

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 = 901)	Placebo (N = 107)	Total (N = 1008)
Age			
Age 18 - 59	452 (50.2%)	52 (48.6%)	504 (50.0%)
Age \geq 60	449 (49.8%)	55 (51.4%)	504 (50.0%)
Mean (Range)	56.2 (18.0, 85.0)	57.3 (18.0, 85.0)	56.3 (18.0, 85.0)
BMI			
Underweight BMI < 18.5	5 (0.6%)		5 (0.5%)
Normal $18.5 \leq$ BMI < 25	155 (17.2%)	26 (24.3%)	181 (18.0%)
Overweight $25 \leq$ BMI < 30	357 (39.6%)	46 (43.0%)	403 (40.0%)
Obese BMI \geq 30	384 (42.6%)	35 (32.7%)	419 (41.6%)
Risk for Severe Covid-19			
At-risk	452 (50.2%)	55 (51.4%)	507 (50.3%)
Not at-risk	449 (49.8%)	52 (48.6%)	501 (49.7%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	228 (25.3%)	27 (25.2%)	255 (25.3%)
Age 18 - 59 Not at-risk	224 (24.9%)	25 (23.4%)	249 (24.7%)
Age \geq 60 At-risk	224 (24.9%)	28 (26.2%)	252 (25.0%)
Age \geq 60 Not at-risk	225 (25.0%)	27 (25.2%)	252 (25.0%)
Sex			
Female	502 (55.7%)	53 (49.5%)	555 (55.1%)
Male	399 (44.3%)	54 (50.5%)	453 (44.9%)
Hispanic or Latino ethnicity			
Hispanic or Latino	374 (41.5%)	43 (40.2%)	417 (41.4%)
Not Hispanic or Latino	481 (53.4%)	57 (53.3%)	538 (53.4%)

(continued)

Characteristics	Vaccine (N = 901)	Placebo (N = 107)	Total (N = 1008)
Not reported and unknown	46 (5.1%)	7 (6.5%)	53 (5.3%)
Race			
White	387 (43.0%)	41 (38.3%)	428 (42.5%)
Black or African American	314 (34.9%)	36 (33.6%)	350 (34.7%)
Asian	24 (2.7%)	4 (3.7%)	28 (2.8%)
American Indian or Alaska Native	137 (15.2%)	20 (18.7%)	157 (15.6%)
Native Hawaiian or Other Pacific Islander	2 (0.2%)		2 (0.2%)
Multiracial	24 (2.7%)	5 (4.7%)	29 (2.9%)
Not reported and unknown	13 (1.4%)	1 (0.9%)	14 (1.4%)
Underrepresented Minority Status in the U.S.			
URM	225 (25.0%)	27 (25.2%)	252 (25.0%)
Non-URM	225 (25.0%)	25 (23.4%)	250 (24.8%)
Country			
United States	450 (49.9%)	52 (48.6%)	502 (49.8%)
Argentina	31 (3.4%)	4 (3.7%)	35 (3.5%)
Brazil	103 (11.4%)	10 (9.3%)	113 (11.2%)
Chile	15 (1.7%)	1 (0.9%)	16 (1.6%)
Columbia	47 (5.2%)	8 (7.5%)	55 (5.5%)
Mexico	5 (0.6%)	1 (0.9%)	6 (0.6%)
Peru	26 (2.9%)	4 (3.7%)	30 (3.0%)
South Africa	224 (24.9%)	27 (25.2%)	251 (24.9%)
HIV Infection			
Negative	830 (92.1%)	103 (96.3%)	933 (92.6%)
Positive	71 (7.9%)	4 (3.7%)	75 (7.4%)

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 = 280)	Placebo (N = 280)	Total (N = 560)
Age			
Age 18 - 59	139 (49.6%)	141 (50.4%)	280 (50.0%)
Age ≥ 60	141 (50.4%)	139 (49.6%)	280 (50.0%)
Mean (Range)	55.2 (18.0, 85.0)	56.4 (18.0, 85.0)	55.8 (18.0, 85.0)
BMI			
Underweight BMI < 18.5	1 (0.4%)	1 (0.4%)	2 (0.4%)
Normal 18.5 ≤ BMI < 25	70 (25.0%)	37 (13.2%)	107 (19.1%)
Overweight 25 ≤ BMI < 30	109 (38.9%)	122 (43.6%)	231 (41.2%)
Obese BMI ≥ 30	100 (35.7%)	120 (42.9%)	220 (39.3%)
Risk for Severe Covid-19			
At-risk	142 (50.7%)	139 (49.6%)	281 (50.2%)
Not at-risk	138 (49.3%)	141 (50.4%)	279 (49.8%)
Age, Risk for Severe Covid-19			
Age 18 - 59 At-risk	71 (25.4%)	69 (24.6%)	140 (25.0%)
Age 18 - 59 Not at-risk	68 (24.3%)	72 (25.7%)	140 (25.0%)
Age ≥ 60 At-risk	71 (25.4%)	70 (25.0%)	141 (25.2%)
Age ≥ 60 Not at-risk	70 (25.0%)	69 (24.6%)	139 (24.8%)
Sex			
Female	156 (55.7%)	159 (56.8%)	315 (56.2%)
Male	124 (44.3%)	121 (43.2%)	245 (43.8%)
Hispanic or Latino ethnicity			
Hispanic or Latino	119 (42.5%)	112 (40.0%)	231 (41.2%)
Not Hispanic or Latino	150 (53.6%)	153 (54.6%)	303 (54.1%)
Not reported and unknown	11 (3.9%)	15 (5.4%)	26 (4.6%)
Race			
White	127 (45.4%)	115 (41.1%)	242 (43.2%)
Black or African American	98 (35.0%)	100 (35.7%)	198 (35.4%)
Asian	6 (2.1%)	6 (2.1%)	12 (2.1%)
American Indian or Alaska Native	34 (12.1%)	44 (15.7%)	78 (13.9%)
Multiracial	11 (3.9%)	12 (4.3%)	23 (4.1%)
Not reported and unknown	4 (1.4%)	3 (1.1%)	7 (1.2%)
Underrepresented Minority Status in the U.S.			
URM	70 (25.0%)	70 (25.0%)	140 (25.0%)
Non-URM	72 (25.7%)	70 (25.0%)	142 (25.4%)
Country			
United States	142 (50.7%)	140 (50.0%)	282 (50.4%)
Argentina	9 (3.2%)	9 (3.2%)	18 (3.2%)
Brazil	23 (8.2%)	31 (11.1%)	54 (9.6%)
Chile	6 (2.1%)	2 (0.7%)	8 (1.4%)
Columbia	20 (7.1%)	14 (5.0%)	34 (6.1%)
Mexico	4 (1.4%)	3 (1.1%)	7 (1.2%)
Peru	8 (2.9%)	11 (3.9%)	19 (3.4%)

(continued)

Characteristics	Vaccine (N = 280)	Placebo (N = 280)	Total (N = 560)
South Africa	68 (24.3%)	70 (25.0%)	138 (24.6%)
HIV Infection			
Negative	262 (93.6%)	260 (92.9%)	522 (93.2%)
Positive	18 (6.4%)	20 (7.1%)	38 (6.8%)

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 \times Baseline SARS-CoV-2 seronegative vs. seropositive \times 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=784 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	56	55	55	58	56	56	18	18	16	18	18	18	18	18
Estimated	1526	951	834	517	1771	1227	958	673	173	101	73	63	214	116	108	61
Placebo																
Observed	6	7	7	7	6	6	6	7	18	17	17	18	18	18	17	17
Estimated	1498	1025	857	573	1709	1174	995	668	164	106	94	55	208	122	100	70

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=784 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	57	57	55	57	56	56	17	18	18	17	15	17	18	18
Estimated	3116	2100	1635	1079	1143	782	609	380	346	223	169	122	102	84	71	49
Placebo																
Observed	7	7	7	7	6	7	7	7	18	17	17	18	18	17	18	17
Estimated	3114	1985	1611	1063	1148	778	582	429	336	213	181	119	122	70	64	33

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 (IU/ml)	901	1219.4/19301 = 6.3% (4.9%, 8.1%)	2987.2/19301 = 15.5% (13.2%, 18.1%)	1680.8/19301 = 8.7% (7.0%, 10.8%)
	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	901	10191.3/19301 = 52.8% (49.2%, 56.4%)	11471.1/19301 = 59.4% (55.8%, 63.0%)	8549.7/19301 = 44.3% (40.8%, 47.9%)
	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	901	7932.8/19301 = 41.1% (37.7%, 44.6%)	14101.8/19301 = 73.1% (69.6%, 76.3%)	10256.1/19301 = 53.1% (49.5%, 56.7%)
	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	280	253.2/2075 = 12.2% (8.5%, 17.2%)	452.3/2075 = 21.8% (17.3%, 27.1%)	287.6/2075 = 13.9% (10.0%, 19.0%)
	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	280	1324.5/2075 = 63.8% (57.0%, 70.1%)	1532.6/2075 = 73.9% (67.3%, 79.5%)	1135.4/2075 = 54.7% (48.1%, 61.2%)
	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	280	1111.9/2075 = 53.6% (47.3%, 59.8%)	1637/2075 = 78.9% (72.5%, 84.1%)	1389.9/2075 = 67.0% (60.3%, 73.0%)
	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	280	87.1/2057 = 4.2% (2.4%, 7.5%)	233.8/2057 = 11.4% (7.9%, 16.1%)	117/2057 = 5.7% (3.3%, 9.7%)
	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	280	1046.5/2057 = 50.9% (44.4%, 57.3%)	1212.9/2057 = 59.0% (52.4%, 65.3%)	845/2057 = 41.1% (34.9%, 47.6%)

Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	280	617.4/2057 = 30.0% (24.9%, 35.7%)	1210.5/2057 = 58.8% (52.2%, 65.2%)	757.5/2057 = 36.8% (31.1%, 42.9%)
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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 (IU/ml)	452	314.5/12616 = 2.5% (1.3%, 4.7%)	1179.6/12616 = 9.3% (6.8%, 12.7%)	562.2/12616 = 4.5% (2.8%, 7.1%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	5235.7/12616 = 41.5% (36.6%, 46.6%)	6139.7/12616 = 48.7% (43.7%, 53.7%)	4095.6/12616 = 32.5% (27.9%, 37.4%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	3472.1/12616 = 27.5% (23.2%, 32.3%)	8003.3/12616 = 63.4% (58.4%, 68.2%)	5109.3/12616 = 40.5% (35.6%, 45.6%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	139	97.9/1359 = 7.2% (3.4%, 14.6%)	153.3/1359 = 11.3% (6.6%, 18.6%)	107.5/1359 = 7.9% (3.9%, 15.4%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	139	714/1359 = 52.5% (43.1%, 61.8%)	885/1359 = 65.1% (55.7%, 73.5%)	572.4/1359 = 42.1% (33.2%, 51.5%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	139	496.7/1359 = 36.5% (28.2%, 45.8%)	943.7/1359 = 69.4% (60.2%, 77.3%)	717.7/1359 = 52.8% (43.4%, 62.1%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	30.3/1341 = 2.3% (0.7%, 7.2%)	109.1/1341 = 8.1% (4.3%, 14.9%)	53.1/1341 = 4.0% (1.5%, 10.3%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	504.4/1341 = 37.6% (29.1%, 46.9%)	628.4/1341 = 46.9% (37.9%, 56.0%)	388.2/1341 = 28.9% (21.2%, 38.1%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	203.1/1341 = 15.1% (9.7%, 22.8%)	613.8/1341 = 45.8% (36.8%, 55.0%)	293.9/1341 = 21.9% (15.2%, 30.5%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	904.9/6685 = 13.5% (10.4%, 17.4%)	1807.6/6685 = 27.0% (22.7%, 31.8%)	1118.6/6685 = 16.7% (13.3%, 20.9%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	4955.6/6685 = 74.1% (69.4%, 78.4%)	5331.3/6685 = 79.8% (75.3%, 83.6%)	4454.1/6685 = 66.6% (61.6%, 71.3%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	4460.7/6685 = 66.7% (61.8%, 71.4%)	6098.5/6685 = 91.2% (87.9%, 93.7%)	5146.8/6685 = 77.0% (72.4%, 81.0%)

(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 (IU/ml)	141	155.3/716 = 21.7% (15.3%, 29.9%)	299.1/716 = 41.8% (33.3%, 50.7%)	180.1/716 = 25.2% (18.1%, 33.7%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	141	610.5/716 = 85.3% (77.8%, 90.5%)	647.7/716 = 90.5% (83.6%, 94.6%)	563/716 = 78.6% (70.4%, 85.0%)
Age ≥ 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	141	615.2/716 = 85.9% (78.5%, 91.1%)	693.3/716 = 96.8% (90.1%, 99.0%)	672.1/716 = 93.9% (87.9%, 97.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age ≥ 60	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	139	56.8/716 = 7.9% (4.2%, 14.6%)	124.8/716 = 17.4% (11.6%, 25.4%)	63.9/716 = 8.9% (5.0%, 15.5%)
Age ≥ 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	542.1/716 = 75.7% (66.7%, 82.9%)	584.5/716 = 81.6% (73.3%, 87.8%)	456.8/716 = 63.8% (54.3%, 72.3%)
Age ≥ 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	414.3/716 = 57.9% (48.3%, 66.9%)	596.7/716 = 83.3% (74.5%, 89.5%)	463.6/716 = 64.8% (55.2%, 73.3%)

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 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 (IU/ml)	452	449.6/7709 = 5.8% (4.0%, 8.5%)	1068.3/7709 = 13.9% (10.9%, 17.4%)	551.1/7709 = 7.1% (5.1%, 9.9%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	4120.3/7709 = 53.4% (48.3%, 58.5%)	4822.3/7709 = 62.6% (57.4%, 67.5%)	3408.9/7709 = 44.2% (39.3%, 49.3%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	3181.5/7709 = 41.3% (36.5%, 46.2%)	5759.3/7709 = 74.7% (69.8%, 79.1%)	4116.4/7709 = 53.4% (48.3%, 58.4%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	106.8/819 = 13.0% (8.8%, 18.9%)	203.3/819 = 24.8% (19.2%, 31.4%)	112.3/819 = 13.7% (9.4%, 19.6%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	547/819 = 66.8% (57.8%, 74.7%)	633.5/819 = 77.4% (68.6%, 84.3%)	480.4/819 = 58.7% (50.3%, 66.5%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	431.8/819 = 52.7% (44.3%, 61.0%)	709.8/819 = 86.7% (78.3%, 92.1%)	551.5/819 = 67.3% (58.3%, 75.2%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	139	46/788 = 5.8% (2.7%, 12.3%)	107.9/788 = 13.7% (8.4%, 21.6%)	50.2/788 = 6.4% (3.0%, 12.8%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	420.3/788 = 53.3% (44.3%, 62.2%)	467/788 = 59.3% (49.9%, 68.0%)	353.7/788 = 44.9% (36.2%, 53.9%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	267.2/788 = 33.9% (26.6%, 42.0%)	509.2/788 = 64.6% (55.2%, 73.0%)	295.6/788 = 37.5% (30.0%, 45.7%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	769.8/11592 = 6.6% (4.7%, 9.2%)	1918.9/11592 = 16.6% (13.3%, 20.4%)	1129.7/11592 = 9.7% (7.3%, 12.9%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	6071/11592 = 52.4% (47.4%, 57.3%)	6648.8/11592 = 57.4% (52.4%, 62.2%)	5140.8/11592 = 44.3% (39.5%, 49.3%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	4751.3/11592 = 41.0% (36.4%, 45.8%)	8342.5/11592 = 72.0% (67.0%, 76.4%)	6139.7/11592 = 53.0% (48.0%, 57.9%)

(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 (IU/ml)	138	146.4/1256 = 11.7% (6.7%, 19.6%)	249/1256 = 19.8% (13.7%, 27.9%)	175.3/1256 = 14.0% (8.5%, 22.0%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	138	777.5/1256 = 61.9% (52.2%, 70.8%)	899.1/1256 = 71.6% (62.0%, 79.5%)	655.1/1256 = 52.2% (42.7%, 61.5%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	138	680.1/1256 = 54.1% (45.2%, 62.8%)	927.2/1256 = 73.8% (64.5%, 81.4%)	838.4/1256 = 66.8% (57.2%, 75.1%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	41.1/1269 = 3.2% (1.3%, 7.7%)	125.9/1269 = 9.9% (5.8%, 16.5%)	66.9/1269 = 5.3% (2.4%, 11.3%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	626.2/1269 = 49.3% (40.5%, 58.3%)	745.9/1269 = 58.8% (49.7%, 67.3%)	491.3/1269 = 38.7% (30.4%, 47.8%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	350.2/1269 = 27.6% (20.9%, 35.5%)	701.3/1269 = 55.3% (46.1%, 64.0%)	462/1269 = 36.4% (28.6%, 45.0%)

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 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 (IU/ml)	228	126.6/5060 = 2.5% (1.0%, 6.3%)	398.9/5060 = 7.9% (4.9%, 12.4%)	143.2/5060 = 2.8% (1.2%, 6.6%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	228	2233.7/5060 = 44.1% (37.3%, 51.3%)	2796.8/5060 = 55.3% (48.2%, 62.2%)	1702.7/5060 = 33.6% (27.2%, 40.7%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	228	1474.7/5060 = 29.1% (23.1%, 36.0%)	3380.4/5060 = 66.8% (59.8%, 73.2%)	2129.6/5060 = 42.1% (35.3%, 49.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	20.4/524 = 3.9% (1.5%, 9.9%)	59.4/524 = 11.3% (6.4%, 19.2%)	20.4/524 = 3.9% (1.5%, 9.9%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	277.3/524 = 52.9% (40.1%, 65.3%)	357.7/524 = 68.3% (55.3%, 78.9%)	218.9/524 = 41.8% (30.3%, 54.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	182.7/524 = 34.9% (24.0%, 47.5%)	414.8/524 = 79.2% (66.5%, 87.9%)	277.6/524 = 53.0% (40.1%, 65.4%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	18.8/511 = 3.7% (0.8%, 15.1%)	49/511 = 9.6% (4.0%, 21.3%)	22.9/511 = 4.5% (1.2%, 15.1%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	197/511 = 38.5% (26.7%, 52.0%)	237.5/511 = 46.5% (33.9%, 59.5%)	154.3/511 = 30.2% (19.4%, 43.7%)

(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 (IU/ml)	69	85.3/511 = 16.7% (9.1%, 28.5%)	269.2/511 = 52.7% (39.8%, 65.2%)	106.6/511 = 20.9% (12.5%, 32.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	188/7556 = 2.5% (1.1%, 5.7%)	780.7/7556 = 10.3% (6.8%, 15.4%)	419/7556 = 5.5% (3.1%, 9.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	3002/7556 = 39.7% (33.1%, 46.8%)	3342.9/7556 = 44.2% (37.4%, 51.3%)	2393/7556 = 31.7% (25.5%, 38.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1997.4/7556 = 26.4% (20.6%, 33.2%)	4622.9/7556 = 61.2% (54.1%, 67.8%)	2979.7/7556 = 39.4% (32.7%, 46.6%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	68	77.5/835 = 9.3% (3.6%, 21.7%)	93.9/835 = 11.2% (5.0%, 23.4%)	87.1/835 = 10.4% (4.4%, 22.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	436.7/835 = 52.3% (39.2%, 65.1%)	527.2/835 = 63.1% (49.8%, 74.7%)	353.6/835 = 42.3% (30.0%, 55.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	314/835 = 37.6% (26.1%, 50.8%)	528.9/835 = 63.3% (50.3%, 74.7%)	440.1/835 = 52.7% (39.5%, 65.5%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	72	11.6/830 = 1.4% (0.2%, 9.6%)	60.1/830 = 7.2% (2.9%, 17.2%)	30.2/830 = 3.6% (0.8%, 14.5%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	72	307.4/830 = 37.0% (25.8%, 49.9%)	390.9/830 = 47.1% (35.0%, 59.6%)	233.9/830 = 28.2% (18.1%, 41.0%)

(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 (IU/ml)	72	117.8/830 = 14.2% (7.4%, 25.4%)	344.7/830 = 41.5% (29.7%, 54.4%)	187.3/830 = 22.6% (13.6%, 35.0%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	323/2649 = 12.2% (8.3%, 17.6%)	669.4/2649 = 25.3% (19.6%, 32.0%)	407.9/2649 = 15.4% (11.0%, 21.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	1886.6/2649 = 71.2% (64.3%, 77.3%)	2025.4/2649 = 76.5% (69.8%, 82.0%)	1706.2/2649 = 64.4% (57.3%, 70.9%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1706.9/2649 = 64.4% (57.4%, 70.9%)	2378.9/2649 = 89.8% (84.4%, 93.5%)	1986.8/2649 = 75.0% (68.3%, 80.7%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	86.4/295 = 29.3% (18.8%, 42.6%)	143.9/295 = 48.8% (36.5%, 61.2%)	91.8/295 = 31.1% (20.4%, 44.4%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	269.7/295 = 91.4% (83.6%, 95.7%)	275.8/295 = 93.5% (86.0%, 97.1%)	261.5/295 = 88.6% (80.6%, 93.6%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	249.1/295 = 84.4% (73.0%, 91.6%)	295/295 = 100.0% (100.0%, 100.0%)	273.8/295 = 92.8% (85.6%, 96.6%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	27.3/277 = 9.8% (4.2%, 21.2%)	59/277 = 21.3% (12.3%, 34.3%)	27.3/277 = 9.8% (4.2%, 21.2%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	223.4/277 = 80.6% (69.2%, 88.6%)	229.5/277 = 82.9% (71.4%, 90.4%)	199.4/277 = 72.0% (59.6%, 81.8%)

(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 (IU/ml)	70	181.8/277 = 65.6% (52.2%, 76.9%)	240.1/277 = 86.7% (74.5%, 93.5%)	189/277 = 68.2% (54.8%, 79.2%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	581.8/4036 = 14.4% (10.1%, 20.2%)	1138.2/4036 = 28.2% (22.3%, 35.0%)	710.7/4036 = 17.6% (12.9%, 23.7%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	3069/4036 = 76.0% (69.4%, 81.6%)	3305.9/4036 = 81.9% (75.7%, 86.8%)	2747.8/4036 = 68.1% (61.1%, 74.3%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	2753.9/4036 = 68.2% (61.3%, 74.5%)	3719.6/4036 = 92.2% (87.5%, 95.2%)	3160/4036 = 78.3% (71.9%, 83.6%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	68.9/421 = 16.4% (9.1%, 27.7%)	155.1/421 = 36.8% (25.7%, 49.6%)	88.2/421 = 21.0% (12.4%, 33.1%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	340.8/421 = 81.0% (69.0%, 89.0%)	371.9/421 = 88.3% (77.0%, 94.5%)	301.5/421 = 71.6% (58.7%, 81.8%)
Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	366.1/421 = 87.0% (75.8%, 93.4%)	398.3/421 = 94.6% (83.4%, 98.4%)	398.3/421 = 94.6% (83.4%, 98.4%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	29.5/439 = 6.7% (2.5%, 16.8%)	65.8/439 = 15.0% (8.0%, 26.3%)	36.6/439 = 8.3% (3.6%, 18.0%)
Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	318.7/439 = 72.6% (59.3%, 82.8%)	355/439 = 80.9% (68.5%, 89.2%)	257.4/439 = 58.6% (45.2%, 70.9%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	69	232.5/439 = 53.0% (39.8%, 65.7%)	356.6/439 = 81.2% (68.2%, 89.8%)	274.6/439 = 62.6% (49.1%, 74.3%)

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 (IU/ml)	399	638.8/8381.3 = 7.6% (5.3%, 10.8%)	1430.8/8381.3 = 17.1% (13.5%, 21.4%)	908.8/8381.3 = 10.8% (8.0%, 14.6%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	399	4597.6/8381.3 = 54.9% (49.2%, 60.4%)	5148.1/8381.3 = 61.4% (55.7%, 66.8%)	3817.4/8381.3 = 45.5% (40.1%, 51.1%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	399	3761.6/8381.3 = 44.9% (39.5%, 50.4%)	6350.2/8381.3 = 75.8% (70.4%, 80.4%)	4763.3/8381.3 = 56.8% (51.2%, 62.3%)
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	124	130.7/985.8 = 13.3% (7.4%, 22.6%)	211.2/985.8 = 21.4% (14.3%, 30.8%)	149.4/985.8 = 15.2% (9.0%, 24.5%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	124	547.8/985.8 = 55.6% (45.2%, 65.5%)	699.6/985.8 = 71.0% (60.7%, 79.4%)	459.4/985.8 = 46.6% (36.8%, 56.7%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	124	458.6/985.8 = 46.5% (36.7%, 56.6%)	743.4/985.8 = 75.4% (65.1%, 83.4%)	618/985.8 = 62.7% (52.2%, 72.1%)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	121	30.6/919.7 = 3.3% (1.3%, 8.4%)	117.5/919.7 = 12.8% (7.4%, 21.2%)	49.3/919.7 = 5.4% (2.1%, 13.2%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	121	467.7/919.7 = 50.9% (40.6%, 61.0%)	558.9/919.7 = 60.8% (50.4%, 70.2%)	366.9/919.7 = 39.9% (30.4%, 50.3%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	121	255.3/919.7 = 27.8% (19.9%, 37.3%)	535.8/919.7 = 58.3% (47.8%, 68.1%)	334.9/919.7 = 36.4% (27.5%, 46.4%)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	502	580.6/10919.7 = 5.3% (3.7%, 7.6%)	1556.4/10919.7 = 14.3% (11.3%, 17.8%)	772/10919.7 = 7.1% (5.1%, 9.7%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	502	5593.8/10919.7 = 51.2% (46.4%, 56.1%)	6323/10919.7 = 57.9% (53.0%, 62.7%)	4732.3/10919.7 = 43.3% (38.6%, 48.2%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	502	4171.2/10919.7 = 38.2% (33.7%, 42.9%)	7751.6/10919.7 = 71.0% (66.1%, 75.4%)	5492.8/10919.7 = 50.3% (45.4%, 55.2%)

(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 (IU/ml)	156	122.6/1089.2 = 11.3% (7.4%, 16.7%)	241.1/1089.2 = 22.1% (16.6%, 28.8%)	138.2/1089.2 = 12.7% (8.5%, 18.5%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	156	776.7/1089.2 = 71.3% (62.1%, 79.1%)	833/1089.2 = 76.5% (67.3%, 83.7%)	676.1/1089.2 = 62.1% (52.7%, 70.6%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	156	653.3/1089.2 = 60.0% (51.2%, 68.2%)	893.6/1089.2 = 82.0% (72.7%, 88.7%)	771.9/1089.2 = 70.9% (61.4%, 78.8%)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	159	56.5/1137.3 = 5.0% (2.4%, 10.2%)	116.3/1137.3 = 10.2% (6.2%, 16.3%)	67.7/1137.3 = 6.0% (3.1%, 11.1%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	159	578.8/1137.3 = 50.9% (42.3%, 59.5%)	654/1137.3 = 57.5% (48.5%, 66.0%)	478.1/1137.3 = 42.0% (33.7%, 50.8%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	159	362.1/1137.3 = 31.8% (25.0%, 39.6%)	674.8/1137.3 = 59.3% (50.2%, 67.8%)	422.7/1137.3 = 37.2% (29.5%, 45.5%)

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

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

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than $2 \times$ LLOQ	% Greater than $4 \times$ LLOQ
Age, sex								
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	255	107.5/7251 = 1.5% (0.5%, 4.1%)	572.3/7251 = 7.9% (5.0%, 12.3%)	220.8/7251 = 3.0% (1.5%, 6.1%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	255	2767.7/7251 = 38.2% (31.9%, 44.8%)	3298/7251 = 45.5% (39.0%, 52.1%)	2194.5/7251 = 30.3% (24.4%, 36.8%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	255	1741.1/7251 = 24.0% (18.7%, 30.3%)	4466.3/7251 = 61.6% (54.8%, 68.0%)	2706.5/7251 = 37.3% (31.1%, 44.1%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	16.7/658.1 = 2.5% (0.8%, 7.8%)	53.5/658.1 = 8.1% (4.2%, 15.3%)	26.3/658.1 = 4.0% (1.4%, 10.9%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	393.4/658.1 = 59.8% (46.1%, 72.1%)	424.6/658.1 = 64.5% (50.7%, 76.3%)	322/658.1 = 48.9% (35.7%, 62.3%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	257.3/658.1 = 39.1% (27.7%, 51.8%)	462.5/658.1 = 70.3% (56.3%, 81.3%)	349.6/658.1 = 53.1% (39.8%, 66.1%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	76	18.8/716 = 2.6% (0.6%, 10.9%)	47/716 = 6.6% (2.6%, 15.7%)	22.9/716 = 3.2% (0.9%, 10.8%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	76	248.2/716 = 34.7% (23.7%, 47.5%)	309.6/716 = 43.2% (31.1%, 56.2%)	201.9/716 = 28.2% (18.0%, 41.2%)

(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 (IU/ml)	76	92.1/716 = 12.9% (6.7%, 23.4%)	321.8/716 = 44.9% (32.8%, 57.8%)	139.7/716 = 19.5% (11.3%, 31.5%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	197	207/5365 = 3.9% (1.7%, 8.4%)	607.2/5365 = 11.3% (7.3%, 17.2%)	341.4/5365 = 6.4% (3.4%, 11.7%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	197	2468/5365 = 46.0% (38.4%, 53.8%)	2841.7/5365 = 53.0% (45.2%, 60.6%)	1901.1/5365 = 35.4% (28.4%, 43.2%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	197	1731/5365 = 32.3% (25.4%, 40.0%)	3537.1/5365 = 65.9% (58.3%, 72.8%)	2402.8/5365 = 44.8% (37.2%, 52.6%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	69	81.2/700.9 = 11.6% (4.9%, 25.1%)	99.7/700.9 = 14.2% (6.8%, 27.2%)	81.2/700.9 = 11.6% (4.9%, 25.1%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	69	320.7/700.9 = 45.7% (32.9%, 59.2%)	460.4/700.9 = 65.7% (52.3%, 76.9%)	250.4/700.9 = 35.7% (24.1%, 49.3%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	69	239.4/700.9 = 34.1% (22.6%, 48.0%)	481.2/700.9 = 68.7% (55.2%, 79.6%)	368.1/700.9 = 52.5% (39.3%, 65.4%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	65	11.6/625 = 1.8% (0.2%, 12.6%)	62.1/625 = 9.9% (4.1%, 22.0%)	30.2/625 = 4.8% (1.1%, 18.5%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	65	256.2/625 = 41.0% (28.3%, 55.0%)	318.8/625 = 51.0% (37.7%, 64.2%)	186.2/625 = 29.8% (18.6%, 44.1%)

(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 (IU/ml)	65	111/625 = 17.8% (9.5%, 30.6%)	292/625 = 46.7% (33.6%, 60.3%)	154.2/625 = 24.7% (14.7%, 38.3%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	247	473.1/3668.8 = 12.9% (8.8%, 18.5%)	984.1/3668.8 = 26.8% (21.1%, 33.5%)	551.1/3668.8 = 15.0% (10.7%, 20.8%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	247	2826.1/3668.8 = 77.0% (70.7%, 82.3%)	3025/3668.8 = 82.5% (76.6%, 87.1%)	2537.7/3668.8 = 69.2% (62.5%, 75.1%)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	247	2430.1/3668.8 = 66.2% (59.5%, 72.4%)	3285.3/3668.8 = 89.5% (84.7%, 93.0%)	2786.3/3668.8 = 75.9% (69.7%, 81.3%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	86	105.9/431.1 = 24.6% (16.0%, 35.8%)	187.5/431.1 = 43.5% (32.6%, 55.1%)	111.9/431.1 = 26.0% (17.1%, 37.4%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	86	383.4/431.1 = 88.9% (80.8%, 93.9%)	408.4/431.1 = 94.7% (88.5%, 97.7%)	354/431.1 = 82.1% (72.3%, 89.0%)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	86	396/431.1 = 91.8% (85.3%, 95.6%)	431.1/431.1 = 100.0% (100.0%, 100.0%)	422.3/431.1 = 98.0% (93.7%, 99.4%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	83	37.8/421.3 = 9.0% (3.8%, 19.5%)	69.4/421.3 = 16.5% (9.4%, 27.1%)	44.9/421.3 = 10.6% (5.1%, 21.1%)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	83	330.7/421.3 = 78.5% (67.0%, 86.8%)	344.4/421.3 = 81.7% (71.1%, 89.0%)	276.2/421.3 = 65.5% (53.4%, 75.9%)

(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 (IU/ml)	83	269.9/421.3 = 64.1% (51.8%, 74.7%)	353/421.3 = 83.8% (72.0%, 91.2%)	282.9/421.3 = 67.2% (54.9%, 77.4%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	202	431.8/3016.2 = 14.3% (9.9%, 20.3%)	823.5/3016.2 = 27.3% (21.2%, 34.4%)	567.4/3016.2 = 18.8% (13.6%, 25.4%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	202	2129.6/3016.2 = 70.6% (63.2%, 77.1%)	2306.4/3016.2 = 76.5% (69.3%, 82.4%)	1916.3/3016.2 = 63.5% (55.9%, 70.5%)
Age ≥ 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	202	2030.6/3016.2 = 67.3% (59.8%, 74.1%)	2813.1/3016.2 = 93.3% (88.1%, 96.3%)	2360.5/3016.2 = 78.3% (71.1%, 84.0%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	55	49.4/284.9 = 17.4% (9.0%, 30.8%)	111.5/284.9 = 39.1% (25.9%, 54.2%)	68.2/284.9 = 23.9% (13.6%, 38.6%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	55	227.1/284.9 = 79.7% (65.1%, 89.2%)	239.2/284.9 = 84.0% (69.4%, 92.4%)	209/284.9 = 73.4% (58.4%, 84.4%)
Age ≥ 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	55	219.2/284.9 = 76.9% (61.8%, 87.3%)	262.2/284.9 = 92.0% (76.8%, 97.6%)	249.8/284.9 = 87.7% (73.9%, 94.7%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	56	19.1/294.7 = 6.5% (2.5%, 15.7%)	55.4/294.7 = 18.8% (9.8%, 33.0%)	19.1/294.7 = 6.5% (2.5%, 15.7%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	56	211.5/294.7 = 71.8% (56.0%, 83.6%)	240.1/294.7 = 81.5% (66.2%, 90.8%)	180.6/294.7 = 61.3% (45.6%, 75.0%)
Age ≥ 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	56	144.3/294.7 = 49.0% (34.3%, 63.8%)	243.7/294.7 = 82.7% (66.9%, 91.9%)	180.7/294.7 = 61.3% (45.7%, 74.9%)

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 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 (IU/ml)	374	720/10100.7 = 7.1% (5.0%, 10.1%)	1544.8/10100.7 = 15.3% (11.9%, 19.5%)	895.9/10100.7 = 8.9% (6.4%, 12.2%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	374	5314.8/10100.7 = 52.6% (47.1%, 58.1%)	5788.2/10100.7 = 57.3% (51.8%, 62.7%)	4622.8/10100.7 = 45.8% (40.4%, 51.3%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	374	4142/10100.7 = 41.0% (35.8%, 46.4%)	7432.5/10100.7 = 73.6% (68.1%, 78.4%)	5411.1/10100.7 = 53.6% (48.0%, 59.1%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	119	159.6/1111.2 = 14.4% (8.5%, 23.1%)	251.1/1111.2 = 22.6% (15.7%, 31.4%)	178.6/1111.2 = 16.1% (9.9%, 25.0%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	119	705/1111.2 = 63.4% (53.2%, 72.6%)	837.1/1111.2 = 75.3% (65.2%, 83.3%)	597/1111.2 = 53.7% (43.8%, 63.4%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	119	576.1/1111.2 = 51.8% (42.2%, 61.4%)	905.1/1111.2 = 81.4% (71.1%, 88.7%)	757.9/1111.2 = 68.2% (57.7%, 77.1%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	112	42.6/1111.7 = 3.8% (1.5%, 9.4%)	116.6/1111.7 = 10.5% (5.8%, 18.1%)	61.3/1111.7 = 5.5% (2.3%, 12.9%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	112	557.1/1111.7 = 50.1% (40.1%, 60.1%)	665.3/1111.7 = 59.8% (49.5%, 69.4%)	488.8/1111.7 = 44.0% (34.4%, 54.1%)

(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 (IU/ml)	112	287.1/1111.7 = 25.8% (18.8%, 34.3%)	640.8/1111.7 = 57.6% (47.3%, 67.3%)	350.4/1111.7 = 31.5% (23.4%, 40.9%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	481	470.3/8327 = 5.6% (3.9%, 8.0%)	1336/8327 = 16.0% (12.9%, 19.7%)	723.5/8327 = 8.7% (6.4%, 11.7%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	481	4424.5/8327 = 53.1% (48.2%, 58.0%)	5179.7/8327 = 62.2% (57.3%, 66.9%)	3559/8327 = 42.7% (38.1%, 47.5%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	481	3421.9/8327 = 41.1% (36.7%, 45.7%)	5942.4/8327 = 71.4% (66.5%, 75.8%)	4246.4/8327 = 51.0% (46.2%, 55.8%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	150	84.3/891.6 = 9.4% (6.1%, 14.5%)	182.3/891.6 = 20.4% (15.2%, 26.9%)	93.6/891.6 = 10.5% (6.9%, 15.6%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	150	585.7/891.6 = 65.7% (56.7%, 73.7%)	655.8/891.6 = 73.6% (64.7%, 80.9%)	504.7/891.6 = 56.6% (47.9%, 64.9%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	150	502.9/891.6 = 56.4% (47.7%, 64.7%)	685.7/891.6 = 76.9% (68.8%, 83.4%)	592.2/891.6 = 66.4% (57.7%, 74.2%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	153	42.5/867 = 4.9% (2.3%, 10.2%)	107.6/867 = 12.4% (7.6%, 19.5%)	50.2/867 = 5.8% (2.9%, 11.1%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	153	458.7/867 = 52.9% (44.4%, 61.2%)	511/867 = 58.9% (50.3%, 67.1%)	337.1/867 = 38.9% (31.0%, 47.4%)

(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 (IU/ml)	153	307.2/867 = 35.4% (27.9%, 43.7%)	530.7/867 = 61.2% (52.5%, 69.2%)	379.9/867 = 43.8% (35.8%, 52.2%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	46	29.1/873.3 = 3.3% (0.8%, 13.5%)	106.4/873.3 = 12.2% (4.9%, 27.0%)	61.3/873.3 = 7.0% (2.0%, 22.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	46	452/873.3 = 51.8% (35.6%, 67.5%)	503.2/873.3 = 57.6% (40.6%, 73.0%)	367.9/873.3 = 42.1% (27.6%, 58.1%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	46	368.9/873.3 = 42.2% (27.4%, 58.6%)	726.9/873.3 = 83.2% (65.2%, 92.9%)	598.6/873.3 = 68.5% (51.5%, 81.7%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	9.4/72.2 = 13.0% (1.0%, 68.8%)	18.9/72.2 = 26.2% (3.8%, 76.2%)	15.4/72.2 = 21.3% (2.6%, 73.6%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	33.8/72.2 = 46.8% (8.3%, 89.5%)	39.8/72.2 = 55.1% (9.6%, 93.4%)	33.8/72.2 = 46.8% (8.3%, 89.5%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	33/72.2 = 45.7% (8.3%, 88.6%)	46.2/72.2 = 64.0% (9.8%, 96.7%)	39.8/72.2 = 55.1% (9.6%, 93.4%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	15	1.9/78.2 = 2.5% (0.2%, 21.9%)	9.6/78.2 = 12.3% (2.8%, 40.6%)	5.5/78.2 = 7.0% (1.2%, 32.2%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	15	30.8/78.2 = 39.3% (13.8%, 72.4%)	36.7/78.2 = 46.9% (18.3%, 77.6%)	19/78.2 = 24.3% (5.6%, 63.6%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	15	23.1/78.2 = 29.5% (8.2%, 66.3%)	39/78.2 = 49.9% (20.3%, 79.5%)	27.2/78.2 = 34.8% (11.1%, 69.5%)

