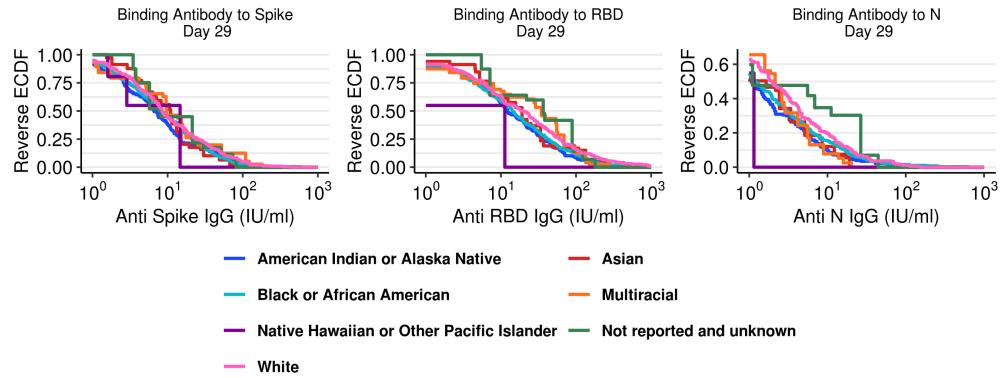


Figure 2.49: RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

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

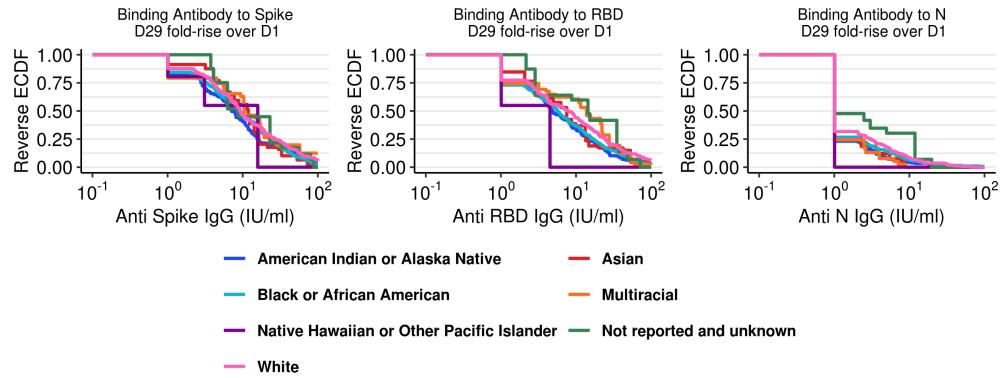


Figure 2.50: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by race.

MOCK

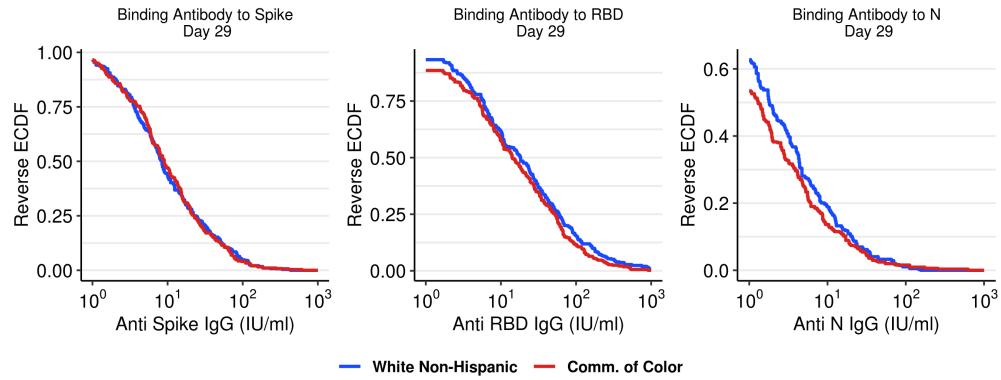


Figure 2.51: RCDF plots for D29 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

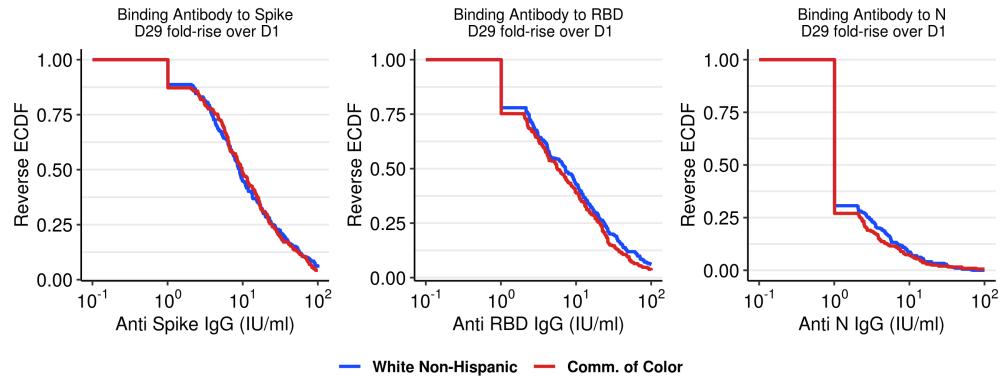


Figure 2.52: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

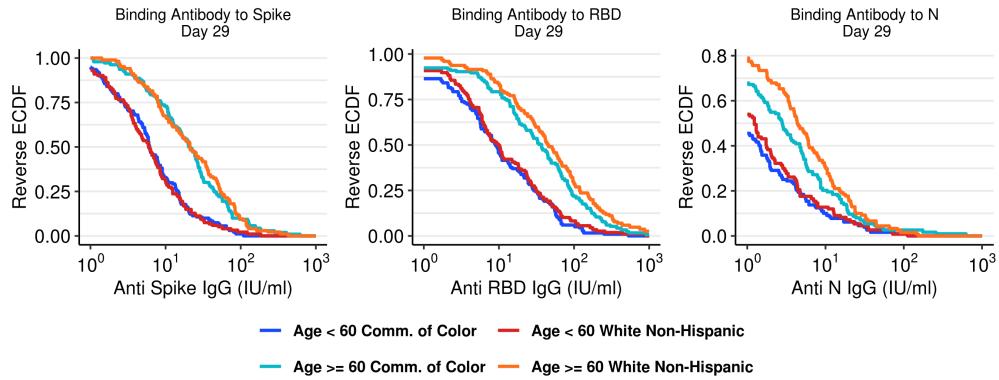


Figure 2.53: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

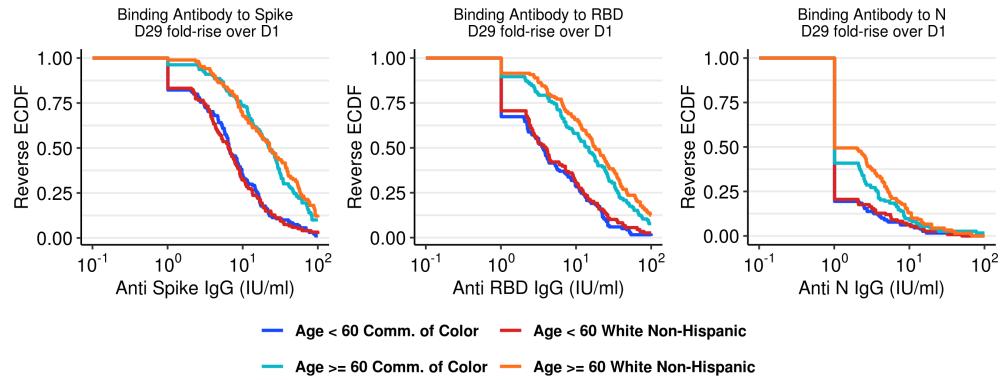


Figure 2.54: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

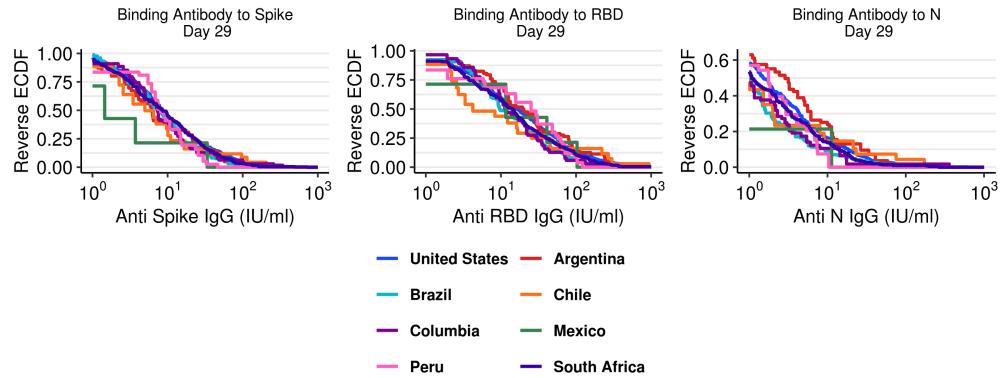


Figure 2.55: RCDF plots for D29 Ab markers: baseline negative vaccine arm by country of residence.

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

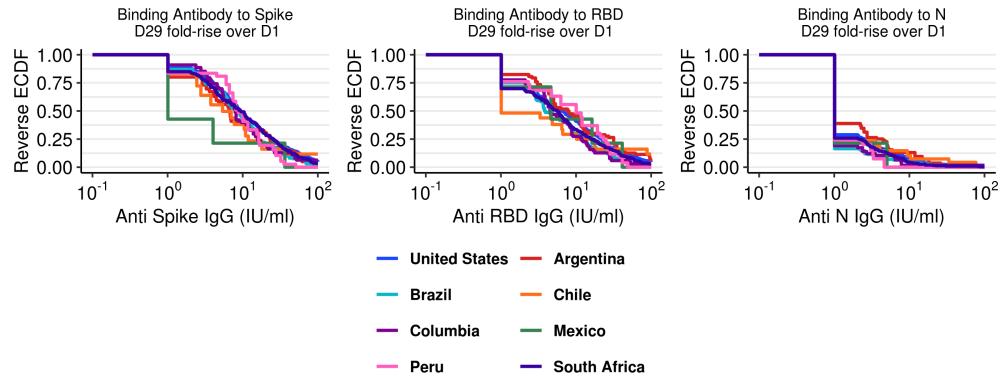


Figure 2.56: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by country of residence.

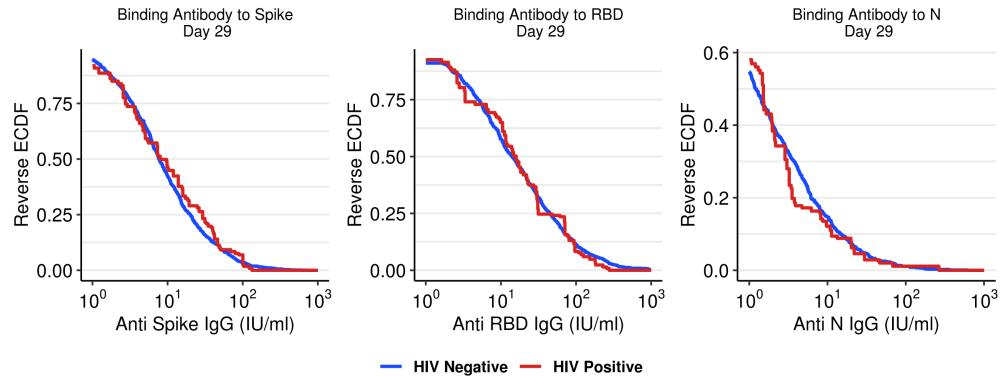


Figure 2.57: RCDF plots for D29 Ab markers: baseline negative vaccine arm by HIV positivity.

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

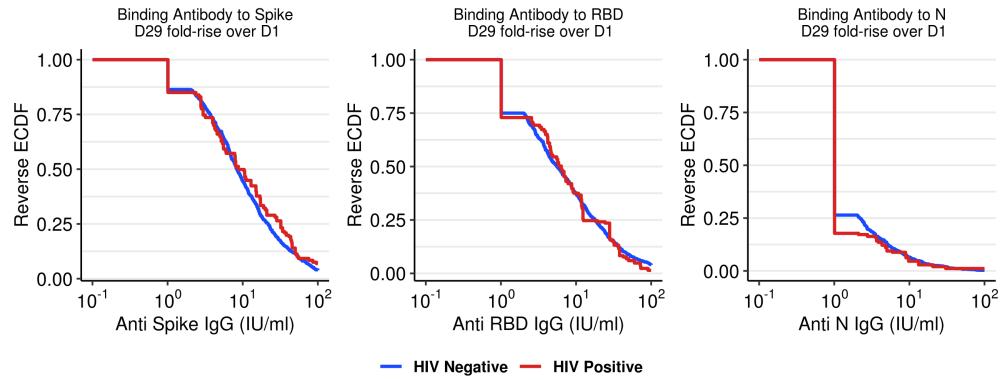


Figure 2.58: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by HIV positivity.

2.6.2 Baseline SARS-CoV-2 Positive

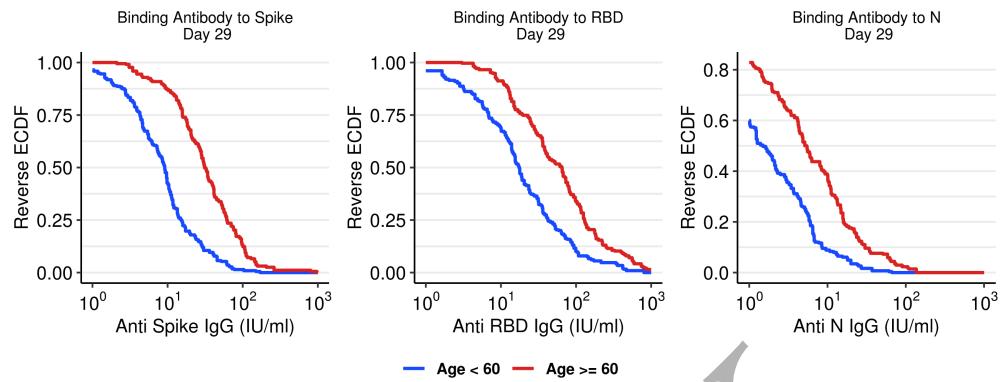


Figure 2.59: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age groups.

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

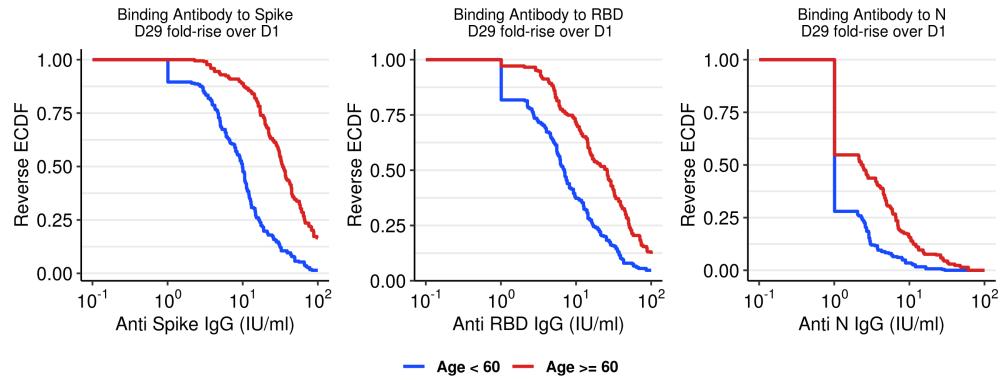


Figure 2.60: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age groups.

