

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 = 913)	Placebo (N = 109)	Total (N = 1022)
Age			
Age 18 - 59	453 (49.6%)	54 (49.5%)	507 (49.6%)
Age \geq 60	460 (50.4%)	55 (50.5%)	515 (50.4%)
Mean (Range)	56.1 (18.0, 85.0)	55.8 (18.0, 85.0)	56.1 (18.0, 85.0)
BMI			
Underweight BMI < 18.5	14 (1.5%)	2 (1.8%)	16 (1.6%)
Normal $18.5 \leq$ BMI < 25	174 (19.1%)	27 (24.8%)	201 (19.7%)
Overweight $25 \leq$ BMI < 30	368 (40.3%)	45 (41.3%)	413 (40.4%)
Obese BMI \geq 30	357 (39.1%)	35 (32.1%)	392 (38.4%)
Risk for Severe Covid-19			
At-risk	454 (49.7%)	53 (48.6%)	507 (49.6%)
Not at-risk	459 (50.3%)	56 (51.4%)	515 (50.4%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	226 (24.8%)	26 (23.9%)	252 (24.7%)
Age 18 - 59 Not at-risk	227 (24.9%)	28 (25.7%)	255 (25.0%)
Age \geq 60 At-risk	228 (25.0%)	27 (24.8%)	255 (25.0%)
Age \geq 60 Not at-risk	232 (25.4%)	28 (25.7%)	260 (25.4%)
Sex			
Female	497 (54.4%)	54 (49.5%)	551 (53.9%)
Male	416 (45.6%)	55 (50.5%)	471 (46.1%)
Hispanic or Latino ethnicity			
Hispanic or Latino	374 (41.0%)	44 (40.4%)	418 (40.9%)
Not Hispanic or Latino	477 (52.2%)	56 (51.4%)	533 (52.2%)

(continued)

Characteristics	Vaccine (N = 913)	Placebo (N = 109)	Total (N = 1022)
Not reported and unknown	62 (6.8%)	9 (8.3%)	71 (6.9%)
Race			
White	375 (41.1%)	47 (43.1%)	422 (41.3%)
Black or African American	332 (36.4%)	38 (34.9%)	370 (36.2%)
Asian	18 (2.0%)	2 (1.8%)	20 (2.0%)
American Indian or Alaska Native	149 (16.3%)	18 (16.5%)	167 (16.3%)
Native Hawaiian or Other Pacific Islander	2 (0.2%)		2 (0.2%)
Multiracial	25 (2.7%)	2 (1.8%)	27 (2.6%)
Not reported and unknown	12 (1.3%)	2 (1.8%)	14 (1.4%)
Underrepresented Minority Status in the U.S.			
URM	227 (24.9%)	28 (25.7%)	255 (25.0%)
Non-URM	227 (24.9%)	28 (25.7%)	255 (25.0%)
Country			
United States	454 (49.7%)	56 (51.4%)	510 (49.9%)
Argentina	45 (4.9%)	5 (4.6%)	50 (4.9%)
Brazil	78 (8.5%)	15 (13.8%)	93 (9.1%)
Chile	13 (1.4%)	1 (0.9%)	14 (1.4%)
Columbia	64 (7.0%)	3 (2.8%)	67 (6.6%)
Mexico	9 (1.0%)	1 (0.9%)	10 (1.0%)
Peru	19 (2.1%)	1 (0.9%)	20 (2.0%)
South Africa	231 (25.3%)	27 (24.8%)	258 (25.2%)
HIV Infection			
Negative	848 (92.9%)	100 (91.7%)	948 (92.8%)
Positive	65 (7.1%)	9 (8.3%)	74 (7.2%)

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%)	139 (49.6%)	280 (49.7%)
Age ≥ 60	142 (50.2%)	141 (50.4%)	283 (50.3%)
Mean (Range)	56.1 (18.0, 85.0)	56.4 (18.0, 85.0)	56.3 (18.0, 85.0)
BMI			
Underweight BMI < 18.5		2 (0.7%)	2 (0.4%)
Normal 18.5 ≤ BMI < 25	62 (21.9%)	45 (16.1%)	107 (19.0%)
Overweight 25 ≤ BMI < 30	112 (39.6%)	114 (40.7%)	226 (40.1%)
Obese BMI ≥ 30	109 (38.5%)	119 (42.5%)	228 (40.5%)
Risk for Severe Covid-19			
At-risk	140 (49.5%)	141 (50.4%)	281 (49.9%)
Not at-risk	143 (50.5%)	139 (49.6%)	282 (50.1%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	69 (24.4%)	69 (24.6%)	138 (24.5%)
Age 18 - 59 Not at-risk	72 (25.4%)	70 (25.0%)	142 (25.2%)
Age ≥ 60 At-risk	71 (25.1%)	72 (25.7%)	143 (25.4%)
Age ≥ 60 Not at-risk	71 (25.1%)	69 (24.6%)	140 (24.9%)
Sex			
Female	160 (56.5%)	154 (55.0%)	314 (55.8%)
Male	123 (43.5%)	126 (45.0%)	249 (44.2%)
Hispanic or Latino ethnicity			
Hispanic or Latino	106 (37.5%)	105 (37.5%)	211 (37.5%)
Not Hispanic or Latino	164 (58.0%)	152 (54.3%)	316 (56.1%)
Not reported and unknown	13 (4.6%)	23 (8.2%)	36 (6.4%)
Race			
White	108 (38.2%)	108 (38.6%)	216 (38.4%)
Black or African American	111 (39.2%)	94 (33.6%)	205 (36.4%)
Asian	5 (1.8%)	10 (3.6%)	15 (2.7%)
American Indian or Alaska Native	49 (17.3%)	48 (17.1%)	97 (17.2%)
Native Hawaiian or Other Pacific Islander		1 (0.4%)	1 (0.2%)
Multiracial	9 (3.2%)	15 (5.4%)	24 (4.3%)
Not reported and unknown	1 (0.4%)	4 (1.4%)	5 (0.9%)
Underrepresented Minority Status in the U.S.			
URM	71 (25.1%)	70 (25.0%)	141 (25.0%)
Non-URM	71 (25.1%)	71 (25.4%)	142 (25.2%)
Country			
United States	142 (50.2%)	141 (50.4%)	283 (50.3%)
Argentina	11 (3.9%)	16 (5.7%)	27 (4.8%)
Brazil	29 (10.2%)	30 (10.7%)	59 (10.5%)
Chile	1 (0.4%)	1 (0.4%)	2 (0.4%)
Columbia	20 (7.1%)	13 (4.6%)	33 (5.9%)
Mexico	4 (1.4%)	5 (1.8%)	9 (1.6%)

(continued)

Characteristics	Vaccine (N = 283)	Placebo (N = 280)	Total (N = 563)
Peru	6 (2.1%)	5 (1.8%)	11 (2.0%)
South Africa	70 (24.7%)	69 (24.6%)	139 (24.7%)
HIV Infection			
Negative	265 (93.6%)	266 (95.0%)	531 (94.3%)
Positive	18 (6.4%)	14 (5.0%)	32 (5.7%)

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=793 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	57	56	58	56	56	55	58	58	18	18	17	18	18	17	18	18
Estimated	1522	1048	801	568	1854	1211	935	659	191	131	76	61	199	121	123	76
Placebo																
Observed	7	7	7	7	7	7	7	7	18	17	17	18	17	18	18	18
Estimated	1442	993	813	522	1860	1270	957	671	159	115	93	51	174	115	82	68

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=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	57	57	58	56	57	58	58	58	18	18	18	17	18	16	18	18
Estimated	3021	2018	1653	1051	1154	787	598	412	322	219	164	124	114	83	58	40
Placebo																
Observed	7	6	7	6	7	6	7	7	18	16	18	18	17	18	16	18
Estimated	3012	2083	1748	1099	1148	704	576	435	347	222	182	119	103	81	43	25

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)	913	1147.9/19292 = 6.0% (4.7%, 7.5%)	3005.2/19292 = 15.6% (13.4%, 18.1%)	1609/19292 = 8.3% (6.8%, 10.3%)
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	913	10495.8/19292 = 54.4% (50.8%, 58.0%)	11972.4/19292 = 62.1% (58.5%, 65.5%)	9022.3/19292 = 46.8% (43.2%, 50.3%)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	913	9225.7/19292 = 47.8% (44.3%, 51.3%)	14549.4/19292 = 75.4% (72.1%, 78.5%)	11326.9/19292 = 58.7% (55.1%, 62.2%)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	222.1/2102 = 10.6% (7.4%, 14.9%)	492/2102 = 23.4% (18.5%, 29.1%)	309.4/2102 = 14.7% (10.8%, 19.7%)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	1569.2/2102 = 74.7% (68.5%, 80.0%)	1685.1/2102 = 80.2% (74.4%, 84.9%)	1272.8/2102 = 60.6% (54.2%, 66.6%)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	1310.4/2102 = 62.3% (55.7%, 68.6%)	1847.3/2102 = 87.9% (82.4%, 91.8%)	1471.2/2102 = 70.0% (63.5%, 75.8%)
	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	280	61.5/1979 = 3.1% (1.6%, 5.8%)	203.5/1979 = 10.3% (7.5%, 14.0%)	76.5/1979 = 3.9% (2.2%, 6.7%)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	753.1/1979 = 38.1% (32.2%, 44.3%)	981.2/1979 = 49.6% (43.1%, 56.0%)	578.5/1979 = 29.2% (24.6%, 34.4%)

Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	636.7/1979 = 32.2% (26.9%, 37.9%)	1156.6/1979 = 58.4% (51.8%, 64.8%)	752.3/1979 = 38.0% (32.4%, 44.0%)
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

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



Table 5b. Percentage of responders, and participants with concentrations $\geq 2 \times$ 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)	453	301.7/12615 = 2.4% (1.4%, 4.2%)	1147.1/12615 = 9.1% (6.7%, 12.2%)	518.8/12615 = 4.1% (2.6%, 6.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	453	5383.1/12615 = 42.7% (37.8%, 47.7%)	6355/12615 = 50.4% (45.4%, 55.4%)	4392.4/12615 = 34.8% (30.2%, 39.8%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	453	4453.6/12615 = 35.3% (30.7%, 40.2%)	8294.6/12615 = 65.8% (60.8%, 70.4%)	5991.1/12615 = 47.5% (42.5%, 52.5%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	81.9/1380 = 5.9% (2.8%, 12.0%)	236.3/1380 = 17.1% (11.4%, 24.9%)	145.7/1380 = 10.6% (6.2%, 17.4%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	925/1380 = 67.0% (58.2%, 74.8%)	1029.7/1380 = 74.6% (66.3%, 81.5%)	670.6/1380 = 48.6% (39.9%, 57.4%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	715.4/1380 = 51.8% (42.7%, 60.8%)	1154.7/1380 = 83.7% (75.7%, 89.4%)	831.2/1380 = 60.2% (51.1%, 68.7%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	20.8/1316 = 1.6% (0.5%, 5.2%)	46.9/1316 = 3.6% (1.6%, 7.6%)	20.8/1316 = 1.6% (0.5%, 5.2%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	316.1/1316 = 24.0% (17.1%, 32.6%)	475.4/1316 = 36.1% (27.9%, 45.2%)	193.3/1316 = 14.7% (10.0%, 21.1%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	232.3/1316 = 17.7% (11.8%, 25.5%)	576.6/1316 = 43.8% (34.9%, 53.2%)	279.7/1316 = 21.3% (14.7%, 29.7%)
Age \geq 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	460	846.2/6677 = 12.7% (9.8%, 16.3%)	1858/6677 = 27.8% (23.5%, 32.6%)	1090.2/6677 = 16.3% (13.0%, 20.3%)
Age \geq 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	460	5112.7/6677 = 76.6% (72.1%, 80.5%)	5617.4/6677 = 84.1% (80.1%, 87.5%)	4629.9/6677 = 69.3% (64.5%, 73.8%)
Age \geq 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	460	4772.1/6677 = 71.5% (66.8%, 75.8%)	6254.8/6677 = 93.7% (91.0%, 95.6%)	5335.8/6677 = 79.9% (75.7%, 83.6%)

(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	140.2/722 = 19.4% (13.2%, 27.6%)	255.7/722 = 35.4% (27.4%, 44.4%)	163.7/722 = 22.7% (16.1%, 31.0%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	644.2/722 = 89.2% (82.7%, 93.5%)	655.4/722 = 90.8% (84.4%, 94.7%)	602.2/722 = 83.4% (75.8%, 89.0%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	595.1/722 = 82.4% (74.4%, 88.3%)	692.6/722 = 95.9% (89.9%, 98.4%)	640.1/722 = 88.7% (81.3%, 93.3%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	40.7/663 = 6.1% (2.9%, 12.4%)	156.6/663 = 23.6% (16.6%, 32.4%)	55.7/663 = 8.4% (4.5%, 15.2%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	436.9/663 = 65.9% (56.1%, 74.5%)	505.8/663 = 76.3% (66.8%, 83.7%)	385.2/663 = 58.1% (48.4%, 67.2%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	404.4/663 = 61.0% (51.5%, 69.7%)	580/663 = 87.5% (79.1%, 92.8%)	472.7/663 = 71.3% (61.8%, 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)	454	596.8/7754 = 7.7% (5.5%, 10.6%)	1264.2/7754 = 16.3% (13.0%, 20.2%)	752.2/7754 = 9.7% (7.2%, 13.0%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	4049.4/7754 = 52.2% (47.3%, 57.1%)	4897/7754 = 63.2% (58.2%, 67.9%)	3593.2/7754 = 46.3% (41.5%, 51.3%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	3832.8/7754 = 49.4% (44.5%, 54.4%)	5839.7/7754 = 75.3% (70.6%, 79.5%)	4625/7754 = 59.6% (54.6%, 64.5%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	84/855 = 9.8% (5.7%, 16.4%)	180.6/855 = 21.1% (15.1%, 28.8%)	111.3/855 = 13.0% (8.3%, 19.9%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	637.1/855 = 74.5% (65.8%, 81.6%)	684.9/855 = 80.1% (71.8%, 86.4%)	556.5/855 = 65.1% (56.0%, 73.2%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	557.1/855 = 65.2% (56.0%, 73.3%)	772.5/855 = 90.4% (82.8%, 94.8%)	620.9/855 = 72.6% (63.6%, 80.1%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	53	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	23.3/796 = 2.9% (1.3%, 6.7%)	99.2/796 = 12.5% (8.3%, 18.3%)	32.8/796 = 4.1% (2.0%, 8.3%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	309.6/796 = 38.9% (30.9%, 47.5%)	436.4/796 = 54.8% (45.4%, 63.9%)	258.9/796 = 32.5% (25.5%, 40.5%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	299.2/796 = 37.6% (30.0%, 45.8%)	513/796 = 64.5% (55.0%, 72.9%)	317.2/796 = 39.8% (32.2%, 48.1%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	459	551.2/11538 = 4.8% (3.3%, 6.8%)	1741/11538 = 15.1% (12.2%, 18.5%)	856.8/11538 = 7.4% (5.5%, 9.9%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	459	6446.4/11538 = 55.9% (50.8%, 60.8%)	7075.5/11538 = 61.3% (56.3%, 66.1%)	5429.1/11538 = 47.1% (42.2%, 52.0%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	459	5392.9/11538 = 46.7% (42.0%, 51.6%)	8709.8/11538 = 75.5% (70.7%, 79.7%)	6701.9/11538 = 58.1% (53.1%, 62.9%)

(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)	143	138.1/1247 = 11.1% (6.8%, 17.5%)	311.5/1247 = 25.0% (18.2%, 33.3%)	198.1/1247 = 15.9% (10.5%, 23.3%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	143	932/1247 = 74.7% (65.8%, 82.0%)	1000.3/1247 = 80.2% (71.8%, 86.6%)	716.3/1247 = 57.4% (48.5%, 65.9%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	143	753.3/1247 = 60.4% (51.0%, 69.1%)	1074.8/1247 = 86.2% (77.9%, 91.7%)	850.3/1247 = 68.2% (58.9%, 76.2%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	38.2/1183 = 3.2% (1.3%, 7.7%)	104.4/1183 = 8.8% (5.4%, 14.2%)	43.7/1183 = 3.7% (1.6%, 8.2%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	443.4/1183 = 37.5% (29.4%, 46.3%)	544.8/1183 = 46.1% (37.4%, 54.9%)	319.6/1183 = 27.0% (21.0%, 34.0%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	337.5/1183 = 28.5% (21.6%, 36.6%)	643.6/1183 = 54.4% (45.2%, 63.4%)	435.2/1183 = 36.8% (29.0%, 45.3%)

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 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)	226	201.4/5064 = 4.0% (2.0%, 7.8%)	534.7/5064 = 10.6% (6.9%, 15.8%)	272.2/5064 = 5.4% (2.9%, 9.8%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	2039.2/5064 = 40.3% (33.6%, 47.3%)	2617.9/5064 = 51.7% (44.8%, 58.6%)	1773.5/5064 = 35.0% (28.6%, 42.0%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	1953.3/5064 = 38.6% (32.0%, 45.6%)	3339.1/5064 = 65.9% (59.1%, 72.2%)	2540.4/5064 = 50.2% (43.2%, 57.1%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	69	24.5/554 = 4.4% (1.3%, 14.2%)	76.1/554 = 13.7% (7.4%, 24.0%)	42/554 = 7.6% (3.2%, 16.9%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	373/554 = 67.3% (55.0%, 77.6%)	413.9/554 = 74.7% (62.9%, 83.7%)	309.4/554 = 55.9% (43.5%, 67.5%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	301.9/554 = 54.5% (41.7%, 66.7%)	474.9/554 = 85.7% (74.3%, 92.6%)	340.8/554 = 61.5% (48.6%, 73.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	4.5/533 = 0.8% (0.1%, 6.0%)	21.8/533 = 4.1% (1.5%, 10.6%)	4.5/533 = 0.8% (0.1%, 6.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	114.5/533 = 21.5% (12.6%, 34.2%)	217.3/533 = 40.8% (28.6%, 54.2%)	80.7/533 = 15.1% (8.0%, 26.7%)

(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	98.3/533 = 18.4% (10.2%, 31.1%)	260.8/533 = 48.9% (36.1%, 61.9%)	107.3/533 = 20.1% (11.6%, 32.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	100.3/7551 = 1.3% (0.5%, 3.6%)	612.4/7551 = 8.1% (5.3%, 12.2%)	246.6/7551 = 3.3% (1.7%, 6.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	3343.9/7551 = 44.3% (37.5%, 51.3%)	3737.1/7551 = 49.5% (42.5%, 56.5%)	2618.9/7551 = 34.7% (28.3%, 41.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	2500.3/7551 = 33.1% (26.9%, 40.0%)	4955.5/7551 = 65.6% (58.7%, 72.0%)	3450.8/7551 = 45.7% (38.8%, 52.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	72	57.4/826 = 6.9% (2.7%, 16.6%)	160.2/826 = 19.4% (11.3%, 31.2%)	103.7/826 = 12.6% (6.4%, 23.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	72	552/826 = 66.8% (54.2%, 77.4%)	615.8/826 = 74.5% (62.5%, 83.8%)	361.2/826 = 43.7% (31.9%, 56.3%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	72	413.4/826 = 50.1% (37.5%, 62.6%)	679.8/826 = 82.3% (70.4%, 90.1%)	490.4/826 = 59.4% (46.6%, 71.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	16.3/783 = 2.1% (0.5%, 8.6%)	25.1/783 = 3.2% (1.0%, 10.0%)	16.3/783 = 2.1% (0.5%, 8.6%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	201.6/783 = 25.8% (16.4%, 38.1%)	258.2/783 = 33.0% (22.4%, 45.6%)	112.6/783 = 14.4% (8.7%, 22.9%)

(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)	70	134/783 = 17.1% (9.8%, 28.2%)	315.8/783 = 40.3% (28.4%, 53.5%)	172.3/783 = 22.0% (13.3%, 34.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	228	395.3/2690 = 14.7% (10.2%, 20.6%)	729.4/2690 = 27.1% (21.3%, 33.8%)	480/2690 = 17.8% (13.0%, 24.0%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	228	2010.2/2690 = 74.7% (68.3%, 80.3%)	2279/2690 = 84.7% (78.9%, 89.1%)	1819.7/2690 = 67.6% (60.8%, 73.8%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	228	1879.4/2690 = 69.9% (63.1%, 75.9%)	2500.6/2690 = 93.0% (88.5%, 95.8%)	2084.7/2690 = 77.5% (71.2%, 82.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	59.5/301 = 19.8% (11.0%, 32.9%)	104.4/301 = 34.7% (23.3%, 48.2%)	69.4/301 = 23.0% (13.6%, 36.3%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	264.2/301 = 87.8% (76.5%, 94.1%)	271/301 = 90.0% (78.7%, 95.7%)	247.1/301 = 82.1% (69.9%, 90.1%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	255.2/301 = 84.8% (74.4%, 91.4%)	297.6/301 = 98.9% (92.1%, 99.8%)	280.2/301 = 93.1% (85.1%, 96.9%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	18.8/263 = 7.2% (2.8%, 17.2%)	77.4/263 = 29.4% (18.6%, 43.2%)	28.3/263 = 10.8% (4.8%, 22.3%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	195.2/263 = 74.2% (60.7%, 84.3%)	219.2/263 = 83.3% (70.7%, 91.2%)	178.2/263 = 67.8% (54.1%, 79.0%)

(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)	72	200.9/263 = 76.4% (63.9%, 85.5%)	252.2/263 = 95.9% (85.9%, 98.9%)	209.8/263 = 79.8% (67.3%, 88.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	232	450.9/3987 = 11.3% (7.8%, 16.2%)	1128.6/3987 = 28.3% (22.4%, 35.0%)	610.3/3987 = 15.3% (11.1%, 20.8%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	232	3102.5/3987 = 77.8% (71.4%, 83.1%)	3338.4/3987 = 83.7% (77.9%, 88.3%)	2810.2/3987 = 70.5% (63.7%, 76.5%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	232	2892.6/3987 = 72.6% (65.9%, 78.3%)	3754.2/3987 = 94.2% (90.3%, 96.5%)	3251.1/3987 = 81.5% (75.6%, 86.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	80.7/421 = 19.2% (11.3%, 30.7%)	151.3/421 = 35.9% (25.2%, 48.3%)	94.3/421 = 22.4% (13.9%, 34.0%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	380/421 = 90.3% (81.0%, 95.3%)	384.5/421 = 91.3% (82.2%, 96.0%)	355.1/421 = 84.4% (73.4%, 91.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	339.9/421 = 80.7% (68.2%, 89.1%)	395/421 = 93.8% (83.5%, 97.9%)	359.9/421 = 85.5% (73.4%, 92.6%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	21.9/400 = 5.5% (1.8%, 15.8%)	79.2/400 = 19.8% (11.4%, 32.2%)	27.4/400 = 6.8% (2.5%, 17.2%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	241.8/400 = 60.4% (46.6%, 72.8%)	286.6/400 = 71.7% (57.8%, 82.4%)	207/400 = 51.7% (38.5%, 64.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times \text{LLOQ}$	% Greater than $4 \times \text{LLOQ}$
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	203.5/400 = 50.9% (37.6%, 64.0%)	327.8/400 = 82.0% (68.9%, 90.3%)	262.8/400 = 65.7% (51.9%, 77.3%)

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 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)	416	550.9/8876.1 = 6.2% (4.3%, 8.8%)	1423.2/8876.1 = 16.0% (12.7%, 20.0%)	734.8/8876.1 = 8.3% (6.0%, 11.3%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	416	5007.8/8876.1 = 56.4% (50.9%, 61.8%)	5685.6/8876.1 = 64.1% (58.6%, 69.2%)	4315.9/8876.1 = 48.6% (43.2%, 54.0%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	416	4328.8/8876.1 = 48.8% (43.4%, 54.2%)	6673.7/8876.1 = 75.2% (70.0%, 79.8%)	5279.4/8876.1 = 59.5% (54.0%, 64.7%)
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	90.8/877.8 = 10.3% (5.9%, 17.6%)	235.2/877.8 = 26.8% (19.0%, 36.4%)	128.4/877.8 = 14.6% (8.9%, 23.2%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	672.9/877.8 = 76.7% (67.0%, 84.1%)	702.9/877.8 = 80.1% (70.8%, 86.9%)	569.7/877.8 = 64.9% (54.7%, 73.9%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	575.7/877.8 = 65.6% (55.2%, 74.6%)	769.4/877.8 = 87.7% (78.2%, 93.4%)	622.5/877.8 = 70.9% (60.5%, 79.5%)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	126	32.1/899.8 = 3.6% (1.4%, 8.6%)	93.2/899.8 = 10.4% (6.3%, 16.6%)	41.5/899.8 = 4.6% (2.1%, 9.7%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	126	339.6/899.8 = 37.7% (29.4%, 46.9%)	451.6/899.8 = 50.2% (40.4%, 60.0%)	259.8/899.8 = 28.9% (21.7%, 37.3%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	126	239.7/899.8 = 26.6% (19.5%, 35.3%)	558.1/899.8 = 62.0% (51.5%, 71.6%)	310.9/899.8 = 34.6% (26.2%, 44.0%)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	497	597/10415.9 = 5.7% (4.1%, 8.0%)	1582/10415.9 = 15.2% (12.2%, 18.7%)	874.2/10415.9 = 8.4% (6.3%, 11.1%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	497	5488/10415.9 = 52.7% (47.7%, 57.6%)	6286.8/10415.9 = 60.4% (55.4%, 65.1%)	4706.4/10415.9 = 45.2% (40.4%, 50.1%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	497	4896.9/10415.9 = 47.0% (42.2%, 51.9%)	7875.8/10415.9 = 75.6% (70.9%, 79.8%)	6047.5/10415.9 = 58.1% (53.1%, 62.9%)

(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	131.2/1224.2 = 10.7% (6.5%, 17.1%)	256.8/1224.2 = 21.0% (15.1%, 28.5%)	180.9/1224.2 = 14.8% (9.9%, 21.6%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	896.2/1224.2 = 73.2% (64.5%, 80.5%)	982.3/1224.2 = 80.2% (72.2%, 86.4%)	703.1/1224.2 = 57.4% (48.5%, 65.9%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	734.8/1224.2 = 60.0% (51.0%, 68.4%)	1077.9/1224.2 = 88.1% (80.8%, 92.8%)	848.7/1224.2 = 69.3% (60.4%, 77.0%)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	154	29.5/1079.2 = 2.7% (1.1%, 6.5%)	110.3/1079.2 = 10.2% (6.5%, 15.7%)	34.9/1079.2 = 3.2% (1.4%, 7.2%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	154	413.5/1079.2 = 38.3% (29.9%, 47.5%)	529.6/1079.2 = 49.1% (39.9%, 58.3%)	318.7/1079.2 = 29.5% (22.8%, 37.3%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	154	397/1079.2 = 36.8% (28.9%, 45.4%)	598.5/1079.2 = 55.5% (46.2%, 64.3%)	441.4/1079.2 = 40.9% (32.8%, 49.6%)

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 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)	238	81/6678.1 = 1.2% (0.4%, 3.3%)	588.5/6678.1 = 8.8% (5.7%, 13.4%)	238.3/6678.1 = 3.6% (1.8%, 6.9%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	238	2658.5/6678.1 = 39.8% (33.2%, 46.8%)	3137.6/6678.1 = 47.0% (40.1%, 54.0%)	2104.1/6678.1 = 31.5% (25.4%, 38.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	238	2259.2/6678.1 = 33.8% (27.6%, 40.7%)	4394.1/6678.1 = 65.8% (59.0%, 72.0%)	3084.9/6678.1 = 46.2% (39.4%, 53.2%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	79	51.5/790.2 = 6.5% (2.5%, 16.2%)	110.3/790.2 = 14.0% (7.4%, 24.7%)	80/790.2 = 10.1% (4.9%, 19.8%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	509.5/790.2 = 64.5% (52.2%, 75.1%)	587.7/790.2 = 74.4% (62.9%, 83.2%)	350.5/790.2 = 44.4% (32.6%, 56.7%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	393.6/790.2 = 49.8% (37.7%, 62.0%)	670.1/790.2 = 84.8% (74.2%, 91.5%)	467.9/790.2 = 59.2% (46.9%, 70.5%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	73	14.7/711.4 = 2.1% (0.5%, 9.0%)	30/711.4 = 4.2% (1.5%, 11.4%)	14.7/711.4 = 2.1% (0.5%, 9.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	73	181.6/711.4 = 25.5% (15.6%, 38.8%)	257/711.4 = 36.1% (24.7%, 49.3%)	114.9/711.4 = 16.2% (9.3%, 26.6%)

(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)	73	157.7/711.4 = 22.2% (13.5%, 34.2%)	273.7/711.4 = 38.5% (27.1%, 51.3%)	172.4/711.4 = 24.2% (15.2%, 36.4%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	215	220.7/5936.9 = 3.7% (1.9%, 7.2%)	558.6/5936.9 = 9.4% (6.1%, 14.1%)	280.5/5936.9 = 4.7% (2.6%, 8.6%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	215	2724.6/5936.9 = 45.9% (38.7%, 53.3%)	3217.4/5936.9 = 54.2% (46.9%, 61.4%)	2288.3/5936.9 = 38.5% (31.7%, 45.9%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	215	2194.5/5936.9 = 37.0% (30.2%, 44.3%)	3900.5/5936.9 = 65.7% (58.4%, 72.3%)	2906.2/5936.9 = 49.0% (41.7%, 56.2%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	62	30.3/589.8 = 5.1% (1.6%, 15.7%)	126/589.8 = 21.4% (12.3%, 34.4%)	65.7/589.8 = 11.1% (4.9%, 23.4%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62	415.4/589.8 = 70.4% (57.0%, 81.1%)	442/589.8 = 74.9% (61.9%, 84.6%)	320.1/589.8 = 54.3% (40.9%, 67.1%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	62	321.8/589.8 = 54.6% (40.8%, 67.6%)	484.6/589.8 = 82.2% (68.8%, 90.6%)	363.2/589.8 = 61.6% (47.6%, 73.9%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	66	6.1/604.6 = 1.0% (0.1%, 7.1%)	16.9/604.6 = 2.8% (0.9%, 8.8%)	6.1/604.6 = 1.0% (0.1%, 7.1%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	66	134.6/604.6 = 22.3% (14.0%, 33.5%)	218.5/604.6 = 36.1% (24.6%, 49.6%)	78.4/604.6 = 13.0% (7.2%, 22.2%)

(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)	66	74.6/604.6 = 12.3% (6.2%, 23.1%)	302.9/604.6 = 50.1% (36.6%, 63.6%)	107.2/604.6 = 17.7% (9.6%, 30.3%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	259	516/3737.8 = 13.8% (9.7%, 19.2%)	993.5/3737.8 = 26.6% (21.2%, 32.8%)	635.9/3737.8 = 17.0% (12.6%, 22.6%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	259	2829.5/3737.8 = 75.7% (69.6%, 80.9%)	3149.2/3737.8 = 84.3% (78.9%, 88.5%)	2602.3/3737.8 = 69.6% (63.2%, 75.3%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	259	2637.7/3737.8 = 70.6% (64.3%, 76.2%)	3481.7/3737.8 = 93.1% (89.2%, 95.7%)	2962.6/3737.8 = 79.3% (73.5%, 84.0%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	79.7/433.9 = 18.4% (10.8%, 29.4%)	146.5/433.9 = 33.8% (24.0%, 45.2%)	101/433.9 = 23.3% (14.8%, 34.6%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	386.7/433.9 = 89.1% (79.0%, 94.7%)	394.5/433.9 = 90.9% (80.7%, 96.0%)	352.5/433.9 = 81.2% (69.7%, 89.1%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	341.2/433.9 = 78.6% (67.0%, 87.0%)	407.7/433.9 = 94.0% (84.1%, 97.9%)	380.7/433.9 = 87.7% (76.9%, 93.9%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	81	14.7/367.8 = 4.0% (1.5%, 10.3%)	80.4/367.8 = 21.8% (13.5%, 33.4%)	20.2/367.8 = 5.5% (2.2%, 12.9%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	81	231.9/367.8 = 63.1% (49.9%, 74.5%)	272.6/367.8 = 74.1% (60.8%, 84.1%)	203.8/367.8 = 55.4% (42.8%, 67.4%)

(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)	81	239.3/367.8 = 65.1% (52.2%, 76.0%)	324.9/367.8 = 88.3% (76.5%, 94.6%)	269/367.8 = 73.1% (60.4%, 82.9%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	201	330.2/2939.2 = 11.2% (7.6%, 16.4%)	864.6/2939.2 = 29.4% (22.8%, 37.0%)	454.3/2939.2 = 15.5% (10.8%, 21.6%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	201	2283.2/2939.2 = 77.7% (70.6%, 83.4%)	2468.2/2939.2 = 84.0% (77.3%, 88.9%)	2027.6/2939.2 = 69.0% (61.4%, 75.6%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	201	2134.3/2939.2 = 72.6% (65.2%, 79.0%)	2773.1/2939.2 = 94.3% (90.0%, 96.9%)	2373.2/2939.2 = 80.7% (74.1%, 86.0%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	61	60.5/288.1 = 21.0% (11.5%, 35.3%)	109.2/288.1 = 37.9% (25.0%, 52.7%)	62.7/288.1 = 21.8% (12.1%, 36.0%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	61	257.5/288.1 = 89.4% (80.2%, 94.6%)	260.9/288.1 = 90.6% (81.7%, 95.4%)	249.6/288.1 = 86.7% (76.8%, 92.7%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	61	253.9/288.1 = 88.1% (76.7%, 94.4%)	284.9/288.1 = 98.9% (92.1%, 99.9%)	259.3/288.1 = 90.0% (78.4%, 95.7%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	60	26/295.2 = 8.8% (3.1%, 22.4%)	76.3/295.2 = 25.8% (15.0%, 40.7%)	35.5/295.2 = 12.0% (5.1%, 25.6%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	60	205/295.2 = 69.5% (54.1%, 81.4%)	233.2/295.2 = 79.0% (64.4%, 88.6%)	181.4/295.2 = 61.5% (46.2%, 74.7%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	60	165.1/295.2 = 55.9% (40.9%, 69.9%)	255.2/295.2 = 86.4% (71.4%, 94.2%)	203.7/295.2 = 69.0% (53.3%, 81.3%)

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)	374	539.6/10111.8 = 5.3% (3.6%, 7.8%)	1493.4/10111.8 = 14.8% (11.7%, 18.5%)	769.4/10111.8 = 7.6% (5.5%, 10.5%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	374	5689.2/10111.8 = 56.3% (50.6%, 61.7%)	6471.3/10111.8 = 64.0% (58.4%, 69.2%)	4960.6/10111.8 = 49.1% (43.6%, 54.6%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	374	4773.5/10111.8 = 47.2% (41.9%, 52.6%)	7648.8/10111.8 = 75.6% (70.4%, 80.2%)	6093.8/10111.8 = 60.3% (54.7%, 65.6%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	106	75/993.9 = 7.5% (3.6%, 15.1%)	166.5/993.9 = 16.8% (10.2%, 26.2%)	96.2/993.9 = 9.7% (4.9%, 18.2%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	106	707.6/993.9 = 71.2% (60.6%, 79.9%)	791/993.9 = 79.6% (69.6%, 86.9%)	545.7/993.9 = 54.9% (44.4%, 65.0%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	106	610.1/993.9 = 61.4% (50.5%, 71.3%)	891.2/993.9 = 89.7% (80.3%, 94.9%)	695.1/993.9 = 69.9% (59.1%, 78.9%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	105	19.6/1003.3 = 1.9% (0.5%, 6.7%)	100.6/1003.3 = 10.0% (6.2%, 15.9%)	34.5/1003.3 = 3.4% (1.4%, 8.1%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	105	375.2/1003.3 = 37.4% (28.3%, 47.5%)	524.4/1003.3 = 52.3% (41.8%, 62.5%)	255.5/1003.3 = 25.5% (18.9%, 33.4%)

(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)	105	332.3/1003.3 = 33.1% (24.7%, 42.8%)	553.3/1003.3 = 55.2% (45.1%, 64.8%)	382.4/1003.3 = 38.1% (29.4%, 47.6%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	477	557.4/8055.6 = 6.9% (5.0%, 9.5%)	1358.7/8055.6 = 16.9% (13.6%, 20.7%)	772.6/8055.6 = 9.6% (7.2%, 12.7%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	477	4275.6/8055.6 = 53.1% (48.3%, 57.8%)	4791.6/8055.6 = 59.5% (54.6%, 64.2%)	3606.1/8055.6 = 44.8% (40.1%, 49.5%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	477	3945.2/8055.6 = 49.0% (44.2%, 53.8%)	6040.3/8055.6 = 75.0% (70.4%, 79.1%)	4553/8055.6 = 56.5% (51.6%, 61.3%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	164	147.1/1004.4 = 14.6% (9.7%, 21.5%)	311.3/1004.4 = 31.0% (23.8%, 39.2%)	213.1/1004.4 = 21.2% (15.2%, 28.8%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	164	793.6/1004.4 = 79.0% (71.3%, 85.1%)	818.9/1004.4 = 81.5% (74.2%, 87.2%)	683.4/1004.4 = 68.0% (59.5%, 75.5%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	164	656.1/1004.4 = 65.3% (56.8%, 73.0%)	870.3/1004.4 = 86.6% (79.3%, 91.7%)	714.1/1004.4 = 71.1% (62.7%, 78.3%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	152	38.2/801.6 = 4.8% (2.2%, 10.1%)	89.3/801.6 = 11.1% (6.9%, 17.5%)	38.2/801.6 = 4.8% (2.2%, 10.1%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	352.6/801.6 = 44.0% (35.5%, 52.9%)	422.4/801.6 = 52.7% (43.7%, 61.5%)	301.5/801.6 = 37.6% (29.6%, 46.3%)

(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)	152	284.7/801.6 = 35.5% (28.0%, 43.8%)	477.8/801.6 = 59.6% (50.4%, 68.2%)	319/801.6 = 39.8% (31.8%, 48.3%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	62	50.9/1124.6 = 4.5% (1.7%, 11.3%)	153.1/1124.6 = 13.6% (7.1%, 24.5%)	67.1/1124.6 = 6.0% (2.5%, 13.6%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	62	531/1124.6 = 47.2% (34.1%, 60.7%)	709.5/1124.6 = 63.1% (48.4%, 75.7%)	455.5/1124.6 = 40.5% (28.3%, 54.0%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	62	507/1124.6 = 45.1% (32.1%, 58.8%)	860.4/1124.6 = 76.5% (62.1%, 86.6%)	680/1124.6 = 60.5% (46.1%, 73.2%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	13	0/103.7 = 0.0% (0.0%, 0.0%)	14.3/103.7 = 13.8% (1.7%, 60.3%)	0/103.7 = 0.0% (0.0%, 0.0%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	13	68/103.7 = 65.5% (15.6%, 95.1%)	75.2/103.7 = 72.5% (16.2%, 97.3%)	43.7/103.7 = 42.2% (8.0%, 85.9%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	13	44.2/103.7 = 42.6% (9.3%, 84.3%)	85.8/103.7 = 82.8% (13.9%, 99.3%)	62.1/103.7 = 59.8% (14.2%, 93.1%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	23	3.8/174.1 = 2.2% (0.2%, 17.4%)	13.7/174.1 = 7.8% (2.4%, 23.0%)	3.8/174.1 = 2.2% (0.2%, 17.4%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	23	25.3/174.1 = 14.5% (5.9%, 31.4%)	34.4/174.1 = 19.8% (8.7%, 39.0%)	21.5/174.1 = 12.4% (4.8%, 28.5%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	23	19.7/174.1 = 11.3% (4.0%, 27.8%)	125.5/174.1 = 72.1% (45.9%, 88.7%)	51/174.1 = 29.3% (11.2%, 57.6%)

(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)	196	322.7/3997.3 = 8.1% (5.1%, 12.5%)	782.4/3997.3 = 19.6% (14.4%, 26.0%)	481.8/3997.3 = 12.1% (8.1%, 17.5%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	196	2175.9/3997.3 = 54.4% (47.0%, 61.7%)	2476.6/3997.3 = 62.0% (54.4%, 69.0%)	1922.9/3997.3 = 48.1% (40.8%, 55.5%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	196	1953/3997.3 = 48.9% (41.5%, 56.2%)	3021/3997.3 = 75.6% (68.3%, 81.6%)	2240.1/3997.3 = 56.0% (48.5%, 63.3%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	92/475.6 = 19.3% (10.8%, 32.2%)	158.3/475.6 = 33.3% (22.1%, 46.8%)	132/475.6 = 27.8% (17.4%, 41.2%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	397.7/475.6 = 83.6% (71.1%, 91.4%)	423/475.6 = 88.9% (77.2%, 95.0%)	342.4/475.6 = 72.0% (57.7%, 82.9%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	327.4/475.6 = 68.8% (55.1%, 79.9%)	428.8/475.6 = 90.2% (77.7%, 96.0%)	338.8/475.6 = 71.2% (57.6%, 81.8%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	56	19.3/346.9 = 5.6% (1.6%, 18.0%)	44.2/346.9 = 12.8% (6.0%, 25.1%)	19.3/346.9 = 5.6% (1.6%, 18.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	56	153.1/346.9 = 44.1% (30.6%, 58.6%)	178.3/346.9 = 51.4% (37.1%, 65.4%)	128.2/346.9 = 36.9% (24.5%, 51.4%)