(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 (IU/ml)	195	199/4089.9 = 4.9% (2.7%, 8.7%)	575.9/4089.9 = 14.1% (9.8%, 19.9%)	335.6/4089.9 = 8.2% (5.0%, 13.2%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	195	2244.4/4089.9 = 54.9% (47.4%, 62.2%)	2659.5/4089.9 = 65.0% (57.5%, 71.8%)	1720.3/4089.9 = 42.1% (35.1%, 49.3%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	195	1586.6/4089.9 = 38.8% (32.4%, 45.6%)	2883.2/4089.9 = 70.5% (63.0%, 77.0%)	2026.1/4089.9 = 49.5% (42.4%, 56.7%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	62	43.3/447.1 = 9.7% (5.3%, 17.1%)	74.5/447.1 = 16.7% (10.6%, 25.2%)	43.3/447.1 = 9.7% (5.3%, 17.1%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	62	257.8/447.1 = 57.7% (43.7%, 70.5%)	306.5/447.1 = 68.6% (54.2%, 80.1%)	210.2/447.1 = 47.0% (34.3%, 60.1%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	62	226.7/447.1 = 50.7% (38.1%, 63.2%)	284.1/447.1 = 63.5% (49.9%, 75.3%)	254.9/447.1 = 57.0% (43.7%, 69.4%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	58	31.6/405 = 7.8% (2.9%, 19.3%)	82.3/405 = 20.3% (11.1%, 34.4%)	31.6/405 = 7.8% (2.9%, 19.3%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	58	256.2/405 = 63.3% (48.8%, 75.7%)	274.5/405 = 67.8% (53.1%, 79.7%)	197.5/405 = 48.8% (35.1%, 62.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	58	167.5/405 = 41.3% (28.8%, 55.1%)	265.6/405 = 65.6% (50.9%, 77.8%)	209.1/405 = 51.6% (37.8%, 65.2%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	314	253.5/4722.4 = 5.4% (3.4%, 8.5%)	664.9/4722.4 = 14.1% (10.6%, 18.4%)	398.8/4722.4 = 8.4% (5.8%, 12.2%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	314	2401.1/4722.4 = 50.8% (44.9%, 56.8%)	2809/4722.4 = 59.5% (53.3%, 65.3%)	1990.9/4722.4 = 42.2% (36.5%, 48.0%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	314	1871.3/4722.4 = 39.6% (34.1%, 45.5%)	3487.5/4722.4 = 73.9% (67.9%, 79.1%)	2542.8/4722.4 = 53.8% (47.8%, 59.8%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	47.2/488.1 = 9.7% (5.2%, 17.2%)	96.1/488.1 = 19.7% (13.2%, 28.2%)	56.6/488.1 = 11.6% (6.7%, 19.2%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	350.2/488.1 = 71.8% (60.3%, 81.0%)	382.5/488.1 = 78.4% (67.5%, 86.3%)	321.4/488.1 = 65.9% (54.5%, 75.7%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	322.5/488.1 = 66.1% (54.8%, 75.8%)	462.1/488.1 = 94.7% (86.9%, 97.9%)	390.1/488.1 = 79.9% (69.2%, 87.6%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	100	12.9/475.1 = 2.7% (1.1%, 6.6%)	48.2/475.1 = 10.1% (5.3%, 18.4%)	24.2/475.1 = 5.1% (2.5%, 10.1%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	100	188.1/475.1 = 39.6% (30.2%, 49.9%)	204.4/475.1 = 43.0% (33.4%, 53.2%)	139.5/475.1 = 29.3% (21.4%, 38.8%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	100	137.3/475.1 = 28.9% (21.0%, 38.4%)	278.5/475.1 = 58.6% (48.2%, 68.3%)	175.4/475.1 = 36.9% (28.1%, 46.7%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	6.8/543.7 = 1.2% (0.1%, 11.1%)	103.7/543.7 = 19.1% (6.4%, 45.0%)	35.5/543.7 = 6.5% (1.0%, 32.5%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	357.6/543.7 = 65.8% (38.6%, 85.5%)	404/543.7 = 74.3% (44.5%, 91.3%)	325.4/543.7 = 59.9% (33.6%, 81.4%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	233.4/543.7 = 42.9% (21.4%, 67.4%)	454.4/543.7 = 83.6% (57.8%, 95.0%)	316.7/543.7 = 58.2% (31.8%, 80.7%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	0/32.2 = 0.0%	9.4/32.2 = 29.1%	0/32.2 = 0.0%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	21.5/32.2 = 66.7%	21.5/32.2 = 66.7%	21.5/32.2 = 66.7%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	18.1/32.2 = 56.2%	21.5/32.2 = 66.7%	18.1/32.2 = 56.2%
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	6	0/45.3 = 0.0%	0/45.3 = 0.0%	0/45.3 = 0.0%
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	6	21.9/45.3 = 48.3%	26/45.3 = 57.4%	10.3/45.3 = 22.8%
Asian	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6	0/45.3 = 0.0%	7.7/45.3 = 16.9%	3.6/45.3 = 7.8%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	137	228.9/4647.9 = 4.9% (2.6%, 9.2%)	566.2/4647.9 = 12.2% (7.8%, 18.6%)	228.9/4647.9 = 4.9% (2.6%, 9.2%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	137	2329.9/4647.9 = 50.1% (41.3%, 58.9%)	2443.7/4647.9 = 52.6% (43.7%, 61.3%)	1963.7/4647.9 = 42.2% (33.7%, 51.2%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	137	1960.2/4647.9 = 42.2% (33.8%, 51.0%)	3379.7/4647.9 = 72.7% (63.7%, 80.2%)	2392.1/4647.9 = 51.5% (42.5%, 60.3%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	67.8/411 = 16.5% (7.1%, 33.8%)	82.2/411 = 20.0% (9.7%, 36.7%)	67.8/411 = 16.5% (7.1%, 33.8%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	270.7/411 = 65.9% (45.7%, 81.5%)	295.4/411 = 71.9% (51.0%, 86.2%)	216.1/411 = 52.6% (34.5%, 70.0%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	217.6/411 = 52.9% (35.2%, 70.0%)	336.2/411 = 81.8% (60.9%, 92.8%)	291/411 = 70.8% (50.4%, 85.3%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	44	23.9/506.6 = 4.7% (1.4%, 14.7%)	61.7/506.6 = 12.2% (4.9%, 27.1%)	42.5/506.6 = 8.4% (2.7%, 23.1%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	44	313.5/506.6 = 61.9% (44.9%, 76.4%)	324.2/506.6 = 64.0% (46.9%, 78.1%)	265.4/506.6 = 52.4% (36.3%, 68.0%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	44	158.6/506.6 = 31.3% (19.7%, 45.9%)	336.4/506.6 = 66.4% (49.2%, 80.1%)	195.9/506.6 = 38.7% (24.9%, 54.6%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/45.7 = 0.0%	0/45.7 = 0.0%	0/45.7 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	18.9/45.7 = 41.4%	18.9/45.7 = 41.4%	18.9/45.7 = 41.4%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	18.9/45.7 = 41.4%	18.9/45.7 = 41.4%	18.9/45.7 = 41.4%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	76.8/527.2 = 14.6% (5.1%, 35.0%)	190.9/527.2 = 36.2% (16.4%, 62.2%)	76.8/527.2 = 14.6% (5.1%, 35.0%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	252.6/527.2 = 47.9% (24.9%, 71.8%)	335/527.2 = 63.5% (36.4%, 84.1%)	252.6/527.2 = 47.9% (24.9%, 71.8%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	213.4/527.2 = 40.5% (20.3%, 64.5%)	389.3/527.2 = 73.8% (43.4%, 91.2%)	268.1/527.2 = 50.9% (27.1%, 74.3%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	0/57.7 = 0.0% (0.0%, 0.0%)	23.1/57.7 = 40.1% (9.6%, 80.8%)	0/57.7 = 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
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	40.2/57.7 = 69.7% (26.3%, 93.7%)	46.3/57.7 = 80.3% (30.1%, 97.5%)	28.8/57.7 = 49.9% (14.4%, 85.5%)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	37.1/57.7 = 64.4% (22.5%, 91.8%)	52.7/57.7 = 91.4% (35.8%, 99.5%)	43.6/57.7 = 75.5% (29.2%, 95.8%)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	12	0/93.5 = 0.0%	10.2/93.5 = 10.9%	0/93.5 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12	45.9/93.5 = 49.1%	77.6/93.5 = 83.0%	45.9/93.5 = 49.1%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	12	35.3/93.5 = 37.7%	60.2/93.5 = 64.4%	41.5/93.5 = 44.4%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	13	48.4/250.2 = 19.3% (2.1%, 72.6%)	84/250.2 = 33.6% (7.6%, 75.6%)	84/250.2 = 33.6% (7.6%, 75.6%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	13	117.2/250.2 = 46.8% (14.4%, 82.2%)	137.9/250.2 = 55.1% (19.2%, 86.4%)	105.1/250.2 = 42.0% (11.7%, 79.9%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	13	177.9/250.2 = 71.1% (30.5%, 93.2%)	231.3/250.2 = 92.4% (39.9%, 99.6%)	196.8/250.2 = 78.6% (35.9%, 96.0%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/23 = 0.0%	16.2/23 = 70.4%	6/23 = 26.1%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	16.2/23 = 70.4%	16.2/23 = 70.4%	16.2/23 = 70.4%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	16.2/23 = 70.4%	16.2/23 = 70.4%	16.2/23 = 70.4%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	0/23.9 = 0.0%	0/23.9 = 0.0%	0/23.9 = 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	Placebo	Positive	Anti RBD IgG (IU/ml)	3	17.1/23.9 = 71.6%	23.9/23.9 = 100.0%	17.1/23.9 = 71.6%
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	12.3/23.9 = 51.6%	23.9/23.9 = 100.0%	12.3/23.9 = 51.6%

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 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 (IU/ml)	225	296.8/3828 = 7.8% (4.9%, 12.1%)	605.4/3828 = 15.8% (11.5%, 21.3%)	368.5/3828 = 9.6% (6.4%, 14.3%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	2130.8/3828 = 55.7% (48.9%, 62.3%)	2403.7/3828 = 62.8% (55.9%, 69.2%)	1746.8/3828 = 45.6% (39.2%, 52.2%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	1727.2/3828 = 45.1% (38.7%, 51.7%)	2891.2/3828 = 75.5% (68.9%, 81.1%)	2197.9/3828 = 57.4% (50.7%, 63.8%)
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	40.5/410 = 9.9% (4.7%, 19.6%)	90.1/410 = 22.0% (13.8%, 33.2%)	50.1/410 = 12.2% (6.0%, 23.3%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	255/410 = 62.2% (49.1%, 73.7%)	288.9/410 = 70.5% (57.1%, 81.0%)	250.4/410 = 61.1% (48.0%, 72.7%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	239.7/410 = 58.5% (45.3%, 70.5%)	368.3/410 = 89.8% (78.4%, 95.6%)	299.9/410 = 73.2% (60.0%, 83.2%)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	6.2/419 = 1.5% (0.2%, 10.3%)	17.9/419 = 4.3% (1.5%, 11.7%)	6.2/419 = 1.5% (0.2%, 10.3%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	150.5/419 = 35.9% (25.6%, 47.7%)	177.5/419 = 42.4% (31.3%, 54.3%)	116.7/419 = 27.9% (19.5%, 38.0%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	112.5/419 = 26.8% (18.5%, 37.3%)	206.8/419 = 49.4% (37.8%, 60.9%)	136.4/419 = 32.6% (23.0%, 43.8%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	252.1/4629 = 5.4% (3.3%, 8.9%)	801.4/4629 = 17.3% (12.8%, 23.1%)	410.1/4629 = 8.9% (5.7%, 13.5%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	2501.9/4629 = 54.0% (47.2%, 60.7%)	2951.8/4629 = 63.8% (56.9%, 70.1%)	1930.4/4629 = 41.7% (35.5%, 48.2%)

(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 (IU/ml)	225	1809.4/4629 = 39.1% (33.4%, 45.1%)	3347.8/4629 = 72.3% (65.6%, 78.2%)	2421.9/4629 = 52.3% (45.8%, 58.8%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	47.7/499 = 9.6% (5.4%, 16.4%)	94.8/499 = 19.0% (12.8%, 27.2%)	53.7/499 = 10.8% (6.3%, 17.8%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	287.5/499 = 57.6% (44.8%, 69.5%)	345.6/499 = 69.2% (56.2%, 79.8%)	233.4/499 = 46.8% (35.1%, 58.8%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	255.9/499 = 51.3% (40.0%, 62.4%)	336/499 = 67.3% (55.0%, 77.7%)	290.6/499 = 58.2% (46.1%, 69.4%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	31.6/500 = 6.3% (2.4%, 15.8%)	86.5/500 = 17.3% (9.6%, 29.2%)	31.6/500 = 6.3% (2.4%, 15.8%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	296.2/500 = 59.2% (46.5%, 70.9%)	327.2/500 = 65.4% (52.4%, 76.5%)	217.8/500 = 43.6% (31.5%, 56.4%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	189/500 = 37.8% (26.8%, 50.2%)	309.1/500 = 61.8% (48.8%, 73.4%)	234.8/500 = 47.0% (34.9%, 59.4%)

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 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 (IU/ml)	114	97/2477 = 3.9% (1.4%, 10.3%)	270.8/2477 = 10.9% (6.2%, 18.6%)	140.5/2477 = 5.7% (2.5%, 12.4%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	114	1069.7/2477 = 43.2% (34.0%, 52.8%)	1290.1/2477 = 52.1% (42.6%, 61.4%)	792.3/2477 = 32.0% (23.7%, 41.5%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	114	755.4/2477 = 30.5% (22.4%, 40.0%)	1594.3/2477 = 64.4% (54.7%, 73.0%)	1056.1/2477 = 42.6% (33.6%, 52.2%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	15.2/274 = 5.6% (1.2%, 22.0%)	36.1/274 = 13.2% (5.1%, 30.0%)	24.8/274 = 9.1% (2.7%, 26.5%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	144.2/274 = 52.6% (35.4%, 69.3%)	169.1/274 = 61.7% (43.5%, 77.1%)	144.2/274 = 52.6% (35.4%, 69.3%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	137/274 = 50.0% (32.8%, 67.2%)	232.3/274 = 84.8% (68.2%, 93.6%)	167.4/274 = 61.1% (42.9%, 76.7%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	6.2/270 = 2.3% (0.3%, 15.9%)	6.2/270 = 2.3% (0.3%, 15.9%)	6.2/270 = 2.3% (0.3%, 15.9%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	58.5/270 = 21.7% (10.6%, 39.2%)	73.9/270 = 27.4% (14.6%, 45.3%)	27.8/270 = 10.3% (3.7%, 25.8%)

(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 (IU/ml)	35	34.1/270 = 12.6% (5.1%, 28.0%)	83/270 = 30.7% (17.0%, 49.0%)	49.4/270 = 18.3% (8.5%, 35.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	113	53.4/2998 = 1.8% (0.4%, 7.2%)	405.7/2998 = 13.5% (8.2%, 21.6%)	182.2/2998 = 6.1% (2.7%, 13.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	113	1290.6/2998 = 43.0% (33.9%, 52.7%)	1631/2998 = 54.4% (44.8%, 63.7%)	852.7/2998 = 28.4% (20.7%, 37.7%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	113	639.3/2998 = 21.3% (14.6%, 30.1%)	1855.5/2998 = 61.9% (52.2%, 70.7%)	1099.3/2998 = 36.7% (28.0%, 46.3%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	0/330 = 0.0% (0.0%, 0.0%)	12.9/330 = 3.9% (0.9%, 14.8%)	0/330 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	146.7/330 = 44.4% (27.8%, 62.4%)	183.3/330 = 55.6% (37.6%, 72.2%)	104.6/330 = 31.7% (17.7%, 49.9%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	97.1/330 = 29.4% (15.7%, 48.2%)	167/330 = 50.6% (33.8%, 67.3%)	128.3/330 = 38.9% (23.2%, 57.2%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	36	11.6/330 = 3.5% (0.4%, 22.9%)	48.2/330 = 14.6% (5.7%, 32.5%)	11.6/330 = 3.5% (0.4%, 22.9%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	36	156.2/330 = 47.3% (30.7%, 64.6%)	181.3/330 = 54.9% (37.4%, 71.3%)	119.6/330 = 36.2% (21.3%, 54.5%)

(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 (IU/ml)	36	84.9/330 = 25.7% (13.2%, 44.2%)	165/330 = 50.0% (32.8%, 67.2%)	114.8/330 = 34.8% (20.0%, 53.2%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	111	199.8/1351 = 14.8% (9.1%, 23.2%)	334.6/1351 = 24.8% (17.4%, 34.0%)	228/1351 = 16.9% (10.8%, 25.4%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	111	1061.1/1351 = 78.5% (69.7%, 85.3%)	1113.6/1351 = 82.4% (73.9%, 88.6%)	954.5/1351 = 70.7% (61.3%, 78.6%)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	111	971.7/1351 = 71.9% (62.4%, 79.8%)	1296.9/1351 = 96.0% (89.5%, 98.5%)	1141.8/1351 = 84.5% (76.1%, 90.3%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	25.2/136 = 18.6% (8.2%, 36.7%)	54/136 = 39.7% (24.1%, 57.7%)	25.2/136 = 18.6% (8.2%, 36.7%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	110.8/136 = 81.4% (63.3%, 91.8%)	119.9/136 = 88.1% (70.8%, 95.8%)	106.2/136 = 78.1% (59.8%, 89.5%)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	102.7/136 = 75.5% (57.1%, 87.7%)	136/136 = 100.0% (100.0%, 100.0%)	132.5/136 = 97.4% (82.5%, 99.7%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	0/149 = 0.0% (0.0%, 0.0%)	11.6/149 = 7.8% (2.2%, 23.9%)	0/149 = 0.0% (0.0%, 0.0%)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	92/149 = 61.7% (43.1%, 77.5%)	103.6/149 = 69.5% (50.5%, 83.6%)	88.9/149 = 59.7% (41.2%, 75.8%)

(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 (IU/ml)	35	78.4/149 = 52.6% (35.2%, 69.4%)	123.8/149 = 83.1% (64.1%, 93.1%)	87/149 = 58.4% (40.3%, 74.5%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	112	198.8/1631 = 12.2% (7.2%, 19.9%)	395.7/1631 = 24.3% (17.0%, 33.4%)	227.9/1631 = 14.0% (8.6%, 21.9%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	112	1211.2/1631 = 74.3% (65.1%, 81.7%)	1320.8/1631 = 81.0% (72.5%, 87.3%)	1077.6/1631 = 66.1% (56.5%, 74.5%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	112	1170.1/1631 = 71.7% (62.4%, 79.5%)	1492.3/1631 = 91.5% (84.2%, 95.6%)	1322.6/1631 = 81.1% (72.4%, 87.5%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	47.7/169 = 28.2% (15.4%, 46.0%)	81.9/169 = 48.5% (31.5%, 65.8%)	53.7/169 = 31.8% (17.9%, 49.9%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	140.8/169 = 83.3% (65.6%, 92.9%)	162.2/169 = 96.0% (84.8%, 99.0%)	128.8/169 = 76.2% (57.7%, 88.3%)
Age ≥ 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	158.8/169 = 94.0% (82.7%, 98.1%)	169/169 = 100.0% (100.0%, 100.0%)	162.2/169 = 96.0% (84.8%, 99.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	34	20/170 = 11.8% (4.1%, 29.2%)	38.2/170 = 22.5% (11.0%, 40.5%)	20/170 = 11.8% (4.1%, 29.2%)
Age ≥ 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	34	140/170 = 82.4% (64.3%, 92.4%)	145.9/170 = 85.8% (68.5%, 94.4%)	98.2/170 = 57.8% (39.6%, 74.0%)

(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 (IU/ml)	34	104.1/170 = 61.2% (42.8%, 76.9%)	144.1/170 = 84.8% (66.7%, 93.9%)	120/170 = 70.6% (51.9%, 84.2%)

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 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 (IU/ml)	450	549/8457 = 6.5% (4.6%, 9.0%)	1406.9/8457 = 16.6% (13.4%, 20.5%)	778.6/8457 = 9.2% (6.8%, 12.3%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	450	4632.7/8457 = 54.8% (50.0%, 59.5%)	5355.5/8457 = 63.3% (58.5%, 67.9%)	3677.2/8457 = 43.5% (39.0%, 48.1%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	450	3536.6/8457 = 41.8% (37.6%, 46.2%)	6239/8457 = 73.8% (69.1%, 77.9%)	4619.9/8457 = 54.6% (49.9%, 59.2%)
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	88.2/909 = 9.7% (6.2%, 14.9%)	184.8/909 = 20.3% (15.1%, 26.8%)	103.8/909 = 11.4% (7.4%, 17.2%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	542.5/909 = 59.7% (50.6%, 68.1%)	634.5/909 = 69.8% (60.7%, 77.6%)	483.8/909 = 53.2% (44.5%, 61.7%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	495.6/909 = 54.5% (46.0%, 62.8%)	704.3/909 = 77.5% (69.4%, 83.9%)	590.5/909 = 65.0% (56.2%, 72.8%)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	140	37.8/919 = 4.1% (1.7%, 9.5%)	104.3/919 = 11.4% (6.8%, 18.3%)	37.8/919 = 4.1% (1.7%, 9.5%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	140	446.7/919 = 48.6% (40.3%, 57.0%)	504.7/919 = 54.9% (46.4%, 63.2%)	334.5/919 = 36.4% (28.8%, 44.8%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	140	301.5/919 = 32.8% (25.6%, 40.9%)	515.9/919 = 56.1% (47.4%, 64.5%)	371.2/919 = 40.4% (32.5%, 48.9%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	28.7/948.5 = 3.0% (0.4%, 20.3%)	188.3/948.5 = 19.9% (8.4%, 40.0%)	28.7/948.5 = 3.0% (0.4%, 20.3%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	602.4/948.5 = 63.5% (43.1%, 80.0%)	650/948.5 = 68.5% (47.6%, 83.9%)	583.5/948.5 = 61.5% (41.4%, 78.3%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	415.9/948.5 = 43.9% (26.3%, 63.1%)	659.8/948.5 = 69.6% (48.7%, 84.6%)	538.5/948.5 = 56.8% (37.2%, 74.5%)

(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 (IU/ml)	9	27.5/122 = 22.6% (2.8%, 74.5%)	27.5/122 = 22.6% (2.8%, 74.5%)	27.5/122 = 22.6% (2.8%, 74.5%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	9	89.2/122 = 73.2% (23.2%, 96.1%)	89.2/122 = 73.2% (23.2%, 96.1%)	56.5/122 = 46.3% (11.9%, 84.7%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	9	69.7/122 = 57.1% (16.9%, 89.7%)	109.6/122 = 89.8% (35.8%, 99.3%)	109.6/122 = 89.8% (35.8%, 99.3%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	9	0/117.7 = 0.0% (0.0%, 0.0%)	0/117.7 = 0.0% (0.0%, 0.0%)	0/117.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	9	77.8/117.7 = 66.1% (21.8%, 93.1%)	107.1/117.7 = 91.0% (38.7%, 99.4%)	67.1/117.7 = 57.0% (17.6%, 89.2%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	9	6.6/117.7 = 5.6% (0.4%, 47.4%)	107.1/117.7 = 91.0% (38.7%, 99.4%)	25.3/117.7 = 21.5% (2.7%, 72.8%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	103	160.5/3880.8 = 4.1% (1.8%, 9.3%)	383/3880.8 = 9.9% (5.5%, 17.2%)	253/3880.8 = 6.5% (3.2%, 12.9%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	103	1772.1/3880.8 = 45.7% (35.8%, 55.9%)	1949.4/3880.8 = 50.2% (40.1%, 60.4%)	1491.2/3880.8 = 38.4% (29.1%, 48.7%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	103	1566.1/3880.8 = 40.4% (30.9%, 50.6%)	2598.9/3880.8 = 67.0% (56.4%, 76.1%)	1946.2/3880.8 = 50.2% (39.9%, 60.4%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	34.7/276 = 12.6% (3.1%, 39.0%)	72.8/276 = 26.4% (11.8%, 48.9%)	44.1/276 = 16.0% (4.9%, 41.3%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	171.4/276 = 62.1% (37.1%, 82.0%)	183.8/276 = 66.6% (40.8%, 85.2%)	149.6/276 = 54.2% (31.1%, 75.7%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	111.1/276 = 40.3% (21.4%, 62.5%)	201.2/276 = 72.9% (46.3%, 89.3%)	160.5/276 = 58.1% (34.2%, 78.8%)
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	31	23.2/390.9 = 5.9% (1.4%, 22.4%)	59.6/390.9 = 15.2% (6.5%, 31.8%)	23.2/390.9 = 5.9% (1.4%, 22.4%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	31	184.4/390.9 = 47.2% (29.7%, 65.4%)	215.6/390.9 = 55.1% (36.0%, 72.9%)	177.8/390.9 = 45.5% (28.2%, 63.9%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	31	104.7/390.9 = 26.8% (15.0%, 43.1%)	209.4/390.9 = 53.6% (35.3%, 71.0%)	134.1/390.9 = 34.3% (20.0%, 52.1%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	15	83.4/505.4 = 16.5% (3.3%, 53.5%)	102.3/505.4 = 20.2% (5.1%, 54.5%)	83.4/505.4 = 16.5% (3.3%, 53.5%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15	216.1/505.4 = 42.8% (18.1%, 71.6%)	216.1/505.4 = 42.8% (18.1%, 71.6%)	216.1/505.4 = 42.8% (18.1%, 71.6%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	15	132.7/505.4 = 26.3% (9.2%, 55.6%)	329.9/505.4 = 65.3% (33.1%, 87.7%)	263.7/505.4 = 52.2% (24.4%, 78.7%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	9.4/76.3 = 12.3% (0.4%, 82.5%)	9.4/76.3 = 12.3% (0.4%, 82.5%)	9.4/76.3 = 12.3% (0.4%, 82.5%)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	51.5/76.3 = 67.5% (11.2%, 97.2%)	63.9/76.3 = 83.8% (12.7%, 99.5%)	39.1/76.3 = 51.3% (7.1%, 93.5%)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	18.8/76.3 = 24.6% (2.1%, 83.0%)	63.9/76.3 = 83.8% (12.7%, 99.5%)	39.1/76.3 = 51.3% (7.1%, 93.5%)
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0/25.1 = 0.0%	0/25.1 = 0.0%	0/25.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0/25.1 = 0.0%	0/25.1 = 0.0%	0/25.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0/25.1 = 0.0%	25.1/25.1 = 100.0%	0/25.1 = 0.0%
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	47	171.5/1453.3 = 11.8% (5.5%, 23.7%)	266.8/1453.3 = 18.4% (10.0%, 31.2%)	200.2/1453.3 = 13.8% (6.7%, 26.1%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	47	913.7/1453.3 = 62.9% (46.5%, 76.7%)	961.3/1453.3 = 66.1% (49.6%, 79.5%)	847.5/1453.3 = 58.3% (42.3%, 72.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	47	661.1/1453.3 = 45.5% (31.0%, 60.8%)	1144.6/1453.3 = 78.8% (63.0%, 89.0%)	819.8/1453.3 = 56.4% (40.6%, 71.0%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	20	51.3/256.7 = 20.0% (6.9%, 45.8%)	51.3/256.7 = 20.0% (6.9%, 45.8%)	51.3/256.7 = 20.0% (6.9%, 45.8%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	20	181.8/256.7 = 70.8% (42.8%, 88.8%)	214.6/256.7 = 83.6% (54.7%, 95.6%)	152.1/256.7 = 59.2% (33.1%, 81.0%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	20	141.1/256.7 = 55.0% (30.1%, 77.6%)	186.3/256.7 = 72.6% (43.6%, 90.1%)	173.9/256.7 = 67.7% (39.7%, 87.0%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	6.6/144.6 = 4.6% (0.5%, 33.2%)	6.6/144.6 = 4.6% (0.5%, 33.2%)	6.6/144.6 = 4.6% (0.5%, 33.2%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	86/144.6 = 59.5% (27.8%, 84.8%)	115.3/144.6 = 79.7% (39.6%, 95.9%)	62.8/144.6 = 43.4% (18.6%, 72.1%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	58.4/144.6 = 40.4% (16.6%, 69.7%)	90.3/144.6 = 62.4% (29.8%, 86.7%)	58.4/144.6 = 40.4% (16.6%, 69.7%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	0/175.9 = 0.0% (0.0%, 0.0%)	102.3/175.9 = 58.2% (1.7%, 99.1%)	28.7/175.9 = 16.3% (0.1%, 96.4%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	66.5/175.9 = 37.8% (1.2%, 96.9%)	66.5/175.9 = 37.8% (1.2%, 96.9%)	66.5/175.9 = 37.8% (1.2%, 96.9%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	66.5/175.9 = 37.8% (1.2%, 96.9%)	175.9/175.9 = 100.0% (100.0%, 100.0%)	121.2/175.9 = 68.9% (1.5%, 99.7%)
Mexico	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/38.3 = 0.0%	9.4/38.3 = 24.5%	0/38.3 = 0.0%
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	26/38.3 = 67.7%	38.3/38.3 = 100.0%	26/38.3 = 67.7%
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	26/38.3 = 67.7%	38.3/38.3 = 100.0%	38.3/38.3 = 100.0%
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% Greater than 2 ×LLOQ	% Greater than 4 ×LLOQ
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	0/49.9 = 0.0%	18.7/49.9 = 37.4%	18.7/49.9 = 37.4%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	3	49.9/49.9 = 100.0%	49.9/49.9 = 100.0%	31.2/49.9 = 62.6%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	18.7/49.9 = 37.4%	49.9/49.9 = 100.0%	18.7/49.9 = 37.4%
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	26	57.4/966.1 = 5.9% (1.4%, 22.5%)	114.7/966.1 = 11.9% (4.2%, 29.1%)	57.4/966.1 = 5.9% (1.4%, 22.5%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	26	467.9/966.1 = 48.4% (28.3%, 69.1%)	496.6/966.1 = 51.4% (30.7%, 71.6%)	373/966.1 = 38.6% (20.6%, 60.4%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	26	381.8/966.1 = 39.5% (21.2%, 61.3%)	783.2/966.1 = 81.1% (56.5%, 93.4%)	439.2/966.1 = 45.5% (25.9%, 66.5%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	8	7.2/90.7 = 7.9% (0.4%, 63.1%)	16.6/90.7 = 18.3% (2.2%, 69.4%)	7.2/90.7 = 7.9% (0.4%, 63.1%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	8	45.5/90.7 = 50.2% (11.1%, 89.0%)	78.3/90.7 = 86.3% (23.4%, 99.2%)	45.5/90.7 = 50.2% (11.1%, 89.0%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	8	45.5/90.7 = 50.2% (11.1%, 89.0%)	70.3/90.7 = 77.5% (15.2%, 98.5%)	45.5/90.7 = 50.2% (11.1%, 89.0%)
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	11	6.6/120.8 = 5.5% (0.5%, 41.5%)	6.6/120.8 = 5.5% (0.5%, 41.5%)	6.6/120.8 = 5.5% (0.5%, 41.5%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	78.9/120.8 = 65.4% (25.6%, 91.2%)	78.9/120.8 = 65.4% (25.6%, 91.2%)	78.9/120.8 = 65.4% (25.6%, 91.2%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	49.1/120.8 = 40.7% (12.5%, 76.6%)	61.7/120.8 = 51.1% (17.9%, 83.3%)	49.1/120.8 = 40.7% (12.5%, 76.6%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	169/2914 = 5.8% (3.5%, 9.4%)	422.9/2914 = 14.5% (10.7%, 19.3%)	250.9/2914 = 8.6% (5.7%, 12.7%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	1519.9/2914 = 52.2% (45.4%, 58.8%)	1775.7/2914 = 60.9% (54.0%, 67.5%)	1294.7/2914 = 44.4% (38.0%, 51.1%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1172.1/2914 = 40.2% (34.0%, 46.7%)	2170.6/2914 = 74.5% (67.7%, 80.3%)	1507.6/2914 = 51.7% (44.9%, 58.5%)

(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 N IgG (IU/ml)	68	35/306 = 11.4% (5.5%, 22.2%)	80.5/306 = 26.3% (16.9%, 38.6%)	44.3/306 = 14.5% (7.8%, 25.4%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	216.5/306 = 70.8% (57.5%, 81.2%)	230/306 = 75.2% (62.0%, 84.9%)	182.8/306 = 59.7% (46.6%, 71.6%)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	204/306 = 66.7% (53.8%, 77.5%)	263.1/306 = 86.0% (73.7%, 93.1%)	232.5/306 = 76.0% (63.1%, 85.4%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	12.9/289 = 4.5% (1.8%, 10.8%)	38.1/289 = 13.2% (7.1%, 23.1%)	24.2/289 = 8.4% (4.1%, 16.2%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	122.9/289 = 42.5% (31.5%, 54.4%)	141.4/289 = 48.9% (37.1%, 60.9%)	92.6/289 = 32.0% (22.4%, 43.4%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	78.4/289 = 27.1% (18.4%, 38.0%)	151.2/289 = 52.3% (41.2%, 63.2%)	100.8/289 = 34.9% (25.6%, 45.5%)

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

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

Table 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 (IU/ml)	830	1146.3/18139.3 = 6.3% (4.8%, 8.2%)	2880.4/18139.3 = 15.9% (13.4%, 18.7%)	1586/18139.3 = 8.7% (6.9%, 11.0%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	830	9718.2/18139.3 = 53.6% (49.8%, 57.3%)	10911.8/18139.3 = 60.2% (56.4%, 63.8%)	8149.7/18139.3 = 44.9% (41.3%, 48.7%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	830	7564.4/18139.3 = 41.7% (38.2%, 45.3%)	13318.3/18139.3 = 73.4% (69.8%, 76.8%)	9671.6/18139.3 = 53.3% (49.6%, 57.0%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	262	242.1/1955.4 = 12.4% (8.5%, 17.6%)	431.8/1955.4 = 22.1% (17.4%, 27.6%)	276.5/1955.4 = 14.1% (10.1%, 19.5%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	262	1225.2/1955.4 = 62.7% (55.6%, 69.2%)	1429.4/1955.4 = 73.1% (66.2%, 79.0%)	1066.9/1955.4 = 54.6% (47.7%, 61.3%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	262	1037.8/1955.4 = 53.1% (46.5%, 59.6%)	1529.3/1955.4 = 78.2% (71.5%, 83.7%)	1306/1955.4 = 66.8% (59.8%, 73.1%)
Negative	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	260	78.6/1949.2 = 4.0% (2.2%, 7.4%)	198.6/1949.2 = 10.2% (6.9%, 14.9%)	108.5/1949.2 = 5.6% (3.1%, 9.7%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	260	971.6/1949.2 = 49.8% (43.1%, 56.6%)	1138/1949.2 = 58.4% (51.5%, 64.9%)	777.1/1949.2 = 39.9% (33.5%, 46.6%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	260	574.7/1949.2 = 29.5% (24.3%, 35.3%)	1125.4/1949.2 = 57.7% (50.8%, 64.3%)	700.6/1949.2 = 35.9% (30.1%, 42.3%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	71	73.1/1161.7 = 6.3% (2.9%, 13.3%)	106.8/1161.7 = 9.2% (4.8%, 17.0%)	94.8/1161.7 = 8.2% (4.1%, 15.6%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	71	473.2/1161.7 = 40.7% (28.4%, 54.3%)	559.3/1161.7 = 48.1% (34.7%, 61.8%)	400/1161.7 = 34.4% (23.2%, 47.7%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	71	368.4/1161.7 = 31.7% (21.4%, 44.2%)	783.5/1161.7 = 67.4% (51.6%, 80.1%)	584.5/1161.7 = 50.3% (36.6%, 64.0%)

(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 (IU/ml)	18	11.1/119.6 = 9.3% (1.6%, 39.6%)	20.5/119.6 = 17.2% (4.1%, 50.4%)	11.1/119.6 = 9.3% (1.6%, 39.6%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	18	99.3/119.6 = 83.0% (55.4%, 95.1%)	103.2/119.6 = 86.3% (58.2%, 96.6%)	68.5/119.6 = 57.3% (28.1%, 82.1%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	18	74/119.6 = 61.9% (31.5%, 85.1%)	107.7/119.6 = 90.1% (44.1%, 99.0%)	83.9/119.6 = 70.2% (36.2%, 90.7%)
Positive	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	20	8.6/107.8 = 7.9% (1.4%, 34.9%)	35.3/107.8 = 32.7% (11.4%, 64.8%)	8.6/107.8 = 7.9% (1.4%, 34.9%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	20	75/107.8 = 69.5% (39.9%, 88.7%)	75/107.8 = 69.5% (39.9%, 88.7%)	67.8/107.8 = 62.9% (34.5%, 84.6%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	20	42.7/107.8 = 39.6% (16.1%, 69.2%)	85.1/107.8 = 78.9% (45.7%, 94.4%)	56.9/107.8 = 52.8% (25.6%, 78.4%)

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 (IU/ml)	901	1219.4/19301 = 6.3% (4.9%, 8.1%)	4837.9/19301 = 25.1% (22.2%, 28.2%)	2987.2/19301 = 15.5% (13.2%, 18.1%)
	Day 29	Vaccine	Negative Anti RBD IgG (IU/ml)	901	10191.3/19301 = 52.8% (49.2%, 56.4%)	14316.9/19301 = 74.2% (70.7%, 77.4%)	11471.1/19301 = 59.4% (55.8%, 63.0%)
	Day 29	Vaccine	Negative Anti Spike IgG (IU/ml)	901	7932.8/19301 = 41.1% (37.7%, 44.6%)	16763.6/19301 = 86.9% (83.9%, 89.3%)	14101.8/19301 = 73.1% (69.6%, 76.3%)
	Day 29	Vaccine	Positive Anti N IgG (IU/ml)	280	253.2/2075 = 12.2% (8.5%, 17.2%)	766.1/2075 = 36.9% (31.1%, 43.1%)	452.3/2075 = 21.8% (17.3%, 27.1%)
	Day 29	Vaccine	Positive Anti RBD IgG (IU/ml)	280	1324.5/2075 = 63.8% (57.0%, 70.1%)	1783.6/2075 = 86.0% (80.2%, 90.3%)	1532.6/2075 = 73.9% (67.3%, 79.5%)
	Day 29	Vaccine	Positive Anti Spike IgG (IU/ml)	280	1111.9/2075 = 53.6% (47.3%, 59.8%)	1859.1/2075 = 89.6% (84.0%, 93.4%)	1637/2075 = 78.9% (72.5%, 84.1%)
	Day 29	Placebo	Negative Anti N IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative Anti RBD IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Negative Anti Spike IgG (IU/ml)	107	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)	0/19209 = 0.0% (0.0%, 0.0%)
	Day 29	Placebo	Positive Anti N IgG (IU/ml)	280	87.1/2057 = 4.2% (2.4%, 7.5%)	423.9/2057 = 20.6% (15.9%, 26.3%)	233.8/2057 = 11.4% (7.9%, 16.1%)
	Day 29	Placebo	Positive Anti RBD IgG (IU/ml)	280	1046.5/2057 = 50.9% (44.4%, 57.3%)	1446.1/2057 = 70.3% (63.8%, 76.1%)	1212.9/2057 = 59.0% (52.4%, 65.3%)

Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	280	617.4/2057 = 30.0% (24.9%, 35.7%)	1702/2057 = 82.7% (77.3%, 87.1%)	1210.5/2057 = 58.8% (52.2%, 65.2%)
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Binding Antibody Responders are defined as participants with concentration above the specified positivity cut-off, with a separate cut-off for each antigen Spike, RBD, N (10.8424, 14.0858, and 23.4711 respectively, in IU/ml).

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

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age								
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	314.5/12616 = 2.5% (1.3%, 4.7%)	2155.6/12616 = 17.1% (13.6%, 21.3%)	1179.6/12616 = 9.3% (6.8%, 12.7%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	5235.7/12616 = 41.5% (36.6%, 46.6%)	8285.3/12616 = 65.7% (60.7%, 70.4%)	6139.7/12616 = 48.7% (43.7%, 53.7%)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	3472.1/12616 = 27.5% (23.2%, 32.3%)	10242.6/12616 = 81.2% (76.8%, 84.9%)	8003.3/12616 = 63.4% (58.4%, 68.2%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	139	97.9/1359 = 7.2% (3.4%, 14.6%)	335.5/1359 = 24.7% (17.7%, 33.4%)	153.3/1359 = 11.3% (6.6%, 18.6%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	139	714/1359 = 52.5% (43.1%, 61.8%)	1083.2/1359 = 79.7% (71.1%, 86.2%)	885/1359 = 65.1% (55.7%, 73.5%)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	139	496.7/1359 = 36.5% (28.2%, 45.8%)	1143.1/1359 = 84.1% (75.8%, 90.0%)	943.7/1359 = 69.4% (60.2%, 77.3%)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)	0/12431 = 0.0% (0.0%, 0.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	30.3/1341 = 2.3% (0.7%, 7.2%)	195.9/1341 = 14.6% (9.2%, 22.4%)	109.1/1341 = 8.1% (4.3%, 14.9%)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	504.4/1341 = 37.6% (29.1%, 46.9%)	803.4/1341 = 59.9% (50.7%, 68.4%)	628.4/1341 = 46.9% (37.9%, 56.0%)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	203.1/1341 = 15.1% (9.7%, 22.8%)	1015.5/1341 = 75.7% (67.8%, 82.2%)	613.8/1341 = 45.8% (36.8%, 55.0%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	904.9/6685 = 13.5% (10.4%, 17.4%)	2682.3/6685 = 40.1% (35.3%, 45.2%)	1807.6/6685 = 27.0% (22.7%, 31.8%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	4955.6/6685 = 74.1% (69.4%, 78.4%)	6031.6/6685 = 90.2% (86.8%, 92.8%)	5331.3/6685 = 79.8% (75.3%, 83.6%)
Age ≥ 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	4460.7/6685 = 66.7% (61.8%, 71.4%)	6521/6685 = 97.5% (95.0%, 98.8%)	6098.5/6685 = 91.2% (87.9%, 93.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	141	155.3/716 = 21.7% (15.3%, 29.9%)	430.6/716 = 60.1% (51.2%, 68.5%)	299.1/716 = 41.8% (33.3%, 50.7%)
Age \geq 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	141	610.5/716 = 85.3% (77.8%, 90.5%)	700.4/716 = 97.8% (92.1%, 99.4%)	647.7/716 = 90.5% (83.6%, 94.6%)
Age \geq 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	141	615.2/716 = 85.9% (78.5%, 91.1%)	716/716 = 100.0% (100.0%, 100.0%)	693.3/716 = 96.8% (90.1%, 99.0%)
Age \geq 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age \geq 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age \geq 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)	0/6778 = 0.0% (0.0%, 0.0%)
Age \geq 60	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	139	56.8/716 = 7.9% (4.2%, 14.6%)	228/716 = 31.8% (23.8%, 41.2%)	124.8/716 = 17.4% (11.6%, 25.4%)
Age \geq 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	542.1/716 = 75.7% (66.7%, 82.9%)	642.7/716 = 89.8% (82.1%, 94.4%)	584.5/716 = 81.6% (73.3%, 87.8%)
Age \geq 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	414.3/716 = 57.9% (48.3%, 66.9%)	686.5/716 = 95.9% (89.4%, 98.5%)	596.7/716 = 83.3% (74.5%, 89.5%)

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

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

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Risk for Severe Covid-19								
At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	449.6/7709 = 5.8% (4.0%, 8.5%)	1826.7/7709 = 23.7% (19.7%, 28.2%)	1068.3/7709 = 13.9% (10.9%, 17.4%)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	4120.3/7709 = 53.4% (48.3%, 58.5%)	5865.1/7709 = 76.1% (71.2%, 80.3%)	4822.3/7709 = 62.6% (57.4%, 67.5%)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	3181.5/7709 = 41.3% (36.5%, 46.2%)	6754.9/7709 = 87.6% (83.5%, 90.8%)	5759.3/7709 = 74.7% (69.8%, 79.1%)
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	106.8/819 = 13.0% (8.8%, 18.9%)	361.9/819 = 44.2% (35.8%, 52.9%)	203.3/819 = 24.8% (19.2%, 31.4%)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	547/819 = 66.8% (57.8%, 74.7%)	728.2/819 = 88.9% (81.5%, 93.6%)	633.5/819 = 77.4% (68.6%, 84.3%)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	431.8/819 = 52.7% (44.3%, 61.0%)	758.7/819 = 92.6% (85.3%, 96.5%)	709.8/819 = 86.7% (78.3%, 92.1%)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)	0/7695 = 0.0% (0.0%, 0.0%)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	139	46/788 = 5.8% (2.7%, 12.3%)	194.6/788 = 24.7% (17.6%, 33.5%)	107.9/788 = 13.7% (8.4%, 21.6%)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	420.3/788 = 53.3% (44.3%, 62.2%)	563.5/788 = 71.5% (62.1%, 79.3%)	467/788 = 59.3% (49.9%, 68.0%)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	267.2/788 = 33.9% (26.6%, 42.0%)	671.2/788 = 85.2% (77.3%, 90.7%)	509.2/788 = 64.6% (55.2%, 73.0%)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	769.8/11592 = 6.6% (4.7%, 9.2%)	3011.2/11592 = 26.0% (22.0%, 30.4%)	1918.9/11592 = 16.6% (13.3%, 20.4%)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	6071/11592 = 52.4% (47.4%, 57.3%)	8451.7/11592 = 72.9% (68.0%, 77.3%)	6648.8/11592 = 57.4% (52.4%, 62.2%)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	4751.3/11592 = 41.0% (36.4%, 45.8%)	10008.7/11592 = 86.3% (82.1%, 89.7%)	8342.5/11592 = 72.0% (67.0%, 76.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	138	146.4/1256 = 11.7% (6.7%, 19.6%)	404.3/1256 = 32.2% (24.6%, 40.9%)	249/1256 = 19.8% (13.7%, 27.9%)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	138	777.5/1256 = 61.9% (52.2%, 70.8%)	1055.4/1256 = 84.0% (75.2%, 90.1%)	899.1/1256 = 71.6% (62.0%, 79.5%)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	138	680.1/1256 = 54.1% (45.2%, 62.8%)	1100.4/1256 = 87.6% (79.0%, 93.0%)	927.2/1256 = 73.8% (64.5%, 81.4%)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)	0/11514 = 0.0% (0.0%, 0.0%)
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	41.1/1269 = 3.2% (1.3%, 7.7%)	229.2/1269 = 18.1% (12.1%, 26.0%)	125.9/1269 = 9.9% (5.8%, 16.5%)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	626.2/1269 = 49.3% (40.5%, 58.3%)	882.7/1269 = 69.6% (60.4%, 77.4%)	745.9/1269 = 58.8% (49.7%, 67.3%)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	350.2/1269 = 27.6% (20.9%, 35.5%)	1030.7/1269 = 81.2% (73.4%, 87.1%)	701.3/1269 = 55.3% (46.1%, 64.0%)

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 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 (IU/ml)	228	126.6/5060 = 2.5% (1.0%, 6.3%)	869.4/5060 = 17.2% (12.5%, 23.2%)	398.9/5060 = 7.9% (4.9%, 12.4%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	228	2233.7/5060 = 44.1% (37.3%, 51.3%)	3602.8/5060 = 71.2% (64.4%, 77.2%)	2796.8/5060 = 55.3% (48.2%, 62.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	228	1474.7/5060 = 29.1% (23.1%, 36.0%)	4166.8/5060 = 82.3% (76.2%, 87.2%)	3380.4/5060 = 66.8% (59.8%, 73.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	20.4/524 = 3.9% (1.5%, 9.9%)	177.8/524 = 33.9% (23.2%, 46.7%)	59.4/524 = 11.3% (6.4%, 19.2%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	277.3/524 = 52.9% (40.1%, 65.3%)	439.5/524 = 83.9% (72.6%, 91.1%)	357.7/524 = 68.3% (55.3%, 78.9%)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	182.7/524 = 34.9% (24.0%, 47.5%)	463.7/524 = 88.5% (77.2%, 94.6%)	414.8/524 = 79.2% (66.5%, 87.9%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)	0/4962 = 0.0% (0.0%, 0.0%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	18.8/511 = 3.7% (0.8%, 15.1%)	84.9/511 = 16.6% (8.8%, 29.2%)	49/511 = 9.6% (4.0%, 21.3%)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	197/511 = 38.5% (26.7%, 52.0%)	316/511 = 61.8% (48.7%, 73.4%)	237.5/511 = 46.5% (33.9%, 59.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	69	85.3/511 = 16.7% (9.1%, 28.5%)	396.2/511 = 77.5% (65.7%, 86.1%)	269.2/511 = 52.7% (39.8%, 65.2%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	188/7556 = 2.5% (1.1%, 5.7%)	1286.2/7556 = 17.0% (12.3%, 23.0%)	780.7/7556 = 10.3% (6.8%, 15.4%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	3002/7556 = 39.7% (33.1%, 46.8%)	4682.4/7556 = 62.0% (54.8%, 68.6%)	3342.9/7556 = 44.2% (37.4%, 51.3%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1997.4/7556 = 26.4% (20.6%, 33.2%)	6075.9/7556 = 80.4% (74.2%, 85.5%)	4622.9/7556 = 61.2% (54.1%, 67.8%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	68	77.5/835 = 9.3% (3.6%, 21.7%)	157.8/835 = 18.9% (10.5%, 31.7%)	93.9/835 = 11.2% (5.0%, 23.4%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	436.7/835 = 52.3% (39.2%, 65.1%)	643.8/835 = 77.1% (64.4%, 86.2%)	527.2/835 = 63.1% (49.8%, 74.7%)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	314/835 = 37.6% (26.1%, 50.8%)	679.4/835 = 81.4% (68.8%, 89.6%)	528.9/835 = 63.3% (50.3%, 74.7%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)	0/7469 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	72	11.6/830 = 1.4% (0.2%, 9.6%)	111/830 = 13.4% (6.8%, 24.6%)	60.1/830 = 7.2% (2.9%, 17.2%)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	72	307.4/830 = 37.0% (25.8%, 49.9%)	487.4/830 = 58.7% (46.1%, 70.3%)	390.9/830 = 47.1% (35.0%, 59.6%)