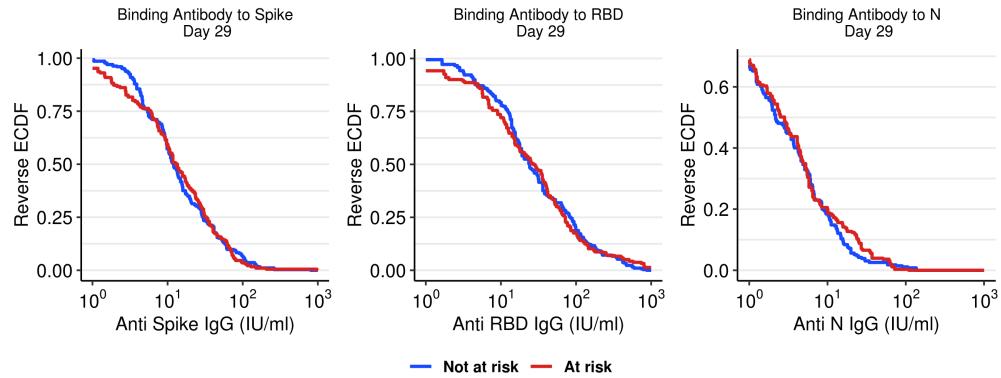


Figure 2.61: RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

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

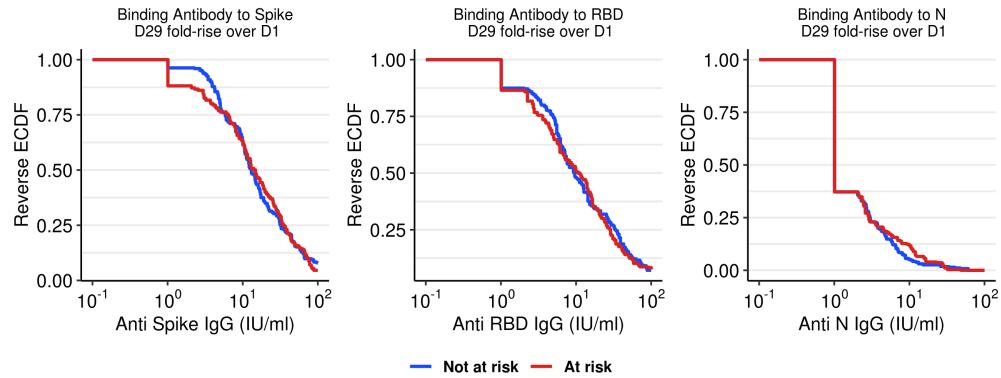


Figure 2.62: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

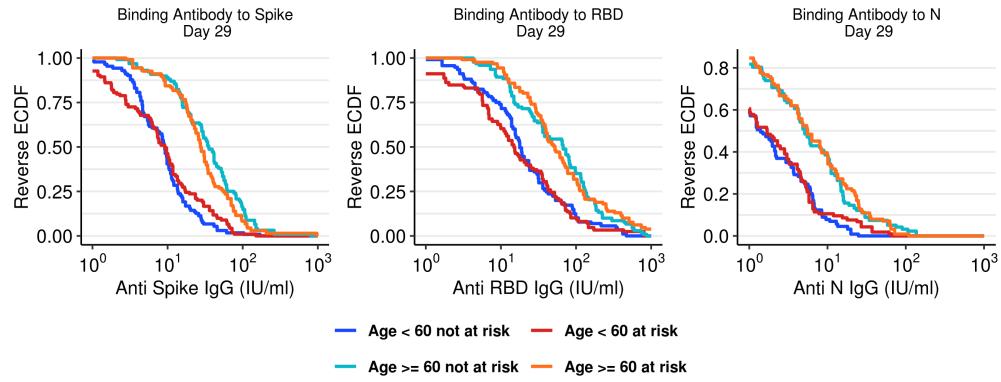


Figure 2.63: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

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

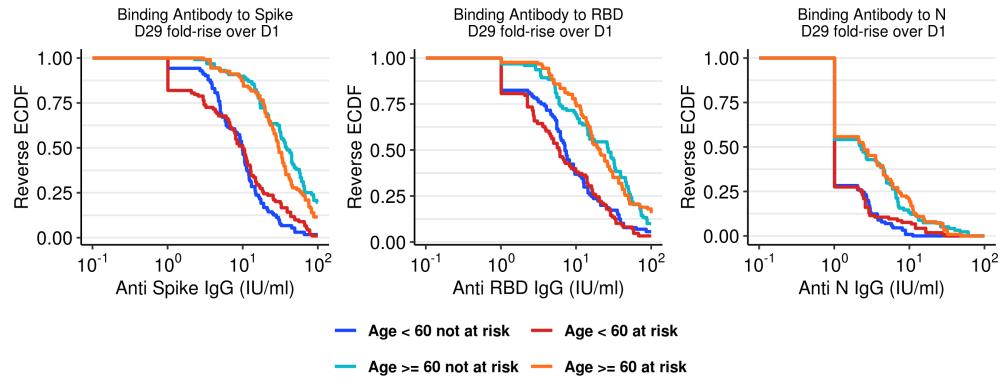


Figure 2.64: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

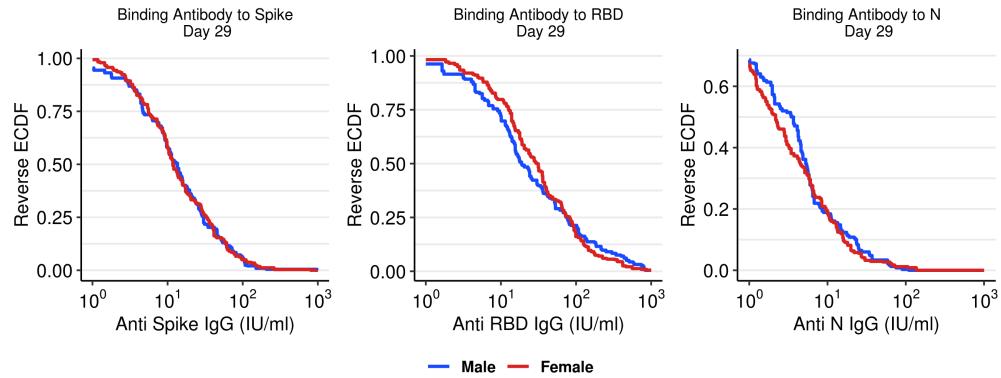


Figure 2.65: RCDF plots for D29 Ab markers: baseline positive vaccine arm by sex assigned at birth.

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

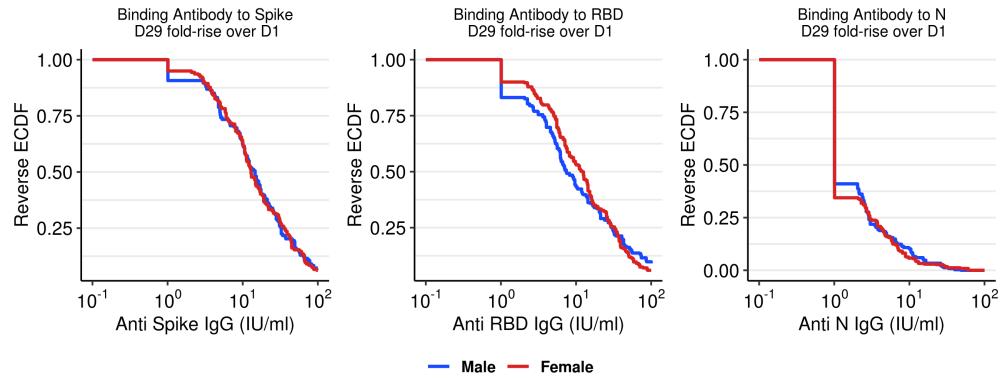


Figure 2.66: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

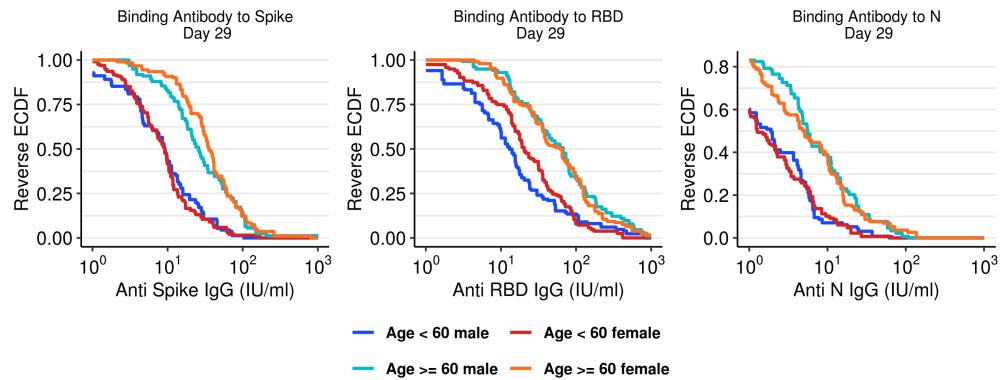


Figure 2.67: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

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

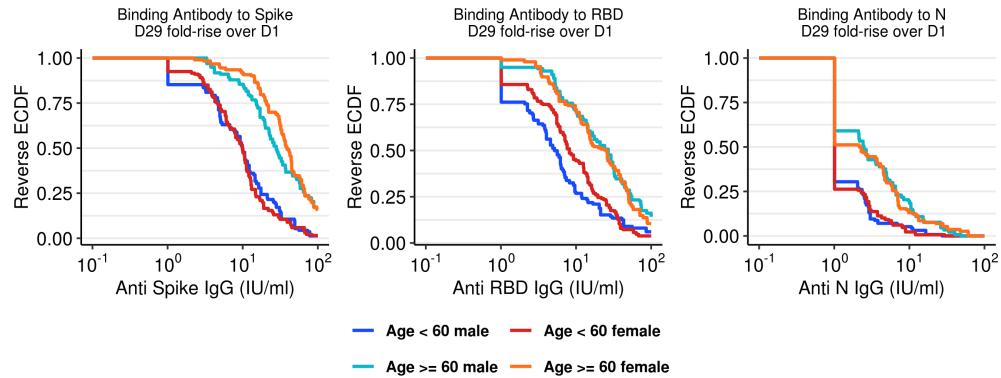


Figure 2.68: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

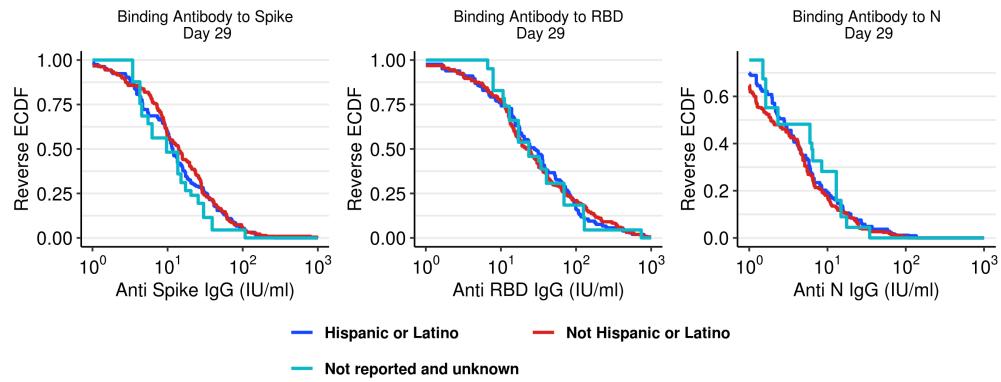


Figure 2.69: RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

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

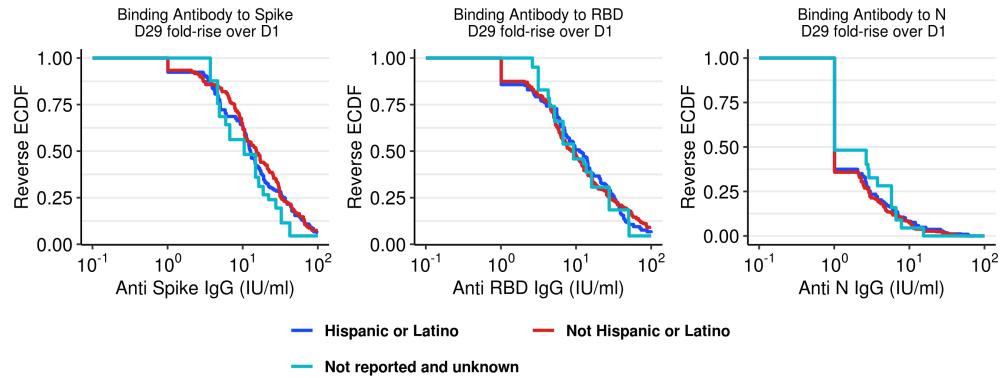


Figure 2.70: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

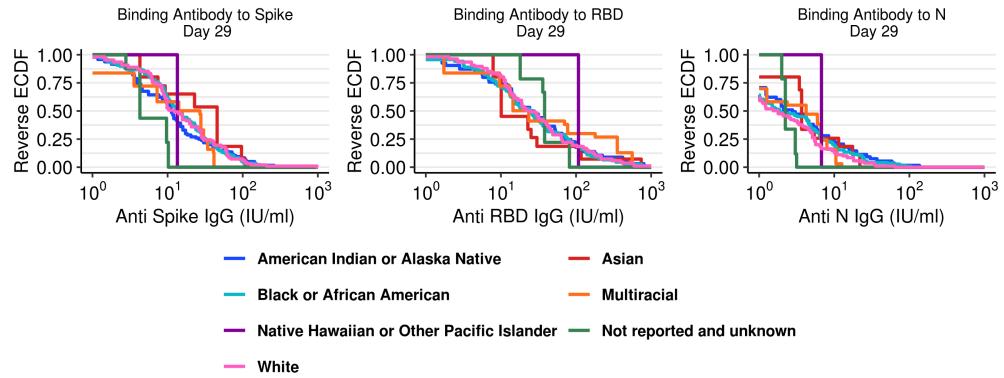


Figure 2.71: RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

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

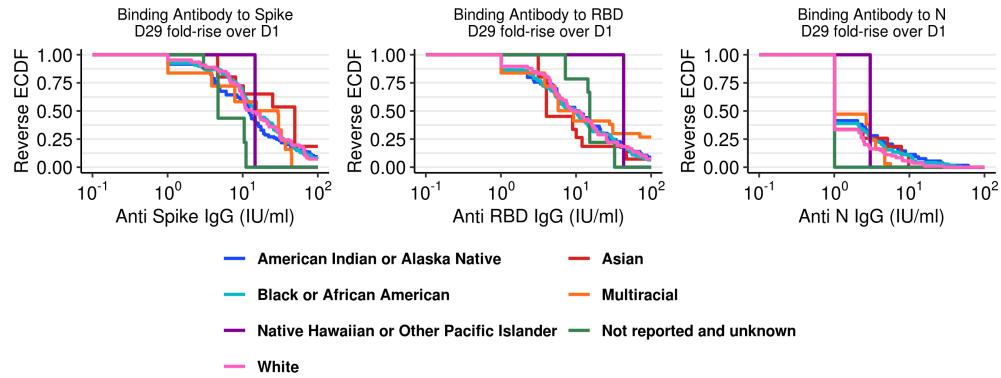


Figure 2.72: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

MOCK

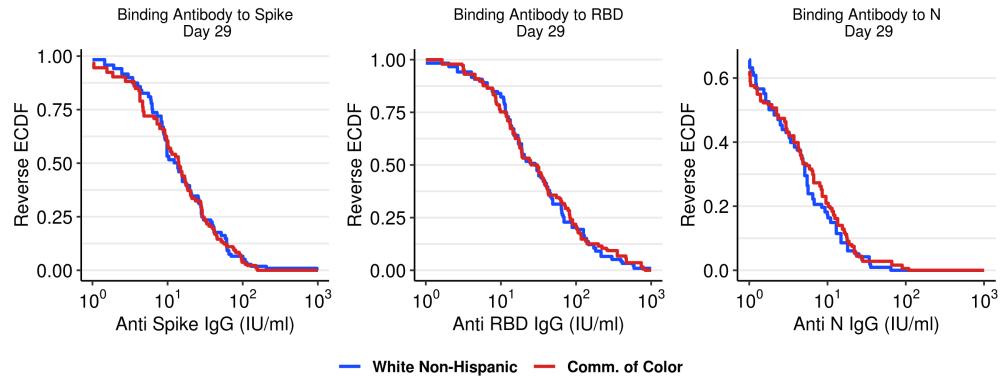


Figure 2.73: RCDF plots for D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