(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)	56	109/346.9 = 31.4% (20.5%, 44.8%)	213/346.9 = 61.4% (46.6%, 74.4%)	123.8/346.9 = 35.7% (23.8%, 49.7%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	332	302/5012.5 = 6.0% (4.0%, 8.9%)	697.2/5012.5 = 13.9% (10.6%, 18.0%)	379.4/5012.5 = 7.6% (5.3%, 10.8%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	332	2663.7/5012.5 = 53.1% (47.4%, 58.8%)	3060.8/5012.5 = 61.1% (55.3%, 66.6%)	2200.1/5012.5 = 43.9% (38.4%, 49.6%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	332	2268.2/5012.5 = 45.3% (39.6%, 51.0%)	3778.3/5012.5 = 75.4% (70.0%, 80.1%)	2760.2/5012.5 = 55.1% (49.2%, 60.8%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	111	51/600 = 8.5% (4.9%, 14.3%)	137.9/600 = 23.0% (15.9%, 32.1%)	69.9/600 = 11.7% (7.2%, 18.4%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	111	399.3/600 = 66.6% (55.3%, 76.2%)	417.4/600 = 69.6% (58.3%, 78.9%)	316.8/600 = 52.8% (42.3%, 63.1%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	111	346/600 = 57.7% (46.6%, 68.0%)	494.8/600 = 82.5% (71.2%, 89.9%)	408.1/600 = 68.0% (56.8%, 77.5%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	38	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 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	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	94	17.5/474.5 = 3.7% (1.4%, 9.6%)	65.5/474.5 = 13.8% (7.9%, 23.1%)	22.9/474.5 = 4.8% (2.0%, 11.4%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	94	200.6/474.5 = 42.3% (31.6%, 53.8%)	228.4/474.5 = 48.1% (37.0%, 59.5%)	180.3/474.5 = 38.0% (27.9%, 49.3%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	94	162.5/474.5 = 34.2% (24.8%, 45.2%)	249.4/474.5 = 52.6% (40.9%, 64.0%)	189.2/474.5 = 39.9% (29.8%, 50.9%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	18	37.5/324.9 = 11.6% (2.1%, 44.2%)	56.2/324.9 = 17.3% (4.3%, 49.5%)	37.5/324.9 = 11.6% (2.1%, 44.2%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	18	171.6/324.9 = 52.8% (23.8%, 80.0%)	226.5/324.9 = 69.7% (38.5%, 89.4%)	160.2/324.9 = 49.3% (21.0%, 78.1%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18	113.5/324.9 = 34.9% (13.4%, 65.0%)	284.5/324.9 = 87.5% (53.8%, 97.7%)	228.5/324.9 = 70.3% (39.3%, 89.7%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	0/32.2 = 0.0%	0/32.2 = 0.0%	0/32.2 = 0.0%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	24.9/32.2 = 77.4%	24.9/32.2 = 77.4%	24.9/32.2 = 77.4%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	20.1/32.2 = 62.3%	32.2/32.2 = 100.0%	20.1/32.2 = 62.3%
Asian	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	10	0/40.7 = 0.0% (0.0%, 0.0%)	3.8/40.7 = 9.3% (0.3%, 75.9%)	0/40.7 = 0.0% (0.0%, 0.0%)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	10	8.3/40.7 = 20.5% (1.8%, 78.4%)	19.8/40.7 = 48.7% (8.0%, 91.2%)	3.8/40.7 = 9.3% (0.3%, 75.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	10	8.3/40.7 = 20.5% (1.8%, 78.4%)	21.4/40.7 = 52.6% (9.0%, 92.6%)	11/40.7 = 27.1% (3.3%, 80.1%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	149	233.5/5037.1 = 4.6% (2.5%, 8.6%)	644.9/5037.1 = 12.8% (8.8%, 18.2%)	316.2/5037.1 = 6.3% (3.6%, 10.7%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	149	2641.2/5037.1 = 52.4% (43.9%, 60.8%)	2981.2/5037.1 = 59.2% (50.5%, 67.4%)	2322.6/5037.1 = 46.1% (37.9%, 54.6%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	149	2278.9/5037.1 = 45.2% (37.1%, 53.6%)	3659.6/5037.1 = 72.7% (64.1%, 79.8%)	2945.4/5037.1 = 58.5% (49.8%, 66.7%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	68.3/561.8 = 12.2% (5.4%, 25.2%)	127.8/561.8 = 22.8% (12.5%, 37.8%)	86.2/561.8 = 15.4% (7.2%, 29.8%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	425.1/561.8 = 75.7% (59.6%, 86.8%)	455.2/561.8 = 81.0% (65.2%, 90.7%)	350.2/561.8 = 62.3% (46.8%, 75.7%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	346.8/561.8 = 61.7% (46.1%, 75.3%)	480.4/561.8 = 85.5% (70.2%, 93.7%)	382.6/561.8 = 68.1% (52.3%, 80.6%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 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	Negative	Anti Spike IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	48	6.6/554.6 = 1.2% (0.2%, 8.5%)	43.2/554.6 = 7.8% (3.5%, 16.5%)	6.6/554.6 = 1.2% (0.2%, 8.5%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	48	215.1/554.6 = 38.8% (25.9%, 53.4%)	287.4/554.6 = 51.8% (36.8%, 66.5%)	149.8/554.6 = 27.0% (17.2%, 39.7%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	48	176.9/554.6 = 31.9% (20.6%, 45.8%)	297/554.6 = 53.5% (38.8%, 67.7%)	187/554.6 = 33.7% (22.2%, 47.6%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2	0/45.4 = 0.0%	0/45.4 = 0.0%	0/45.4 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	2	26.7/45.4 = 58.8%	45.4/45.4 = 100.0%	26.7/45.4 = 58.8%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	2	26.7/45.4 = 58.8%	45.4/45.4 = 100.0%	45.4/45.4 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/5.5 = 0.0%	0/5.5 = 0.0%	0/5.5 = 0.0%

(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	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%	0/5.5 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	25	18.8/579.7 = 3.2% (0.4%, 23.2%)	117.7/579.7 = 20.3% (8.0%, 42.7%)	30.1/579.7 = 5.2% (1.1%, 22.0%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	25	366.1/579.7 = 63.2% (40.0%, 81.5%)	403.7/579.7 = 69.6% (46.0%, 86.1%)	297.6/579.7 = 51.3% (29.2%, 73.0%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	25	363.3/579.7 = 62.7% (39.1%, 81.5%)	451.3/579.7 = 77.8% (52.9%, 91.6%)	376.9/579.7 = 65.0% (41.0%, 83.2%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	9	0/77.7 = 0.0% (0.0%, 0.0%)	14.2/77.7 = 18.3% (1.6%, 75.5%)	7.1/77.7 = 9.2% (0.3%, 76.3%)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	9	53.5/77.7 = 68.8% (12.0%, 97.3%)	71.4/77.7 = 91.8% (27.1%, 99.7%)	53.5/77.7 = 68.8% (12.0%, 97.3%)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	9	39.2/77.7 = 50.5% (8.7%, 91.7%)	77.7/77.7 = 100.0% (100.0%, 100.0%)	46.4/77.7 = 59.7% (10.8%, 94.7%)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	15	10.1/90.7 = 11.2% (0.7%, 70.1%)	15.6/90.7 = 17.2% (2.3%, 64.5%)	10.1/90.7 = 11.2% (0.7%, 70.1%)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	15	48.2/90.7 = 53.2% (16.6%, 86.7%)	56/90.7 = 61.8% (21.9%, 90.3%)	29/90.7 = 31.9% (7.9%, 72.1%)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	15	35.3/90.7 = 39.0% (10.4%, 77.8%)	62.4/90.7 = 68.8% (26.6%, 93.1%)	35.3/90.7 = 39.0% (10.4%, 77.8%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	12	0/231.3 = 0.0% (0.0%, 0.0%)	93.2/231.3 = 40.3% (5.6%, 88.4%)	0/231.3 = 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
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	12	192.3/231.3 = 83.2% (27.4%, 98.5%)	192.3/231.3 = 83.2% (27.4%, 98.5%)	106.2/231.3 = 45.9% (9.2%, 87.7%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	12	211/231.3 = 91.2% (25.9%, 99.7%)	211/231.3 = 91.2% (25.9%, 99.7%)	211/231.3 = 91.2% (25.9%, 99.7%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/6.8 = 0.0%	0/6.8 = 0.0%	0/6.8 = 0.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	1.4/28.3 = 4.9%	1.4/28.3 = 4.9%	1.4/28.3 = 4.9%
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	1.4/28.3 = 4.9%	21.7/28.3 = 76.6%	0/28.3 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	28.3/28.3 = 100.0%	28.3/28.3 = 100.0%	28.3/28.3 = 100.0%

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

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

Table 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	187.6/3939 = 4.8% (2.7%, 8.3%)	589.7/3939 = 15.0% (10.8%, 20.4%)	252/3939 = 6.4% (3.9%, 10.3%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	2041/3939 = 51.8% (45.0%, 58.5%)	2449.3/3939 = 62.2% (55.3%, 68.6%)	1702.8/3939 = 43.2% (36.8%, 49.9%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1780.2/3939 = 45.2% (38.8%, 51.7%)	3007.6/3939 = 76.4% (69.8%, 81.9%)	2367.6/3939 = 60.1% (53.2%, 66.6%)
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	19.1/459 = 4.2% (1.7%, 9.7%)	77.9/459 = 17.0% (9.5%, 28.4%)	22.5/459 = 4.9% (2.2%, 10.5%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	268.2/459 = 58.4% (45.3%, 70.4%)	304.6/459 = 66.4% (53.0%, 77.6%)	202.2/459 = 44.1% (32.3%, 56.5%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	266/459 = 57.9% (45.0%, 69.9%)	380.7/459 = 82.9% (69.8%, 91.1%)	295.1/459 = 64.3% (51.1%, 75.6%)
URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	5.7/418 = 1.4% (0.3%, 5.3%)	45.1/418 = 10.8% (5.7%, 19.5%)	14/418 = 3.3% (1.2%, 9.1%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	164.3/418 = 39.3% (28.5%, 51.2%)	193.7/418 = 46.3% (34.9%, 58.2%)	136.5/418 = 32.6% (23.1%, 43.9%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	130.5/418 = 31.2% (22.2%, 41.9%)	227.4/418 = 54.4% (43.0%, 65.4%)	155.7/418 = 37.3% (27.7%, 47.9%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	328.5/4659 = 7.1% (4.5%, 10.9%)	846.6/4659 = 18.2% (13.5%, 23.9%)	515.1/4659 = 11.1% (7.6%, 15.8%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	2499/4659 = 53.6% (46.9%, 60.2%)	2819.5/4659 = 60.5% (53.6%, 67.0%)	2168.4/4659 = 46.5% (40.0%, 53.2%)

(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)	227	2309.8/4659 = 49.6% (42.8%, 56.3%)	3506.3/4659 = 75.3% (68.7%, 80.9%)	2663.1/4659 = 57.2% (50.2%, 63.9%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	82.9/519 = 16.0% (8.7%, 27.5%)	174.5/519 = 33.6% (23.0%, 46.3%)	130/519 = 25.1% (15.7%, 37.5%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	446.3/519 = 86.0% (74.4%, 92.9%)	471.6/519 = 90.9% (80.0%, 96.1%)	391/519 = 75.3% (62.6%, 84.8%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	355/519 = 68.4% (55.5%, 79.0%)	472.2/519 = 91.0% (79.6%, 96.3%)	373.4/519 = 72.0% (59.2%, 82.0%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	71	23.1/439 = 5.3% (1.7%, 14.9%)	51.8/439 = 11.8% (6.0%, 21.8%)	23.1/439 = 5.3% (1.7%, 14.9%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	71	175.2/439 = 39.9% (28.8%, 52.2%)	215.6/439 = 49.1% (37.1%, 61.3%)	141.9/439 = 32.3% (22.2%, 44.4%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	71	138.7/439 = 31.6% (22.2%, 42.8%)	267.3/439 = 60.9% (48.1%, 72.3%)	161.1/439 = 36.7% (26.5%, 48.3%)

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 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)	113	64.1/2570 = 2.5% (0.8%, 7.7%)	291.2/2570 = 11.3% (6.6%, 18.9%)	90.8/2570 = 3.5% (1.3%, 9.3%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	113	1082/2570 = 42.1% (33.1%, 51.7%)	1319.8/2570 = 51.4% (41.9%, 60.7%)	846.9/2570 = 33.0% (24.7%, 42.4%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	113	849.7/2570 = 33.1% (24.9%, 42.3%)	1744.5/2570 = 67.9% (58.4%, 76.1%)	1282.4/2570 = 49.9% (40.5%, 59.3%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0/322 = 0.0% (0.0%, 0.0%)	43.1/322 = 13.4% (5.3%, 30.0%)	0/322 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	153.7/322 = 47.7% (31.1%, 64.9%)	178.9/322 = 55.6% (38.0%, 71.8%)	100.1/322 = 31.1% (17.3%, 49.2%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	150.4/322 = 46.7% (30.2%, 64.0%)	247.1/322 = 76.7% (58.7%, 88.5%)	168.3/322 = 52.3% (35.1%, 68.9%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	0/274 = 0.0% (0.0%, 0.0%)	8.8/274 = 3.2% (0.4%, 21.4%)	0/274 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	64.5/274 = 23.5% (11.7%, 41.7%)	80.1/274 = 29.2% (15.9%, 47.5%)	42.1/274 = 15.4% (6.3%, 32.9%)

(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)	35	33.3/274 = 12.1% (4.4%, 29.4%)	88.9/274 = 32.4% (18.4%, 50.6%)	42.1/274 = 15.4% (6.3%, 32.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	111	99.2/3065 = 3.2% (1.2%, 8.6%)	386/3065 = 12.6% (7.4%, 20.7%)	198.5/3065 = 6.5% (3.0%, 13.3%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	111	1246.2/3065 = 40.7% (31.7%, 50.3%)	1477.6/3065 = 48.2% (38.8%, 57.8%)	1025.5/3065 = 33.5% (25.0%, 43.1%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	111	1168.7/3065 = 38.1% (29.3%, 47.9%)	2028.9/3065 = 66.2% (56.7%, 74.5%)	1444.3/3065 = 47.1% (37.7%, 56.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	40.3/320 = 12.6% (4.5%, 30.5%)	87.7/320 = 27.4% (14.3%, 46.0%)	69.5/320 = 21.7% (10.3%, 40.2%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	258.4/320 = 80.7% (63.0%, 91.2%)	283.7/320 = 88.6% (71.5%, 96.0%)	214.1/320 = 66.9% (48.4%, 81.4%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	196/320 = 61.2% (43.0%, 76.8%)	286.8/320 = 89.6% (71.6%, 96.7%)	210.2/320 = 65.7% (47.5%, 80.2%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	10.2/289 = 3.5% (0.4%, 23.2%)	23/289 = 8.0% (2.3%, 23.9%)	10.2/289 = 3.5% (0.4%, 23.2%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	76.7/289 = 26.6% (13.7%, 45.2%)	99.7/289 = 34.5% (19.7%, 53.1%)	60.1/289 = 20.8% (9.6%, 39.3%)

(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)	35	52.4/289 = 18.1% (8.3%, 35.0%)	135.5/289 = 46.9% (30.1%, 64.5%)	62.7/289 = 21.7% (10.5%, 39.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	123.4/1369 = 9.0% (4.8%, 16.2%)	298.4/1369 = 21.8% (15.0%, 30.7%)	161.2/1369 = 11.8% (6.9%, 19.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	959/1369 = 70.1% (60.9%, 77.9%)	1129.5/1369 = 82.5% (74.1%, 88.6%)	855.8/1369 = 62.5% (53.0%, 71.1%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	930.5/1369 = 68.0% (58.6%, 76.1%)	1263/1369 = 92.3% (85.5%, 96.0%)	1085.2/1369 = 79.3% (70.6%, 85.9%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	19.1/137 = 13.9% (5.6%, 30.8%)	34.8/137 = 25.4% (13.1%, 43.4%)	22.5/137 = 16.4% (7.2%, 33.3%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	114.5/137 = 83.6% (66.7%, 92.8%)	125.8/137 = 91.8% (76.0%, 97.5%)	102.2/137 = 74.6% (56.6%, 86.9%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	115.6/137 = 84.4% (68.6%, 93.0%)	133.6/137 = 97.5% (83.1%, 99.7%)	126.8/137 = 92.6% (79.0%, 97.6%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	5.7/144 = 3.9% (0.9%, 15.0%)	36.2/144 = 25.2% (13.1%, 42.9%)	14/144 = 9.7% (3.3%, 25.3%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	99.8/144 = 69.3% (50.1%, 83.6%)	113.6/144 = 78.9% (59.9%, 90.4%)	94.4/144 = 65.5% (46.5%, 80.6%)

(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)	35	97.2/144 = 67.5% (48.4%, 82.1%)	138.5/144 = 96.2% (75.5%, 99.5%)	113.6/144 = 78.9% (59.9%, 90.4%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	229.4/1594 = 14.4% (8.9%, 22.4%)	460.6/1594 = 28.9% (21.1%, 38.1%)	316.6/1594 = 19.9% (13.3%, 28.5%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	1252.8/1594 = 78.6% (69.9%, 85.3%)	1341.9/1594 = 84.2% (76.0%, 89.9%)	1142.9/1594 = 71.7% (62.5%, 79.4%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	1141.1/1594 = 71.6% (62.5%, 79.2%)	1477.5/1594 = 92.7% (86.3%, 96.2%)	1218.8/1594 = 76.5% (67.7%, 83.4%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	42.6/199 = 21.4% (10.1%, 39.7%)	86.8/199 = 43.6% (27.5%, 61.3%)	60.5/199 = 30.4% (16.7%, 48.7%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	187.9/199 = 94.4% (78.2%, 98.8%)	187.9/199 = 94.4% (78.2%, 98.8%)	176.9/199 = 88.9% (72.0%, 96.1%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	159/199 = 79.9% (61.8%, 90.7%)	185.3/199 = 93.1% (75.2%, 98.4%)	163.2/199 = 82.0% (63.9%, 92.2%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	12.9/150 = 8.6% (2.6%, 24.8%)	28.8/150 = 19.2% (9.0%, 36.3%)	12.9/150 = 8.6% (2.6%, 24.8%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	98.4/150 = 65.6% (48.1%, 79.7%)	115.9/150 = 77.3% (59.7%, 88.6%)	81.8/150 = 54.5% (37.6%, 70.4%)

(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)	36	86.3/150 = 57.6% (40.3%, 73.2%)	131.8/150 = 87.9% (71.5%, 95.4%)	98.4/150 = 65.6% (48.1%, 79.7%)

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 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)	454	516.1/8598 = 6.0% (4.2%, 8.4%)	1436.3/8598 = 16.7% (13.5%, 20.6%)	767.1/8598 = 8.9% (6.6%, 11.9%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	4540/8598 = 52.8% (48.0%, 57.5%)	5268.8/8598 = 61.3% (56.4%, 65.9%)	3871.2/8598 = 45.0% (40.4%, 49.8%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	4090/8598 = 47.6% (42.9%, 52.3%)	6513.9/8598 = 75.8% (71.2%, 79.8%)	5030.7/8598 = 58.5% (53.6%, 63.2%)
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	102/978 = 10.4% (6.3%, 16.9%)	252.4/978 = 25.8% (19.0%, 34.1%)	152.5/978 = 15.6% (10.4%, 22.7%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	714.5/978 = 73.1% (64.7%, 80.0%)	776.2/978 = 79.4% (71.4%, 85.6%)	593.3/978 = 60.7% (52.2%, 68.5%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	620.9/978 = 63.5% (54.5%, 71.6%)	852.9/978 = 87.2% (79.4%, 92.4%)	668.5/978 = 68.4% (59.4%, 76.1%)
United States	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	28.8/857 = 3.4% (1.3%, 8.1%)	96.9/857 = 11.3% (7.1%, 17.4%)	37.1/857 = 4.3% (2.0%, 9.2%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	339.5/857 = 39.6% (31.7%, 48.1%)	409.3/857 = 47.8% (39.4%, 56.2%)	278.4/857 = 32.5% (25.3%, 40.5%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	269.2/857 = 31.4% (24.7%, 39.0%)	494.7/857 = 57.7% (49.3%, 65.8%)	316.8/857 = 37.0% (29.8%, 44.7%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	45	94.5/1628.6 = 5.8% (2.1%, 15.2%)	234.2/1628.6 = 14.4% (7.3%, 26.3%)	113.3/1628.6 = 7.0% (2.8%, 16.4%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	45	739.4/1628.6 = 45.4% (30.8%, 60.8%)	945.8/1628.6 = 58.1% (42.0%, 72.6%)	686.4/1628.6 = 42.1% (28.1%, 57.6%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	45	838.7/1628.6 = 51.5% (36.2%, 66.6%)	1204.1/1628.6 = 73.9% (57.4%, 85.7%)	874.1/1628.6 = 53.7% (38.1%, 68.6%)

(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)	11	19.5/129.4 = 15.0% (2.5%, 55.2%)	46.5/129.4 = 35.9% (10.3%, 73.2%)	37.3/129.4 = 28.9% (6.8%, 69.2%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	11	99.4/129.4 = 76.8% (32.6%, 95.8%)	99.4/129.4 = 76.8% (32.6%, 95.8%)	99.4/129.4 = 76.8% (32.6%, 95.8%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	11	102.4/129.4 = 79.1% (35.3%, 96.3%)	111.5/129.4 = 86.2% (34.0%, 98.7%)	102.4/129.4 = 79.1% (35.3%, 96.3%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	16	0/203 = 0.0% (0.0%, 0.0%)	6.6/203 = 3.3% (0.4%, 24.3%)	0/203 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	16	75.1/203 = 37.0% (14.7%, 66.6%)	89/203 = 43.8% (19.1%, 72.1%)	36.6/203 = 18.0% (6.6%, 40.6%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	16	63.1/203 = 31.1% (11.6%, 60.7%)	105.7/203 = 52.1% (24.8%, 78.2%)	82.4/203 = 40.6% (16.8%, 69.8%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	78	205/2605.6 = 7.9% (4.0%, 14.9%)	515.8/2605.6 = 19.8% (12.5%, 29.9%)	304.3/2605.6 = 11.7% (6.5%, 20.1%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	78	1713.3/2605.6 = 65.8% (53.3%, 76.4%)	1884.3/2605.6 = 72.3% (59.9%, 82.1%)	1388.9/2605.6 = 53.3% (41.3%, 64.9%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	78	1283.9/2605.6 = 49.3% (37.7%, 60.9%)	1968/2605.6 = 75.5% (63.1%, 84.8%)	1635.5/2605.6 = 62.8% (50.5%, 73.6%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	29	7.3/338.2 = 2.2% (0.3%, 15.3%)	31/338.2 = 9.2% (3.3%, 23.0%)	7.3/338.2 = 2.2% (0.3%, 15.3%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29	257.8/338.2 = 76.2% (53.9%, 89.8%)	293.6/338.2 = 86.8% (66.2%, 95.7%)	184.7/338.2 = 54.6% (35.2%, 72.7%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29	219.5/338.2 = 64.9% (43.6%, 81.5%)	296/338.2 = 87.5% (65.7%, 96.3%)	256.9/338.2 = 75.9% (54.0%, 89.4%)
Brazil	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 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
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	6.6/358.5 = 1.8% (0.2%, 13.2%)	40.1/358.5 = 11.2% (4.4%, 25.6%)	6.6/358.5 = 1.8% (0.2%, 13.2%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	97.5/358.5 = 27.2% (14.8%, 44.6%)	168.5/358.5 = 47.0% (28.6%, 66.2%)	66.9/358.5 = 18.7% (9.2%, 34.1%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	99.4/358.5 = 27.7% (14.9%, 45.7%)	214.6/358.5 = 59.9% (39.5%, 77.3%)	129.7/358.5 = 36.2% (21.8%, 53.6%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	13	72.9/356.4 = 20.5% (5.2%, 54.6%)	139/356.4 = 39.0% (15.2%, 69.6%)	91.7/356.4 = 25.7% (7.9%, 58.3%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13	202.9/356.4 = 56.9% (26.3%, 83.1%)	221.6/356.4 = 62.2% (29.7%, 86.5%)	202.9/356.4 = 56.9% (26.3%, 83.1%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	13	231.4/356.4 = 64.9% (31.9%, 88.0%)	321/356.4 = 90.1% (46.7%, 98.9%)	266.8/356.4 = 74.9% (39.4%, 93.2%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	64	37.5/2092.3 = 1.8% (0.4%, 7.1%)	167.5/2092.3 = 8.0% (3.7%, 16.6%)	66/2092.3 = 3.2% (1.0%, 9.9%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	64	1162.5/2092.3 = 55.6% (42.0%, 68.3%)	1309.1/2092.3 = 62.6% (48.7%, 74.6%)	944.2/2092.3 = 45.1% (32.5%, 58.5%)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	64	820.6/2092.3 = 39.2% (27.5%, 52.3%)	1585.6/2092.3 = 75.8% (61.6%, 85.9%)	1175.7/2092.3 = 56.2% (42.8%, 68.7%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	20	36.1/250.4 = 14.4% (3.9%, 41.2%)	54/250.4 = 21.6% (7.2%, 49.4%)	36.1/250.4 = 14.4% (3.9%, 41.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	20	202.5/250.4 = 80.9% (51.6%, 94.4%)	214.7/250.4 = 85.7% (54.9%, 96.7%)	154.5/250.4 = 61.7% (35.9%, 82.3%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	20	103.2/250.4 = 41.2% (20.9%, 65.0%)	232.5/250.4 = 92.9% (58.6%, 99.2%)	148.1/250.4 = 59.1% (34.4%, 80.0%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	13	10.1/176.2 = 5.7% (0.6%, 39.3%)	16.7/176.2 = 9.5% (1.7%, 38.2%)	10.1/176.2 = 5.7% (0.6%, 39.3%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	13	54.6/176.2 = 31.0% (10.8%, 62.5%)	99.1/176.2 = 56.2% (26.8%, 81.9%)	54.6/176.2 = 31.0% (10.8%, 62.5%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	13	61.2/176.2 = 34.7% (13.0%, 65.5%)	88.9/176.2 = 50.5% (23.1%, 77.6%)	61.2/176.2 = 34.7% (13.0%, 65.5%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0/331.2 = 0.0% (0.0%, 0.0%)	28.5/331.2 = 8.6% (0.6%, 59.3%)	0/331.2 = 0.0% (0.0%, 0.0%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	153.3/331.2 = 46.3% (12.1%, 84.3%)	153.3/331.2 = 46.3% (12.1%, 84.3%)	153.3/331.2 = 46.3% (12.1%, 84.3%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	153.3/331.2 = 46.3% (12.1%, 84.3%)	260.4/331.2 = 78.6% (31.4%, 96.7%)	206.3/331.2 = 62.3% (22.0%, 90.6%)
Mexico	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	7.3/38.9 = 18.7% (0.2%, 97.2%)	7.3/38.9 = 18.7% (0.2%, 97.2%)	7.3/38.9 = 18.7% (0.2%, 97.2%)
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	26.8/38.9 = 68.7% (1.3%, 99.7%)	26.8/38.9 = 68.7% (1.3%, 99.7%)	14.6/38.9 = 37.5% (0.9%, 97.5%)
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	26.8/38.9 = 68.7% (1.3%, 99.7%)	26.8/38.9 = 68.7% (1.3%, 99.7%)	26.8/38.9 = 68.7% (1.3%, 99.7%)
Mexico	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	0/69.2 = 0.0%	0/69.2 = 0.0%	0/69.2 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	36/69.2 = 52.1%	36/69.2 = 52.1%	16.7/69.2 = 24.2%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	6.6/69.2 = 9.6%	55.3/69.2 = 79.9%	6.6/69.2 = 9.6%

(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 N IgG (BAU/ml)	19	18.8/729 = 2.6% (0.3%, 19.1%)	47.3/729 = 6.5% (1.3%, 26.1%)	18.8/729 = 2.6% (0.3%, 19.1%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	469.7/729 = 64.4% (37.4%, 84.6%)	469.7/729 = 64.4% (37.4%, 84.6%)	469.7/729 = 64.4% (37.4%, 84.6%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	434.3/729 = 59.6% (33.5%, 81.2%)	575.7/729 = 79.0% (50.8%, 93.2%)	575.7/729 = 79.0% (50.8%, 93.2%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	14.6/62.9 = 23.2% (0.7%, 92.5%)	14.6/62.9 = 23.2% (0.7%, 92.5%)	14.6/62.9 = 23.2% (0.7%, 92.5%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)	53.8/62.9 = 85.5% (4.6%, 99.9%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	0/49.2 = 0.0% (0.0%, 0.0%)	6.6/49.2 = 13.4% (0.1%, 95.7%)	6.6/49.2 = 13.4% (0.1%, 95.7%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	23.3/49.2 = 47.4% (1.3%, 98.4%)	29.9/49.2 = 60.8% (1.3%, 99.5%)	13.2/49.2 = 26.9% (0.6%, 95.5%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	29.9/49.2 = 60.8% (1.3%, 99.5%)	29.9/49.2 = 60.8% (1.3%, 99.5%)	29.9/49.2 = 60.8% (1.3%, 99.5%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	203/2951 = 6.9% (4.3%, 10.8%)	436.7/2951 = 14.8% (10.8%, 19.9%)	247.8/2951 = 8.4% (5.5%, 12.7%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	1514.8/2951 = 51.3% (44.8%, 57.8%)	1719.7/2951 = 58.3% (51.6%, 64.7%)	1305.8/2951 = 44.2% (38.0%, 50.6%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	1373.6/2951 = 46.5% (40.1%, 53.1%)	2120.7/2951 = 71.9% (65.1%, 77.8%)	1562/2951 = 52.9% (46.3%, 59.5%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	35.3/295 = 12.0% (6.3%, 21.7%)	86.3/295 = 29.3% (19.6%, 41.3%)	54.2/295 = 18.4% (10.6%, 29.9%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	205.3/295 = 69.6% (56.3%, 80.3%)	211.7/295 = 71.7% (58.6%, 82.0%)	172.6/295 = 58.5% (45.4%, 70.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 × LLOQ	% Greater than 4 × LLOQ
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	174.7/295 = 59.2% (46.1%, 71.2%)	264.7/295 = 89.7% (78.7%, 95.4%)	205.7/295 = 69.7% (56.4%, 80.4%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	16/252 = 6.4% (2.2%, 16.8%)	36.6/252 = 14.5% (8.0%, 25.0%)	16/252 = 6.4% (2.2%, 16.8%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	127.1/252 = 50.4% (37.4%, 63.4%)	149.4/252 = 59.3% (46.0%, 71.4%)	112.2/252 = 44.5% (32.1%, 57.6%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	107.2/252 = 42.6% (30.3%, 55.8%)	167.4/252 = 66.4% (52.5%, 78.0%)	125.7/252 = 49.9% (36.9%, 62.9%)

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 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)	848	1075.4/18035.1 = 6.0% (4.6%, 7.6%)	2825.9/18035.1 = 15.7% (13.4%, 18.3%)	1529.4/18035.1 = 8.5% (6.8%, 10.5%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	848	9909.2/18035.1 = 54.9% (51.2%, 58.6%)	11346.4/18035.1 = 62.9% (59.2%, 66.5%)	8466.2/18035.1 = 46.9% (43.3%, 50.6%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	848	8785.2/18035.1 = 48.7% (45.1%, 52.4%)	13786/18035.1 = 76.4% (73.0%, 79.6%)	10691.4/18035.1 = 59.3% (55.5%, 62.9%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	265	201.3/1980.7 = 10.2% (7.0%, 14.6%)	457.7/1980.7 = 23.1% (18.1%, 29.0%)	283.5/1980.7 = 14.3% (10.4%, 19.4%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	265	1475.1/1980.7 = 74.5% (68.0%, 80.0%)	1584.8/1980.7 = 80.0% (73.9%, 85.0%)	1178.8/1980.7 = 59.5% (52.9%, 65.8%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	265	1217.1/1980.7 = 61.4% (54.6%, 67.9%)	1731.2/1980.7 = 87.4% (81.7%, 91.5%)	1377.9/1980.7 = 69.6% (62.8%, 75.6%)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	266	51.4/1886.3 = 2.7% (1.4%, 5.2%)	190.7/1886.3 = 10.1% (7.3%, 13.9%)	66.3/1886.3 = 3.5% (2.0%, 6.1%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	266	722.7/1886.3 = 38.3% (32.2%, 44.8%)	944.8/1886.3 = 50.1% (43.4%, 56.8%)	554.2/1886.3 = 29.4% (24.5%, 34.8%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	266	609/1886.3 = 32.3% (26.8%, 38.3%)	1118.4/1886.3 = 59.3% (52.4%, 65.9%)	724.6/1886.3 = 38.4% (32.6%, 44.6%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	65	72.5/1256.9 = 5.8% (2.2%, 14.3%)	179.2/1256.9 = 14.3% (7.4%, 25.7%)	79.7/1256.9 = 6.3% (2.6%, 14.7%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	65	586.6/1256.9 = 46.7% (32.9%, 61.0%)	626.1/1256.9 = 49.8% (35.7%, 63.9%)	556.1/1256.9 = 44.2% (30.7%, 58.7%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	65	440.5/1256.9 = 35.0% (23.1%, 49.1%)	763.4/1256.9 = 60.7% (45.9%, 73.9%)	635.5/1256.9 = 50.6% (36.4%, 64.6%)

(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)	18	20.7/121.3 = 17.1% (3.8%, 51.9%)	34.3/121.3 = 28.3% (9.8%, 58.9%)	25.9/121.3 = 21.4% (5.9%, 54.3%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	94/121.3 = 77.5% (46.3%, 93.2%)	100.3/121.3 = 82.7% (50.5%, 95.7%)	94/121.3 = 77.5% (46.3%, 93.2%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	93.4/121.3 = 77.0% (41.7%, 94.0%)	116.1/121.3 = 95.7% (67.9%, 99.6%)	93.4/121.3 = 77.0% (41.7%, 94.0%)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	14	10.1/92.7 = 10.9% (1.0%, 58.7%)	12.8/92.7 = 13.8% (2.0%, 56.0%)	10.1/92.7 = 10.9% (1.0%, 58.7%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	30.4/92.7 = 32.8% (9.8%, 68.6%)	36.4/92.7 = 39.3% (12.7%, 74.2%)	24.3/92.7 = 26.2% (7.0%, 62.7%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	27.7/92.7 = 29.9% (8.4%, 66.4%)	38.3/92.7 = 41.2% (13.5%, 76.0%)	27.7/92.7 = 29.9% (8.4%, 66.4%)

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)	913	1147.9/19292 = 6.0% (4.7%, 7.5%)	4910.8/19292 = 25.5% (22.5%, 28.6%)	3005.2/19292 = 15.6% (13.4%, 18.1%)
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	913	10495.8/19292 = 54.4% (50.8%, 58.0%)	15270.4/19292 = 79.2% (76.0%, 82.0%)	11972.4/19292 = 62.1% (58.5%, 65.5%)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	913	9225.7/19292 = 47.8% (44.3%, 51.3%)	16592.4/19292 = 86.0% (83.1%, 88.5%)	14549.4/19292 = 75.4% (72.1%, 78.5%)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	222.1/2102 = 10.6% (7.4%, 14.9%)	740.9/2102 = 35.2% (29.4%, 41.6%)	492/2102 = 23.4% (18.5%, 29.1%)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	1569.2/2102 = 74.7% (68.5%, 80.0%)	1873/2102 = 89.1% (84.0%, 92.7%)	1685.1/2102 = 80.2% (74.4%, 84.9%)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	1310.4/2102 = 62.3% (55.7%, 68.6%)	2004.5/2102 = 95.4% (91.7%, 97.5%)	1847.3/2102 = 87.9% (82.4%, 91.8%)
	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	109	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)	0/19333 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	280	61.5/1979 = 3.1% (1.6%, 5.8%)	399.9/1979 = 20.2% (16.1%, 25.0%)	203.5/1979 = 10.3% (7.5%, 14.0%)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	753.1/1979 = 38.1% (32.2%, 44.3%)	1300.3/1979 = 65.7% (58.9%, 72.0%)	981.2/1979 = 49.6% (43.1%, 56.0%)

Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	636.7/1979 = 32.2% (26.9%, 37.9%)	1430/1979 = 72.3% (65.5%, 78.1%)	1156.6/1979 = 58.4% (51.8%, 64.8%)
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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)	453	301.7/12615 = 2.4% (1.4%, 4.2%)	2269.5/12615 = 18.0% (14.5%, 22.1%)	1147.1/12615 = 9.1% (6.7%, 12.2%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	453	5383.1/12615 = 42.7% (37.8%, 47.7%)	9121.9/12615 = 72.3% (67.7%, 76.5%)	6355/12615 = 50.4% (45.4%, 55.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	453	4453.6/12615 = 35.3% (30.7%, 40.2%)	10055.4/12615 = 79.7% (75.3%, 83.5%)	8294.6/12615 = 65.8% (60.8%, 70.4%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	141	81.9/1380 = 5.9% (2.8%, 12.0%)	373.5/1380 = 27.1%	236.3/1380 = 17.1% (11.4%, 24.9%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	925/1380 = 67.0% (58.2%, 74.8%)	1182.7/1380 = 85.7% (78.3%, 90.9%)	1029.7/1380 = 74.6% (66.3%, 81.5%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	715.4/1380 = 51.8% (42.7%, 60.8%)	1291.6/1380 = 93.6% (88.2%, 96.6%)	1154.7/1380 = 83.7% (75.7%, 89.4%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)	0/12512 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	20.8/1316 = 1.6% (0.5%, 5.2%)	129.4/1316 = 9.8% (6.0%, 15.7%)	46.9/1316 = 3.6% (1.6%, 7.6%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	316.1/1316 = 24.0% (17.1%, 32.6%)	717.2/1316 = 54.5% (45.1%, 63.6%)	475.4/1316 = 36.1% (27.9%, 45.2%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	232.3/1316 = 17.7% (11.8%, 25.5%)	817.8/1316 = 62.1% (52.7%, 70.7%)	576.6/1316 = 43.8% (34.9%, 53.2%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	460	846.2/6677 = 12.7% (9.8%, 16.3%)	2641.4/6677 = 39.6% (34.7%, 44.6%)	1858/6677 = 27.8% (23.5%, 32.6%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	460	5112.7/6677 = 76.6% (72.1%, 80.5%)	6148.5/6677 = 92.1% (88.9%, 94.4%)	5617.4/6677 = 84.1% (80.1%, 87.5%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	460	4772.1/6677 = 71.5% (66.8%, 75.8%)	6537/6677 = 97.9% (96.2%, 98.9%)	6254.8/6677 = 93.7% (91.0%, 95.6%)

(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	140.2/722 = 19.4% (13.2%, 27.6%)	367.4/722 = 50.9% (41.9%, 59.9%)	255.7/722 = 35.4% (27.4%, 44.4%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	644.2/722 = 89.2% (82.7%, 93.5%)	690.3/722 = 95.6% (90.1%, 98.1%)	655.4/722 = 90.8% (84.4%, 94.7%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	595.1/722 = 82.4% (74.4%, 88.3%)	712.9/722 = 98.7% (91.4%, 99.8%)	692.6/722 = 95.9% (89.9%, 98.4%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)	0/6821 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	40.7/663 = 6.1% (2.9%, 12.4%)	270.5/663 = 40.8% (32.0%, 50.3%)	156.6/663 = 23.6% (16.6%, 32.4%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	436.9/663 = 65.9% (56.1%, 74.5%)	583.1/663 = 87.9% (79.7%, 93.1%)	505.8/663 = 76.3% (66.8%, 83.7%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	404.4/663 = 61.0% (51.5%, 69.7%)	612.1/663 = 92.3% (84.4%, 96.4%)	580/663 = 87.5% (79.1%, 92.8%)

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 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)	454	596.8/7754 = 7.7% (5.5%, 10.6%)	1831/7754 = 23.6% (19.7%, 28.0%)	1264.2/7754 = 16.3% (13.0%, 20.2%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	4049.4/7754 = 52.2% (47.3%, 57.1%)	6287.2/7754 = 81.1% (76.9%, 84.7%)	4897/7754 = 63.2% (58.2%, 67.9%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	3832.8/7754 = 49.4% (44.5%, 54.4%)	6662.1/7754 = 85.9% (81.7%, 89.3%)	5839.7/7754 = 75.3% (70.6%, 79.5%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	84/855 = 9.8% (5.7%, 16.4%)	284.6/855 = 33.3% (25.8%, 41.7%)	180.6/855 = 21.1% (15.1%, 28.8%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	637.1/855 = 74.5% (65.8%, 81.6%)	788.4/855 = 92.2% (86.2%, 95.7%)	684.9/855 = 80.1% (71.8%, 86.4%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	557.1/855 = 65.2% (56.0%, 73.3%)	815.8/855 = 95.4% (89.0%, 98.2%)	772.5/855 = 90.4% (82.8%, 94.8%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	53	0/7777 = 0% (0.0%, 0.0%)	0/7777 = 0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	53	0/7777 = 0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	53	0/7777 = 0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)	0/7777 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	23.3/796 = 2.9% (1.3%, 6.7%)	207.9/796 = 26.1% (19.3%, 34.3%)	99.2/796 = 12.5% (8.3%, 18.3%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	309.6/796 = 38.9% (30.9%, 47.5%)	570.4/796 = 71.7% (61.9%, 79.7%)	436.4/796 = 54.8% (45.4%, 63.9%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	299.2/796 = 37.6% (30.0%, 45.8%)	649.7/796 = 81.6% (72.5%, 88.2%)	513/796 = 64.5% (55.0%, 72.9%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	459	551.2/11538 = 4.8% (3.3%, 6.8%)	3079.8/11538 = 26.7% (22.7%, 31.1%)	1741/11538 = 15.1% (12.2%, 18.5%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	459	6446.4/11538 = 55.9% (50.8%, 60.8%)	8983.2/11538 = 77.9% (73.2%, 81.9%)	7075.5/11538 = 61.3% (56.3%, 66.1%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	459	5392.9/11538 = 46.7% (42.0%, 51.6%)	9930.4/11538 = 86.1% (81.9%, 89.4%)	8709.8/11538 = 75.5% (70.7%, 79.7%)