(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 (IU/ml)	72	117.8/830 = 14.2% (7.4%, 25.4%)	619.3/830 = 74.6% (63.5%, 83.3%)	344.7/830 = 41.5% (29.7%, 54.4%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	323/2649 = 12.2% (8.3%, 17.6%)	957.3/2649 = 36.1% (29.6%, 43.2%)	669.4/2649 = 25.3% (19.6%, 32.0%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	1886.6/2649 = 71.2% (64.3%, 77.3%)	2262.3/2649 = 85.4% (79.5%, 89.8%)	2025.4/2649 = 76.5% (69.8%, 82.0%)
Age ≥ 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1706.9/2649 = 64.4% (57.4%, 70.9%)	2588.2/2649 = 97.7% (94.1%, 99.1%)	2378.9/2649 = 89.8% (84.4%, 93.5%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	86.4/295 = 29.3% (18.8%, 42.6%)	184.1/295 = 62.4% (50.5%, 73.0%)	143.9/295 = 48.8% (36.5%, 61.2%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	269.7/295 = 91.4% (83.6%, 95.7%)	288.8/295 = 97.9% (91.6%, 99.5%)	275.8/295 = 93.5% (86.0%, 97.1%)
Age ≥ 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	249.1/295 = 84.4% (73.0%, 91.6%)	295/295 = 100.0% (100.0%, 100.0%)	295/295 = 100.0% (100.0%, 100.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	28	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)	0/2733 = 0.0% (0.0%, 0.0%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	27.3/277 = 9.8% (4.2%, 21.2%)	109.8/277 = 39.6% (27.5%, 53.2%)	59/277 = 21.3% (12.3%, 34.3%)
Age ≥ 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	223.4/277 = 80.6% (69.2%, 88.6%)	247.5/277 = 89.3% (77.7%, 95.3%)	229.5/277 = 82.9% (71.4%, 90.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	181.8/277 = 65.6% (52.2%, 76.9%)	275.1/277 = 99.3% (95.0%, 99.9%)	240.1/277 = 86.7% (74.5%, 93.5%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	581.8/4036 = 14.4% (10.1%, 20.2%)	1725/4036 = 42.7% (36.0%, 49.8%)	1138.2/4036 = 28.2% (22.3%, 35.0%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	3069/4036 = 76.0% (69.4%, 81.6%)	3769.3/4036 = 93.4% (88.8%, 96.2%)	3305.9/4036 = 81.9% (75.7%, 86.8%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	2753.9/4036 = 68.2% (61.3%, 74.5%)	3932.8/4036 = 97.4% (93.3%, 99.1%)	3719.6/4036 = 92.2% (87.5%, 95.2%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	68.9/421 = 16.4% (9.1%, 27.7%)	246.5/421 = 58.5% (45.6%, 70.4%)	155.1/421 = 36.8% (25.7%, 49.6%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	340.8/421 = 81.0% (69.0%, 89.0%)	411.6/421 = 97.8% (85.1%, 99.7%)	371.9/421 = 88.3% (77.0%, 94.5%)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	366.1/421 = 87.0% (75.8%, 93.4%)	421/421 = 100.0% (100.0%, 100.0%)	398.3/421 = 94.6% (83.4%, 98.4%)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)	0/4045 = 0.0% (0.0%, 0.0%)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	29.5/439 = 6.7% (2.5%, 16.8%)	118.2/439 = 26.9% (16.8%, 40.2%)	65.8/439 = 15.0% (8.0%, 26.3%)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	318.7/439 = 72.6% (59.3%, 82.8%)	395.2/439 = 90.0% (78.3%, 95.8%)	355/439 = 80.9% (68.5%, 89.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	69	232.5/439 = 53.0% (39.8%, 65.7%)	411.4/439 = 93.7% (83.2%, 97.8%)	356.6/439 = 81.2% (68.2%, 89.8%)

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 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 (IU/ml)	399	638.8/8381.3 = 7.6% (5.3%, 10.8%)	2251/8381.3 = 26.9% (22.3%, 32.0%)	1430.8/8381.3 = 17.1% (13.5%, 21.4%)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	399	4597.6/8381.3 = 54.9% (49.2%, 60.4%)	6526.7/8381.3 = 77.9% (72.7%, 82.3%)	5148.1/8381.3 = 61.4% (55.7%, 66.8%)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	399	3761.6/8381.3 = 44.9% (39.5%, 50.4%)	7214.9/8381.3 = 86.1% (81.5%, 89.7%)	6350.2/8381.3 = 75.8% (70.4%, 80.4%)
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	124	130.7/985.8 = 13.3% (7.4%, 22.6%)	370.9/985.8 = 37.6% (28.5%, 47.7%)	211.2/985.8 = 21.4% (14.3%, 30.8%)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	124	547.8/985.8 = 55.6% (45.2%, 65.5%)	837.2/985.8 = 84.9% (75.8%, 91.0%)	699.6/985.8 = 71.0% (60.7%, 79.4%)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	124	458.6/985.8 = 46.5% (36.7%, 56.6%)	883.3/985.8 = 89.6% (80.7%, 94.7%)	743.4/985.8 = 75.4% (65.1%, 83.4%)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)	0/9710.4 = 0.0% (0.0%, 0.0%)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	121	30.6/919.7 = 3.3% (1.3%, 8.4%)	236.5/919.7 = 25.7% (17.8%, 35.5%)	117.5/919.7 = 12.8% (7.4%, 21.2%)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	121	467.7/919.7 = 50.9% (40.6%, 61.0%)	663.6/919.7 = 72.2% (61.8%, 80.5%)	558.9/919.7 = 60.8% (50.4%, 70.2%)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	121	255.3/919.7 = 27.8% (19.9%, 37.3%)	778.7/919.7 = 84.7% (75.6%, 90.8%)	535.8/919.7 = 58.3% (47.8%, 68.1%)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	502	580.6/10919.7 = 5.3% (3.7%, 7.6%)	2586.9/10919.7 = 23.7% (20.0%, 27.9%)	1556.4/10919.7 = 14.3% (11.3%, 17.8%)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	502	5593.8/10919.7 = 51.2% (46.4%, 56.1%)	7790.1/10919.7 = 71.3% (66.5%, 75.8%)	6323/10919.7 = 57.9% (53.0%, 62.7%)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	502	4171.2/10919.7 = 38.2% (33.7%, 42.9%)	9548.8/10919.7 = 87.4% (83.4%, 90.6%)	7751.6/10919.7 = 71.0% (66.1%, 75.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	156	122.6/1089.2 = 11.3% (7.4%, 16.7%)	395.3/1089.2 = 36.3% (28.8%, 44.5%)	241.1/1089.2 = 22.1% (16.6%, 28.8%)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	156	776.7/1089.2 = 71.3% (62.1%, 79.1%)	946.4/1089.2 = 86.9% (78.3%, 92.4%)	833/1089.2 = 76.5% (67.3%, 83.7%)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	156	653.3/1089.2 = 60.0% (51.2%, 68.2%)	975.8/1089.2 = 89.6% (80.9%, 94.6%)	893.6/1089.2 = 82.0% (72.7%, 88.7%)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	53	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)	0/9498.6 = 0.0% (0.0%, 0.0%)
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	159	56.5/1137.3 = 5.0% (2.4%, 10.2%)	187.4/1137.3 = 16.5% (11.4%, 23.3%)	116.3/1137.3 = 10.2% (6.2%, 16.3%)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	159	578.8/1137.3 = 50.9% (42.3%, 59.5%)	782.6/1137.3 = 68.8% (59.8%, 76.6%)	654/1137.3 = 57.5% (48.5%, 66.0%)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	159	362.1/1137.3 = 31.8% (25.0%, 39.6%)	923.3/1137.3 = 81.2% (73.6%, 87.0%)	674.8/1137.3 = 59.3% (50.2%, 67.8%)

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 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 (IU/ml)	255	107.5/7251 = 1.5% (0.5%, 4.1%)	1125.5/7251 = 15.5% (11.3%, 20.9%)	572.3/7251 = 7.9% (5.0%, 12.3%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	255	2767.7/7251 = 38.2% (31.9%, 44.8%)	4369.7/7251 = 60.3% (53.5%, 66.7%)	3298/7251 = 45.5% (39.0%, 52.1%)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	255	1741.1/7251 = 24.0% (18.7%, 30.3%)	5924.9/7251 = 81.7% (75.8%, 86.4%)	4466.3/7251 = 61.6% (54.8%, 68.0%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	16.7/658.1 = 2.5% (0.8%, 7.8%)	126.2/658.1 = 19.2% (11.2%, 30.8%)	53.5/658.1 = 8.1% (4.2%, 15.3%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	393.4/658.1 = 59.8% (46.1%, 72.1%)	518/658.1 = 78.7% (65.3%, 87.9%)	424.6/658.1 = 64.5% (50.7%, 76.3%)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	257.3/658.1 = 39.1% (27.7%, 51.8%)	544.7/658.1 = 82.8% (69.2%, 91.1%)	462.5/658.1 = 70.3% (56.3%, 81.3%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)	0/5709 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	76	18.8/716 = 2.6% (0.6%, 10.9%)	69.8/716 = 9.8% (4.7%, 19.1%)	47/716 = 6.6% (2.6%, 15.7%)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	76	248.2/716 = 34.7% (23.7%, 47.5%)	395/716 = 55.2% (42.4%, 67.3%)	309.6/716 = 43.2% (31.1%, 56.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	76	92.1/716 = 12.9% (6.7%, 23.4%)	515.3/716 = 72.0% (60.6%, 81.1%)	321.8/716 = 44.9% (32.8%, 57.8%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	197	207/5365 = 3.9% (1.7%, 8.4%)	1030/5365 = 19.2% (13.7%, 26.2%)	607.2/5365 = 11.3% (7.3%, 17.2%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	197	2468/5365 = 46.0% (38.4%, 53.8%)	3915.6/5365 = 73.0% (65.6%, 79.3%)	2841.7/5365 = 53.0% (45.2%, 60.6%)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	197	1731/5365 = 32.3% (25.4%, 40.0%)	4317.8/5365 = 80.5% (73.7%, 85.8%)	3537.1/5365 = 65.9% (58.3%, 72.8%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	69	81.2/700.9 = 11.6% (4.9%, 25.1%)	209.3/700.9 = 29.9%	99.7/700.9 = 14.2% (6.8%, 27.2%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	69	320.7/700.9 = 45.7% (32.9%, 59.2%)	565.2/700.9 = 80.6% (68.4%, 88.9%)	460.4/700.9 = 65.7% (52.3%, 76.9%)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	69	239.4/700.9 = 34.1% (22.6%, 48.0%)	598.4/700.9 = 85.4% (73.3%, 92.6%)	481.2/700.9 = 68.7% (55.2%, 79.6%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	29	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)	0/6722 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	65	11.6/625 = 1.8% (0.2%, 12.6%)	126/625 = 20.2% (11.2%, 33.5%)	62.1/625 = 9.9% (4.1%, 22.0%)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	65	256.2/625 = 41.0% (28.3%, 55.0%)	408.4/625 = 65.3% (51.7%, 76.9%)	318.8/625 = 51.0% (37.7%, 64.2%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	65	111/625 = 17.8% (9.5%, 30.6%)	500.2/625 = 80.0% (67.5%, 88.5%)	292/625 = 46.7% (33.6%, 60.3%)
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	247	473.1/3668.8 = 12.9% (8.8%, 18.5%)	1461.4/3668.8 = 39.8% (33.3%, 46.7%)	984.1/3668.8 = 26.8% (21.1%, 33.5%)
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	247	2826.1/3668.8 = 77.0% (70.7%, 82.3%)	3420.4/3668.8 = 93.2% (89.3%, 95.8%)	3025/3668.8 = 82.5% (76.6%, 87.1%)
Age \geq 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	247	2430.1/3668.8 = 66.2% (59.5%, 72.4%)	3623.9/3668.8 = 98.8% (95.3%, 99.7%)	3285.3/3668.8 = 89.5% (84.7%, 93.0%)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	86	105.9/431.1 = 24.6% (16.0%, 35.8%)	269.1/431.1 = 62.4% (50.8%, 72.8%)	187.5/431.1 = 43.5% (32.6%, 55.1%)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	86	383.4/431.1 = 88.9% (80.8%, 93.9%)	428.4/431.1 = 99.4% (95.5%, 99.9%)	408.4/431.1 = 94.7% (88.5%, 97.7%)
Age \geq 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	86	396/431.1 = 91.8% (85.3%, 95.6%)	431.1/431.1 = 100.0% (100.0%, 100.0%)	431.1/431.1 = 100.0% (100.0%, 100.0%)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age \geq 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)	0/3789.6 = 0.0% (0.0%, 0.0%)
Age \geq 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	83	37.8/421.3 = 9.0% (3.8%, 19.5%)	117.6/421.3 = 27.9% (18.5%, 39.8%)	69.4/421.3 = 16.5% (9.4%, 27.1%)
Age \geq 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	83	330.7/421.3 = 78.5% (67.0%, 86.8%)	387.6/421.3 = 92.0% (83.4%, 96.3%)	344.4/421.3 = 81.7% (71.1%, 89.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	83	269.9/421.3 = 64.1% (51.8%, 74.7%)	408/421.3 = 96.8% (89.6%, 99.1%)	353/421.3 = 83.8% (72.0%, 91.2%)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	202	431.8/3016.2 = 14.3% (9.9%, 20.3%)	1220.9/3016.2 = 40.5% (33.3%, 48.1%)	823.5/3016.2 = 27.3% (21.2%, 34.4%)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	202	2129.6/3016.2 = 70.6% (63.2%, 77.1%)	2611.1/3016.2 = 86.6% (80.4%, 91.0%)	2306.4/3016.2 = 76.5% (69.3%, 82.4%)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	202	2030.6/3016.2 = 67.3% (59.8%, 74.1%)	2897.1/3016.2 = 96.1% (91.0%, 98.3%)	2813.1/3016.2 = 93.3% (88.1%, 96.3%)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	55	49.4/284.9 = 17.4% (9.0%, 30.8%)	161.5/284.9 = 56.7% (42.0%, 70.3%)	111.5/284.9 = 39.1% (25.9%, 54.2%)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	55	227.1/284.9 = 79.7% (65.1%, 89.2%)	272/284.9 = 95.5% (80.9%, 99.1%)	239.2/284.9 = 84.0% (69.4%, 92.4%)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	55	219.2/284.9 = 76.9% (61.8%, 87.3%)	284.9/284.9 = 100.0% (100.0%, 100.0%)	262.2/284.9 = 92.0% (76.8%, 97.6%)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)	0/2988.4 = 0.0% (0.0%, 0.0%)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	56	19.1/294.7 = 6.5% (2.5%, 15.7%)	110.4/294.7 = 37.5% (24.2%, 53.0%)	55.4/294.7 = 18.8% (9.8%, 33.0%)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	56	211.5/294.7 = 71.8% (56.0%, 83.6%)	255.1/294.7 = 86.6% (70.9%, 94.5%)	240.1/294.7 = 81.5% (66.2%, 90.8%)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	56	144.3/294.7 = 49.0% (34.3%, 63.8%)	278.5/294.7 = 94.5% (78.6%, 98.8%)	243.7/294.7 = 82.7% (66.9%, 91.9%)

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 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 (IU/ml)	374	720/10100.7 = 7.1% (5.0%, 10.1%)	2440.2/10100.7 = 24.2% (19.9%, 29.0%)	1544.8/10100.7 = 15.3% (11.9%, 19.5%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	374	5314.8/10100.7 = 52.6% (47.1%, 58.1%)	7397.3/10100.7 = 73.2% (67.8%, 78.1%)	5788.2/10100.7 = 57.3% (51.8%, 62.7%)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	374	4142/10100.7 = 41.0% (35.8%, 46.4%)	8882/10100.7 = 87.9% (83.4%, 91.4%)	7432.5/10100.7 = 73.6% (68.1%, 78.4%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	119	159.6/1111.2 = 14.4% (8.5%, 23.1%)	485.8/1111.2 = 43.7% (34.2%, 53.7%)	251.1/1111.2 = 22.6% (15.7%, 31.4%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	119	705/1111.2 = 63.4% (53.2%, 72.6%)	987.9/1111.2 = 88.9% (80.1%, 94.1%)	837.1/1111.2 = 75.3% (65.2%, 83.3%)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	119	576.1/1111.2 = 51.8% (42.2%, 61.4%)	1004.6/1111.2 = 90.4% (80.9%, 95.4%)	905.1/1111.2 = 81.4% (71.1%, 88.7%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	43	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)	0/9438.4 = 0.0% (0.0%, 0.0%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	112	42.6/1111.7 = 3.8% (1.5%, 9.4%)	213.4/1111.7 = 19.2% (12.7%, 28.0%)	116.6/1111.7 = 10.5% (5.8%, 18.1%)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	112	557.1/1111.7 = 50.1% (40.1%, 60.1%)	769/1111.7 = 69.2% (58.9%, 77.8%)	665.3/1111.7 = 59.8% (49.5%, 69.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	112	287.1/1111.7 = 25.8% (18.8%, 34.3%)	945.5/1111.7 = 85.0% (76.5%, 90.8%)	640.8/1111.7 = 57.6% (47.3%, 67.3%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	481	470.3/8327 = 5.6% (3.9%, 8.0%)	2138.3/8327 = 25.7% (21.7%, 30.1%)	1336/8327 = 16.0% (12.9%, 19.7%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	481	4424.5/8327 = 53.1% (48.2%, 58.0%)	6292.4/8327 = 75.6% (70.9%, 79.7%)	5179.7/8327 = 62.2% (57.3%, 66.9%)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	481	3421.9/8327 = 41.1% (36.7%, 45.7%)	7122.5/8327 = 85.5% (81.2%, 89.0%)	5942.4/8327 = 71.4% (66.5%, 75.8%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	150	84.3/891.6 = 9.4% (6.1%, 14.5%)	261.5/891.6 = 29.3% (23.2%, 36.3%)	182.3/891.6 = 20.4% (15.2%, 26.9%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	150	585.7/891.6 = 65.7% (56.7%, 73.7%)	743.9/891.6 = 83.4% (75.1%, 89.4%)	655.8/891.6 = 73.6% (64.7%, 80.9%)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	150	502.9/891.6 = 56.4% (47.7%, 64.7%)	782.4/891.6 = 87.8% (79.7%, 92.9%)	685.7/891.6 = 76.9% (68.8%, 83.4%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	57	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)	0/8385.5 = 0.0% (0.0%, 0.0%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	153	42.5/867 = 4.9% (2.3%, 10.2%)	194/867 = 22.4% (15.8%, 30.7%)	107.6/867 = 12.4% (7.6%, 19.5%)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	153	458.7/867 = 52.9% (44.4%, 61.2%)	618/867 = 71.3% (62.5%, 78.7%)	511/867 = 58.9% (50.3%, 67.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	153	307.2/867 = 35.4% (27.9%, 43.7%)	689.1/867 = 79.5% (71.0%, 86.0%)	530.7/867 = 61.2% (52.5%, 69.2%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	46	29.1/873.3 = 3.3% (0.8%, 13.5%)	259.3/873.3 = 29.7% (17.4%, 45.9%)	106.4/873.3 = 12.2% (4.9%, 27.0%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	46	452/873.3 = 51.8% (35.6%, 67.5%)	627.1/873.3 = 71.8% (54.6%, 84.4%)	503.2/873.3 = 57.6% (40.6%, 73.0%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	46	368.9/873.3 = 42.2% (27.4%, 58.6%)	759.1/873.3 = 86.9% (69.2%, 95.2%)	726.9/873.3 = 83.2% (65.2%, 92.9%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	9.4/72.2 = 13.0% (1.0%, 68.8%)	18.9/72.2 = 26.2% (3.8%, 76.2%)	18.9/72.2 = 26.2% (3.8%, 76.2%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	33.8/72.2 = 46.8% (8.3%, 89.5%)	51.8/72.2 = 71.8% (8.3%, 98.6%)	39.8/72.2 = 55.1% (9.6%, 93.4%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	33/72.2 = 45.7% (8.3%, 88.6%)	72.2/72.2 = 100.0% (100.0%, 100.0%)	46.2/72.2 = 64.0% (9.8%, 96.7%)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	7	0/1385 = 0.0%	0/1385 = 0.0%	0/1385 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	15	1.9/78.2 = 2.5% (0.2%, 21.9%)	16.4/78.2 = 20.9% (5.6%, 54.1%)	9.6/78.2 = 12.3% (2.8%, 40.6%)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	15	30.8/78.2 = 39.3% (13.8%, 72.4%)	59.1/78.2 = 75.6% (42.3%, 92.9%)	36.7/78.2 = 46.9% (18.3%, 77.6%)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	15	23.1/78.2 = 29.5% (8.2%, 66.3%)	67.4/78.2 = 86.1% (49.7%, 97.5%)	39/78.2 = 49.9% (20.3%, 79.5%)

(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 (IU/ml)	195	199/4089.9 = 4.9% (2.7%, 8.7%)	1047/4089.9 = 25.6% (19.8%, 32.4%)	575.9/4089.9 = 14.1% (9.8%, 19.9%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	195	2244.4/4089.9 = 54.9% (47.4%, 62.2%)	3080/4089.9 = 75.3% (68.1%, 81.3%)	2659.5/4089.9 = 65.0% (57.5%, 71.8%)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	195	1586.6/4089.9 = 38.8% (32.4%, 45.6%)	3464.7/4089.9 = 84.7% (78.2%, 89.5%)	2883.2/4089.9 = 70.5% (63.0%, 77.0%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	62	43.3/447.1 = 9.7% (5.3%, 17.1%)	105.4/447.1 = 23.6% (16.4%, 32.7%)	74.5/447.1 = 16.7% (10.6%, 25.2%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	62	257.8/447.1 = 57.7% (43.7%, 70.5%)	343.5/447.1 = 76.8% (62.4%, 86.9%)	306.5/447.1 = 68.6% (54.2%, 80.1%)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	62	226.7/447.1 = 50.7% (38.1%, 63.2%)	356.4/447.1 = 79.7% (65.2%, 89.2%)	284.1/447.1 = 63.5% (49.9%, 75.3%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)	0/4047.7 = 0.0% (0.0%, 0.0%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	58	31.6/405 = 7.8% (2.9%, 19.3%)	108/405 = 26.7% (16.0%, 41.1%)	82.3/405 = 20.3% (11.1%, 34.4%)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	58	256.2/405 = 63.3% (48.8%, 75.7%)	295.9/405 = 73.1% (58.2%, 84.1%)	274.5/405 = 67.8% (53.1%, 79.7%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	58	167.5/405 = 41.3% (28.8%, 55.1%)	330.6/405 = 81.6% (67.0%, 90.7%)	265.6/405 = 65.6% (50.9%, 77.8%)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	314	253.5/4722.4 = 5.4% (3.4%, 8.5%)	1004.3/4722.4 = 21.3% (16.9%, 26.3%)	664.9/4722.4 = 14.1% (10.6%, 18.4%)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	314	2401.1/4722.4 = 50.8% (44.9%, 56.8%)	3566.8/4722.4 = 75.5% (69.6%, 80.6%)	2809/4722.4 = 59.5% (53.3%, 65.3%)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	314	1871.3/4722.4 = 39.6% (34.1%, 45.5%)	4180.1/4722.4 = 88.5% (83.4%, 92.2%)	3487.5/4722.4 = 73.9% (67.9%, 79.1%)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	47.2/488.1 = 9.7% (5.2%, 17.2%)	166.3/488.1 = 34.1% (25.3%, 44.1%)	96.1/488.1 = 19.7% (13.2%, 28.2%)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	350.2/488.1 = 71.8% (60.3%, 81.0%)	459.1/488.1 = 94.1% (85.4%, 97.7%)	382.5/488.1 = 78.4% (67.5%, 86.3%)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	322.5/488.1 = 66.1% (54.8%, 75.8%)	474.5/488.1 = 97.2% (89.6%, 99.3%)	462.1/488.1 = 94.7% (86.9%, 97.9%)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	36	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)	0/4332.9 = 0.0% (0.0%, 0.0%)
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	100	12.9/475.1 = 2.7% (1.1%, 6.6%)	93/475.1 = 19.6% (12.4%, 29.4%)	48.2/475.1 = 10.1% (5.3%, 18.4%)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	100	188.1/475.1 = 39.6% (30.2%, 49.9%)	308.6/475.1 = 64.9% (54.0%, 74.5%)	204.4/475.1 = 43.0% (33.4%, 53.2%)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	100	137.3/475.1 = 28.9% (21.0%, 38.4%)	365.1/475.1 = 76.8% (66.0%, 85.0%)	278.5/475.1 = 58.6% (48.2%, 68.3%)
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	6.8/543.7 = 1.2% (0.1%, 11.1%)	150.1/543.7 = 27.6% (11.4%, 53.1%)	103.7/543.7 = 19.1% (6.4%, 45.0%)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	357.6/543.7 = 65.8% (38.6%, 85.5%)	485.5/543.7 = 89.3% (64.1%, 97.5%)	404/543.7 = 74.3% (44.5%, 91.3%)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	233.4/543.7 = 42.9% (21.4%, 67.4%)	484.8/543.7 = 89.2% (60.5%, 97.8%)	454.4/543.7 = 83.6% (57.8%, 95.0%)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	0/32.2 = 0.0%	9.4/32.2 = 29.1%	9.4/32.2 = 29.1%
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	21.5/32.2 = 66.7%	25.4/32.2 = 78.9%	21.5/32.2 = 66.7%
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	18.1/32.2 = 56.2%	32.2/32.2 = 100.0%	21.5/32.2 = 66.7%
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/585.6 = 0.0%	0/585.6 = 0.0%	0/585.6 = 0.0%
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	6	0/45.3 = 0.0%	0/45.3 = 0.0%	0/45.3 = 0.0%
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	6	21.9/45.3 = 48.3%	26/45.3 = 57.4%	26/45.3 = 57.4%
Asian	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6	0/45.3 = 0.0%	31.8/45.3 = 70.1%	7.7/45.3 = 16.9%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	137	228.9/4647.9 = 4.9% (2.6%, 9.2%)	1149.4/4647.9 = 24.7% (18.0%, 32.9%)	566.2/4647.9 = 12.2% (7.8%, 18.6%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	137	2329.9/4647.9 = 50.1% (41.3%, 58.9%)	3337/4647.9 = 71.8% (62.7%, 79.4%)	2443.7/4647.9 = 52.6% (43.7%, 61.3%)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	137	1960.2/4647.9 = 42.2% (33.8%, 51.0%)	4037.1/4647.9 = 86.9% (78.9%, 92.1%)	3379.7/4647.9 = 72.7% (63.7%, 80.2%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	67.8/411 = 16.5% (7.1%, 33.8%)	217.2/411 = 52.8% (34.2%, 70.7%)	82.2/411 = 20.0% (9.7%, 36.7%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	270.7/411 = 65.9% (45.7%, 81.5%)	357.9/411 = 87.1% (65.2%, 96.0%)	295.4/411 = 71.9% (51.0%, 86.2%)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	217.6/411 = 52.9% (35.2%, 70.0%)	357.9/411 = 87.1% (65.2%, 96.0%)	336.2/411 = 81.8% (60.9%, 92.8%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	20	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)	0/5650 = 0.0% (0.0%, 0.0%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	44	23.9/506.6 = 4.7% (1.4%, 14.7%)	106.8/506.6 = 21.1% (11.2%, 36.1%)	61.7/506.6 = 12.2% (4.9%, 27.1%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	44	313.5/506.6 = 61.9% (44.9%, 76.4%)	359.9/506.6 = 71.0% (53.6%, 83.9%)	324.2/506.6 = 64.0% (46.9%, 78.1%)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	44	158.6/506.6 = 31.3% (19.7%, 45.9%)	464.8/506.6 = 91.7% (75.5%, 97.6%)	336.4/506.6 = 66.4% (49.2%, 80.1%)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	0/45.7 = 0.0%	18.9/45.7 = 41.4%	0/45.7 = 0.0%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	18.9/45.7 = 41.4%	45.7/45.7 = 100.0%	18.9/45.7 = 41.4%
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	18.9/45.7 = 41.4%	45.7/45.7 = 100.0%	18.9/45.7 = 41.4%
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	76.8/527.2 = 14.6% (5.1%, 35.0%)	281.2/527.2 = 53.3% (29.4%, 75.8%)	190.9/527.2 = 36.2% (16.4%, 62.2%)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	252.6/527.2 = 47.9% (24.9%, 71.8%)	436.3/527.2 = 82.8% (49.6%, 95.9%)	335/527.2 = 63.5% (36.4%, 84.1%)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	213.4/527.2 = 40.5% (20.3%, 64.5%)	472.5/527.2 = 89.6% (47.4%, 98.8%)	389.3/527.2 = 73.8% (43.4%, 91.2%)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	0/57.7 = 0.0% (0.0%, 0.0%)	37.5/57.7 = 64.9% (23.7%, 91.7%)	23.1/57.7 = 40.1% (9.6%, 80.8%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	40.2/57.7 = 69.7% (26.3%, 93.7%)	51.2/57.7 = 88.8% (29.5%, 99.3%)	46.3/57.7 = 80.3% (30.1%, 97.5%)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	37.1/57.7 = 64.4% (22.5%, 91.8%)	52.7/57.7 = 91.4% (35.8%, 99.5%)	52.7/57.7 = 91.4% (35.8%, 99.5%)
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0/806 = 0.0%	0/806 = 0.0%	0/806 = 0.0%
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	12	0/93.5 = 0.0%	10.2/93.5 = 10.9%	10.2/93.5 = 10.9%
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12	45.9/93.5 = 49.1%	84.4/93.5 = 90.3%	77.6/93.5 = 83.0%
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	12	35.3/93.5 = 37.7%	77.6/93.5 = 83.0%	60.2/93.5 = 64.4%
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	13	48.4/250.2 = 19.3% (2.1%, 72.6%)	112.7/250.2 = 45.0%	84/250.2 = 33.6% (7.6%, 75.6%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	13	117.2/250.2 = 46.8% (14.4%, 82.2%)	212.4/250.2 = 84.9% (39.5%, 98.0%)	137.9/250.2 = 55.1% (19.2%, 86.4%)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	13	177.9/250.2 = 71.1% (30.5%, 93.2%)	250.2/250.2 = 100.0% (100.0%, 100.0%)	231.3/250.2 = 92.4% (39.9%, 99.6%)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/23 = 0.0%	16.2/23 = 70.4%	16.2/23 = 70.4%
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	16.2/23 = 70.4%	16.2/23 = 70.4%	16.2/23 = 70.4%
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	16.2/23 = 70.4%	23/23 = 100.0%	16.2/23 = 70.4%
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/195.7 = 0.0%	0/195.7 = 0.0%	0/195.7 = 0.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	0/23.9 = 0.0%	11.6/23.9 = 48.4%	0/23.9 = 0.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	3	17.1/23.9 = 71.6%	23.9/23.9 = 100.0%	23.9/23.9 = 100.0%
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	12.3/23.9 = 51.6%	23.9/23.9 = 100.0%	23.9/23.9 = 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 (IU/ml)	225	296.8/3828 = 7.8% (4.9%, 12.1%)	976.9/3828 = 25.5% (20.1%, 31.9%)	605.4/3828 = 15.8% (11.5%, 21.3%)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	2130.8/3828 = 55.7% (48.9%, 62.3%)	2873.8/3828 = 75.1% (68.4%, 80.7%)	2403.7/3828 = 62.8% (55.9%, 69.2%)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	1727.2/3828 = 45.1% (38.7%, 51.7%)	3444.2/3828 = 90.0% (84.5%, 93.6%)	2891.2/3828 = 75.5% (68.9%, 81.1%)
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	40.5/410 = 9.9% (4.7%, 19.6%)	153/410 = 37.3% (26.8%, 49.2%)	90.1/410 = 22.0% (13.8%, 33.2%)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	255/410 = 62.2% (49.1%, 73.7%)	356.8/410 = 87.0% (74.4%, 93.9%)	288.9/410 = 70.5% (57.1%, 81.0%)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	239.7/410 = 58.5% (45.3%, 70.5%)	389.2/410 = 94.9% (84.4%, 98.5%)	368.3/410 = 89.8% (78.4%, 95.6%)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)	0/3953 = 0.0% (0.0%, 0.0%)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	6.2/419 = 1.5% (0.2%, 10.3%)	62.7/419 = 15.0% (8.4%, 25.3%)	17.9/419 = 4.3% (1.5%, 11.7%)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	150.5/419 = 35.9% (25.6%, 47.7%)	240/419 = 57.3% (44.8%, 68.9%)	177.5/419 = 42.4% (31.3%, 54.3%)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	112.5/419 = 26.8% (18.5%, 37.3%)	303.9/419 = 72.5% (59.5%, 82.6%)	206.8/419 = 49.4% (37.8%, 60.9%)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	252.1/4629 = 5.4% (3.3%, 8.9%)	1249.9/4629 = 27.0% (21.5%, 33.3%)	801.4/4629 = 17.3% (12.8%, 23.1%)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	2501.9/4629 = 54.0% (47.2%, 60.7%)	3442.7/4629 = 74.4% (67.7%, 80.1%)	2951.8/4629 = 63.8% (56.9%, 70.1%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	1809.4/4629 = 39.1% (33.4%, 45.1%)	3886.1/4629 = 84.0% (77.8%, 88.6%)	3347.8/4629 = 72.3% (65.6%, 78.2%)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	47.7/499 = 9.6% (5.4%, 16.4%)	125.7/499 = 25.2% (18.2%, 33.8%)	94.8/499 = 19.0% (12.8%, 27.2%)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	287.5/499 = 57.6% (44.8%, 69.5%)	389/499 = 78.0% (64.8%, 87.1%)	345.6/499 = 69.2% (56.2%, 79.8%)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	255.9/499 = 51.3% (40.0%, 62.4%)	408.3/499 = 81.8% (68.7%, 90.2%)	336/499 = 67.3% (55.0%, 77.7%)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)	0/4546 = 0.0% (0.0%, 0.0%)
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	31.6/500 = 6.3% (2.4%, 15.8%)	130.5/500 = 26.1% (16.3%, 38.9%)	86.5/500 = 17.3% (9.6%, 29.2%)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	296.2/500 = 59.2% (46.5%, 70.9%)	369.1/500 = 73.8% (60.7%, 83.7%)	327.2/500 = 65.4% (52.4%, 76.5%)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	189/500 = 37.8% (26.8%, 50.2%)	414/500 = 82.8% (70.2%, 90.8%)	309.1/500 = 61.8% (48.8%, 73.4%)

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 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 (IU/ml)	114	97/2477 = 3.9% (1.4%, 10.3%)	511.4/2477 = 20.6% (14.0%, 29.4%)	270.8/2477 = 10.9% (6.2%, 18.6%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	114	1069.7/2477 = 43.2% (34.0%, 52.8%)	1614.5/2477 = 65.2% (55.5%, 73.7%)	1290.1/2477 = 52.1% (42.6%, 61.4%)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	114	755.4/2477 = 30.5% (22.4%, 40.0%)	2102.6/2477 = 84.9% (76.6%, 90.6%)	1594.3/2477 = 64.4% (54.7%, 73.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	15.2/274 = 5.6% (1.2%, 22.0%)	79.3/274 = 29.0% (16.6%, 45.6%)	36.1/274 = 13.2% (5.1%, 30.0%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	144.2/274 = 52.6% (35.4%, 69.3%)	224.3/274 = 81.9% (63.6%, 92.1%)	169.1/274 = 61.7% (43.5%, 77.1%)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	137/274 = 50.0% (32.8%, 67.2%)	253.2/274 = 92.4% (76.9%, 97.8%)	232.3/274 = 84.8% (68.2%, 93.6%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)	0/2523 = 0.0% (0.0%, 0.0%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	6.2/270 = 2.3% (0.3%, 15.9%)	27.8/270 = 10.3% (3.7%, 25.8%)	6.2/270 = 2.3% (0.3%, 15.9%)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	58.5/270 = 21.7% (10.6%, 39.2%)	113.7/270 = 42.1% (26.1%, 60.0%)	73.9/270 = 27.4% (14.6%, 45.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	35	34.1/270 = 12.6% (5.1%, 28.0%)	165.9/270 = 61.5% (43.3%, 76.9%)	83/270 = 30.7% (17.0%, 49.0%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	113	53.4/2998 = 1.8% (0.4%, 7.2%)	586.9/2998 = 19.6% (13.0%, 28.3%)	405.7/2998 = 13.5% (8.2%, 21.6%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	113	1290.6/2998 = 43.0% (33.9%, 52.7%)	1993.4/2998 = 66.5% (56.9%, 74.9%)	1631/2998 = 54.4% (44.8%, 63.7%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	113	639.3/2998 = 21.3% (14.6%, 30.1%)	2272.2/2998 = 75.8% (66.6%, 83.1%)	1855.5/2998 = 61.9% (52.2%, 70.7%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	0/330 = 0.0% (0.0%, 0.0%)	25.8/330 = 7.8% (3.0%, 18.9%)	12.9/330 = 3.9% (0.9%, 14.8%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	146.7/330 = 44.4% (27.8%, 62.4%)	220/330 = 66.7% (48.1%, 81.2%)	183.3/330 = 55.6% (37.6%, 72.2%)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	97.1/330 = 29.4% (15.7%, 48.2%)	239.3/330 = 72.5% (53.7%, 85.7%)	167/330 = 50.6% (33.8%, 67.3%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)	0/2883 = 0.0% (0.0%, 0.0%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	36	11.6/330 = 3.5% (0.4%, 22.9%)	78.1/330 = 23.7% (11.6%, 42.2%)	48.2/330 = 14.6% (5.7%, 32.5%)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	36	156.2/330 = 47.3% (30.7%, 64.6%)	213.2/330 = 64.6% (46.4%, 79.4%)	181.3/330 = 54.9% (37.4%, 71.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	36	84.9/330 = 25.7% (13.2%, 44.2%)	249.9/330 = 75.7% (57.7%, 87.7%)	165/330 = 50.0% (32.8%, 67.2%)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	111	199.8/1351 = 14.8% (9.1%, 23.2%)	465.5/1351 = 34.5% (25.9%, 44.1%)	334.6/1351 = 24.8% (17.4%, 34.0%)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	111	1061.1/1351 = 78.5% (69.7%, 85.3%)	1259.3/1351 = 93.2% (86.6%, 96.7%)	1113.6/1351 = 82.4% (73.9%, 88.6%)
Age \geq 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	111	971.7/1351 = 71.9% (62.4%, 79.8%)	1341.6/1351 = 99.3% (95.1%, 99.9%)	1296.9/1351 = 96.0% (89.5%, 98.5%)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	25.2/136 = 18.6% (8.2%, 36.7%)	73.6/136 = 54.1% (36.6%, 70.7%)	54/136 = 39.7% (24.1%, 57.7%)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	110.8/136 = 81.4% (63.3%, 91.8%)	132.5/136 = 97.4% (82.5%, 99.7%)	119.9/136 = 88.1% (70.8%, 95.8%)
Age \geq 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	102.7/136 = 75.5% (57.1%, 87.7%)	136/136 = 100.0% (100.0%, 100.0%)	136/136 = 100.0% (100.0%, 100.0%)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age \geq 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)	0/1430 = 0.0% (0.0%, 0.0%)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	0/149 = 0.0% (0.0%, 0.0%)	34.9/149 = 23.4% (11.8%, 41.3%)	11.6/149 = 7.8% (2.2%, 23.9%)
Age \geq 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	92/149 = 61.7% (43.1%, 77.5%)	126.3/149 = 84.8% (66.3%, 94.0%)	103.6/149 = 69.5% (50.5%, 83.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	35	78.4/149 = 52.6% (35.2%, 69.4%)	137.9/149 = 92.6% (73.5%, 98.2%)	123.8/149 = 83.1% (64.1%, 93.1%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	112	198.8/1631 = 12.2% (7.2%, 19.9%)	662.9/1631 = 40.6% (31.7%, 50.3%)	395.7/1631 = 24.3% (17.0%, 33.4%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	112	1211.2/1631 = 74.3% (65.1%, 81.7%)	1449.3/1631 = 88.9% (81.5%, 93.5%)	1320.8/1631 = 81.0% (72.5%, 87.3%)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	112	1170.1/1631 = 71.7% (62.4%, 79.5%)	1613.9/1631 = 99.0% (92.7%, 99.9%)	1492.3/1631 = 91.5% (84.2%, 95.6%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	47.7/169 = 28.2% (15.4%, 46.0%)	99.9/169 = 59.1% (41.1%, 75.0%)	81.9/169 = 48.5% (31.5%, 65.8%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	140.8/169 = 83.3% (65.6%, 92.9%)	169/169 = 100.0% (100.0%, 100.0%)	162.2/169 = 96.0% (84.8%, 99.0%)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	158.8/169 = 94.0% (82.7%, 98.1%)	169/169 = 100.0% (100.0%, 100.0%)	169/169 = 100.0% (100.0%, 100.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)	0/1663 = 0.0% (0.0%, 0.0%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	34	20/170 = 11.8% (4.1%, 29.2%)	52.4/170 = 30.8% (17.1%, 48.9%)	38.2/170 = 22.5% (11.0%, 40.5%)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	34	140/170 = 82.4% (64.3%, 92.4%)	155.9/170 = 91.7% (75.5%, 97.5%)	145.9/170 = 85.8% (68.5%, 94.4%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	34	104.1/170 = 61.2% (42.8%, 76.9%)	164.1/170 = 96.5% (77.3%, 99.6%)	144.1/170 = 84.8% (66.7%, 93.9%)