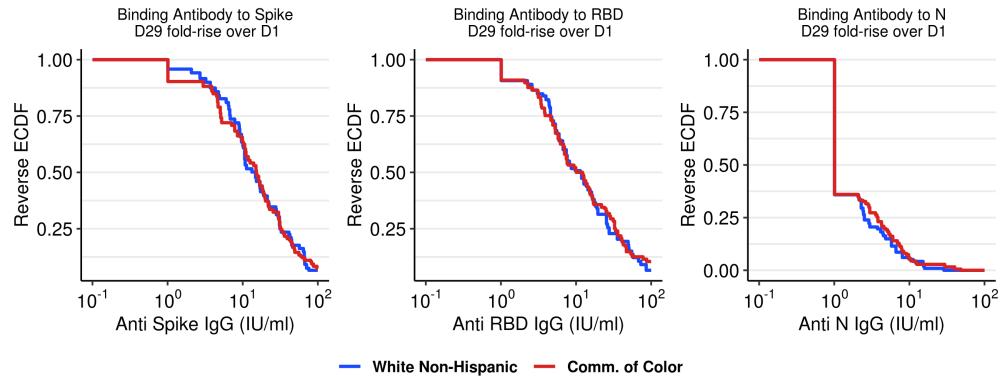


Figure 2.74: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

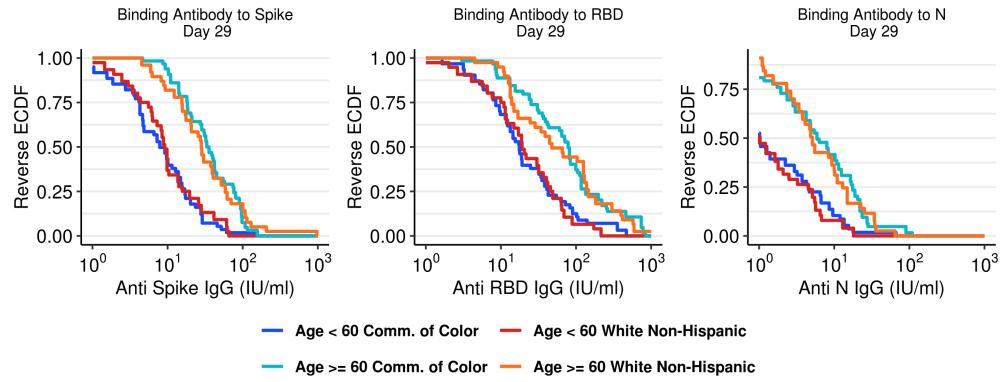


Figure 2.75: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT333

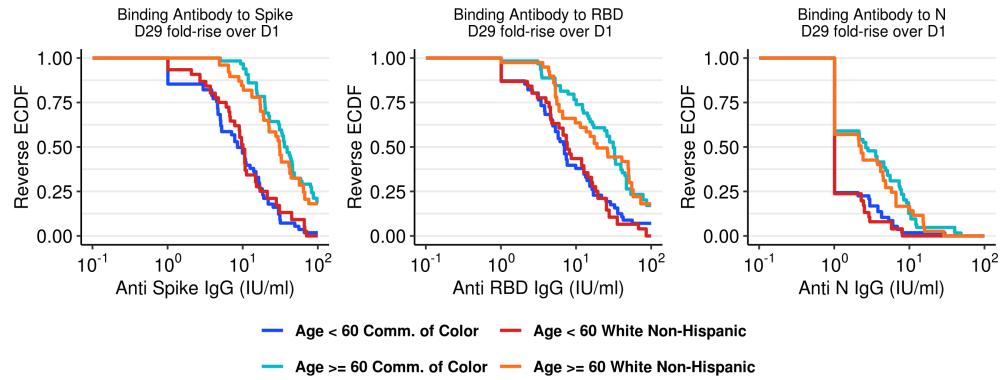


Figure 2.76: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

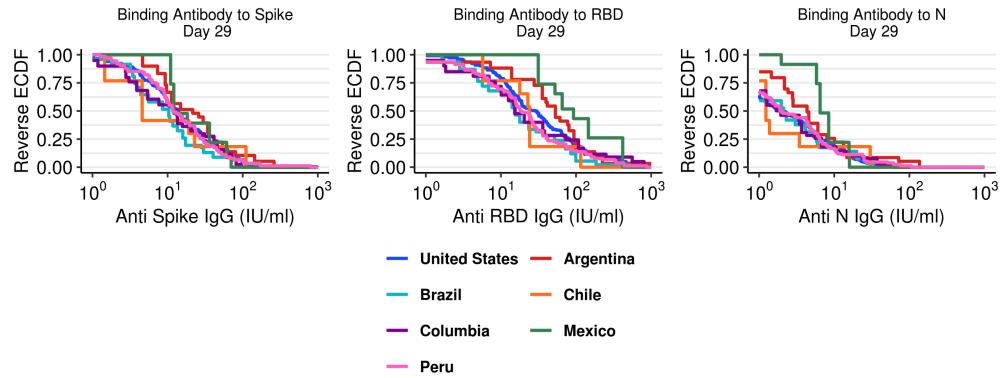


Figure 2.77: RCDF plots for D29 Ab markers: baseline positive vaccine arm by country of residence.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT335

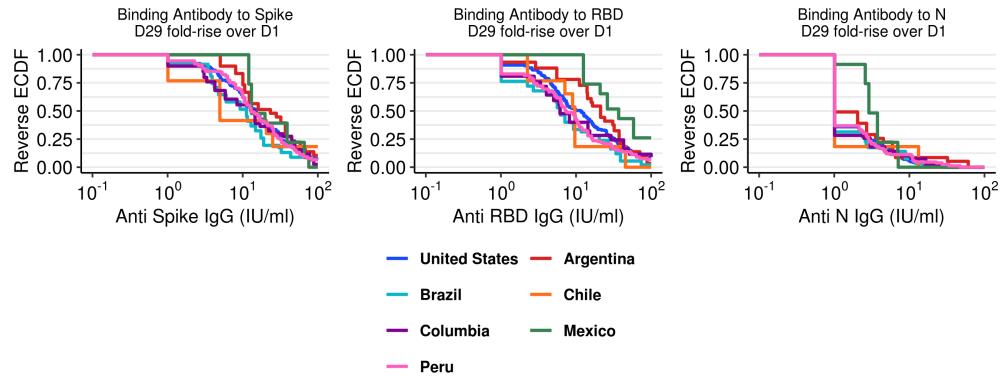


Figure 2.78: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

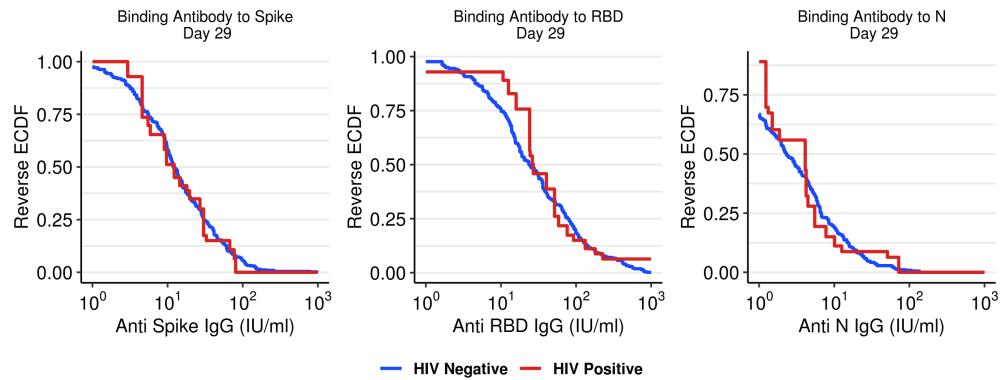


Figure 2.79: RCDF plots for D29 Ab markers: baseline positive vaccine arm by HIV positivity.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT337

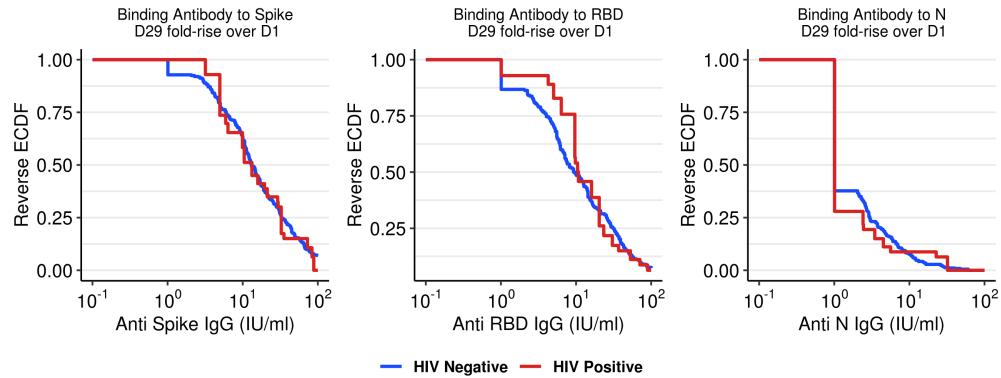


Figure 2.80: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

2.6.3 Baseline SARS-CoV-2 Positive Placebo Arm

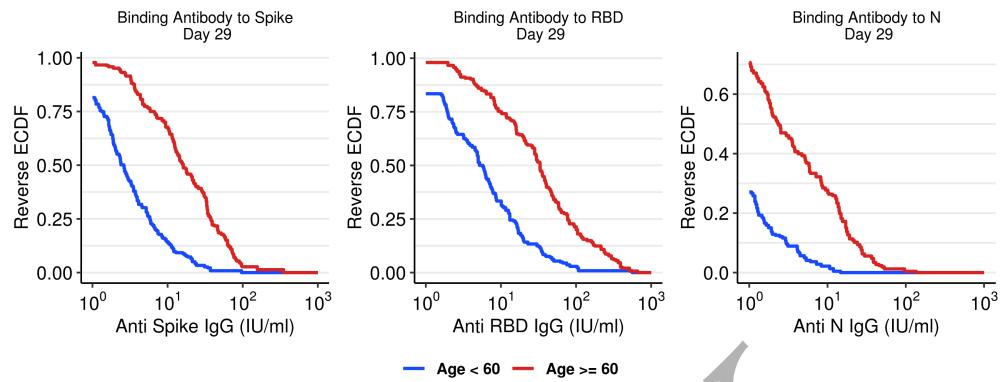


Figure 2.81: RCDF plots for D29 Ab markers: baseline positive placebo arm by age groups.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT339

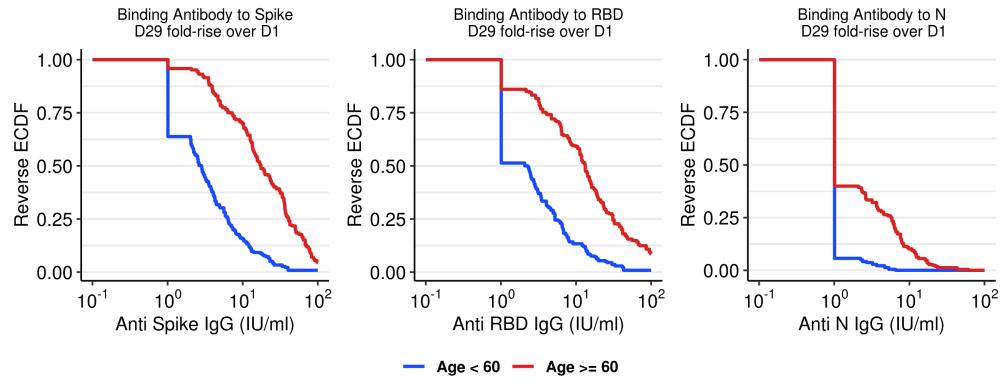


Figure 2.82: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age groups.

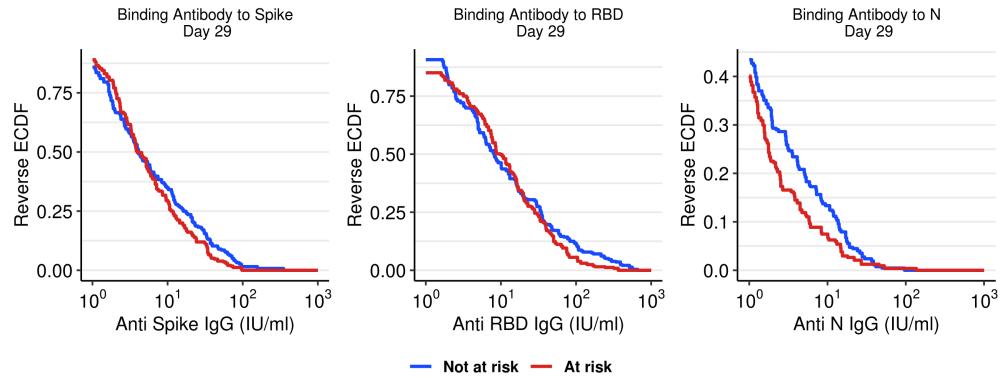


Figure 2.83: RCDF plots for D29 Ab markers: baseline positive placebo arm by high-risk condition.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT341

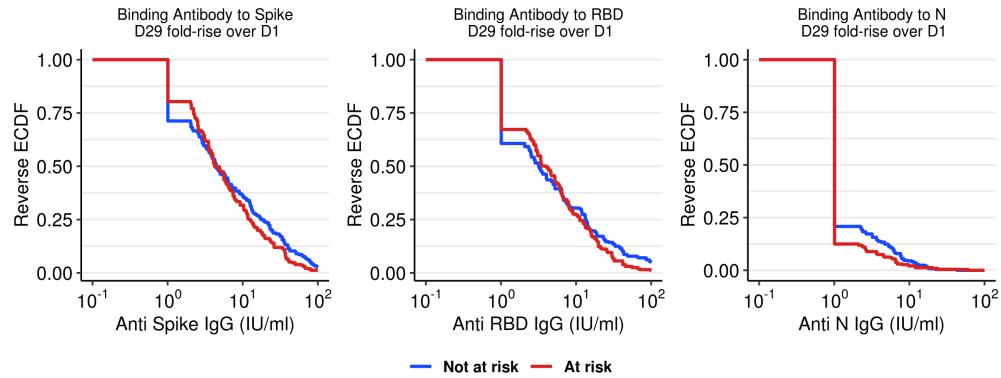


Figure 2.84: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by high-risk condition.

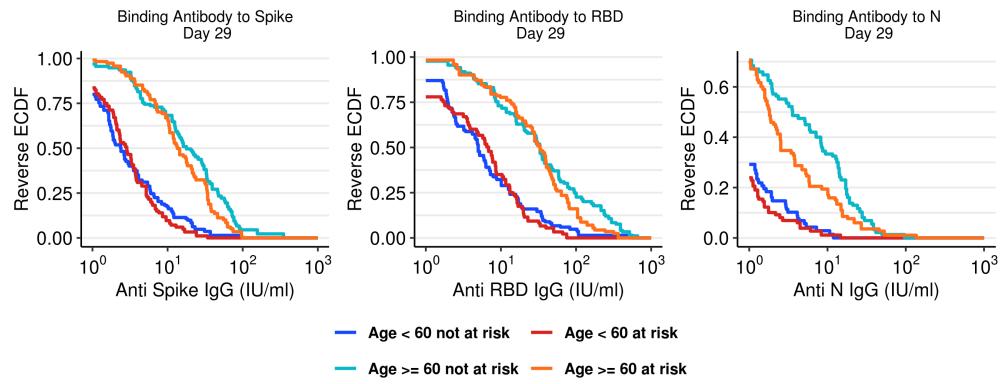


Figure 2.85: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and high-risk condition.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT343

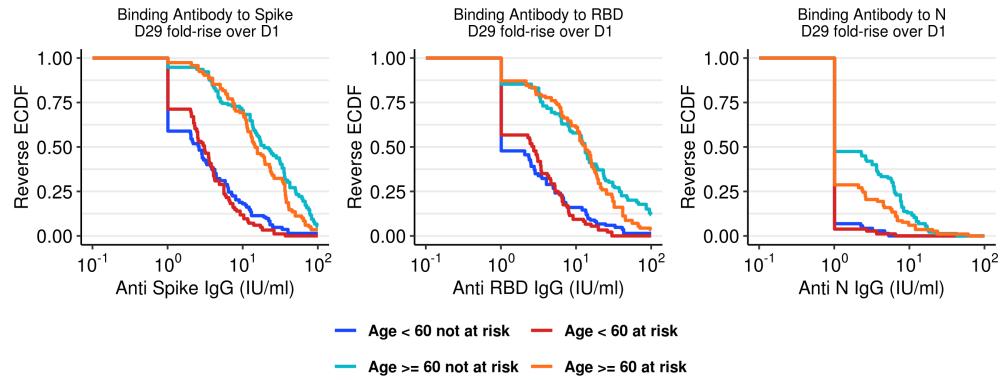


Figure 2.86: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and high-risk condition.