(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)	143	138.1/1247 = 11.1% (6.8%, 17.5%)	456.3/1247 = 36.6% (28.4%, 45.7%)	311.5/1247 = 25.0% (18.2%, 33.3%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	143	932/1247 = 74.7% (65.8%, 82.0%)	1084.7/1247 = 87.0% (79.0%, 92.2%)	1000.3/1247 = 80.2% (71.8%, 86.6%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	143	753.3/1247 = 60.4% (51.0%, 69.1%)	1188.7/1247 = 95.3% (89.9%, 97.9%)	1074.8/1247 = 86.2% (77.9%, 91.7%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)	0/11556 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	139	38.2/1183 = 3.2% (1.3%, 7.7%)	192/1183 = 16.2% (11.4%, 22.5%)	104.4/1183 = 8.8% (5.4%, 14.2%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	443.4/1183 = 37.5% (29.4%, 46.3%)	729.9/1183 = 61.7% (52.1%, 70.4%)	544.8/1183 = 46.1% (37.4%, 54.9%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	337.5/1183 = 28.5% (21.6%, 36.6%)	780.3/1183 = 66.0% (56.2%, 74.5%)	643.6/1183 = 54.4% (45.2%, 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 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)	226	201.4/5064 = 4.0% (2.0%, 7.8%)	820.5/5064 = 16.2% (11.6%, 22.2%)	534.7/5064 = 10.6% (6.9%, 15.8%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	2039.2/5064 = 40.3% (33.6%, 47.3%)	3814/5064 = 75.3% (69.3%, 80.5%)	2617.9/5064 = 51.7% (44.8%, 58.6%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	1953.3/5064 = 38.6% (32.0%, 45.6%)	4035.1/5064 = 79.7% (73.5%, 84.7%)	3339.1/5064 = 65.9% (59.1%, 72.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	69	24.5/554 = 4.4% (1.3%, 14.2%)	136.3/554 = 24.6% (15.9%, 36.0%)	76.1/554 = 13.7% (7.4%, 24.0%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	373/554 = 67.3% (55.0%, 77.6%)	500.3/554 = 90.3% (81.7%, 95.1%)	413.9/554 = 74.7% (62.9%, 83.7%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	301.9/554 = 54.5% (41.7%, 66.7%)	514.8/554 = 92.9% (83.2%, 97.2%)	474.9/554 = 85.7% (74.3%, 92.6%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	26	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)	0/5050 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	4.5/533 = 0.8% (0.1%, 6.0%)	77.7/533 = 14.6% (7.6%, 26.1%)	21.8/533 = 4.1% (1.5%, 10.6%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	114.5/533 = 21.5% (12.6%, 34.2%)	335.2/533 = 62.9% (49.4%, 74.6%)	217.3/533 = 40.8% (28.6%, 54.2%)

(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	98.3/533 = 18.4% (10.2%, 31.1%)	388.1/533 = 72.8% (59.7%, 82.9%)	260.8/533 = 48.9% (36.1%, 61.9%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	100.3/7551 = 1.3% (0.5%, 3.6%)	1448.9/7551 = 19.2% (14.4%, 25.1%)	612.4/7551 = 8.1% (5.3%, 12.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	3343.9/7551 = 44.3% (37.5%, 51.3%)	5307.9/7551 = 70.3% (63.6%, 76.2%)	3737.1/7551 = 49.5% (42.5%, 56.5%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	2500.3/7551 = 33.1% (26.9%, 40.0%)	6020.3/7551 = 79.7% (73.4%, 84.8%)	4955.5/7551 = 65.6% (58.7%, 72.0%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	72	57.4/826 = 6.9% (2.7%, 16.6%)	237.2/826 = 28.7% (18.6%, 41.6%)	160.2/826 = 19.4% (11.3%, 31.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	72	552/826 = 66.8% (54.2%, 77.4%)	682.4/826 = 82.6% (70.9%, 90.3%)	615.8/826 = 74.5% (62.5%, 83.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	72	413.4/826 = 50.1% (37.5%, 62.6%)	776.8/826 = 94.0% (86.2%, 97.6%)	679.8/826 = 82.3% (70.4%, 90.1%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)	0/7462 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	16.3/783 = 2.1% (0.5%, 8.6%)	51.7/783 = 6.6% (2.9%, 14.2%)	25.1/783 = 3.2% (1.0%, 10.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	201.6/783 = 25.8% (16.4%, 38.1%)	382/783 = 48.8% (36.0%, 61.7%)	258.2/783 = 33.0% (22.4%, 45.6%)

(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)	70	134/783 = 17.1% (9.8%, 28.2%)	429.7/783 = 54.9% (41.7%, 67.4%)	315.8/783 = 40.3% (28.4%, 53.5%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	228	395.3/2690 = 14.7% (10.2%, 20.6%)	1010.4/2690 = 37.6% (31.1%, 44.5%)	729.4/2690 = 27.1% (21.3%, 33.8%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	228	2010.2/2690 = 74.7% (68.3%, 80.3%)	2473.2/2690 = 91.9% (87.1%, 95.1%)	2279/2690 = 84.7% (78.9%, 89.1%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	228	1879.4/2690 = 69.9% (63.1%, 75.9%)	2627/2690 = 97.7% (94.3%, 99.1%)	2500.6/2690 = 93.0% (88.5%, 95.8%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	59.5/301 = 19.8% (11.0%, 32.9%)	148.3/301 = 49.3% (36.4%, 62.2%)	104.4/301 = 34.7% (23.3%, 48.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	264.2/301 = 87.8% (76.5%, 94.1%)	288.1/301 = 95.7% (85.4%, 98.8%)	271/301 = 90.0% (78.7%, 95.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	255.2/301 = 84.8% (74.4%, 91.4%)	301/301 = 100.0% (100.0%, 100.0%)	297.6/301 = 98.9% (92.1%, 99.8%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)	0/2727 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	72	18.8/263 = 7.2% (2.8%, 17.2%)	130.2/263 = 49.5% (36.3%, 62.8%)	77.4/263 = 29.4% (18.6%, 43.2%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	195.2/263 = 74.2% (60.7%, 84.3%)	235.2/263 = 89.4% (77.8%, 95.3%)	219.2/263 = 83.3% (70.7%, 91.2%)

(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)	72	200.9/263 = 76.4% (63.9%, 85.5%)	261.6/263 = 99.5% (96.2%, 99.9%)	252.2/263 = 95.9% (85.9%, 98.9%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	232	450.9/3987 = 11.3% (7.8%, 16.2%)	1630.9/3987 = 40.9% (34.2%, 48.0%)	1128.6/3987 = 28.3% (22.4%, 35.0%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	232	3102.5/3987 = 77.8% (71.4%, 83.1%)	3675.3/3987 = 92.2% (87.6%, 95.2%)	3338.4/3987 = 83.7% (77.9%, 88.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	232	2892.6/3987 = 72.6% (65.9%, 78.3%)	3910/3987 = 98.1% (95.7%, 99.1%)	3754.2/3987 = 94.2% (90.3%, 96.5%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	80.7/421 = 19.2% (11.3%, 30.7%)	219.1/421 = 52.1% (39.6%, 64.3%)	151.3/421 = 35.9% (25.2%, 48.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	380/421 = 90.3% (81.0%, 95.3%)	402.2/421 = 95.5% (86.9%, 98.6%)	384.5/421 = 91.3% (82.2%, 96.0%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	339.9/421 = 80.7% (68.2%, 89.1%)	411.9/421 = 97.8% (85.5%, 99.7%)	395/421 = 93.8% (83.5%, 97.9%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)	0/4094 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	21.9/400 = 5.5% (1.8%, 15.8%)	140.4/400 = 35.1% (23.7%, 48.5%)	79.2/400 = 19.8% (11.4%, 32.2%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	241.8/400 = 60.4% (46.6%, 72.8%)	347.8/400 = 87.0% (74.3%, 93.9%)	286.6/400 = 71.7% (57.8%, 82.4%)

(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)	69	203.5/400 = 50.9% (37.6%, 64.0%)	350.5/400 = 87.6% (74.9%, 94.4%)	327.8/400 = 82.0% (68.9%, 90.3%)

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

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

Table 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)	416	550.9/8876.1 = 6.2% (4.3%, 8.8%)	2145.5/8876.1 = 24.2% (20.0%, 28.9%)	1423.2/8876.1 = 16.0% (12.7%, 20.0%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	416	5007.8/8876.1 = 56.4% (50.9%, 61.8%)	6980.1/8876.1 = 78.6% (73.6%, 82.9%)	5685.6/8876.1 = 64.1% (58.6%, 69.2%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	416	4328.8/8876.1 = 48.8% (43.4%, 54.2%)	7617.1/8876.1 = 85.8% (81.2%, 89.4%)	6673.7/8876.1 = 75.2% (70.0%, 79.8%)
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	90.8/877.8 = 10.3% (5.9%, 17.6%)	357.9/877.8 = 40.8% (31.5%, 50.7%)	235.2/877.8 = 26.8% (19.0%, 36.4%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	672.9/877.8 = 76.7% (67.0%, 84.1%)	763.3/877.8 = 87.0% (77.8%, 92.7%)	702.9/877.8 = 80.1% (70.8%, 86.9%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	575.7/877.8 = 65.6% (55.2%, 74.6%)	835.3/877.8 = 95.2% (88.5%, 98.0%)	769.4/877.8 = 87.7% (78.2%, 93.4%)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)	0/11015.9 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	126	32.1/899.8 = 3.6% (1.4%, 8.6%)	188.9/899.8 = 21.0% (14.7%, 29.1%)	93.2/899.8 = 10.4% (6.3%, 16.6%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	126	339.6/899.8 = 37.7% (29.4%, 46.9%)	574.7/899.8 = 63.9% (53.1%, 73.4%)	451.6/899.8 = 50.2% (40.4%, 60.0%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	126	239.7/899.8 = 26.6% (19.5%, 35.3%)	665.8/899.8 = 74.0% (63.3%, 82.4%)	558.1/899.8 = 62.0% (51.5%, 71.6%)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	497	597/10415.9 = 5.7% (4.1%, 8.0%)	2765.4/10415.9 = 26.5% (22.5%, 31.0%)	1582/10415.9 = 15.2% (12.2%, 18.7%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	497	5488/10415.9 = 52.7% (47.7%, 57.6%)	8290.3/10415.9 = 79.6% (75.2%, 83.4%)	6286.8/10415.9 = 60.4% (55.4%, 65.1%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	497	4896.9/10415.9 = 47.0% (42.2%, 51.9%)	8975.3/10415.9 = 86.2% (82.0%, 89.5%)	7875.8/10415.9 = 75.6% (70.9%, 79.8%)

(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	131.2/1224.2 = 10.7% (6.5%, 17.1%)	383.1/1224.2 = 31.3% (23.8%, 39.8%)	256.8/1224.2 = 21.0% (15.1%, 28.5%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	896.2/1224.2 = 73.2% (64.5%, 80.5%)	1109.7/1224.2 = 90.7% (84.0%, 94.7%)	982.3/1224.2 = 80.2% (72.2%, 86.4%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	734.8/1224.2 = 60.0% (51.0%, 68.4%)	1169.2/1224.2 = 95.5% (90.1%, 98.0%)	1077.9/1224.2 = 88.1% (80.8%, 92.8%)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)	0/8317.1 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	154	29.5/1079.2 = 2.7% (1.1%, 6.5%)	211/1079.2 = 19.6% (14.0%, 26.6%)	110.3/1079.2 = 10.2% (6.5%, 15.7%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	154	413.5/1079.2 = 38.3% (29.9%, 47.5%)	725.6/1079.2 = 67.2% (57.4%, 75.7%)	529.6/1079.2 = 49.1% (39.9%, 58.3%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	154	397/1079.2 = 36.8% (28.9%, 45.4%)	764.1/1079.2 = 70.8% (61.0%, 79.0%)	598.5/1079.2 = 55.5% (46.2%, 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 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)	238	81/6678.1 = 1.2% (0.4%, 3.3%)	1247.4/6678.1 = 18.7% (13.8%, 24.7%)	588.5/6678.1 = 8.8% (5.7%, 13.4%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	238	2658.5/6678.1 = 39.8% (33.2%, 46.8%)	4822.6/6678.1 = 72.2% (65.8%, 77.9%)	3137.6/6678.1 = 47.0% (40.1%, 54.0%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	238	2259.2/6678.1 = 33.8% (27.6%, 40.7%)	5316.6/6678.1 = 79.6% (73.4%, 84.7%)	4394.1/6678.1 = 65.8% (59.0%, 72.0%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	79	51.5/790.2 = 6.5% (2.5%, 16.2%)	189.7/790.2 = 24.0% (15.0%, 36.1%)	110.3/790.2 = 14.0% (7.4%, 24.7%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	509.5/790.2 = 64.5% (52.2%, 75.1%)	697.7/790.2 = 88.3% (78.5%, 94.0%)	587.7/790.2 = 74.4% (62.9%, 83.2%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	393.6/790.2 = 49.8% (37.7%, 62.0%)	744.4/790.2 = 94.2% (86.3%, 97.7%)	670.1/790.2 = 84.8% (74.2%, 91.5%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)	0/4732.7 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	73	14.7/711.4 = 2.1% (0.5%, 9.0%)	66.5/711.4 = 9.4% (4.5%, 18.6%)	30/711.4 = 4.2% (1.5%, 11.4%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	73	181.6/711.4 = 25.5% (15.6%, 38.8%)	388.5/711.4 = 54.6% (41.5%, 67.1%)	257/711.4 = 36.1% (24.7%, 49.3%)

(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)	73	157.7/711.4 = 22.2% (13.5%, 34.2%)	417.9/711.4 = 58.7% (45.4%, 70.9%)	273.7/711.4 = 38.5% (27.1%, 51.3%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	215	220.7/5936.9 = 3.7% (1.9%, 7.2%)	1022.1/5936.9 = 17.2% (12.4%, 23.4%)	558.6/5936.9 = 9.4% (6.1%, 14.1%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	215	2724.6/5936.9 = 45.9% (38.7%, 53.3%)	4299.3/5936.9 = 72.4% (65.4%, 78.5%)	3217.4/5936.9 = 54.2% (46.9%, 61.4%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	215	2194.5/5936.9 = 37.0% (30.2%, 44.3%)	4738.8/5936.9 = 79.8% (73.2%, 85.1%)	3900.5/5936.9 = 65.7% (58.4%, 72.3%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	62	30.3/589.8 = 5.1% (1.6%, 15.7%)	183.7/589.8 = 31.2% (20.1%, 44.8%)	126/589.8 = 21.4% (12.3%, 34.4%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62	415.4/589.8 = 70.4% (57.0%, 81.1%)	485/589.8 = 82.2% (69.2%, 90.5%)	442/589.8 = 74.9% (61.9%, 84.6%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	62	321.8/589.8 = 54.6% (40.8%, 67.6%)	547.2/589.8 = 92.8% (83.1%, 97.1%)	484.6/589.8 = 82.2% (68.8%, 90.6%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)	0/7779.3 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	66	6.1/604.6 = 1.0% (0.1%, 7.1%)	62.8/604.6 = 10.4% (5.0%, 20.2%)	16.9/604.6 = 2.8% (0.9%, 8.8%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	66	134.6/604.6 = 22.3% (14.0%, 33.5%)	328.8/604.6 = 54.4% (40.4%, 67.7%)	218.5/604.6 = 36.1% (24.6%, 49.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	66	74.6/604.6 = 12.3% (6.2%, 23.1%)	400/604.6 = 66.2% (51.8%, 78.0%)	302.9/604.6 = 50.1% (36.6%, 63.6%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	259	516/3737.8 = 13.8% (9.7%, 19.2%)	1518/3737.8 = 40.6% (34.2%, 47.3%)	993.5/3737.8 = 26.6% (21.2%, 32.8%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	259	2829.5/3737.8 = 75.7% (69.6%, 80.9%)	3467.8/3737.8 = 92.8% (88.6%, 95.5%)	3149.2/3737.8 = 84.3% (78.9%, 88.5%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	259	2637.7/3737.8 = 70.6% (64.3%, 76.2%)	3658.7/3737.8 = 97.9% (95.3%, 99.1%)	3481.7/3737.8 = 93.1% (89.2%, 95.7%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	79.7/433.9 = 18.4% (10.8%, 29.4%)	193.3/433.9 = 44.6% (33.2%, 56.5%)	146.5/433.9 = 33.8% (24.0%, 45.2%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	386.7/433.9 = 89.1% (79.0%, 94.7%)	412.1/433.9 = 95.0% (85.4%, 98.4%)	394.5/433.9 = 90.9% (80.7%, 96.0%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	341.2/433.9 = 78.6% (67.0%, 87.0%)	424.8/433.9 = 97.9% (86.0%, 99.7%)	407.7/433.9 = 94.0% (84.1%, 97.9%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)	0/3584.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	81	14.7/367.8 = 4.0% (1.5%, 10.3%)	144.5/367.8 = 39.3% (28.0%, 51.8%)	80.4/367.8 = 21.8% (13.5%, 33.4%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	81	231.9/367.8 = 63.1% (49.9%, 74.5%)	337.1/367.8 = 91.7% (80.9%, 96.6%)	272.6/367.8 = 74.1% (60.8%, 84.1%)

(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)	81	239.3/367.8 = 65.1% (52.2%, 76.0%)	346.3/367.8 = 94.1% (82.9%, 98.2%)	324.9/367.8 = 88.3% (76.5%, 94.6%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	201	330.2/2939.2 = 11.2% (7.6%, 16.4%)	1123.4/2939.2 = 38.2% (31.0%, 46.0%)	864.6/2939.2 = 29.4% (22.8%, 37.0%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	201	2283.2/2939.2 = 77.7% (70.6%, 83.4%)	2680.7/2939.2 = 91.2% (85.7%, 94.7%)	2468.2/2939.2 = 84.0% (77.3%, 88.9%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	201	2134.3/2939.2 = 72.6% (65.2%, 79.0%)	2878.3/2939.2 = 97.9%	2773.1/2939.2 = 94.3% (90.0%, 96.9%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	61	60.5/288.1 = 21.0% (11.5%, 35.3%)	174.1/288.1 = 60.4% (46.3%, 73.0%)	109.2/288.1 = 37.9% (25.0%, 52.7%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	61	257.5/288.1 = 89.4% (80.2%, 94.6%)	278.3/288.1 = 96.6% (89.7%, 98.9%)	260.9/288.1 = 90.6% (81.7%, 95.4%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	61	253.9/288.1 = 88.1% (76.7%, 94.4%)	288.1/288.1 = 100.0% (100.0%, 100.0%)	284.9/288.1 = 98.9% (92.1%, 99.9%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)	0/3236.5 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	60	26/295.2 = 8.8% (3.1%, 22.4%)	126/295.2 = 42.7% (29.1%, 57.5%)	76.3/295.2 = 25.8% (15.0%, 40.7%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	60	205/295.2 = 69.5% (54.1%, 81.4%)	245.9/295.2 = 83.3% (68.4%, 92.0%)	233.2/295.2 = 79.0% (64.4%, 88.6%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	60	165.1/295.2 = 55.9% (40.9%, 69.9%)	265.9/295.2 = 90.1% (74.7%, 96.5%)	255.2/295.2 = 86.4% (71.4%, 94.2%)

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 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)	374	539.6/10111.8 = 5.3% (3.6%, 7.8%)	2477.3/10111.8 = 24.5% (20.3%, 29.3%)	1493.4/10111.8 = 14.8% (11.7%, 18.5%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	374	5689.2/10111.8 = 56.3% (50.6%, 61.7%)	8215.3/10111.8 = 81.2% (76.2%, 85.4%)	6471.3/10111.8 = 64.0% (58.4%, 69.2%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	374	4773.5/10111.8 = 47.2% (41.9%, 52.6%)	8600.3/10111.8 = 85.1% (80.3%, 88.8%)	7648.8/10111.8 = 75.6% (70.4%, 80.2%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	106	75/993.9 = 7.5% (3.6%, 15.1%)	293.4/993.9 = 29.5% (20.8%, 40.0%)	166.5/993.9 = 16.8% (10.2%, 26.2%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	106	707.6/993.9 = 71.2% (60.6%, 79.9%)	907/993.9 = 91.3% (82.8%, 95.8%)	791/993.9 = 79.6% (69.6%, 86.9%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	106	610.1/993.9 = 61.4% (50.5%, 71.3%)	965.3/993.9 = 97.1% (91.0%, 99.1%)	891.2/993.9 = 89.7% (80.3%, 94.9%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	44	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)	0/10019.2 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	105	19.6/1003.3 = 1.9% (0.5%, 6.7%)	182/1003.3 = 18.1% (12.5%, 25.6%)	100.6/1003.3 = 10.0% (6.2%, 15.9%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	105	375.2/1003.3 = 37.4% (28.3%, 47.5%)	645.1/1003.3 = 64.3% (53.5%, 73.8%)	524.4/1003.3 = 52.3% (41.8%, 62.5%)

(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)	105	332.3/1003.3 = 33.1% (24.7%, 42.8%)	688.2/1003.3 = 68.6% (57.9%, 77.6%)	553.3/1003.3 = 55.2% (45.1%, 64.8%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	477	557.4/8055.6 = 6.9% (5.0%, 9.5%)	2157.3/8055.6 = 26.8% (22.7%, 31.3%)	1358.7/8055.6 = 16.9% (13.6%, 20.7%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	477	4275.6/8055.6 = 53.1% (48.3%, 57.8%)	6192.9/8055.6 = 76.9% (72.4%, 80.8%)	4791.6/8055.6 = 59.5% (54.6%, 64.2%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	477	3945.2/8055.6 = 49.0% (44.2%, 53.8%)	7026.7/8055.6 = 87.2% (83.5%, 90.2%)	6040.3/8055.6 = 75.0% (70.4%, 79.1%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	164	147.1/1004.4 = 14.6% (9.7%, 21.5%)	416.6/1004.4 = 41.5% (33.6%, 49.8%)	311.3/1004.4 = 31.0% (23.8%, 39.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	164	793.6/1004.4 = 79.0% (71.3%, 85.1%)	880.2/1004.4 = 87.6% (80.6%, 92.4%)	818.9/1004.4 = 81.5% (74.2%, 87.2%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	164	656.1/1004.4 = 65.3% (56.8%, 73.0%)	935.4/1004.4 = 93.1% (86.8%, 96.6%)	870.3/1004.4 = 86.6% (79.3%, 91.7%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)	0/7726.8 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	152	38.2/801.6 = 4.8% (2.2%, 10.1%)	204.2/801.6 = 25.5% (18.7%, 33.7%)	89.3/801.6 = 11.1% (6.9%, 17.5%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	352.6/801.6 = 44.0% (35.5%, 52.9%)	553.8/801.6 = 69.1% (59.7%, 77.1%)	422.4/801.6 = 52.7% (43.7%, 61.5%)

(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)	152	284.7/801.6 = 35.5% (28.0%, 43.8%)	602.6/801.6 = 75.2% (65.7%, 82.7%)	477.8/801.6 = 59.6% (50.4%, 68.2%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	62	50.9/1124.6 = 4.5% (1.7%, 11.3%)	276.2/1124.6 = 24.6% (14.8%, 37.9%)	153.1/1124.6 = 13.6% (7.1%, 24.5%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	62	531/1124.6 = 47.2% (34.1%, 60.7%)	862.3/1124.6 = 76.7% (62.1%, 86.8%)	709.5/1124.6 = 63.1% (48.4%, 75.7%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	62	507/1124.6 = 45.1% (32.1%, 58.8%)	965.4/1124.6 = 85.8% (71.0%, 93.7%)	860.4/1124.6 = 76.5% (62.1%, 86.6%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	13	0/103.7 = 0.0% (0.0%, 0.0%)	30.9/103.7 = 29.8% (5.8%, 74.6%)	14.3/103.7 = 13.8% (1.7%, 60.3%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	13	68/103.7 = 65.5% (15.6%, 95.1%)	85.8/103.7 = 82.8% (13.9%, 99.3%)	75.2/103.7 = 72.5% (16.2%, 97.3%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	13	44.2/103.7 = 42.6% (9.3%, 84.3%)	103.7/103.7 = 100.0% (100.0%, 100.0%)	85.8/103.7 = 82.8% (13.9%, 99.3%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0/1587 = 0.0%	0/1587 = 0.0%	0/1587 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	23	3.8/174.1 = 2.2% (0.2%, 17.4%)	13.7/174.1 = 7.8% (2.4%, 23.0%)	13.7/174.1 = 7.8% (2.4%, 23.0%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	23	25.3/174.1 = 14.5% (5.9%, 31.4%)	101.3/174.1 = 58.2% (30.3%, 81.7%)	34.4/174.1 = 19.8% (8.7%, 39.0%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	23	19.7/174.1 = 11.3% (4.0%, 27.8%)	139.1/174.1 = 79.9% (52.6%, 93.4%)	125.5/174.1 = 72.1% (45.9%, 88.7%)

(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)	196	322.7/3997.3 = 8.1% (5.1%, 12.5%)	1219.7/3997.3 = 30.5% (24.1%, 37.8%)	782.4/3997.3 = 19.6% (14.4%, 26.0%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	196	2175.9/3997.3 = 54.4% (47.0%, 61.7%)	3115.1/3997.3 = 77.9% (70.8%, 83.7%)	2476.6/3997.3 = 62.0% (54.4%, 69.0%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	196	1953/3997.3 = 48.9% (41.5%, 56.2%)	3523.3/3997.3 = 88.1% (82.2%, 92.3%)	3021/3997.3 = 75.6% (68.3%, 81.6%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	92/475.6 = 19.3% (10.8%, 32.2%)	212.9/475.6 = 44.8% (32.2%, 58.0%)	158.3/475.6 = 33.3% (22.1%, 46.8%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	397.7/475.6 = 83.6% (71.1%, 91.4%)	434.1/475.6 = 91.3% (79.6%, 96.5%)	423/475.6 = 88.9% (77.2%, 95.0%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	327.4/475.6 = 68.8% (55.1%, 79.9%)	464.5/475.6 = 97.7% (84.4%, 99.7%)	428.8/475.6 = 90.2% (77.7%, 96.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)	0/3812.6 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	56	19.3/346.9 = 5.6% (1.6%, 18.0%)	100.5/346.9 = 29.0% (17.9%, 43.2%)	44.2/346.9 = 12.8% (6.0%, 25.1%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	56	153.1/346.9 = 44.1% (30.6%, 58.6%)	241.1/346.9 = 69.5% (54.2%, 81.4%)	178.3/346.9 = 51.4% (37.1%, 65.4%)

(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)	56	109/346.9 = 31.4% (20.5%, 44.8%)	269.3/346.9 = 77.6% (62.3%, 87.9%)	213/346.9 = 61.4% (46.6%, 74.4%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	332	302/5012.5 = 6.0% (4.0%, 8.9%)	1206.7/5012.5 = 24.1% (19.6%, 29.2%)	697.2/5012.5 = 13.9% (10.6%, 18.0%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	332	2663.7/5012.5 = 53.1% (47.4%, 58.8%)	3784.2/5012.5 = 75.5% (70.0%, 80.3%)	3060.8/5012.5 = 61.1% (55.3%, 66.6%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	332	2268.2/5012.5 = 45.3% (39.6%, 51.0%)	4426.6/5012.5 = 88.3% (84.1%, 91.5%)	3778.3/5012.5 = 75.4% (70.0%, 80.1%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	111	51/600 = 8.5% (4.9%, 14.3%)	187.2/600 = 31.2% (22.7%, 41.1%)	137.9/600 = 23.0% (15.9%, 32.1%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	111	399.3/600 = 66.6% (55.3%, 76.2%)	496.2/600 = 82.7% (71.6%, 90.1%)	417.4/600 = 69.6% (58.3%, 78.9%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	111	346/600 = 57.7% (46.6%, 68.0%)	542.1/600 = 90.3% (80.8%, 95.4%)	494.8/600 = 82.5% (71.2%, 89.9%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	38	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	38	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 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	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)	0/4983 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	94	17.5/474.5 = 3.7% (1.4%, 9.6%)	95.7/474.5 = 20.2% (13.0%, 30.0%)	65.5/474.5 = 13.8% (7.9%, 23.1%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	94	200.6/474.5 = 42.3% (31.6%, 53.8%)	298.5/474.5 = 62.9% (50.1%, 74.1%)	228.4/474.5 = 48.1% (37.0%, 59.5%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	94	162.5/474.5 = 34.2% (24.8%, 45.2%)	321.7/474.5 = 67.8% (54.6%, 78.7%)	249.4/474.5 = 52.6% (40.9%, 64.0%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	18	37.5/324.9 = 11.6% (2.1%, 44.2%)	56.2/324.9 = 17.3% (4.3%, 49.5%)	56.2/324.9 = 17.3% (4.3%, 49.5%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	18	171.6/324.9 = 52.8% (23.8%, 80.0%)	282.7/324.9 = 87.0% (52.2%, 97.6%)	226.5/324.9 = 69.7% (38.5%, 89.4%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18	113.5/324.9 = 34.9% (13.4%, 65.0%)	304.7/324.9 = 93.8% (56.3%, 99.4%)	284.5/324.9 = 87.5% (53.8%, 97.7%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	0/32.2 = 0.0%	10.6/32.2 = 32.7%	0/32.2 = 0.0%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	24.9/32.2 = 77.4%	24.9/32.2 = 77.4%	24.9/32.2 = 77.4%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	20.1/32.2 = 62.3%	32.2/32.2 = 100.0%	32.2/32.2 = 100.0%
Asian	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/258 = 0.0%	0/258 = 0.0%	0/258 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	10	0/40.7 = 0.0% (0.0%, 0.0%)	8.3/40.7 = 20.5% (1.8%, 78.4%)	3.8/40.7 = 9.3% (0.3%, 75.9%)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	10	8.3/40.7 = 20.5% (1.8%, 78.4%)	24.3/40.7 = 59.8% (12.5%, 94.0%)	19.8/40.7 = 48.7% (8.0%, 91.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	10	8.3/40.7 = 20.5% (1.8%, 78.4%)	39.3/40.7 = 96.6% (48.3%, 99.9%)	21.4/40.7 = 52.6% (9.0%, 92.6%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	149	233.5/5037.1 = 4.6% (2.5%, 8.6%)	1213.1/5037.1 = 24.1% (17.8%, 31.7%)	644.9/5037.1 = 12.8% (8.8%, 18.2%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	149	2641.2/5037.1 = 52.4% (43.9%, 60.8%)	4028.1/5037.1 = 80.0% (71.7%, 86.3%)	2981.2/5037.1 = 59.2% (50.5%, 67.4%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	149	2278.9/5037.1 = 45.2% (37.1%, 53.6%)	4116.7/5037.1 = 81.7% (73.6%, 87.8%)	3659.6/5037.1 = 72.7% (64.1%, 79.8%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	68.3/561.8 = 12.2% (5.4%, 25.2%)	223.4/561.8 = 39.8% (26.3%, 55.0%)	127.8/561.8 = 22.8% (12.5%, 37.8%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	425.1/561.8 = 75.7% (59.6%, 86.8%)	516.9/561.8 = 92.0% (76.6%, 97.6%)	455.2/561.8 = 81.0% (65.2%, 90.7%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	346.8/561.8 = 61.7% (46.1%, 75.3%)	540.5/561.8 = 96.2% (85.2%, 99.1%)	480.4/561.8 = 85.5% (70.2%, 93.7%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 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	Negative	Anti Spike IgG (BAU/ml)	18	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)	0/5012.8 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	48	6.6/554.6 = 1.2% (0.2%, 8.5%)	100.9/554.6 = 18.2% (10.1%, 30.5%)	43.2/554.6 = 7.8% (3.5%, 16.5%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	48	215.1/554.6 = 38.8% (25.9%, 53.4%)	376.8/554.6 = 67.9% (51.7%, 80.8%)	287.4/554.6 = 51.8% (36.8%, 66.5%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	48	176.9/554.6 = 31.9% (20.6%, 45.8%)	383.7/554.6 = 69.2% (52.6%, 82.0%)	297/554.6 = 53.5% (38.8%, 67.7%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2	0/45.4 = 0.0%	26.7/45.4 = 58.8%	0/45.4 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	2	26.7/45.4 = 58.8%	45.4/45.4 = 100.0%	45.4/45.4 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	2	26.7/45.4 = 58.8%	45.4/45.4 = 100.0%	45.4/45.4 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/5.5 = 0.0%	0/5.5 = 0.0%	0/5.5 = 0.0%

(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	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%	5.5/5.5 = 100.0%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	25	18.8/579.7 = 3.2% (0.4%, 23.2%)	150.8/579.7 = 26.0% (11.2%, 49.5%)	117.7/579.7 = 20.3% (8.0%, 42.7%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	25	366.1/579.7 = 63.2% (40.0%, 81.5%)	522.1/579.7 = 90.1% (70.1%, 97.2%)	403.7/579.7 = 69.6% (46.0%, 86.1%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	25	363.3/579.7 = 62.7% (39.1%, 81.5%)	500.3/579.7 = 86.3% (61.6%, 96.1%)	451.3/579.7 = 77.8% (52.9%, 91.6%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	9	0/77.7 = 0.0% (0.0%, 0.0%)	33.5/77.7 = 43.1% (6.9%, 88.6%)	14.2/77.7 = 18.3% (1.6%, 75.5%)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	9	53.5/77.7 = 68.8% (12.0%, 97.3%)	71.4/77.7 = 91.8% (27.1%, 99.7%)	71.4/77.7 = 91.8% (27.1%, 99.7%)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	9	39.2/77.7 = 50.5% (8.7%, 91.7%)	77.7/77.7 = 100.0% (100.0%, 100.0%)	77.7/77.7 = 100.0% (100.0%, 100.0%)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/447.1 = 0.0%	0/447.1 = 0.0%	0/447.1 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	15	10.1/90.7 = 11.2% (0.7%, 70.1%)	30.2/90.7 = 33.3% (8.1%, 73.9%)	15.6/90.7 = 17.2% (2.3%, 64.5%)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	15	48.2/90.7 = 53.2% (16.6%, 86.7%)	69.2/90.7 = 76.3% (30.6%, 95.9%)	56/90.7 = 61.8% (21.9%, 90.3%)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	15	35.3/90.7 = 39.0% (10.4%, 77.8%)	62.4/90.7 = 68.8% (26.6%, 93.1%)	62.4/90.7 = 68.8% (26.6%, 93.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	12	0/231.3 = 0.0% (0.0%, 0.0%)	112/231.3 = 48.4% (9.3%, 89.6%)	93.2/231.3 = 40.3% (5.6%, 88.4%)

(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)	12	192.3/231.3 = 83.2% (27.4%, 98.5%)	231.3/231.3 = 100.0% (100.0%, 100.0%)	192.3/231.3 = 83.2% (27.4%, 98.5%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	12	211/231.3 = 91.2% (25.9%, 99.7%)	231.3/231.3 = 100.0% (100.0%, 100.0%)	211/231.3 = 91.2% (25.9%, 99.7%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/6.8 = 0.0%	0/6.8 = 0.0%	0/6.8 = 0.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%	6.8/6.8 = 100.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0/254 = 0.0%	0/254 = 0.0%	0/254 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	1.4/28.3 = 4.9%	7.8/28.3 = 27.5%	1.4/28.3 = 4.9%
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	1.4/28.3 = 4.9%	21.7/28.3 = 76.6%	21.7/28.3 = 76.6%
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	28.3/28.3 = 100.0%	28.3/28.3 = 100.0%	28.3/28.3 = 100.0%

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

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

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Underrepresented Minority Status in the U.S.								
URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	187.6/3939 = 4.8% (2.7%, 8.3%)	843.5/3939 = 21.4% (16.4%, 27.5%)	589.7/3939 = 15.0% (10.8%, 20.4%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	2041/3939 = 51.8% (45.0%, 58.5%)	3049.9/3939 = 77.4% (70.9%, 82.8%)	2449.3/3939 = 62.2% (55.3%, 68.6%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	1780.2/3939 = 45.2% (38.8%, 51.7%)	3452.9/3939 = 87.7% (81.9%, 91.8%)	3007.6/3939 = 76.4% (69.8%, 81.9%)
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	19.1/459 = 4.2% (1.7%, 9.7%)	110.4/459 = 24.1% (15.0%, 36.2%)	77.9/459 = 17.0% (9.5%, 28.4%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	268.2/459 = 58.4% (45.3%, 70.4%)	384.1/459 = 83.7% (70.7%, 91.6%)	304.6/459 = 66.4% (53.0%, 77.6%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	266/459 = 57.9% (45.0%, 69.9%)	405.3/459 = 88.3% (75.8%, 94.8%)	380.7/459 = 82.9% (69.8%, 91.1%)
URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)	0/3770 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	70	5.7/418 = 1.4% (0.3%, 5.3%)	75.5/418 = 18.1% (11.5%, 27.1%)	45.1/418 = 10.8% (5.7%, 19.5%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	164.3/418 = 39.3% (28.5%, 51.2%)	284.9/418 = 68.2% (55.3%, 78.7%)	193.7/418 = 46.3% (34.9%, 58.2%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	130.5/418 = 31.2% (22.2%, 41.9%)	287.7/418 = 68.8% (56.0%, 79.3%)	227.4/418 = 54.4% (43.0%, 65.4%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	328.5/4659 = 7.1% (4.5%, 10.9%)	1364.2/4659 = 29.3% (23.4%, 35.9%)	846.6/4659 = 18.2% (13.5%, 23.9%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	2499/4659 = 53.6% (46.9%, 60.2%)	3584.3/4659 = 76.9% (70.4%, 82.4%)	2819.5/4659 = 60.5% (53.6%, 67.0%)

(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)	227	2309.8/4659 = 49.6% (42.8%, 56.3%)	4052.7/4659 = 87.0% (81.4%, 91.1%)	3506.3/4659 = 75.3% (68.7%, 80.9%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	82.9/519 = 16.0% (8.7%, 27.5%)	247.5/519 = 47.7% (35.7%, 59.9%)	174.5/519 = 33.6% (23.0%, 46.3%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	446.3/519 = 86.0% (74.4%, 92.9%)	482.7/519 = 93.0% (82.1%, 97.5%)	471.6/519 = 90.9% (80.0%, 96.1%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	355/519 = 68.4% (55.5%, 79.0%)	507.9/519 = 97.9% (85.7%, 99.7%)	472.2/519 = 91.0% (79.6%, 96.3%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	28	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)	0/4758 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	71	23.1/439 = 5.3% (1.7%, 14.9%)	124/439 = 28.2% (18.6%, 40.4%)	51.8/439 = 11.8% (6.0%, 21.8%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	71	175.2/439 = 39.9% (28.8%, 52.2%)	297.6/439 = 67.8% (54.5%, 78.7%)	215.6/439 = 49.1% (37.1%, 61.3%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	71	138.7/439 = 31.6% (22.2%, 42.8%)	340.9/439 = 77.7% (64.7%, 86.8%)	267.3/439 = 60.9% (48.1%, 72.3%)

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 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)	113	64.1/2570 = 2.5% (0.8%, 7.7%)	435.4/2570 = 16.9% (10.9%, 25.4%)	291.2/2570 = 11.3% (6.6%, 18.9%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	113	1082/2570 = 42.1% (33.1%, 51.7%)	1776.7/2570 = 69.1% (59.7%, 77.2%)	1319.8/2570 = 51.4% (41.9%, 60.7%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	113	849.7/2570 = 33.1% (24.9%, 42.3%)	2107.9/2570 = 82.0% (73.5%, 88.3%)	1744.5/2570 = 67.9% (58.4%, 76.1%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0/322 = 0.0% (0.0%, 0.0%)	60.9/322 = 18.9% (8.7%, 36.3%)	43.1/322 = 13.4% (5.3%, 30.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	153.7/322 = 47.7% (31.1%, 64.9%)	250.4/322 = 77.8% (59.9%, 89.1%)	178.9/322 = 55.6% (38.0%, 71.8%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	150.4/322 = 46.7% (30.2%, 64.0%)	268.3/322 = 83.3% (65.9%, 92.8%)	247.1/322 = 76.7% (58.7%, 88.5%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)	0/2435 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	0/274 = 0.0% (0.0%, 0.0%)	8.8/274 = 3.2% (0.4%, 21.4%)	8.8/274 = 3.2% (0.4%, 21.4%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	64.5/274 = 23.5% (11.7%, 41.7%)	149.2/274 = 54.5% (36.9%, 71.0%)	80.1/274 = 29.2% (15.9%, 47.5%)

(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)	35	33.3/274 = 12.1% (4.4%, 29.4%)	149.2/274 = 54.5% (36.9%, 71.0%)	88.9/274 = 32.4% (18.4%, 50.6%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	111	99.2/3065 = 3.2% (1.2%, 8.6%)	750.1/3065 = 24.5% (17.1%, 33.7%)	386/3065 = 12.6% (7.4%, 20.7%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	111	1246.2/3065 = 40.7% (31.7%, 50.3%)	2139.1/3065 = 69.8% (60.5%, 77.7%)	1477.6/3065 = 48.2% (38.8%, 57.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	111	1168.7/3065 = 38.1% (29.3%, 47.9%)	2525/3065 = 82.4% (74.2%, 88.4%)	2028.9/3065 = 66.2% (56.7%, 74.5%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	40.3/320 = 12.6% (4.5%, 30.5%)	123.3/320 = 38.5% (23.2%, 56.6%)	87.7/320 = 27.4% (14.3%, 46.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	258.4/320 = 80.7% (63.0%, 91.2%)	283.7/320 = 88.6% (71.5%, 96.0%)	283.7/320 = 88.6% (71.5%, 96.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	196/320 = 61.2% (43.0%, 76.8%)	308.9/320 = 96.5% (77.3%, 99.6%)	286.8/320 = 89.6% (71.6%, 96.7%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)	0/3130 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	10.2/289 = 3.5% (0.4%, 23.2%)	62.7/289 = 21.7% (10.5%, 39.5%)	23/289 = 8.0% (2.3%, 23.9%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	76.7/289 = 26.6% (13.7%, 45.2%)	168.8/289 = 58.4% (40.3%, 74.5%)	99.7/289 = 34.5% (19.7%, 53.1%)

(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)	35	52.4/289 = 18.1% (8.3%, 35.0%)	204.6/289 = 70.8% (52.4%, 84.2%)	135.5/289 = 46.9% (30.1%, 64.5%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	123.4/1369 = 9.0% (4.8%, 16.2%)	408.1/1369 = 29.8% (21.9%, 39.1%)	298.4/1369 = 21.8% (15.0%, 30.7%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	959/1369 = 70.1% (60.9%, 77.9%)	1273.2/1369 = 93.0% (86.4%, 96.5%)	1129.5/1369 = 82.5% (74.1%, 88.6%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	930.5/1369 = 68.0% (58.6%, 76.1%)	1345/1369 = 98.3% (93.0%, 99.6%)	1263/1369 = 92.3% (85.5%, 96.0%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	19.1/137 = 13.9% (5.6%, 30.8%)	49.5/137 = 36.1% (21.4%, 53.9%)	34.8/137 = 25.4% (13.1%, 43.4%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	114.5/137 = 83.6% (66.7%, 92.8%)	133.6/137 = 97.5% (83.1%, 99.7%)	125.8/137 = 91.8% (76.0%, 97.5%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	115.6/137 = 84.4% (68.6%, 93.0%)	137/137 = 100.0% (100.0%, 100.0%)	133.6/137 = 97.5% (83.1%, 99.7%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)	0/1335 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	35	5.7/144 = 3.9% (0.9%, 15.0%)	66.6/144 = 46.3% (29.2%, 64.2%)	36.2/144 = 25.2% (13.1%, 42.9%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	99.8/144 = 69.3% (50.1%, 83.6%)	135.7/144 = 94.2% (76.9%, 98.8%)	113.6/144 = 78.9% (59.9%, 90.4%)