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 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 (IU/ml)	450	549/8457 = 6.5% (4.6%, 9.0%)	2226.7/8457 = 26.3% (22.3%, 30.7%)	1406.9/8457 = 16.6% (13.4%, 20.5%)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	450	4632.7/8457 = 54.8% (50.0%, 59.5%)	6316.5/8457 = 74.7% (70.1%, 78.8%)	5355.5/8457 = 63.3% (58.5%, 67.9%)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	450	3536.6/8457 = 41.8% (37.6%, 46.2%)	7330.3/8457 = 86.7% (82.7%, 89.9%)	6239/8457 = 73.8% (69.1%, 77.9%)
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	88.2/909 = 9.7% (6.2%, 14.9%)	278.6/909 = 30.7% (24.4%, 37.7%)	184.8/909 = 20.3% (15.1%, 26.8%)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	542.5/909 = 59.7% (50.6%, 68.1%)	745.8/909 = 82.0% (73.4%, 88.3%)	634.5/909 = 69.8% (60.7%, 77.6%)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	495.6/909 = 54.5% (46.0%, 62.8%)	797.5/909 = 87.7% (79.8%, 92.9%)	704.3/909 = 77.5% (69.4%, 83.9%)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)	0/8499 = 0.0% (0.0%, 0.0%)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	140	37.8/919 = 4.1% (1.7%, 9.5%)	193.2/919 = 21.0% (14.7%, 29.1%)	104.3/919 = 11.4% (6.8%, 18.3%)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	140	446.7/919 = 48.6% (40.3%, 57.0%)	609.1/919 = 66.3% (57.5%, 74.1%)	504.7/919 = 54.9% (46.4%, 63.2%)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	140	301.5/919 = 32.8% (25.6%, 40.9%)	717.9/919 = 78.1% (69.6%, 84.8%)	515.9/919 = 56.1% (47.4%, 64.5%)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	28.7/948.5 = 3.0% (0.4%, 20.3%)	245.7/948.5 = 25.9% (12.7%, 45.7%)	188.3/948.5 = 19.9% (8.4%, 40.0%)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	602.4/948.5 = 63.5% (43.1%, 80.0%)	733.4/948.5 = 77.3% (56.8%, 89.8%)	650/948.5 = 68.5% (47.6%, 83.9%)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	415.9/948.5 = 43.9% (26.3%, 63.1%)	808.7/948.5 = 85.3% (64.0%, 95.0%)	659.8/948.5 = 69.6% (48.7%, 84.6%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Argentina	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	9	27.5/122 = 22.6% (2.8%, 74.5%)	77.6/122 = 63.6% (24.1%, 90.6%)	27.5/122 = 22.6% (2.8%, 74.5%)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	9	89.2/122 = 73.2% (23.2%, 96.1%)	109.6/122 = 89.8% (35.8%, 99.3%)	89.2/122 = 73.2% (23.2%, 96.1%)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	9	69.7/122 = 57.1% (16.9%, 89.7%)	109.6/122 = 89.8% (35.8%, 99.3%)	109.6/122 = 89.8% (35.8%, 99.3%)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/1163.9 = 0.0%	0/1163.9 = 0.0%	0/1163.9 = 0.0%
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	9	0/117.7 = 0.0% (0.0%, 0.0%)	0/117.7 = 0.0% (0.0%, 0.0%)	0/117.7 = 0.0% (0.0%, 0.0%)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	9	77.8/117.7 = 66.1% (21.8%, 93.1%)	107.1/117.7 = 91.0% (38.7%, 99.4%)	107.1/117.7 = 91.0% (38.7%, 99.4%)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	9	6.6/117.7 = 5.6% (0.4%, 47.4%)	107.1/117.7 = 91.0% (38.7%, 99.4%)	107.1/117.7 = 91.0% (38.7%, 99.4%)
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	103	160.5/3880.8 = 4.1% (1.8%, 9.3%)	783.4/3880.8 = 20.2% (13.3%, 29.4%)	383/3880.8 = 9.9% (5.5%, 17.2%)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	103	1772.1/3880.8 = 45.7% (35.8%, 55.9%)	2737.4/3880.8 = 70.5% (60.0%, 79.3%)	1949.4/3880.8 = 50.2% (40.1%, 60.4%)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	103	1566.1/3880.8 = 40.4% (30.9%, 50.6%)	3316.3/3880.8 = 85.5% (76.2%, 91.5%)	2598.9/3880.8 = 67.0% (56.4%, 76.1%)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	34.7/276 = 12.6% (3.1%, 39.0%)	114.1/276 = 41.4% (22.1%, 63.7%)	72.8/276 = 26.4% (11.8%, 48.9%)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	171.4/276 = 62.1% (37.1%, 82.0%)	222.9/276 = 80.8% (52.1%, 94.2%)	183.8/276 = 66.6% (40.8%, 85.2%)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	111.1/276 = 40.3% (21.4%, 62.5%)	243.3/276 = 88.1% (59.1%, 97.4%)	201.2/276 = 72.9% (46.3%, 89.3%)
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 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 (IU/ml)	10	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)	0/2602.9 = 0.0% (0.0%, 0.0%)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	31	23.2/390.9 = 5.9% (1.4%, 22.4%)	87.5/390.9 = 22.4% (11.5%, 38.9%)	59.6/390.9 = 15.2% (6.5%, 31.8%)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	31	184.4/390.9 = 47.2% (29.7%, 65.4%)	246.8/390.9 = 63.1% (42.8%, 79.6%)	215.6/390.9 = 55.1% (36.0%, 72.9%)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	31	104.7/390.9 = 26.8% (15.0%, 43.1%)	328.5/390.9 = 84.0% (62.6%, 94.3%)	209.4/390.9 = 53.6% (35.3%, 71.0%)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	15	83.4/505.4 = 16.5% (3.3%, 53.5%)	121.2/505.4 = 24.0% (7.1%, 56.4%)	102.3/505.4 = 20.2% (5.1%, 54.5%)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15	216.1/505.4 = 42.8% (18.1%, 71.6%)	394.3/505.4 = 78.0% (43.5%, 94.2%)	216.1/505.4 = 42.8% (18.1%, 71.6%)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	15	132.7/505.4 = 26.3% (9.2%, 55.6%)	413.2/505.4 = 81.8% (44.6%, 96.1%)	329.9/505.4 = 65.3% (33.1%, 87.7%)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	9.4/76.3 = 12.3% (0.4%, 82.5%)	21.8/76.3 = 28.5% (2.2%, 87.5%)	9.4/76.3 = 12.3% (0.4%, 82.5%)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	51.5/76.3 = 67.5% (11.2%, 97.2%)	76.3/76.3 = 100.0% (100.0%, 100.0%)	63.9/76.3 = 83.8% (12.7%, 99.5%)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	18.8/76.3 = 24.6% (2.1%, 83.0%)	76.3/76.3 = 100.0% (100.0%, 100.0%)	63.9/76.3 = 83.8% (12.7%, 99.5%)
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0/25.1 = 0.0%	0/25.1 = 0.0%	0/25.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0/25.1 = 0.0%	12.5/25.1 = 50.0%	0/25.1 = 0.0%
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0/25.1 = 0.0%	25.1/25.1 = 100.0%	25.1/25.1 = 100.0%
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	47	171.5/1453.3 = 11.8% (5.5%, 23.7%)	456.5/1453.3 = 31.4% (19.7%, 46.1%)	266.8/1453.3 = 18.4% (10.0%, 31.2%)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	47	913.7/1453.3 = 62.9% (46.5%, 76.7%)	1138.9/1453.3 = 78.4% (61.3%, 89.2%)	961.3/1453.3 = 66.1% (49.6%, 79.5%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	47	661.1/1453.3 = 45.5% (31.0%, 60.8%)	1313.5/1453.3 = 90.4% (75.1%, 96.7%)	1144.6/1453.3 = 78.8% (63.0%, 89.0%)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	20	51.3/256.7 = 20.0% (6.9%, 45.8%)	99/256.7 = 38.6% (19.0%, 62.7%)	51.3/256.7 = 20.0% (6.9%, 45.8%)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	20	181.8/256.7 = 70.8% (42.8%, 88.8%)	227/256.7 = 88.4% (57.6%, 97.7%)	214.6/256.7 = 83.6% (54.7%, 95.6%)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	20	141.1/256.7 = 55.0% (30.1%, 77.6%)	216/256.7 = 84.1% (51.8%, 96.3%)	186.3/256.7 = 72.6% (43.6%, 90.1%)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	8	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)	0/2142.6 = 0.0% (0.0%, 0.0%)
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	6.6/144.6 = 4.6% (0.5%, 33.2%)	30.5/144.6 = 21.1% (6.4%, 51.2%)	6.6/144.6 = 4.6% (0.5%, 33.2%)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	86/144.6 = 59.5% (27.8%, 84.8%)	144.6/144.6 = 100.0% (100.0%, 100.0%)	115.3/144.6 = 79.7% (39.6%, 95.9%)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	58.4/144.6 = 40.4% (16.6%, 69.7%)	144.6/144.6 = 100.0% (100.0%, 100.0%)	90.3/144.6 = 62.4% (29.8%, 86.7%)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	0/175.9 = 0.0% (0.0%, 0.0%)	121.2/175.9 = 68.9% (1.5%, 99.7%)	102.3/175.9 = 58.2% (1.7%, 99.1%)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	66.5/175.9 = 37.8% (1.2%, 96.9%)	121.2/175.9 = 68.9% (1.5%, 99.7%)	66.5/175.9 = 37.8% (1.2%, 96.9%)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	66.5/175.9 = 37.8% (1.2%, 96.9%)	175.9/175.9 = 100.0% (100.0%, 100.0%)	175.9/175.9 = 100.0% (100.0%, 100.0%)
Mexico	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	0/38.3 = 0.0%	9.4/38.3 = 24.5%	9.4/38.3 = 24.5%
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	26/38.3 = 67.7%	38.3/38.3 = 100.0%	38.3/38.3 = 100.0%
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	26/38.3 = 67.7%	38.3/38.3 = 100.0%	38.3/38.3 = 100.0%
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0/230.1 = 0.0%	0/230.1 = 0.0%	0/230.1 = 0.0%
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	0/49.9 = 0.0%	49.9/49.9 = 100.0%	18.7/49.9 = 37.4%
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	3	49.9/49.9 = 100.0%	49.9/49.9 = 100.0%	49.9/49.9 = 100.0%
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	18.7/49.9 = 37.4%	49.9/49.9 = 100.0%	49.9/49.9 = 100.0%
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	26	57.4/966.1 = 5.9% (1.4%, 22.5%)	254.5/966.1 = 26.3% (12.5%, 47.3%)	114.7/966.1 = 11.9% (4.2%, 29.1%)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	26	467.9/966.1 = 48.4% (28.3%, 69.1%)	588.7/966.1 = 60.9% (38.6%, 79.5%)	496.6/966.1 = 51.4% (30.7%, 71.6%)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	26	381.8/966.1 = 39.5% (21.2%, 61.3%)	802.1/966.1 = 83.0% (57.6%, 94.6%)	783.2/966.1 = 81.1% (56.5%, 93.4%)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	8	7.2/90.7 = 7.9% (0.4%, 63.1%)	45.5/90.7 = 50.2% (11.1%, 89.0%)	16.6/90.7 = 18.3% (2.2%, 69.4%)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	8	45.5/90.7 = 50.2% (11.1%, 89.0%)	90.7/90.7 = 100.0% (100.0%, 100.0%)	78.3/90.7 = 86.3% (23.4%, 99.2%)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	8	45.5/90.7 = 50.2% (11.1%, 89.0%)	90.7/90.7 = 100.0% (100.0%, 100.0%)	70.3/90.7 = 77.5% (15.2%, 98.5%)
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/1403.4 = 0.0%	0/1403.4 = 0.0%	0/1403.4 = 0.0%
Peru	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	11	6.6/120.8 = 5.5% (0.5%, 41.5%)	13.2/120.8 = 10.9% (1.9%, 43.5%)	6.6/120.8 = 5.5% (0.5%, 41.5%)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	78.9/120.8 = 65.4% (25.6%, 91.2%)	78.9/120.8 = 65.4% (25.6%, 91.2%)	78.9/120.8 = 65.4% (25.6%, 91.2%)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	49.1/120.8 = 40.7% (12.5%, 76.6%)	120.8/120.8 = 100.0% (100.0%, 100.0%)	61.7/120.8 = 51.1% (17.9%, 83.3%)
South Africa	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	169/2914 = 5.8% (3.5%, 9.4%)	628.6/2914 = 21.6% (16.8%, 27.3%)	422.9/2914 = 14.5% (10.7%, 19.3%)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	1519.9/2914 = 52.2% (45.4%, 58.8%)	2286.4/2914 = 78.5% (72.0%, 83.8%)	1775.7/2914 = 60.9% (54.0%, 67.5%)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	1172.1/2914 = 40.2% (34.0%, 46.7%)	2603.6/2914 = 89.3% (83.7%, 93.2%)	2170.6/2914 = 74.5% (67.7%, 80.3%)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Responder	% 2-Fold Rise	% 4-Fold Rise
South Africa	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	68	35/306 = 11.4% (5.5%, 22.2%)	120.1/306 = 39.2% (27.7%, 52.1%)	80.5/306 = 26.3% (16.9%, 38.6%)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	216.5/306 = 70.8% (57.5%, 81.2%)	273/306 = 89.2% (77.3%, 95.3%)	230/306 = 75.2% (62.0%, 84.9%)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	204/306 = 66.7% (53.8%, 77.5%)	287.5/306 = 93.9% (82.3%, 98.1%)	263.1/306 = 86.0% (73.7%, 93.1%)
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)	0/2937 = 0.0% (0.0%, 0.0%)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	12.9/289 = 4.5% (1.8%, 10.8%)	49.6/289 = 17.2% (10.2%, 27.4%)	38.1/289 = 13.2% (7.1%, 23.1%)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	122.9/289 = 42.5% (31.5%, 54.4%)	197.2/289 = 68.2% (55.1%, 79.0%)	141.4/289 = 48.9% (37.1%, 60.9%)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	78.4/289 = 27.1% (18.4%, 38.0%)	208.1/289 = 72.0% (58.8%, 82.3%)	151.2/289 = 52.3% (41.2%, 63.2%)

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 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 (IU/ml)	830	1146.3/18139.3 = 6.3% (4.8%, 8.2%)	4662.7/18139.3 = 25.7% (22.6%, 29.0%)	2880.4/18139.3 = 15.9% (13.4%, 18.7%)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	830	9718.2/18139.3 = 53.6% (49.8%, 57.3%)	13542.3/18139.3 = 74.7% (71.1%, 78.0%)	10911.8/18139.3 = 60.2% (56.4%, 63.8%)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	830	7564.4/18139.3 = 41.7% (38.2%, 45.3%)	15779.8/18139.3 = 87.0% (84.0%, 89.5%)	13318.3/18139.3 = 73.4% (69.8%, 76.8%)
Negative	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	262	242.1/1955.4 = 12.4% (8.5%, 17.6%)	737.2/1955.4 = 37.7% (31.6%, 44.2%)	431.8/1955.4 = 22.1% (17.4%, 27.6%)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	262	1225.2/1955.4 = 62.7% (55.6%, 69.2%)	1680.4/1955.4 = 85.9% (79.8%, 90.4%)	1429.4/1955.4 = 73.1% (66.2%, 79.0%)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	262	1037.8/1955.4 = 53.1% (46.5%, 59.6%)	1751.4/1955.4 = 89.6% (83.7%, 93.5%)	1529.3/1955.4 = 78.2% (71.5%, 83.7%)
Negative	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	103	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)	0/18458.7 = 0.0% (0.0%, 0.0%)
Negative	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	260	78.6/1949.2 = 4.0% (2.2%, 7.4%)	383.1/1949.2 = 19.7% (14.9%, 25.5%)	198.6/1949.2 = 10.2% (6.9%, 14.9%)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	260	971.6/1949.2 = 49.8% (43.1%, 56.6%)	1361/1949.2 = 69.8% (63.0%, 75.8%)	1138/1949.2 = 58.4% (51.5%, 64.9%)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	260	574.7/1949.2 = 29.5% (24.3%, 35.3%)	1614.9/1949.2 = 82.9% (77.2%, 87.3%)	1125.4/1949.2 = 57.7% (50.8%, 64.3%)
Positive	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	71	73.1/1161.7 = 6.3% (2.9%, 13.3%)	175.2/1161.7 = 15.1% (8.1%, 26.4%)	106.8/1161.7 = 9.2% (4.8%, 17.0%)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	71	473.2/1161.7 = 40.7% (28.4%, 54.3%)	774.5/1161.7 = 66.7% (51.2%, 79.2%)	559.3/1161.7 = 48.1% (34.7%, 61.8%)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	71	368.4/1161.7 = 31.7% (21.4%, 44.2%)	983.8/1161.7 = 84.7% (67.9%, 93.5%)	783.5/1161.7 = 67.4% (51.6%, 80.1%)

(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 (IU/ml)	18	11.1/119.6 = 9.3% (1.6%, 39.6%)	29/119.6 = 24.2% (7.7%, 55.1%)	20.5/119.6 = 17.2% (4.1%, 50.4%)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	18	99.3/119.6 = 83.0% (55.4%, 95.1%)	103.2/119.6 = 86.3% (58.2%, 96.6%)	103.2/119.6 = 86.3% (58.2%, 96.6%)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	18	74/119.6 = 61.9% (31.5%, 85.1%)	107.7/119.6 = 90.1% (44.1%, 99.0%)	107.7/119.6 = 90.1% (44.1%, 99.0%)
Positive	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0/750.3 = 0.0%	0/750.3 = 0.0%	0/750.3 = 0.0%
Positive	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	20	8.6/107.8 = 7.9% (1.4%, 34.9%)	40.8/107.8 = 37.8% (14.8%, 68.0%)	35.3/107.8 = 32.7% (11.4%, 64.8%)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	20	75/107.8 = 69.5% (39.9%, 88.7%)	85.1/107.8 = 78.9% (45.7%, 94.4%)	75/107.8 = 69.5% (39.9%, 88.7%)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	20	42.7/107.8 = 39.6% (16.1%, 69.2%)	87.1/107.8 = 80.7% (46.1%, 95.4%)	85.1/107.8 = 78.9% (45.7%, 94.4%)

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.

1.7 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 (IU/ml)	901	0.05 (0.05, 0.05)
	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	901	0.80 (0.80, 0.80)
	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	901	0.15 (0.15, 0.15)
	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	280	0.05 (0.05, 0.05)
	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	280	0.81 (0.79, 0.82)
	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	280	0.15 (0.15, 0.15)
	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	107	0.05 (0.05, 0.05)
	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	107	0.80 (0.80, 0.80)
	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	107	0.15 (0.15, 0.15)
	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	280	0.05 (0.05, 0.05)
	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	280	0.80 (0.80, 0.80)
	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	280	0.15 (0.15, 0.15)
	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	901	1.30 (1.14, 1.49)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	901	15.35 (13.72, 17.17)
	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	901	8.28 (7.55, 9.08)
	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	280	2.16 (1.70, 2.75)
	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	280	23.59 (19.58, 28.41)
	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	280	12.33 (10.34, 14.70)
	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	107	0.05 (0.05, 0.05)
	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	107	0.80 (0.80, 0.80)
	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	107	0.15 (0.15, 0.15)
	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	280	1.04 (0.85, 1.28)
	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	280	12.43 (10.30, 15.01)
	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	280	5.71 (4.89, 6.66)

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 (IU/ml)	452	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	139	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
Age 18 - 59	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)
Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	141	0.80 (0.80, 0.80)
Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	141	0.15 (0.15, 0.15)
Age 18 - 59	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	0.86 (0.72, 1.03)
Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	9.40 (8.10, 10.91)
Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	5.12 (4.54, 5.78)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	139	1.26 (0.92, 1.74)
Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	139	14.04 (10.96, 17.99)
Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	139	7.10 (5.58, 9.03)
Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	0.75 (0.57, 0.98)
Age 18 - 59	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	8.09 (6.25, 10.45)
Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	3.63 (3.00, 4.38)
Age ≥ 60	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	449	0.05 (0.05, 0.05)
Age ≥ 60	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	0.80 (0.80, 0.80)
Age ≥ 60	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	0.15 (0.15, 0.15)
Age ≥ 60	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)
Age ≥ 60	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	141	0.83 (0.78, 0.88)
Age ≥ 60	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	141	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 (IU/ml)	55	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)
Age \geq 60	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	139	0.05 (0.05, 0.05)
Age \geq 60	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)
Age \geq 60	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.16)
Age \geq 60	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	2.85 (2.37, 3.43)
Age \geq 60	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	38.75 (33.06, 45.41)
Age \geq 60	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	20.51 (17.92, 23.48)
Age \geq 60	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	141	6.00 (4.37, 8.23)
Age \geq 60	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	141	63.15 (49.24, 81.00)
Age \geq 60	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	141	35.14 (28.57, 43.23)
Age \geq 60	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)
Age \geq 60	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)
Age \geq 60	Day 29	Placebo	Negative	Anti Spike IgG (IU/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 (IU/ml)	139	1.95 (1.44, 2.62)
Age \geq 60	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	27.83 (21.92, 35.34)
Age \geq 60	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	13.35 (10.30, 17.30)

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 (IU/ml)	452	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)
At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	142	0.05 (0.05, 0.05)
At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	0.80 (0.80, 0.80)
At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	0.15 (0.15, 0.15)
At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)
At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	139	0.05 (0.05, 0.05)
At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)
At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.16)
At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	452	1.25 (1.05, 1.49)
At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	15.64 (13.41, 18.24)
At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	8.18 (7.19, 9.30)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	2.78 (2.08, 3.72)
At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	29.62 (22.96, 38.21)
At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	13.56 (10.93, 16.83)
At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)
At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)
At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)
At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	139	1.39 (1.03, 1.86)
At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	139	13.56 (10.34, 17.78)
At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	139	6.23 (5.06, 7.67)
Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	449	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	0.80 (0.80, 0.80)
Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	0.15 (0.15, 0.15)
Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	138	0.05 (0.05, 0.05)
Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	138	0.81 (0.79, 0.84)
Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	138	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 (IU/ml)	52	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)
Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	141	0.80 (0.80, 0.80)
Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	141	0.15 (0.15, 0.15)
Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	449	1.34 (1.11, 1.61)
Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	15.16 (12.97, 17.73)
Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	8.35 (7.35, 9.48)
Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	138	1.84 (1.30, 2.60)
Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	138	20.33 (15.70, 26.33)
Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	138	11.59 (8.99, 14.94)
Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	141	0.87 (0.66, 1.15)
Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	141	11.78 (9.13, 15.21)
Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	141	5.40 (4.35, 6.70)

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 (IU/ml)	228	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	228	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	228	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	228	0.90 (0.71, 1.13)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	228	10.60 (8.68, 12.96)
Age 18 - 59 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	228	5.43 (4.58, 6.44)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	1.60 (1.09, 2.35)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	16.81 (11.94, 23.67)
Age 18 - 59 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	7.52 (5.71, 9.90)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age 18 - 59 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	0.98 (0.66, 1.46)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	8.42 (5.79, 12.26)
Age 18 - 59 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	69	3.85 (2.92, 5.07)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	68	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	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 (IU/ml)	25	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	72	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	72	0.15 (0.15, 0.15)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.84 (0.65, 1.08)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	8.67 (7.03, 10.69)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	4.92 (4.17, 5.81)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	68	1.09 (0.68, 1.73)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	12.54 (8.92, 17.63)
Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	6.85 (4.82, 9.73)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	72	0.63 (0.44, 0.91)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	72	7.88 (5.59, 11.13)
Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	72	3.49 (2.71, 4.51)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	28	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	28	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	28	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.16 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	224	2.36 (1.78, 3.12)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	32.86 (26.13, 41.31)
Age \geq 60 At-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	17.87 (14.91, 21.43)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	71	7.40 (4.89, 11.20)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	81.03 (58.21, 112.79)
Age \geq 60 At-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	38.64 (28.26, 52.82)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	28	0.05 (0.05, 0.05)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	28	0.80 (0.80, 0.80)
Age \geq 60 At-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	28	0.15 (0.15, 0.15)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	2.64 (1.79, 3.90)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	32.63 (23.88, 44.59)
Age \geq 60 At-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	15.17 (11.51, 19.98)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	225	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.85 (0.77, 0.94)
Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	3.22 (2.52, 4.12)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	43.18 (34.80, 53.56)
Age \geq 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	22.46 (18.58, 27.14)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	5.18 (3.30, 8.14)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	53.03 (37.25, 75.50)
Age \geq 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	32.88 (24.96, 43.32)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
Age \geq 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	69	1.61 (1.06, 2.44)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	69	25.18 (18.00, 35.22)
Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	69	12.31 (8.37, 18.10)

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 (IU/ml)	399	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	399	0.80 (0.80, 0.80)
Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	399	0.15 (0.15, 0.15)
Male	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	124	0.05 (0.05, 0.05)
Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	124	0.82 (0.78, 0.85)
Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	124	0.15 (0.15, 0.15)
Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)
Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	121	0.05 (0.05, 0.05)
Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	121	0.80 (0.80, 0.80)
Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	121	0.15 (0.15, 0.15)
Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	399	1.48 (1.21, 1.81)
Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	399	16.71 (14.14, 19.74)
Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	399	8.76 (7.60, 10.10)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	124	2.07 (1.45, 2.97)
Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	124	19.43 (14.51, 26.01)
Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	124	10.29 (7.77, 13.61)
Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)
Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)
Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)
Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	121	1.26 (0.91, 1.74)
Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	121	12.81 (9.50, 17.28)
Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	121	5.61 (4.30, 7.31)
Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	502	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	502	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	502	0.15 (0.15, 0.15)
Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	156	0.05 (0.05, 0.05)
Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	156	0.80 (0.80, 0.80)
Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	156	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 (IU/ml)	53	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	53	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	53	0.15 (0.15, 0.15)
Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	159	0.05 (0.05, 0.05)
Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	159	0.80 (0.80, 0.80)
Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	159	0.15 (0.15, 0.15)
Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	502	1.18 (0.98, 1.42)
Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	502	14.39 (12.28, 16.85)
Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	502	7.93 (6.95, 9.03)
Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	156	2.25 (1.62, 3.11)
Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	156	28.12 (21.62, 36.57)
Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	156	14.52 (11.28, 18.69)
Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	53	0.05 (0.05, 0.05)
Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	53	0.80 (0.80, 0.80)
Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	53	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	159	0.89 (0.68, 1.18)
Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	159	12.13 (9.38, 15.70)
Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	159	5.79 (4.75, 7.06)

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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 (IU/ml)	255	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	255	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	255	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	76	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	76	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	76	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	255	0.75 (0.59, 0.95)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	255	8.32 (6.80, 10.17)
Age 18 - 59 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	255	4.86 (4.14, 5.71)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	1.01 (0.67, 1.51)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	15.18 (10.88, 21.16)
Age 18 - 59 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	7.27 (5.24, 10.10)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Age 18 - 59 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	76	0.61 (0.42, 0.88)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	76	7.52 (5.22, 10.83)
Age 18 - 59 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	76	3.34 (2.65, 4.21)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	197	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	197	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	197	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	29	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	29	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	29	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	65	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	65	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	65	0.15 (0.15, 0.15)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	197	1.04 (0.79, 1.35)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	197	11.08 (8.97, 13.70)
Age 18 - 59 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	197	5.49 (4.58, 6.57)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	69	1.57 (0.99, 2.48)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	69	13.05 (9.04, 18.83)
Age 18 - 59 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	69	6.94 (4.88, 9.89)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	29	0.05 (0.05, 0.05)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	29	0.80 (0.80, 0.80)
Age 18 - 59 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	29	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	65	0.94 (0.62, 1.42)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	65	8.78 (6.04, 12.78)
Age 18 - 59 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	65	3.98 (2.91, 5.44)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	247	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	247	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	247	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	86	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	86	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	86	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	83	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	83	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	83	0.15 (0.15, 0.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	247	2.89 (2.27, 3.68)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	247	42.46 (34.71, 51.95)
Age ≥ 60 Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	247	20.83 (17.32, 25.06)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	86	7.67 (5.20, 11.31)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	86	72.08 (52.29, 99.36)
Age ≥ 60 Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	86	41.76 (32.95, 52.94)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)
Age ≥ 60 Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	83	1.71 (1.17, 2.52)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	83	27.34 (20.90, 35.76)
Age ≥ 60 Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	83	14.73 (11.03, 19.67)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	202	0.05 (0.05, 0.05)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	202	0.80 (0.80, 0.80)
Age ≥ 60 Male	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	202	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 (IU/ml)	55	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	55	0.87 (0.76, 1.01)
Age \geq 60 Male	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	56	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	56	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	56	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	202	2.80 (2.10, 3.72)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	202	34.66 (27.08, 44.37)
Age \geq 60 Male	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	202	20.13 (16.58, 24.45)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	55	4.14 (2.50, 6.86)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	55	51.70 (35.43, 75.43)
Age \geq 60 Male	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	55	27.06 (19.07, 38.41)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Male	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Age \geq 60 Male	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	56	2.33 (1.45, 3.74)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	56	28.55 (18.46, 44.14)
Age \geq 60 Male	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	56	11.59 (7.31, 18.38)

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 (IU/ml)	374	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	374	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	374	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	119	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	119	0.81 (0.78, 0.84)
Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	119	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	43	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	43	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	43	0.15 (0.15, 0.15)
Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)
Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	112	0.80 (0.80, 0.80)
Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	112	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	374	1.37 (1.12, 1.68)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	374	15.45 (13.00, 18.36)
Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	374	8.71 (7.55, 10.06)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	119	2.86 (1.96, 4.18)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	119	24.93 (19.16, 32.42)
Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	119	13.17 (10.01, 17.33)
Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	43	0.05 (0.05, 0.05)
Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	43	0.80 (0.80, 0.80)
Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	43	0.15 (0.15, 0.15)
Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	112	0.92 (0.67, 1.25)
Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	112	12.10 (9.05, 16.17)
Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	112	5.47 (4.33, 6.91)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	481	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	481	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	481	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	150	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	150	0.80 (0.79, 0.81)
Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	150	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 (IU/ml)	57	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	57	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	57	0.15 (0.15, 0.15)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	153	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	153	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	153	0.15 (0.15, 0.16)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	481	1.24 (1.03, 1.50)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	481	15.50 (13.30, 18.06)
Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	481	7.84 (6.89, 8.91)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	150	1.65 (1.26, 2.15)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	150	22.69 (17.26, 29.82)
Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	150	11.54 (9.20, 14.48)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	57	0.05 (0.05, 0.05)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	57	0.80 (0.80, 0.80)
Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	57	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	153	1.18 (0.89, 1.56)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	153	13.02 (10.12, 16.75)
Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	153	6.12 (4.97, 7.55)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	46	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	7	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	7	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	7	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	15	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	15	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	15	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	46	1.11 (0.62, 2.01)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	46	13.03 (8.11, 20.93)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	46	7.69 (5.42, 10.93)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	0.84 (0.21, 3.34)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	16.32 (5.47, 48.71)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	10.09 (4.17, 24.39)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	7	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	7	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	7	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	15	1.71 (0.84, 3.50)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	15	11.01 (5.60, 21.63)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	15	4.76 (1.99, 11.39)

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 (IU/ml)	195	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	195	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	195	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	62	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	62	0.81 (0.79, 0.83)
White Non-Hispanic	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	62	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
White Non-Hispanic	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	58	0.05 (0.05, 0.05)
White Non-Hispanic	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	58	0.80 (0.80, 0.80)
White Non-Hispanic	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	58	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	195	1.17 (0.89, 1.54)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	195	15.30 (12.32, 18.99)
White Non-Hispanic	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	195	7.39 (6.17, 8.84)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
White Non-Hispanic	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	62	1.09 (0.74, 1.62)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	62	18.12 (11.59, 28.33)
White Non-Hispanic	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	62	7.84 (5.37, 11.46)
White Non-Hispanic	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)
White Non-Hispanic	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)
White Non-Hispanic	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)
White Non-Hispanic	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	58	1.48 (0.92, 2.37)
White Non-Hispanic	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	58	17.12 (11.08, 26.44)
White Non-Hispanic	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	58	7.26 (5.13, 10.26)
Black or African American	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	314	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	314	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	314	0.15 (0.15, 0.15)
Black or African American	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)
Black or African American	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)
Black or African American	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Black or African American	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)
Black or African American	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	100	0.05 (0.05, 0.05)
Black or African American	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	100	0.80 (0.80, 0.80)
Black or African American	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	100	0.15 (0.15, 0.16)
Black or African American	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	314	1.27 (1.03, 1.57)
Black or African American	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	314	15.07 (12.60, 18.01)
Black or African American	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	314	8.37 (7.16, 9.78)
Black or African American	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	98	2.20 (1.56, 3.09)
Black or African American	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	30.87 (23.48, 40.57)
Black or African American	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	18.40 (14.83, 22.83)
Black or African American	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Black or African American	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Black or African American	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Black or African American	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	100	0.97 (0.69, 1.38)
Black or African American	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	100	9.47 (7.08, 12.67)
Black or African American	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	100	5.44 (4.23, 6.99)
Asian	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)
Asian	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Asian	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Asian	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Asian	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Asian	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Asian	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Asian	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	1.88 (0.99, 3.58)
Asian	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	25.21 (12.24, 51.92)
Asian	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	10.98 (5.34, 22.58)
Asian	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	2.64 (0.77, 9.03)
Asian	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	16.58 (3.13, 88.01)
Asian	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	14.09 (4.27, 46.53)
Asian	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Asian	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Asian	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Asian	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	6	0.35 (0.23, 0.54)
Asian	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	6	7.45 (2.88, 19.25)
Asian	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6	2.09 (1.19, 3.64)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	137	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	137	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	137	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 (IU/ml)	34	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	20	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	20	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	44	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	44	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	44	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	137	1.06 (0.77, 1.46)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	137	13.78 (10.11, 18.80)
American Indian or Alaska Native	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	137	8.40 (6.58, 10.73)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	3.75 (1.88, 7.50)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	24.79 (14.24, 43.17)
American Indian or Alaska Native	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	14.20 (7.84, 25.70)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	20	0.05 (0.05, 0.05)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)
American Indian or Alaska Native	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	20	0.15 (0.15, 0.15)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	44	1.03 (0.61, 1.72)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	44	14.43 (8.81, 23.65)
American Indian or Alaska Native	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	44	6.63 (4.62, 9.49)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Native Hawaiian or Other Pacific Islander	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2	1.01 (0.09, 12.01)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	24.67 (2.98, 203.88)
Native Hawaiian or Other Pacific Islander	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	20.21 (0.92, 443.92)
Multiracial	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)
Multiracial	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	11	0.05 (0.04, 0.06)
Multiracial	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Multiracial	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)
Multiracial	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Multiracial	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Multiracial	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Multiracial	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Multiracial	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	24	4.40 (1.94, 9.98)
Multiracial	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	22.42 (11.95, 42.07)
Multiracial	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	8.07 (4.22, 15.43)
Multiracial	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	11	3.93 (1.53, 10.12)
Multiracial	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	18.16 (7.69, 42.85)
Multiracial	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	19.61 (7.47, 51.50)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Multiracial	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Multiracial	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Multiracial	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Multiracial	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	12	0.65 (0.26, 1.67)
Multiracial	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12	16.90 (8.16, 35.02)
Multiracial	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	12	7.64 (3.23, 18.07)
Not reported and unknown	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Not reported and unknown	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Not reported and unknown	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)
Not reported and unknown	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)
Not reported and unknown	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	13	3.28 (1.07, 10.09)
Not reported and unknown	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	13	25.32 (9.76, 65.68)
Not reported and unknown	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	13	14.24 (8.54, 23.73)
Not reported and unknown	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	5.75 (0.95, 34.90)
Not reported and unknown	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	63.38 (9.05, 444.10)
Not reported and unknown	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	29.71 (4.91, 179.86)
Not reported and unknown	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Not reported and unknown	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Not reported and unknown	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Not reported and unknown	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	2.83 (1.01, 7.97)
Not reported and unknown	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	3	25.97 (12.86, 52.42)
Not reported and unknown	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	11.80 (5.38, 25.88)

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 (IU/ml)	225	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)
URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)
URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	1.62 (1.26, 2.08)
URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	16.77 (13.47, 20.89)
URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	9.25 (7.90, 10.83)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	70	2.44 (1.60, 3.71)
URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	27.15 (19.33, 38.13)
URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	15.40 (11.60, 20.44)
URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	0.61 (0.42, 0.91)
URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	7.50 (5.30, 10.61)
URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	4.38 (3.27, 5.86)
Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	225	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)
Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)
Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)
Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	0.81 (0.79, 0.82)
Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	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 (IU/ml)	25	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)
Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)
Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	225	1.21 (0.93, 1.57)
Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	14.88 (12.20, 18.14)
Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	7.34 (6.21, 8.67)
Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	72	1.17 (0.81, 1.68)
Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	17.83 (11.94, 26.63)
Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	8.47 (6.06, 11.85)
Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)
Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)
Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	1.38 (0.91, 2.07)
Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	15.22 (10.53, 22.00)
Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	6.39 (4.68, 8.72)

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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 (IU/ml)	114	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	114	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	114	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	35	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	35	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	35	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	114	1.09 (0.78, 1.54)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	114	10.15 (7.52, 13.69)
Age 18 - 59 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	114	5.73 (4.62, 7.10)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	1.74 (0.99, 3.05)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	19.78 (12.48, 31.37)
Age 18 - 59 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	11.08 (7.56, 16.25)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age 18 - 59 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	0.42 (0.25, 0.72)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	4.26 (2.68, 6.77)
Age 18 - 59 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	35	2.61 (1.84, 3.71)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	113	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	113	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	113	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	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 (IU/ml)	12	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	113	0.85 (0.59, 1.20)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	113	9.38 (7.21, 12.19)
Age 18 - 59 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	113	4.34 (3.47, 5.44)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.49 (0.31, 0.76)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	8.23 (4.82, 14.05)
Age 18 - 59 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	3.88 (2.45, 6.16)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)
Age 18 - 59 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	36	1.10 (0.64, 1.89)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	36	10.65 (6.39, 17.77)
Age 18 - 59 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	36	4.27 (2.83, 6.44)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	111	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	111	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	111	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	34	0.05 (0.05, 0.06)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	35	0.05 (0.05, 0.05)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	35	0.80 (0.80, 0.80)
Age \geq 60 URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	35	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	111	3.32 (2.37, 4.65)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	111	42.16 (31.70, 56.06)
Age ≥ 60 URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	111	22.27 (18.13, 27.34)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	34	4.81 (2.78, 8.32)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	51.36 (34.05, 77.49)
Age ≥ 60 URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	29.87 (21.23, 42.02)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Age ≥ 60 URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	35	1.21 (0.72, 2.03)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	35	20.86 (13.21, 32.95)
Age ≥ 60 URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	35	11.17 (6.88, 18.13)
Age ≥ 60 Non-URM	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)
Age ≥ 60 Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	112	0.80 (0.80, 0.80)
Age ≥ 60 Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	112	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.82 (0.77, 0.88)
Age \geq 60 Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	34	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	34	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	112	2.35 (1.66, 3.34)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	112	34.77 (26.13, 46.25)
Age \geq 60 Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	112	19.24 (15.44, 23.97)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	36	6.49 (3.85, 10.95)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	80.59 (49.63, 130.88)
Age \geq 60 Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	38.83 (28.64, 52.64)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)
Age \geq 60 Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	34	2.12 (1.17, 3.83)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	34	30.41 (20.13, 45.96)
Age \geq 60 Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	34	13.94 (9.10, 21.33)

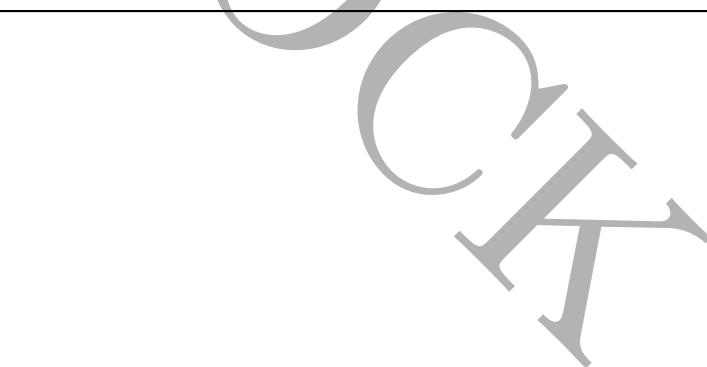


Table 7k. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Country

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Country						
United States	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	450	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	450	0.80 (0.80, 0.80)
United States	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	450	0.15 (0.15, 0.15)
United States	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	142	0.05 (0.05, 0.05)
United States	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	0.80 (0.79, 0.81)
United States	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	0.15 (0.15, 0.15)
United States	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
United States	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
United States	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	140	0.05 (0.05, 0.05)
United States	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	140	0.80 (0.80, 0.80)
United States	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	140	0.15 (0.15, 0.15)
United States	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	450	1.38 (1.15, 1.66)
United States	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	450	15.71 (13.56, 18.20)
United States	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	450	8.15 (7.26, 9.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
United States	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	142	1.63 (1.23, 2.15)
United States	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	21.55 (16.48, 28.19)
United States	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	11.09 (8.86, 13.89)
United States	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)
United States	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)
United States	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)
United States	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	140	0.95 (0.72, 1.27)
United States	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	140	11.02 (8.53, 14.24)
United States	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	140	5.38 (4.33, 6.67)
Argentina	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)
Argentina	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)
Argentina	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)
Argentina	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Argentina	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)
Argentina	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)
Argentina	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)
Argentina	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	31	1.51 (0.82, 2.81)
Argentina	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	22.43 (11.50, 43.77)
Argentina	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	9.81 (5.36, 17.94)
Argentina	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	9	5.55 (2.35, 13.12)
Argentina	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	9	20.89 (6.97, 62.56)
Argentina	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	9	19.07 (6.90, 52.66)
Argentina	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Argentina	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Argentina	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Argentina	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	9	0.69 (0.31, 1.56)
Argentina	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	9	20.41 (9.09, 45.81)
Argentina	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	9	4.26 (2.15, 8.44)
Brazil	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	103	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	103	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	103	0.15 (0.15, 0.15)
Brazil	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)
Brazil	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)
Brazil	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	10	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	10	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	10	0.15 (0.15, 0.15)
Brazil	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)
Brazil	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)
Brazil	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Brazil	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	103	1.01 (0.71, 1.45)
Brazil	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	103	11.62 (8.61, 15.69)
Brazil	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	103	7.31 (5.80, 9.23)
Brazil	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	23	1.61 (0.63, 4.14)
Brazil	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	22.80 (11.24, 46.26)
Brazil	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	11.02 (5.65, 21.50)
Brazil	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	10	0.05 (0.05, 0.05)
Brazil	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	10	0.80 (0.80, 0.80)
Brazil	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	10	0.15 (0.15, 0.15)
Brazil	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	31	1.06 (0.59, 1.90)
Brazil	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	31	11.67 (6.55, 20.77)
Brazil	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	31	5.50 (3.59, 8.43)
Chile	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	15	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	15	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	15	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Chile	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)
Chile	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)
Chile	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)
Chile	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)
Chile	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)
Chile	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	15	1.08 (0.26, 4.40)
Chile	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15	16.33 (7.68, 34.74)
Chile	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	15	6.00 (3.12, 11.53)
Chile	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6	3.69 (1.37, 9.92)
Chile	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	21.40 (11.09, 41.32)
Chile	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	9.18 (5.27, 15.98)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Chile	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Chile	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Chile	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Chile	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2	0.76 (0.24, 2.36)
Chile	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	2	4.83 (4.44, 5.25)
Chile	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	2	4.27 (3.55, 5.14)
Columbia	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	47	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	47	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	47	0.15 (0.15, 0.15)
Columbia	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	20	0.05 (0.05, 0.05)
Columbia	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)
Columbia	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	20	0.15 (0.15, 0.15)
Columbia	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	8	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	8	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	8	0.15 (0.15, 0.15)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Columbia	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)
Columbia	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)
Columbia	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)
Columbia	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	47	1.81 (1.02, 3.23)
Columbia	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	47	24.20 (13.77, 42.54)
Columbia	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	47	10.46 (6.36, 17.21)
Columbia	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	20	3.86 (1.57, 9.51)
Columbia	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	20	30.27 (16.40, 55.88)
Columbia	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	20	11.06 (5.58, 21.90)
Columbia	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	8	0.05 (0.05, 0.05)
Columbia	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	8	0.80 (0.80, 0.80)
Columbia	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	8	0.15 (0.15, 0.15)
Columbia	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	14	0.97 (0.48, 1.97)
Columbia	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	14	20.65 (12.07, 35.33)
Columbia	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	14	7.79 (4.46, 13.62)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)
Mexico	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)
Mexico	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Mexico	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Mexico	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Mexico	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)
Mexico	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)
Mexico	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)
Mexico	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	5	6.38 (2.06, 19.70)
Mexico	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	18.35 (4.68, 71.98)
Mexico	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	14.15 (4.44, 45.04)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Mexico	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	4	2.53 (0.65, 9.86)
Mexico	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	33.18 (12.28, 89.62)
Mexico	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	36.66 (11.12, 120.86)
Mexico	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)
Mexico	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)
Mexico	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)
Mexico	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	3	9.42 (4.90, 18.09)
Mexico	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	3	27.26 (17.47, 42.53)
Mexico	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3	12.55 (2.76, 57.12)
Peru	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	26	0.05 (0.05, 0.05)
Peru	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	26	0.80 (0.80, 0.80)
Peru	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	26	0.15 (0.15, 0.15)
Peru	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	8	0.05 (0.04, 0.07)
Peru	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	8	1.00 (0.65, 1.55)
Peru	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	8	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 (IU/ml)	4	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Peru	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)
Peru	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)
Peru	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)
Peru	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	26	0.97 (0.47, 1.98)
Peru	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	26	10.49 (5.21, 21.11)
Peru	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	26	8.24 (4.08, 16.63)
Peru	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	8	2.67 (0.92, 7.71)
Peru	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	8	25.32 (12.09, 53.05)
Peru	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	8	12.81 (5.11, 32.11)
Peru	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Peru	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Peru	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	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 (IU/ml)	11	1.50 (0.84, 2.69)
Peru	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	11	18.74 (8.10, 43.32)
Peru	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	11	8.00 (4.25, 15.07)
South Africa	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)
South Africa	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	68	0.05 (0.05, 0.05)
South Africa	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	0.80 (0.80, 0.80)
South Africa	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
South Africa	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)
South Africa	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)
South Africa	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.16 (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 (IU/ml)	224	1.28 (1.01, 1.61)
South Africa	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	16.27 (13.48, 19.62)
South Africa	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	8.83 (7.52, 10.37)
South Africa	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	68	2.24 (1.38, 3.64)
South Africa	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	26.03 (17.75, 38.19)
South Africa	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	15.98 (11.90, 21.45)
South Africa	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)
South Africa	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)
South Africa	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)
South Africa	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	70	1.00 (0.67, 1.49)
South Africa	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	70	10.07 (6.97, 14.55)
South Africa	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	70	5.42 (3.92, 7.49)