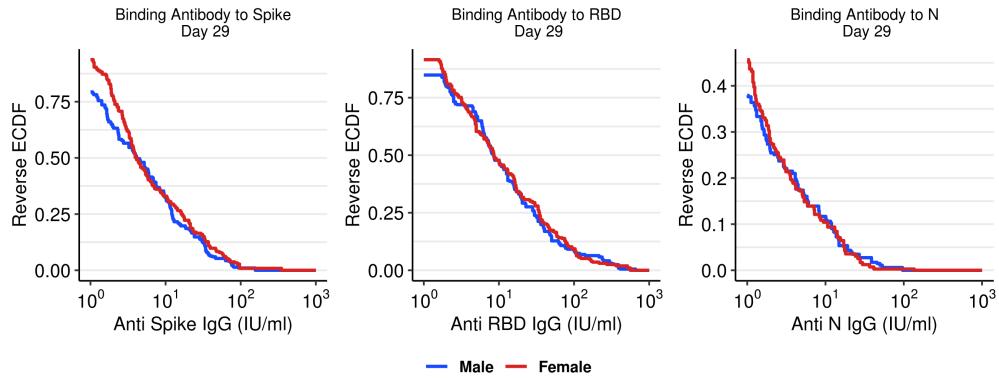


Figure 2.87: RCDF plots for D29 Ab markers: baseline positive placebo arm by sex assigned at birth.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT345

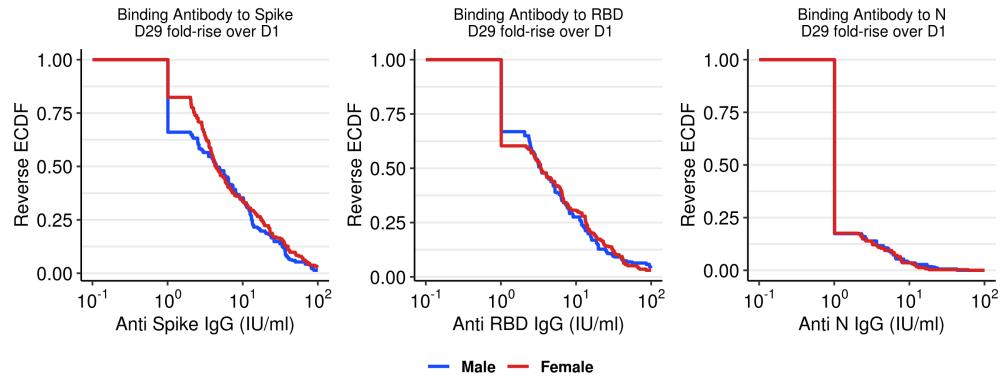


Figure 2.88: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by sex assigned at birth.

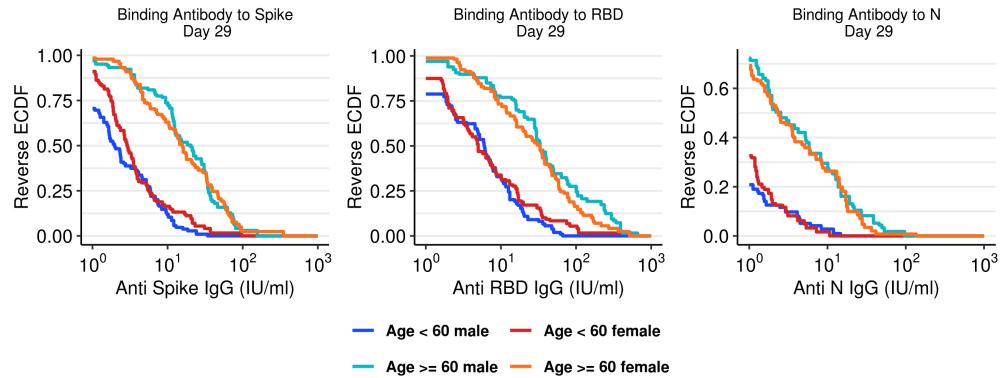


Figure 2.89: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT347

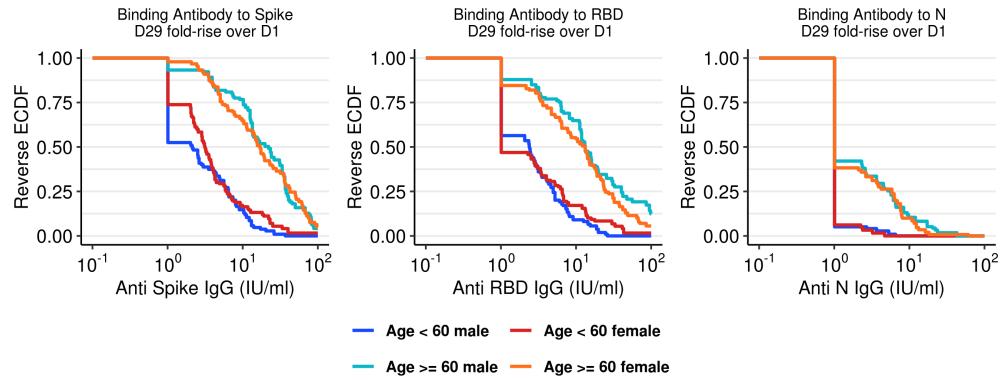


Figure 2.90: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

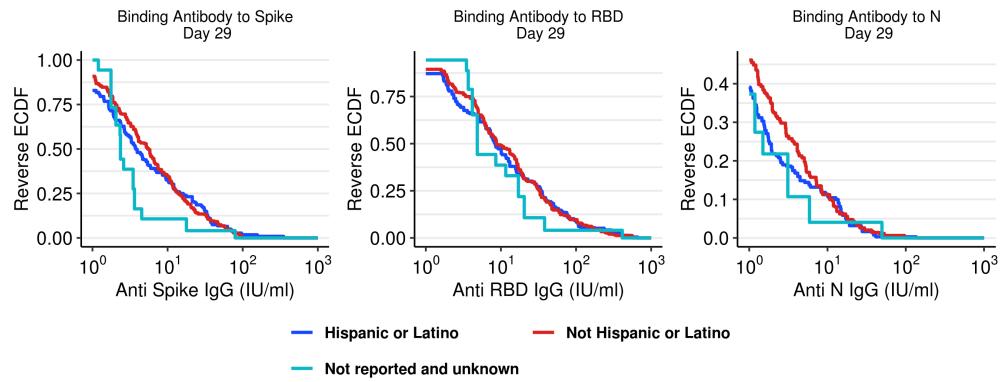


Figure 2.91: RCDF plots for D29 Ab markers: baseline positive placebo arm by ethnicity.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT349

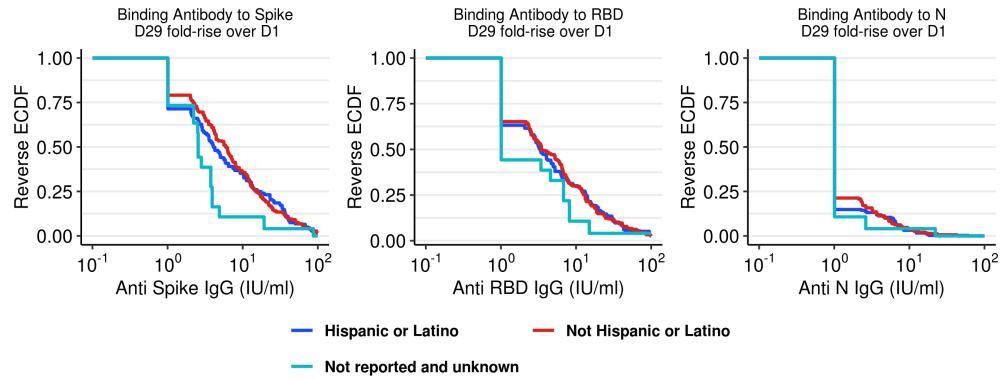


Figure 2.92: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by ethnicity.

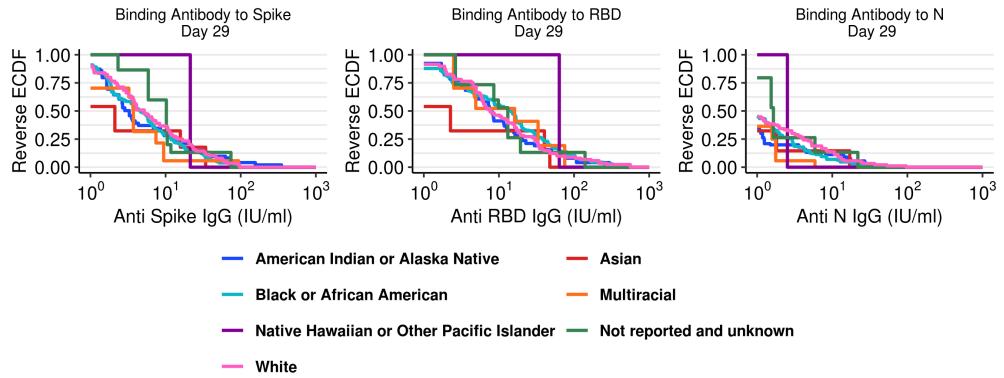


Figure 2.93: RCDF plots for D29 Ab markers: baseline positive placebo arm by race.

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2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT351

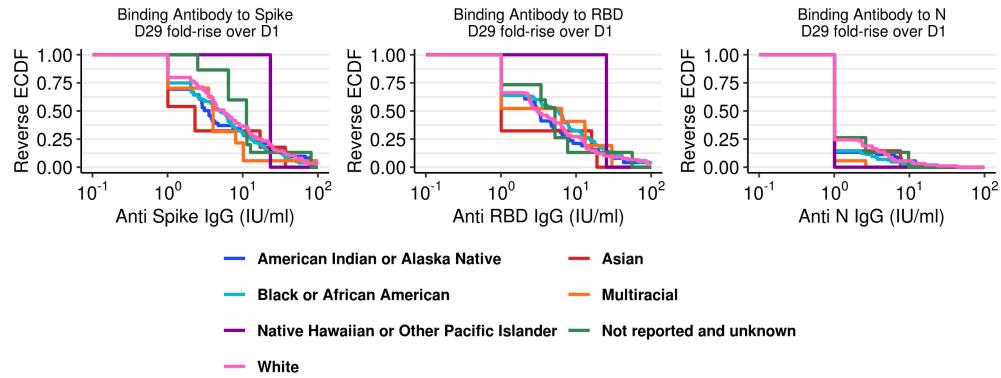


Figure 2.94: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by race.

MOCHI

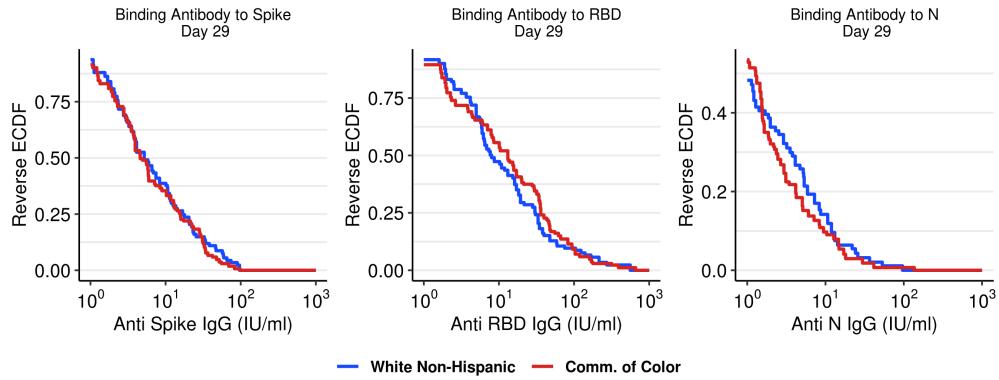


Figure 2.95: RCDF plots for D29 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT353

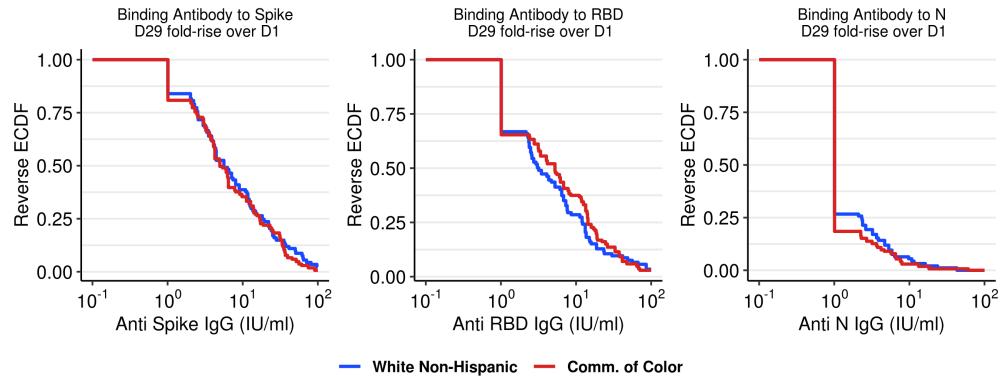


Figure 2.96: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

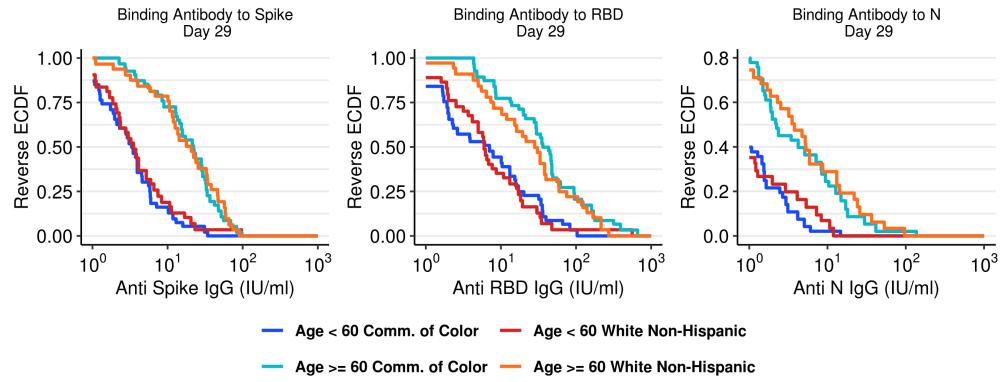


Figure 2.97: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT355

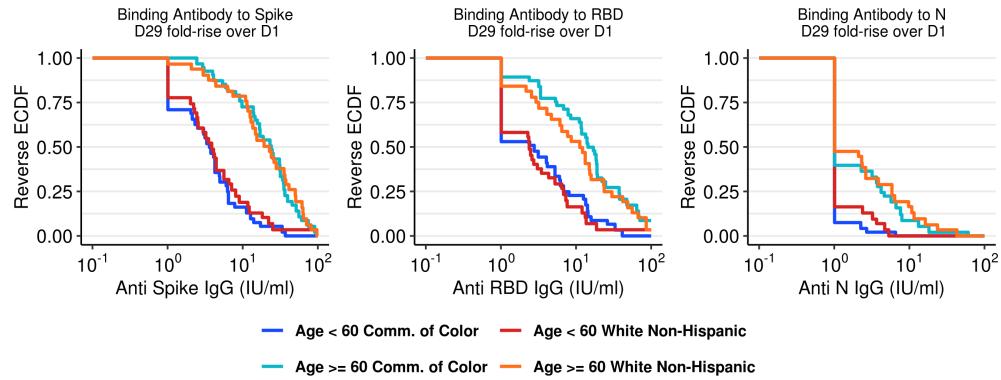


Figure 2.98: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

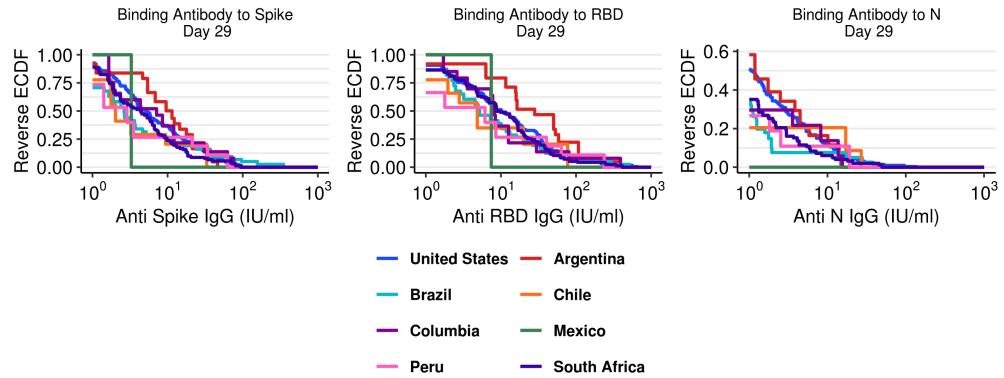


Figure 2.99: RCDF plots for D29 Ab markers: baseline positive placebo arm by country of residence.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT357