(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)	35	97.2/144 = 67.5% (48.4%, 82.1%)	138.5/144 = 96.2% (75.5%, 99.5%)	138.5/144 = 96.2% (75.5%, 99.5%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	229.4/1594 = 14.4% (8.9%, 22.4%)	614.1/1594 = 38.5% (29.9%, 48.0%)	460.6/1594 = 28.9% (21.1%, 38.1%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	1252.8/1594 = 78.6% (69.9%, 85.3%)	1445.2/1594 = 90.7% (83.6%, 94.9%)	1341.9/1594 = 84.2% (76.0%, 89.9%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	1141.1/1594 = 71.6% (62.5%, 79.2%)	1527.7/1594 = 95.8% (90.1%, 98.3%)	1477.5/1594 = 92.7% (86.3%, 96.2%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	42.6/199 = 21.4% (10.1%, 39.7%)	124.2/199 = 62.4% (44.5%, 77.5%)	86.8/199 = 43.6% (27.5%, 61.3%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	187.9/199 = 94.4% (78.2%, 98.8%)	199/199 = 100.0% (100.0%, 100.0%)	187.9/199 = 94.4% (78.2%, 98.8%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	159/199 = 79.9% (61.8%, 90.7%)	199/199 = 100.0% (100.0%, 100.0%)	185.3/199 = 93.1% (75.2%, 98.4%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	14	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)	0/1628 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	36	12.9/150 = 8.6% (2.6%, 24.8%)	61.3/150 = 40.9% (25.6%, 58.2%)	28.8/150 = 19.2% (9.0%, 36.3%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	98.4/150 = 65.6% (48.1%, 79.7%)	128.8/150 = 85.9% (69.0%, 94.3%)	115.9/150 = 77.3% (59.7%, 88.6%)

(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)	36	86.3/150 = 57.6% (40.3%, 73.2%)	136.3/150 = 90.9% (74.7%, 97.1%)	131.8/150 = 87.9% (71.5%, 95.4%)

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 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)	454	516.1/8598 = 6.0% (4.2%, 8.4%)	2207.7/8598 = 25.7% (21.7%, 30.1%)	1436.3/8598 = 16.7% (13.5%, 20.6%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	4540/8598 = 52.8% (48.0%, 57.5%)	6634.2/8598 = 77.2% (72.7%, 81.1%)	5268.8/8598 = 61.3% (56.4%, 65.9%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	4090/8598 = 47.6% (42.9%, 52.3%)	7505.6/8598 = 87.3% (83.5%, 90.3%)	6513.9/8598 = 75.8% (71.2%, 79.8%)
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	102/978 = 10.4% (6.3%, 16.9%)	357.9/978 = 36.6% (28.8%, 45.1%)	252.4/978 = 25.8% (19.0%, 34.1%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	714.5/978 = 73.1% (64.7%, 80.0%)	866.7/978 = 88.6% (81.1%, 93.4%)	776.2/978 = 79.4% (71.4%, 85.6%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	620.9/978 = 63.5% (54.5%, 71.6%)	913.3/978 = 93.4% (86.7%, 96.8%)	852.9/978 = 87.2% (79.4%, 92.4%)
United States	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)	0/8528 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	141	28.8/857 = 3.4% (1.3%, 8.1%)	199.4/857 = 23.3% (17.2%, 30.7%)	96.9/857 = 11.3% (7.1%, 17.4%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	339.5/857 = 39.6% (31.7%, 48.1%)	582.5/857 = 68.0% (59.0%, 75.8%)	409.3/857 = 47.8% (39.4%, 56.2%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	269.2/857 = 31.4% (24.7%, 39.0%)	628.7/857 = 73.4% (64.6%, 80.6%)	494.7/857 = 57.7% (49.3%, 65.8%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	45	94.5/1628.6 = 5.8% (2.1%, 15.2%)	440.7/1628.6 = 27.1% (16.1%, 41.8%)	234.2/1628.6 = 14.4% (7.3%, 26.3%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	45	739.4/1628.6 = 45.4% (30.8%, 60.8%)	1327.9/1628.6 = 81.5% (65.3%, 91.2%)	945.8/1628.6 = 58.1% (42.0%, 72.6%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	45	838.7/1628.6 = 51.5% (36.2%, 66.6%)	1363.4/1628.6 = 83.7% (67.4%, 92.7%)	1204.1/1628.6 = 73.9% (57.4%, 85.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Argentina	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	11	19.5/129.4 = 15.0% (2.5%, 55.2%)	62.9/129.4 = 48.6% (17.7%, 80.6%)	46.5/129.4 = 35.9% (10.3%, 73.2%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	11	99.4/129.4 = 76.8% (32.6%, 95.8%)	111.5/129.4 = 86.2% (34.0%, 98.7%)	99.4/129.4 = 76.8% (32.6%, 95.8%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	11	102.4/129.4 = 79.1% (35.3%, 96.3%)	129.4/129.4 = 100.0%	111.5/129.4 = 86.2% (34.0%, 98.7%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0/1460 = 0.0%	0/1460 = 0.0%	0/1460 = 0.0%
Argentina	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	16	0/203 = 0.0% (0.0%, 0.0%)	30.6/203 = 15.1% (4.0%, 42.9%)	6.6/203 = 3.3% (0.4%, 24.3%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	16	75.1/203 = 37.0% (14.7%, 66.6%)	135.1/203 = 66.5% (34.6%, 88.2%)	89/203 = 43.8% (19.1%, 72.1%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	16	63.1/203 = 31.1% (11.6%, 60.7%)	125/203 = 61.6% (31.2%, 85.0%)	105.7/203 = 52.1% (24.8%, 78.2%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	78	205/2605.6 = 7.9% (4.0%, 14.9%)	808.7/2605.6 = 31.0% (21.5%, 42.5%)	515.8/2605.6 = 19.8% (12.5%, 29.9%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	78	1713.3/2605.6 = 65.8% (53.3%, 76.4%)	2354.9/2605.6 = 90.4% (79.8%, 95.7%)	1884.3/2605.6 = 72.3% (59.9%, 82.1%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	78	1283.9/2605.6 = 49.3% (37.7%, 60.9%)	2197.8/2605.6 = 84.3% (72.8%, 91.6%)	1968/2605.6 = 75.5% (63.1%, 84.8%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	29	7.3/338.2 = 2.2% (0.3%, 15.3%)	101.4/338.2 = 30.0% (15.4%, 50.2%)	31/338.2 = 9.2% (3.3%, 23.0%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29	257.8/338.2 = 76.2% (53.9%, 89.8%)	313.1/338.2 = 92.6% (70.2%, 98.5%)	293.6/338.2 = 86.8% (66.2%, 95.7%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29	219.5/338.2 = 64.9% (43.6%, 81.5%)	326.1/338.2 = 96.4% (76.5%, 99.5%)	296/338.2 = 87.5% (65.7%, 96.3%)
Brazil	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)	0/4560.7 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	6.6/358.5 = 1.8% (0.2%, 13.2%)	70.7/358.5 = 19.7% (9.3%, 37.0%)	40.1/358.5 = 11.2% (4.4%, 25.6%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	97.5/358.5 = 27.2% (14.8%, 44.6%)	192.5/358.5 = 53.7% (34.3%, 72.1%)	168.5/358.5 = 47.0% (28.6%, 66.2%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	99.4/358.5 = 27.7% (14.9%, 45.7%)	268.2/358.5 = 74.8% (52.7%, 88.8%)	214.6/358.5 = 59.9% (39.5%, 77.3%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	13	72.9/356.4 = 20.5% (5.2%, 54.6%)	186.2/356.4 = 52.3% (23.4%, 79.7%)	139/356.4 = 39.0% (15.2%, 69.6%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13	202.9/356.4 = 56.9% (26.3%, 83.1%)	356.4/356.4 = 100.0% (100.0%, 100.0%)	221.6/356.4 = 62.2% (29.7%, 86.5%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	13	231.4/356.4 = 64.9% (31.9%, 88.0%)	321/356.4 = 90.1% (46.7%, 98.9%)	321/356.4 = 90.1% (46.7%, 98.9%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0/9.1 = 0.0%	0/9.1 = 0.0%	0/9.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/430.3 = 0.0%	0/430.3 = 0.0%	0/430.3 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0/13.9 = 0.0%	0/13.9 = 0.0%	0/13.9 = 0.0%
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	64	37.5/2092.3 = 1.8% (0.4%, 7.1%)	353.2/2092.3 = 16.9% (9.5%, 28.1%)	167.5/2092.3 = 8.0% (3.7%, 16.6%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	64	1162.5/2092.3 = 55.6% (42.0%, 68.3%)	1551.9/2092.3 = 74.2% (60.2%, 84.5%)	1309.1/2092.3 = 62.6% (48.7%, 74.6%)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	64	820.6/2092.3 = 39.2% (27.5%, 52.3%)	1774.3/2092.3 = 84.8% (70.6%, 92.8%)	1585.6/2092.3 = 75.8% (61.6%, 85.9%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	20	36.1/250.4 = 14.4% (3.9%, 41.2%)	71.9/250.4 = 28.7% (11.3%, 56.1%)	54/250.4 = 21.6% (7.2%, 49.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	20	202.5/250.4 = 80.9% (51.6%, 94.4%)	232.5/250.4 = 92.9% (58.6%, 99.2%)	214.7/250.4 = 85.7% (54.9%, 96.7%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	20	103.2/250.4 = 41.2% (20.9%, 65.0%)	250.4/250.4 = 100.0% (100.0%, 100.0%)	232.5/250.4 = 92.9% (58.6%, 99.2%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	3	0/796.6 = 0.0%	0/796.6 = 0.0%	0/796.6 = 0.0%
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	13	10.1/176.2 = 5.7% (0.6%, 39.3%)	23.3/176.2 = 13.2% (3.3%, 40.4%)	16.7/176.2 = 9.5% (1.7%, 38.2%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	13	54.6/176.2 = 31.0% (10.8%, 62.5%)	118.3/176.2 = 67.2% (32.4%, 89.7%)	99.1/176.2 = 56.2% (26.8%, 81.9%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	13	61.2/176.2 = 34.7% (13.0%, 65.5%)	99.1/176.2 = 56.2% (26.8%, 81.9%)	88.9/176.2 = 50.5% (23.1%, 77.6%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0/331.2 = 0.0% (0.0%, 0.0%)	47.3/331.2 = 14.3% (2.0%, 57.8%)	28.5/331.2 = 8.6% (0.6%, 59.3%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	153.3/331.2 = 46.3% (12.1%, 84.3%)	242.8/331.2 = 73.3% (24.4%, 95.9%)	153.3/331.2 = 46.3% (12.1%, 84.3%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	153.3/331.2 = 46.3% (12.1%, 84.3%)	260.4/331.2 = 78.6% (31.4%, 96.7%)	260.4/331.2 = 78.6% (31.4%, 96.7%)
Mexico	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	7.3/38.9 = 18.7% (0.2%, 97.2%)	7.3/38.9 = 18.7% (0.2%, 97.2%)	7.3/38.9 = 18.7% (0.2%, 97.2%)
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	26.8/38.9 = 68.7% (1.3%, 99.7%)	38.9/38.9 = 100.0% (100.0%, 100.0%)	26.8/38.9 = 68.7% (1.3%, 99.7%)
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	26.8/38.9 = 68.7% (1.3%, 99.7%)	38.9/38.9 = 100.0% (100.0%, 100.0%)	26.8/38.9 = 68.7% (1.3%, 99.7%)
Mexico	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	0/69.2 = 0.0%	0/69.2 = 0.0%	0/69.2 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	36/69.2 = 52.1%	69.2/69.2 = 100.0%	36/69.2 = 52.1%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	6.6/69.2 = 9.6%	69.2/69.2 = 100.0%	55.3/69.2 = 79.9%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Peru	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	19	18.8/729 = 2.6% (0.3%, 19.1%)	206.3/729 = 28.3% (10.8%, 56.3%)	47.3/729 = 6.5% (1.3%, 26.1%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	469.7/729 = 64.4% (37.4%, 84.6%)	570/729 = 78.2% (48.0%, 93.3%)	469.7/729 = 64.4% (37.4%, 84.6%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	434.3/729 = 59.6% (33.5%, 81.2%)	676/729 = 92.7% (58.3%, 99.1%)	575.7/729 = 79.0% (50.8%, 93.2%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	14.6/62.9 = 23.2% (0.7%, 92.5%)	26.8/62.9 = 42.6% (1.9%, 96.6%)	14.6/62.9 = 23.2% (0.7%, 92.5%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)	62.9/62.9 = 100.0% (100.0%, 100.0%)
Peru	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0/347.2 = 0.0%	0/347.2 = 0.0%	0/347.2 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	0/49.2 = 0.0% (0.0%, 0.0%)	13.2/49.2 = 26.9% (0.6%, 95.5%)	6.6/49.2 = 13.4% (0.1%, 95.7%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	23.3/49.2 = 47.4% (1.3%, 98.4%)	29.9/49.2 = 60.8% (1.3%, 99.5%)	29.9/49.2 = 60.8% (1.3%, 99.5%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	29.9/49.2 = 60.8% (1.3%, 99.5%)	29.9/49.2 = 60.8% (1.3%, 99.5%)	29.9/49.2 = 60.8% (1.3%, 99.5%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	203/2951 = 6.9% (4.3%, 10.8%)	660.7/2951 = 22.4% (17.5%, 28.2%)	436.7/2951 = 14.8% (10.8%, 19.9%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	1514.8/2951 = 51.3% (44.8%, 57.8%)	2232.2/2951 = 75.6% (69.1%, 81.2%)	1719.7/2951 = 58.3% (51.6%, 64.7%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	1373.6/2951 = 46.5% (40.1%, 53.1%)	2494/2951 = 84.5% (78.5%, 89.1%)	2120.7/2951 = 71.9% (65.1%, 77.8%)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	35.3/295 = 12.0% (6.3%, 21.7%)	112.8/295 = 38.2% (27.1%, 50.8%)	86.3/295 = 29.3% (19.6%, 41.3%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	205.3/295 = 69.6% (56.3%, 80.3%)	247.4/295 = 83.9% (71.5%, 91.5%)	211.7/295 = 71.7% (58.6%, 82.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	174.7/295 = 59.2% (46.1%, 71.2%)	283.5/295 = 96.1% (85.0%, 99.1%)	264.7/295 = 89.7% (78.7%, 95.4%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)	0/2863 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	16/252 = 6.4% (2.2%, 16.8%)	62.6/252 = 24.9% (15.8%, 36.8%)	36.6/252 = 14.5% (8.0%, 25.0%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	127.1/252 = 50.4% (37.4%, 63.4%)	172.8/252 = 68.6% (54.6%, 79.8%)	149.4/252 = 59.3% (46.0%, 71.4%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	107.2/252 = 42.6% (30.3%, 55.8%)	209.9/252 = 83.3% (70.1%, 91.4%)	167.4/252 = 66.4% (52.5%, 78.0%)

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

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

Table 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)	848	1075.4/18035.1 = 6.0% (4.6%, 7.6%)	4652.1/18035.1 = 25.8% (22.7%, 29.1%)	2825.9/18035.1 = 15.7% (13.4%, 18.3%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	848	9909.2/18035.1 = 54.9% (51.2%, 58.6%)	14493.5/18035.1 = 80.4% (77.1%, 83.3%)	11346.4/18035.1 = 62.9% (59.2%, 66.5%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	848	8785.2/18035.1 = 48.7% (45.1%, 52.4%)	15658.3/18035.1 = 86.8% (83.8%, 89.3%)	13786/18035.1 = 76.4% (73.0%, 79.6%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	265	201.3/1980.7 = 10.2% (7.0%, 14.6%)	696/1980.7 = 35.1% (29.2%, 41.6%)	457.7/1980.7 = 23.1% (18.1%, 29.0%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	265	1475.1/1980.7 = 74.5% (68.0%, 80.0%)	1751.7/1980.7 = 88.4% (83.1%, 92.3%)	1584.8/1980.7 = 80.0% (73.9%, 85.0%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	265	1217.1/1980.7 = 61.4% (54.6%, 67.9%)	1888.3/1980.7 = 95.3% (91.5%, 97.5%)	1731.2/1980.7 = 87.4% (81.7%, 91.5%)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	100	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)	0/18198.3 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	266	51.4/1886.3 = 2.7% (1.4%, 5.2%)	385.7/1886.3 = 20.4% (16.2%, 25.5%)	190.7/1886.3 = 10.1% (7.3%, 13.9%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	266	722.7/1886.3 = 38.3% (32.2%, 44.8%)	1237.4/1886.3 = 65.6% (58.6%, 72.0%)	944.8/1886.3 = 50.1% (43.4%, 56.8%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	266	609/1886.3 = 32.3% (26.8%, 38.3%)	1380.3/1886.3 = 73.2% (66.2%, 79.2%)	1118.4/1886.3 = 59.3% (52.4%, 65.9%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	65	72.5/1256.9 = 5.8% (2.2%, 14.3%)	258.8/1256.9 = 20.6% (12.2%, 32.6%)	179.2/1256.9 = 14.3% (7.4%, 25.7%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	65	586.6/1256.9 = 46.7% (32.9%, 61.0%)	776.9/1256.9 = 61.8% (46.6%, 75.0%)	626.1/1256.9 = 49.8% (35.7%, 63.9%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	65	440.5/1256.9 = 35.0% (23.1%, 49.1%)	934.1/1256.9 = 74.3% (58.7%, 85.5%)	763.4/1256.9 = 60.7% (45.9%, 73.9%)

(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)	18	20.7/121.3 = 17.1% (3.8%, 51.9%)	44.9/121.3 = 37.0% (14.4%, 67.3%)	34.3/121.3 = 28.3% (9.8%, 58.9%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	94/121.3 = 77.5% (46.3%, 93.2%)	121.3/121.3 = 100.0% (100.0%, 100.0%)	100.3/121.3 = 82.7% (50.5%, 95.7%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	93.4/121.3 = 77.0% (41.7%, 94.0%)	116.1/121.3 = 95.7% (67.9%, 99.6%)	116.1/121.3 = 95.7% (67.9%, 99.6%)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)	0/1134.7 = 0.0% (0.0%, 0.0%)
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	14	10.1/92.7 = 10.9% (1.0%, 58.7%)	14.2/92.7 = 15.3% (2.6%, 55.3%)	12.8/92.7 = 13.8% (2.0%, 56.0%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	30.4/92.7 = 32.8% (9.8%, 68.6%)	62.9/92.7 = 67.8% (24.3%, 93.3%)	36.4/92.7 = 39.3% (12.7%, 74.2%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	27.7/92.7 = 29.9% (8.4%, 66.4%)	49.7/92.7 = 53.6% (18.4%, 85.5%)	38.3/92.7 = 41.2% (13.5%, 76.0%)

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

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

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)	913	0.05 (0.05, 0.05)
	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	913	0.80 (0.80, 0.80)
	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	913	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 (0.79, 0.81)
	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	0.15 (0.15, 0.15)
	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 (0.79, 0.80)
	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	0.15 (0.15, 0.15)
	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	913	1.41 (1.24, 1.59)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	913	17.09 (15.39, 18.96)
	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	913	9.28 (8.44, 10.21)
	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	283	2.52 (2.00, 3.19)
	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	30.05 (25.07, 36.02)
	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	14.92 (12.80, 17.39)
	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	0.87 (0.70, 1.09)
	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	9.52 (7.86, 11.52)
	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	5.00 (4.20, 5.95)

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)	453	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	453	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	453	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)	139	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)
Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.15)
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	453	0.94 (0.80, 1.11)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	453	10.80 (9.40, 12.41)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	453	6.06 (5.32, 6.91)

(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	1.76 (1.29, 2.41)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	20.39 (16.05, 25.89)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	10.36 (8.49, 12.65)
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)	139	0.52 (0.39, 0.69)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	5.48 (4.31, 6.98)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	2.84 (2.26, 3.57)
Age \geq 60	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	460	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	460	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	460	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	0.81 (0.78, 0.84)
Age \geq 60	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
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)	141	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)
Age \geq 60	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	460	2.98 (2.49, 3.57)
Age \geq 60	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	460	40.62 (35.11, 47.01)
Age \geq 60	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	460	20.78 (18.47, 23.38)
Age \geq 60	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	5.00 (3.66, 6.83)
Age \geq 60	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	63.07 (48.83, 81.48)
Age \geq 60	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	29.97 (23.96, 37.48)
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)	141	2.46 (1.77, 3.42)
Age \geq 60	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	28.45 (21.21, 38.17)
Age \geq 60	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	15.36 (12.18, 19.37)

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)	454	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	0.15 (0.15, 0.15)
At-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	140	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	0.15 (0.15, 0.15)
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)	141	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)
At-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	454	1.34 (1.12, 1.59)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	17.44 (15.14, 20.09)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	9.51 (8.27, 10.93)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	140	2.53 (1.88, 3.39)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	34.36 (27.39, 43.11)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	15.52 (12.72, 18.95)
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)	141	1.16 (0.86, 1.56)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	12.07 (9.52, 15.31)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	6.30 (5.07, 7.82)
Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	459	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	459	0.80 (0.80, 0.80)
Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	459	0.15 (0.15, 0.15)
Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	143	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	143	0.80 (0.79, 0.82)
Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	143	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)	139	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)
Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.15)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	459	1.45 (1.23, 1.72)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	459	16.85 (14.56, 19.50)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	459	9.14 (8.03, 10.39)
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	143	2.52 (1.80, 3.53)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	143	27.41 (21.07, 35.65)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	143	14.52 (11.67, 18.08)
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)	139	0.72 (0.52, 0.98)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	8.11 (6.15, 10.70)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	4.29 (3.33, 5.51)

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)	226	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.06)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	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)	226	0.88 (0.70, 1.11)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	11.21 (9.32, 13.48)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	6.37 (5.24, 7.73)

(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)	69	1.80 (1.22, 2.64)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	24.92 (18.62, 33.36)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	10.40 (7.91, 13.67)
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	0.66 (0.45, 0.98)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	7.06 (5.28, 9.43)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	3.41 (2.58, 4.52)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	72	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	72	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)	70	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.79, 0.81)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.99 (0.79, 1.23)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	10.54 (8.66, 12.82)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	5.86 (4.92, 6.99)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	72	1.74 (1.10, 2.75)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	72	17.82 (12.58, 25.23)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	72	10.34 (7.83, 13.65)
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)	70	0.44 (0.29, 0.65)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	4.62 (3.24, 6.58)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	2.51 (1.80, 3.50)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	228	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	228	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	228	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	0.15 (0.15, 0.15)
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)	72	0.05 (0.05, 0.06)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (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)	228	2.93 (2.27, 3.79)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	228	40.07 (32.47, 49.44)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	228	20.22 (17.20, 23.77)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	4.73 (3.07, 7.28)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	62.08 (43.89, 87.80)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	32.45 (25.59, 41.17)
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)	72	3.60 (2.43, 5.33)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	35.83 (24.46, 52.47)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	21.81 (16.61, 28.64)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	232	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	232	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	232	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	0.82 (0.78, 0.87)
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)	69	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	232	3.02 (2.36, 3.86)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	232	41.01 (33.61, 50.04)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	232	21.17 (17.96, 24.94)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	5.21 (3.36, 8.07)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	63.79 (44.40, 91.66)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	28.30 (20.07, 39.92)

(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)	69	1.91 (1.19, 3.09)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	24.45 (16.12, 37.10)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	12.20 (8.69, 17.11)

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)	416	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	416	0.80 (0.80, 0.80)
Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	416	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, 0.15)
Male	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	55	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0.15 (0.15, 0.15)
Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	126	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	126	0.80 (0.79, 0.81)
Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	126	0.15 (0.15, 0.15)
Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	416	1.43 (1.19, 1.72)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	416	17.21 (14.63, 20.24)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	416	9.36 (8.08, 10.84)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	123	2.88 (1.96, 4.24)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	31.72 (23.68, 42.49)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	16.03 (12.43, 20.69)
Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	55	0.05 (0.05, 0.05)
Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	55	0.80 (0.80, 0.80)
Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	55	0.15 (0.15, 0.15)
Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	126	0.88 (0.61, 1.27)
Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	126	9.77 (7.11, 13.44)
Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	126	5.33 (4.08, 6.96)
Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	497	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	497	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	497	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 (0.79, 0.82)
Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	54	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	0.15 (0.15, 0.15)
Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	154	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	154	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	154	0.15 (0.15, 0.15)
Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	497	1.38 (1.17, 1.64)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	497	16.98 (14.69, 19.63)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	497	9.22 (8.06, 10.54)
Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	160	2.30 (1.70, 3.09)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	28.91 (22.56, 37.04)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	14.17 (11.60, 17.32)
Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	54	0.05 (0.05, 0.05)
Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	54	0.80 (0.80, 0.80)
Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	54	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)	154	0.87 (0.63, 1.18)
Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	154	9.31 (7.08, 12.24)
Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	154	4.75 (3.65, 6.18)

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)	238	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	238	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	238	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	79	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	73	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	73	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	73	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	238	0.91 (0.73, 1.13)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	238	10.17 (8.45, 12.25)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	238	5.84 (4.88, 6.98)

(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)	79	1.66 (1.12, 2.46)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	19.70 (14.23, 27.28)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	10.12 (7.91, 12.94)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	73	0.50 (0.33, 0.75)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	73	5.30 (3.71, 7.58)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	73	2.63 (1.87, 3.69)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	215	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	215	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	215	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	62	0.05 (0.05, 0.06)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	62	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)	31	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	66	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	66	0.80 (0.79, 0.82)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	66	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	215	0.98 (0.77, 1.25)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	215	11.55 (9.37, 14.25)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	215	6.32 (5.22, 7.66)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	62	1.92 (1.15, 3.20)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62	21.34 (14.85, 30.68)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	62	10.70 (7.70, 14.87)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	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)	66	0.54 (0.35, 0.83)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	66	5.70 (4.04, 8.05)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	66	3.12 (2.31, 4.22)
Age \geq 60 Female	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	259	0.05 (0.05, 0.05)
Age \geq 60 Female	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	259	0.80 (0.80, 0.80)
Age \geq 60 Female	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	259	0.15 (0.15, 0.15)
Age \geq 60 Female	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	81	0.05 (0.05, 0.05)
Age \geq 60 Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	0.82 (0.78, 0.86)
Age \geq 60 Female	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)
Age \geq 60 Female	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	31	0.05 (0.05, 0.05)
Age \geq 60 Female	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0.80 (0.80, 0.80)
Age \geq 60 Female	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0.15 (0.15, 0.15)
Age \geq 60 Female	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	81	0.05 (0.05, 0.05)
Age \geq 60 Female	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	81	0.80 (0.80, 0.80)
Age \geq 60 Female	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	259	2.94 (2.28, 3.79)
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	259	42.41 (34.81, 51.66)
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	259	20.86 (17.74, 24.54)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	81	4.16 (2.76, 6.28)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	58.11 (41.55, 81.27)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	26.18 (19.12, 35.85)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	31	0.05 (0.05, 0.05)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	31	0.80 (0.80, 0.80)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	31	0.15 (0.15, 0.15)
Age \geq 60 Female	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	81	2.52 (1.73, 3.68)
Age \geq 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	81	27.65 (20.60, 37.10)
Age \geq 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	81	14.91 (11.39, 19.53)
Age \geq 60 Male	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	201	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	201	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	201	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Male	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	61	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	24	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	60	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	60	0.15 (0.15, 0.16)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	201	3.03 (2.35, 3.91)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	201	38.47 (31.05, 47.65)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	201	20.68 (17.44, 24.52)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	61	6.59 (4.21, 10.32)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	61	71.36 (48.36, 105.31)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	61	36.72 (27.52, 48.99)

(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)	24	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	24	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	24	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	60	2.38 (1.32, 4.27)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	60	29.49 (17.05, 51.02)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	60	15.93 (10.61, 23.92)



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)	374	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	374	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	374	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	106	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	106	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	106	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	44	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	44	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	44	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	105	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	105	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	105	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	374	1.48 (1.24, 1.77)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	374	17.87 (15.17, 21.05)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	374	9.55 (8.26, 11.04)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	106	2.07 (1.41, 3.02)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	106	26.47 (19.85, 35.29)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	106	14.30 (11.44, 17.89)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	44	0.05 (0.05, 0.05)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	44	0.80 (0.80, 0.80)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	44	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	105	0.81 (0.57, 1.15)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	105	9.25 (6.85, 12.50)
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	105	5.02 (3.84, 6.56)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	477	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	477	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	477	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	164	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	164	0.81 (0.79, 0.83)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	164	0.15 (0.15, 0.15)

(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)	56	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	152	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	0.80 (0.79, 0.81)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	477	1.37 (1.16, 1.63)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	477	16.37 (14.27, 18.78)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	477	9.23 (8.11, 10.50)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	164	3.09 (2.24, 4.24)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	164	36.03 (27.77, 46.75)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	164	15.94 (12.70, 20.00)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
Not Hispanic or Latino	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 Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	152	1.06 (0.74, 1.51)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	10.83 (8.01, 14.64)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	5.11 (3.81, 6.86)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	62	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	62	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	62	0.16 (0.15, 0.16)
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	13	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	13	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	23	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)	62	1.03 (0.60, 1.79)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	62	15.50 (10.38, 23.14)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	62	7.49 (4.99, 11.25)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	13	2.45 (1.39, 4.30)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	13	17.50 (9.29, 32.94)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	13	11.83 (6.16, 22.73)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	23	0.53 (0.32, 0.89)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	23	6.17 (3.91, 9.75)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	23	4.41 (2.97, 6.55)

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)	196	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	196	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	196	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	63	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	0.82 (0.78, 0.86)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	56	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	196	1.50 (1.13, 1.98)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	196	17.65 (14.16, 22.00)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	196	9.28 (7.55, 11.41)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	63	3.69 (2.18, 6.25)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	45.03 (30.91, 65.61)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	17.98 (12.82, 25.22)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	23	0.05 (0.05, 0.05)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	56	1.16 (0.67, 2.02)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	56	12.32 (7.77, 19.56)
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	56	5.02 (3.41, 7.38)
Black or African American	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	332	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	332	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	332	0.15 (0.15, 0.15)
Black or African American	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	111	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	111	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	111	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 1	Placebo	Negative	Anti N IgG (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)	94	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	94	0.81 (0.79, 0.82)
Black or African American	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	94	0.15 (0.15, 0.15)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	332	1.33 (1.10, 1.62)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	332	16.19 (13.79, 18.99)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	332	9.18 (7.98, 10.57)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	111	1.82 (1.24, 2.66)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	111	20.44 (14.38, 29.07)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	111	12.52 (9.57, 16.39)
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)	94	0.93 (0.57, 1.49)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	94	10.46 (6.88, 15.91)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	94	4.71 (3.31, 6.71)
Asian	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	18	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)
Asian	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	5	0.07 (0.04, 0.12)
Asian	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	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)	10	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	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
Asian	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	18	2.15 (1.01, 4.58)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	18	20.66 (10.86, 39.30)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18	10.30 (6.01, 17.63)
Asian	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5	3.89 (2.24, 6.74)
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	52.83 (12.92, 215.97)
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	24.28 (8.61, 68.46)
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)	10	0.51 (0.16, 1.61)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	10	6.07 (2.15, 17.12)
Asian	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	10	5.58 (2.70, 11.54)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	149	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	149	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	149	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	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	18	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	48	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	48	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	48	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	149	1.34 (1.01, 1.79)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	149	16.66 (12.81, 21.68)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	149	8.81 (6.94, 11.18)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	49	2.79 (1.56, 4.98)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	34.07 (22.72, 51.09)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	49	14.32 (10.15, 20.21)

(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)	18	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	48	0.70 (0.43, 1.15)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	48	9.20 (6.04, 14.01)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	48	4.46 (2.94, 6.77)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	2	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)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2	2.86 (1.01, 8.14)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	2	24.67 (9.77, 62.29)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	2	10.65 (8.80, 12.90)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	3.09 (3.09, 3.09)
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	18.62 (18.62, 18.62)
Native Hawaiian or Other Pacific Islander	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	12.15 (12.15, 12.15)
Multiracial	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	25	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	25	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	25	0.15 (0.15, 0.15)
Multiracial	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)
Multiracial	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Multiracial	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	25	1.26 (0.63, 2.52)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	25	16.70 (10.38, 26.86)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	25	11.25 (6.17, 20.52)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	9	2.79 (1.15, 6.76)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	9	35.72 (15.57, 81.92)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	9	9.78 (5.54, 17.26)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Multiracial	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	15	1.85 (0.49, 6.95)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	15	16.42 (6.17, 43.75)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	15	7.36 (2.96, 18.26)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	12	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	12	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	12	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)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	12	2.50 (0.90, 6.94)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	12	21.32 (14.43, 31.50)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	12	20.41 (12.24, 34.04)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	1.70 (1.70, 1.70)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	30.53 (30.53, 30.53)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	26.52 (26.52, 26.52)

(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)	2	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	4	2.85 (1.31, 6.21)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	8.77 (4.28, 17.98)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	15.88 (13.13, 19.20)

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)	70	0.05 (0.05, 0.06)
URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)
URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	1.33 (1.07, 1.66)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	15.83 (13.04, 19.22)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	9.26 (7.76, 11.04)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	1.60 (1.06, 2.41)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	17.64 (12.36, 25.18)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	12.18 (9.07, 16.36)
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)	70	0.93 (0.65, 1.32)
URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	10.38 (7.41, 14.55)
URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	4.59 (3.28, 6.41)
Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)
Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)
Non-URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.82 (0.78, 0.85)
Non-URM	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
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)	71	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)
Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	227	1.36 (1.05, 1.77)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	16.64 (13.58, 20.37)
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	8.85 (7.31, 10.73)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	71	3.92 (2.47, 6.21)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	47.58 (34.24, 66.13)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	17.81 (13.03, 24.36)
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)	71	1.05 (0.65, 1.70)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	71	10.56 (7.07, 15.79)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	71	5.08 (3.67, 7.03)

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)	113	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	113	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	113	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	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)	35	0.05 (0.04, 0.06)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	113	0.95 (0.71, 1.28)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	113	10.76 (8.28, 13.99)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	113	6.41 (5.02, 8.18)

(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)	36	1.12 (0.65, 1.93)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	10.28 (6.59, 16.03)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	7.81 (5.31, 11.49)
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)	35	0.47 (0.29, 0.75)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	5.34 (3.44, 8.28)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	2.09 (1.35, 3.24)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	111	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	111	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	111	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	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)	35	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	111	0.93 (0.65, 1.31)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	111	10.19 (7.79, 13.33)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	111	5.89 (4.51, 7.70)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	3.04 (1.60, 5.79)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	33.89 (21.53, 53.37)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	12.01 (7.99, 18.06)
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)	35	0.70 (0.36, 1.36)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	6.36 (3.69, 10.95)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	3.16 (2.04, 4.87)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	114	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	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)	35	0.05 (0.04, 0.05)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	114	2.50 (1.82, 3.42)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	32.68 (25.29, 42.23)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	18.45 (14.88, 22.87)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	35	3.64 (2.20, 6.03)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	62.80 (37.48, 105.23)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	34.65 (24.94, 48.14)
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)	35	3.39 (2.20, 5.22)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	36.78 (23.53, 57.49)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	20.48 (13.85, 30.30)
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)	36	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.85 (0.75, 0.95)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)
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)	36	0.05 (0.05, 0.06)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	116	2.88 (2.00, 4.14)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	42.70 (32.17, 56.68)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	19.37 (15.50, 24.20)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	36	5.88 (3.21, 10.74)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	82.09 (52.81, 127.62)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	33.58 (20.94, 53.86)

(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)	36	2.30 (1.30, 4.08)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	28.08 (17.06, 46.21)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	12.71 (8.41, 19.22)



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)	454	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	0.80 (0.80, 0.80)
United States	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	0.15 (0.15, 0.15)
United States	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.81 (0.79, 0.83)
United States	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.15 (0.15, 0.15)
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)	141	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)
United States	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)
United States	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	454	1.35 (1.13, 1.61)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	16.26 (14.12, 18.73)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	9.04 (7.92, 10.31)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
United States	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	142	2.57 (1.88, 3.51)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	29.87 (23.41, 38.11)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	14.91 (12.00, 18.51)
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)	141	0.99 (0.73, 1.34)
United States	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	10.47 (8.05, 13.63)
United States	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	4.83 (3.83, 6.10)
Argentina	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	45	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	45	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	45	0.15 (0.15, 0.15)
Argentina	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	11	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	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
Argentina	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Argentina	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	16	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	16	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	16	0.15 (0.15, 0.15)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	45	1.47 (0.91, 2.36)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	45	19.39 (12.92, 29.08)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	45	10.05 (6.85, 14.75)
Argentina	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	11	3.37 (0.76, 15.00)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	11	48.05 (19.88, 116.17)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	11	22.23 (10.96, 45.09)
Argentina	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	16	0.79 (0.33, 1.89)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	16	7.57 (3.41, 16.81)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	16	4.51 (2.20, 9.24)
Brazil	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	78	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	78	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	78	0.15 (0.15, 0.15)
Brazil	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	29	0.05 (0.05, 0.06)
Brazil	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	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)	78	1.89 (1.25, 2.85)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	78	24.23 (17.26, 34.03)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	78	9.82 (6.87, 14.04)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	29	2.05 (1.26, 3.33)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29	25.63 (15.10, 43.50)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29	15.35 (9.85, 23.90)
Brazil	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)
Brazil	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	30	0.61 (0.30, 1.23)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	7.43 (4.21, 13.11)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	4.73 (2.69, 8.31)
Chile	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	13	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	13	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)	1	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	13	4.14 (1.65, 10.37)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13	22.09 (12.75, 38.27)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	13	13.15 (6.95, 24.87)
Chile	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.37 (0.37, 0.37)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Chile	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.46 (0.46, 0.46)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	2.93 (2.93, 2.93)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	1.13 (1.13, 1.13)
Columbia	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	64	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	64	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	64	0.15 (0.15, 0.15)
Columbia	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	20	0.05 (0.04, 0.05)
Columbia	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	20	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	20	0.15 (0.15, 0.15)
Columbia	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	3	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	3	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	3	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Columbia	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	13	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	13	0.15 (0.15, 0.15)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	64	1.12 (0.75, 1.67)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	64	12.70 (8.40, 19.20)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	64	8.16 (5.82, 11.45)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	20	2.61 (1.03, 6.62)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	20	31.48 (17.36, 57.08)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	20	12.55 (8.24, 19.12)
Columbia	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	3	0.05 (0.05, 0.05)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	3	0.80 (0.80, 0.80)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	3	0.15 (0.15, 0.15)
Columbia	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	13	0.61 (0.22, 1.71)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	13	9.19 (3.60, 23.44)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	13	4.78 (2.12, 10.76)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Mexico	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)
Mexico	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0.06 (0.04, 0.08)
Mexico	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0.74 (0.29, 1.90)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	16.10 (5.55, 46.75)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	11.26 (4.24, 29.93)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4	1.96 (0.42, 9.23)
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	32.46 (7.08, 148.71)
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	13.89 (3.79, 50.94)
Mexico	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)
Mexico	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	0.66 (0.25, 1.69)
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	12.36 (7.69, 19.86)
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	6.18 (3.37, 11.36)
Peru	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	19	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	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)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
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)
Peru	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)
Peru	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	19	2.12 (1.05, 4.28)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	22.76 (9.92, 52.21)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	13.64 (8.00, 23.25)
Peru	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	6	5.16 (2.20, 12.11)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	69.02 (32.43, 146.86)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	22.38 (12.79, 39.16)
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)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Peru	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	5	1.54 (0.31, 7.56)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	7.47 (0.98, 56.72)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	6.77 (1.68, 27.23)
South Africa	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	231	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	0.15 (0.15, 0.16)
South Africa	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.06)
South Africa	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	27	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.81 (0.78, 0.84)
South Africa	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
South Africa	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	231	1.19 (0.95, 1.51)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	15.16 (12.68, 18.13)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	8.54 (7.24, 10.08)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	70	2.59 (1.62, 4.13)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	26.69 (18.00, 39.59)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	14.64 (10.61, 20.20)
South Africa	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	27	0.05 (0.05, 0.05)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	27	0.80 (0.80, 0.80)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	27	0.15 (0.15, 0.15)
South Africa	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	69	1.31 (0.84, 2.04)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	12.55 (8.32, 18.93)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	6.61 (4.63, 9.43)

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)	848	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	848	0.80 (0.80, 0.80)
Negative	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	848	0.15 (0.15, 0.15)
Negative	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	265	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	265	0.80 (0.79, 0.81)
Negative	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	265	0.15 (0.15, 0.15)
Negative	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	100	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	100	0.80 (0.80, 0.80)
Negative	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	100	0.15 (0.15, 0.15)
Negative	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	266	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	266	0.80 (0.79, 0.80)
Negative	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	266	0.15 (0.15, 0.15)
Negative	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	848	1.43 (1.26, 1.63)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	848	17.56 (15.77, 19.55)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	848	9.55 (8.65, 10.54)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Negative	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	265	2.42 (1.90, 3.08)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	265	29.55 (24.46, 35.70)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	265	14.91 (12.69, 17.52)
Negative	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	100	0.05 (0.05, 0.05)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	100	0.80 (0.80, 0.80)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (BAU/ml)	100	0.15 (0.15, 0.15)
Negative	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	266	0.87 (0.70, 1.10)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	266	9.49 (7.77, 11.60)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	266	5.12 (4.28, 6.12)
Positive	Day 1	Vaccine	Negative	Anti N IgG (BAU/ml)	65	0.05 (0.05, 0.05)
Positive	Day 1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	65	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	65	0.15 (0.15, 0.15)
Positive	Day 1	Vaccine	Positive	Anti N IgG (BAU/ml)	18	0.06 (0.05, 0.07)
Positive	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Positive	Day 1	Placebo	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Positive	Day 1	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)
Positive	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	14	0.05 (0.05, 0.05)
Positive	Day 1	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)
Positive	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	65	1.05 (0.66, 1.68)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	65	11.52 (7.30, 18.16)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	65	6.21 (4.22, 9.14)
Positive	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	18	4.99 (2.24, 11.13)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	39.49 (22.01, 70.85)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	15.07 (9.94, 22.85)
Positive	Day 29	Placebo	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)
Positive	Day 29	Placebo	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
Positive	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	14	0.83 (0.17, 4.12)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	10.02 (3.90, 25.74)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	3.18 (1.04, 9.69)