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 (IU/ml)	830	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	830	0.80 (0.80, 0.80)
Negative	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	830	0.15 (0.15, 0.15)
Negative	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	262	0.05 (0.05, 0.05)
Negative	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	262	0.81 (0.79, 0.83)
Negative	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	262	0.15 (0.15, 0.15)
Negative	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	103	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	103	0.80 (0.80, 0.80)
Negative	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	103	0.15 (0.15, 0.15)
Negative	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	260	0.05 (0.05, 0.05)
Negative	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	260	0.80 (0.80, 0.80)
Negative	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	260	0.15 (0.15, 0.15)
Negative	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	830	1.32 (1.15, 1.52)
Negative	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	830	15.80 (14.07, 17.74)
Negative	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	830	8.37 (7.60, 9.22)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	GMT/GMC
Negative	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	262	2.22 (1.72, 2.85)
Negative	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	262	23.57 (19.37, 28.69)
Negative	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	262	12.22 (10.14, 14.72)
Negative	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	103	0.05 (0.05, 0.05)
Negative	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	103	0.80 (0.80, 0.80)
Negative	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	103	0.15 (0.15, 0.15)
Negative	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	260	0.97 (0.78, 1.19)
Negative	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	260	12.01 (9.90, 14.58)
Negative	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	260	5.59 (4.76, 6.56)
Positive	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)
Positive	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)
Positive	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	18	0.05 (0.05, 0.05)
Positive	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	18	0.80 (0.80, 0.80)
Positive	Day 1	Vaccine	Positive	Anti Spike IgG (IU/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 (IU/ml)	4	0.05 (0.05, 0.05)
Positive	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)
Positive	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	20	0.05 (0.04, 0.06)
Positive	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)
Positive	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	20	0.16 (0.15, 0.16)
Positive	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	71	1.01 (0.61, 1.66)
Positive	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	71	9.82 (6.12, 15.75)
Positive	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	71	6.93 (4.85, 9.90)
Positive	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	18	1.44 (0.67, 3.12)
Positive	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	18	23.83 (14.39, 39.47)
Positive	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	18	14.23 (7.36, 27.48)
Positive	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)
Positive	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)
Positive	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	4	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 (IU/ml)	20	4.10 (2.21, 7.61)
Positive	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	20	23.18 (9.59, 56.01)
Positive	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	20	8.29 (4.04, 17.02)

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

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

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
All participants								
	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	901	0.05 (0.05, 0.05)	1.30 (1.14, 1.49)	1.59 (1.50, 1.69)
	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	901	0.80 (0.80, 0.80)	15.35 (13.72, 17.17)	6.49 (5.86, 7.19)
	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	901	0.15 (0.15, 0.15)	8.28 (7.55, 9.08)	9.02 (8.25, 9.86)
	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	280	0.05 (0.05, 0.05)	2.16 (1.70, 2.75)	2.03 (1.77, 2.33)
	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	280	0.81 (0.79, 0.82)	23.59 (19.58, 28.41)	9.80 (8.24, 11.67)
	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	280	0.15 (0.15, 0.15)	12.33 (10.34, 14.70)	13.51 (11.38, 16.03)
	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	107	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	107	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	107	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	280	0.05 (0.05, 0.05)	1.04 (0.85, 1.28)	1.40 (1.28, 1.54)
	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	280	0.80 (0.80, 0.80)	12.43 (10.30, 15.01)	5.36 (4.52, 6.36)
	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	280	0.15 (0.15, 0.15)	5.71 (4.89, 6.66)	6.18 (5.32, 7.18)

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 (IU/ml)	452	0.05 (0.05, 0.05)	0.86 (0.72, 1.03)	1.32 (1.23, 1.42)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)	9.40 (8.10, 10.91)	4.10 (3.59, 4.68)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)	5.12 (4.54, 5.78)	5.62 (5.01, 6.30)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	139	0.05 (0.05, 0.05)	1.26 (0.92, 1.74)	1.52 (1.29, 1.80)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)	14.04 (10.96, 17.99)	6.04 (4.81, 7.57)
Age 18 - 59	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.15)	7.10 (5.58, 9.03)	7.82 (6.20, 9.86)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)	0.75 (0.57, 0.98)	1.26 (1.13, 1.41)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	141	0.80 (0.80, 0.80)	8.09 (6.25, 10.45)	3.63 (2.88, 4.57)
Age 18 - 59	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	141	0.15 (0.15, 0.15)	3.63 (3.00, 4.38)	3.86 (3.19, 4.66)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	449	0.05 (0.05, 0.05)	2.85 (2.37, 3.43)	2.25 (2.00, 2.54)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	0.80 (0.80, 0.80)	38.75 (33.06, 45.41)	15.42 (13.18, 18.03)
Age ≥ 60	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	0.15 (0.15, 0.15)	20.51 (17.92, 23.48)	22.02 (19.18, 25.28)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)	6.00 (4.37, 8.23)	3.49 (2.73, 4.47)
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	141	0.83 (0.78, 0.88)	63.15 (49.24, 81.00)	24.60 (19.17, 31.58)
Age \geq 60	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	141	0.15 (0.15, 0.15)	35.14 (28.57, 43.23)	38.14 (31.00, 46.91)
Age \geq 60	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/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 (IU/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 (IU/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 (IU/ml)	139	0.05 (0.05, 0.05)	1.95 (1.44, 2.62)	1.71 (1.46, 2.01)
Age \geq 60	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)	27.83 (21.92, 35.34)	11.14 (8.84, 14.03)
Age \geq 60	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.16)	13.35 (10.30, 17.30)	14.93 (11.79, 18.89)

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 (IU/ml)	452	0.05 (0.05, 0.05)	1.25 (1.05, 1.49)	1.54 (1.42, 1.67)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	452	0.80 (0.80, 0.80)	15.64 (13.41, 18.24)	6.57 (5.70, 7.56)
At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	452	0.15 (0.15, 0.15)	8.18 (7.19, 9.30)	8.94 (7.90, 10.11)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	142	0.05 (0.05, 0.05)	2.78 (2.08, 3.72)	2.26 (1.90, 2.69)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	0.80 (0.80, 0.80)	29.62 (22.96, 38.21)	12.30 (9.73, 15.55)
At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	0.15 (0.15, 0.15)	13.56 (10.93, 16.83)	14.70 (11.89, 18.17)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	55	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	139	0.05 (0.05, 0.05)	1.39 (1.03, 1.86)	1.50 (1.30, 1.74)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	139	0.80 (0.80, 0.80)	13.56 (10.34, 17.78)	5.85 (4.55, 7.51)
At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	139	0.15 (0.15, 0.16)	6.23 (5.06, 7.67)	6.77 (5.55, 8.27)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	449	0.05 (0.05, 0.05)	1.34 (1.11, 1.61)	1.62 (1.49, 1.77)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	449	0.80 (0.80, 0.80)	15.16 (12.97, 17.73)	6.44 (5.58, 7.42)
Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	449	0.15 (0.15, 0.15)	8.35 (7.35, 9.48)	9.07 (8.02, 10.26)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	138	0.05 (0.05, 0.05)	1.84 (1.30, 2.60)	1.89 (1.55, 2.31)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	138	0.81 (0.79, 0.84)	20.33 (15.70, 26.33)	8.45 (6.63, 10.78)
Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	138	0.15 (0.15, 0.15)	11.59 (8.99, 14.94)	12.78 (9.99, 16.36)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	141	0.05 (0.05, 0.05)	0.87 (0.66, 1.15)	1.35 (1.19, 1.52)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	141	0.80 (0.80, 0.80)	11.78 (9.13, 15.21)	5.08 (4.03, 6.40)
Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	141	0.15 (0.15, 0.15)	5.40 (4.35, 6.70)	5.83 (4.73, 7.20)

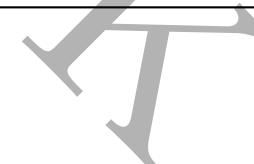


Table 8d. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, Risk for Severe Covid-19

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 (IU/ml)	228	0.05 (0.05, 0.05)	0.90 (0.71, 1.13)	1.30 (1.19, 1.42)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	228	0.80 (0.80, 0.80)	10.60 (8.68, 12.96)	4.59 (3.83, 5.49)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	228	0.15 (0.15, 0.15)	5.43 (4.58, 6.44)	5.99 (5.10, 7.04)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)	1.60 (1.09, 2.35)	1.63 (1.37, 1.93)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)	16.81 (11.94, 23.67)	7.18 (5.29, 9.74)
Age 18 - 59 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)	7.52 (5.71, 9.90)	8.15 (6.23, 10.65)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)	0.98 (0.66, 1.46)	1.31 (1.09, 1.57)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)	8.42 (5.79, 12.26)	3.82 (2.72, 5.36)
Age 18 - 59 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)	3.85 (2.92, 5.07)	4.20 (3.24, 5.44)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)	0.84 (0.65, 1.08)	1.34 (1.21, 1.48)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)	8.67 (7.03, 10.69)	3.81 (3.16, 4.58)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)	4.92 (4.17, 5.81)	5.38 (4.59, 6.30)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	68	0.05 (0.05, 0.05)	1.09 (0.68, 1.73)	1.46 (1.14, 1.87)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	0.80 (0.80, 0.80)	12.54 (8.92, 17.63)	5.42 (3.95, 7.42)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	0.15 (0.15, 0.15)	6.85 (4.82, 9.73)	7.62 (5.43, 10.69)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)	0.63 (0.44, 0.91)	1.24 (1.07, 1.43)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	72	0.80 (0.80, 0.80)	7.88 (5.59, 11.13)	3.52 (2.59, 4.78)
Age 18 - 59 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	72	0.15 (0.15, 0.15)	3.49 (2.71, 4.51)	3.66 (2.82, 4.75)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)	2.36 (1.78, 3.12)	2.15 (1.81, 2.55)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)	32.86 (26.13, 41.31)	13.03 (10.41, 16.32)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)	17.87 (14.91, 21.43)	19.17 (15.93, 23.08)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)	7.40 (4.89, 11.20)	4.04 (2.80, 5.83)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)	81.03 (58.21, 112.79)	32.02 (22.94, 44.72)
Age ≥ 60 At-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)	38.64 (28.26, 52.82)	41.93 (30.67, 57.32)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	28	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	28	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	28	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	2.64 (1.79, 3.90)	1.94 (1.52, 2.46)
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	32.63 (23.88, 44.59)	12.83 (9.33, 17.65)
Age \geq 60 At-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.16 (0.15, 0.16)	15.17 (11.51, 19.98)	16.38 (12.42, 21.61)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	225	0.05 (0.05, 0.05)	3.22 (2.52, 4.12)	2.33 (1.98, 2.73)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)	43.18 (34.80, 53.56)	17.21 (13.91, 21.31)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)	22.46 (18.58, 27.14)	24.12 (19.88, 29.26)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	5.18 (3.30, 8.14)	3.15 (2.26, 4.39)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.85 (0.77, 0.94)	53.03 (37.25, 75.50)	20.45 (14.36, 29.11)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)	32.88 (24.96, 43.32)	35.69 (27.09, 47.01)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)	1.61 (1.06, 2.44)	1.58 (1.28, 1.96)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)	25.18 (18.00, 35.22)	10.18 (7.41, 13.99)
Age \geq 60 Not at-risk	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)	12.31 (8.37, 18.10)	14.08 (10.00, 19.81)

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 (IU/ml)	399	0.05 (0.05, 0.05)	1.48 (1.21, 1.81)	1.68 (1.52, 1.86)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	399	0.80 (0.80, 0.80)	16.71 (14.14, 19.74)	6.96 (5.95, 8.13)
Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	399	0.15 (0.15, 0.15)	8.76 (7.60, 10.10)	9.50 (8.25, 10.94)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	124	0.05 (0.05, 0.05)	2.07 (1.45, 2.97)	2.00 (1.61, 2.49)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	124	0.82 (0.78, 0.85)	19.43 (14.51, 26.01)	8.26 (6.34, 10.76)
Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	124	0.15 (0.15, 0.15)	10.29 (7.77, 13.61)	11.48 (8.82, 14.94)
Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	54	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	54	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	54	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	121	0.05 (0.05, 0.05)	1.26 (0.91, 1.74)	1.50 (1.29, 1.74)
Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	121	0.80 (0.80, 0.80)	12.81 (9.50, 17.28)	5.52 (4.22, 7.22)
Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	121	0.15 (0.15, 0.15)	5.61 (4.30, 7.31)	6.19 (4.82, 7.96)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	502	0.05 (0.05, 0.05)	1.18 (0.98, 1.42)	1.53 (1.41, 1.65)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	502	0.80 (0.80, 0.80)	14.39 (12.28, 16.85)	6.15 (5.33, 7.10)
Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	502	0.15 (0.15, 0.15)	7.93 (6.95, 9.03)	8.66 (7.64, 9.81)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	156	0.05 (0.05, 0.05)	2.25 (1.62, 3.11)	2.06 (1.71, 2.46)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	156	0.80 (0.80, 0.80)	28.12 (21.62, 36.57)	11.44 (8.89, 14.72)
Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	156	0.15 (0.15, 0.15)	14.52 (11.28, 18.69)	15.65 (12.16, 20.16)
Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	53	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	53	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	53	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	159	0.05 (0.05, 0.05)	0.89 (0.68, 1.18)	1.33 (1.19, 1.49)
Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	159	0.80 (0.80, 0.80)	12.13 (9.38, 15.70)	5.23 (4.14, 6.62)
Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	159	0.15 (0.15, 0.15)	5.79 (4.75, 7.06)	6.16 (5.05, 7.53)

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 (IU/ml)	255	0.05 (0.05, 0.05)	0.75 (0.59, 0.95)	1.27 (1.17, 1.37)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	255	0.80 (0.80, 0.80)	8.32 (6.80, 10.17)	3.72 (3.12, 4.43)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	255	0.15 (0.15, 0.15)	4.86 (4.14, 5.71)	5.34 (4.60, 6.20)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	1.01 (0.67, 1.51)	1.34 (1.17, 1.54)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	15.18 (10.88, 21.16)	6.27 (4.59, 8.56)
Age 18 - 59 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)	7.27 (5.24, 10.10)	7.80 (5.61, 10.84)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	76	0.05 (0.05, 0.05)	0.61 (0.42, 0.88)	1.18 (1.04, 1.34)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	76	0.80 (0.80, 0.80)	7.52 (5.22, 10.83)	3.38 (2.44, 4.69)
Age 18 - 59 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	76	0.15 (0.15, 0.15)	3.34 (2.65, 4.21)	3.52 (2.79, 4.44)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	197	0.05 (0.05, 0.05)	1.04 (0.79, 1.35)	1.40 (1.24, 1.59)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	197	0.80 (0.80, 0.80)	11.08 (8.97, 13.70)	4.69 (3.86, 5.70)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	197	0.15 (0.15, 0.15)	5.49 (4.58, 6.57)	6.01 (5.05, 7.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	69	0.05 (0.05, 0.05)	1.57 (0.99, 2.48)	1.72 (1.30, 2.27)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	69	0.80 (0.80, 0.80)	13.05 (9.04, 18.83)	5.83 (4.20, 8.09)
Age 18 - 59 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	69	0.15 (0.15, 0.15)	6.94 (4.88, 9.89)	7.84 (5.64, 10.88)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	29	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	29	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	29	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	65	0.05 (0.05, 0.05)	0.94 (0.62, 1.42)	1.36 (1.13, 1.64)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	65	0.80 (0.80, 0.80)	8.78 (6.04, 12.78)	3.93 (2.83, 5.47)
Age 18 - 59 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	65	0.15 (0.15, 0.15)	3.98 (2.91, 5.44)	4.28 (3.15, 5.82)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	247	0.05 (0.05, 0.05)	2.89 (2.27, 3.68)	2.21 (1.88, 2.59)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	247	0.80 (0.80, 0.80)	42.46 (34.71, 51.95)	16.67 (13.60, 20.43)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	247	0.15 (0.15, 0.15)	20.83 (17.32, 25.06)	22.51 (18.68, 27.12)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	86	0.05 (0.05, 0.05)	7.67 (5.20, 11.31)	3.94 (2.76, 5.62)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	86	0.80 (0.80, 0.80)	72.08 (52.29, 99.36)	28.70 (20.82, 39.56)
Age \geq 60 Female	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	86	0.15 (0.15, 0.15)	41.76 (32.95, 52.94)	45.32 (35.76, 57.45)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	30	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	30	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	30	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	83	0.05 (0.05, 0.05)	1.71 (1.17, 2.52)	1.63 (1.32, 2.01)
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	83	0.80 (0.80, 0.80)	27.34 (20.90, 35.76)	11.00 (8.46, 14.30)
Age \geq 60 Female	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	83	0.15 (0.15, 0.16)	14.73 (11.03, 19.67)	15.98 (11.98, 21.32)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	202	0.05 (0.05, 0.05)	2.80 (2.10, 3.72)	2.31 (1.94, 2.75)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	202	0.80 (0.80, 0.80)	34.66 (27.08, 44.37)	14.02 (11.05, 17.79)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	202	0.15 (0.15, 0.15)	20.13 (16.58, 24.45)	21.44 (17.53, 26.23)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	55	0.05 (0.05, 0.05)	4.14 (2.50, 6.86)	2.91 (2.15, 3.94)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	55	0.87 (0.76, 1.01)	51.70 (35.43, 75.43)	19.49 (13.38, 28.37)
Age \geq 60 Male	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	55	0.15 (0.15, 0.15)	27.06 (19.07, 38.41)	29.37 (20.70, 41.68)
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	56	0.05 (0.05, 0.05)	2.33 (1.45, 3.74)	1.83 (1.42, 2.34)
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	56	0.80 (0.80, 0.80)	28.55 (18.46, 44.14)	11.33 (7.46, 17.21)
Age \geq 60 Male	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	56	0.15 (0.15, 0.15)	11.59 (7.31, 18.38)	13.53 (9.21, 19.88)

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 (IU/ml)	374	0.05 (0.05, 0.05)	1.37 (1.12, 1.68)	1.59 (1.45, 1.75)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	374	0.80 (0.80, 0.80)	15.45 (13.00, 18.36)	6.52 (5.56, 7.65)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	374	0.15 (0.15, 0.15)	8.71 (7.55, 10.06)	9.47 (8.24, 10.88)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	119	0.05 (0.05, 0.05)	2.86 (1.96, 4.18)	2.30 (1.82, 2.90)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	119	0.81 (0.78, 0.84)	24.93 (19.16, 32.42)	9.97 (7.73, 12.87)
Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	119	0.15 (0.15, 0.15)	13.17 (10.01, 17.33)	14.34 (10.94, 18.81)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	43	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	43	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	43	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)	0.92 (0.67, 1.25)	1.37 (1.19, 1.57)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	112	0.80 (0.80, 0.80)	12.10 (9.05, 16.17)	5.30 (4.09, 6.88)
Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	112	0.15 (0.15, 0.15)	5.47 (4.33, 6.91)	6.00 (4.80, 7.50)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	481	0.05 (0.05, 0.05)	1.24 (1.03, 1.50)	1.59 (1.47, 1.73)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	481	0.80 (0.80, 0.80)	15.50 (13.30, 18.06)	6.54 (5.70, 7.51)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	481	0.15 (0.15, 0.15)	7.84 (6.89, 8.91)	8.55 (7.55, 9.67)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	150	0.05 (0.05, 0.05)	1.65 (1.26, 2.15)	1.75 (1.53, 2.00)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	150	0.80 (0.79, 0.81)	22.69 (17.26, 29.82)	9.95 (7.85, 12.61)
Not Hispanic or Latino	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	150	0.15 (0.15, 0.15)	11.54 (9.20, 14.48)	12.75 (10.30, 15.78)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	57	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	57	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	57	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	153	0.05 (0.05, 0.05)	1.18 (0.89, 1.56)	1.44 (1.27, 1.64)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	153	0.80 (0.80, 0.80)	13.02 (10.12, 16.75)	5.51 (4.36, 6.97)
Not Hispanic or Latino	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	153	0.15 (0.15, 0.16)	6.12 (4.97, 7.55)	6.41 (5.16, 7.96)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	46	0.05 (0.05, 0.05)	1.11 (0.62, 2.01)	1.53 (1.21, 1.93)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	46	0.80 (0.80, 0.80)	13.03 (8.11, 20.93)	5.71 (3.76, 8.67)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	46	0.15 (0.15, 0.15)	7.69 (5.42, 10.93)	8.49 (6.06, 11.88)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)	0.84 (0.21, 3.34)	1.84 (0.99, 3.42)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)	16.32 (5.47, 48.71)	6.26 (2.00, 19.64)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)	10.09 (4.17, 24.39)	10.95 (4.53, 26.47)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	7	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	7	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	7	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	15	0.05 (0.05, 0.05)	1.71 (0.84, 3.50)	1.44 (1.01, 2.06)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	15	0.80 (0.80, 0.80)	11.01 (5.60, 21.63)	4.59 (2.46, 8.56)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	15	0.15 (0.15, 0.15)	4.76 (1.99, 11.39)	6.19 (3.08, 12.41)



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 (IU/ml)	195	0.05 (0.05, 0.05)	1.17 (0.89, 1.54)	1.55 (1.38, 1.74)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	195	0.80 (0.80, 0.80)	15.30 (12.32, 18.99)	6.37 (5.22, 7.79)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	195	0.15 (0.15, 0.15)	7.39 (6.17, 8.84)	7.94 (6.65, 9.48)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	62	0.05 (0.05, 0.05)	1.09 (0.74, 1.62)	1.60 (1.34, 1.91)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	62	0.81 (0.79, 0.83)	18.12 (11.59, 28.33)	8.46 (5.85, 12.24)
White Non-Hispanic	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	62	0.15 (0.15, 0.15)	7.84 (5.37, 11.46)	8.96 (6.37, 12.61)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	22	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	22	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	22	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	58	0.05 (0.05, 0.05)	1.48 (0.92, 2.37)	1.61 (1.27, 2.04)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	58	0.80 (0.80, 0.80)	17.12 (11.08, 26.44)	7.07 (4.68, 10.67)
White Non-Hispanic	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	58	0.15 (0.15, 0.15)	7.26 (5.13, 10.26)	7.56 (5.27, 10.85)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	314	0.05 (0.05, 0.05)	1.27 (1.03, 1.57)	1.51 (1.37, 1.67)
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	314	0.80 (0.80, 0.80)	15.07 (12.60, 18.01)	6.32 (5.36, 7.44)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Black or African American	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	314	0.15 (0.15, 0.15)	8.37 (7.16, 9.78)	9.18 (7.90, 10.66)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	98	0.05 (0.05, 0.05)	2.20 (1.56, 3.09)	1.85 (1.53, 2.22)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	98	0.80 (0.80, 0.80)	30.87 (23.48, 40.57)	12.39 (9.47, 16.22)
Black or African American	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	98	0.15 (0.15, 0.15)	18.40 (14.83, 22.83)	19.68 (15.74, 24.62)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	100	0.05 (0.05, 0.05)	0.97 (0.69, 1.38)	1.39 (1.20, 1.61)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	100	0.80 (0.80, 0.80)	9.47 (7.08, 12.67)	4.10 (3.14, 5.36)
Black or African American	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	100	0.15 (0.15, 0.16)	5.44 (4.23, 6.99)	5.62 (4.32, 7.31)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	1.88 (0.99, 3.58)	1.55 (1.13, 2.14)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	25.21 (12.24, 51.92)	11.08 (5.81, 21.13)
Asian	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	10.98 (5.34, 22.58)	12.95 (6.98, 24.02)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)	2.64 (0.77, 9.03)	1.81 (0.73, 4.50)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)	16.58 (3.13, 88.01)	8.41 (2.28, 31.00)
Asian	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)	14.09 (4.27, 46.53)	15.30 (4.63, 50.50)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)	0.35 (0.23, 0.54)	1.00 (1.00, 1.00)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)	7.45 (2.88, 19.25)	3.17 (1.30, 7.69)
Asian	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)	2.09 (1.19, 3.64)	2.35 (1.48, 3.73)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	137	0.05 (0.05, 0.05)	1.06 (0.77, 1.46)	1.48 (1.31, 1.68)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	137	0.80 (0.80, 0.80)	13.78 (10.11, 18.80)	6.19 (4.71, 8.14)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	137	0.15 (0.15, 0.15)	8.40 (6.58, 10.73)	9.22 (7.31, 11.63)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	34	0.05 (0.05, 0.05)	3.75 (1.88, 7.50)	2.64 (1.73, 4.03)
American Indian or Alaska Native	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)	24.79 (14.24, 43.17)	10.22 (6.00, 17.42)

(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 (IU/ml)	34	0.15 (0.15, 0.15)	14.20 (7.84, 25.70)	16.26 (9.36, 28.27)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	20	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 (IU/ml)	20	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 (IU/ml)	20	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 (IU/ml)	44	0.05 (0.05, 0.05)	1.03 (0.61, 1.72)	1.43 (1.14, 1.80)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	44	0.80 (0.80, 0.80)	14.43 (8.81, 23.65)	6.23 (4.04, 9.60)
American Indian or Alaska Native	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	44	0.15 (0.15, 0.15)	6.63 (4.62, 9.49)	7.49 (5.38, 10.41)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	1.01 (0.09, 12.01)	1.76 (0.70, 4.38)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	24.67 (2.98, 203.88)	9.82 (1.19, 81.16)
Native Hawaiian or Other Pacific Islander	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	20.21 (0.92, 443.92)	21.94 (1.00, 481.76)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	24	0.05 (0.05, 0.05)	4.40 (1.94, 9.98)	3.07 (1.83, 5.15)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	24	0.80 (0.80, 0.80)	22.42 (11.95, 42.07)	8.16 (4.04, 16.47)
Multiracial	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	24	0.15 (0.15, 0.15)	8.07 (4.22, 15.43)	8.86 (4.70, 16.70)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	11	0.05 (0.04, 0.06)	3.93 (1.53, 10.12)	2.67 (1.65, 4.32)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)	18.16 (7.69, 42.85)	8.22 (4.22, 16.00)
Multiracial	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)	19.61 (7.47, 51.50)	21.22 (8.05, 55.92)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)	0.65 (0.26, 1.67)	1.22 (0.91, 1.64)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)	16.90 (8.16, 35.02)	7.52 (4.23, 13.38)
Multiracial	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)	7.64 (3.23, 18.07)	8.40 (3.62, 19.50)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)	3.28 (1.07, 10.09)	2.55 (1.23, 5.28)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)	25.32 (9.76, 65.68)	9.66 (3.62, 25.77)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)	14.24 (8.54, 23.73)	15.45 (9.27, 25.75)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	5.75 (0.95, 34.90)	4.20 (1.54, 11.43)
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	63.38 (9.05, 444.10)	21.90 (2.51, 191.01)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Not reported and unknown	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	29.71 (4.91, 179.86)	32.24 (5.33, 195.19)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)	2.83 (1.01, 7.97)	1.72 (0.88, 3.37)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)	25.97 (12.86, 52.42)	10.34 (5.12, 20.87)
Not reported and unknown	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)	11.80 (5.38, 25.88)	12.80 (5.83, 28.09)



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 (IU/ml)	225	0.05 (0.05, 0.05)	1.62 (1.26, 2.08)	1.67 (1.45, 1.91)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)	16.77 (13.47, 20.89)	7.18 (5.88, 8.76)
URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)	9.25 (7.90, 10.83)	10.02 (8.57, 11.70)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	2.44 (1.60, 3.71)	1.94 (1.54, 2.45)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	27.15 (19.33, 38.13)	10.68 (7.58, 15.06)
URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)	15.40 (11.60, 20.44)	16.64 (12.49, 22.17)
URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	27	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	27	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	27	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	0.61 (0.42, 0.91)	1.21 (1.08, 1.36)
URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	7.50 (5.30, 10.61)	3.57 (2.69, 4.75)
URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)	4.38 (3.27, 5.86)	4.73 (3.56, 6.28)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	225	0.05 (0.05, 0.05)	1.21 (0.93, 1.57)	1.61 (1.44, 1.81)
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	225	0.80 (0.80, 0.80)	14.88 (12.20, 18.14)	6.28 (5.24, 7.52)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	225	0.15 (0.15, 0.15)	7.34 (6.21, 8.67)	8.02 (6.84, 9.39)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	72	0.05 (0.05, 0.05)	1.17 (0.81, 1.68)	1.66 (1.40, 1.96)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	72	0.81 (0.79, 0.82)	17.83 (11.94, 26.63)	8.31 (5.99, 11.54)
Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	72	0.15 (0.15, 0.15)	8.47 (6.06, 11.85)	9.63 (7.12, 13.02)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	25	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	25	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	25	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	70	0.05 (0.05, 0.05)	1.38 (0.91, 2.07)	1.55 (1.27, 1.89)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	15.22 (10.53, 22.00)	6.32 (4.47, 8.95)
Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.15 (0.15, 0.15)	6.39 (4.68, 8.72)	6.96 (5.11, 9.47)



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 (IU/ml)	114	0.05 (0.05, 0.05)	1.09 (0.78, 1.54)	1.43 (1.21, 1.69)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	114	0.80 (0.80, 0.80)	10.15 (7.52, 13.69)	4.55 (3.50, 5.92)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	114	0.15 (0.15, 0.15)	5.73 (4.62, 7.10)	6.20 (5.03, 7.65)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	1.74 (0.99, 3.05)	1.59 (1.20, 2.10)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)	19.78 (12.48, 31.37)	7.80 (4.90, 12.41)
Age 18 - 59 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	11.08 (7.56, 16.25)	11.95 (8.10, 17.63)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	35	0.05 (0.05, 0.05)	0.42 (0.25, 0.72)	1.15 (0.99, 1.34)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	35	0.80 (0.80, 0.80)	4.26 (2.68, 6.77)	2.23 (1.56, 3.19)
Age 18 - 59 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	35	0.15 (0.15, 0.15)	2.61 (1.84, 3.71)	2.78 (1.98, 3.91)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	113	0.05 (0.05, 0.05)	0.85 (0.59, 1.20)	1.38 (1.21, 1.59)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	113	0.80 (0.80, 0.80)	9.38 (7.21, 12.19)	4.09 (3.25, 5.16)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	113	0.15 (0.15, 0.15)	4.34 (3.47, 5.44)	4.78 (3.88, 5.90)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	0.49 (0.31, 0.76)	1.11 (1.00, 1.23)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)	8.23 (4.82, 14.05)	4.16 (2.76, 6.27)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	3.88 (2.45, 6.16)	4.52 (3.02, 6.78)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	12	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	12	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	12	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	1.10 (0.64, 1.89)	1.44 (1.12, 1.85)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	36	0.80 (0.80, 0.80)	10.65 (6.39, 17.77)	4.59 (2.86, 7.38)
Age 18 - 59 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	4.27 (2.83, 6.44)	4.65 (3.10, 6.99)
Age \geq 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	111	0.05 (0.05, 0.05)	3.32 (2.37, 4.65)	2.21 (1.72, 2.83)
Age \geq 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	111	0.80 (0.80, 0.80)	42.16 (31.70, 56.06)	16.60 (12.45, 22.13)
Age \geq 60 URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	111	0.15 (0.15, 0.15)	22.27 (18.13, 27.34)	24.13 (19.64, 29.64)
Age \geq 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	34	0.05 (0.05, 0.06)	4.81 (2.78, 8.32)	2.91 (1.94, 4.37)
Age \geq 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)	51.36 (34.05, 77.49)	20.12 (13.19, 30.70)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age ≥ 60 URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	34	0.15 (0.15, 0.15)	29.87 (21.23, 42.02)	32.41 (23.04, 45.60)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	35	0.05 (0.05, 0.05)	1.21 (0.72, 2.03)	1.32 (1.11, 1.58)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	35	0.80 (0.80, 0.80)	20.86 (13.21, 32.95)	8.39 (5.41, 13.01)
Age ≥ 60 URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	35	0.15 (0.15, 0.15)	11.17 (6.88, 18.13)	12.36 (7.73, 19.76)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	112	0.05 (0.05, 0.05)	2.35 (1.66, 3.34)	2.14 (1.74, 2.63)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	112	0.80 (0.80, 0.80)	34.77 (26.13, 46.25)	13.81 (10.40, 18.33)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	112	0.15 (0.15, 0.15)	19.24 (15.44, 23.97)	20.74 (16.59, 25.93)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	36	0.05 (0.05, 0.05)	6.49 (3.85, 10.95)	3.63 (2.37, 5.55)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	36	0.82 (0.77, 0.88)	80.59 (49.63, 130.88)	32.08 (19.75, 52.10)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	36	0.15 (0.15, 0.15)	38.83 (28.64, 52.64)	42.14 (31.08, 57.13)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	13	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	13	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	13	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	34	0.05 (0.05, 0.05)	2.12 (1.17, 3.83)	1.78 (1.28, 2.48)
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	34	0.80 (0.80, 0.80)	30.41 (20.13, 45.96)	11.76 (7.65, 18.07)
Age \geq 60 Non-URM	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	34	0.15 (0.15, 0.15)	13.94 (9.10, 21.33)	15.21 (9.98, 23.16)

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 (IU/ml)	450	0.05 (0.05, 0.05)	1.38 (1.15, 1.66)	1.64 (1.50, 1.79)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	450	0.80 (0.80, 0.80)	15.71 (13.56, 18.20)	6.67 (5.84, 7.63)
United States	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	450	0.15 (0.15, 0.15)	8.15 (7.26, 9.15)	8.87 (7.93, 9.92)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	142	0.05 (0.05, 0.05)	1.63 (1.23, 2.15)	1.78 (1.55, 2.05)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	142	0.80 (0.79, 0.81)	21.55 (16.48, 28.19)	9.31 (7.34, 11.80)
United States	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	142	0.15 (0.15, 0.15)	11.09 (8.86, 13.89)	12.32 (9.98, 15.22)
United States	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	52	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	52	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	52	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
United States	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	140	0.05 (0.05, 0.05)	0.95 (0.72, 1.27)	1.38 (1.23, 1.56)
United States	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	140	0.80 (0.80, 0.80)	11.02 (8.53, 14.24)	4.87 (3.87, 6.14)
United States	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	140	0.15 (0.15, 0.15)	5.38 (4.33, 6.67)	5.83 (4.72, 7.21)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)	1.51 (0.82, 2.81)	1.60 (1.15, 2.21)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)	22.43 (11.50, 43.77)	10.02 (5.44, 18.48)
Argentina	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)	9.81 (5.36, 17.94)	10.87 (6.12, 19.34)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)	5.55 (2.35, 13.12)	2.75 (1.39, 5.42)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)	20.89 (6.97, 62.56)	9.34 (3.51, 24.84)
Argentina	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)	19.07 (6.90, 52.66)	22.51 (9.20, 55.05)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	9	0.05 (0.05, 0.05)	0.69 (0.31, 1.56)	1.00 (1.00, 1.00)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	9	0.80 (0.80, 0.80)	20.41 (9.09, 45.81)	9.01 (4.61, 17.62)
Argentina	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	9	0.15 (0.15, 0.15)	4.26 (2.15, 8.44)	5.44 (3.57, 8.29)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	103	0.05 (0.05, 0.05)	1.01 (0.71, 1.45)	1.39 (1.21, 1.59)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	103	0.80 (0.80, 0.80)	11.62 (8.61, 15.69)	4.92 (3.75, 6.47)
Brazil	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	103	0.15 (0.15, 0.15)	7.31 (5.80, 9.23)	7.70 (6.05, 9.80)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	23	0.05 (0.05, 0.05)	1.61 (0.63, 4.14)	2.11 (1.38, 3.22)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	23	0.80 (0.80, 0.80)	22.80 (11.24, 46.26)	9.38 (4.73, 18.57)
Brazil	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	23	0.15 (0.15, 0.15)	11.02 (5.65, 21.50)	12.07 (6.34, 23.01)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	10	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	10	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	10	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	31	0.05 (0.05, 0.05)	1.06 (0.59, 1.90)	1.51 (1.15, 1.98)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	31	0.80 (0.80, 0.80)	11.67 (6.55, 20.77)	5.11 (3.08, 8.48)
Brazil	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	31	0.15 (0.15, 0.15)	5.50 (3.59, 8.43)	5.97 (3.91, 9.10)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	15	0.05 (0.05, 0.05)	1.08 (0.26, 4.40)	1.85 (0.95, 3.58)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	15	0.80 (0.80, 0.80)	16.33 (7.68, 34.74)	6.22 (2.83, 13.68)
Chile	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	15	0.15 (0.15, 0.15)	6.00 (3.12, 11.53)	6.28 (3.20, 12.31)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	6	0.05 (0.05, 0.05)	3.69 (1.37, 9.92)	1.87 (0.76, 4.60)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	6	0.80 (0.80, 0.80)	21.40 (11.09, 41.32)	8.52 (4.41, 16.45)
Chile	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	6	0.15 (0.15, 0.15)	9.18 (5.27, 15.98)	9.96 (5.72, 17.35)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Chile	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	2	0.05 (0.05, 0.05)	0.76 (0.24, 2.36)	1.00 (1.00, 1.00)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	2	0.80 (0.80, 0.80)	4.83 (4.44, 5.25)	1.43 (0.86, 2.37)
Chile	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	2	0.15 (0.15, 0.15)	4.27 (3.55, 5.14)	4.63 (3.85, 5.58)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	47	0.05 (0.05, 0.05)	1.81 (1.02, 3.23)	1.90 (1.40, 2.56)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	47	0.80 (0.80, 0.80)	24.20 (13.77, 42.54)	10.28 (6.10, 17.33)
Columbia	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	47	0.15 (0.15, 0.15)	10.46 (6.36, 17.21)	12.08 (7.73, 18.86)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	20	0.05 (0.05, 0.05)	3.86 (1.57, 9.51)	2.65 (1.29, 5.43)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)	30.27 (16.40, 55.88)	11.58 (6.06, 22.12)
Columbia	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	20	0.15 (0.15, 0.15)	11.06 (5.58, 21.90)	11.65 (5.75, 23.63)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	8	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	8	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	8	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	14	0.05 (0.05, 0.05)	0.97 (0.48, 1.97)	1.30 (0.99, 1.69)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	14	0.80 (0.80, 0.80)	20.65 (12.07, 35.33)	8.22 (4.80, 14.06)
Columbia	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	14	0.15 (0.15, 0.15)	7.79 (4.46, 13.62)	8.45 (4.84, 14.78)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	5	0.05 (0.05, 0.05)	6.38 (2.06, 19.70)	3.32 (1.36, 8.12)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	5	0.80 (0.80, 0.80)	18.35 (4.68, 71.98)	6.05 (1.30, 28.21)
Mexico	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	5	0.15 (0.15, 0.15)	14.15 (4.44, 45.04)	15.35 (4.82, 48.88)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	2.53 (0.65, 9.86)	1.65 (0.69, 3.92)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	33.18 (12.28, 89.62)	13.21 (4.89, 35.68)
Mexico	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	36.66 (11.12, 120.86)	39.79 (12.07, 131.17)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	1	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	1	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	1	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	3	0.05 (0.05, 0.05)	9.42 (4.90, 18.09)	4.19 (2.18, 8.06)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	3	0.80 (0.80, 0.80)	27.26 (17.47, 42.53)	10.85 (6.95, 16.93)
Mexico	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	3	0.15 (0.15, 0.15)	12.55 (2.76, 57.12)	13.62 (2.99, 61.99)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	26	0.05 (0.05, 0.05)	0.97 (0.47, 1.98)	1.47 (1.14, 1.91)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	26	0.80 (0.80, 0.80)	10.49 (5.21, 21.11)	4.68 (2.56, 8.53)
Peru	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	26	0.15 (0.15, 0.15)	8.24 (4.08, 16.63)	9.77 (5.34, 17.88)

(continued)

Group	Visit	Arm	Baseline SARS-CoV-2	Marker	N	Baseline GMT/GMC	Post Baseline GMT/GMC	GMTR/GMCR
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	8	0.05 (0.04, 0.07)	2.67 (0.92, 7.71)	2.16 (1.14, 4.10)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	8	1.00 (0.65, 1.55)	25.32 (12.09, 53.05)	9.01 (4.83, 16.81)
Peru	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	8	0.15 (0.15, 0.15)	12.81 (5.11, 32.11)	13.90 (5.54, 34.84)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	4	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti RBD IgG (IU/ml)	4	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Negative	Anti Spike IgG (IU/ml)	4	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti N IgG (IU/ml)	11	0.05 (0.05, 0.05)	1.50 (0.84, 2.69)	1.22 (0.92, 1.63)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	11	0.80 (0.80, 0.80)	18.74 (8.10, 43.32)	6.55 (2.57, 16.69)
Peru	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	11	0.15 (0.15, 0.15)	8.00 (4.25, 15.07)	8.68 (4.61, 16.35)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	224	0.05 (0.05, 0.05)	1.28 (1.01, 1.61)	1.54 (1.38, 1.72)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	224	0.80 (0.80, 0.80)	16.27 (13.48, 19.62)	6.73 (5.67, 7.99)
South Africa	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	224	0.15 (0.15, 0.15)	8.83 (7.52, 10.37)	9.52 (8.12, 11.17)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	68	0.05 (0.05, 0.05)	2.24 (1.38, 3.64)	2.11 (1.64, 2.72)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	68	0.80 (0.80, 0.80)	26.03 (17.75, 38.19)	10.79 (7.56, 15.41)
South Africa	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	68	0.15 (0.15, 0.15)	15.98 (11.90, 21.45)	16.94 (12.44, 23.07)

(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 (IU/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 (IU/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 (IU/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 (IU/ml)	70	0.05 (0.05, 0.05)	1.00 (0.67, 1.49)	1.43 (1.19, 1.71)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	70	0.80 (0.80, 0.80)	10.07 (6.97, 14.55)	4.62 (3.37, 6.32)
South Africa	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	70	0.16 (0.15, 0.16)	5.42 (3.92, 7.49)	5.42 (3.85, 7.63)

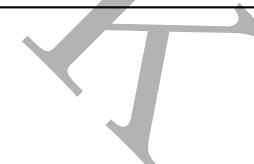


Table 8l. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by HIV Infection

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 (IU/ml)	830	0.05 (0.05, 0.05)	1.32 (1.15, 1.52)	1.60 (1.50, 1.71)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	830	0.80 (0.80, 0.80)	15.80 (14.07, 17.74)	6.63 (5.96, 7.38)
Negative	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	830	0.15 (0.15, 0.15)	8.37 (7.60, 9.22)	9.12 (8.31, 10.01)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti N IgG (IU/ml)	262	0.05 (0.05, 0.05)	2.22 (1.72, 2.85)	2.06 (1.78, 2.38)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	262	0.81 (0.79, 0.83)	23.57 (19.37, 28.69)	9.84 (8.19, 11.81)
Negative	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	262	0.15 (0.15, 0.15)	12.22 (10.14, 14.72)	13.42 (11.21, 16.08)
Negative	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	103	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 (IU/ml)	103	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 (IU/ml)	103	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 (IU/ml)	260	0.05 (0.05, 0.05)	0.97 (0.78, 1.19)	1.37 (1.25, 1.50)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	260	0.80 (0.80, 0.80)	12.01 (9.90, 14.58)	5.17 (4.33, 6.16)
Negative	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	260	0.15 (0.15, 0.15)	5.59 (4.76, 6.56)	6.06 (5.19, 7.07)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti N IgG (IU/ml)	71	0.05 (0.05, 0.05)	1.01 (0.61, 1.66)	1.41 (1.16, 1.73)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti RBD IgG (IU/ml)	71	0.80 (0.80, 0.80)	9.82 (6.12, 15.75)	4.63 (3.17, 6.77)
Positive	D29 fold-rise over D1	Vaccine	Negative	Anti Spike IgG (IU/ml)	71	0.15 (0.15, 0.15)	6.93 (4.85, 9.90)	7.50 (5.28, 10.66)