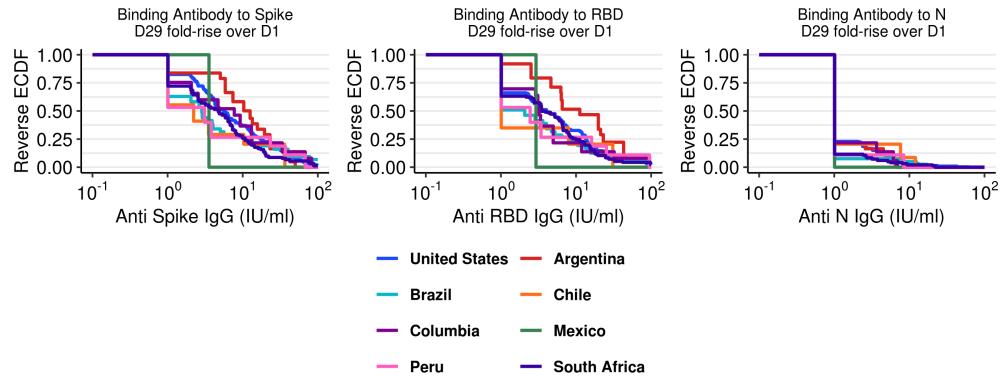


Figure 2.100: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by country of residence.

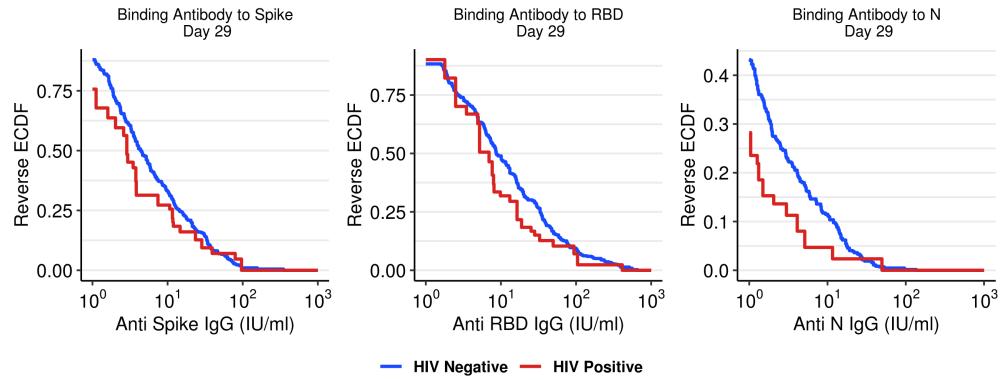


Figure 2.101: RCDF plots for D29 Ab markers: baseline positive placebo arm by HIV positivity.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT359

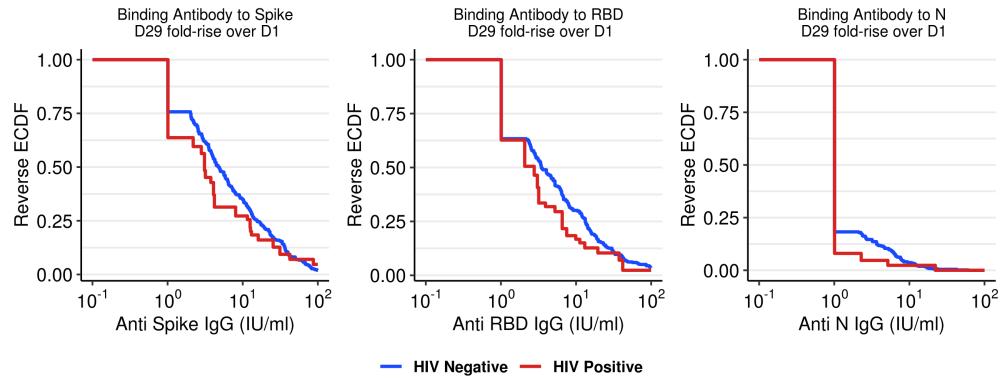


Figure 2.102: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by HIV positivity.

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

2.7.1 Baseline SARS-CoV-2 Negative

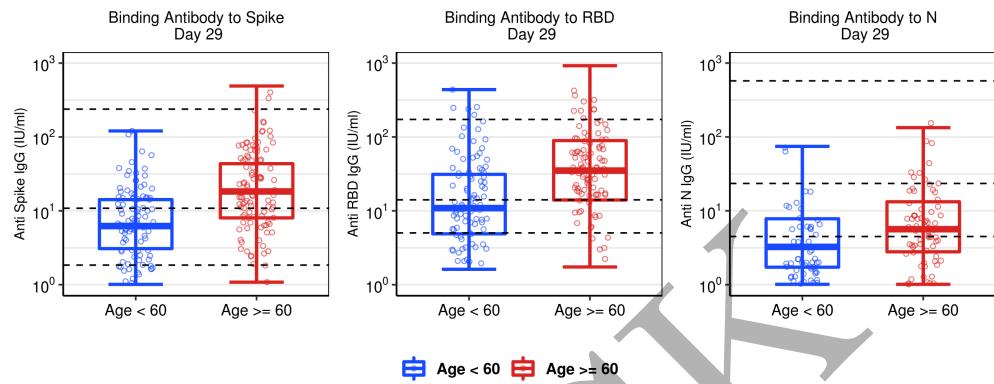


Figure 2.103: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT361

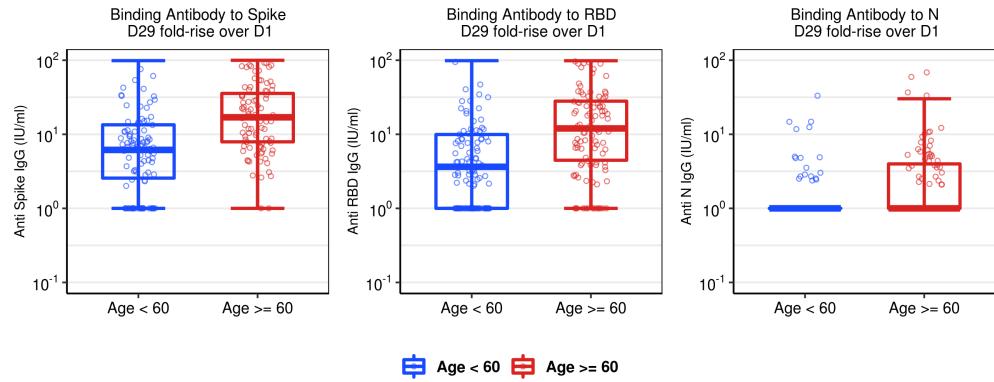


Figure 2.104: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age group.

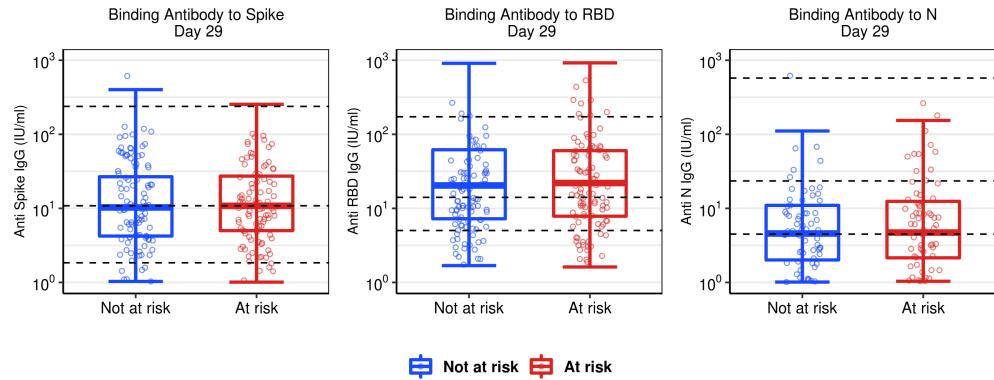


Figure 2.105: Boxplots of D29 Ab markers: Baseline negative vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT363

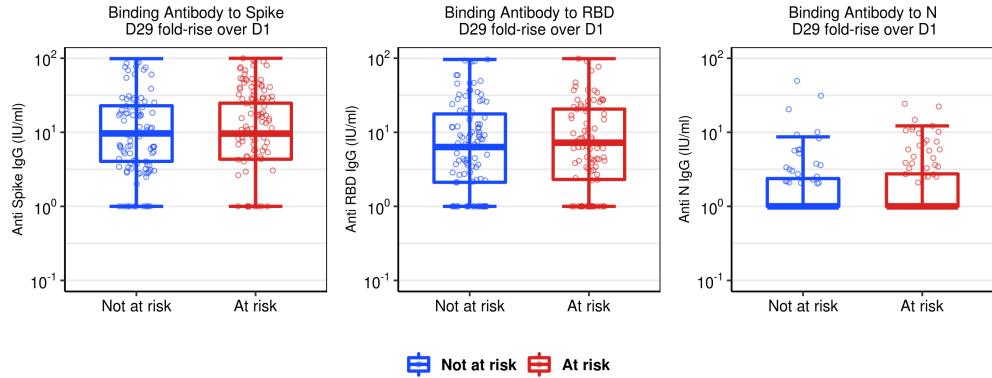


Figure 2.106: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by high-risk condition.

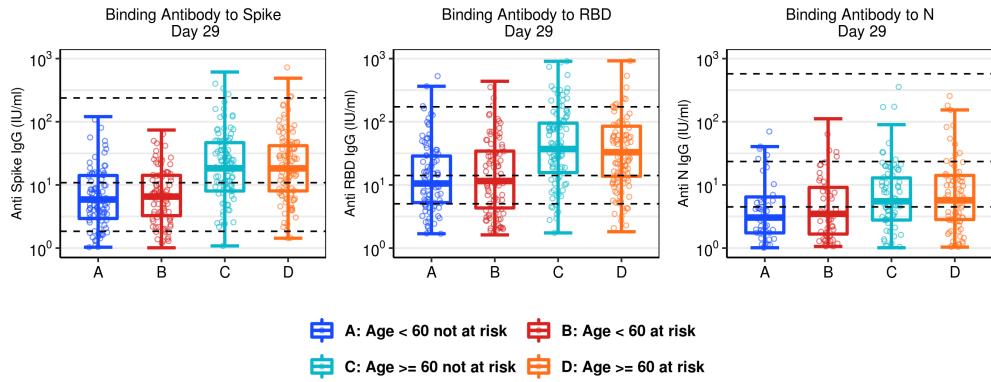


Figure 2.107: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age and high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT365

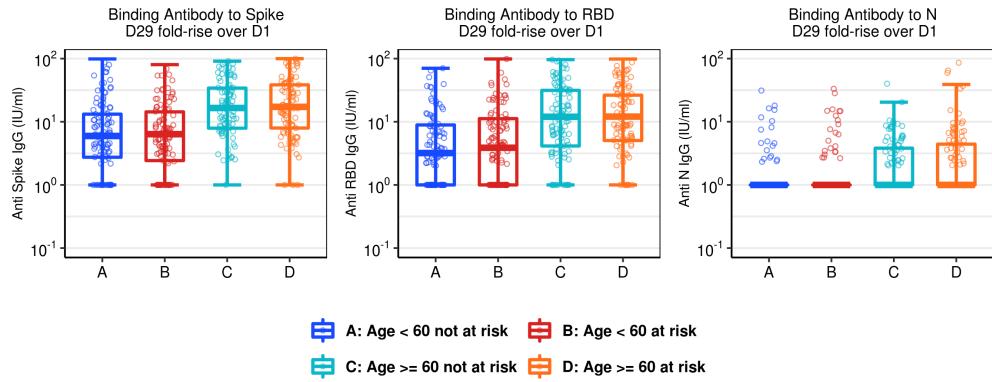


Figure 2.108: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and high-risk condition.

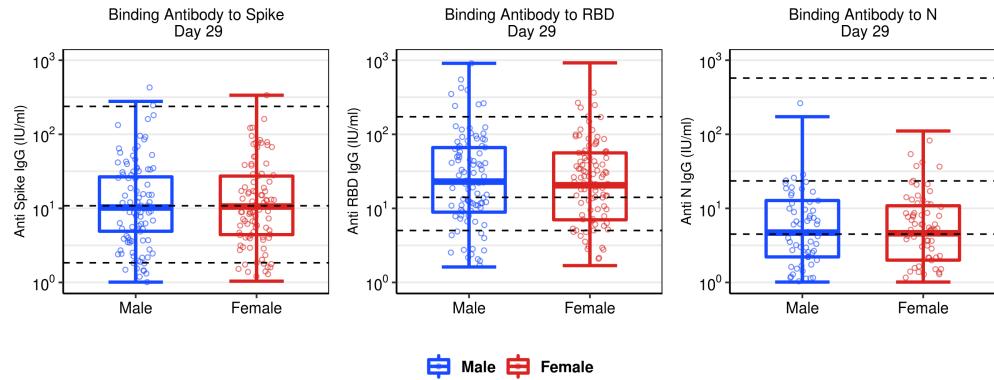


Figure 2.109: Boxplots of D29 Ab markers: Baseline negative vaccine arm by sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT367

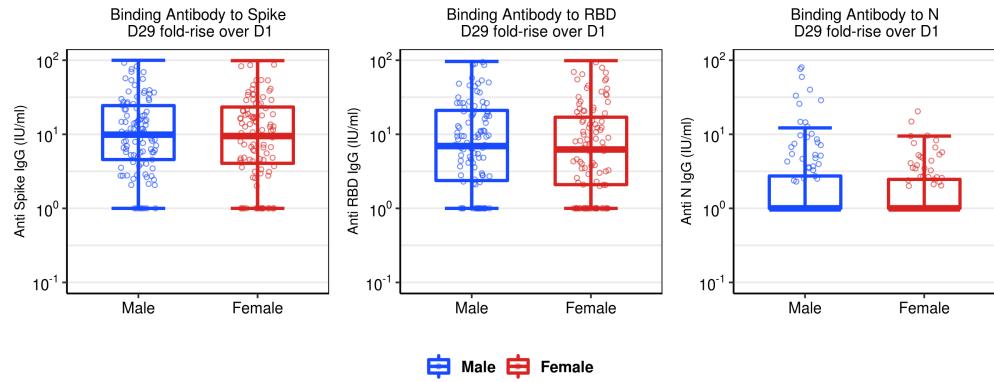


Figure 2.110: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by sex assigned at birth.