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)	913	0.05 (0.05, 0.05)	1.41 (1.24, 1.59)	1.59 (1.50, 1.68)
	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	913	0.80 (0.80, 0.80)	17.09 (15.39, 18.96)	7.12 (6.47, 7.83)
	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	913	0.15 (0.15, 0.15)	9.28 (8.44, 10.21)	10.07 (9.17, 11.06)
	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	283	0.05 (0.05, 0.05)	2.52 (2.00, 3.19)	2.02 (1.76, 2.32)
	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	283	0.80 (0.79, 0.81)	30.05 (25.07, 36.02)	12.22 (10.28, 14.53)
	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	283	0.15 (0.15, 0.15)	14.92 (12.80, 17.39)	16.29 (14.02, 18.93)
	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)	0.87 (0.70, 1.09)	1.38 (1.28, 1.50)
	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	280	0.80 (0.79, 0.80)	9.52 (7.86, 11.52)	4.42 (3.77, 5.18)
	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	280	0.15 (0.15, 0.15)	5.00 (4.20, 5.95)	5.59 (4.75, 6.57)

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)	453	0.05 (0.05, 0.05)	0.94 (0.80, 1.11)	1.32 (1.24, 1.40)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	453	0.80 (0.80, 0.80)	10.80 (9.40, 12.41)	4.62 (4.08, 5.23)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	453	0.15 (0.15, 0.15)	6.06 (5.32, 6.91)	6.59 (5.80, 7.50)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)	1.76 (1.29, 2.41)	1.66 (1.40, 1.96)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	20.39 (16.05, 25.89)	8.35 (6.66, 10.47)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)	10.36 (8.49, 12.65)	11.28 (9.27, 13.73)
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)	139	0.05 (0.05, 0.05)	0.52 (0.39, 0.69)	1.15 (1.07, 1.24)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)	5.48 (4.31, 6.98)	2.73 (2.27, 3.29)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.15)	2.84 (2.26, 3.57)	3.28 (2.67, 4.02)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	460	0.05 (0.05, 0.05)	2.98 (2.49, 3.57)	2.25 (2.00, 2.53)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	460	0.80 (0.80, 0.80)	40.62 (35.11, 47.01)	16.10 (13.92, 18.63)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	460	0.15 (0.15, 0.15)	20.78 (18.47, 23.38)	22.42 (19.91, 25.25)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)	5.00 (3.66, 6.83)	2.96 (2.33, 3.75)
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.81 (0.78, 0.84)	63.07 (48.83, 81.48)	25.30 (19.75, 32.41)
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.15 (0.15, 0.15)	29.97 (23.96, 37.48)	32.89 (26.55, 40.75)
Age \geq 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 \geq 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 \geq 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 \geq 60	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	141	0.05 (0.05, 0.05)	2.46 (1.77, 3.42)	1.99 (1.65, 2.40)
Age \geq 60	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	28.45 (21.21, 38.17)	11.51 (8.70, 15.23)
Age \geq 60	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)	15.36 (12.18, 19.37)	16.09 (12.54, 20.64)

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)	454	0.05 (0.05, 0.05)	1.34 (1.12, 1.59)	1.59 (1.45, 1.74)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	0.80 (0.80, 0.80)	17.44 (15.14, 20.09)	7.27 (6.38, 8.29)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	0.15 (0.15, 0.15)	9.51 (8.27, 10.93)	10.41 (9.09, 11.91)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	140	0.05 (0.05, 0.05)	2.53 (1.88, 3.39)	1.93 (1.61, 2.32)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	140	0.80 (0.80, 0.80)	34.36 (27.39, 43.11)	13.48 (10.70, 16.98)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	140	0.15 (0.15, 0.15)	15.52 (12.72, 18.95)	16.77 (13.71, 20.51)
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)	141	0.05 (0.05, 0.05)	1.16 (0.86, 1.56)	1.48 (1.32, 1.66)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	12.07 (9.52, 15.31)	5.10 (4.06, 6.40)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)	6.30 (5.07, 7.82)	6.98 (5.64, 8.64)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	459	0.05 (0.05, 0.05)	1.45 (1.23, 1.72)	1.58 (1.47, 1.71)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	459	0.80 (0.80, 0.80)	16.85 (14.56, 19.50)	7.01 (6.13, 8.02)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	459	0.15 (0.15, 0.15)	9.14 (8.03, 10.39)	9.85 (8.67, 11.20)

(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)	143	0.05 (0.05, 0.05)	2.52 (1.80, 3.53)	2.09 (1.71, 2.54)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	143	0.80 (0.79, 0.82)	27.41 (21.07, 35.65)	11.43 (8.95, 14.59)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	143	0.15 (0.15, 0.15)	14.52 (11.67, 18.08)	15.97 (12.92, 19.75)
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)	139	0.05 (0.05, 0.05)	0.72 (0.52, 0.98)	1.32 (1.18, 1.47)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	139	0.80 (0.79, 0.81)	8.11 (6.15, 10.70)	4.02 (3.24, 4.99)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	139	0.15 (0.15, 0.15)	4.29 (3.33, 5.51)	4.81 (3.82, 6.06)

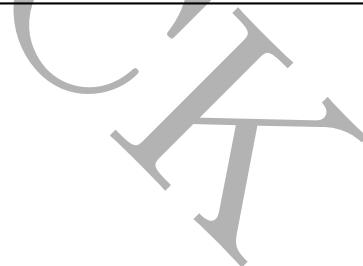


Table 8d. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19

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)	226	0.05 (0.05, 0.05)	0.88 (0.70, 1.11)	1.33 (1.21, 1.47)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	226	0.80 (0.80, 0.80)	11.21 (9.32, 13.48)	4.80 (4.07, 5.67)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	226	0.15 (0.15, 0.15)	6.37 (5.24, 7.73)	7.04 (5.84, 8.48)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.06)	1.80 (1.22, 2.64)	1.54 (1.24, 1.92)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	24.92 (18.62, 33.36)	9.84 (7.33, 13.20)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)	10.40 (7.91, 13.67)	11.21 (8.50, 14.78)
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)	0.66 (0.45, 0.98)	1.20 (1.07, 1.33)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	7.06 (5.28, 9.43)	3.07 (2.34, 4.02)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)	3.41 (2.58, 4.52)	3.82 (2.90, 5.03)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)	0.99 (0.79, 1.23)	1.31 (1.21, 1.41)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)	10.54 (8.66, 12.82)	4.50 (3.78, 5.36)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)	5.86 (4.92, 6.99)	6.31 (5.30, 7.52)

(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)	72	0.05 (0.05, 0.05)	1.74 (1.10, 2.75)	1.74 (1.36, 2.21)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)	17.82 (12.58, 25.23)	7.49 (5.42, 10.33)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.15)	10.34 (7.83, 13.65)	11.33 (8.65, 14.86)
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)	70	0.05 (0.05, 0.05)	0.44 (0.29, 0.65)	1.12 (1.02, 1.24)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.79, 0.81)	4.62 (3.24, 6.58)	2.52 (1.96, 3.25)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)	2.51 (1.80, 3.50)	2.95 (2.22, 3.94)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	228	0.05 (0.05, 0.05)	2.93 (2.27, 3.79)	2.22 (1.87, 2.63)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	228	0.80 (0.80, 0.80)	40.07 (32.47, 49.44)	15.90 (12.90, 19.59)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	228	0.15 (0.15, 0.15)	20.22 (17.20, 23.77)	21.75 (18.44, 25.64)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	4.73 (3.07, 7.28)	2.92 (2.10, 4.05)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	62.08 (43.89, 87.80)	24.07 (16.76, 34.57)
Age \geq 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	32.45 (25.59, 41.17)	35.22 (27.77, 44.68)

(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)	72	0.05 (0.05, 0.06)	3.60 (2.43, 5.33)	2.29 (1.78, 2.95)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	72	0.80 (0.80, 0.80)	35.83 (24.46, 52.47)	14.28 (9.74, 20.93)
Age ≥ 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	72	0.15 (0.15, 0.16)	21.81 (16.61, 28.64)	23.67 (18.02, 31.08)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	232	0.05 (0.05, 0.05)	3.02 (2.36, 3.86)	2.27 (1.94, 2.66)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	232	0.80 (0.80, 0.80)	41.01 (33.61, 50.04)	16.24 (13.30, 19.83)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	232	0.15 (0.15, 0.15)	21.17 (17.96, 24.94)	22.89 (19.41, 26.99)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	5.21 (3.36, 8.07)	2.99 (2.15, 4.17)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.82 (0.78, 0.87)	63.79 (44.40, 91.66)	26.22 (18.72, 36.72)
Age ≥ 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	28.30 (20.07, 39.92)	31.33 (22.63, 43.37)
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)	69	0.05 (0.05, 0.05)	1.91 (1.19, 3.09)	1.81 (1.39, 2.36)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.80 (0.80, 0.80)	24.45 (16.12, 37.10)	10.00 (6.78, 14.75)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.15)	12.20 (8.69, 17.11)	12.48 (8.62, 18.08)

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)	416	0.05 (0.05, 0.05)	1.43 (1.19, 1.72)	1.55 (1.43, 1.69)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	416	0.80 (0.80, 0.80)	17.21 (14.63, 20.24)	7.16 (6.17, 8.31)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	416	0.15 (0.15, 0.15)	9.36 (8.08, 10.84)	10.13 (8.77, 11.72)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	123	0.05 (0.05, 0.05)	2.88 (1.96, 4.24)	2.23 (1.78, 2.80)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	123	0.80 (0.80, 0.80)	31.72 (23.68, 42.49)	12.97 (9.77, 17.22)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	123	0.15 (0.15, 0.15)	16.03 (12.43, 20.69)	17.73 (13.90, 22.63)
Male	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)
Male	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)
Male	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)
Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	126	0.05 (0.05, 0.05)	0.88 (0.61, 1.27)	1.41 (1.23, 1.61)
Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	126	0.80 (0.79, 0.81)	9.77 (7.11, 13.44)	4.52 (3.47, 5.90)
Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	126	0.15 (0.15, 0.15)	5.33 (4.08, 6.96)	5.75 (4.41, 7.49)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	497	0.05 (0.05, 0.05)	1.38 (1.17, 1.64)	1.62 (1.49, 1.75)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	497	0.80 (0.80, 0.80)	16.98 (14.69, 19.63)	7.08 (6.19, 8.09)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	497	0.15 (0.15, 0.15)	9.22 (8.06, 10.54)	10.02 (8.77, 11.44)

(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)	2.30 (1.70, 3.09)	1.88 (1.58, 2.25)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	160	0.80 (0.79, 0.82)	28.91 (22.56, 37.04)	11.71 (9.28, 14.78)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	160	0.15 (0.15, 0.15)	14.17 (11.60, 17.32)	15.33 (12.54, 18.74)
Female	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)
Female	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)
Female	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)
Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	154	0.05 (0.05, 0.05)	0.87 (0.63, 1.18)	1.36 (1.23, 1.52)
Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	154	0.80 (0.80, 0.80)	9.31 (7.08, 12.24)	4.34 (3.48, 5.42)
Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	154	0.15 (0.15, 0.15)	4.75 (3.65, 6.18)	5.45 (4.30, 6.92)

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)	238	0.05 (0.05, 0.05)	0.91 (0.73, 1.13)	1.31 (1.21, 1.42)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	238	0.80 (0.80, 0.80)	10.17 (8.45, 12.25)	4.37 (3.70, 5.15)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	238	0.15 (0.15, 0.15)	5.84 (4.88, 6.98)	6.36 (5.33, 7.58)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	79	0.05 (0.05, 0.05)	1.66 (1.12, 2.46)	1.57 (1.27, 1.96)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	79	0.80 (0.80, 0.80)	19.70 (14.23, 27.28)	8.03 (5.93, 10.87)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	79	0.15 (0.15, 0.15)	10.12 (7.91, 12.94)	10.81 (8.40, 13.92)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	23	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)	23	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)	23	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)	73	0.05 (0.05, 0.05)	0.50 (0.33, 0.75)	1.16 (1.04, 1.30)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	73	0.80 (0.80, 0.80)	5.30 (3.71, 7.58)	2.71 (2.07, 3.56)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	73	0.15 (0.15, 0.15)	2.63 (1.87, 3.69)	3.16 (2.35, 4.24)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	215	0.05 (0.05, 0.05)	0.98 (0.77, 1.25)	1.33 (1.21, 1.46)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	215	0.80 (0.80, 0.80)	11.55 (9.37, 14.25)	4.92 (4.08, 5.93)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	215	0.15 (0.15, 0.15)	6.32 (5.22, 7.66)	6.87 (5.69, 8.30)

(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)	62	0.05 (0.05, 0.06)	1.92 (1.15, 3.20)	1.77 (1.35, 2.32)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62	0.80 (0.80, 0.80)	21.34 (14.85, 30.68)	8.81 (6.23, 12.46)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	62	0.15 (0.15, 0.15)	10.70 (7.70, 14.87)	11.94 (8.75, 16.30)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	31	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)	31	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)	31	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)	66	0.05 (0.05, 0.05)	0.54 (0.35, 0.83)	1.14 (1.04, 1.25)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	66	0.80 (0.79, 0.82)	5.70 (4.04, 8.05)	2.75 (2.11, 3.59)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	66	0.15 (0.15, 0.15)	3.12 (2.31, 4.22)	3.43 (2.57, 4.56)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	259	0.05 (0.05, 0.05)	2.94 (2.28, 3.79)	2.35 (1.99, 2.77)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	259	0.80 (0.80, 0.80)	42.41 (34.81, 51.66)	16.78 (13.76, 20.47)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	259	0.15 (0.15, 0.15)	20.86 (17.74, 24.54)	22.58 (19.19, 26.58)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	81	0.05 (0.05, 0.05)	4.16 (2.76, 6.28)	2.61 (1.94, 3.51)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	81	0.82 (0.78, 0.86)	58.11 (41.55, 81.27)	23.29 (16.91, 32.08)
Age ≥ 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)	26.18 (19.12, 35.85)	28.96 (21.55, 38.92)

(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)	31	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)	31	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)	31	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)	81	0.05 (0.05, 0.05)	2.52 (1.73, 3.68)	1.86 (1.51, 2.29)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	81	0.80 (0.80, 0.80)	27.65 (20.60, 37.10)	10.77 (7.93, 14.63)
Age ≥ 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	81	0.15 (0.15, 0.15)	14.91 (11.39, 19.53)	15.69 (11.73, 20.99)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	201	0.05 (0.05, 0.05)	3.03 (2.35, 3.91)	2.13 (1.81, 2.51)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	201	0.80 (0.80, 0.80)	38.47 (31.05, 47.65)	15.28 (12.35, 18.90)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	201	0.15 (0.15, 0.15)	20.68 (17.44, 24.52)	22.21 (18.68, 26.42)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	61	0.05 (0.05, 0.05)	6.59 (4.21, 10.32)	3.58 (2.45, 5.22)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	61	0.80 (0.80, 0.80)	71.36 (48.36, 105.31)	28.66 (19.50, 42.12)
Age ≥ 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	61	0.15 (0.15, 0.15)	36.72 (27.52, 48.99)	39.85 (29.87, 53.16)
Age ≥ 60 Male	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)
Age ≥ 60 Male	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)
Age ≥ 60 Male	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)

(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)	60	0.05 (0.05, 0.05)	2.38 (1.32, 4.27)	2.16 (1.56, 3.01)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	60	0.80 (0.80, 0.80)	29.49 (17.05, 51.02)	12.51 (7.65, 20.45)
Age ≥ 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	60	0.15 (0.15, 0.16)	15.93 (10.61, 23.92)	16.60 (10.73, 25.70)

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)	374	0.05 (0.05, 0.05)	1.48 (1.24, 1.77)	1.54 (1.42, 1.67)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	374	0.80 (0.80, 0.80)	17.87 (15.17, 21.05)	7.60 (6.55, 8.81)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	374	0.15 (0.15, 0.15)	9.55 (8.26, 11.04)	10.24 (8.85, 11.85)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	106	0.05 (0.05, 0.05)	2.07 (1.41, 3.02)	1.71 (1.40, 2.10)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	106	0.80 (0.80, 0.80)	26.47 (19.85, 35.29)	10.79 (8.23, 14.14)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	106	0.15 (0.15, 0.15)	14.30 (11.44, 17.89)	15.52 (12.42, 19.39)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	44	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)	44	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)	44	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)	105	0.05 (0.05, 0.05)	0.81 (0.57, 1.15)	1.35 (1.20, 1.52)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	105	0.80 (0.80, 0.80)	9.25 (6.85, 12.50)	4.29 (3.34, 5.50)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	105	0.15 (0.15, 0.15)	5.02 (3.84, 6.56)	5.47 (4.21, 7.12)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	477	0.05 (0.05, 0.05)	1.37 (1.16, 1.63)	1.65 (1.51, 1.80)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	477	0.80 (0.80, 0.80)	16.37 (14.27, 18.78)	6.65 (5.84, 7.58)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	477	0.15 (0.15, 0.15)	9.23 (8.11, 10.50)	10.02 (8.83, 11.37)

(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)	164	0.05 (0.05, 0.05)	3.09 (2.24, 4.24)	2.45 (2.00, 3.01)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	164	0.81 (0.79, 0.83)	36.03 (27.77, 46.75)	14.80 (11.60, 18.89)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	164	0.15 (0.15, 0.15)	15.94 (12.70, 20.00)	17.53 (14.06, 21.84)
Not Hispanic or Latino	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 Hispanic or Latino	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 Hispanic or Latino	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 Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	152	0.05 (0.05, 0.05)	1.06 (0.74, 1.51)	1.48 (1.30, 1.69)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	152	0.80 (0.79, 0.81)	10.83 (8.01, 14.64)	5.15 (4.04, 6.57)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	152	0.15 (0.15, 0.15)	5.11 (3.81, 6.86)	5.95 (4.68, 7.58)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	62	0.05 (0.05, 0.05)	1.03 (0.60, 1.79)	1.53 (1.24, 1.89)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	62	0.80 (0.80, 0.80)	15.50 (10.38, 23.14)	6.41 (4.41, 9.30)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	62	0.16 (0.15, 0.16)	7.49 (4.99, 11.25)	9.04 (6.43, 12.72)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	13	0.05 (0.05, 0.05)	2.45 (1.39, 4.30)	1.51 (1.05, 2.17)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)	17.50 (9.29, 32.94)	6.33 (2.95, 13.59)

(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)	13	0.15 (0.15, 0.15)	11.83 (6.16, 22.73)	12.84 (6.68, 24.66)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	9	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)	9	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)	9	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)	23	0.05 (0.05, 0.05)	0.53 (0.32, 0.89)	1.15 (0.99, 1.34)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	23	0.80 (0.80, 0.80)	6.17 (3.91, 9.75)	2.62 (1.75, 3.93)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	23	0.15 (0.15, 0.15)	4.41 (2.97, 6.55)	4.70 (3.18, 6.95)

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)	196	0.05 (0.05, 0.05)	1.50 (1.13, 1.98)	1.80 (1.56, 2.08)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	196	0.80 (0.80, 0.80)	17.65 (14.16, 22.00)	7.33 (5.97, 9.01)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	196	0.15 (0.15, 0.15)	9.28 (7.55, 11.41)	10.30 (8.46, 12.53)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	63	0.05 (0.05, 0.05)	3.69 (2.18, 6.25)	2.83 (1.98, 4.05)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63	0.82 (0.78, 0.86)	45.03 (30.91, 65.61)	17.94 (12.42, 25.91)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	63	0.15 (0.15, 0.15)	17.98 (12.82, 25.22)	19.97 (14.53, 27.46)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	23	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)	23	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)	23	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)	56	0.05 (0.05, 0.05)	1.16 (0.67, 2.02)	1.57 (1.25, 1.98)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	56	0.80 (0.80, 0.80)	12.32 (7.77, 19.56)	5.50 (3.69, 8.22)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	56	0.15 (0.15, 0.15)	5.02 (3.41, 7.38)	5.70 (4.04, 8.03)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	332	0.05 (0.05, 0.05)	1.33 (1.10, 1.62)	1.53 (1.40, 1.67)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	332	0.80 (0.80, 0.80)	16.19 (13.79, 18.99)	6.48 (5.55, 7.57)

(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)	332	0.15 (0.15, 0.15)	9.18 (7.98, 10.57)	9.83 (8.54, 11.31)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	111	0.05 (0.05, 0.05)	1.82 (1.24, 2.66)	1.84 (1.53, 2.21)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	111	0.80 (0.80, 0.80)	20.44 (14.38, 29.07)	8.91 (6.64, 11.95)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	111	0.15 (0.15, 0.15)	12.52 (9.57, 16.39)	13.64 (10.44, 17.80)
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)	94	0.05 (0.05, 0.05)	0.93 (0.57, 1.49)	1.41 (1.20, 1.66)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	94	0.81 (0.79, 0.82)	10.46 (6.88, 15.91)	4.80 (3.34, 6.89)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	94	0.15 (0.15, 0.15)	4.71 (3.31, 6.71)	5.23 (3.69, 7.42)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	18	0.05 (0.05, 0.05)	2.15 (1.01, 4.58)	1.60 (0.95, 2.69)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)	20.66 (10.86, 39.30)	7.82 (3.95, 15.48)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)	10.30 (6.01, 17.63)	11.42 (6.84, 19.08)

(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)	5	0.07 (0.04, 0.12)	3.89 (2.24, 6.74)	1.53 (0.88, 2.65)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)	52.83 (12.92, 215.97)	18.19 (3.57, 92.66)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)	24.28 (8.61, 68.46)	26.35 (9.35, 74.29)
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)	10	0.05 (0.05, 0.05)	0.51 (0.16, 1.61)	1.34 (0.91, 1.97)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	10	0.80 (0.80, 0.80)	6.07 (2.15, 17.12)	3.14 (1.49, 6.63)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	10	0.15 (0.15, 0.15)	5.58 (2.70, 11.54)	6.05 (2.93, 12.52)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	149	0.05 (0.05, 0.05)	1.34 (1.01, 1.79)	1.51 (1.34, 1.71)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	149	0.80 (0.80, 0.80)	16.66 (12.81, 21.68)	7.23 (5.72, 9.13)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	149	0.15 (0.15, 0.15)	8.81 (6.94, 11.18)	9.43 (7.43, 11.97)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	49	0.05 (0.05, 0.05)	2.79 (1.56, 4.98)	2.17 (1.56, 3.03)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	49	0.80 (0.80, 0.80)	34.07 (22.72, 51.09)	13.32 (8.76, 20.24)

(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	0.15 (0.15, 0.15)	14.32 (10.15, 20.21)	15.66 (11.16, 21.98)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	18	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)	18	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)	18	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)	48	0.05 (0.05, 0.05)	0.70 (0.43, 1.15)	1.31 (1.13, 1.52)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	48	0.80 (0.80, 0.80)	9.20 (6.04, 14.01)	4.24 (3.02, 5.94)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	48	0.15 (0.15, 0.15)	4.46 (2.94, 6.77)	5.13 (3.55, 7.41)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	2	0.05 (0.05, 0.05)	2.86 (1.01, 8.14)	1.68 (0.93, 3.05)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	2	0.80 (0.80, 0.80)	24.67 (9.77, 62.29)	9.82 (3.89, 24.79)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	2	0.15 (0.15, 0.15)	10.65 (8.80, 12.90)	11.56 (9.55, 14.00)
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)	3.09 (3.09, 3.09)	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)	18.62 (18.62, 18.62)	7.41 (7.41, 7.41)

(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	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	12.15 (12.15, 12.15)	13.18 (13.18, 13.18)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	25	0.05 (0.05, 0.05)	1.26 (0.63, 2.52)	1.60 (1.15, 2.24)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	25	0.80 (0.80, 0.80)	16.70 (10.38, 26.86)	7.00 (4.53, 10.81)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	25	0.15 (0.15, 0.15)	11.25 (6.17, 20.52)	12.72 (7.16, 22.62)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)	2.79 (1.15, 6.76)	1.83 (1.08, 3.08)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)	35.72 (15.57, 81.92)	13.49 (5.68, 32.02)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)	9.78 (5.54, 17.26)	10.62 (6.02, 18.73)
Multiracial	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)
Multiracial	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)
Multiracial	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)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	15	0.05 (0.05, 0.05)	1.85 (0.49, 6.95)	1.99 (0.90, 4.38)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	15	0.80 (0.80, 0.80)	16.42 (6.17, 43.75)	7.21 (3.09, 16.87)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	15	0.15 (0.15, 0.15)	7.36 (2.96, 18.26)	8.00 (3.21, 19.93)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	12	0.05 (0.05, 0.05)	2.50 (0.90, 6.94)	2.05 (1.22, 3.44)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	12	0.80 (0.80, 0.80)	21.32 (14.43, 31.50)	8.49 (5.75, 12.54)

(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 Spike IgG (BAU/ml)	12	0.15 (0.15, 0.15)	20.41 (12.24, 34.04)	22.15 (13.28, 36.95)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	1.70 (1.70, 1.70)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	30.53 (30.53, 30.53)	12.15 (12.15, 12.15)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	26.52 (26.52, 26.52)	28.78 (28.78, 28.78)
Not reported and unknown	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)
Not reported and unknown	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)
Not reported and unknown	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)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	4	0.05 (0.05, 0.05)	2.85 (1.31, 6.21)	1.41 (0.85, 2.34)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)	8.77 (4.28, 17.98)	3.53 (1.76, 7.09)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)	15.88 (13.13, 19.20)	17.23 (14.25, 20.84)

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)	1.33 (1.07, 1.66)	1.47 (1.33, 1.64)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)	15.83 (13.04, 19.22)	6.51 (5.44, 7.80)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	227	0.15 (0.15, 0.15)	9.26 (7.76, 11.04)	10.03 (8.42, 11.95)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	1.60 (1.06, 2.41)	1.51 (1.27, 1.80)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	17.64 (12.36, 25.18)	7.55 (5.54, 10.29)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	12.18 (9.07, 16.36)	12.89 (9.46, 17.55)
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)	70	0.05 (0.05, 0.06)	0.93 (0.65, 1.32)	1.32 (1.16, 1.50)
URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)	10.38 (7.41, 14.55)	4.61 (3.45, 6.16)
URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)	4.59 (3.28, 6.41)	5.42 (4.04, 7.27)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	227	0.05 (0.05, 0.05)	1.36 (1.05, 1.77)	1.74 (1.53, 1.98)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	227	0.80 (0.80, 0.80)	16.64 (13.58, 20.37)	7.03 (5.83, 8.47)

(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)	227	0.15 (0.15, 0.15)	8.85 (7.31, 10.73)	10.06 (8.43, 12.00)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	71	0.05 (0.05, 0.05)	3.92 (2.47, 6.21)	2.74 (2.01, 3.74)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	71	0.82 (0.78, 0.85)	47.58 (34.24, 66.13)	18.96 (13.75, 26.15)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	17.81 (13.03, 24.36)	19.75 (14.71, 26.52)
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)	71	0.05 (0.05, 0.05)	1.05 (0.65, 1.70)	1.55 (1.28, 1.87)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	71	0.80 (0.80, 0.80)	10.56 (7.07, 15.79)	4.94 (3.53, 6.92)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	71	0.15 (0.15, 0.15)	5.08 (3.67, 7.03)	5.75 (4.30, 7.69)

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)	113	0.05 (0.05, 0.05)	0.95 (0.71, 1.28)	1.31 (1.16, 1.47)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	113	0.80 (0.80, 0.80)	10.76 (8.28, 13.99)	4.51 (3.55, 5.73)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	113	0.15 (0.15, 0.15)	6.41 (5.02, 8.18)	6.96 (5.47, 8.86)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)	1.12 (0.65, 1.93)	1.31 (1.08, 1.58)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)	10.28 (6.59, 16.03)	4.56 (3.16, 6.58)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)	7.81 (5.31, 11.49)	8.17 (5.44, 12.28)
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)	35	0.05 (0.04, 0.06)	0.47 (0.29, 0.75)	1.07 (0.94, 1.21)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	5.34 (3.44, 8.28)	2.54 (1.79, 3.60)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)	2.09 (1.35, 3.24)	2.60 (1.81, 3.75)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	111	0.05 (0.05, 0.05)	0.93 (0.65, 1.31)	1.49 (1.28, 1.73)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	111	0.80 (0.80, 0.80)	10.19 (7.79, 13.33)	4.41 (3.45, 5.62)

(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)	111	0.15 (0.15, 0.15)	5.89 (4.51, 7.70)	6.88 (5.41, 8.75)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)	3.04 (1.60, 5.79)	2.26 (1.47, 3.46)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	33.89 (21.53, 53.37)	13.52 (8.71, 20.98)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)	12.01 (7.99, 18.06)	13.49 (9.31, 19.56)
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)	35	0.05 (0.05, 0.05)	0.70 (0.36, 1.36)	1.37 (1.08, 1.74)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	6.36 (3.69, 10.95)	3.24 (2.10, 5.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)	3.16 (2.04, 4.87)	3.69 (2.54, 5.37)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	114	0.05 (0.05, 0.05)	2.50 (1.82, 3.42)	1.85 (1.51, 2.27)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	114	0.80 (0.80, 0.80)	32.68 (25.29, 42.23)	12.98 (10.04, 16.78)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	114	0.15 (0.15, 0.15)	18.45 (14.88, 22.87)	19.90 (16.02, 24.73)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	35	0.05 (0.05, 0.05)	3.64 (2.20, 6.03)	2.11 (1.45, 3.08)
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	62.80 (37.48, 105.23)	24.66 (14.61, 41.63)

(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)	35	0.15 (0.15, 0.15)	34.65 (24.94, 48.14)	37.60 (27.07, 52.24)
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)	35	0.05 (0.04, 0.05)	3.39 (2.20, 5.22)	1.96 (1.49, 2.59)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	35	0.80 (0.80, 0.80)	36.78 (23.53, 57.49)	14.28 (8.99, 22.70)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	35	0.15 (0.15, 0.15)	20.48 (13.85, 30.30)	21.84 (14.51, 32.89)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	116	0.05 (0.05, 0.05)	2.88 (2.00, 4.14)	2.34 (1.84, 2.97)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	116	0.80 (0.80, 0.80)	42.70 (32.17, 56.68)	17.25 (13.12, 22.67)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	116	0.15 (0.15, 0.15)	19.37 (15.50, 24.20)	20.91 (16.71, 26.17)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.05)	5.88 (3.21, 10.74)	3.74 (2.43, 5.74)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	36	0.85 (0.75, 0.95)	82.09 (52.81, 127.62)	32.68 (21.02, 50.80)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)	33.58 (20.94, 53.86)	36.45 (22.73, 58.45)
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 \geq 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 \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	36	0.05 (0.05, 0.06)	2.30 (1.30, 4.08)	1.95 (1.42, 2.67)
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	36	0.80 (0.80, 0.80)	28.08 (17.06, 46.21)	11.12 (6.74, 18.34)
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	36	0.15 (0.15, 0.15)	12.71 (8.41, 19.22)	13.47 (8.79, 20.64)

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)	454	0.05 (0.05, 0.05)	1.35 (1.13, 1.61)	1.61 (1.48, 1.76)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	454	0.80 (0.80, 0.80)	16.26 (14.12, 18.73)	6.79 (5.96, 7.73)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	454	0.15 (0.15, 0.15)	9.04 (7.92, 10.31)	10.05 (8.87, 11.38)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	142	0.05 (0.05, 0.05)	2.57 (1.88, 3.51)	2.07 (1.72, 2.49)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	142	0.81 (0.79, 0.83)	29.87 (23.41, 38.11)	12.31 (9.82, 15.43)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	142	0.15 (0.15, 0.15)	14.91 (12.00, 18.51)	16.17 (13.06, 20.02)
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)	141	0.05 (0.05, 0.05)	0.99 (0.73, 1.34)	1.43 (1.27, 1.61)
United States	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	141	0.80 (0.80, 0.80)	10.47 (8.05, 13.63)	4.78 (3.82, 5.97)
United States	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	141	0.15 (0.15, 0.15)	4.83 (3.83, 6.10)	5.58 (4.54, 6.87)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	45	0.05 (0.05, 0.05)	1.47 (0.91, 2.36)	1.56 (1.26, 1.93)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	45	0.80 (0.80, 0.80)	19.39 (12.92, 29.08)	7.49 (4.94, 11.36)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	45	0.15 (0.15, 0.15)	10.05 (6.85, 14.75)	10.17 (6.69, 15.46)

(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)	11	0.05 (0.05, 0.05)	3.37 (0.76, 15.00)	2.83 (1.29, 6.20)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	11	0.80 (0.80, 0.80)	48.05 (19.88, 116.17)	17.59 (6.48, 47.70)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	11	0.15 (0.15, 0.15)	22.23 (10.96, 45.09)	24.13 (11.90, 48.93)
Argentina	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)
Argentina	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)
Argentina	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)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	16	0.05 (0.05, 0.05)	0.79 (0.33, 1.89)	1.21 (0.99, 1.49)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	16	0.80 (0.80, 0.80)	7.57 (3.41, 16.81)	3.97 (2.20, 7.18)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	16	0.15 (0.15, 0.15)	4.51 (2.20, 9.24)	4.72 (2.30, 9.65)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	78	0.05 (0.05, 0.05)	1.89 (1.25, 2.85)	1.82 (1.47, 2.26)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	78	0.80 (0.80, 0.80)	24.23 (17.26, 34.03)	10.13 (7.43, 13.82)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	78	0.15 (0.15, 0.15)	9.82 (6.87, 14.04)	10.97 (7.80, 15.44)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	29	0.05 (0.05, 0.06)	2.05 (1.26, 3.33)	1.47 (1.18, 1.83)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	29	0.80 (0.80, 0.80)	25.63 (15.10, 43.50)	10.69 (6.73, 16.97)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29	0.15 (0.15, 0.15)	15.35 (9.85, 23.90)	16.46 (10.48, 25.87)

(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)	15	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)	15	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)	15	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)	0.61 (0.30, 1.23)	1.39 (1.12, 1.74)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	30	0.80 (0.80, 0.80)	7.43 (4.21, 13.11)	3.33 (2.07, 5.34)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	30	0.15 (0.15, 0.15)	4.73 (2.69, 8.31)	5.55 (3.46, 8.89)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	13	0.05 (0.05, 0.05)	4.14 (1.65, 10.37)	2.92 (1.54, 5.53)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)	22.09 (12.75, 38.27)	8.79 (5.08, 15.23)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	13	0.15 (0.15, 0.15)	13.15 (6.95, 24.87)	13.87 (7.04, 27.31)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	0.37 (0.37, 0.37)	1.00 (1.00, 1.00)
Chile	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)
Chile	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)
Chile	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)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Chile	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	1	0.05 (0.05, 0.05)	0.46 (0.46, 0.46)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	1	0.80 (0.80, 0.80)	2.93 (2.93, 2.93)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	1	0.15 (0.15, 0.15)	1.13 (1.13, 1.13)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	64	0.05 (0.05, 0.05)	1.12 (0.75, 1.67)	1.30 (1.13, 1.49)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	64	0.80 (0.80, 0.80)	12.70 (8.40, 19.20)	5.81 (4.14, 8.17)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	64	0.15 (0.15, 0.15)	8.16 (5.82, 11.45)	8.71 (6.18, 12.28)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	20	0.05 (0.04, 0.05)	2.61 (1.03, 6.62)	2.13 (1.17, 3.87)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	20	0.80 (0.80, 0.80)	31.48 (17.36, 57.08)	12.05 (6.40, 22.66)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	20	0.15 (0.15, 0.15)	12.55 (8.24, 19.12)	13.62 (8.94, 20.75)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	3	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)	3	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)	3	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)	13	0.05 (0.05, 0.05)	0.61 (0.22, 1.71)	1.37 (0.88, 2.14)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	13	0.80 (0.80, 0.80)	9.19 (3.60, 23.44)	4.60 (2.17, 9.74)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	13	0.15 (0.15, 0.15)	4.78 (2.12, 10.76)	4.81 (2.10, 11.05)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	9	0.05 (0.05, 0.05)	0.74 (0.29, 1.90)	1.26 (0.89, 1.80)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	9	0.80 (0.80, 0.80)	16.10 (5.55, 46.75)	6.58 (2.32, 18.63)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9	0.15 (0.15, 0.15)	11.26 (4.24, 29.93)	11.85 (4.35, 32.23)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	4	0.06 (0.04, 0.08)	1.96 (0.42, 9.23)	1.84 (0.59, 5.74)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	4	0.80 (0.80, 0.80)	32.46 (7.08, 148.71)	12.92 (2.82, 59.19)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	4	0.15 (0.15, 0.15)	13.89 (3.79, 50.94)	15.07 (4.11, 55.28)
Mexico	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)
Mexico	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)
Mexico	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)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	5	0.05 (0.05, 0.05)	0.66 (0.25, 1.69)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)	12.36 (7.69, 19.86)	4.92 (3.06, 7.91)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)	6.18 (3.37, 11.36)	6.71 (3.65, 12.32)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	19	0.05 (0.05, 0.05)	2.12 (1.05, 4.28)	1.45 (1.09, 1.93)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	19	0.80 (0.80, 0.80)	22.76 (9.92, 52.21)	9.59 (4.44, 20.71)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	19	0.15 (0.15, 0.15)	13.64 (8.00, 23.25)	14.45 (8.22, 25.38)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	6	0.05 (0.05, 0.05)	5.16 (2.20, 12.11)	2.30 (0.99, 5.37)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	6	0.80 (0.80, 0.80)	69.02 (32.43, 146.86)	27.47 (12.91, 58.46)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	6	0.15 (0.15, 0.15)	22.38 (12.79, 39.16)	24.29 (13.88, 42.50)
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)	5	0.05 (0.05, 0.05)	1.54 (0.31, 7.56)	1.56 (0.82, 2.99)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	5	0.80 (0.80, 0.80)	7.47 (0.98, 56.72)	4.66 (1.05, 20.65)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	5	0.15 (0.15, 0.15)	6.77 (1.68, 27.23)	6.33 (1.29, 30.93)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	231	0.05 (0.05, 0.05)	1.19 (0.95, 1.51)	1.52 (1.37, 1.69)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	231	0.80 (0.80, 0.80)	15.16 (12.68, 18.13)	6.13 (5.17, 7.27)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	231	0.15 (0.15, 0.16)	8.54 (7.24, 10.08)	8.96 (7.55, 10.64)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	70	0.05 (0.05, 0.06)	2.59 (1.62, 4.13)	2.22 (1.69, 2.92)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	70	0.80 (0.80, 0.80)	26.69 (18.00, 39.59)	10.84 (7.42, 15.85)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	70	0.15 (0.15, 0.15)	14.64 (10.61, 20.20)	16.39 (12.27, 21.88)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
South Africa	D29 fold-rise over D1	Placebo	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)
South Africa	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)
South Africa	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)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (BAU/ml)	69	0.05 (0.05, 0.05)	1.31 (0.84, 2.04)	1.48 (1.22, 1.79)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	69	0.81 (0.78, 0.84)	12.55 (8.32, 18.93)	5.65 (3.97, 8.04)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	69	0.15 (0.15, 0.16)	6.61 (4.63, 9.43)	7.33 (5.22, 10.30)

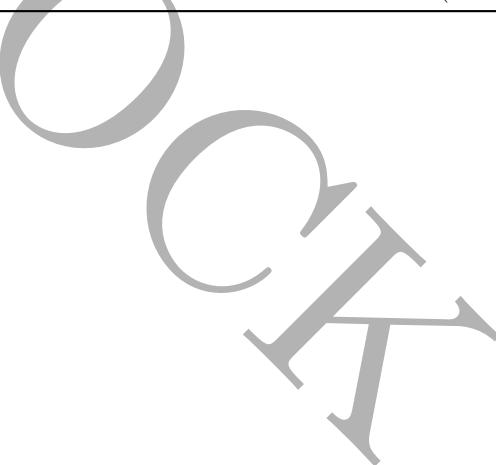
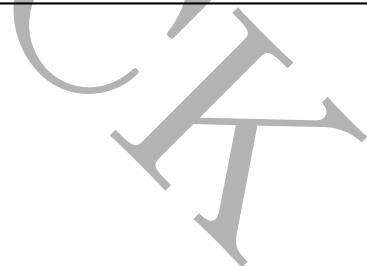


Table 8l. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by HIV Infection

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)	848	0.05 (0.05, 0.05)	1.43 (1.26, 1.63)	1.60 (1.50, 1.70)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	848	0.80 (0.80, 0.80)	17.56 (15.77, 19.55)	7.31 (6.62, 8.07)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	848	0.15 (0.15, 0.15)	9.55 (8.65, 10.54)	10.37 (9.41, 11.44)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (BAU/ml)	265	0.05 (0.05, 0.05)	2.42 (1.90, 3.08)	2.00 (1.74, 2.29)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	265	0.80 (0.79, 0.81)	29.55 (24.46, 35.70)	12.04 (10.06, 14.40)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	265	0.15 (0.15, 0.15)	14.91 (12.69, 17.52)	16.31 (13.93, 19.09)
Negative	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	100	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)	100	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)	100	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)	266	0.05 (0.05, 0.05)	0.87 (0.70, 1.10)	1.37 (1.27, 1.48)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	266	0.80 (0.79, 0.80)	9.49 (7.77, 11.60)	4.44 (3.77, 5.23)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	266	0.15 (0.15, 0.15)	5.12 (4.28, 6.12)	5.69 (4.81, 6.73)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (BAU/ml)	65	0.05 (0.05, 0.05)	1.05 (0.66, 1.68)	1.46 (1.20, 1.78)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (BAU/ml)	65	0.80 (0.80, 0.80)	11.52 (7.30, 18.16)	4.88 (3.24, 7.34)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (BAU/ml)	65	0.15 (0.15, 0.15)	6.21 (4.22, 9.14)	6.60 (4.51, 9.67)