(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 (IU/ml)	18	0.05 (0.05, 0.05)	1.44 (0.67, 3.12)	1.65 (1.05, 2.58)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti RBD IgG (IU/ml)	18	0.80 (0.80, 0.80)	23.83 (14.39, 39.47)	9.24 (5.46, 15.62)
Positive	D29 fold-rise over D1	Vaccine	Positive	Anti Spike IgG (IU/ml)	18	0.15 (0.15, 0.15)	14.23 (7.36, 27.48)	14.97 (7.43, 30.17)
Positive	D29 fold-rise over D1	Placebo	Negative	Anti N IgG (IU/ml)	4	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 (IU/ml)	4	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 (IU/ml)	4	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 (IU/ml)	20	0.05 (0.04, 0.06)	4.10 (2.21, 7.61)	2.13 (1.23, 3.68)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti RBD IgG (IU/ml)	20	0.80 (0.80, 0.80)	23.18 (9.59, 56.01)	10.36 (4.66, 23.06)
Positive	D29 fold-rise over D1	Placebo	Positive	Anti Spike IgG (IU/ml)	20	0.16 (0.15, 0.16)	8.29 (4.04, 17.02)	8.85 (4.13, 18.94)



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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.01 (0.98, 1.05)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.83 (0.78, 0.88)	0.80 (0.80, 0.80)	1.04 (0.98, 1.10)
Age ≥ 60 vs Age 18 - 59	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.98 (0.95, 1.01)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.16)	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 (IU/ml)	2.85 (2.37, 3.43)	0.86 (0.72, 1.03)	3.31 (2.56, 4.29)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	38.75 (33.06, 45.41)	9.40 (8.10, 10.91)	4.12 (3.32, 5.12)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	20.51 (17.92, 23.48)	5.12 (4.54, 5.78)	4.01 (3.34, 4.80)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	6.00 (4.37, 8.23)	1.26 (0.92, 1.74)	4.75 (3.03, 7.45)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	63.15 (49.24, 81.00)	14.04 (10.96, 17.99)	4.50 (3.17, 6.39)
Age ≥ 60 vs Age 18 - 59	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	35.14 (28.57, 43.23)	7.10 (5.58, 9.03)	4.95 (3.60, 6.80)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	1.95 (1.44, 2.62)	0.75 (0.57, 0.98)	2.61 (1.74, 3.91)

(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 (IU/ml)	27.83 (21.92, 35.34)	8.09 (6.25, 10.45)	3.44 (2.42, 4.89)
Age \geq 60 vs Age 18 - 59	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	13.35 (10.30, 17.30)	3.63 (3.00, 4.38)	3.68 (2.67, 5.07)

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

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Risk for Severe Covid-19							
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.01)
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.03 (0.99, 1.08)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.81 (0.79, 0.84)	0.98 (0.95, 1.01)
At-risk vs Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.02 (0.98, 1.06)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.16)	0.15 (0.15, 0.15)	1.00 (1.00, 1.01)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.25 (1.05, 1.49)	1.34 (1.11, 1.61)	0.94 (0.72, 1.21)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15.64 (13.41, 18.24)	15.16 (12.97, 17.73)	1.03 (0.83, 1.28)
At-risk vs Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.18 (7.19, 9.30)	8.35 (7.35, 9.48)	0.98 (0.82, 1.17)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.78 (2.08, 3.72)	1.84 (1.30, 2.60)	1.51 (0.96, 2.38)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	29.62 (22.96, 38.21)	20.33 (15.70, 26.33)	1.46 (1.01, 2.09)
At-risk vs Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13.56 (10.93, 16.83)	11.59 (8.99, 14.94)	1.17 (0.84, 1.63)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	1.39 (1.03, 1.86)	0.87 (0.66, 1.15)	1.59 (1.06, 2.40)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	13.56 (10.34, 17.78)	11.78 (9.13, 15.21)	1.15 (0.79, 1.67)
At-risk vs Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	6.23 (5.06, 7.67)	5.40 (4.35, 6.70)	1.15 (0.85, 1.56)

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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.01)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.03 (0.98, 1.09)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.03 (0.97, 1.10)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (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 (IU/ml)	0.90 (0.71, 1.13)	0.84 (0.65, 1.08)	1.07 (0.76, 1.52)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	10.60 (8.68, 12.96)	8.67 (7.03, 10.69)	1.22 (0.92, 1.63)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	5.43 (4.58, 6.44)	4.92 (4.17, 5.81)	1.10 (0.87, 1.40)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	1.60 (1.09, 2.35)	1.09 (0.68, 1.73)	1.47 (0.81, 2.68)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	16.81 (11.94, 23.67)	12.54 (8.92, 17.63)	1.34 (0.83, 2.17)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	7.52 (5.71, 9.90)	6.85 (4.82, 9.73)	1.10 (0.70, 1.72)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.98 (0.66, 1.46)	0.63 (0.44, 0.91)	1.55 (0.90, 2.67)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	8.42 (5.79, 12.26)	7.88 (5.59, 11.13)	1.07 (0.64, 1.78)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	3.85 (2.92, 5.07)	3.49 (2.71, 4.51)	1.10 (0.76, 1.60)

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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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	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	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.03 (0.96, 1.10)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.85 (0.77, 0.94)	0.94 (0.85, 1.04)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.99 (0.97, 1.01)
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.01 (0.99, 1.03)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	2.36 (1.78, 3.12)	3.22 (2.52, 4.12)	0.73 (0.50, 1.06)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	32.86 (26.13, 41.31)	43.18 (34.80, 53.56)	0.76 (0.56, 1.04)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	17.87 (14.91, 21.43)	22.46 (18.58, 27.14)	0.80 (0.61, 1.03)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	7.40 (4.89, 11.20)	5.18 (3.30, 8.14)	1.43 (0.77, 2.64)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	81.03 (58.21, 112.79)	53.03 (37.25, 75.50)	1.53 (0.94, 2.48)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	38.64 (28.26, 52.82)	32.88 (24.96, 43.32)	1.17 (0.77, 1.78)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	2.64 (1.79, 3.90)	1.61 (1.06, 2.44)	1.64 (0.93, 2.91)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	32.63 (23.88, 44.59)	25.18 (18.00, 35.22)	1.30 (0.82, 2.05)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	15.17 (11.51, 19.98)	12.31 (8.37, 18.10)	1.23 (0.77, 1.98)

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

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Sex							
Male vs Female	Day 1	Vaccine	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.02 (0.98, 1.05)
Male vs Female	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.82 (0.78, 0.85)	0.80 (0.80, 0.80)	1.03 (0.98, 1.07)
Male vs Female	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.99 (0.96, 1.03)
Male vs Female	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (0.99, 1.00)
Male vs Female	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.48 (1.21, 1.81)	1.18 (0.98, 1.42)	1.26 (0.95, 1.66)
Male vs Female	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	16.71 (14.14, 19.74)	14.39 (12.28, 16.85)	1.16 (0.92, 1.47)
Male vs Female	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.76 (7.60, 10.10)	7.93 (6.95, 9.03)	1.11 (0.90, 1.35)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Male vs Female	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.07 (1.45, 2.97)	2.25 (1.62, 3.11)	0.92 (0.57, 1.50)
Male vs Female	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	19.43 (14.51, 26.01)	28.12 (21.62, 36.57)	0.69 (0.46, 1.04)
Male vs Female	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	10.29 (7.77, 13.61)	14.52 (11.28, 18.69)	0.71 (0.48, 1.05)
Male vs Female	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Male vs Female	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	1.26 (0.91, 1.74)	0.89 (0.68, 1.18)	1.41 (0.91, 2.17)
Male vs Female	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12.81 (9.50, 17.28)	12.13 (9.38, 15.70)	1.06 (0.70, 1.59)
Male vs Female	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5.61 (4.30, 7.31)	5.79 (4.75, 7.06)	0.97 (0.69, 1.37)

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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (0.99, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.01 (0.97, 1.04)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.81 (0.78, 0.84)	0.80 (0.79, 0.81)	1.01 (0.97, 1.05)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.98 (0.94, 1.02)
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Hispanic or Latino vs Not Hispanic or Latino	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.16)	1.00 (0.99, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.37 (1.12, 1.68)	1.24 (1.03, 1.50)	1.10 (0.84, 1.45)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	15.45 (13.00, 18.36)	15.50 (13.30, 18.06)	1.00 (0.79, 1.26)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	8.71 (7.55, 10.06)	7.84 (6.89, 8.91)	1.11 (0.91, 1.35)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.86 (1.96, 4.18)	1.65 (1.26, 2.15)	1.74 (1.09, 2.77)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	24.93 (19.16, 32.42)	22.69 (17.26, 29.82)	1.10 (0.75, 1.61)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	13.17 (10.01, 17.33)	11.54 (9.20, 14.48)	1.14 (0.80, 1.63)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.92 (0.67, 1.25)	1.18 (0.89, 1.56)	0.78 (0.51, 1.19)
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	12.10 (9.05, 16.17)	13.02 (10.12, 16.75)	0.93 (0.63, 1.37)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Hispanic or Latino vs Not Hispanic or Latino	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	5.47 (4.33, 6.91)	6.12 (4.97, 7.55)	0.89 (0.65, 1.23)

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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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (0.99, 1.00)
URM vs Non-URM	Day 1	Vaccine	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.04 (1.00, 1.09)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.81 (0.79, 0.82)	0.99 (0.97, 1.01)
URM vs Non-URM	Day 1	Vaccine	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Positive	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.96 (0.91, 1.02)
URM vs Non-URM	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.62 (1.26, 2.08)	1.21 (0.93, 1.57)	1.33 (0.93, 1.92)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	16.77 (13.47, 20.89)	14.88 (12.20, 18.14)	1.13 (0.84, 1.52)
URM vs Non-URM	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	9.25 (7.90, 10.83)	7.34 (6.21, 8.67)	1.26 (1.00, 1.59)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
URM vs Non-URM	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	2.44 (1.60, 3.71)	1.17 (0.81, 1.68)	2.09 (1.20, 3.64)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	27.15 (19.33, 38.13)	17.83 (11.94, 26.63)	1.52 (0.90, 2.58)
URM vs Non-URM	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	15.40 (11.60, 20.44)	8.47 (6.06, 11.85)	1.82 (1.17, 2.82)
URM vs Non-URM	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
URM vs Non-URM	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	0.61 (0.42, 0.91)	1.38 (0.91, 2.07)	0.45 (0.25, 0.79)
URM vs Non-URM	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	7.50 (5.30, 10.61)	15.22 (10.53, 22.00)	0.49 (0.30, 0.82)
URM vs Non-URM	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	4.38 (3.27, 5.86)	6.39 (4.68, 8.72)	0.69 (0.45, 1.05)

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 (IU/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 (IU/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 (IU/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 (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	0.97 (0.95, 0.99)
Positive vs Negative	Day 1	Vaccine	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.81 (0.79, 0.83)	0.99 (0.97, 1.01)
Positive vs Negative	Day 1	Vaccine	Positive	Anti Spike IgG (IU/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 (IU/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 (IU/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 (IU/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 (IU/ml)	0.05 (0.04, 0.06)	0.05 (0.05, 0.05)	1.10 (0.90, 1.34)
Positive vs Negative	Day 1	Placebo	Positive	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 1	Placebo	Positive	Anti Spike IgG (IU/ml)	0.16 (0.15, 0.16)	0.15 (0.15, 0.15)	1.02 (0.98, 1.07)
Positive vs Negative	Day 29	Vaccine	Negative	Anti N IgG (IU/ml)	1.01 (0.61, 1.66)	1.32 (1.15, 1.52)	0.76 (0.45, 1.29)
Positive vs Negative	Day 29	Vaccine	Negative	Anti RBD IgG (IU/ml)	9.82 (6.12, 15.75)	15.80 (14.07, 17.74)	0.62 (0.38, 1.02)
Positive vs Negative	Day 29	Vaccine	Negative	Anti Spike IgG (IU/ml)	6.93 (4.85, 9.90)	8.37 (7.60, 9.22)	0.83 (0.57, 1.20)

(continued)

Group 1 vs 2	Visit	Arm	Baseline SARS-CoV-2	Marker	Group 1 GMT/GMC	Group 2 GMT/GMC	Ratios of GMT/GMC
Positive vs Negative	Day 29	Vaccine	Positive	Anti N IgG (IU/ml)	1.44 (0.67, 3.12)	2.22 (1.72, 2.85)	0.65 (0.28, 1.49)
Positive vs Negative	Day 29	Vaccine	Positive	Anti RBD IgG (IU/ml)	23.83 (14.39, 39.47)	23.57 (19.37, 28.69)	1.01 (0.58, 1.75)
Positive vs Negative	Day 29	Vaccine	Positive	Anti Spike IgG (IU/ml)	14.23 (7.36, 27.48)	12.22 (10.14, 14.72)	1.16 (0.58, 2.35)
Positive vs Negative	Day 29	Placebo	Negative	Anti N IgG (IU/ml)	0.05 (0.05, 0.05)	0.05 (0.05, 0.05)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Negative	Anti RBD IgG (IU/ml)	0.80 (0.80, 0.80)	0.80 (0.80, 0.80)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Negative	Anti Spike IgG (IU/ml)	0.15 (0.15, 0.15)	0.15 (0.15, 0.15)	1.00 (1.00, 1.00)
Positive vs Negative	Day 29	Placebo	Positive	Anti N IgG (IU/ml)	4.10 (2.21, 7.61)	0.97 (0.78, 1.19)	4.25 (2.20, 8.20)
Positive vs Negative	Day 29	Placebo	Positive	Anti RBD IgG (IU/ml)	23.18 (9.59, 56.01)	12.01 (9.90, 14.58)	1.93 (0.78, 4.79)
Positive vs Negative	Day 29	Placebo	Positive	Anti Spike IgG (IU/ml)	8.29 (4.04, 17.02)	5.59 (4.76, 6.56)	1.48 (0.70, 3.12)

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 (IU/ml)	0.06 (0.05, 0.08)	0.25 (0.22, 0.28)	0.15 (0.13, 0.18)
Vaccine vs Placebo	Negative	-	Day 29	Anti RBD IgG (IU/ml)	0.53 (0.49, 0.56)	0.74 (0.71, 0.77)	0.59 (0.56, 0.63)
Vaccine vs Placebo	Negative	-	Day 29	Anti Spike IgG (IU/ml)	0.41 (0.38, 0.45)	0.87 (0.84, 0.89)	0.73 (0.7, 0.76)
Vaccine vs Placebo	Positive	-	Day 29	Anti N IgG (IU/ml)	0.08 (0.03, 0.13)	0.16 (0.08, 0.24)	0.1 (0.04, 0.17)
Vaccine vs Placebo	Positive	-	Day 29	Anti RBD IgG (IU/ml)	0.13 (0.04, 0.22)	0.16 (0.07, 0.23)	0.15 (0.06, 0.24)
Vaccine vs Placebo	Positive	-	Day 29	Anti Spike IgG (IU/ml)	0.24 (0.15, 0.32)	0.07 (0, 0.14)	0.2 (0.11, 0.28)

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 (IU/ml)	0.06 (0.02, 0.11)	0.12 (0.05, 0.19)	0.06 (0.01, 0.12)
Positive vs Negative	-	Placebo	Day 29	Anti N IgG (IU/ml)	0.04 (0.02, 0.07)	0.21 (0.16, 0.26)	0.11 (0.08, 0.16)
Positive vs Negative	-	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.11 (0.03, 0.18)	0.12 (0.05, 0.17)	0.14 (0.07, 0.21)
Positive vs Negative	-	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.51 (0.44, 0.57)	0.7 (0.64, 0.76)	0.59 (0.52, 0.65)
Positive vs Negative	-	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.12 (0.05, 0.2)	0.03 (-0.03, 0.08)	0.06 (-0.01, 0.12)
Positive vs Negative	-	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.3 (0.25, 0.36)	0.83 (0.77, 0.87)	0.59 (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 (IU/ml)	0.11 (0.07, 0.15)	0.23 (0.17, 0.29)	0.18 (0.12, 0.23)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.33 (0.26, 0.39)	0.25 (0.19, 0.3)	0.31 (0.24, 0.37)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.39 (0.32, 0.46)	0.16 (0.12, 0.21)	0.28 (0.22, 0.33)
Age ≥ 60 vs Age 18 - 59	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.14 (0.05, 0.24)	0.35 (0.23, 0.46)	0.3 (0.19, 0.41)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.06 (-0.01, 0.12)	0.17 (0.06, 0.28)	0.09 (0, 0.18)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.33 (0.21, 0.44)	0.18 (0.09, 0.27)	0.25 (0.15, 0.36)
Age ≥ 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.38 (0.25, 0.49)	0.3 (0.18, 0.4)	0.35 (0.22, 0.46)
Age ≥ 60 vs Age 18 - 59	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.49 (0.37, 0.59)	0.16 (0.1, 0.24)	0.27 (0.17, 0.37)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 vs Age 18 - 59	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.43 (0.3, 0.53)	0.2 (0.11, 0.28)	0.38 (0.25, 0.48)

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 (IU/ml)	-0.01 (-0.04, 0.02)	-0.02 (-0.08, 0.04)	-0.03 (-0.08, 0.02)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.01 (-0.06, 0.08)	0.03 (-0.03, 0.1)	0.05 (-0.02, 0.12)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0 (-0.06, 0.07)	0.01 (-0.04, 0.07)	0.03 (-0.04, 0.09)
At-risk vs Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.01 (-0.08, 0.09)	0.12 (0, 0.24)	0.05 (-0.05, 0.14)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.03 (-0.03, 0.09)	0.07 (-0.04, 0.17)	0.04 (-0.05, 0.13)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.05 (-0.08, 0.17)	0.05 (-0.05, 0.15)	0.06 (-0.06, 0.18)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.04 (-0.09, 0.17)	0.02 (-0.1, 0.14)	0 (-0.12, 0.13)
At-risk vs Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.01 (-0.13, 0.11)	0.05 (-0.04, 0.14)	0.13 (0.02, 0.24)
At-risk vs Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.06 (-0.04, 0.17)	0.04 (-0.06, 0.13)	0.09 (-0.04, 0.22)

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 (IU/ml)	0 (-0.04, 0.04)	0 (-0.07, 0.08)	-0.02 (-0.08, 0.03)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.04 (-0.05, 0.14)	0.09 (0, 0.19)	0.11 (0.01, 0.21)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.03 (-0.06, 0.12)	0.02 (-0.06, 0.1)	0.06 (-0.04, 0.15)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.05 (-0.18, 0.03)	0.15 (-0.02, 0.3)	0 (-0.13, 0.1)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.02 (-0.06, 0.14)	0.03 (-0.1, 0.17)	0.02 (-0.09, 0.15)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.01 (-0.17, 0.19)	0.07 (-0.08, 0.21)	0.05 (-0.12, 0.22)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.02 (-0.16, 0.19)	0.03 (-0.14, 0.2)	-0.01 (-0.18, 0.17)
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.03 (-0.2, 0.14)	0.07 (-0.07, 0.21)	0.16 (-0.01, 0.32)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.03 (-0.11, 0.16)	0.03 (-0.12, 0.17)	0.11 (-0.07, 0.28)

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 (IU/ml)	-0.02 (-0.09, 0.05)	-0.07 (-0.16, 0.03)	-0.03 (-0.12, 0.06)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti N IgG (IU/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 (IU/ml)	-0.05 (-0.14, 0.04)	-0.08 (-0.15, -0.02)	-0.05 (-0.14, 0.03)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti RBD IgG (IU/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 (IU/ml)	-0.04 (-0.13, 0.06)	0 (-0.04, 0.05)	-0.02 (-0.09, 0.04)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Negative	Placebo	Day 29	Anti Spike IgG (IU/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 (IU/ml)	0.13 (-0.03, 0.28)	0.04 (-0.13, 0.21)	0.12 (-0.06, 0.29)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.03 (-0.08, 0.15)	0.13 (-0.05, 0.3)	0.06 (-0.08, 0.21)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.1 (-0.01, 0.23)	0 (-0.06, 0.13)	0.05 (-0.05, 0.17)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.08 (-0.07, 0.23)	-0.01 (-0.14, 0.12)	0.02 (-0.12, 0.16)
Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.03 (-0.16, 0.11)	0 (0, 0)	0.05 (0.02, 0.17)

(continued)

Comparison	Baseline SARS-CoV-2	Arm	Visit	Marker	Responder	% 2-Fold Rise	% 4-Fold Rise
Age \geq 60 At-risk vs Age \geq 60 Not at-risk	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.13 (-0.06, 0.3)	0.06 (0, 0.16)	0.05 (-0.09, 0.2)

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 (IU/ml)	0.02 (-0.01, 0.06)	0.03 (-0.03, 0.09)	0.03 (-0.02, 0.08)
Male vs Female	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.04 (-0.04, 0.11)	0.07 (0, 0.13)	0.04 (-0.04, 0.11)
Male vs Female	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.07 (0, 0.14)	-0.01 (-0.07, 0.04)	0.05 (-0.02, 0.12)
Male vs Female	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Male vs Female	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.02 (-0.06, 0.12)	0.01 (-0.11, 0.14)	-0.01 (-0.1, 0.1)
Male vs Female	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	-0.02 (-0.07, 0.04)	0.09 (-0.01, 0.2)	0.03 (-0.06, 0.12)
Male vs Female	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.16 (-0.29, -0.02)	-0.02 (-0.13, 0.09)	-0.06 (-0.18, 0.07)
Male vs Female	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (-0.13, 0.13)	0.03 (-0.1, 0.16)	0.03 (-0.1, 0.16)
Male vs Female	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.13 (-0.26, 0)	0 (-0.1, 0.1)	-0.07 (-0.19, 0.06)
Male vs Female	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	-0.04 (-0.15, 0.08)	0.03 (-0.07, 0.13)	-0.01 (-0.15, 0.12)

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 (IU/ml)	0.01 (-0.02, 0.05)	-0.02 (-0.08, 0.05)	-0.01 (-0.06, 0.04)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.01 (-0.08, 0.07)	-0.02 (-0.09, 0.04)	-0.05 (-0.12, 0.02)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0 (-0.07, 0.07)	0.02 (-0.03, 0.08)	0.02 (-0.05, 0.09)
Hispanic or Latino vs Not Hispanic or Latino	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0.05 (-0.03, 0.14)	0.14 (0.03, 0.26)	0.02 (-0.07, 0.12)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	-0.01 (-0.07, 0.05)	-0.03 (-0.14, 0.08)	-0.02 (-0.1, 0.07)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.02 (-0.15, 0.11)	0.05 (-0.05, 0.15)	0.02 (-0.11, 0.14)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.03 (-0.16, 0.1)	-0.02 (-0.15, 0.1)	0.01 (-0.12, 0.14)
Hispanic or Latino vs Not Hispanic or Latino	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.05 (-0.17, 0.08)	0.03 (-0.08, 0.12)	0.05 (-0.08, 0.15)

(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 (IU/ml)	-0.1 (-0.2, 0.02)	0.06 (-0.05, 0.16)	-0.04 (-0.17, 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 (IU/ml)	0.02 (-0.02, 0.07)	-0.01 (-0.1, 0.07)	-0.01 (-0.09, 0.06)
URM vs Non-URM	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.02 (-0.08, 0.11)	0.01 (-0.08, 0.09)	-0.01 (-0.1, 0.08)
URM vs Non-URM	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.06 (-0.03, 0.15)	0.06 (-0.01, 0.13)	0.03 (-0.06, 0.12)
URM vs Non-URM	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, 0)	0 (0, 0)	0 (0, 0)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	0 (-0.08, 0.11)	0.12 (-0.01, 0.26)	0.03 (-0.09, 0.16)
URM vs Non-URM	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	-0.05 (-0.14, 0.05)	-0.11 (-0.26, 0.03)	-0.13 (-0.25, -0.02)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.05 (-0.13, 0.22)	0.09 (-0.07, 0.24)	0.01 (-0.16, 0.18)
URM vs Non-URM	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	-0.23 (-0.39, -0.06)	-0.17 (-0.32, 0.01)	-0.23 (-0.39, -0.05)
URM vs Non-URM	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.07 (-0.1, 0.24)	0.13 (0, 0.27)	0.23 (0.07, 0.36)
URM vs Non-URM	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	-0.11 (-0.26, 0.04)	-0.1 (-0.26, 0.06)	-0.12 (-0.29, 0.05)

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 (IU/ml)	0 (-0.04, 0.07)	-0.11 (-0.18, 0.01)	-0.07 (-0.12, 0.01)
Positive vs Negative	Negative	Placebo	Day 29	Anti N IgG (IU/ml)	0 (0, NaN)	0 (0, NaN)	0 (0, NaN)
Positive vs Negative	Negative	Vaccine	Day 29	Anti RBD IgG (IU/ml)	-0.13 (-0.26, 0.01)	-0.08 (-0.24, 0.05)	-0.12 (-0.26, 0.02)
Positive vs Negative	Negative	Placebo	Day 29	Anti RBD IgG (IU/ml)	0 (0, NaN)	0 (0, NaN)	0 (0, NaN)
Positive vs Negative	Negative	Vaccine	Day 29	Anti Spike IgG (IU/ml)	-0.1 (-0.21, 0.03)	-0.02 (-0.19, 0.07)	-0.06 (-0.22, 0.07)
Positive vs Negative	Negative	Placebo	Day 29	Anti Spike IgG (IU/ml)	0 (0, NaN)	0 (0, NaN)	0 (0, NaN)
Positive vs Negative	Positive	Vaccine	Day 29	Anti N IgG (IU/ml)	-0.03 (-0.12, 0.27)	-0.13 (-0.31, 0.18)	-0.05 (-0.19, 0.29)
Positive vs Negative	Positive	Placebo	Day 29	Anti N IgG (IU/ml)	0.04 (-0.03, 0.31)	0.18 (-0.06, 0.49)	0.23 (0.01, 0.55)
Positive vs Negative	Positive	Vaccine	Day 29	Anti RBD IgG (IU/ml)	0.2 (-0.08, 0.34)	0 (-0.28, 0.12)	0.13 (-0.15, 0.26)
Positive vs Negative	Positive	Placebo	Day 29	Anti RBD IgG (IU/ml)	0.2 (-0.11, 0.4)	0.09 (-0.25, 0.26)	0.11 (-0.19, 0.31)
Positive vs Negative	Positive	Vaccine	Day 29	Anti Spike IgG (IU/ml)	0.09 (-0.22, 0.33)	0 (-0.46, 0.11)	0.12 (-0.34, 0.23)
Positive vs Negative	Positive	Placebo	Day 29	Anti Spike IgG (IU/ml)	0.1 (-0.14, 0.4)	-0.02 (-0.37, 0.14)	0.21 (-0.13, 0.38)

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 (IU/ml)	901	1219.4/19301 = 6.3% (4.9%, 8.1%)	1.30 (1.14, 1.49)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.06 (0.05, 0.08)	27.77 (24.29, 31.75)
Day 29	Anti RBD IgG (IU/ml)	901	10191.3/19301 = 52.8% (49.2%, 56.4%)	15.35 (13.72, 17.17)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.53 (0.49, 0.56)	19.27 (17.22, 21.55)
Day 29	Anti Spike IgG (IU/ml)	901	7932.8/19301 = 41.1% (37.7%, 44.6%)	8.28 (7.55, 9.08)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.41 (0.38, 0.45)	53.82 (49.08, 59.03)

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						Comparison	
		Vaccine			Placebo			Resp Rate Difference	GMTR/GMCR
N	Resp rate	GMT/GMC	N	Resp rate	GMT/GMC				
Day 29	Anti N IgG (IU/ml)	280	253.2/2075 = 12.2% (8.5%, 17.2%)	2.16 (1.70, 2.75)	280	87.1/2057 = 4.2% (2.4%, 7.5%)	1.04 (0.85, 1.28)	0.08 (0.03, 0.13)	2.08 (1.51, 2.85)
Day 29	Anti RBD IgG (IU/ml)	280	1324.5/2075 = 63.8% (57.0%, 70.1%)	23.59 (19.58, 28.41)	280	1046.5/2057 = 50.9% (44.4%, 57.3%)	12.43 (10.30, 15.01)	0.13 (0.04, 0.22)	1.90 (1.46, 2.47)
Day 29	Anti Spike IgG (IU/ml)	280	1111.9/2075 = 53.6% (47.3%, 59.8%)	12.33 (10.34, 14.70)	280	617.4/2057 = 30.0% (24.9%, 35.7%)	5.71 (4.89, 6.66)	0.24 (0.15, 0.32)	2.16 (1.71, 2.73)

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

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

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

Visit	Marker	N	Vaccine Recipients				Comparison		
			Baseline SARS-CoV-2 Positive		Baseline SARS-CoV-2 Negative		Resp Rate Difference	GMTR/GMCR	
			Resp rate	GMT/GMC	N	Resp rate	GMT/GMC		
Day 29	Anti N IgG (IU/ml)	280	253.2/2075 = 12.2% (8.5%, 17.2%)	2.16 (1.70, 2.75)	901	1219.4/19301 = 6.3% (4.9%, 8.1%)	1.30 (1.14, 1.49)	0.06 (0.02, 0.11)	1.66 (1.26, 2.19)
Day 29	Anti RBD IgG (IU/ml)	280	1324.5/2075 = 63.8% (57.0%, 70.1%)	23.59 (19.58, 28.41)	901	10191.3/19301 = 52.8% (49.2%, 56.4%)	15.35 (13.72, 17.17)	0.11 (0.03, 0.18)	1.54 (1.24, 1.91)
Day 29	Anti Spike IgG (IU/ml)	280	1111.9/2075 = 53.6% (47.3%, 59.8%)	12.33 (10.34, 14.70)	901	7932.8/19301 = 41.1% (37.7%, 44.6%)	8.28 (7.55, 9.08)	0.12 (0.05, 0.2)	1.49 (1.22, 1.82)

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	Resp rate	Placebo Recipients				Comparison	
				Baseline SARS-CoV-2 Positive		Baseline SARS-CoV-2 Negative		Resp Rate Difference	GMTR/GMCR
				GMT/GMC	N	Resp rate	GMT/GMC		
Day 29	Anti N IgG (IU/ml)	280	87.1/2057 = 4.2% (2.4%, 7.5%)	1.04 (0.85, 1.28)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.05 (0.05, 0.05)	0.04 (0.02, 0.07)	22.22 (18.05, 27.34)
Day 29	Anti RBD IgG (IU/ml)	280	1046.5/2057 = 50.9% (44.4%, 57.3%)	12.43 (10.30, 15.01)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.80 (0.80, 0.80)	0.51 (0.44, 0.57)	15.60 (12.92, 18.84)
Day 29	Anti Spike IgG (IU/ml)	280	617.4/2057 = 30.0% (24.9%, 35.7%)	5.71 (4.89, 6.66)	107	0/19209 = 0.0% (0.0%, 0.0%)	0.15 (0.15, 0.15)	0.3 (0.25, 0.36)	37.10 (31.77, 43.33)

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

MOCK

Chapter 2

Graphical Description of Immunogenicity Data

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

2.1.1 Baseline SARS-CoV-2 Negative

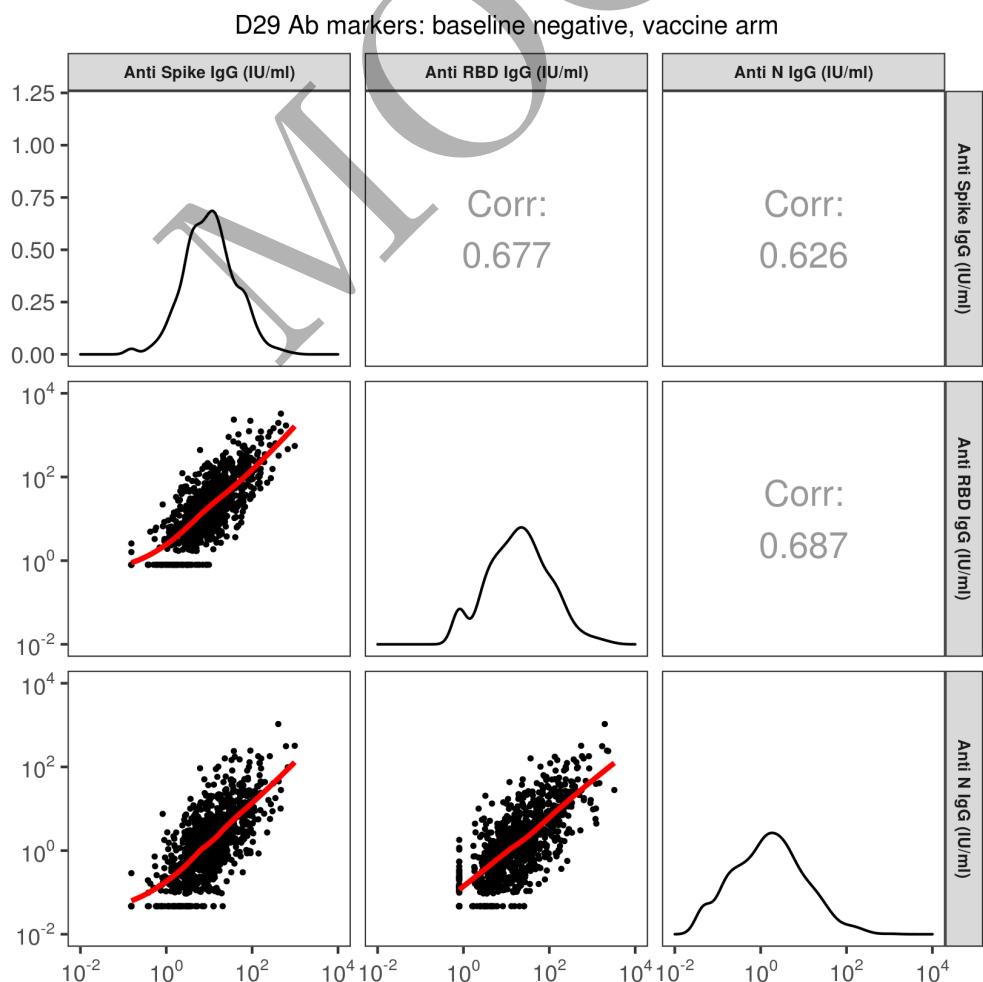


Figure 2.1: Pair plots of D29 Ab markers: baseline negative vaccine arm

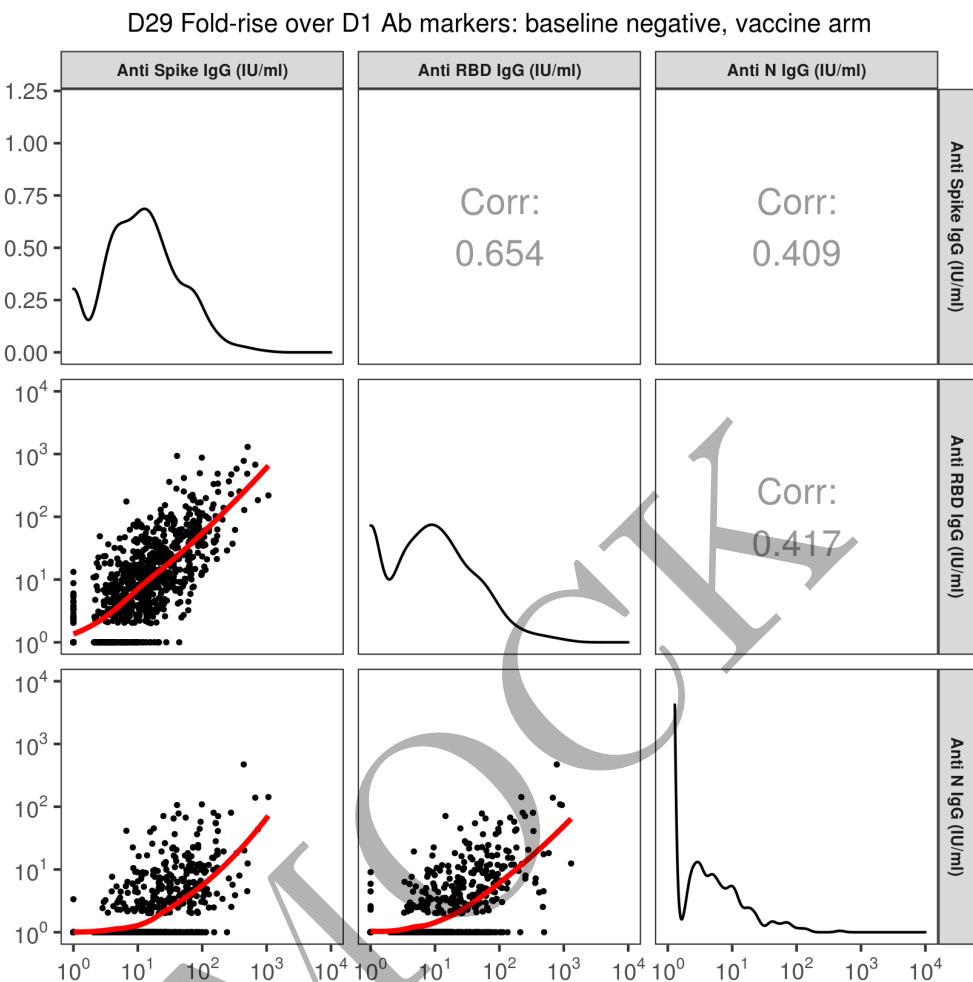


Figure 2.2: Pair plots of D29 fold-rise over D1 Ab markers: baseline negative vaccine arm

2.1.2 Baseline SARS-CoV-2 Positive

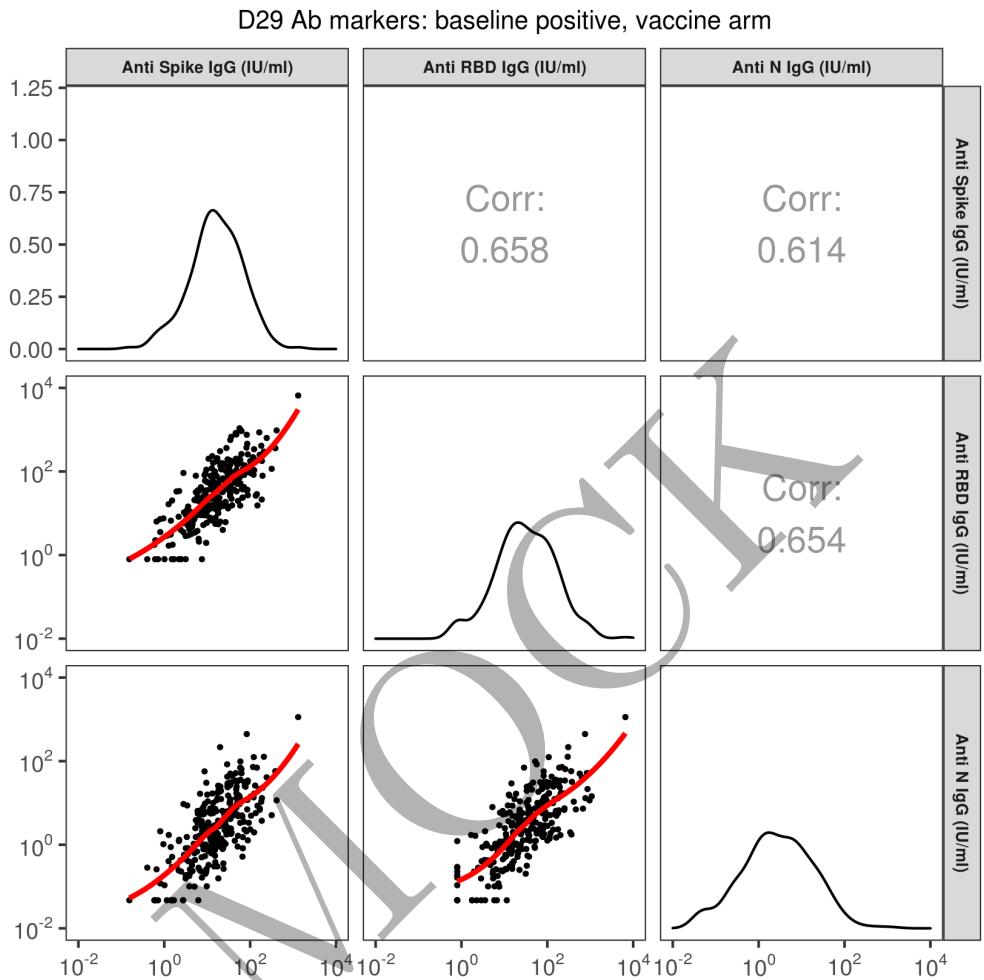


Figure 2.3: Pair plots of D29 Ab markers: baseline positive vaccine arm

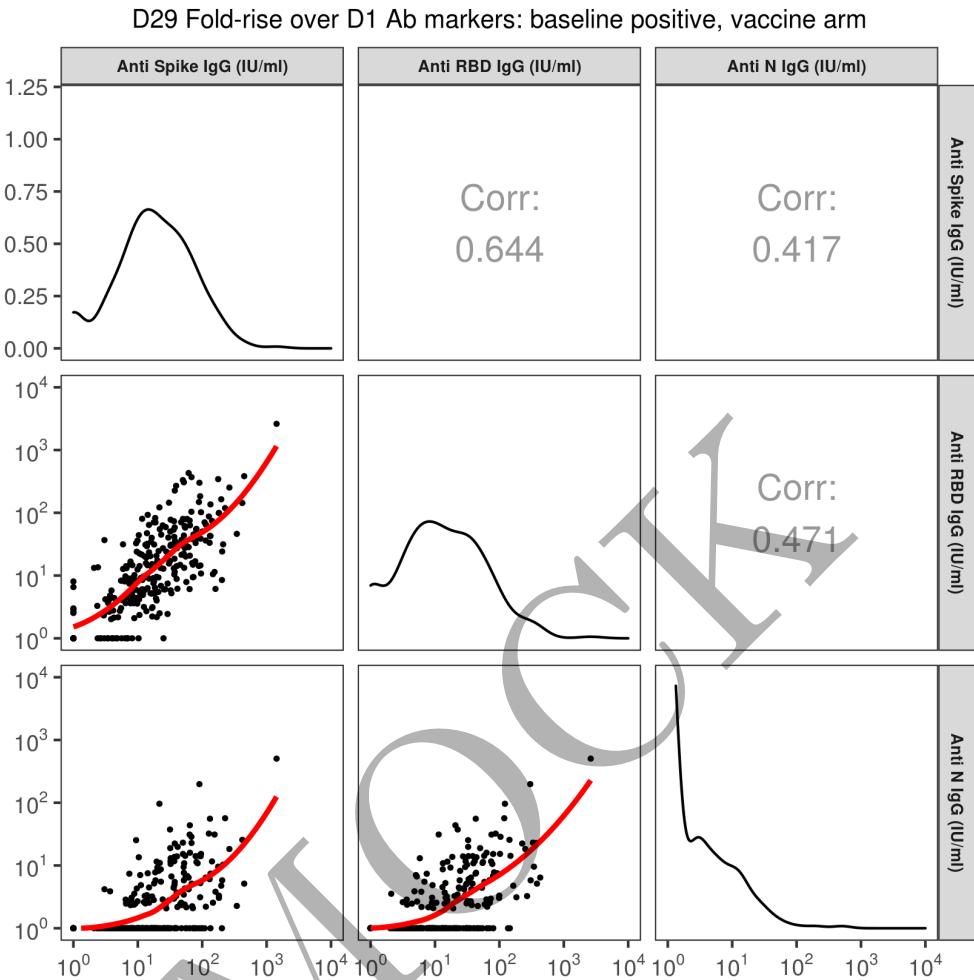


Figure 2.4: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm

2.1.3 Baseline SARS-CoV-2 Positive Placebo Arm

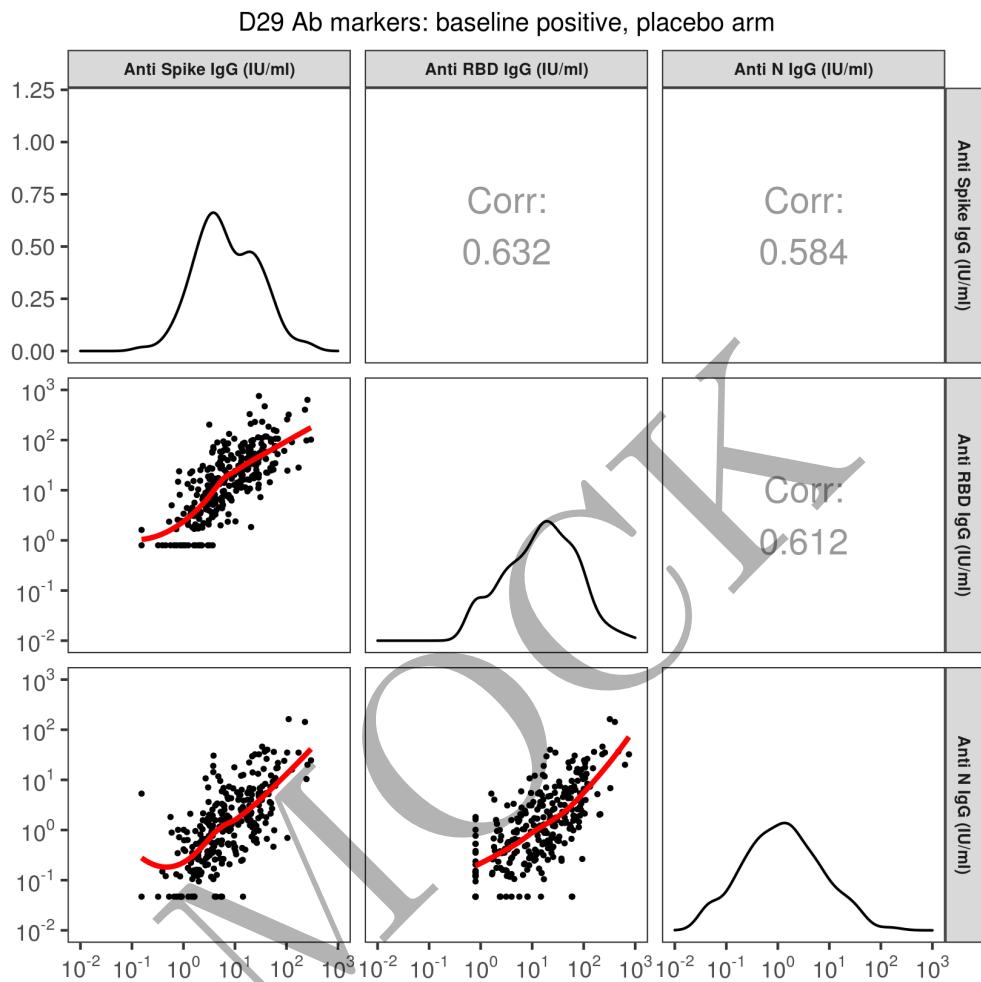


Figure 2.5: Pair plots of D29 Ab markers: baseline positive placebo arm

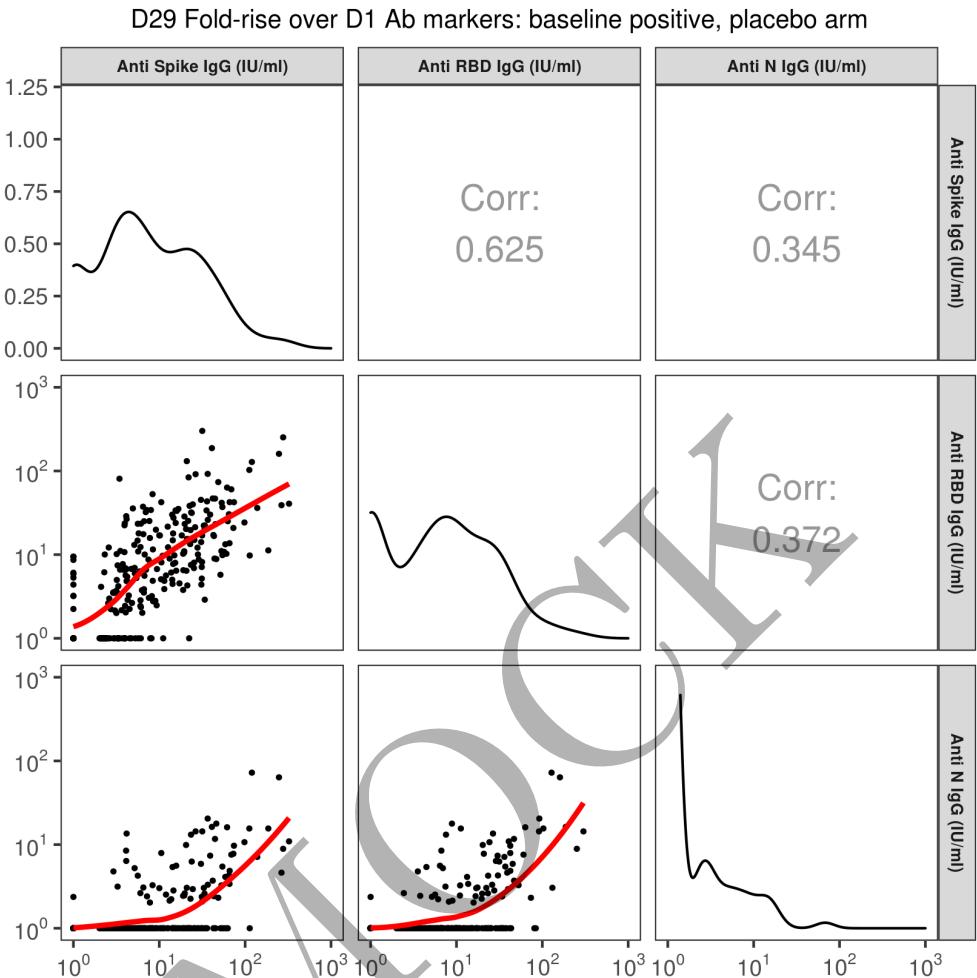


Figure 2.6: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive placebo arm

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

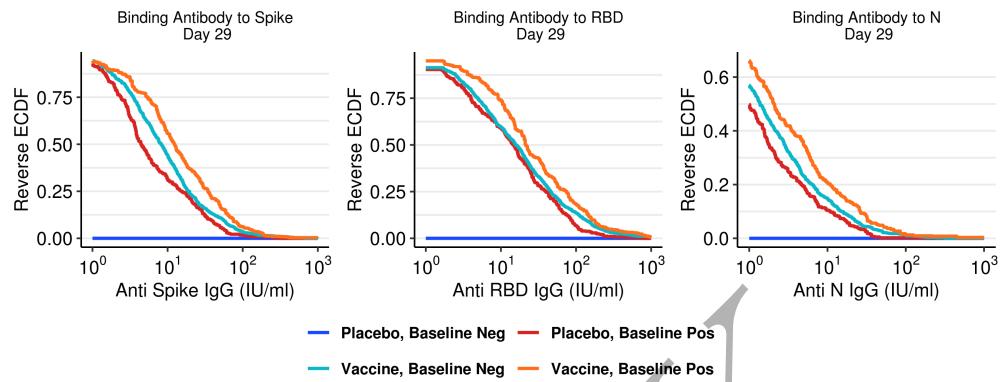


Figure 2.7: RCDF plots for D29 Ab markers: by baseline status x randomization arm