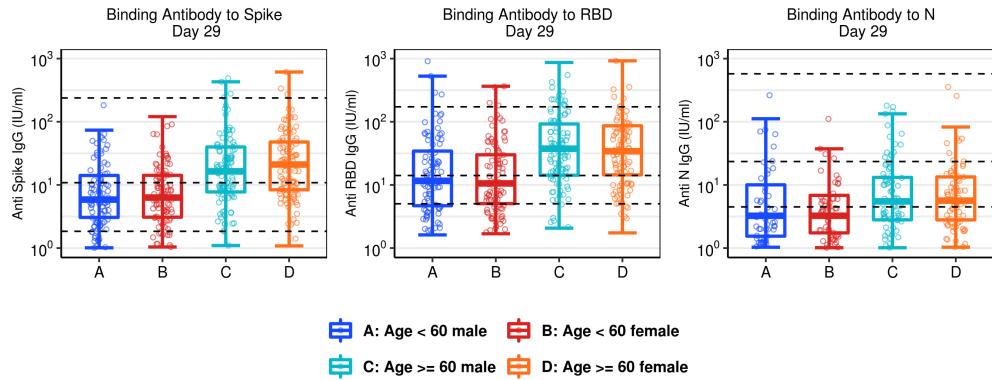


Figure 2.111: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT369

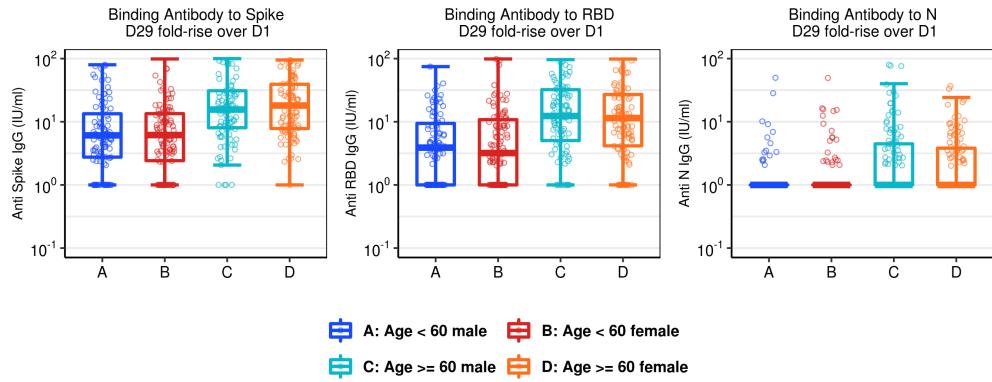


Figure 2.112: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth.

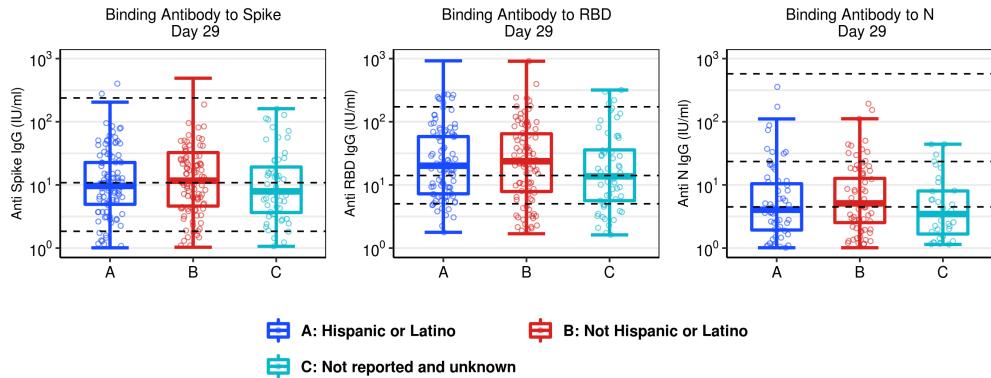


Figure 2.113: Boxplots of D29 Ab markers: Baseline negative vaccine arm by ethnicity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT371

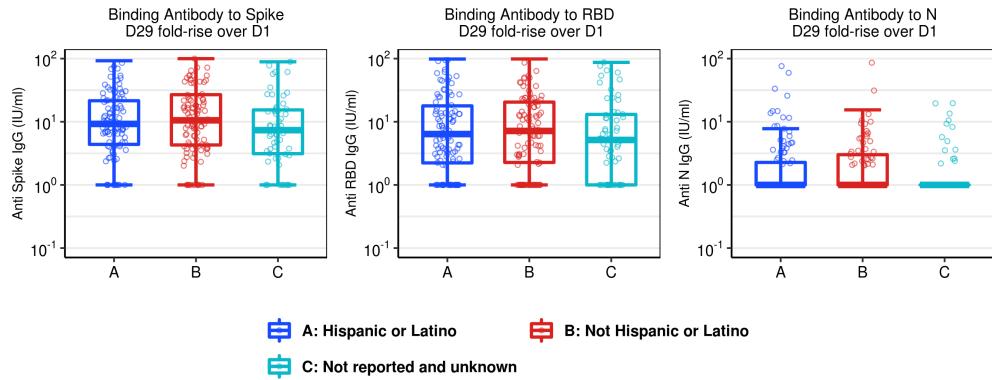


Figure 2.114: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by ethnicity.

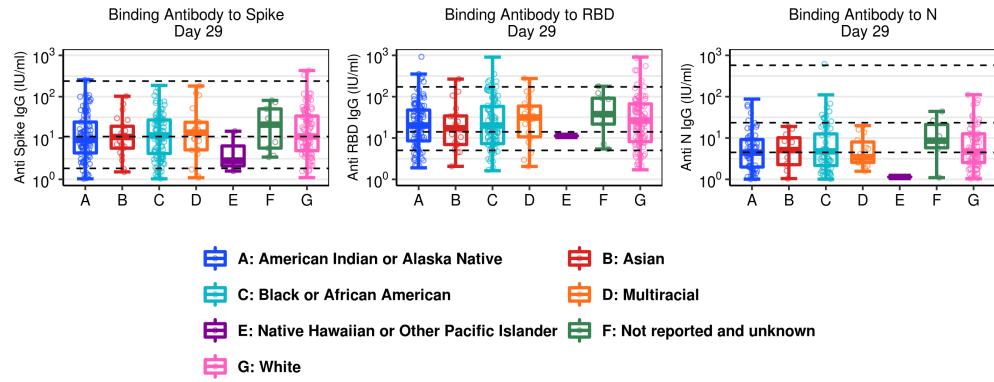


Figure 2.115: Boxplots of D29 Ab markers: Baseline negative vaccine arm by race. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT373

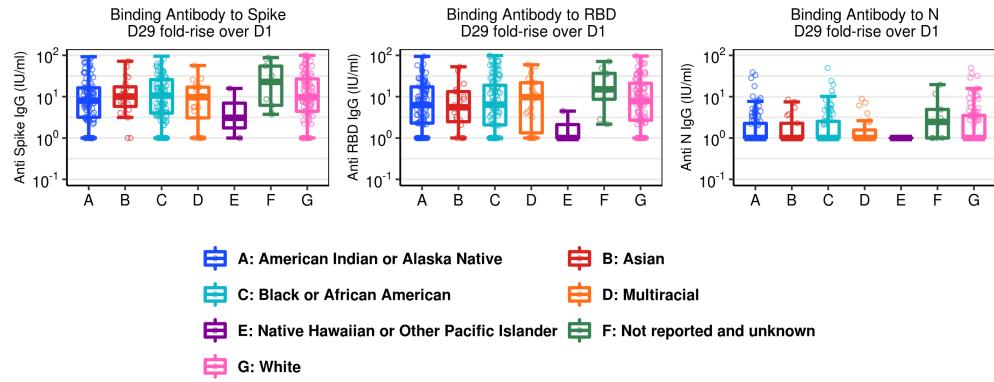


Figure 2.116: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by race.

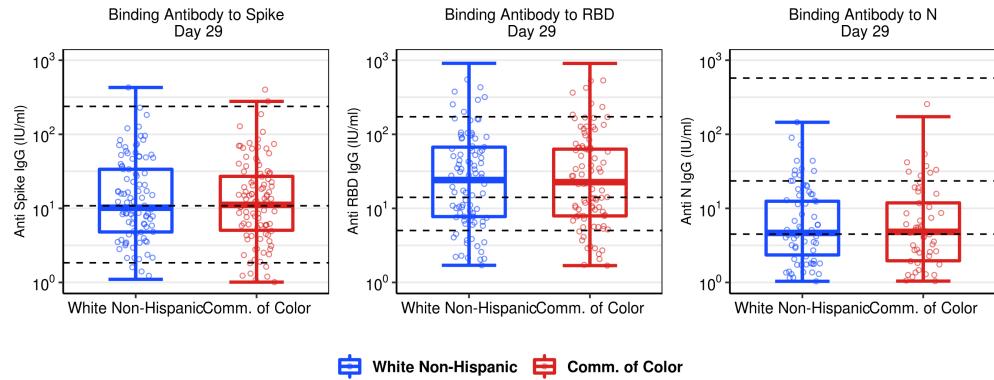


Figure 2.117: Boxplots of D29 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial participants.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT375

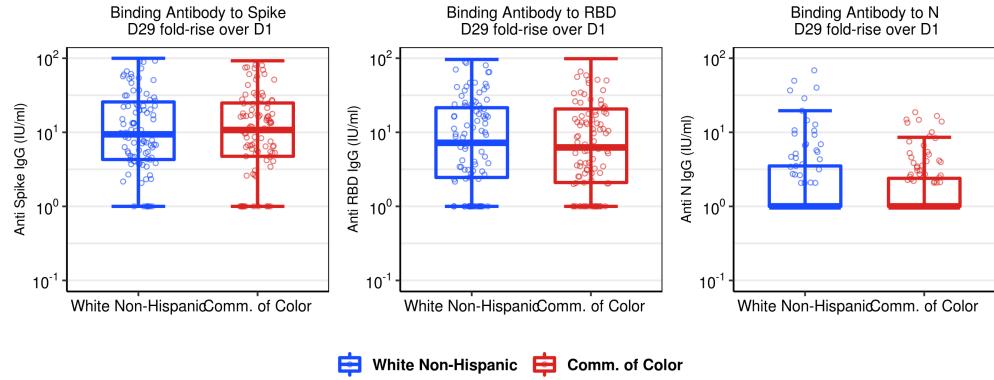


Figure 2.118: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

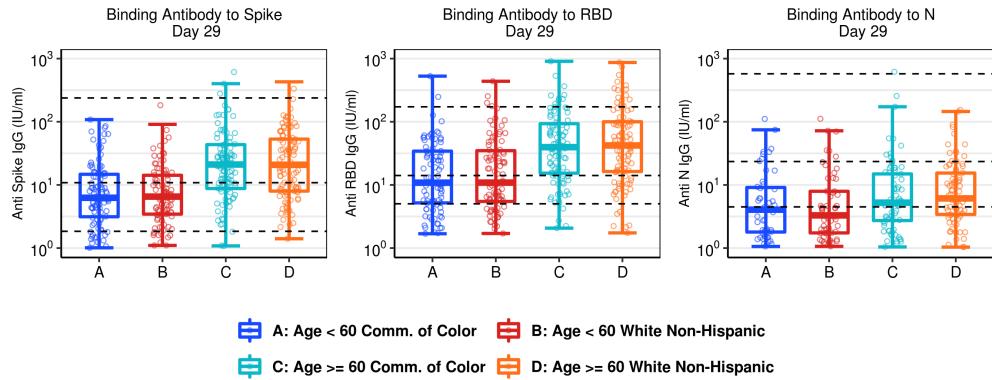


Figure 2.119: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial participants.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT377

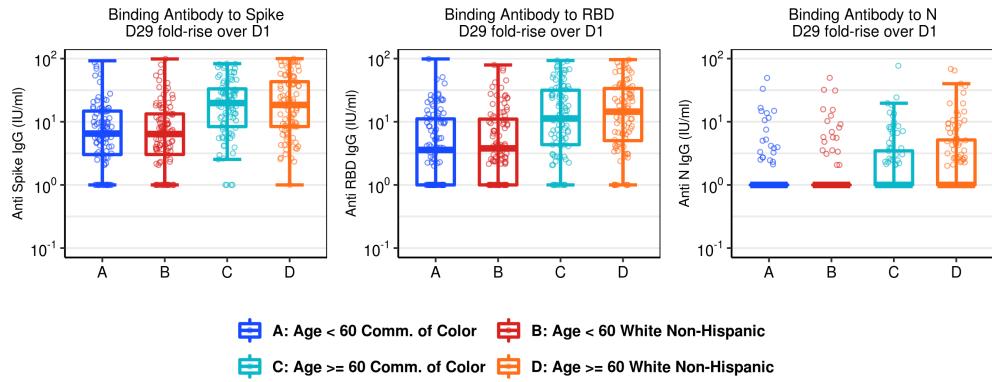


Figure 2.120: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

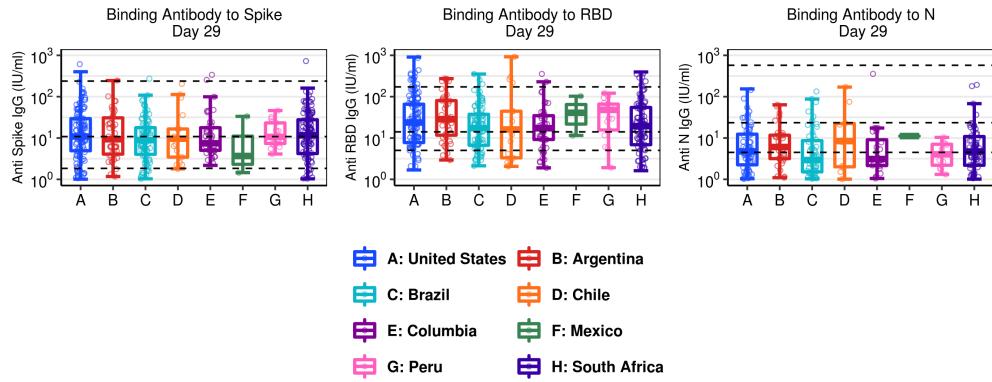


Figure 2.121: Boxplots of D29 Ab markers: Baseline negative vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT379

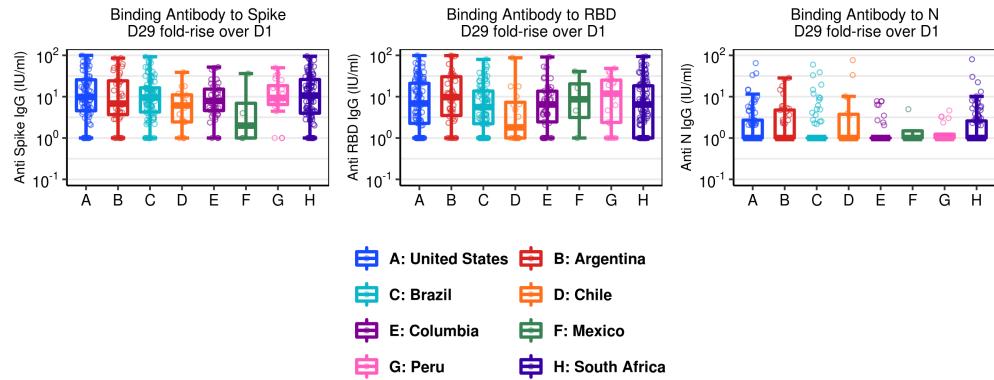


Figure 2.122: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by country of residence.