(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)	18	0.06 (0.05, 0.07)	4.99 (2.24, 11.13)	2.43 (1.17, 5.04)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	18	0.80 (0.80, 0.80)	39.49 (22.01, 70.85)	15.72 (8.76, 28.20)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (BAU/ml)	18	0.15 (0.15, 0.15)	15.07 (9.94, 22.85)	16.07 (10.41, 24.78)
Positive	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (BAU/ml)	9	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)	9	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)	9	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)	14	0.05 (0.05, 0.05)	0.83 (0.17, 4.12)	1.60 (0.74, 3.49)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (BAU/ml)	14	0.80 (0.80, 0.80)	10.02 (3.90, 25.74)	4.10 (1.61, 10.43)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (BAU/ml)	14	0.15 (0.15, 0.15)	3.18 (1.04, 9.69)	3.86 (1.36, 10.94)



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, 1.03)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.81 (0.78, 0.84)	0.80 (0.80, 0.80)	1.02 (0.98, 1.05)
Age ≥ 60 vs Age 18 - 59	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 ≥ 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)	1.01 (0.95, 1.06)

(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 (0.80, 0.80)	0.80 (0.79, 0.81)	1.00 (0.99, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2.98 (2.49, 3.57)	0.94 (0.80, 1.11)	3.16 (2.48, 4.02)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	40.62 (35.11, 47.01)	10.80 (9.40, 12.41)	3.76 (3.07, 4.60)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20.78 (18.47, 23.38)	6.06 (5.32, 6.91)	3.43 (2.88, 4.09)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	5.00 (3.66, 6.83)	1.76 (1.29, 2.41)	2.83 (1.82, 4.41)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	63.07 (48.83, 81.48)	20.39 (16.05, 25.89)	3.09 (2.18, 4.39)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	29.97 (23.96, 37.48)	10.36 (8.49, 12.65)	2.89 (2.14, 3.90)
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)	2.46 (1.77, 3.42)	0.52 (0.39, 0.69)	4.76 (3.08, 7.38)

(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)	28.45 (21.21, 38.17)	5.48 (4.31, 6.98)	5.19 (3.55, 7.59)
Age \geq 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	15.36 (12.18, 19.37)	2.84 (2.26, 3.57)	5.40 (3.90, 7.48)

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)	1.06 (1.00, 1.13)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.82)	0.99 (0.97, 1.01)
At-risk vs 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)
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 (0.94, 1.05)
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, 0.81)	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, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	1.34 (1.12, 1.59)	1.45 (1.23, 1.72)	0.92 (0.72, 1.17)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	17.44 (15.14, 20.09)	16.85 (14.56, 19.50)	1.03 (0.84, 1.27)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9.51 (8.27, 10.93)	9.14 (8.03, 10.39)	1.04 (0.86, 1.26)

(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)	2.53 (1.88, 3.39)	2.52 (1.80, 3.53)	1.00 (0.64, 1.57)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	34.36 (27.39, 43.11)	27.41 (21.07, 35.65)	1.25 (0.89, 1.77)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	15.52 (12.72, 18.95)	14.52 (11.67, 18.08)	1.07 (0.79, 1.44)
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)	1.16 (0.86, 1.56)	0.72 (0.52, 0.98)	1.61 (1.05, 2.49)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	12.07 (9.52, 15.31)	8.11 (6.15, 10.70)	1.49 (1.03, 2.14)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	6.30 (5.07, 7.82)	4.29 (3.33, 5.51)	1.47 (1.05, 2.05)

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 (0.98, 1.16)
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 (0.89, 1.03)
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 (0.79, 0.81)	0.99 (0.98, 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 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)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	0.88 (0.70, 1.11)	0.99 (0.79, 1.23)	0.89 (0.65, 1.23)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	11.21 (9.32, 13.48)	10.54 (8.66, 12.82)	1.06 (0.81, 1.39)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	6.37 (5.24, 7.73)	5.86 (4.92, 6.99)	1.09 (0.84, 1.41)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1.80 (1.22, 2.64)	1.74 (1.10, 2.75)	1.03 (0.57, 1.88)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	24.92 (18.62, 33.36)	17.82 (12.58, 25.23)	1.40 (0.89, 2.20)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	10.40 (7.91, 13.67)	10.34 (7.83, 13.65)	1.01 (0.68, 1.49)
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)	0.66 (0.45, 0.98)	0.44 (0.29, 0.65)	1.52 (0.87, 2.67)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	7.06 (5.28, 9.43)	4.62 (3.24, 6.58)	1.53 (0.97, 2.42)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	3.41 (2.58, 4.52)	2.51 (1.80, 3.50)	1.36 (0.88, 2.10)

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

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age \geq 60, Risk for Severe Covid-19							
Age \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 (0.99, 1.00)
Age \geq 60 At-risk vs Age \geq 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)	1.06 (0.98, 1.14)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.82 (0.78, 0.87)	0.97 (0.92, 1.03)
Age \geq 60 At-risk vs Age \geq 60 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (BAU/ml)	0.05 (0.05, 0.06)	0.05 (0.05, 0.05)	1.07 (0.98, 1.17)
Age \geq 60 At-risk vs Age \geq 60 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 \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (BAU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (BAU/ml)	2.93 (2.27, 3.79)	3.02 (2.36, 3.86)	0.97 (0.68, 1.39)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	40.07 (32.47, 49.44)	41.01 (33.61, 50.04)	0.98 (0.73, 1.31)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	20.22 (17.20, 23.77)	21.17 (17.96, 24.94)	0.96 (0.76, 1.20)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	4.73 (3.07, 7.28)	5.21 (3.36, 8.07)	0.91 (0.49, 1.68)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	62.08 (43.89, 87.80)	63.79 (44.40, 91.66)	0.97 (0.59, 1.61)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	32.45 (25.59, 41.17)	28.30 (20.07, 39.92)	1.15 (0.75, 1.74)
Age \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 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 \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (BAU/ml)	3.60 (2.43, 5.33)	1.91 (1.19, 3.09)	1.88 (1.01, 3.49)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	35.83 (24.46, 52.47)	24.45 (16.12, 37.10)	1.47 (0.83, 2.58)

(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)	21.81 (16.61, 28.64)	12.20 (8.69, 17.11)	1.79 (1.16, 2.76)

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)	1.07 (1.01, 1.14)
Male vs Female	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.82)	0.99 (0.97, 1.01)
Male vs Female	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)
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 (0.94, 1.05)
Male vs Female	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)
Male vs Female	Day 1	Placebo	Positive	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	Vaccine	Negative	Anti N IgG (BAU/ml)	1.43 (1.19, 1.72)	1.38 (1.17, 1.64)	1.03 (0.80, 1.33)
Male vs Female	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	17.21 (14.63, 20.24)	16.98 (14.69, 19.63)	1.01 (0.81, 1.27)
Male vs Female	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9.36 (8.08, 10.84)	9.22 (8.06, 10.54)	1.02 (0.83, 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
Male vs Female	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	2.88 (1.96, 4.24)	2.30 (1.70, 3.09)	1.25 (0.76, 2.06)
Male vs Female	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	31.72 (23.68, 42.49)	28.91 (22.56, 37.04)	1.10 (0.74, 1.63)
Male vs Female	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	16.03 (12.43, 20.69)	14.17 (11.60, 17.32)	1.13 (0.81, 1.58)
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)	0.88 (0.61, 1.27)	0.87 (0.63, 1.18)	1.01 (0.61, 1.69)
Male vs Female	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	9.77 (7.11, 13.44)	9.31 (7.08, 12.24)	1.05 (0.67, 1.65)
Male vs Female	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	5.33 (4.08, 6.96)	4.75 (3.65, 6.18)	1.12 (0.75, 1.68)

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)	1.01 (0.96, 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)	0.81 (0.79, 0.83)	0.99 (0.97, 1.01)
Hispanic or Latino vs Not Hispanic or Latino	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)
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)	1.02 (0.96, 1.08)
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)	0.99 (0.98, 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
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	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	Vaccine	Negative	Anti N IgG (BAU/ml)	1.48 (1.24, 1.77)	1.37 (1.16, 1.63)	1.08 (0.84, 1.38)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	17.87 (15.17, 21.05)	16.37 (14.27, 18.78)	1.09 (0.88, 1.35)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9.55 (8.26, 11.04)	9.23 (8.11, 10.50)	1.03 (0.85, 1.26)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	2.07 (1.41, 3.02)	3.09 (2.24, 4.24)	0.67 (0.41, 1.10)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	26.47 (19.85, 35.29)	36.03 (27.77, 46.75)	0.73 (0.49, 1.09)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	14.30 (11.44, 17.89)	15.94 (12.70, 20.00)	0.90 (0.65, 1.24)
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)	0.81 (0.57, 1.15)	1.06 (0.74, 1.51)	0.77 (0.46, 1.28)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	9.25 (6.85, 12.50)	10.83 (8.01, 14.64)	0.85 (0.55, 1.33)

(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)	5.02 (3.84, 6.56)	5.11 (3.81, 6.86)	0.98 (0.65, 1.49)

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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)	0.99 (0.94, 1.04)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.82 (0.78, 0.85)	0.98 (0.93, 1.02)
URM vs Non-URM	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)
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, 0.06)	0.05 (0.05, 0.05)	1.02 (0.91, 1.14)
URM vs Non-URM	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)
URM vs Non-URM	Day 1	Placebo	Positive	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	Vaccine	Negative	Anti N IgG (BAU/ml)	1.33 (1.07, 1.66)	1.36 (1.05, 1.77)	0.98 (0.69, 1.38)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	15.83 (13.04, 19.22)	16.64 (13.58, 20.37)	0.95 (0.72, 1.26)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	9.26 (7.76, 11.04)	8.85 (7.31, 10.73)	1.05 (0.81, 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
URM vs Non-URM	Day 29	Vaccine	Positive	Anti N IgG (BAU/ml)	1.60 (1.06, 2.41)	3.92 (2.47, 6.21)	0.41 (0.22, 0.76)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	17.64 (12.36, 25.18)	47.58 (34.24, 66.13)	0.37 (0.23, 0.60)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	12.18 (9.07, 16.36)	17.81 (13.03, 24.36)	0.68 (0.44, 1.05)
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)	0.93 (0.65, 1.32)	1.05 (0.65, 1.70)	0.89 (0.49, 1.61)
URM vs Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	10.38 (7.41, 14.55)	10.56 (7.07, 15.79)	0.98 (0.58, 1.66)
URM vs Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	4.59 (3.28, 6.41)	5.08 (3.67, 7.03)	0.90 (0.57, 1.44)

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 (0.05, 0.07)	0.05 (0.05, 0.05)	1.14 (0.94, 1.38)
Positive vs Negative	Day 1	Vaccine	Positive	Anti RBD IgG (BAU/ml)	0.80 (0.80, 0.80)	0.80 (0.79, 0.81)	0.99 (0.98, 1.01)
Positive vs Negative	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)
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, 0.99)
Positive vs Negative	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)
Positive vs Negative	Day 1	Placebo	Positive	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	Vaccine	Negative	Anti N IgG (BAU/ml)	1.05 (0.66, 1.68)	1.43 (1.26, 1.63)	0.73 (0.45, 1.20)
Positive vs Negative	Day 29	Vaccine	Negative	Anti RBD IgG (BAU/ml)	11.52 (7.30, 18.16)	17.56 (15.77, 19.55)	0.66 (0.41, 1.05)
Positive vs Negative	Day 29	Vaccine	Negative	Anti Spike IgG (BAU/ml)	6.21 (4.22, 9.14)	9.55 (8.65, 10.54)	0.65 (0.43, 0.97)

(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)	4.99 (2.24, 11.13)	2.42 (1.90, 3.08)	2.06 (0.90, 4.75)
Positive vs Negative	Day 29	Vaccine	Positive	Anti RBD IgG (BAU/ml)	39.49 (22.01, 70.85)	29.55 (24.46, 35.70)	1.34 (0.72, 2.48)
Positive vs Negative	Day 29	Vaccine	Positive	Anti Spike IgG (BAU/ml)	15.07 (9.94, 22.85)	14.91 (12.69, 17.52)	1.01 (0.65, 1.58)
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)	0.83 (0.17, 4.12)	0.87 (0.70, 1.10)	0.95 (0.18, 4.88)
Positive vs Negative	Day 29	Placebo	Positive	Anti RBD IgG (BAU/ml)	10.02 (3.90, 25.74)	9.49 (7.77, 11.60)	1.06 (0.39, 2.83)
Positive vs Negative	Day 29	Placebo	Positive	Anti Spike IgG (BAU/ml)	3.18 (1.04, 9.69)	5.12 (4.28, 6.12)	0.62 (0.20, 1.96)

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)	0.25 (0.23, 0.29)	0.16 (0.13, 0.18)
Vaccine vs Placebo	Negative	-	Day 29	Anti RBD IgG (BAU/ml)	0.54 (0.51, 0.58)	0.79 (0.76, 0.82)	0.62 (0.58, 0.66)
Vaccine vs Placebo	Negative	-	Day 29	Anti Spike IgG (BAU/ml)	0.48 (0.44, 0.51)	0.86 (0.83, 0.88)	0.75 (0.72, 0.78)
Vaccine vs Placebo	Positive	-	Day 29	Anti N IgG (BAU/ml)	0.07 (0.03, 0.12)	0.15 (0.07, 0.23)	0.13 (0.07, 0.19)
Vaccine vs Placebo	Positive	-	Day 29	Anti RBD IgG (BAU/ml)	0.37 (0.28, 0.45)	0.23 (0.15, 0.31)	0.31 (0.22, 0.39)
Vaccine vs Placebo	Positive	-	Day 29	Anti Spike IgG (BAU/ml)	0.3 (0.21, 0.38)	0.23 (0.16, 0.3)	0.29 (0.21, 0.37)

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)	0.05 (0.01, 0.09)	0.1 (0.03, 0.17)	0.08 (0.02, 0.14)
Positive vs Negative	-	Placebo	Day 29	Anti N IgG (BAU/ml)	0.03 (0.02, 0.06)	0.2 (0.16, 0.25)	0.1 (0.07, 0.14)
Positive vs Negative	-	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.2 (0.13, 0.27)	0.1 (0.04, 0.15)	0.18 (0.11, 0.24)
Positive vs Negative	-	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.38 (0.32, 0.44)	0.66 (0.59, 0.72)	0.5 (0.43, 0.56)
Positive vs Negative	-	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.15 (0.07, 0.22)	0.09 (0.05, 0.13)	0.12 (0.06, 0.18)
Positive vs Negative	-	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0.32 (0.27, 0.38)	0.72 (0.65, 0.78)	0.58 (0.52, 0.65)

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)	0.1 (0.07, 0.14)	0.22 (0.15, 0.28)	0.19 (0.13, 0.24)
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 (0.27, 0.4)	0.2 (0.15, 0.25)	0.34 (0.27, 0.4)
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 (0.29, 0.42)	0.18 (0.14, 0.23)	0.28 (0.23, 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)	0.13 (0.05, 0.22)	0.24 (0.11, 0.35)	0.18 (0.07, 0.29)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0.05 (0, 0.11)	0.31 (0.2, 0.41)	0.2 (0.12, 0.29)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.22 (0.12, 0.32)	0.1 (0.02, 0.18)	0.16 (0.07, 0.25)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.42 (0.29, 0.53)	0.33 (0.21, 0.44)	0.4 (0.27, 0.51)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.31 (0.19, 0.41)	0.05 (-0.03, 0.11)	0.12 (0.04, 0.21)

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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)	0.43 (0.31, 0.54)	0.3 (0.19, 0.4)	0.44 (0.31, 0.54)

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)	0.03 (0, 0.06)	-0.03 (-0.09, 0.03)	0.01 (-0.04, 0.06)
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)	-0.04 (-0.11, 0.03)	0.03 (-0.03, 0.09)	0.02 (-0.05, 0.09)
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)	0.03 (-0.04, 0.1)	0 (-0.06, 0.05)	0 (-0.07, 0.06)
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)	-0.01 (-0.09, 0.07)	-0.03 (-0.15, 0.08)	-0.04 (-0.14, 0.06)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0 (-0.05, 0.04)	0.1 (0.01, 0.19)	0.04 (-0.03, 0.1)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0 (-0.12, 0.11)	0.05 (-0.03, 0.14)	0 (-0.11, 0.1)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.01 (-0.1, 0.13)	0.1 (-0.03, 0.22)	0.09 (-0.04, 0.21)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.05 (-0.08, 0.17)	0 (-0.07, 0.06)	0.04 (-0.05, 0.14)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0.09 (-0.02, 0.2)	0.16 (0.03, 0.27)	0.1 (-0.03, 0.23)

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)	0.03 (0, 0.07)	-0.03 (-0.1, 0.05)	0.02 (-0.03, 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)	-0.04 (-0.14, 0.06)	0.05 (-0.03, 0.14)	0.02 (-0.08, 0.12)
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)	0.05 (-0.04, 0.15)	0 (-0.08, 0.08)	0 (-0.09, 0.1)
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)	-0.03 (-0.13, 0.08)	-0.04 (-0.2, 0.11)	-0.06 (-0.19, 0.07)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.01 (-0.08, 0.04)	0.08 (-0.02, 0.2)	0.01 (-0.06, 0.08)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0 (-0.16, 0.17)	0.08 (-0.04, 0.2)	0 (-0.15, 0.15)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.04 (-0.19, 0.12)	0.14 (-0.05, 0.31)	0.08 (-0.1, 0.25)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.04 (-0.13, 0.22)	-0.01 (-0.11, 0.08)	0.03 (-0.1, 0.17)

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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)	0.01 (-0.12, 0.16)	0.18 (0, 0.35)	0.09 (-0.1, 0.26)

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, 0.1)	-0.03 (-0.13, 0.06)	-0.01 (-0.1, 0.08)
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)	-0.03 (-0.11, 0.05)	0 (-0.06, 0.05)	0.01 (-0.06, 0.08)
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)	-0.03 (-0.12, 0.06)	0 (-0.04, 0.02)	-0.01 (-0.06, 0.04)
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)	0.01 (-0.14, 0.16)	-0.03 (-0.21, 0.15)	-0.01 (-0.18, 0.16)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0.02 (-0.1, 0.12)	0.14 (-0.04, 0.32)	0.1 (-0.07, 0.26)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.02 (-0.15, 0.09)	0 (-0.11, 0.09)	-0.01 (-0.14, 0.09)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	0.14 (-0.05, 0.31)	0.02 (-0.11, 0.16)	0.12 (-0.05, 0.28)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.04 (-0.09, 0.18)	0.02 (0, 0.15)	0.05 (-0.03, 0.15)

(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)	0.26 (0.07, 0.42)	0.12 (0.04, 0.25)	0.14 (0.01, 0.27)

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 (-0.02, 0.04)	-0.02 (-0.09, 0.04)	0.01 (-0.04, 0.06)
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)	-0.01 (-0.07, 0.05)	0.04 (-0.04, 0.11)
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 (-0.06, 0.05)	0 (-0.07, 0.06)
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 (-0.08, 0.08)	0.09 (-0.03, 0.22)	0.06 (-0.05, 0.17)
Male vs Female	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0.01 (-0.04, 0.06)	0.01 (-0.08, 0.11)	0 (-0.07, 0.07)
Male vs Female	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.03 (-0.09, 0.15)	-0.04 (-0.14, 0.05)	0 (-0.11, 0.1)
Male vs Female	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.01 (-0.13, 0.12)	-0.03 (-0.17, 0.1)	0.01 (-0.12, 0.15)
Male vs Female	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.06 (-0.08, 0.18)	0 (-0.07, 0.06)	0 (-0.11, 0.09)
Male vs Female	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.1 (-0.21, 0.02)	0.03 (-0.1, 0.16)	0.07 (-0.07, 0.2)

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)	-0.02 (-0.05, 0.02)	-0.02 (-0.08, 0.04)	-0.02 (-0.07, 0.03)
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)	0.03 (-0.04, 0.1)	0.04 (-0.02, 0.1)	0.05 (-0.03, 0.12)
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)	-0.02 (-0.09, 0.05)	-0.02 (-0.08, 0.03)	0.01 (-0.06, 0.07)
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)	-0.07 (-0.15, 0.02)	-0.12 (-0.24, 0.01)	-0.14 (-0.25, -0.02)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.03 (-0.08, 0.03)	-0.07 (-0.17, 0.03)	-0.01 (-0.09, 0.06)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.08 (-0.2, 0.04)	0.04 (-0.06, 0.12)	-0.02 (-0.13, 0.08)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.07 (-0.19, 0.07)	-0.05 (-0.18, 0.09)	0 (-0.14, 0.13)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	-0.04 (-0.17, 0.09)	0.04 (-0.03, 0.11)	0.03 (-0.08, 0.12)

(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)	-0.02 (-0.14, 0.1)	-0.07 (-0.2, 0.07)	-0.04 (-0.18, 0.09)

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)	-0.02 (-0.07, 0.02)	-0.08 (-0.16, 0.01)	-0.03 (-0.1, 0.04)
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)	-0.02 (-0.11, 0.08)	0 (-0.08, 0.09)	0.02 (-0.08, 0.11)
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)	-0.04 (-0.14, 0.05)	0.01 (-0.06, 0.08)	0.01 (-0.08, 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)	-0.12 (-0.24, -0.03)	-0.24 (-0.39, -0.07)	-0.17 (-0.31, -0.01)
URM vs Non-URM	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	-0.04 (-0.14, 0.01)	-0.1 (-0.24, 0.03)	-0.01 (-0.12, 0.09)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	-0.28 (-0.42, -0.11)	-0.09 (-0.23, 0.04)	-0.24 (-0.39, -0.09)
URM vs Non-URM	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.01 (-0.17, 0.16)	0 (-0.16, 0.17)	-0.03 (-0.19, 0.14)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	-0.1 (-0.27, 0.07)	-0.1 (-0.22, 0.04)	-0.08 (-0.22, 0.06)
URM vs Non-URM	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	0 (-0.15, 0.14)	-0.09 (-0.25, 0.08)	-0.06 (-0.23, 0.1)

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 (-0.04, 0.08)	-0.05 (-0.14, 0.07)	-0.01 (-0.09, 0.1)
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)	-0.08 (-0.23, 0.07)	-0.19 (-0.34, -0.05)	-0.13 (-0.28, 0.02)
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)	-0.14 (-0.26, 0.01)	-0.13 (-0.28, -0.01)	-0.16 (-0.31, -0.02)
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)	0.07 (-0.07, 0.42)	0.02 (-0.22, 0.33)	0.05 (-0.14, 0.36)
Positive vs Negative	Positive	Placebo	Day 29	Anti N IgG (BAU/ml)	0.08 (-0.02, 0.56)	-0.05 (-0.19, 0.35)	0.04 (-0.09, 0.46)
Positive vs Negative	Positive	Vaccine	Day 29	Anti RBD IgG (BAU/ml)	0.03 (-0.29, 0.2)	0.12 (0.08, 0.17)	0.03 (-0.3, 0.17)
Positive vs Negative	Positive	Placebo	Day 29	Anti RBD IgG (BAU/ml)	-0.06 (-0.29, 0.31)	0.02 (-0.42, 0.29)	-0.11 (-0.38, 0.25)
Positive vs Negative	Positive	Vaccine	Day 29	Anti Spike IgG (BAU/ml)	0.16 (-0.2, 0.34)	0 (-0.28, 0.06)	0.08 (-0.2, 0.15)
Positive vs Negative	Positive	Placebo	Day 29	Anti Spike IgG (BAU/ml)	-0.02 (-0.25, 0.34)	-0.2 (-0.55, 0.13)	-0.18 (-0.47, 0.17)

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							
		Vaccine				Placebo			
		N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR
Day 29	Anti N IgG (BAU/ml)	913	1147.9/19292 = 6.0% (4.7%, 7.5%)	1.41 (1.24, 1.59)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.06 (0.05, 0.08)	29.98 (26.53, 33.88)
Day 29	Anti RBD IgG (BAU/ml)	913	10495.8/19292 = 54.4% (50.8%, 58.0%)	17.09 (15.39, 18.96)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.54 (0.51, 0.58)	21.44 (19.32, 23.80)
Day 29	Anti Spike IgG (BAU/ml)	913	9225.7/19292 = 47.8% (44.3%, 51.3%)	9.28 (8.44, 10.21)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.48 (0.44, 0.51)	60.35 (54.88, 66.38)

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	222.1/2102 = 10.6% (7.4%, 14.9%)	2.52 (2.00, 3.19)	280	61.5/1979 = 3.1% (1.6%, 5.8%)	0.87 (0.70, 1.09)	0.07 (0.03, 0.12)	2.90 (2.10, 4.00)
Day 29	Anti RBD IgG (BAU/ml)	283	1569.2/2102 = 74.7% (68.5%, 80.0%)	30.05 (25.07, 36.02)	280	753.1/1979 = 38.1% (32.2%, 44.3%)	9.52 (7.86, 11.52)	0.37 (0.28, 0.45)	3.16 (2.43, 4.11)
Day 29	Anti Spike IgG (BAU/ml)	283	1310.4/2102 = 62.3% (55.7%, 68.6%)	14.92 (12.80, 17.39)	280	636.7/1979 = 32.2% (26.9%, 37.9%)	5.00 (4.20, 5.95)	0.3 (0.21, 0.38)	2.98 (2.37, 3.76)

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	Baseline SARS-CoV-2 Positive		Vaccine Recipients			Comparison	
			Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	Resp Rate Difference	GMTR/GMCR
Day 29	Anti N IgG (BAU/ml)	283	222.1/2102 = 10.6% (7.4%, 14.9%)	2.52 (2.00, 3.19)	913	1147.9/19292 = 6.0% (4.7%, 7.5%)	1.41 (1.24, 1.59)	0.05 (0.01, 0.09)	1.80 (1.38, 2.34)
Day 29	Anti RBD IgG (BAU/ml)	283	1569.2/2102 = 74.7% (68.5%, 80.0%)	30.05 (25.07, 36.02)	913	10495.8/19292 = 54.4% (50.8%, 58.0%)	17.09 (15.39, 18.96)	0.2 (0.13, 0.27)	1.76 (1.43, 2.17)
Day 29	Anti Spike IgG (BAU/ml)	283	1310.4/2102 = 62.3% (55.7%, 68.6%)	14.92 (12.80, 17.39)	913	9225.7/19292 = 47.8% (44.3%, 51.3%)	9.28 (8.44, 10.21)	0.15 (0.07, 0.22)	1.61 (1.34, 1.93)

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	N	Placebo Recipients				Comparison	
			Baseline SARS-CoV-2 Positive		Baseline SARS-CoV-2 Negative		Resp Rate Difference	GMTR/GMCR
			Resp rate	GMT/GMC	N	Resp rate	GMT/GMC	
Day 29	Anti N IgG (BAU/ml)	280	61.5/1979 = 3.1% (1.6%, 5.8%)	0.87 (0.70, 1.09)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.03 (0.02, 0.06) 18.57 (14.85, 23.22)
Day 29	Anti RBD IgG (BAU/ml)	280	753.1/1979 = 38.1% (32.2%, 44.3%)	9.52 (7.86, 11.52)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.38 (0.32, 0.44) 11.94 (9.86, 14.46)
Day 29	Anti Spike IgG (BAU/ml)	280	636.7/1979 = 32.2% (26.9%, 37.9%)	5.00 (4.20, 5.95)	109	0/19333 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.32 (0.27, 0.38) 32.53 (27.33, 38.71)

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

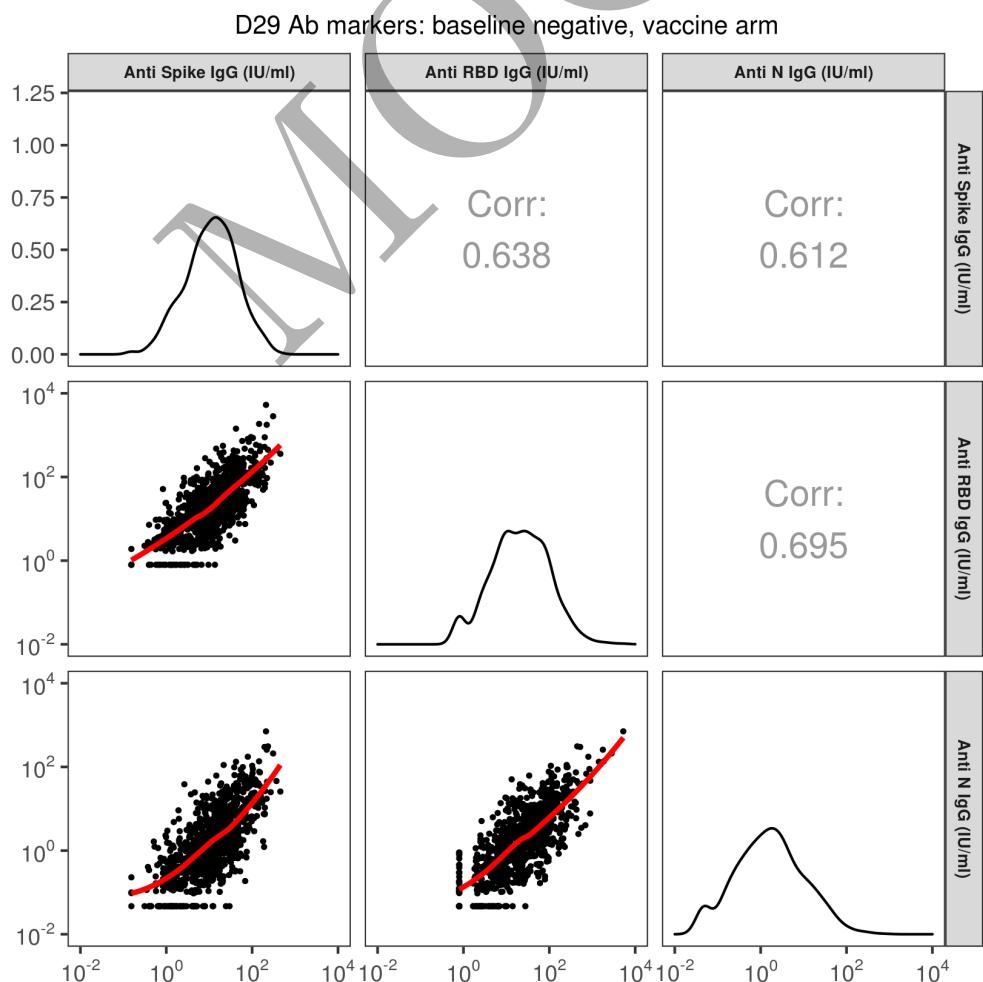


Figure 2.1: Pair plots of D29 Ab markers: baseline negative vaccine arm

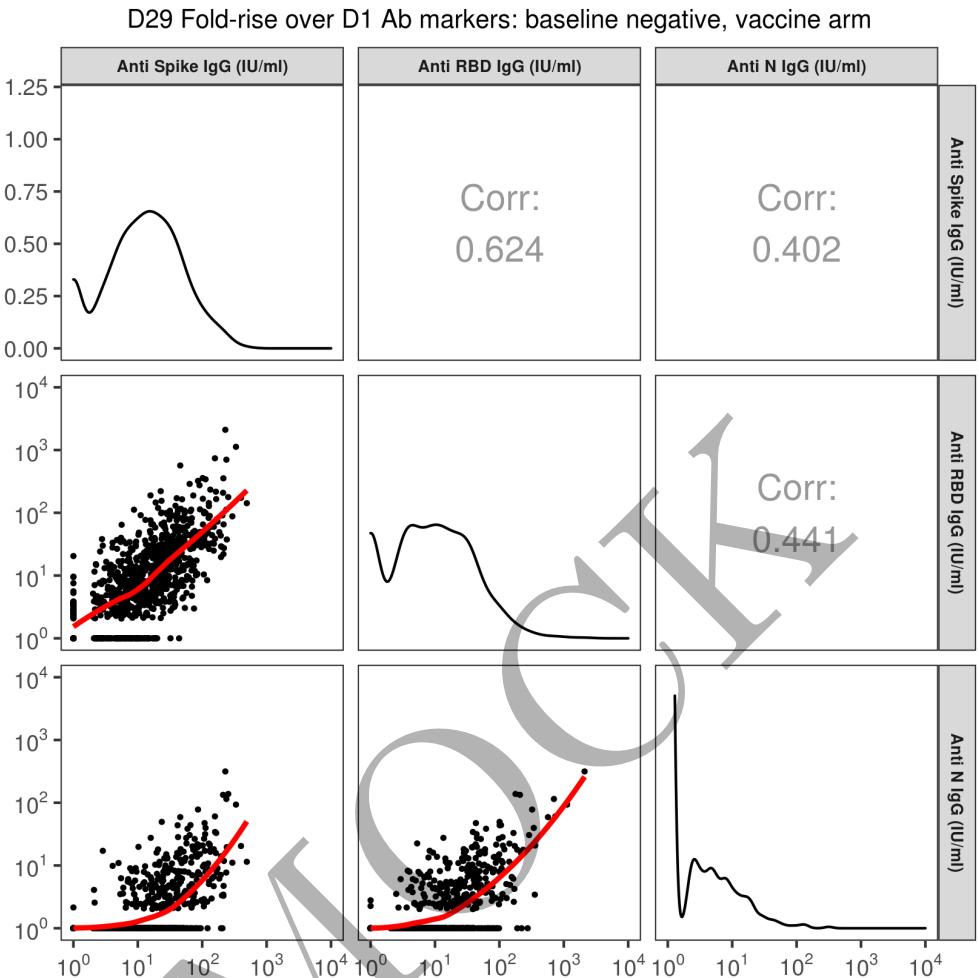


Figure 2.2: Pair plots of D29 fold-rise over D1 Ab markers: baseline negative vaccine arm

2.1.2 Baseline SARS-CoV-2 Positive

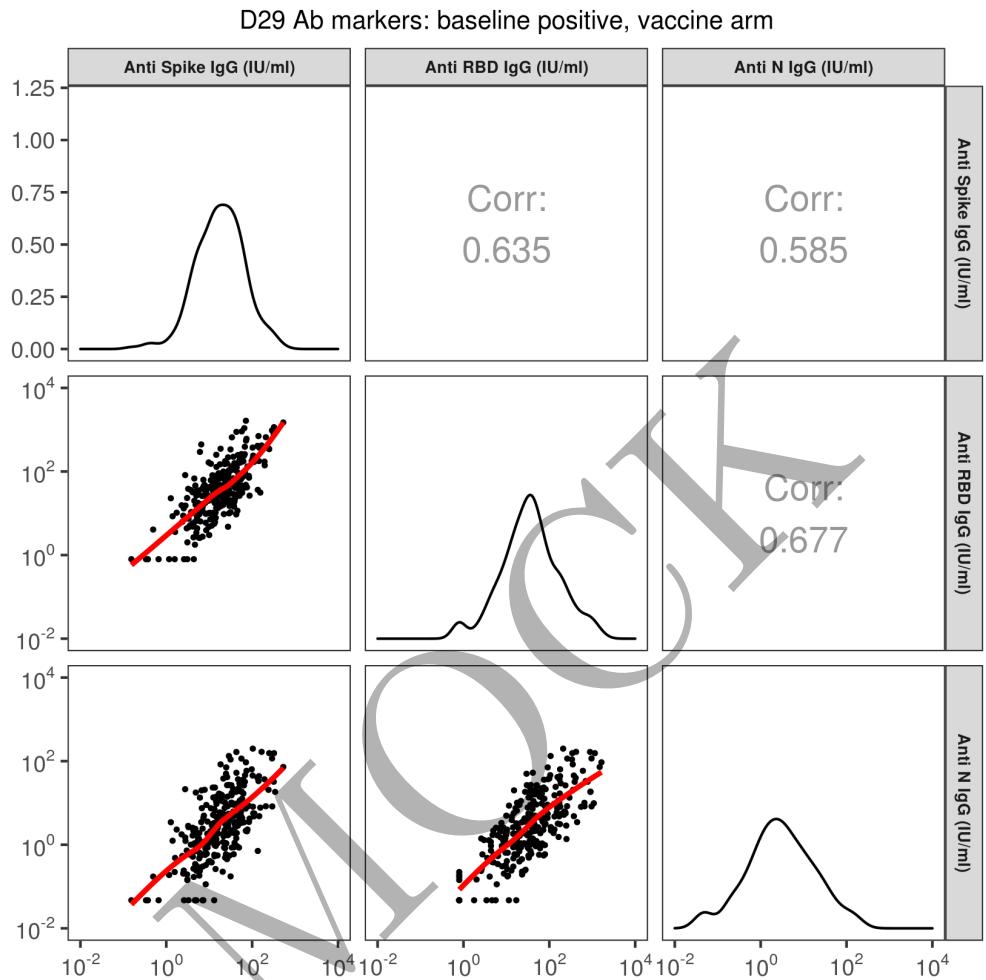


Figure 2.3: Pair plots of D29 Ab markers: baseline positive vaccine arm

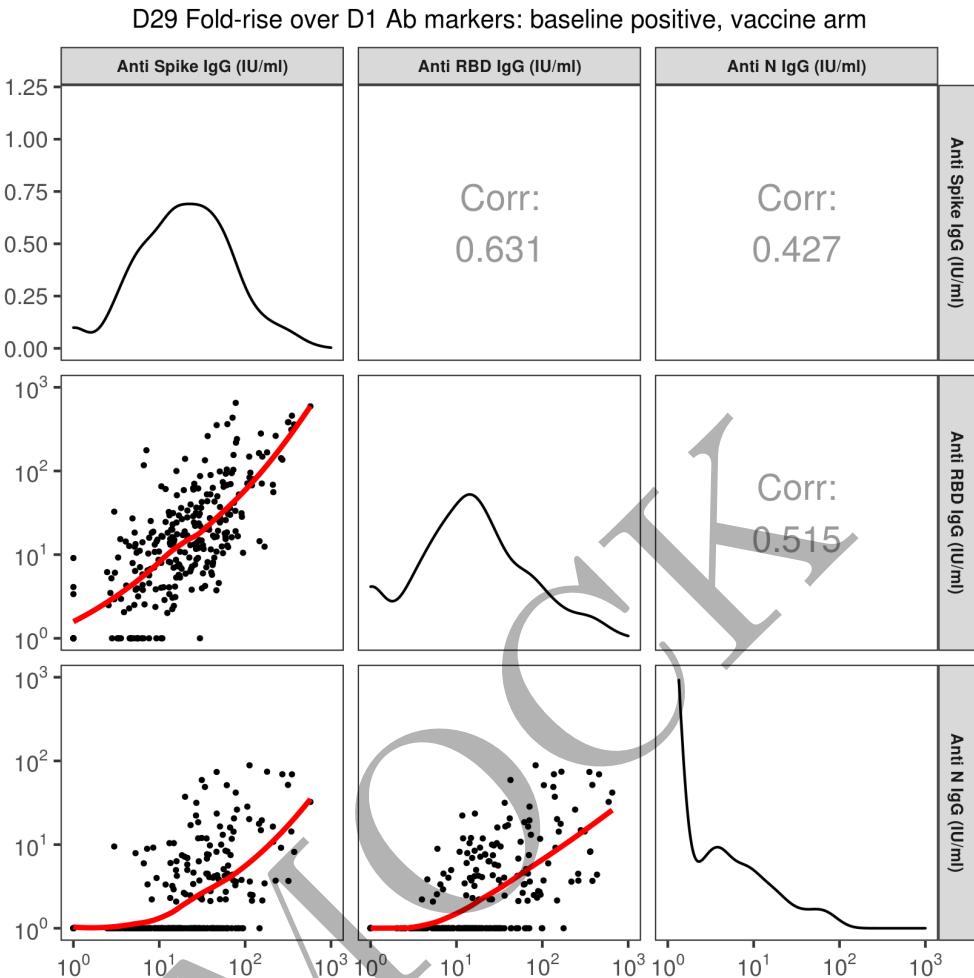


Figure 2.4: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm

2.1.3 Baseline SARS-CoV-2 Positive Placebo Arm

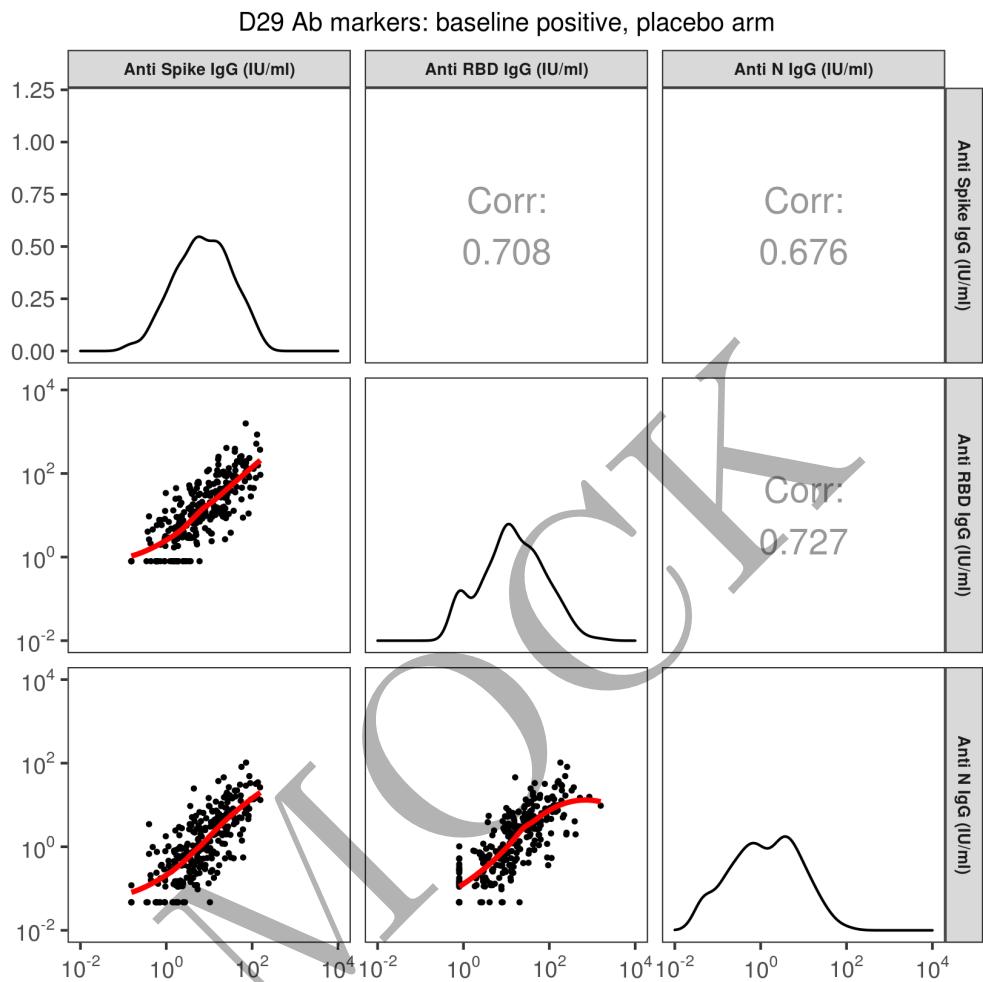


Figure 2.5: Pair plots of D29 Ab markers: baseline positive placebo arm

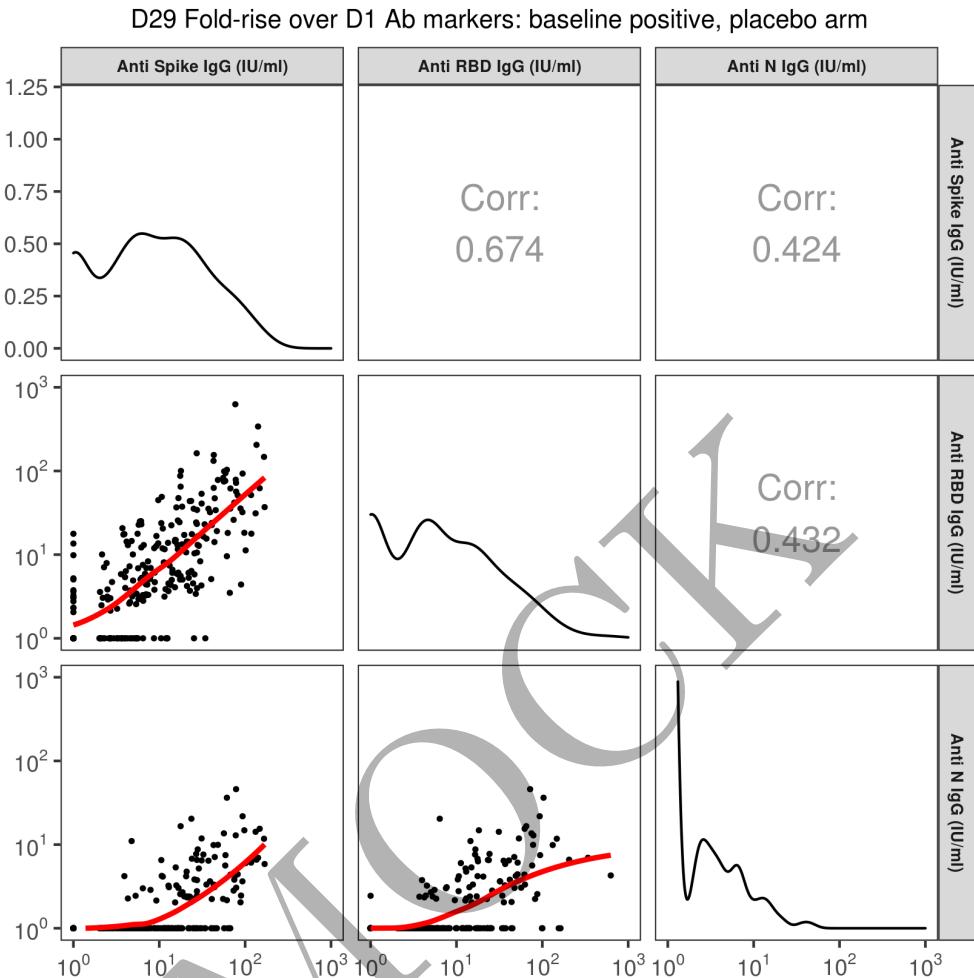


Figure 2.6: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive placebo arm

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

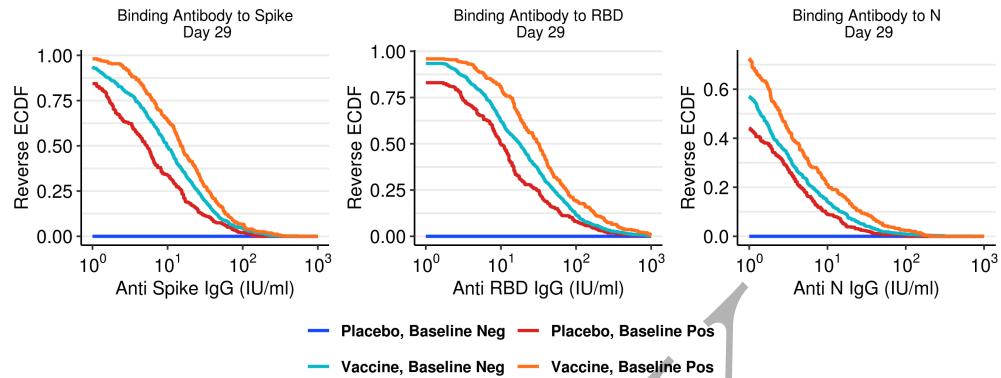


Figure 2.7: RCDF plots for D29 Ab markers: by baseline status x randomization arm