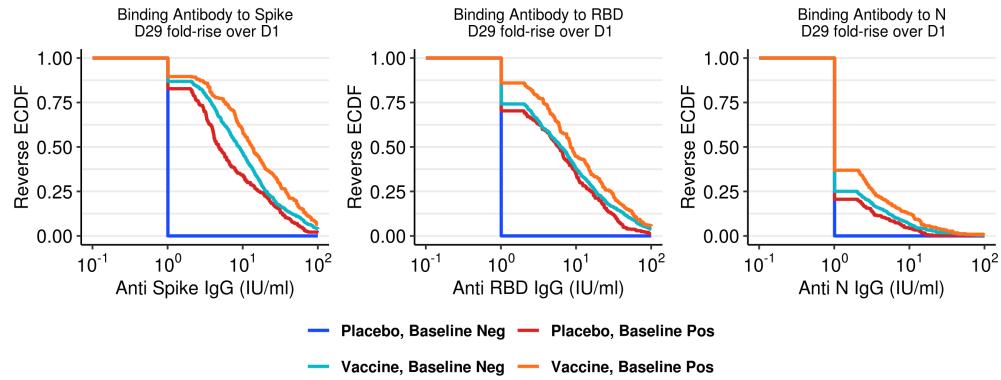


Figure 2.8: RCDF plots for D29 fold-rise over D1 Ab markers: by baseline status x randomization arm

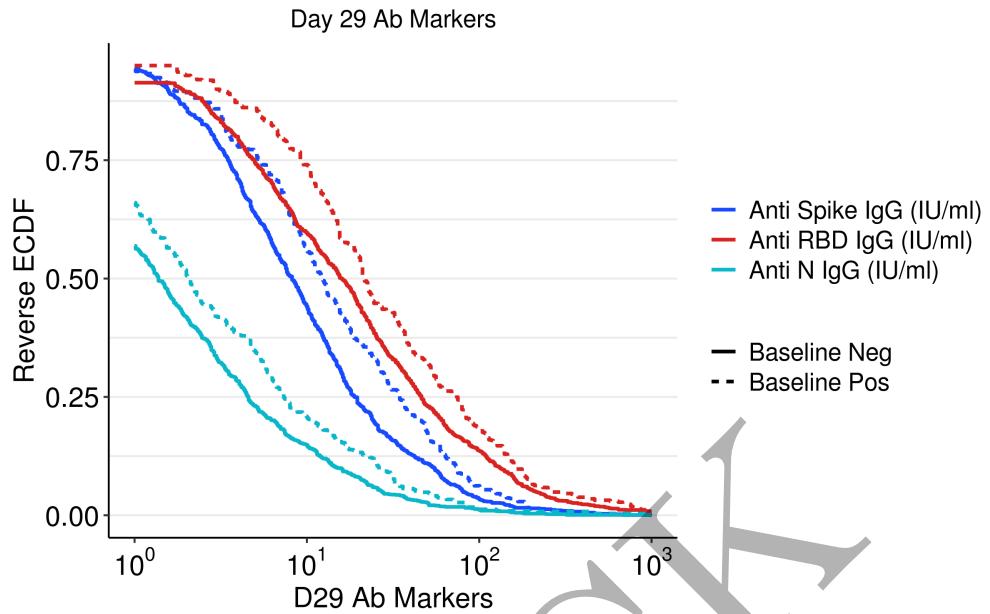


Figure 2.9: RCDF plots for D29 bAb markers: by baseline status for the vaccine arm

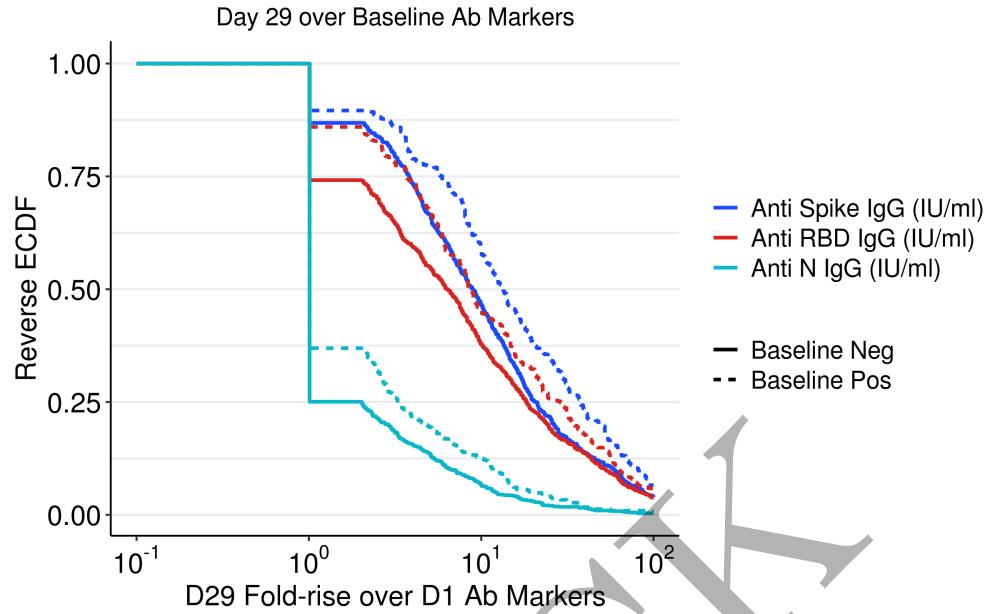


Figure 2.10: RCDF plots for D29 over D1 fold-rise bAb markers: by baseline status for the vaccine arm

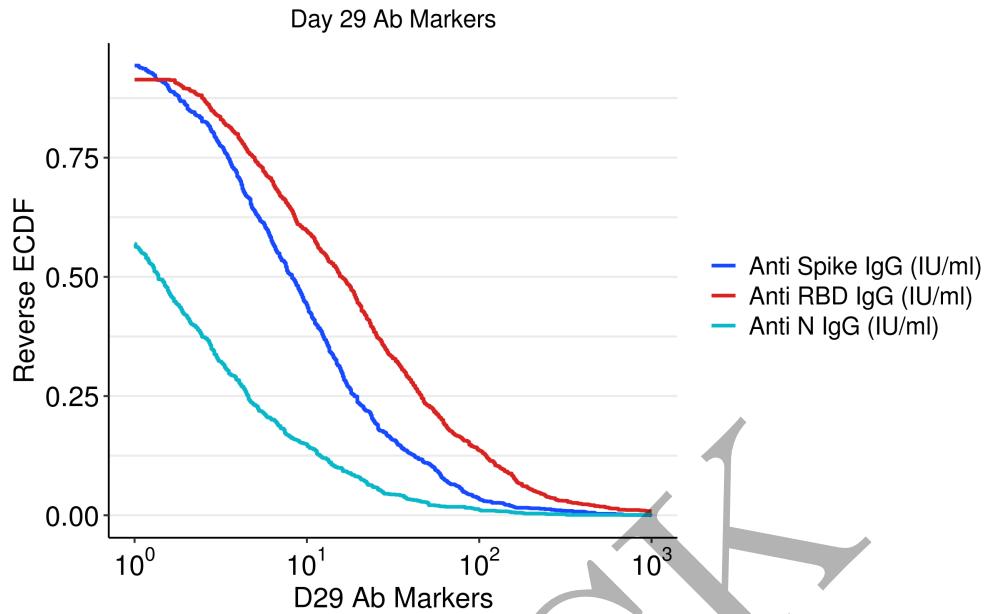


Figure 2.11: RCDF plots for D29 bAb markers: baseline negative vaccine arm

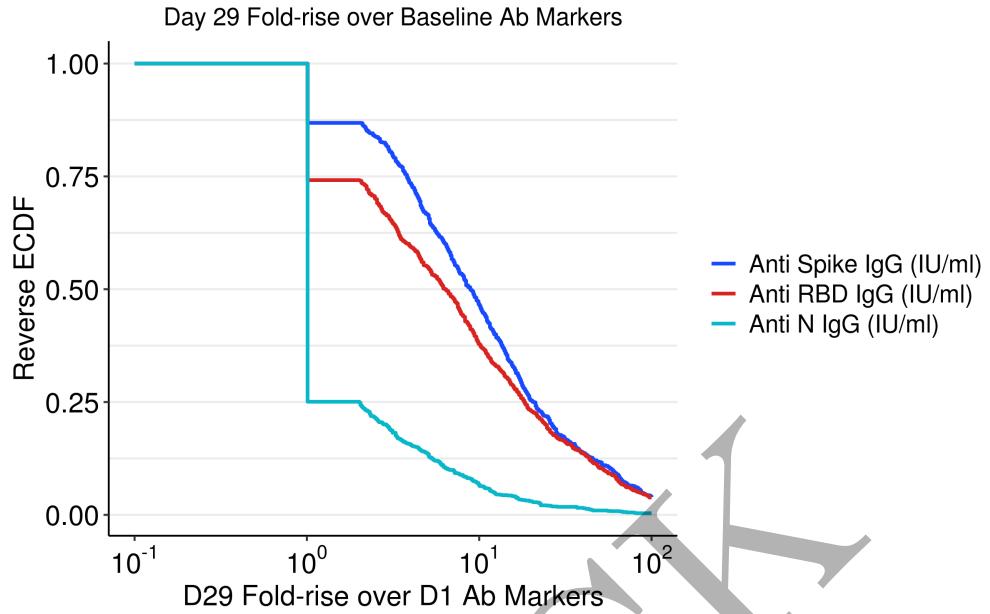


Figure 2.12: RCDF plots for D29 fold-rise over D1 bAb markers: baseline negative vaccine arm

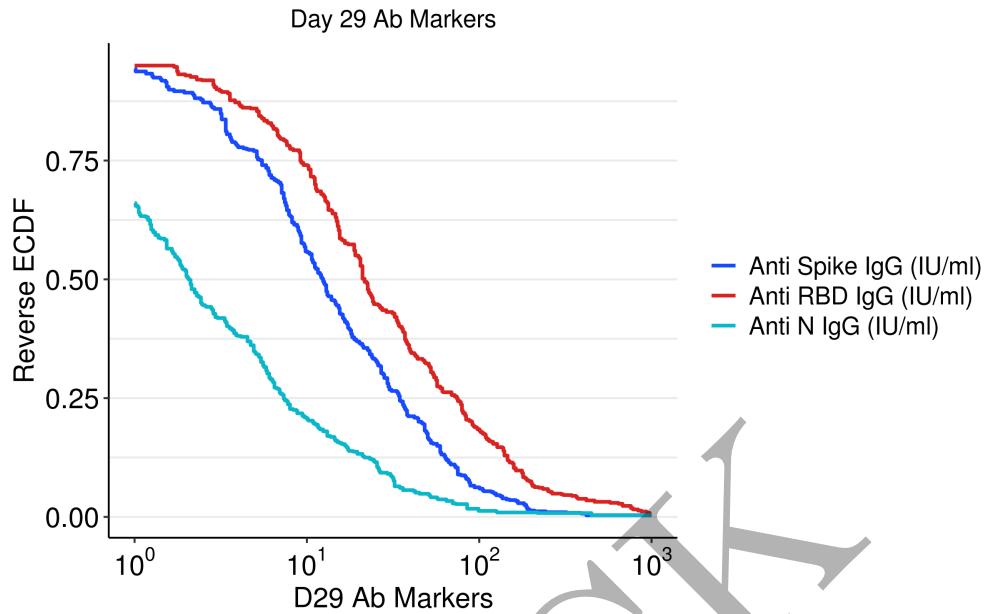


Figure 2.13: RCDF plots for D29 bAb markers: baseline positive vaccine arm

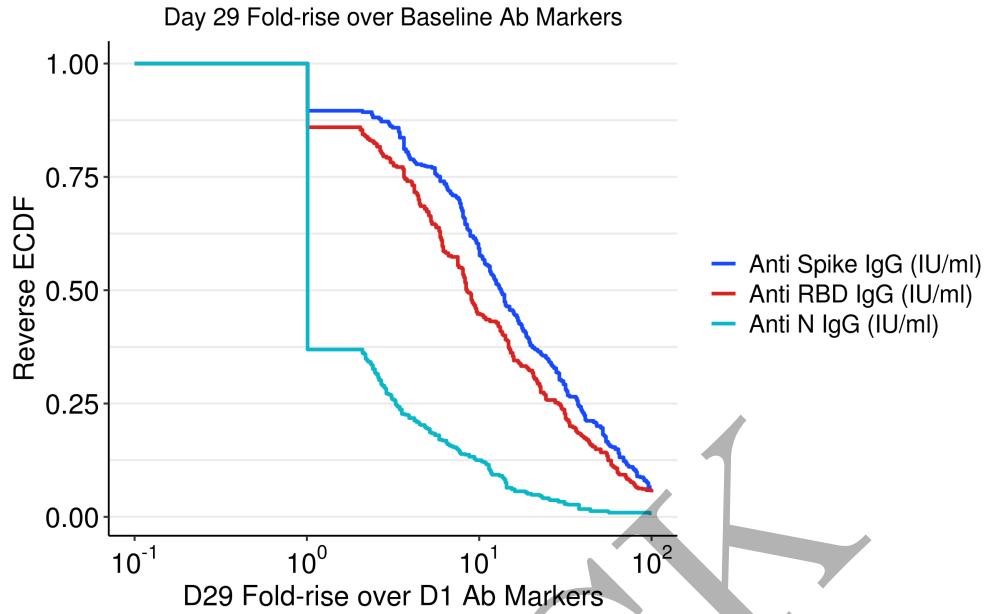


Figure 2.14: RCDF plots for D29 fold-rise over D1 bAb markers: baseline positive vaccine arm

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

2.3.1 Baseline SARS-CoV-2 Negative

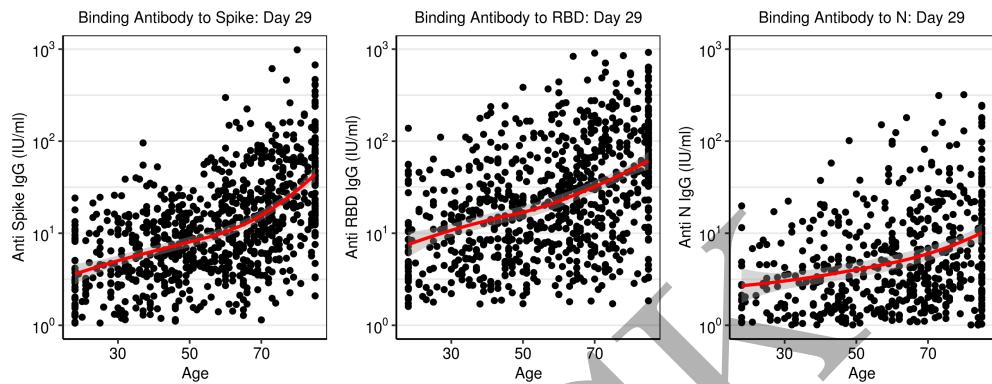


Figure 2.15: Scatter plots for D29 Ab markers vs. age: baseline negative vaccine arm

2.3.2 Baseline SARS-CoV-2 Positive

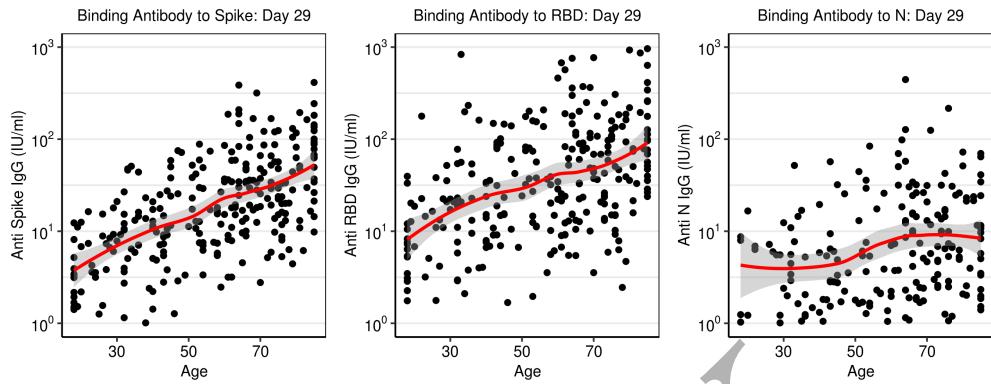


Figure 2.16: Scatter plots for D29 Ab markers vs. age: baseline positive vaccine arm

2.3.3 Baseline SARS-CoV-2 Positive Placebo Arm

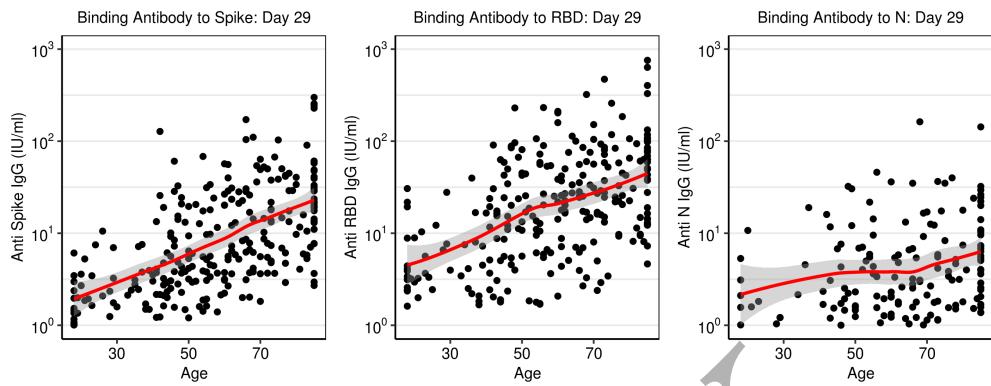


Figure 2.17: Scatter plots for D29 Ab markers vs. age: baseline positive placebo arm

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

2.4.1 Baseline SARS-CoV-2 Negative

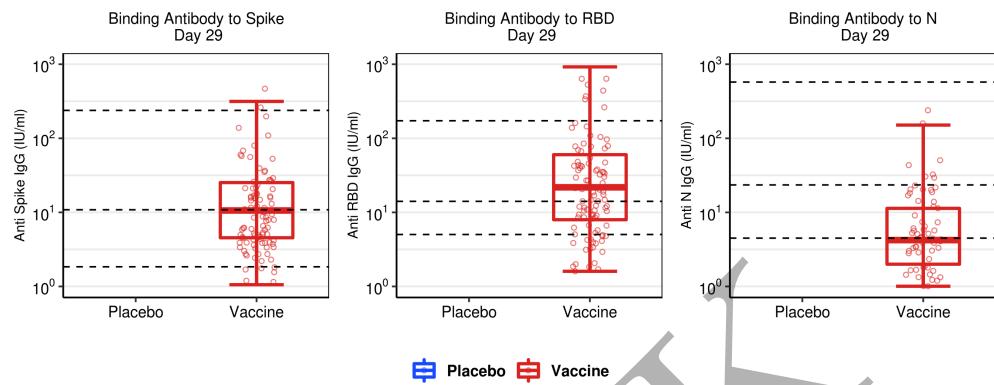


Figure 2.18: Boxplots of D29 Ab markers: baseline negative vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

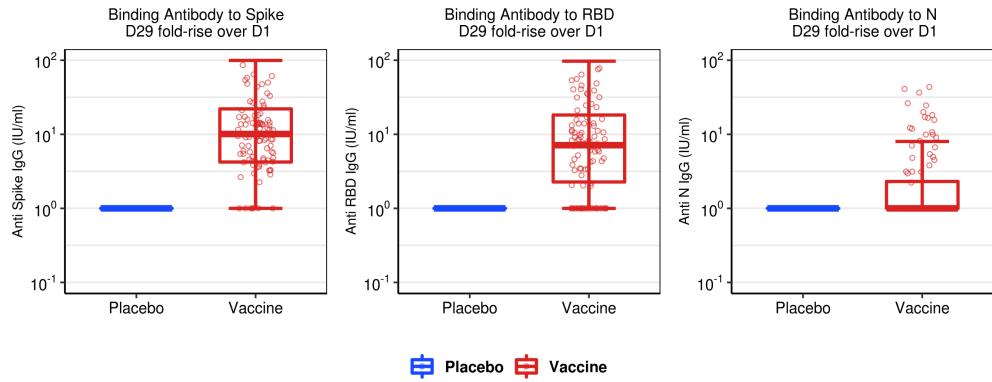


Figure 2.19: Boxplots of D29 fold-rise over D1 Ab markers: baseline negative vaccine + placebo arms

2.4.2 Baseline SARS-CoV-2 Positive

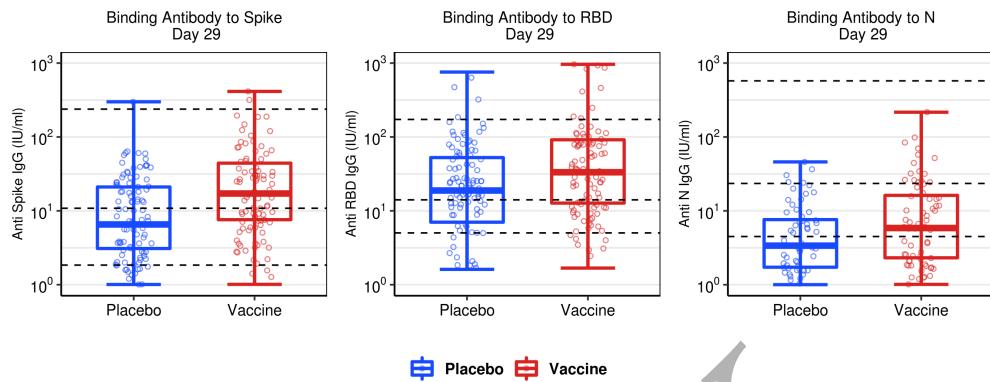


Figure 2.20: Boxplots of D29 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

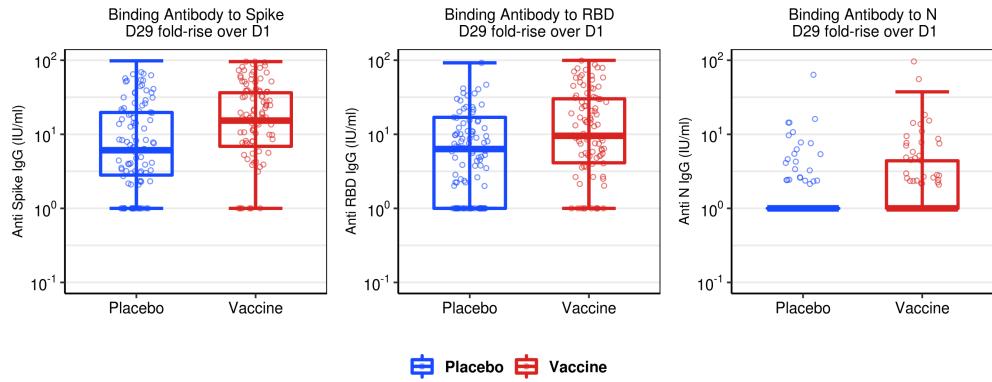


Figure 2.21: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine + placebo arms

2.4.3 Baseline negative vs. positive vaccine recipients

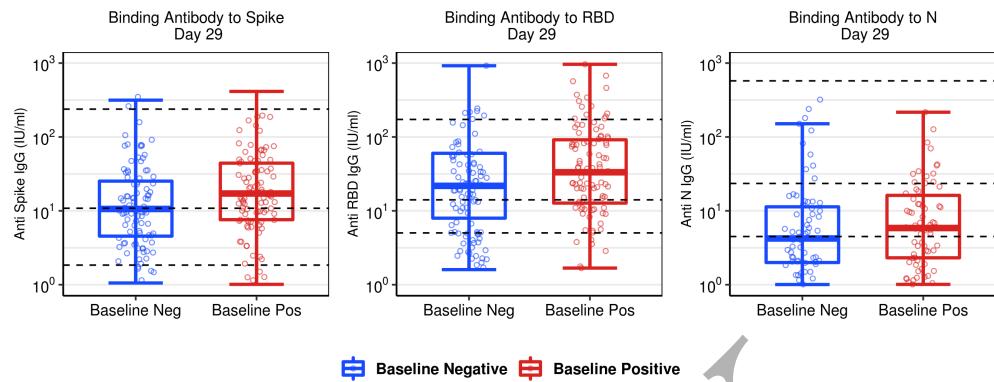


Figure 2.22: Boxplots of D29 Ab markers: baseline positive + negative vaccine arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

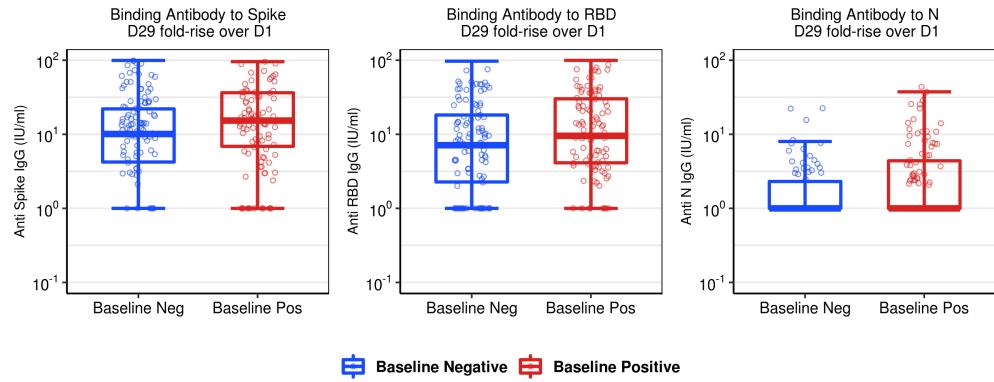


Figure 2.23: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative vaccine arm

2.4.4 Baseline negative vs. positive placebo recipients

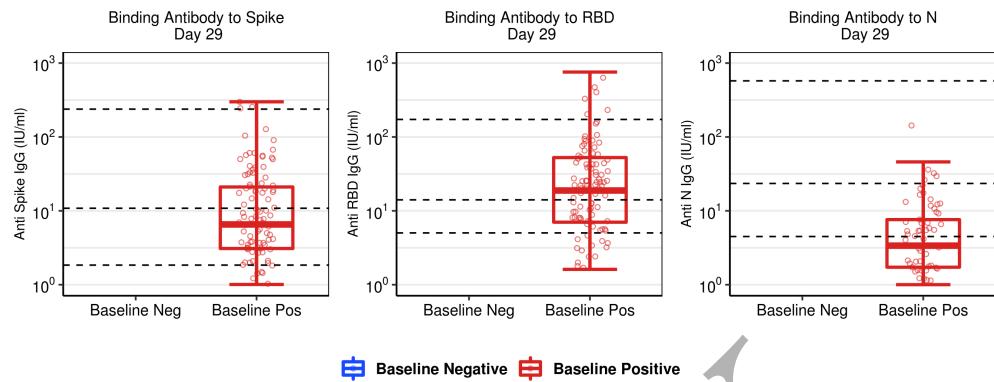


Figure 2.24: Boxplots of D29 Ab markers: baseline positive + negative placebo arm. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

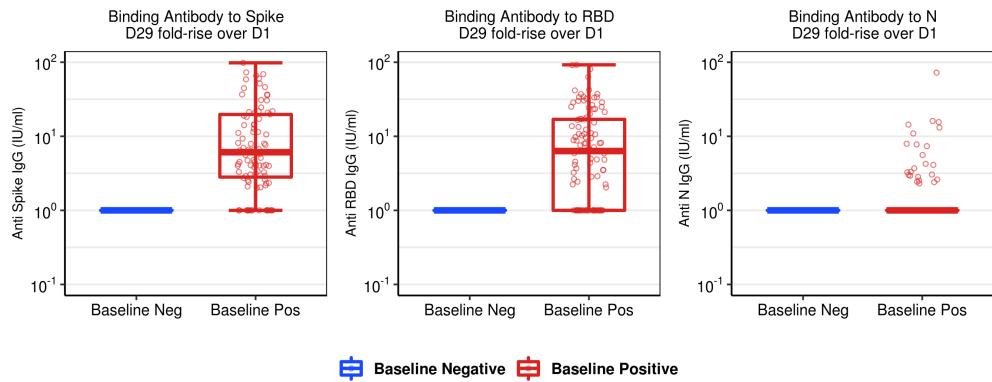


Figure 2.25: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive + negative placebo arm

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

2.5.1 Baseline SARS-CoV-2 Negative

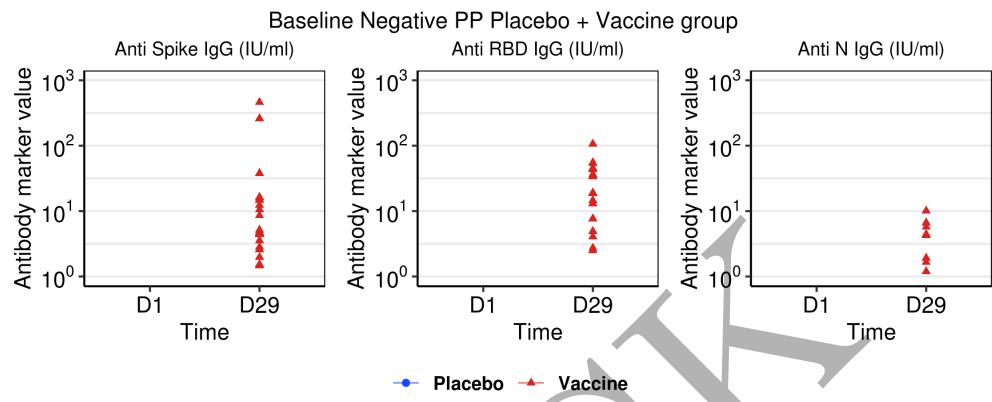


Figure 2.26: Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

2.5.2 Baseline SARS-CoV-2 Positive

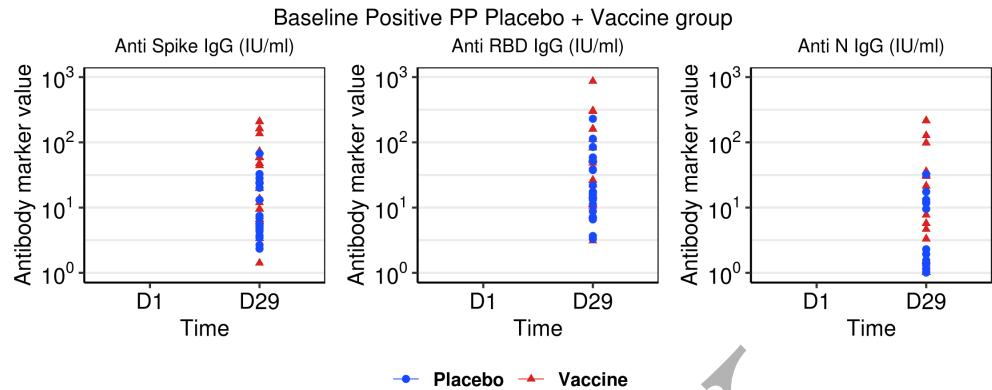


Figure 2.27: Spaghetti plots of Ab markers over time: baseline positive vaccine + placebo arm

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

2.6.1 Baseline SARS-CoV-2 Negative

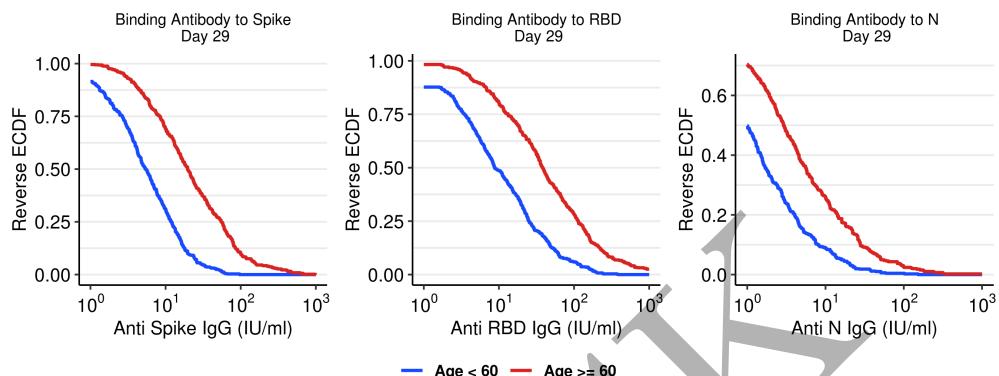


Figure 2.28: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age groups.

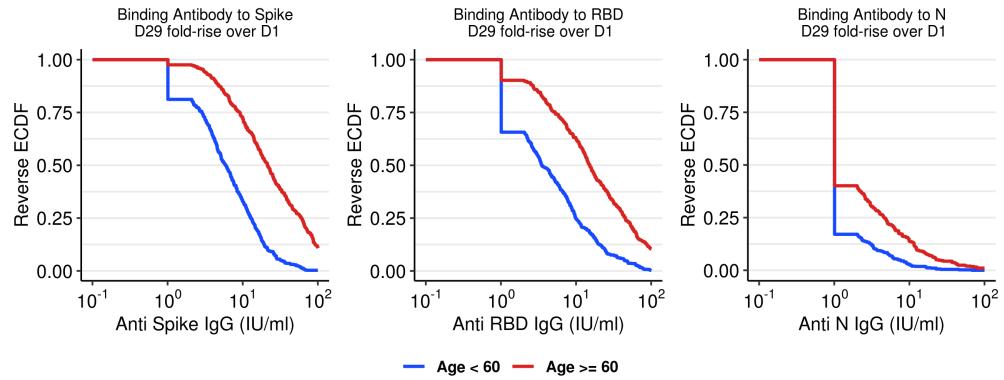


Figure 2.29: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age groups.

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

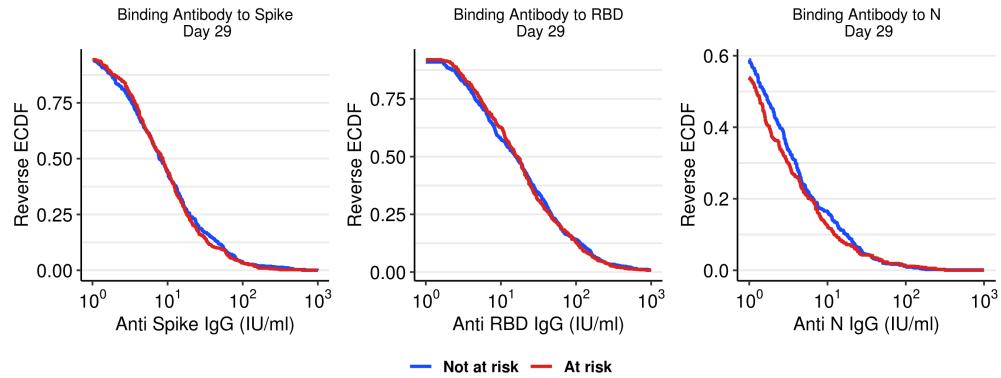


Figure 2.30: RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

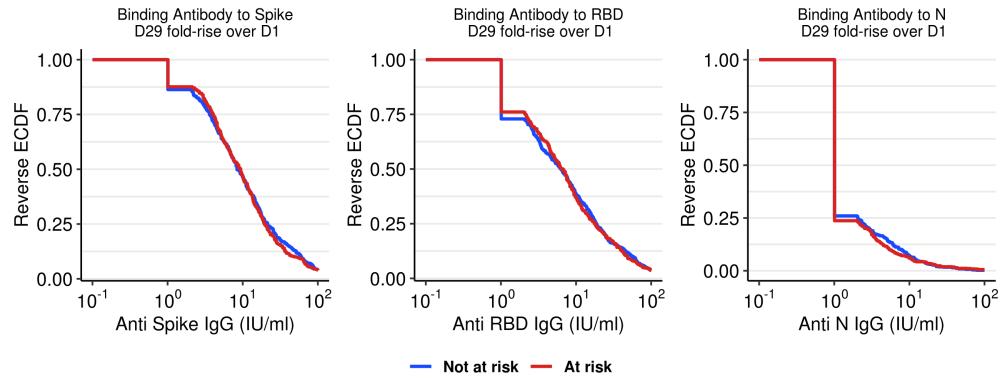


Figure 2.31: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by high-risk condition.

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

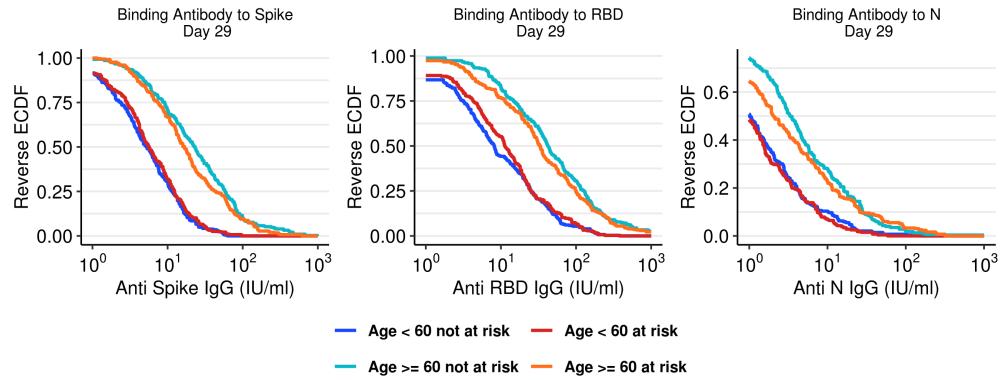


Figure 2.32: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

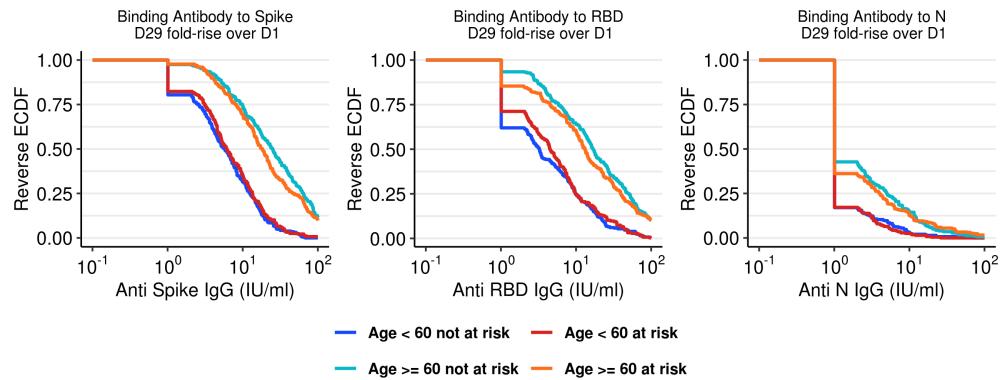


Figure 2.33: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and high-risk condition.