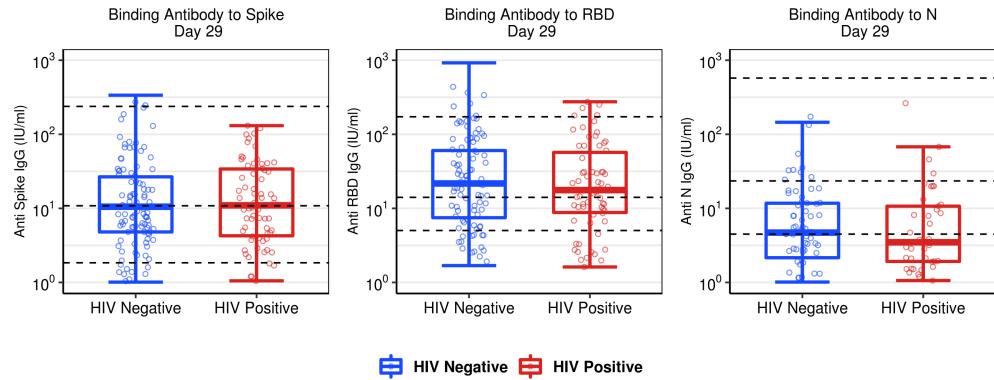


Figure 2.123: Boxplots of D29 Ab markers: Baseline negative vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT381

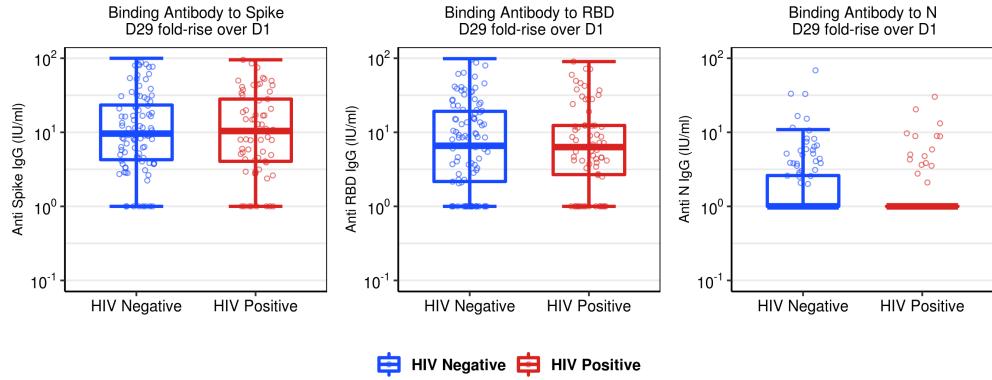


Figure 2.124: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by HIV positivity.

2.7.2 Baseline SARS-CoV-2 Positive

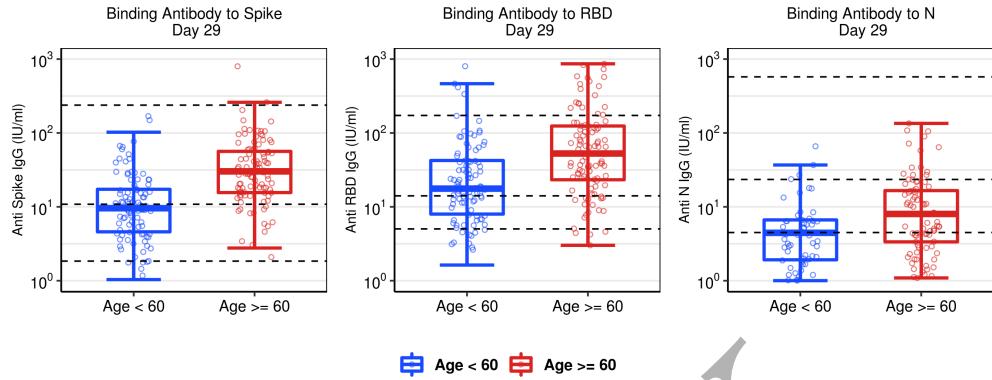


Figure 2.125: Boxplots of D29 Ab markers: baseline positive vaccine arm by age group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT383

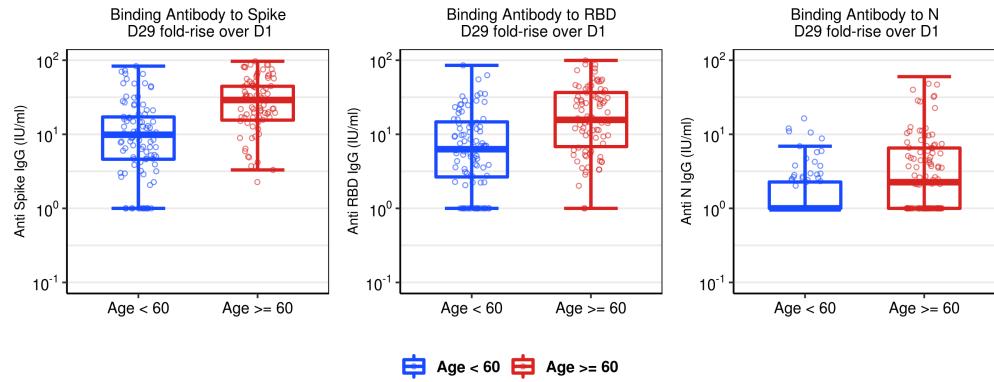


Figure 2.126: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age group.

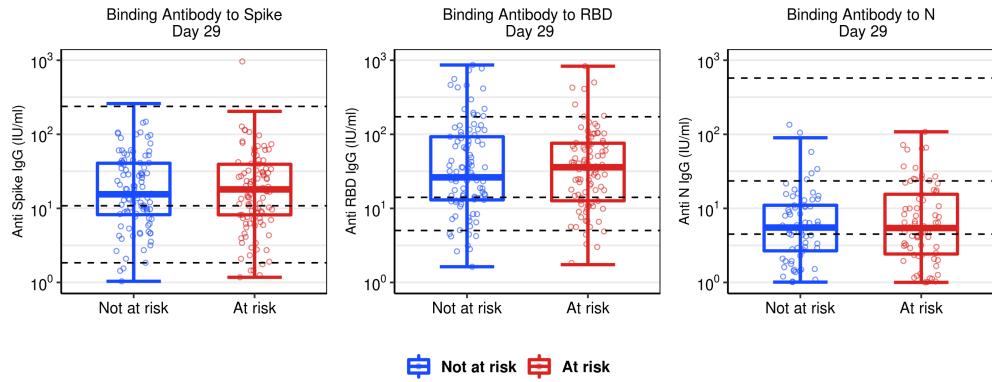


Figure 2.127: Boxplots of D29 Ab markers: baseline positive vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT385

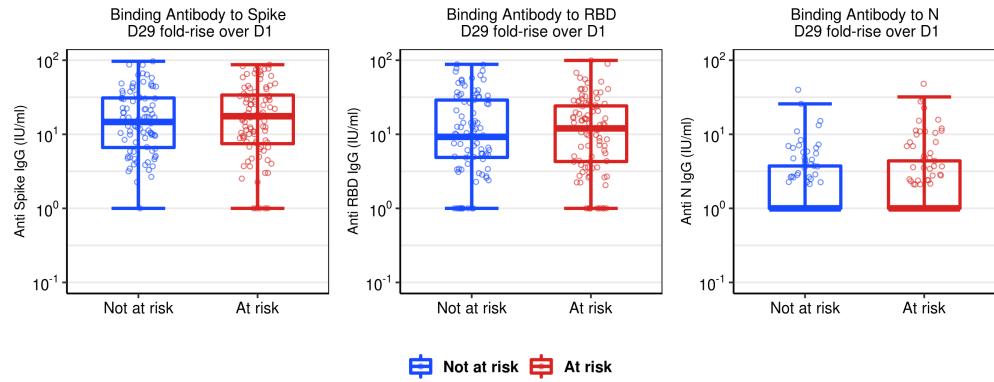


Figure 2.128: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

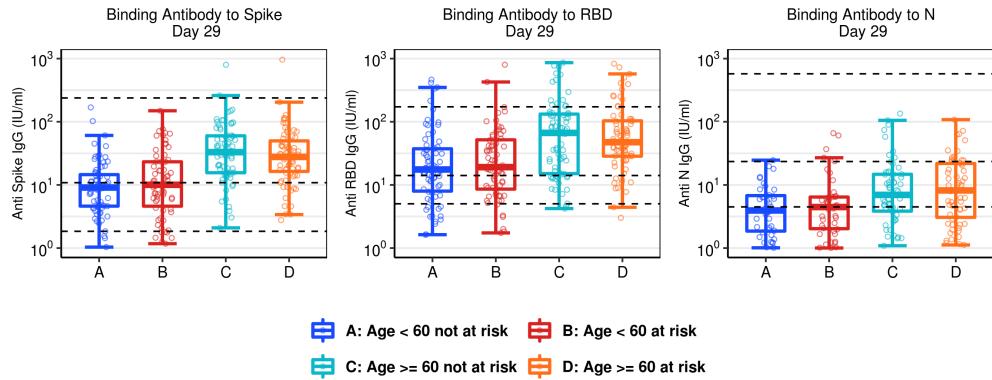


Figure 2.129: Boxplots of D29 Ab markers: baseline positive vaccine arm by age and high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT387

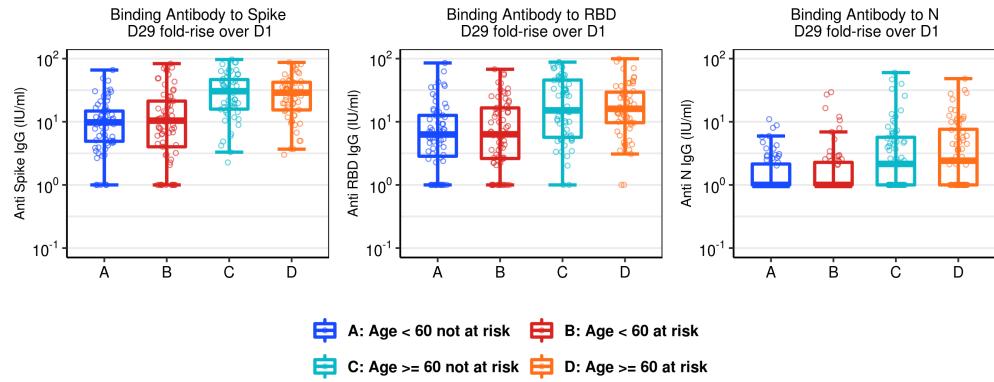


Figure 2.130: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

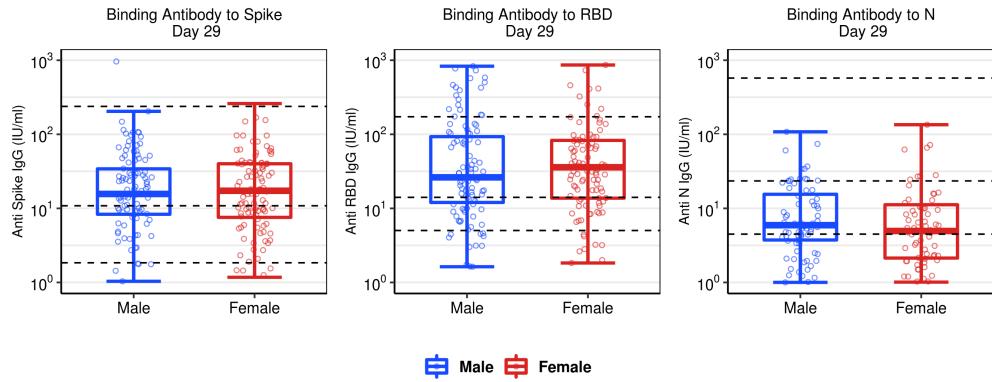


Figure 2.131: Boxplots of D29 Ab markers: baseline positive vaccine arm by sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT389

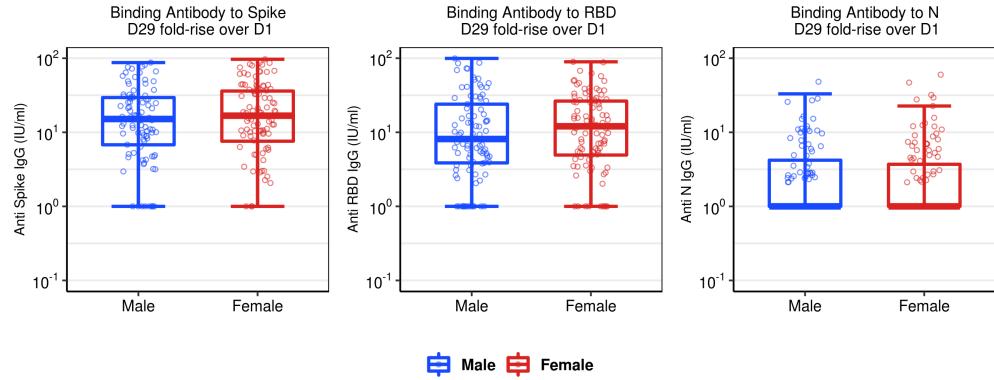


Figure 2.132: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

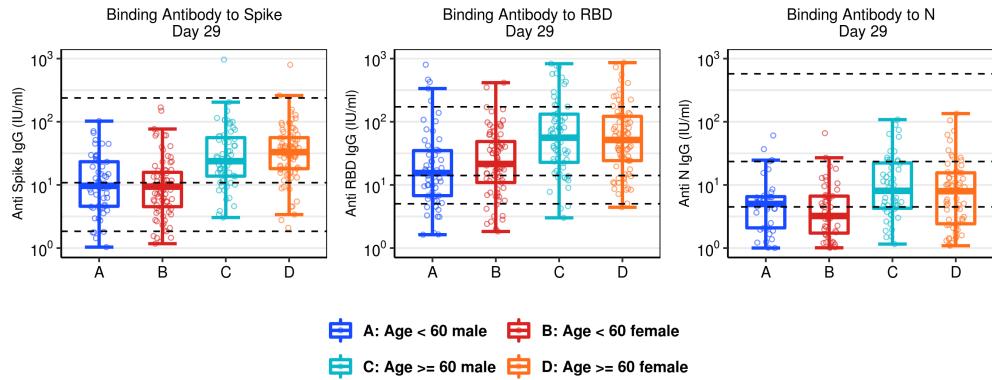


Figure 2.133: Boxplots of D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT391

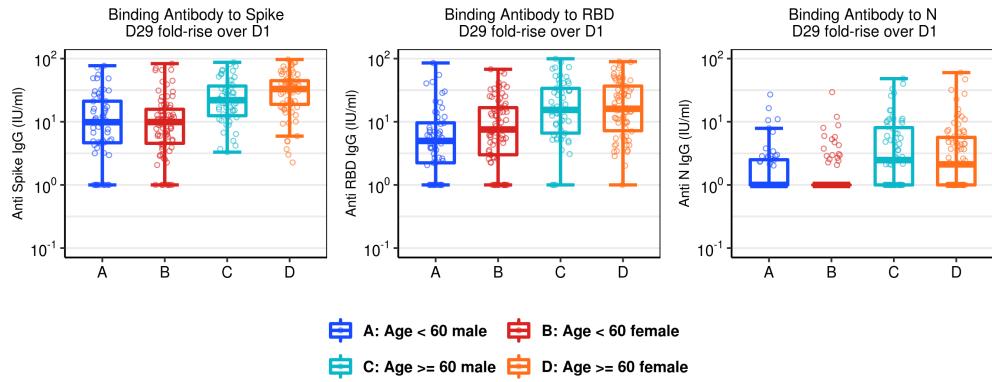


Figure 2.134: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

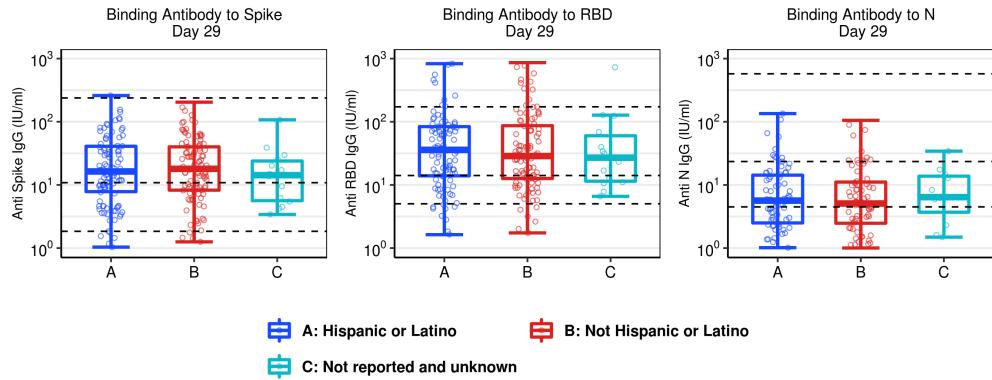


Figure 2.135: Boxplots of D29 Ab markers: baseline positive vaccine arm by ethnicity The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT393