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

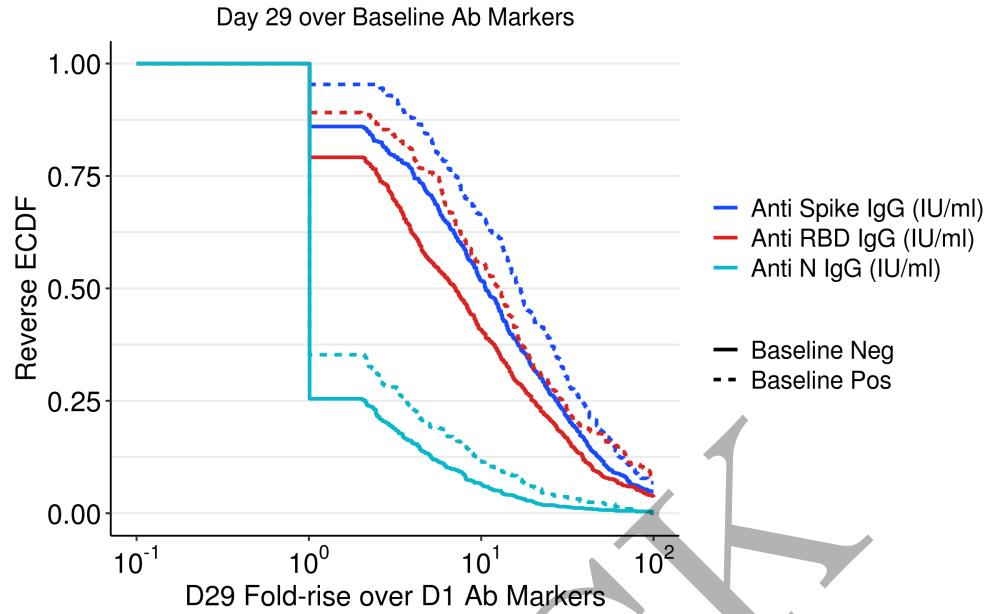


Figure 2.10: RCDF plots for D29 over D1 fold-rise bAb markers: by baseline status for the vaccine arm



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

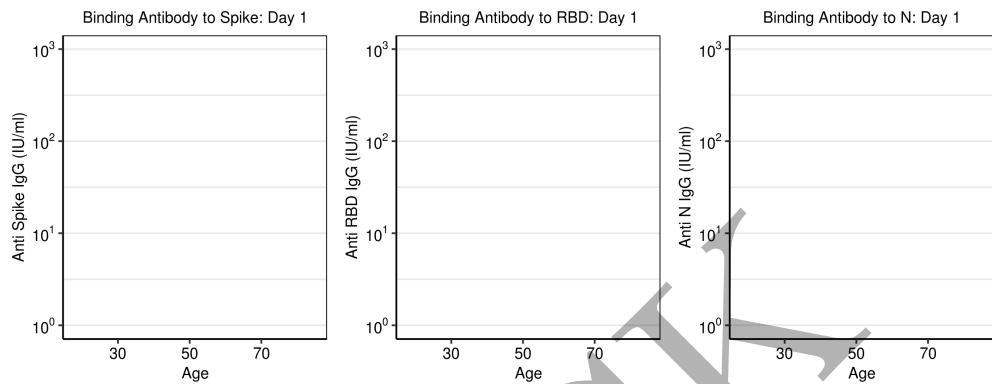


Figure 2.15: Scatter plots for D1 Ab markers vs. age: baseline negative vaccine arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT 275

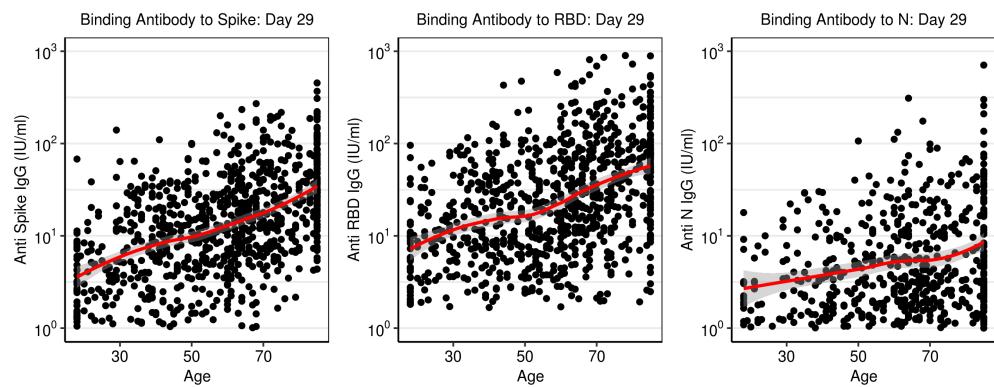


Figure 2.16: Scatter plots for D29 Ab markers vs. age: baseline negative vaccine arm

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 COHORT277

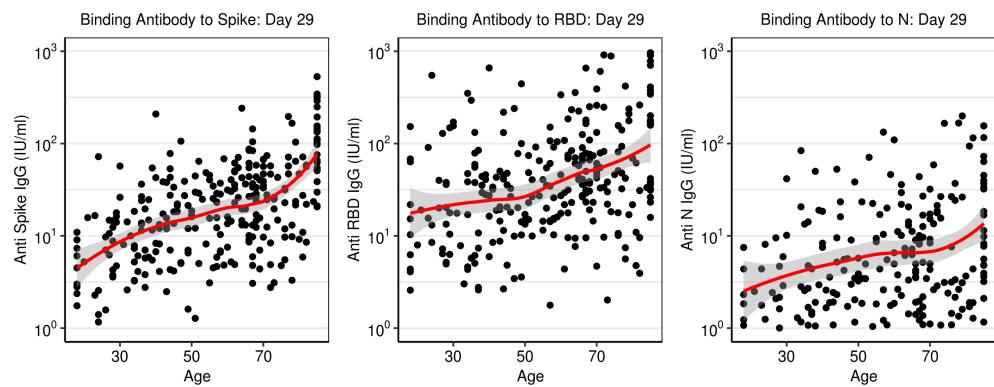


Figure 2.18: Scatter plots for D29 Ab markers vs. age: baseline positive vaccine arm

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 COHORT279

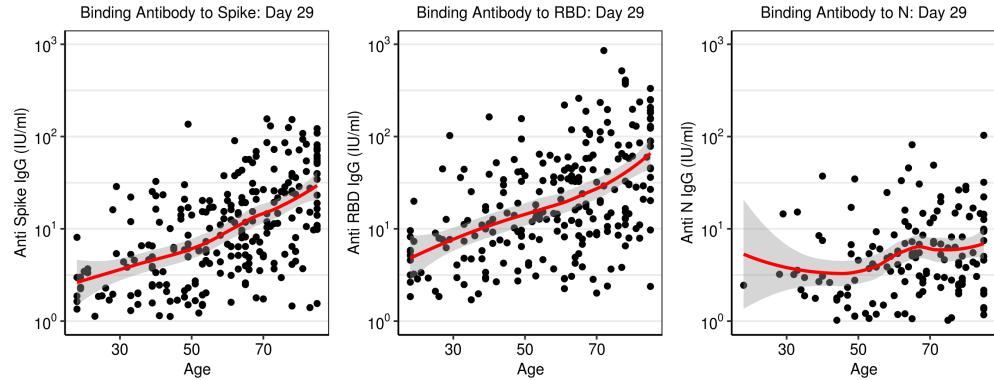


Figure 2.20: Scatter plots for D29 Ab markers vs. age: baseline positive placebo arm

2.3.4 Baseline SARS-CoV-2 Negative Placebo Arm

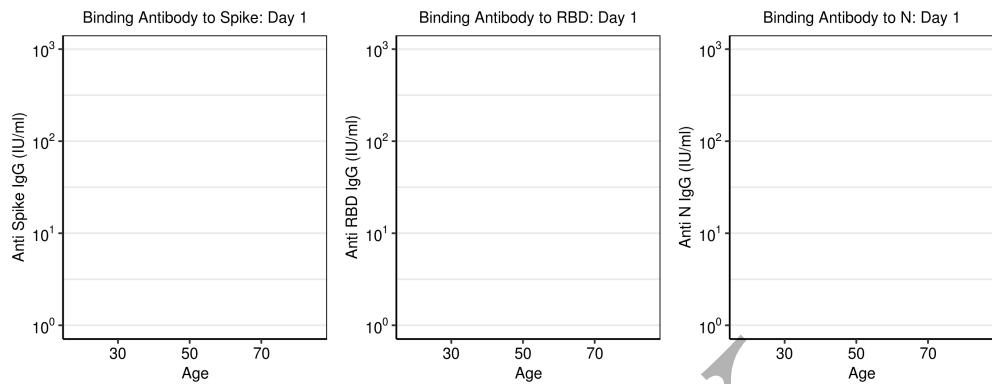


Figure 2.21: Scatter plots for D1 Ab markers vs. age: baseline negative placebo arm

2.3. SCATTER PLOTS OF ANTIBODY MARKERS VERSUS AGE FOR OVERALL PER-PROTOCOL COHORT281

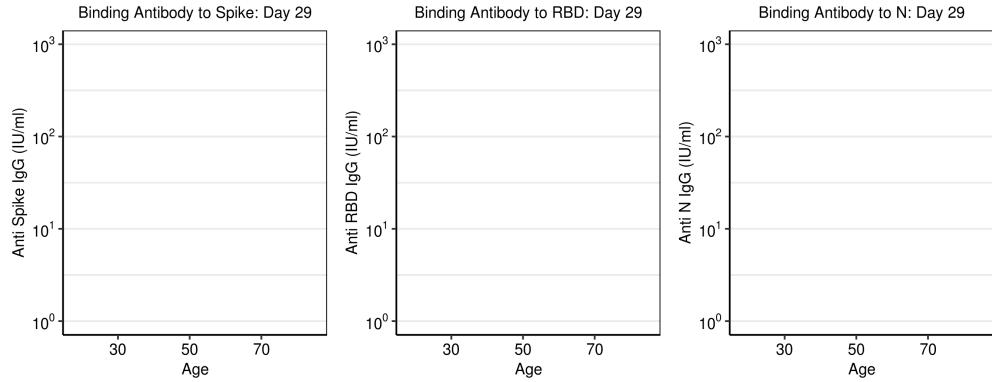


Figure 2.22: Scatter plots for D29 Ab markers vs. age: baseline negative placebo arm

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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.

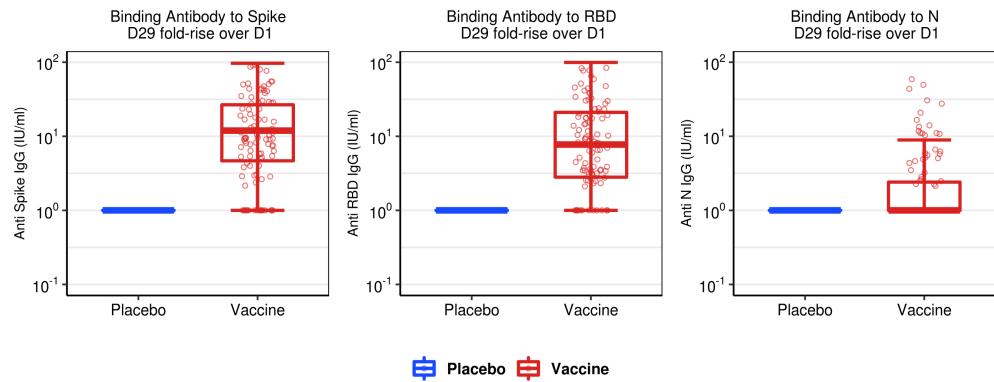


Figure 2.25: Boxplots of D29 fold-rise over D1 Ab markers: baseline negative vaccine + placebo arms

2.4.2 Baseline SARS-CoV-2 Positive

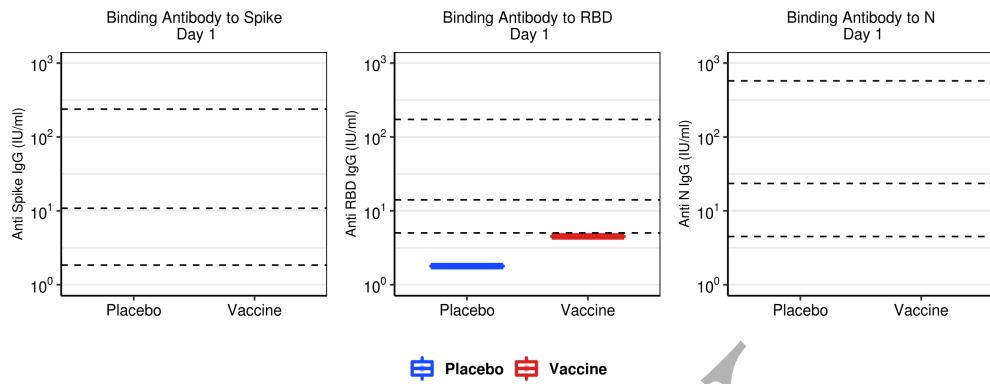


Figure 2.26: Boxplots of D1 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

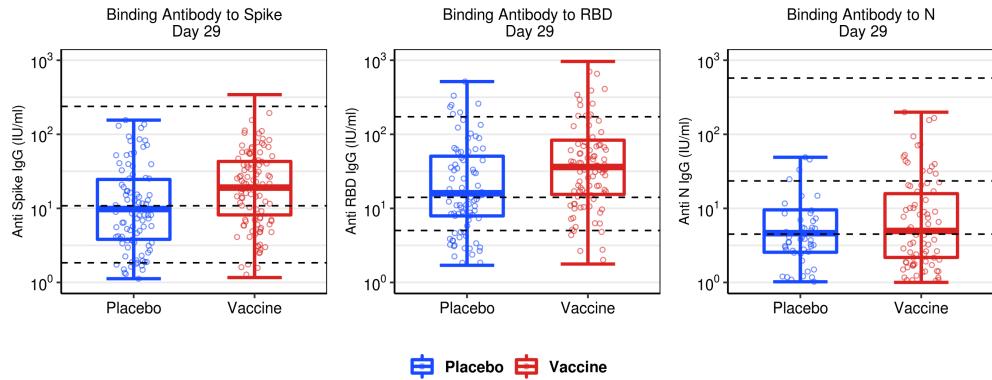


Figure 2.27: Boxplots of D29 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.



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

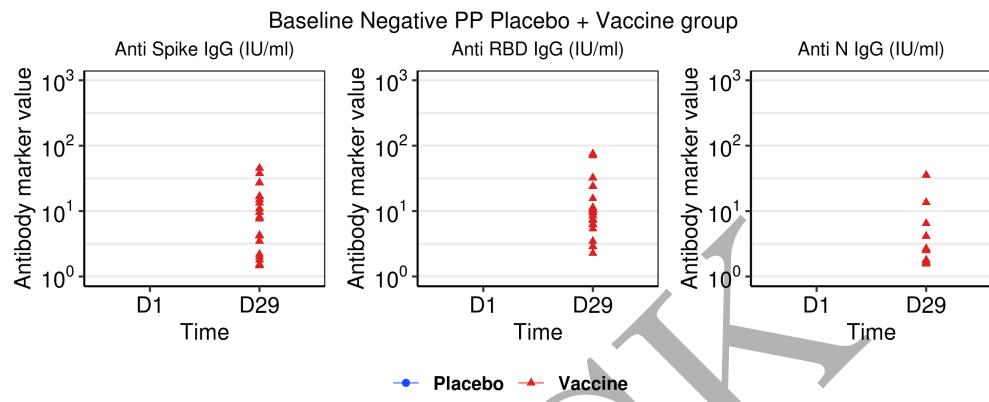


Figure 2.35: Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

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 COHORT297



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

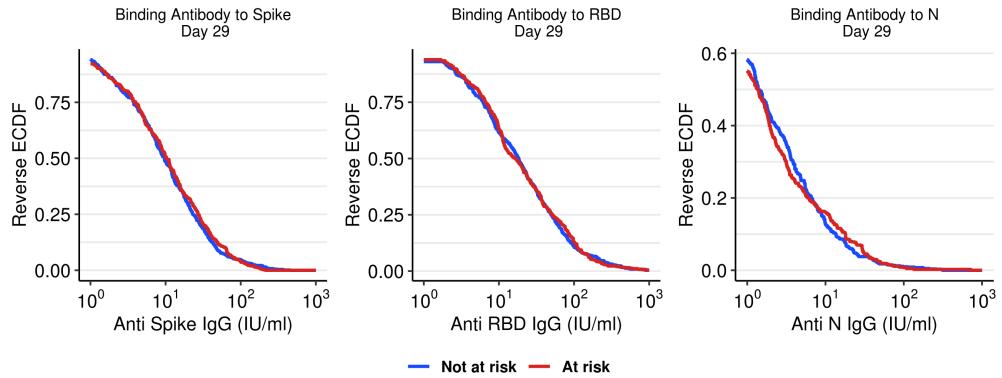


Figure 2.39: RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

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



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

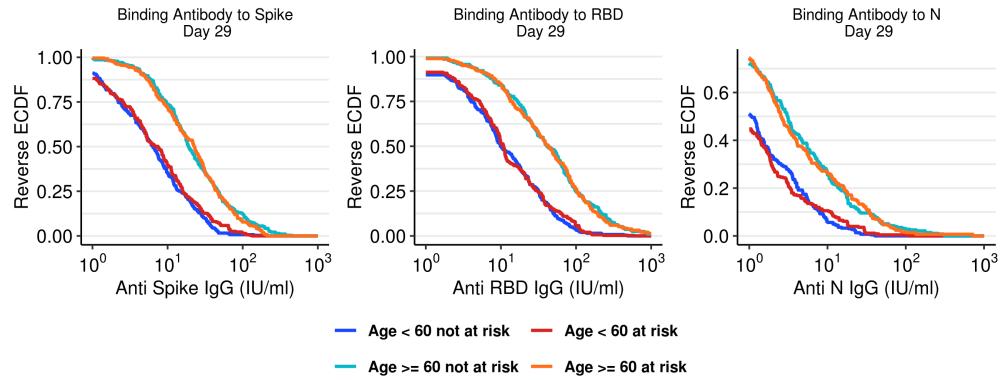


Figure 2.41: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

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



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 COHORT303

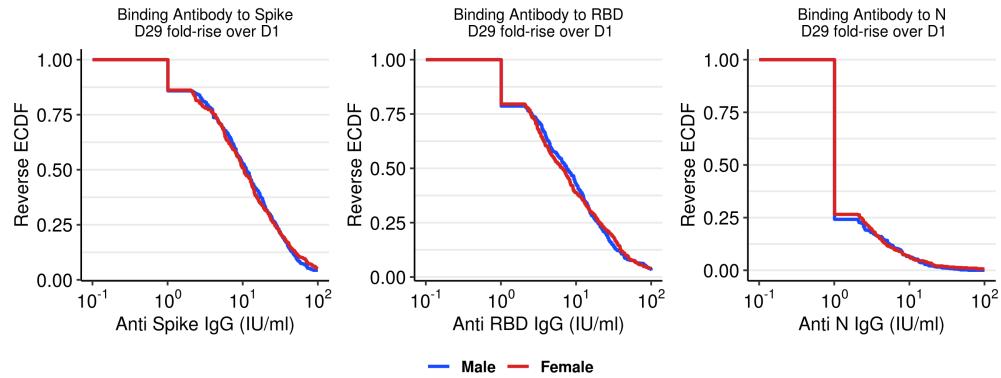


Figure 2.44: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

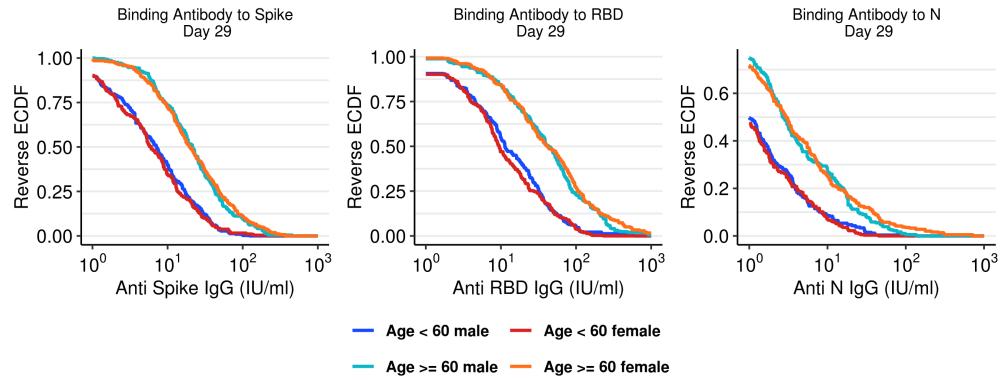


Figure 2.45: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

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

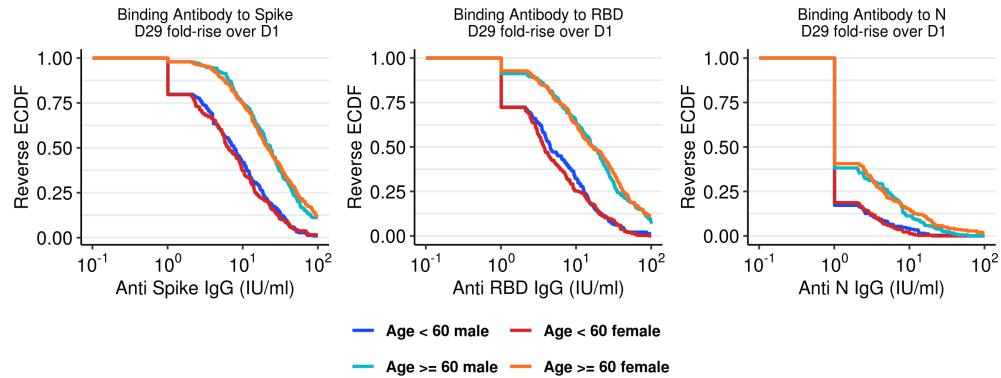


Figure 2.46: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

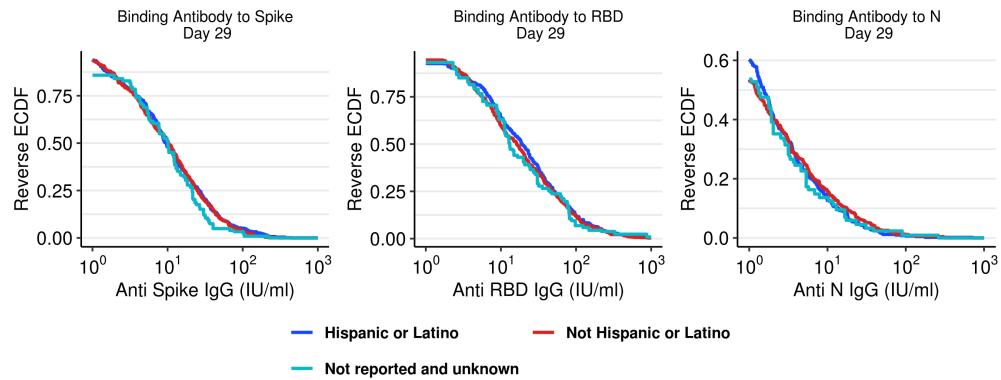


Figure 2.47: RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

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



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

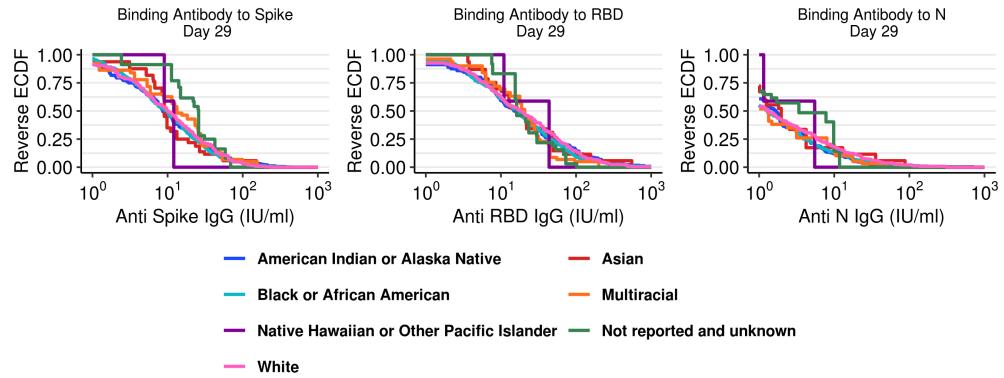


Figure 2.49: RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

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



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 COHORT311



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.

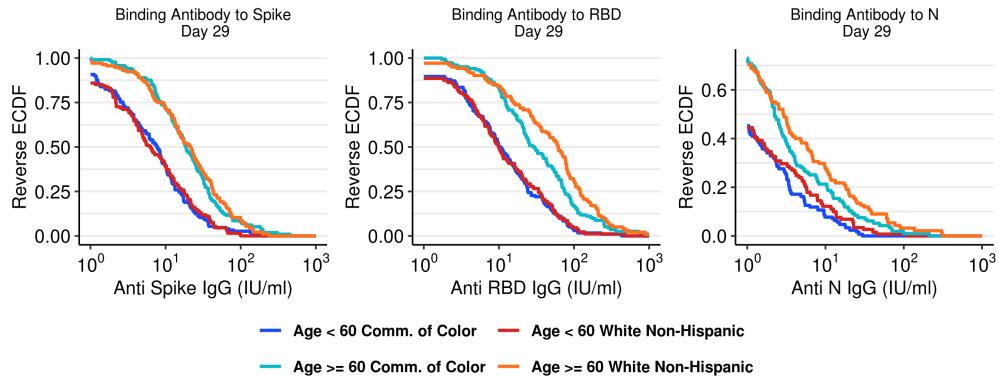


Figure 2.53: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

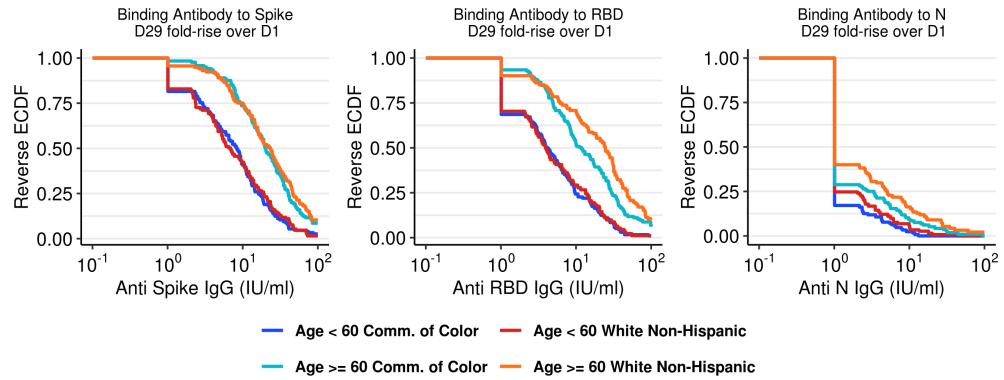


Figure 2.54: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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 COHORT315

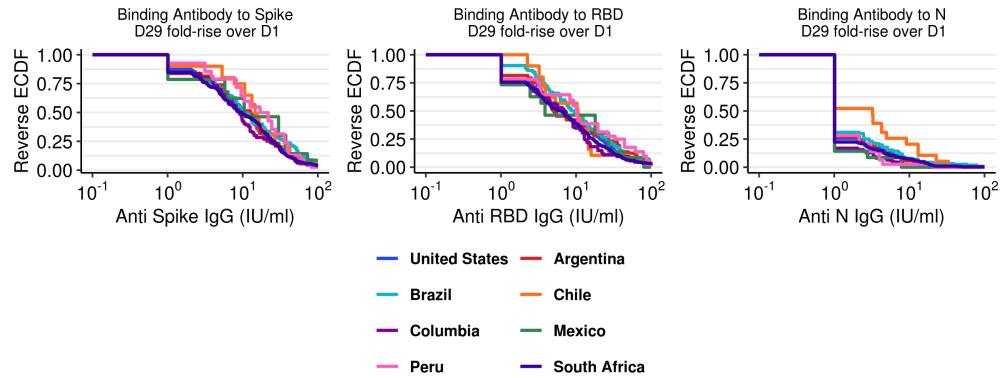


Figure 2.56: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by country of residence.

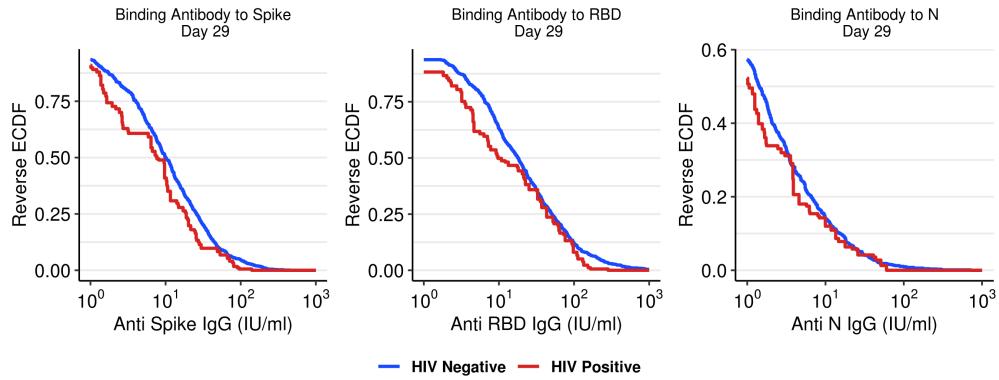


Figure 2.57: RCDF plots for D29 Ab markers: baseline negative vaccine arm by HIV positivity.

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



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 COHORT319



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

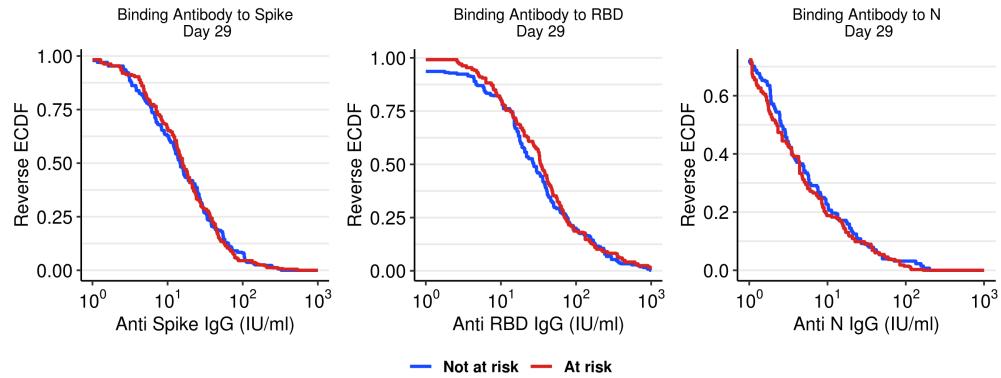


Figure 2.61: RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

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



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

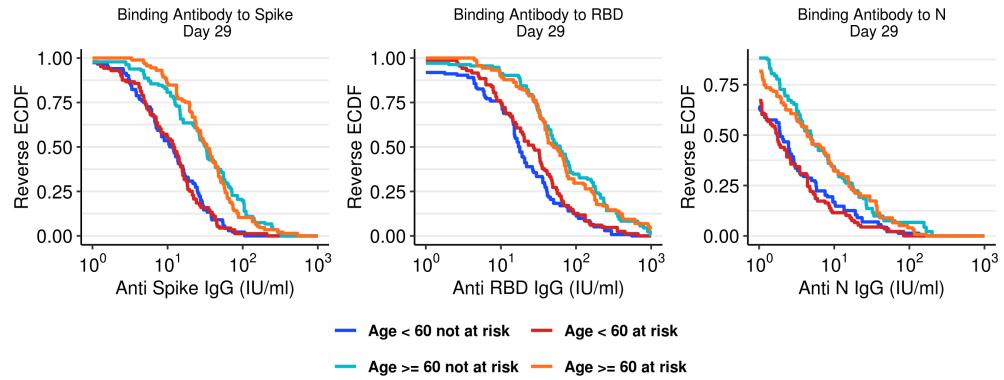


Figure 2.63: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

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

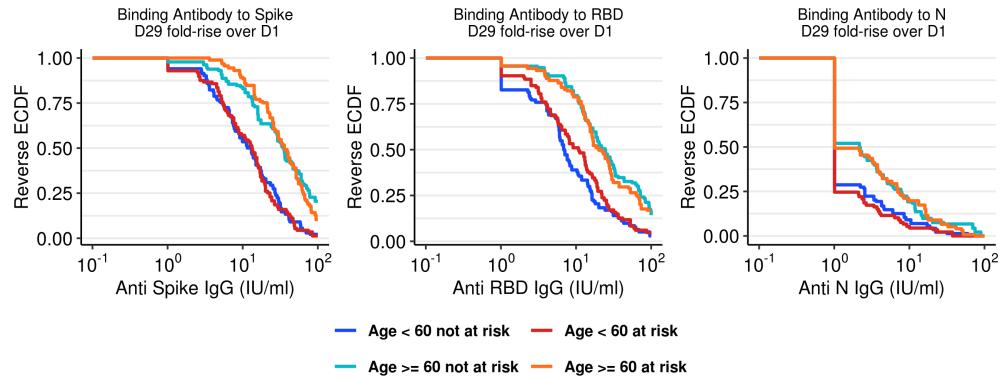


Figure 2.64: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.