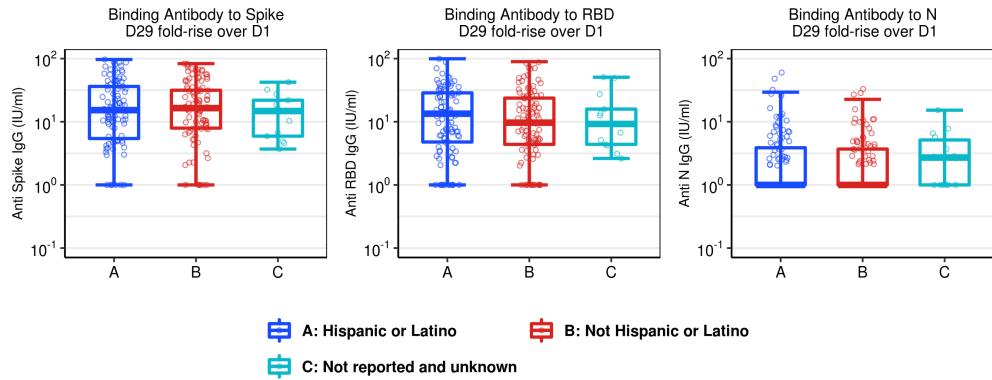


Figure 2.136: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

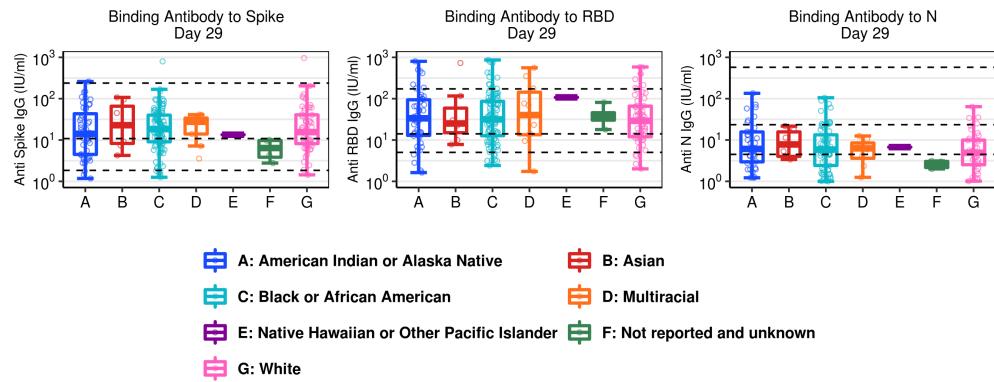


Figure 2.137: Boxplots of D29 Ab markers: baseline positive vaccine arm by race. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT395

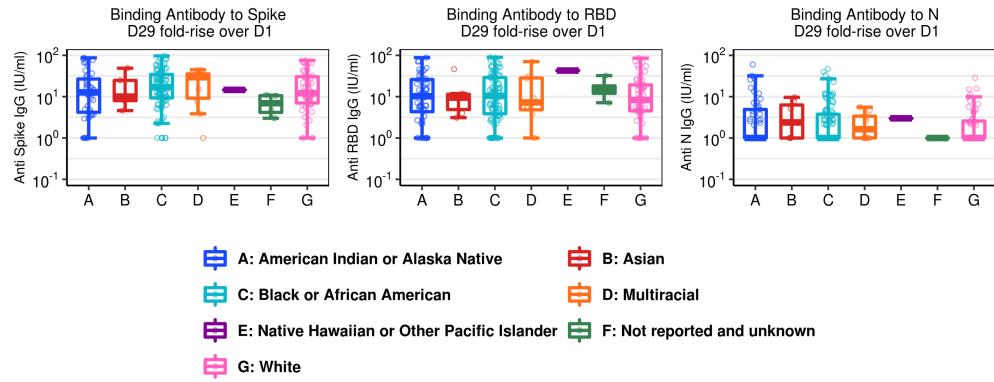


Figure 2.138: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

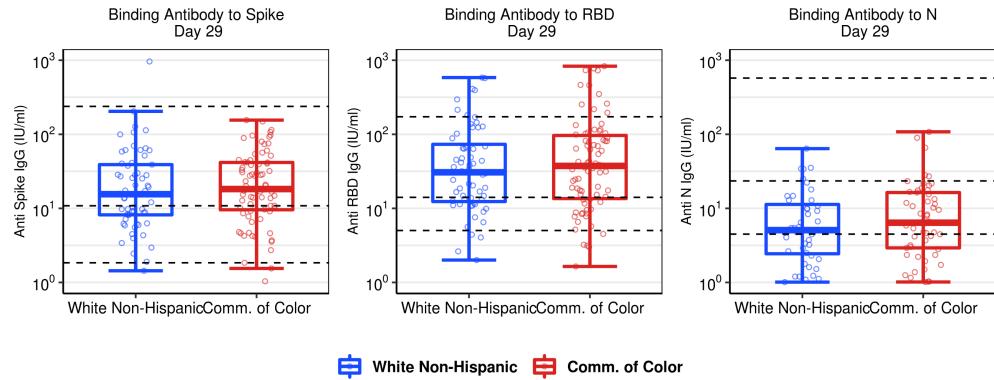


Figure 2.139: Boxplots of D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial participants.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT397

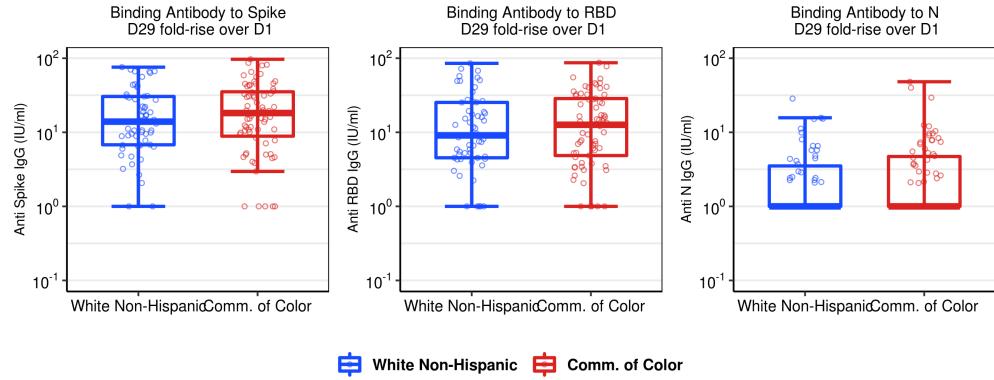


Figure 2.140: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

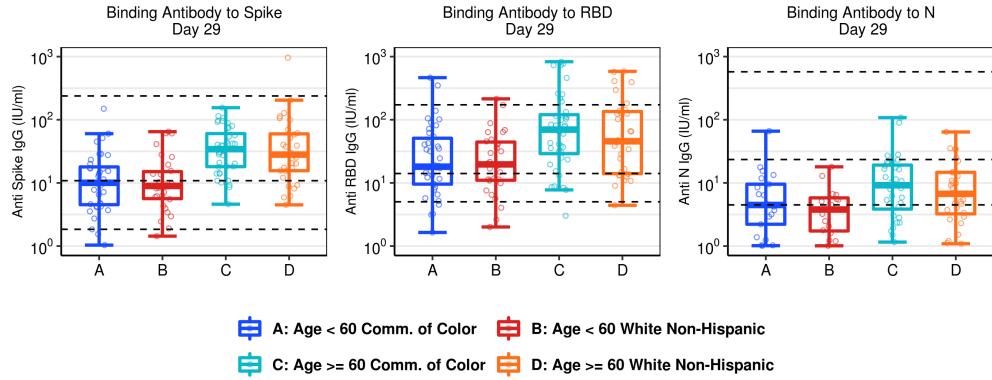


Figure 2.141: Boxplots of D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial participants.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT399

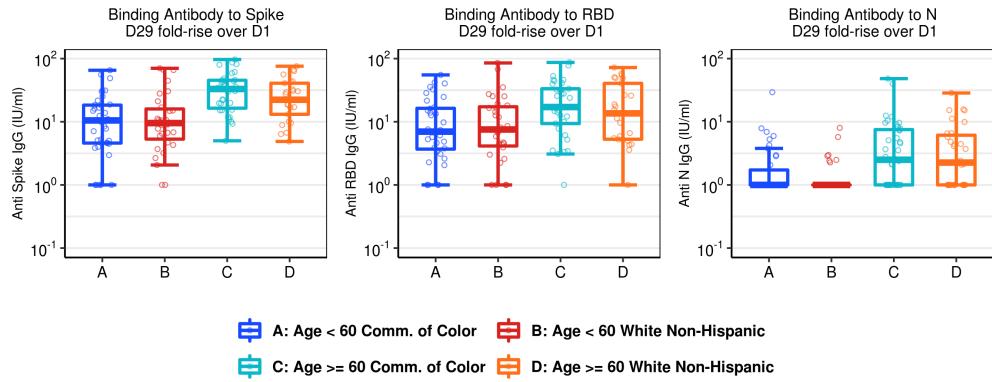


Figure 2.142: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

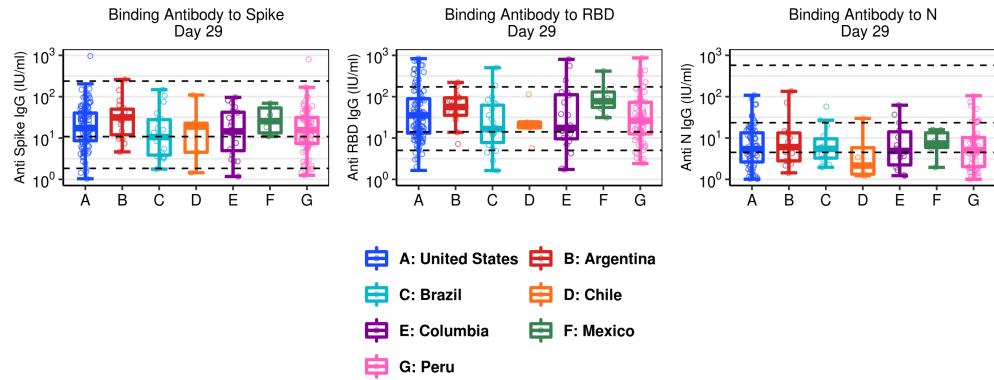


Figure 2.143: Boxplots of D29 Ab markers: baseline positive vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT401

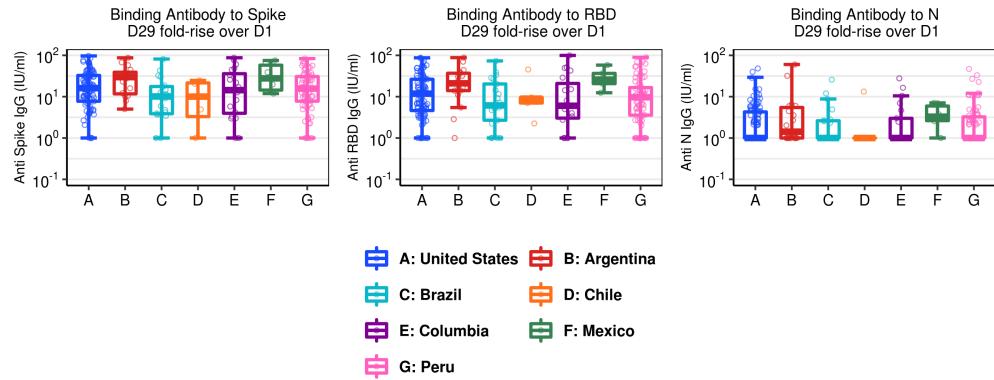


Figure 2.144: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

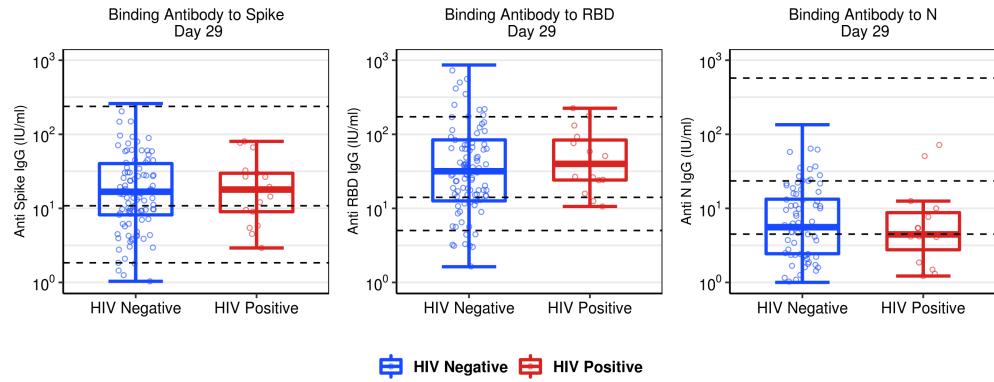


Figure 2.145: Boxplots of D29 Ab markers: baseline positive vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT403

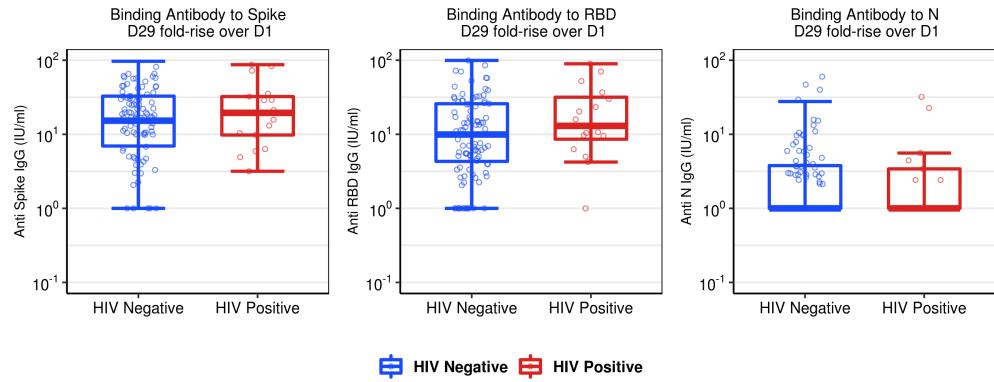


Figure 2.146: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

MOCK

Chapter 3

Appendix

- This report was built from the [CoVPN/correlates_reporting](#) repository with commit hash 8f11bb3ca449adf112505dacb70ea70922cb74b4. A diff of the changes introduced by that commit may be viewed at https://github.com/CoVPN/correlates_reporting/commit/8f11bb3ca449adf112505dacb70ea70922cb74b4
- The sha256 hash sum of the raw input file, “COVID_ENSEMBLE_practicedata.csv”: 847161e464e2488f2d36717254de9e
- The sha256 hash sum of the processed file, “janssen_pooled_mock_data_processed.csv”: c05d0a8b66052e68358fc5fb76888a80b0437b151ae016a1b42f0072ac94d1eb