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 COHORT325



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

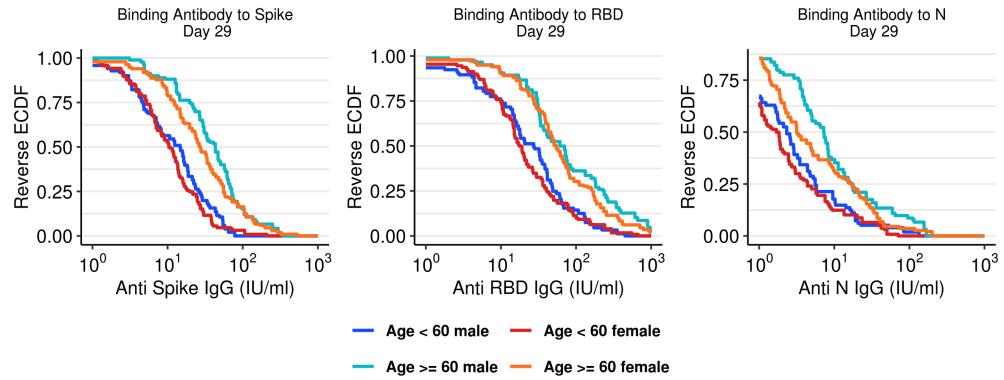


Figure 2.67: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

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



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

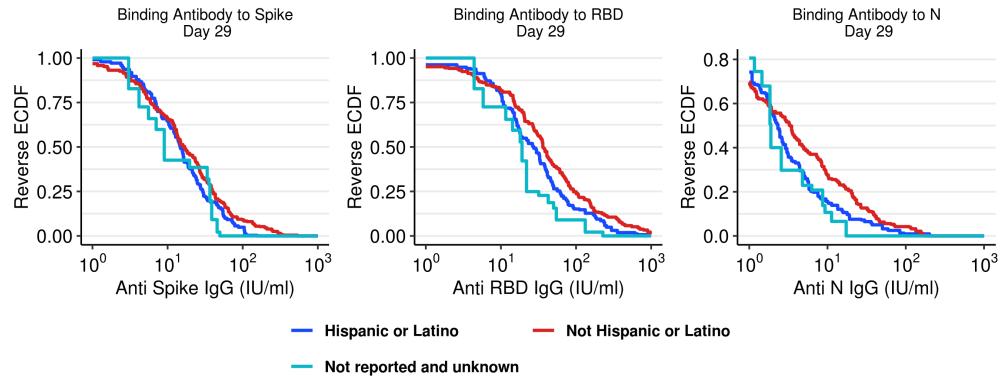


Figure 2.69: RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

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



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

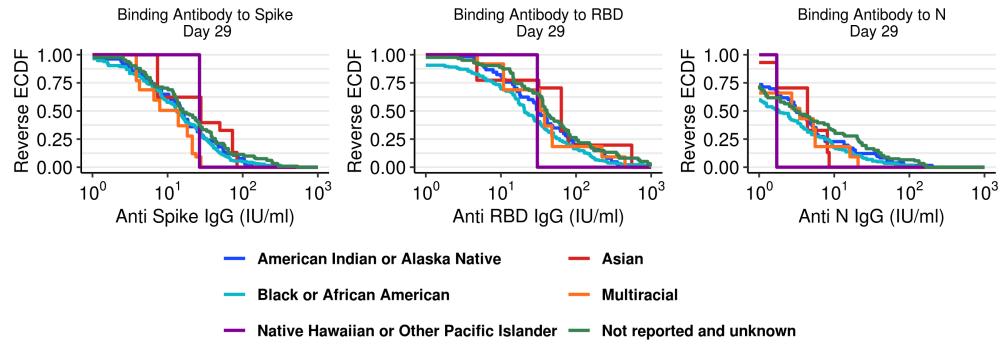


Figure 2.71: RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

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



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 COHORT333

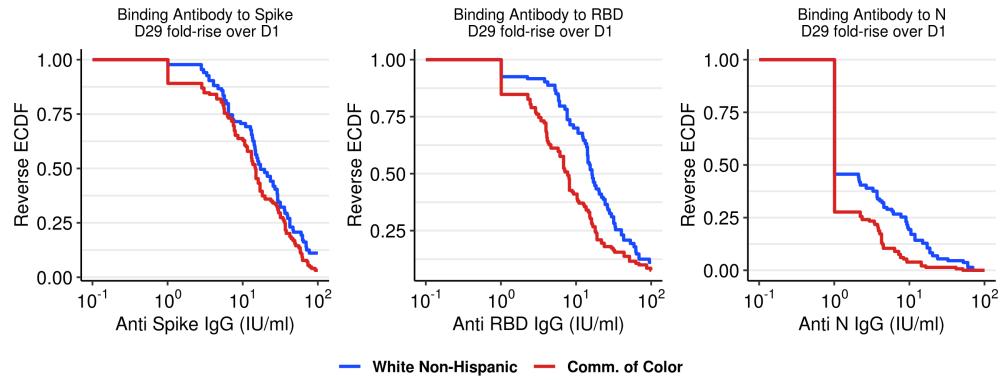


Figure 2.74: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

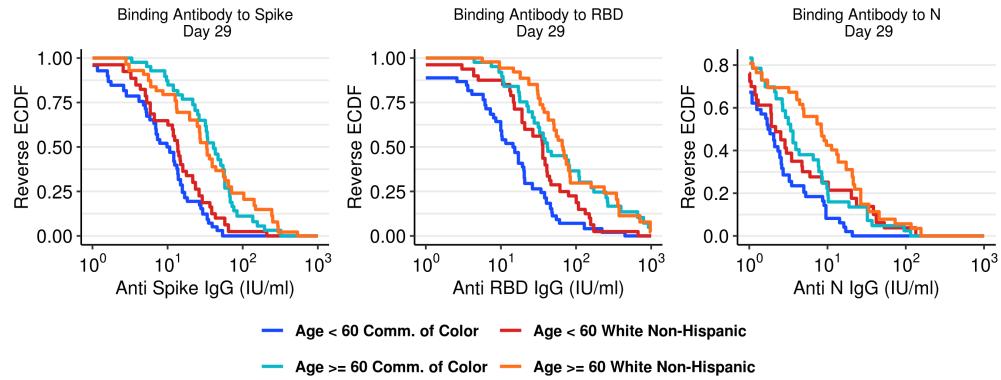


Figure 2.75: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

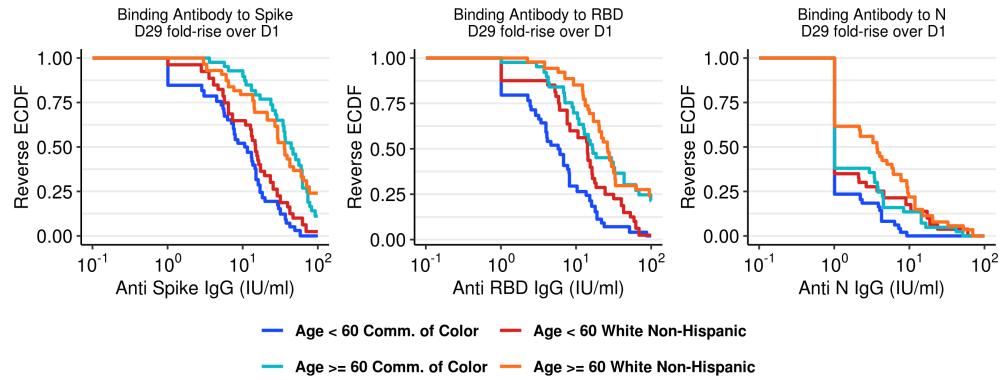


Figure 2.76: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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 COHORT337

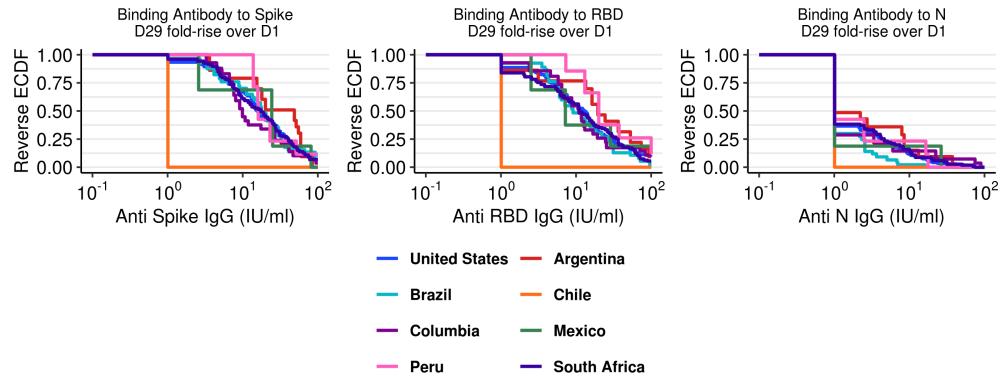


Figure 2.78: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.



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 COHORT339



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 COHORT341



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 COHORT343



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

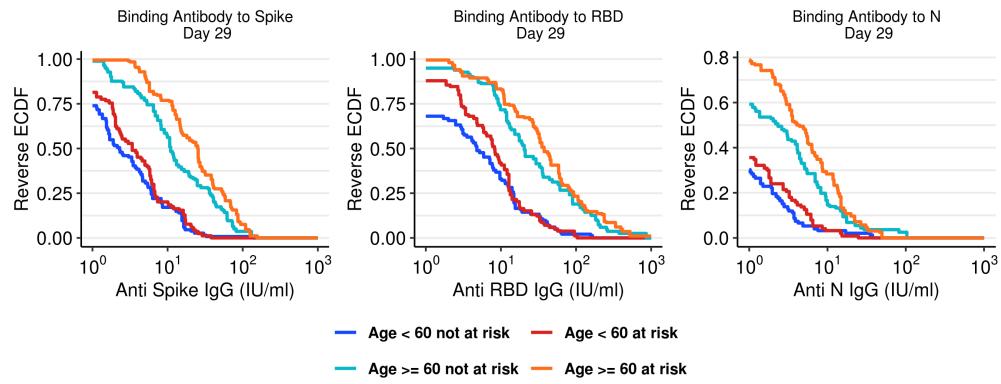


Figure 2.85: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and high-risk condition.

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



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 COHORT347

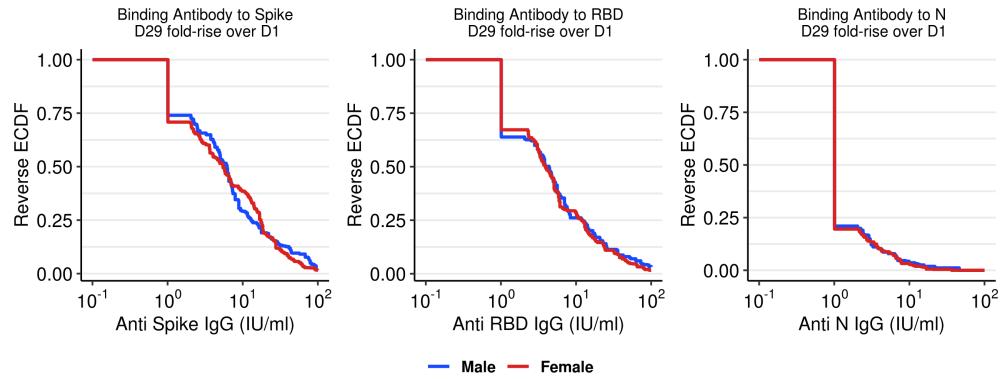


Figure 2.88: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by sex assigned at birth.



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 COHORT349



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

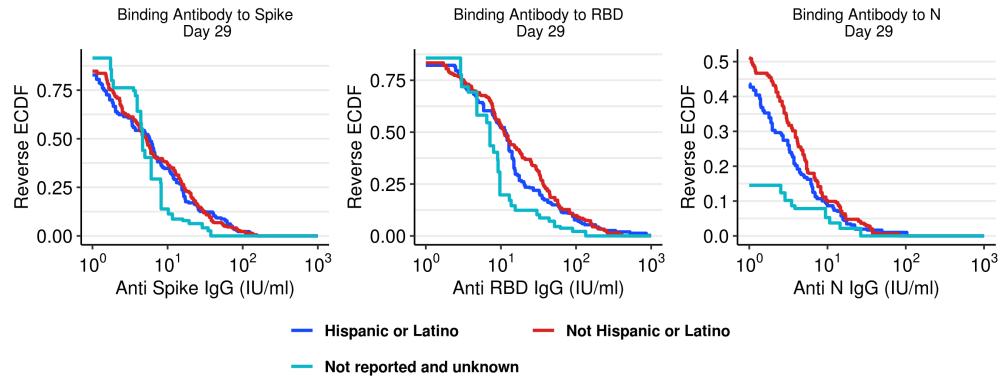


Figure 2.91: RCDF plots for D29 Ab markers: baseline positive placebo arm by ethnicity.

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



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.

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



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

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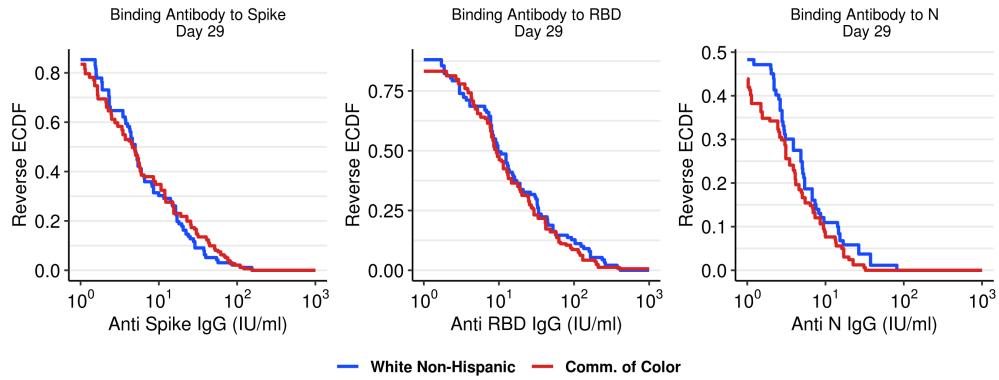


Figure 2.95: RCDF plots for D29 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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



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.

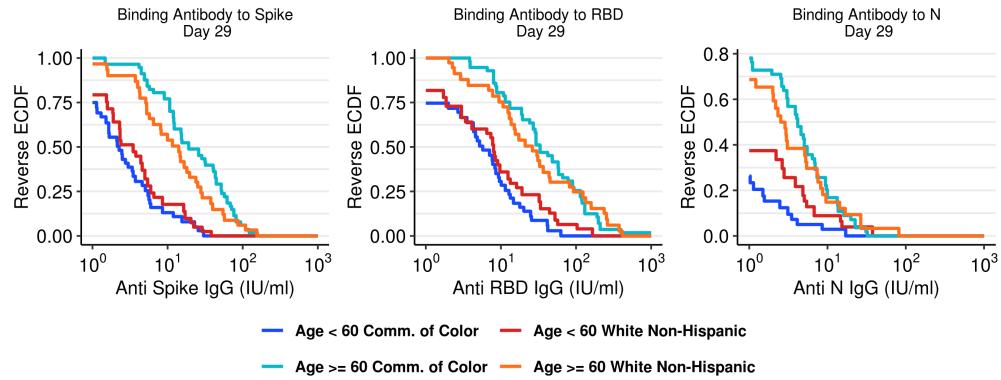


Figure 2.97: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

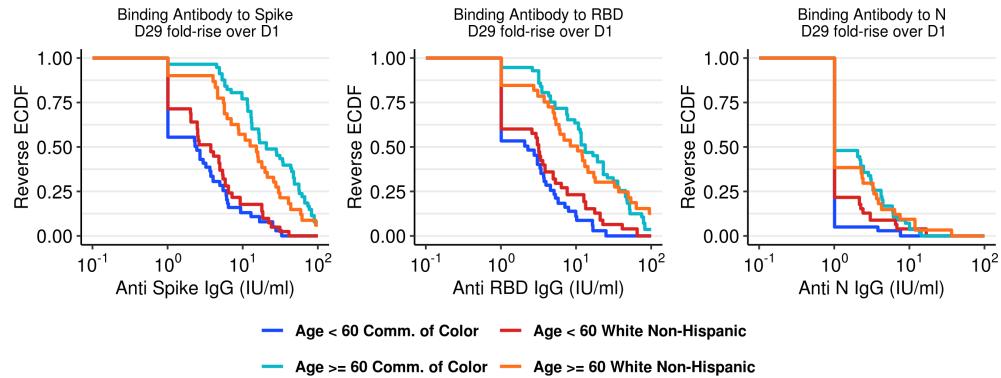


Figure 2.98: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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 COHORT359



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

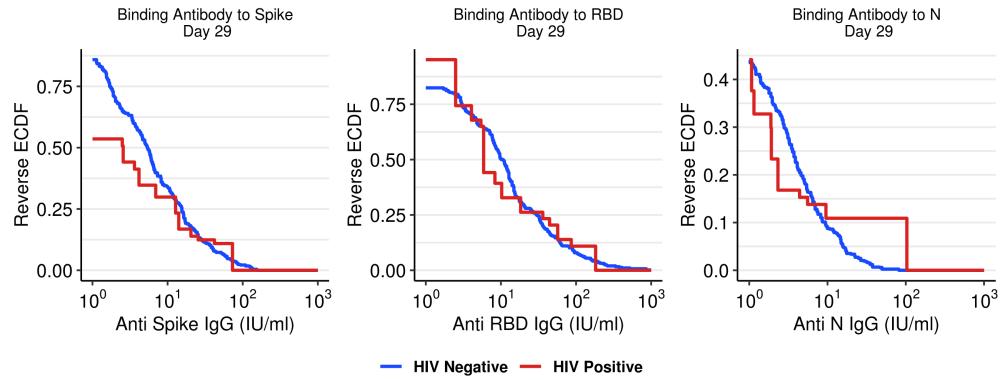


Figure 2.101: RCDF plots for D29 Ab markers: baseline positive placebo arm by HIV positivity.

2.6. RCDF PLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT361



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 COHORT363



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

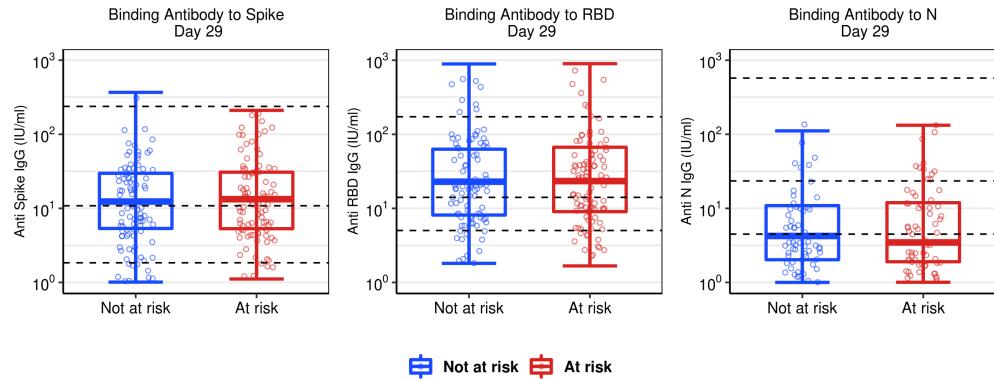


Figure 2.105: Boxplots of D29 Ab markers: Baseline negative vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

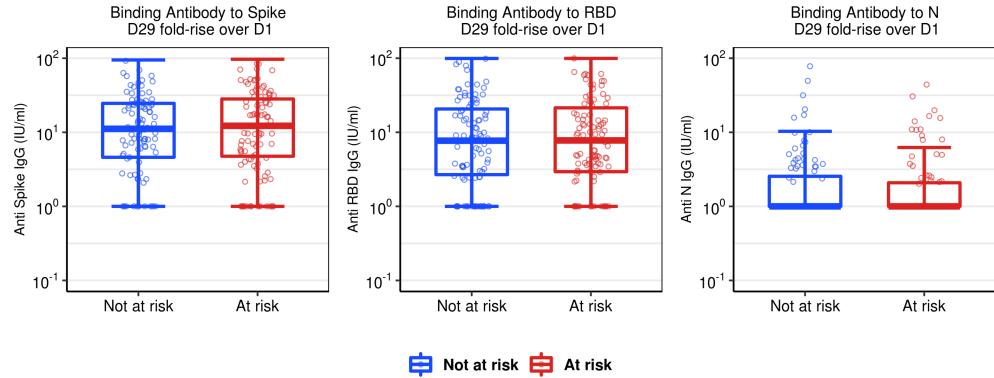


Figure 2.106: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by high-risk condition.



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 COHORT367



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 COHORT369



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 COHORT371



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 COHORT373



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 COHORT375



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

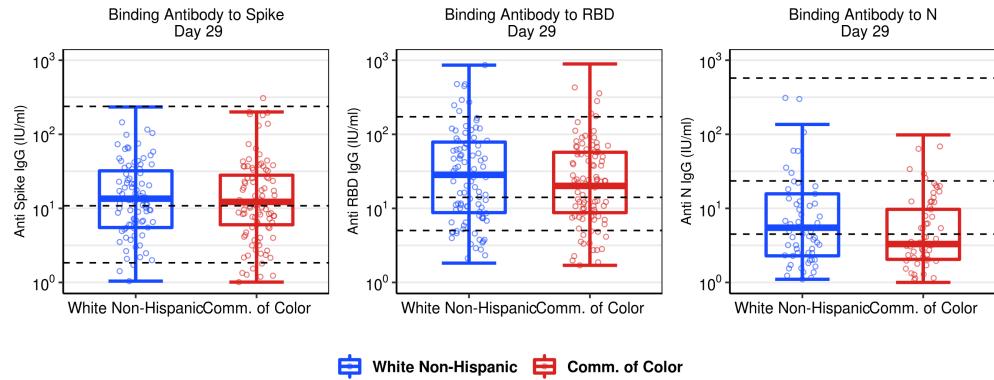


Figure 2.117: Boxplots of D29 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial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

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

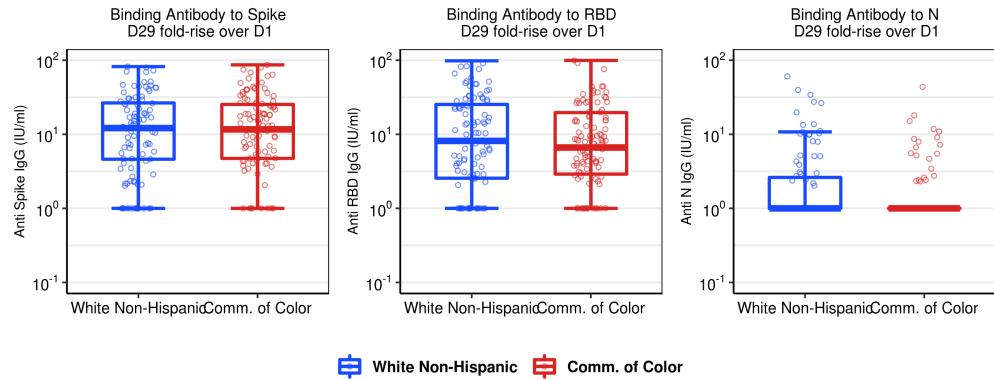


Figure 2.118: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

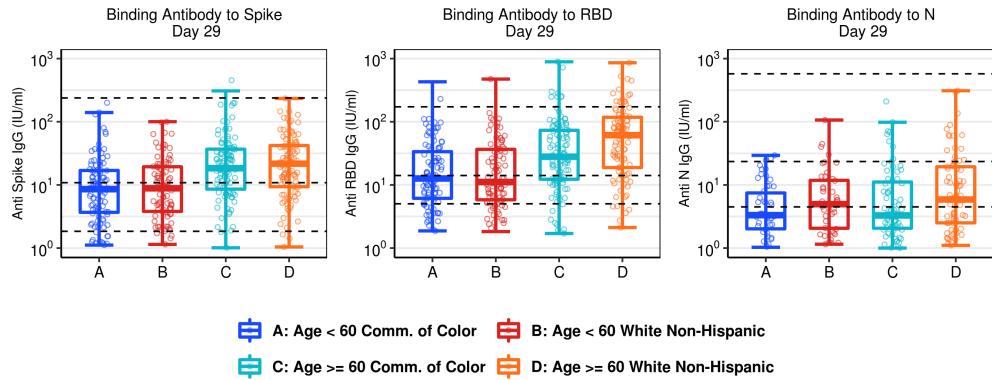


Figure 2.119: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States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

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



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.

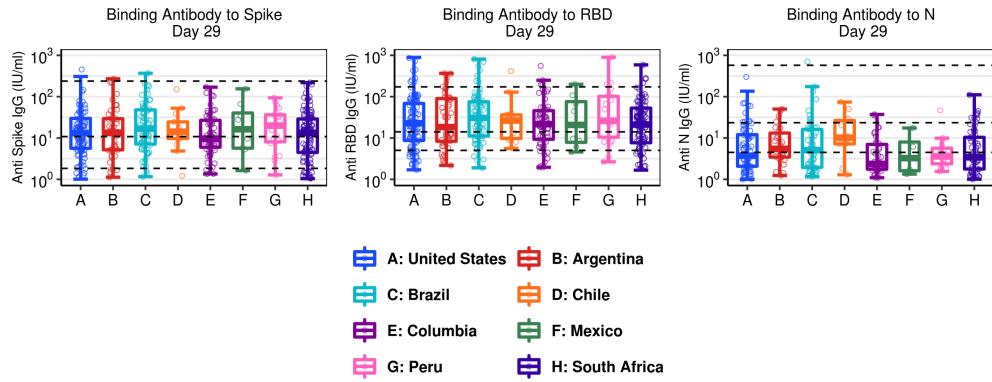


Figure 2.121: Boxplots of D29 Ab markers: Baseline negative vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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

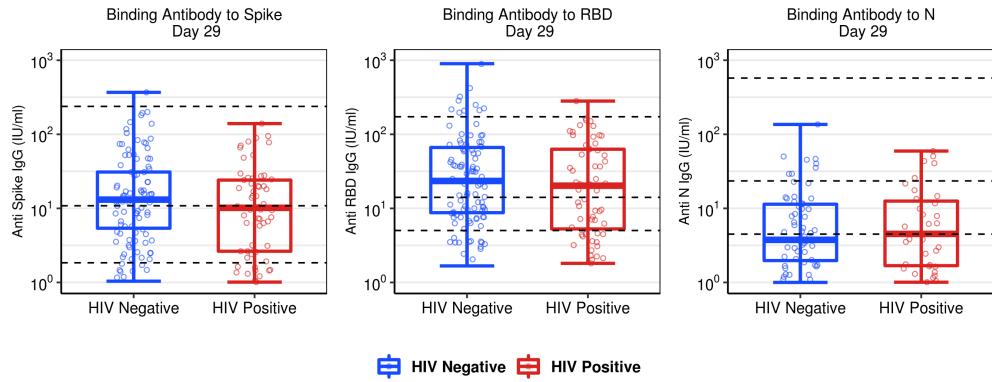


Figure 2.123: Boxplots of D29 Ab markers: Baseline negative vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

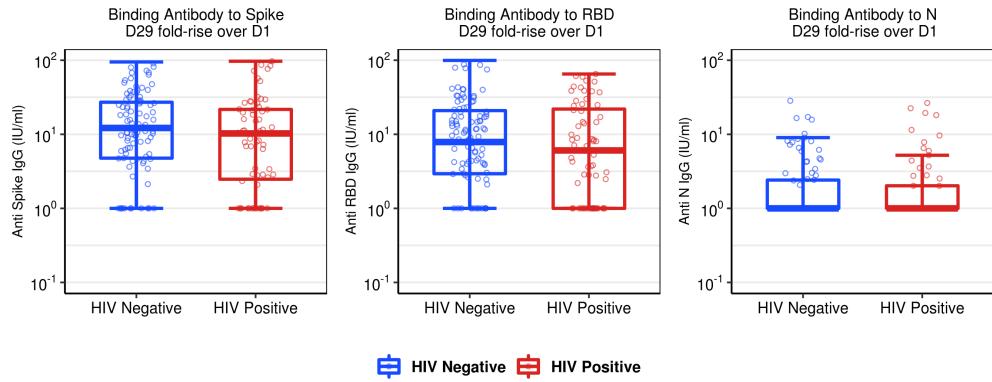


Figure 2.124: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by HIV positivity.

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 COHORT385



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

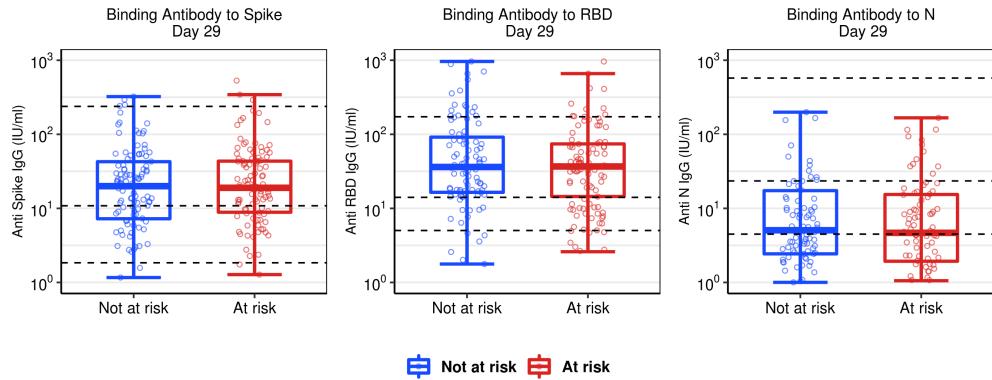


Figure 2.127: Boxplots of D29 Ab markers: baseline positive vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

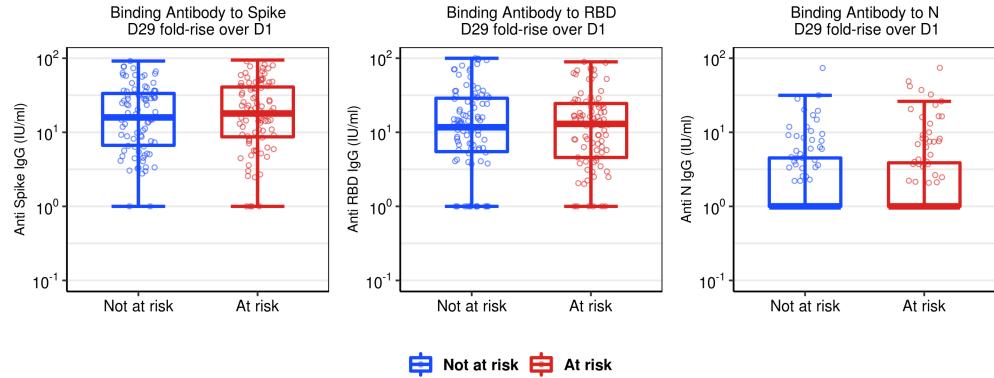


Figure 2.128: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.



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 COHORT389

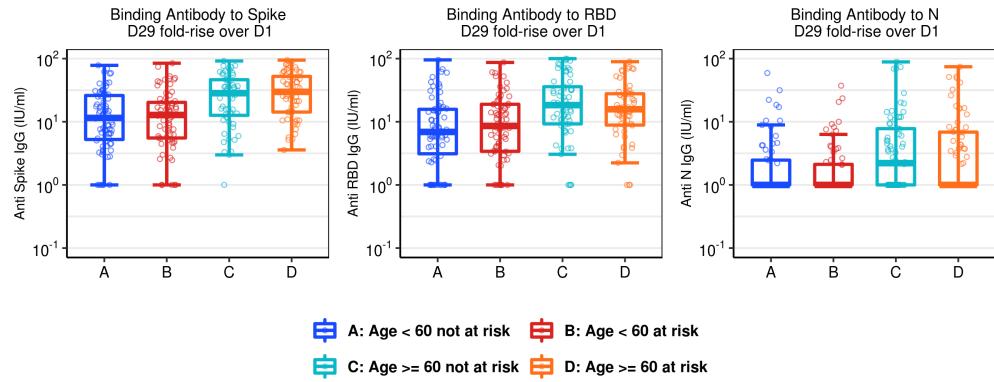


Figure 2.130: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

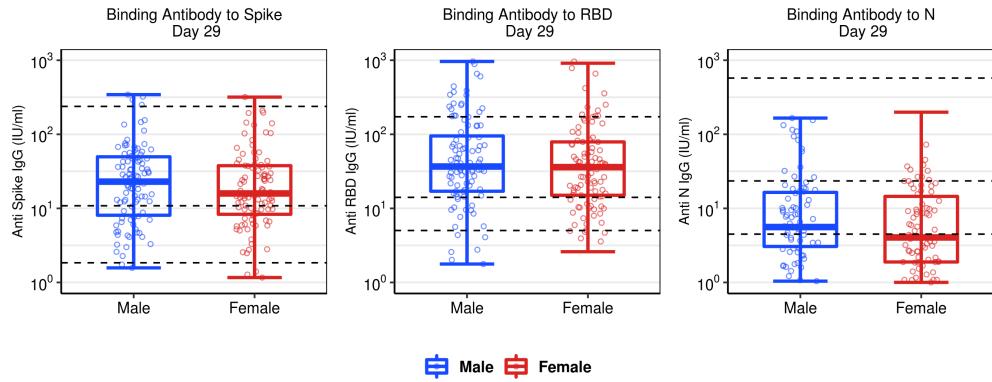


Figure 2.131: Boxplots of D29 Ab markers: baseline positive vaccine arm by sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

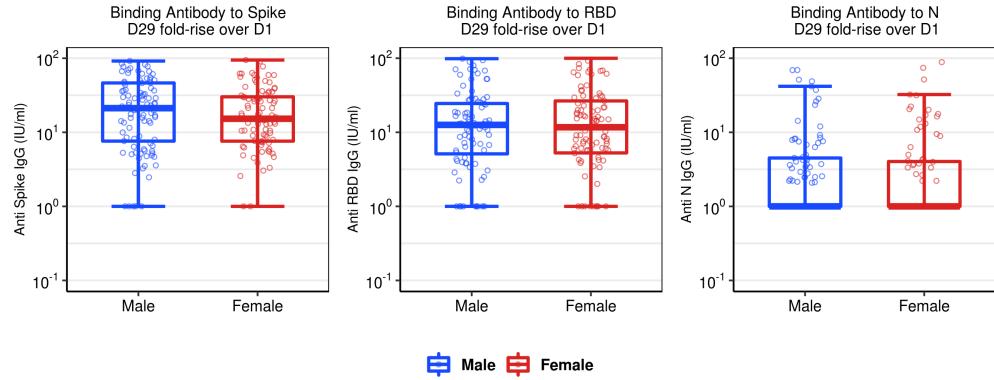


Figure 2.132: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.



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 COHORT393



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

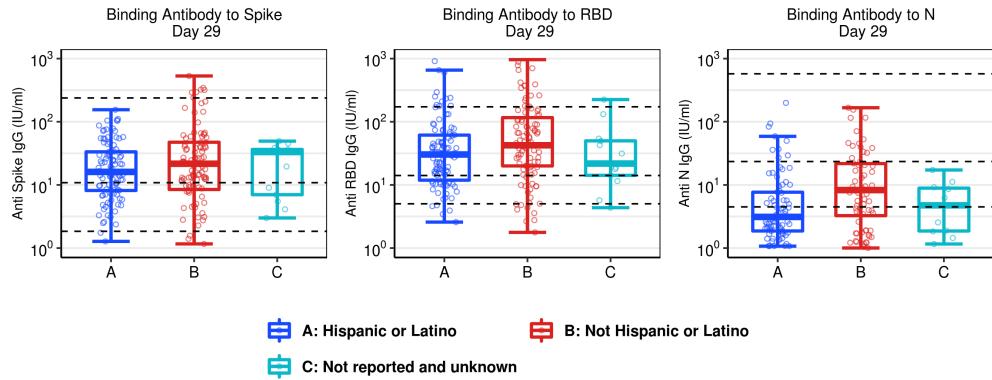


Figure 2.135: Boxplots of D29 Ab markers: baseline positive vaccine arm by ethnicity The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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

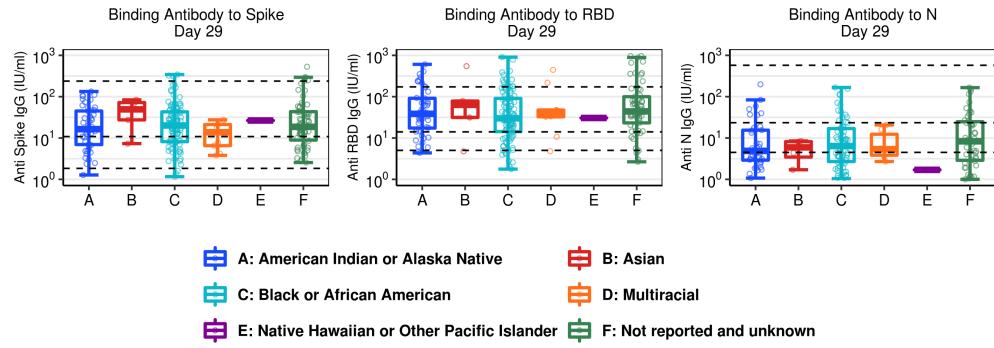


Figure 2.137: Boxplots of D29 Ab markers: baseline positive vaccine arm by race. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

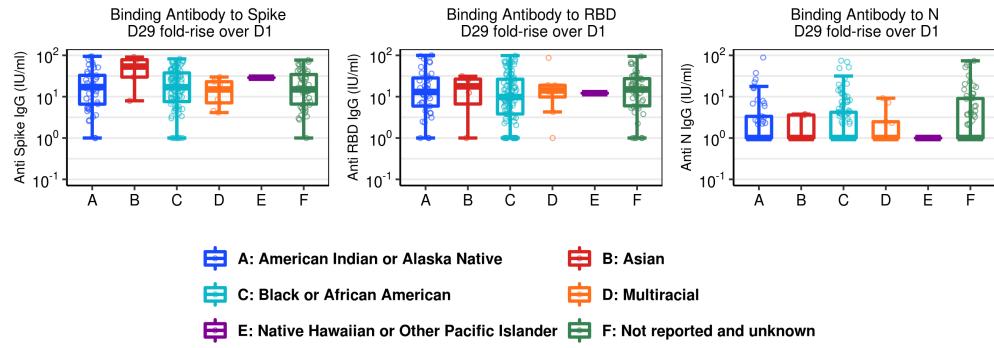


Figure 2.138: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

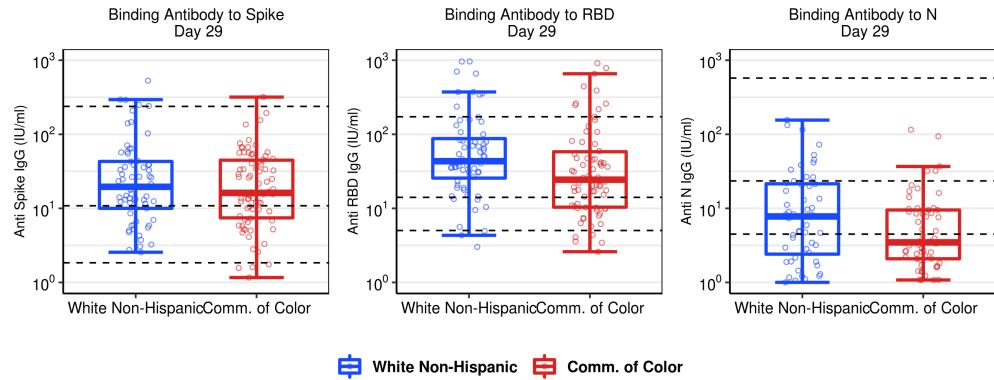


Figure 2.139: Boxplots of D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial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

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

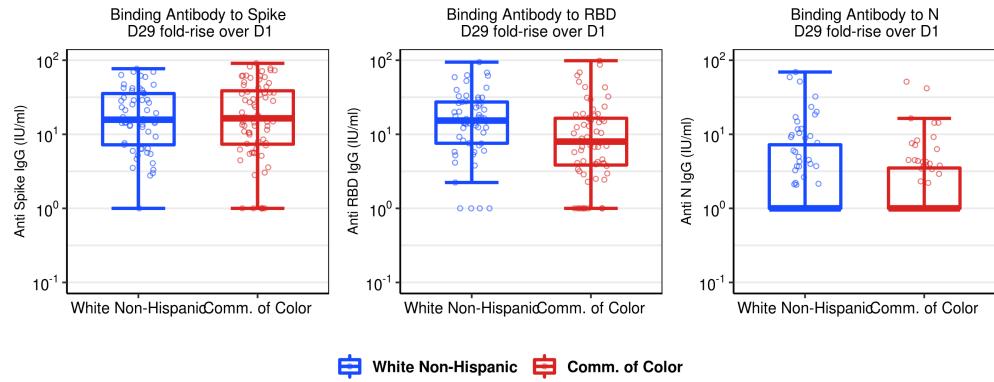


Figure 2.140: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

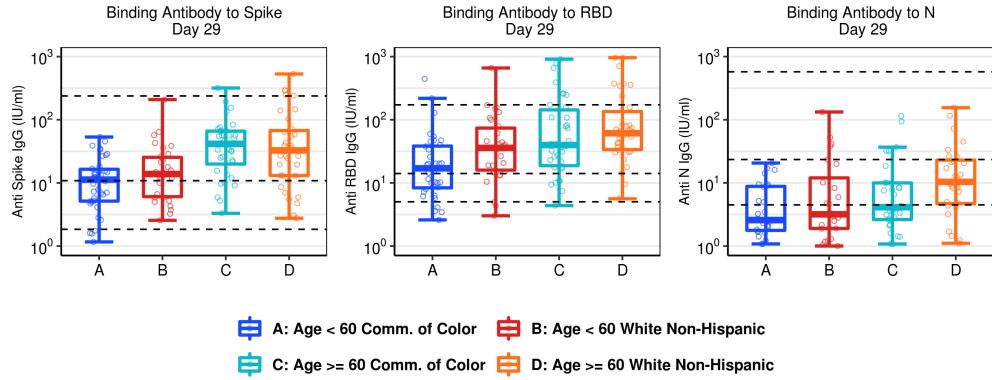


Figure 2.141: Boxplots of D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States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

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

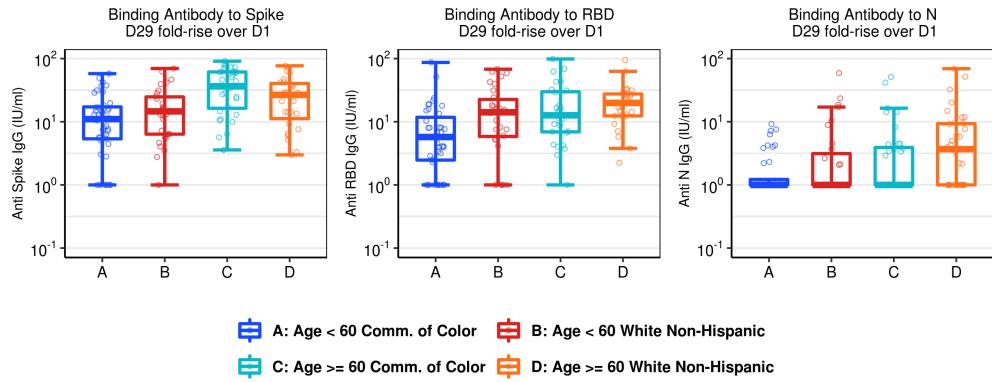


Figure 2.142: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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 COHORT403



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

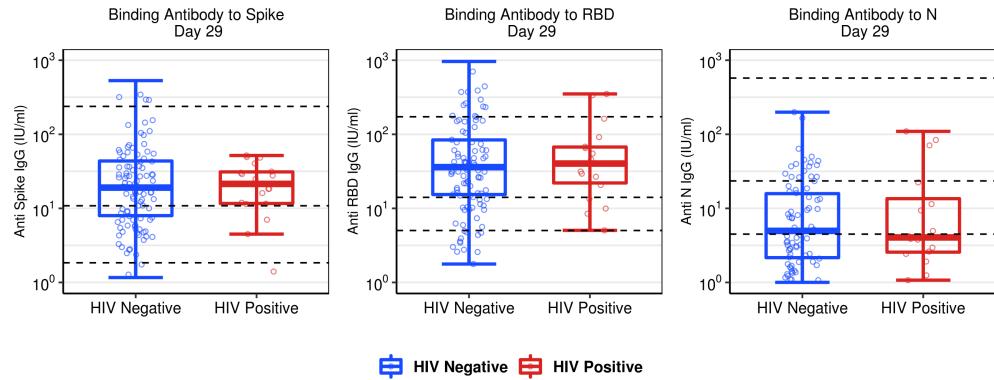


Figure 2.145: Boxplots of D29 Ab markers: baseline positive vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT405



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

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MOCK

Chapter 3

Appendix

- This report was built from the [CoVPN/correlates_reporting](#) repository with commit hash a2303509e1ddfeae837c7b3ef2e9a9d9624dd6eb. A diff of the changes introduced by that commit may be viewed at https://github.com/CoVPN/correlates_reporting/commit/a2303509e1ddfeae837c7b3ef2e9a9d9624dd6eb
- The sha256 hash sum of the raw input file, “COVID_ENSEMBLE_practicedata.csv”: c5c374aafab433f963f8b9a6426b1ff
- The sha256 hash sum of the processed file, “janssen_pooled_mock_data_processed.csv”: 5d6af1d6b6307d64f61e32e01a297faedb5e41c17bcedb7807f46f4f8200c75