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

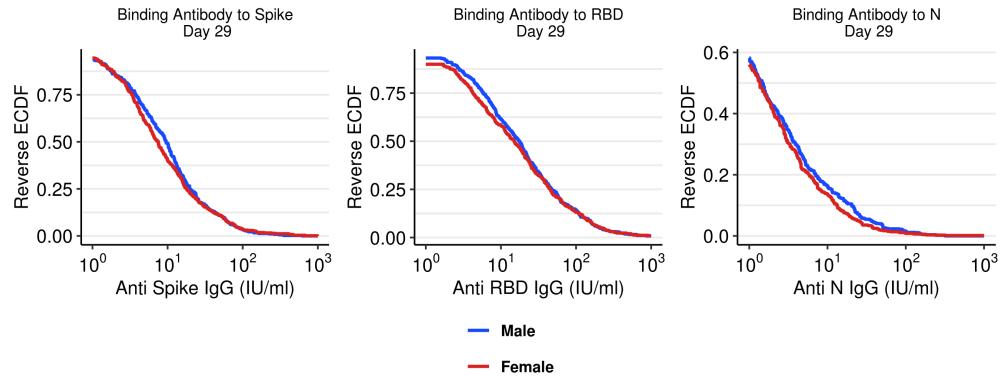


Figure 2.34: RCDF plots for D29 Ab markers: baseline negative vaccine arm by sex assigned at birth.

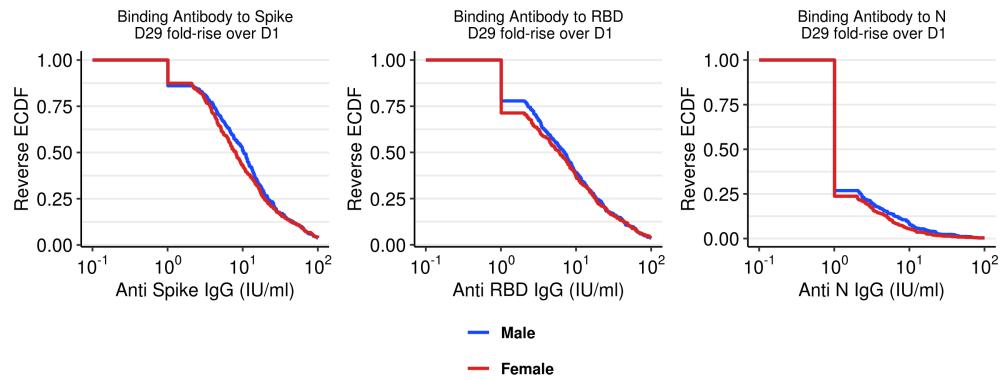


Figure 2.35: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by sex assigned at birth.

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

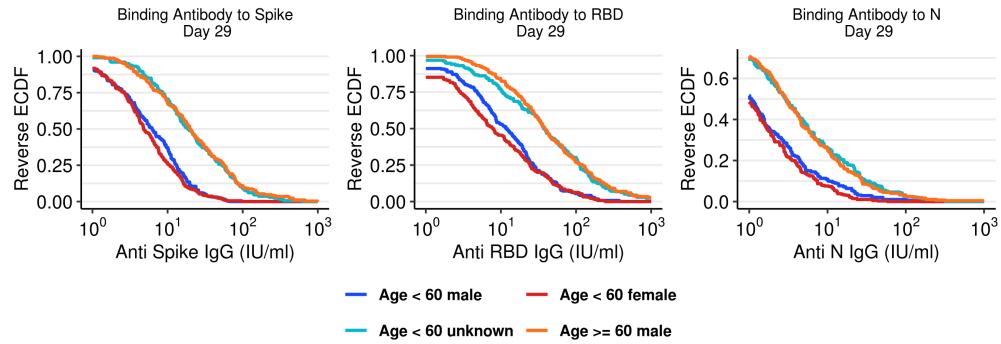


Figure 2.36: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

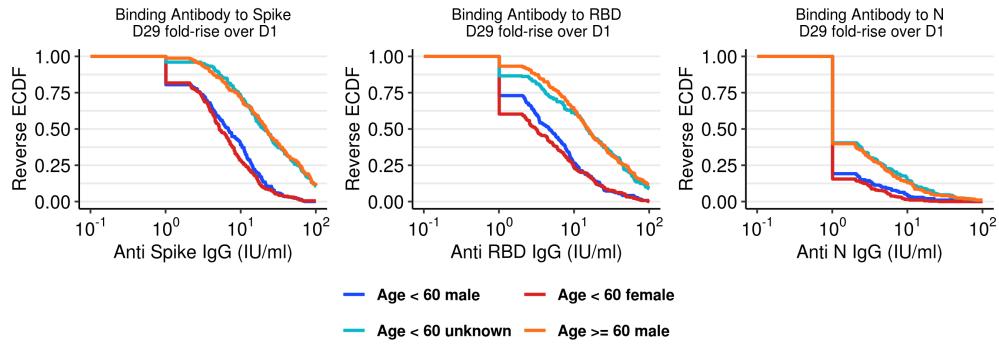


Figure 2.37: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

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

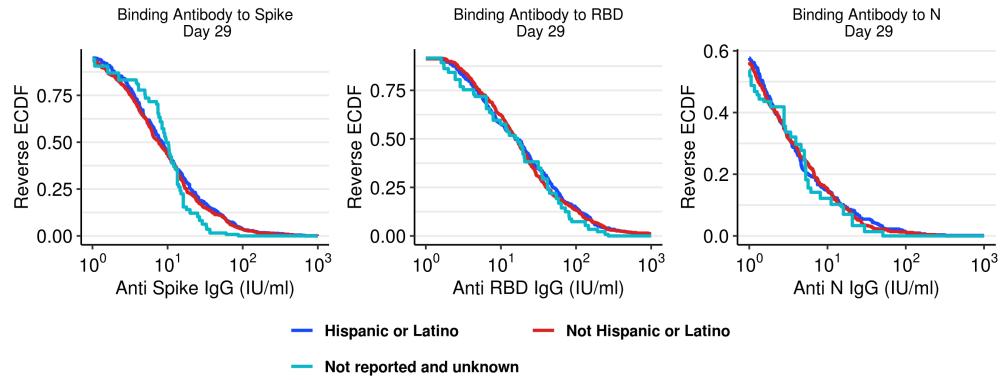


Figure 2.38: RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

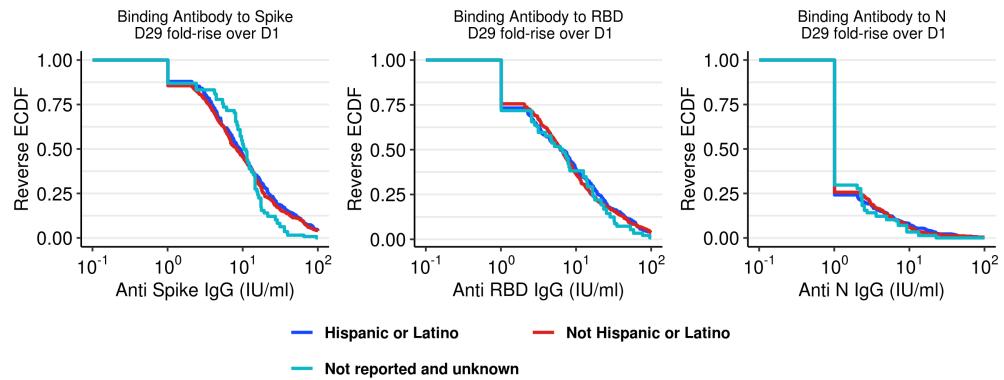


Figure 2.39: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by ethnicity.

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

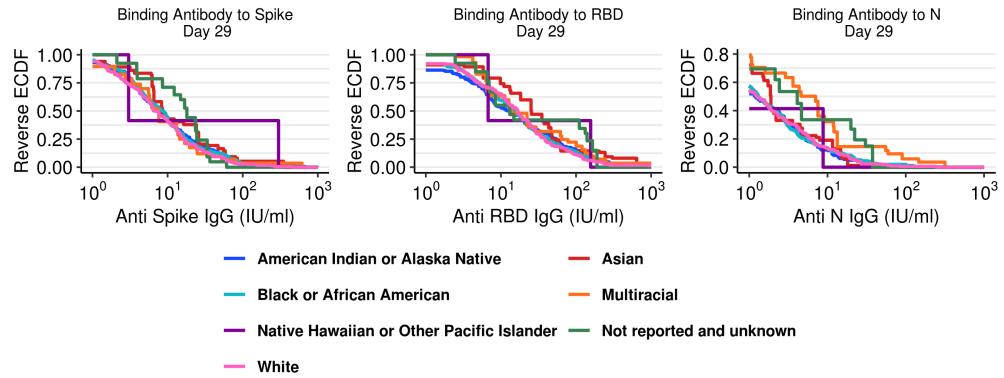


Figure 2.40: RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

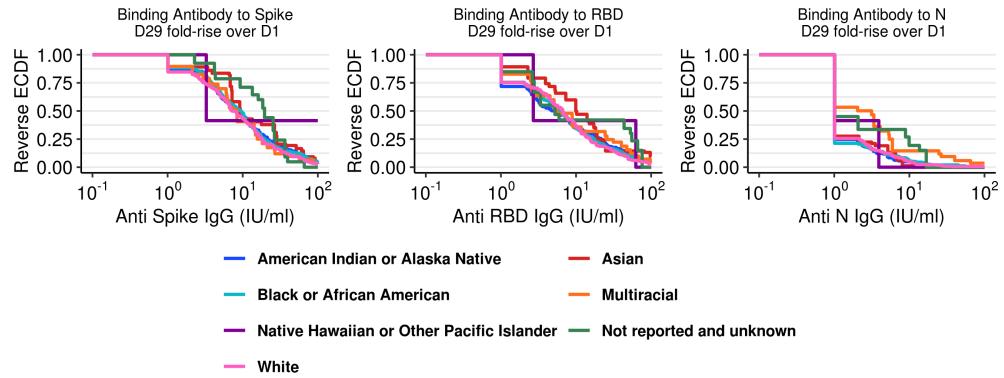


Figure 2.41: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by race.

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

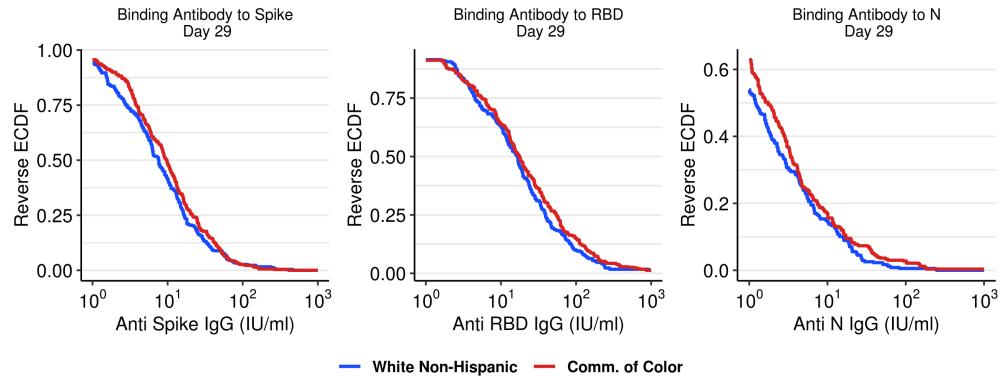


Figure 2.42: RCDF plots for D29 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

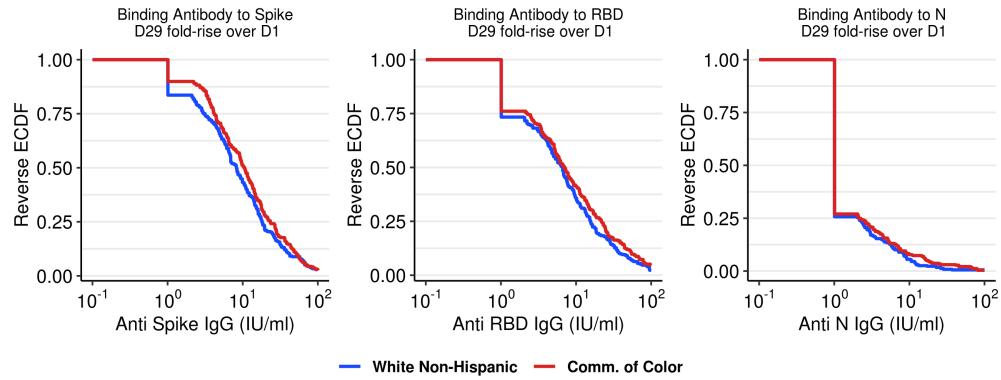


Figure 2.43: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

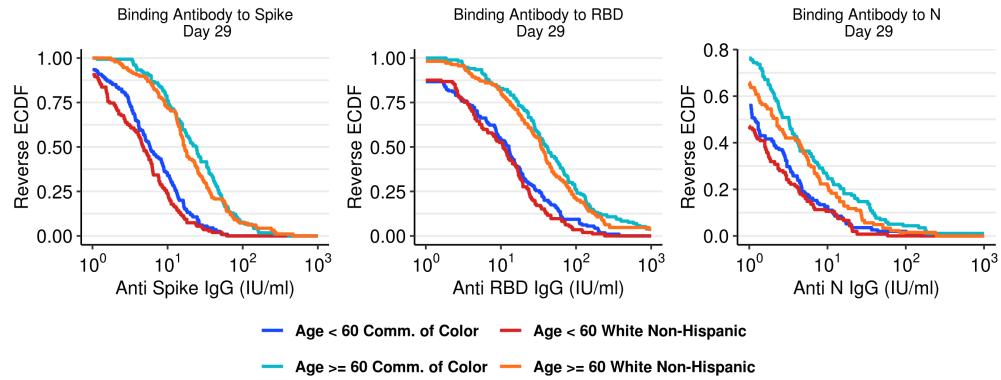


Figure 2.44: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

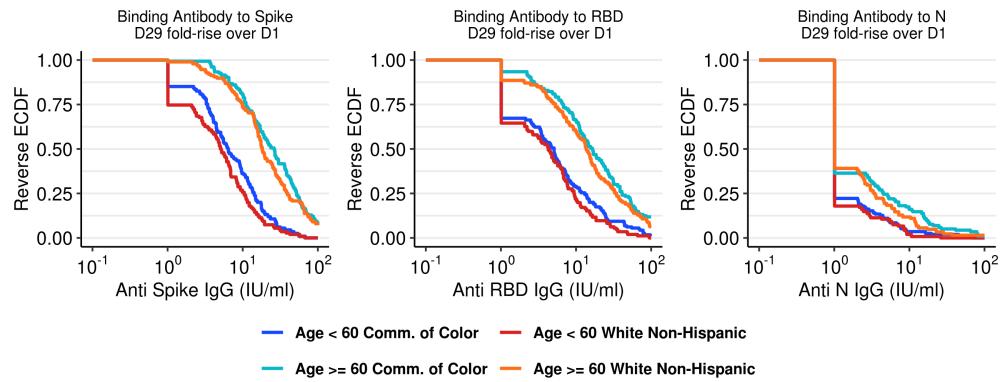


Figure 2.45: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

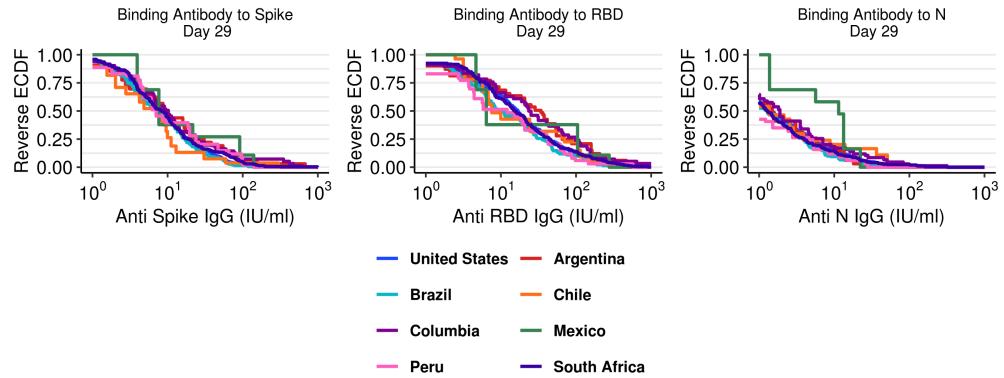


Figure 2.46: RCDF plots for D29 Ab markers: baseline negative vaccine arm by country of residence.

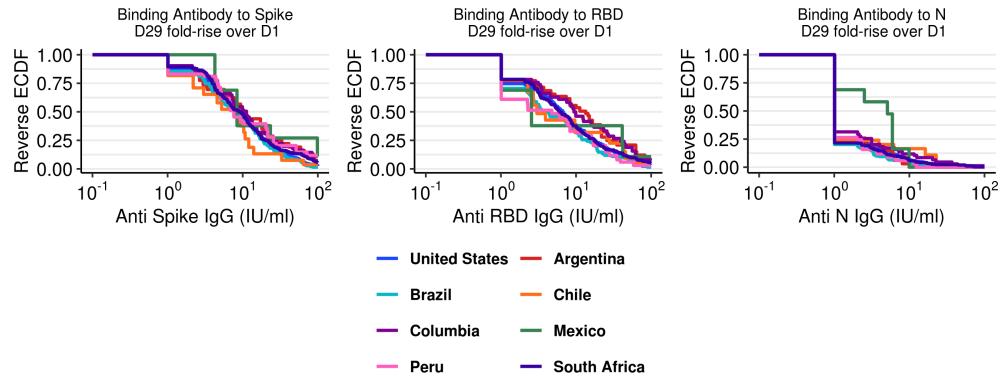


Figure 2.47: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by country of residence.

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

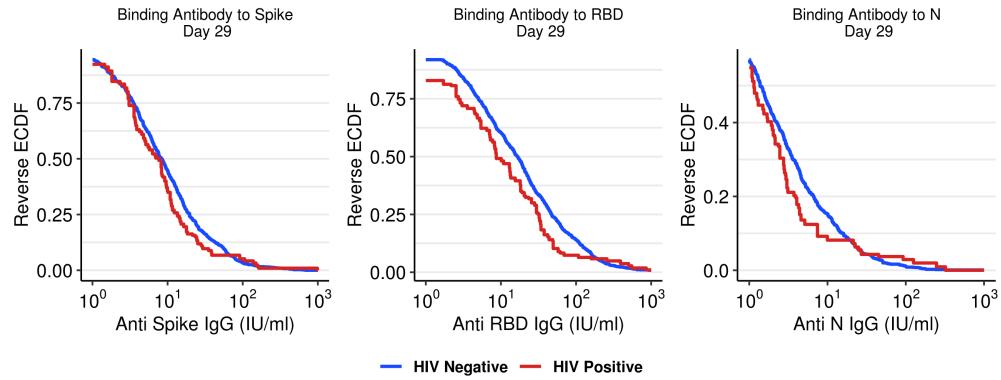


Figure 2.48: RCDF plots for D29 Ab markers: baseline negative vaccine arm by HIV positivity.

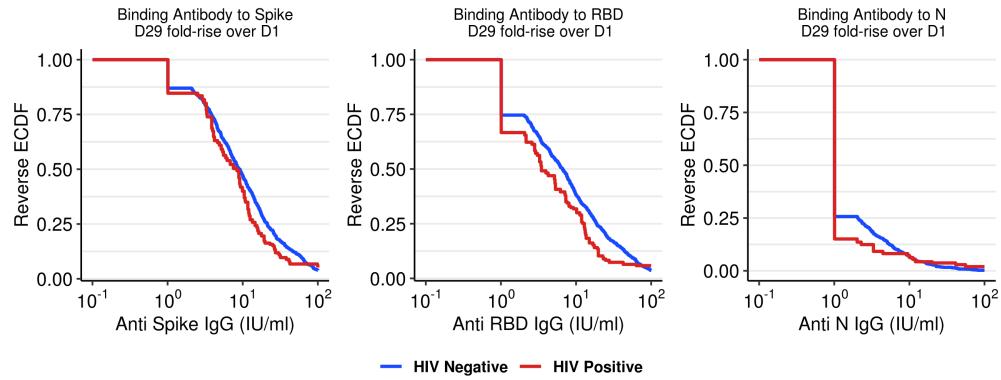


Figure 2.49: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by HIV positivity.

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

2.6.2 Baseline SARS-CoV-2 Positive

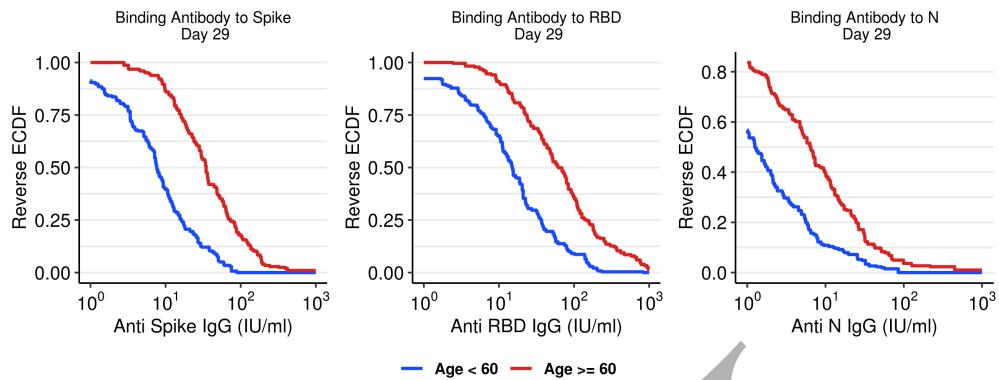


Figure 2.50: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age groups.

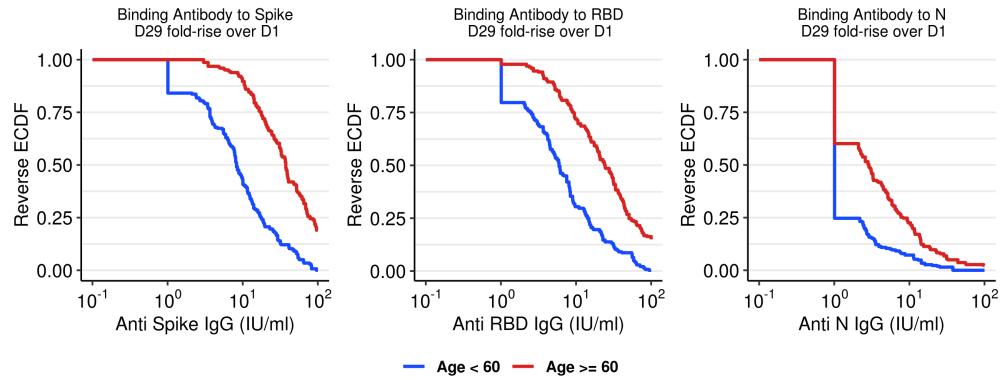


Figure 2.51: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age groups.

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

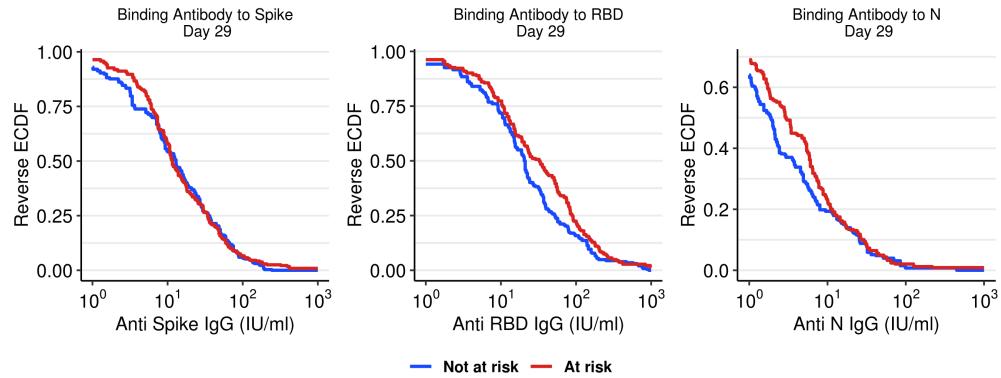


Figure 2.52: RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

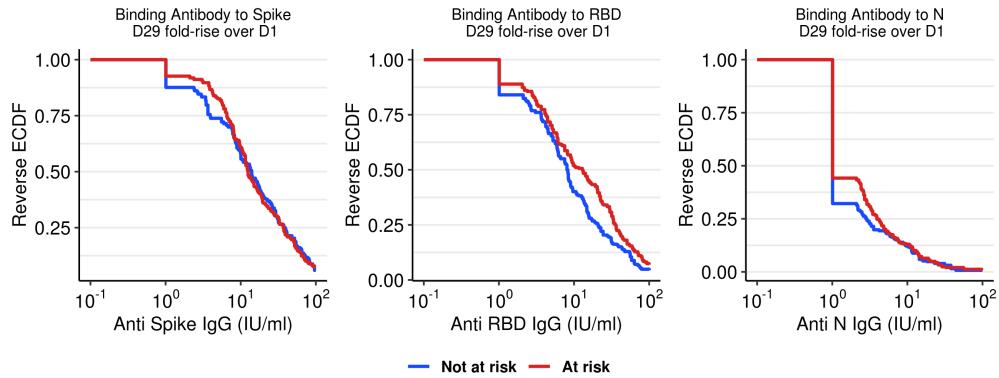


Figure 2.53: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

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

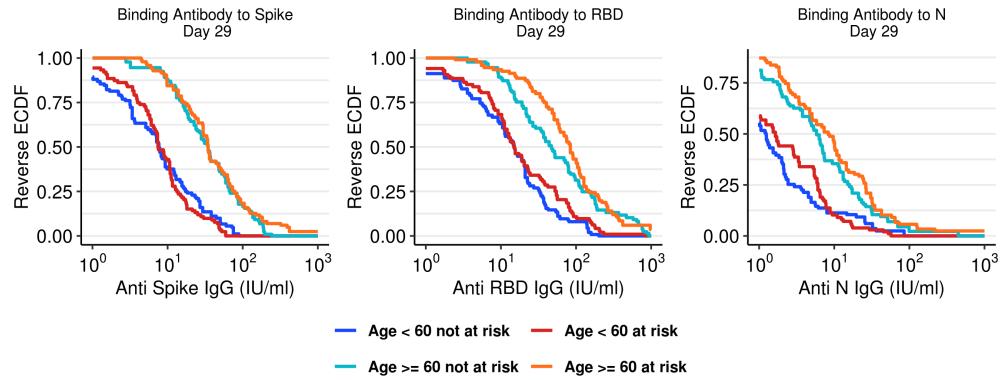


Figure 2.54: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

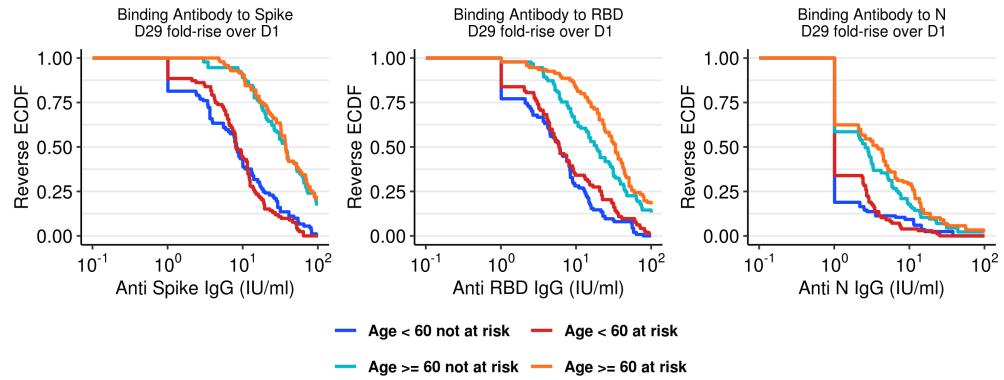


Figure 2.55: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

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

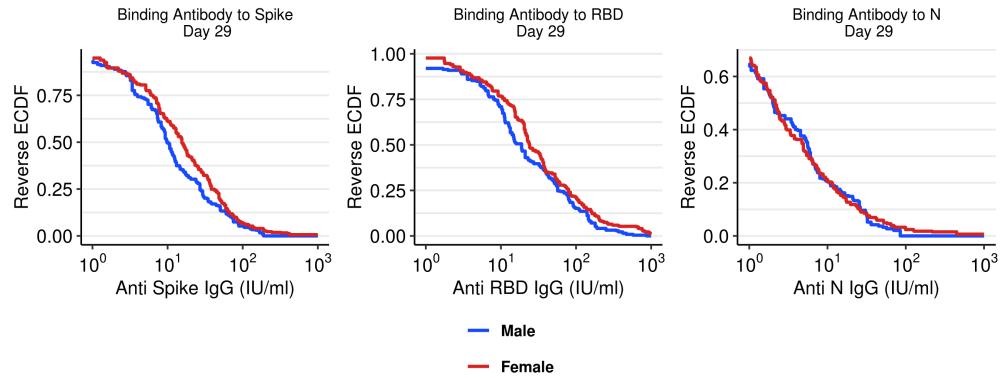


Figure 2.56: RCDF plots for D29 Ab markers: baseline positive vaccine arm by sex assigned at birth.

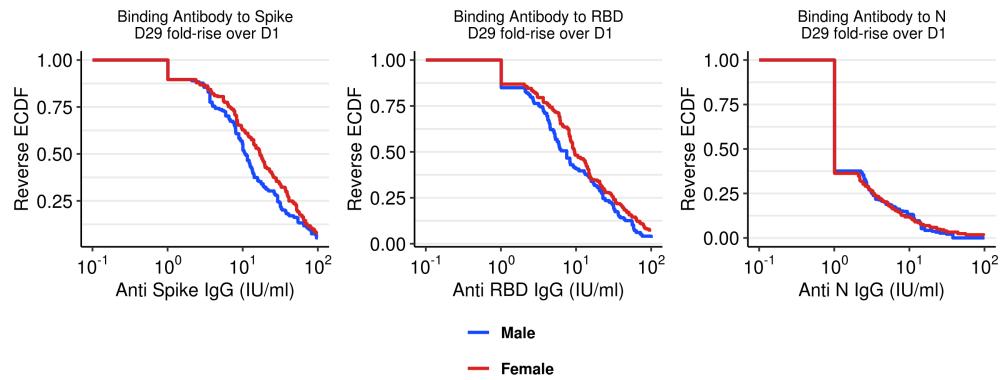


Figure 2.57: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

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

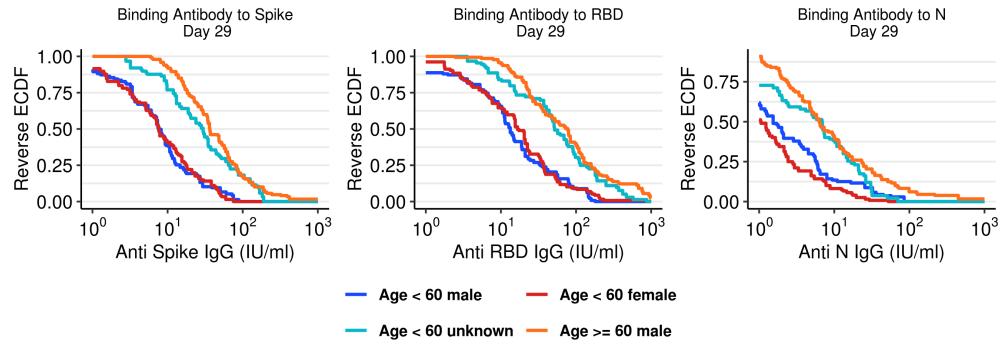


Figure 2.58: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

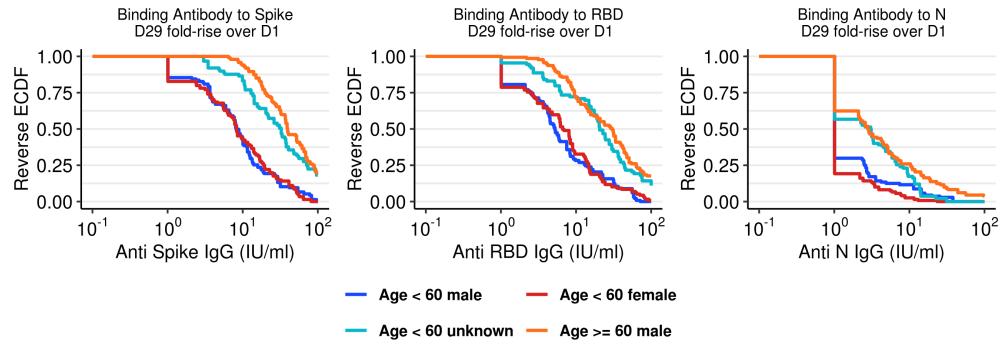


Figure 2.59: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

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

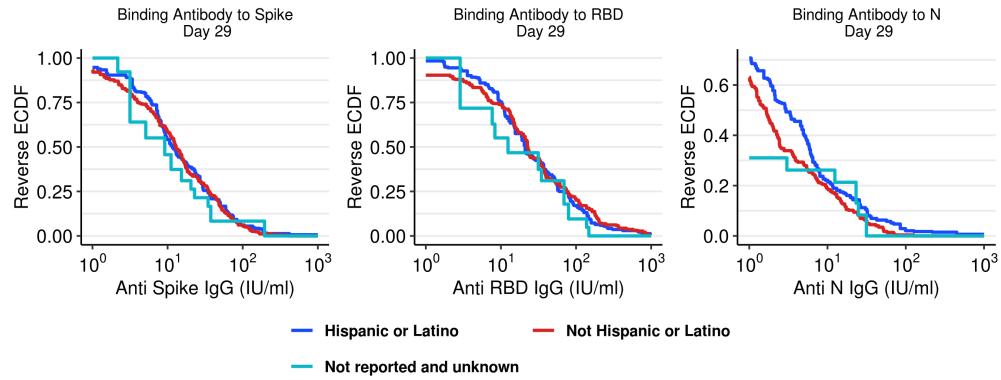


Figure 2.60: RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

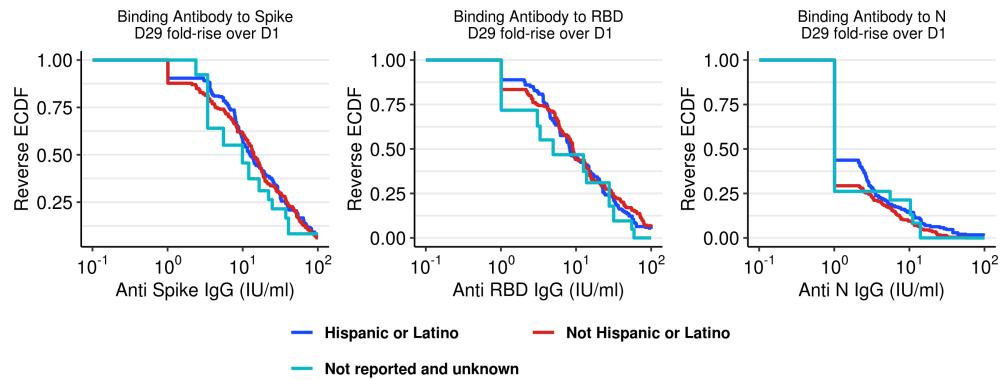


Figure 2.61: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

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

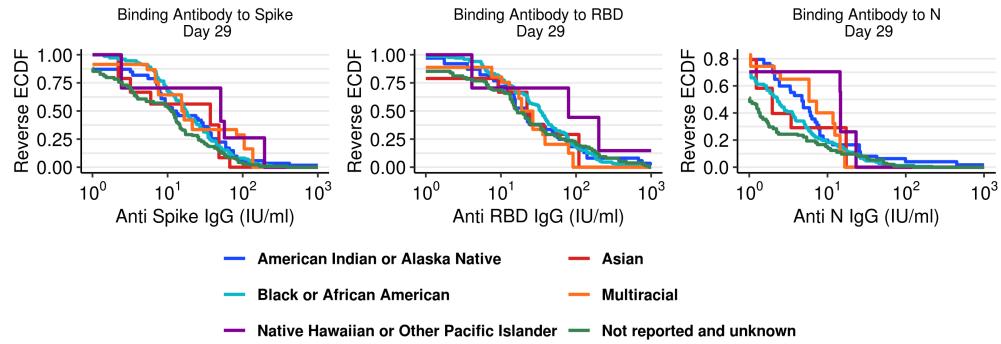


Figure 2.62: RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

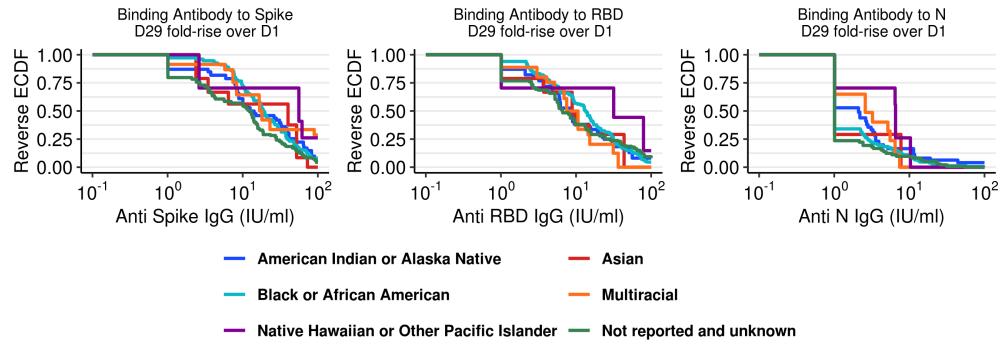


Figure 2.63: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

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

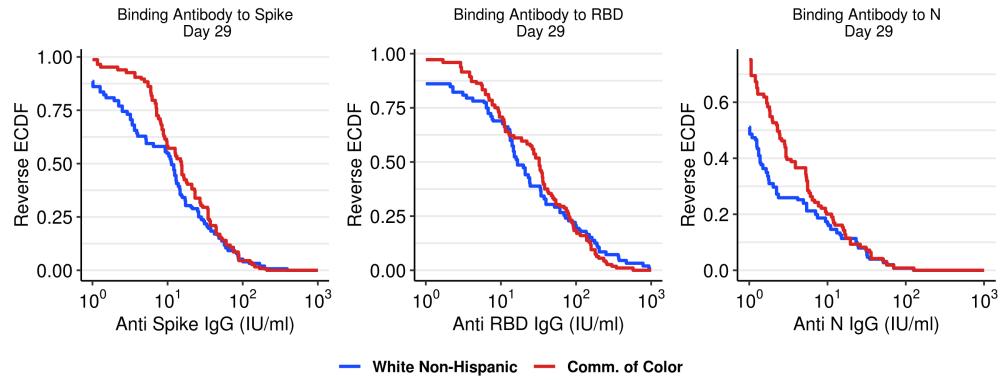


Figure 2.64: RCDF plots for D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

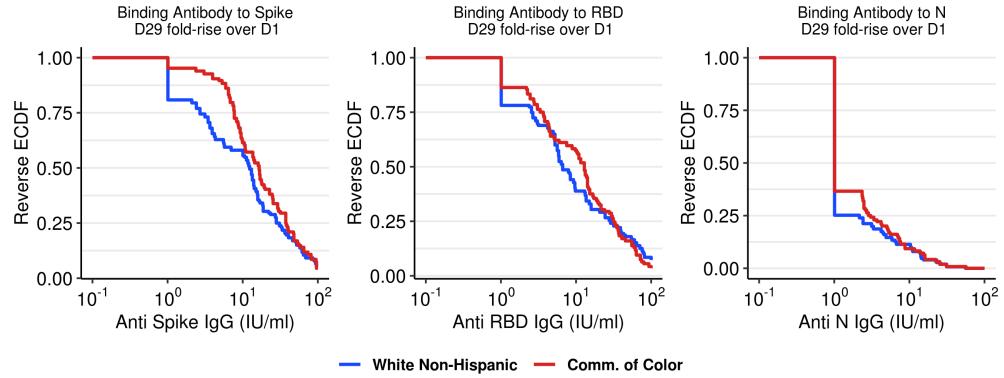


Figure 2.65: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

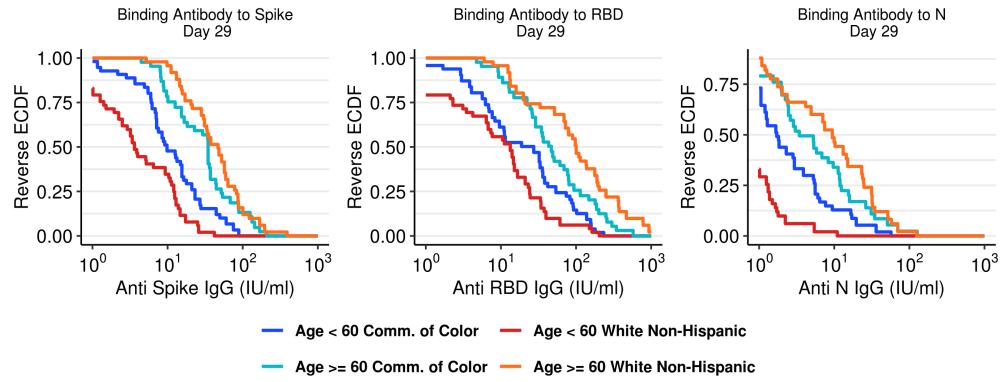


Figure 2.66: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

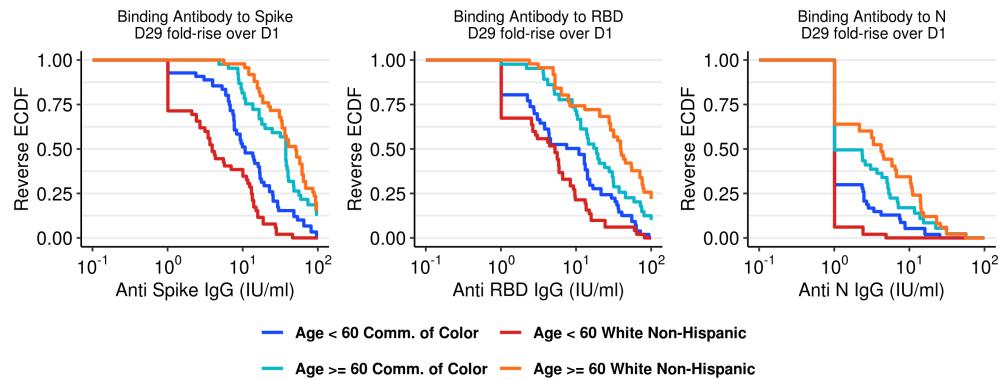


Figure 2.67: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

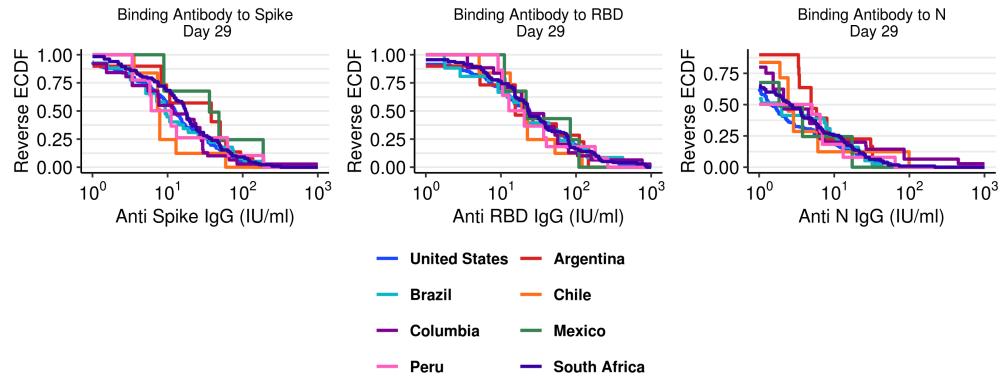


Figure 2.68: RCDF plots for D29 Ab markers: baseline positive vaccine arm by country of residence.

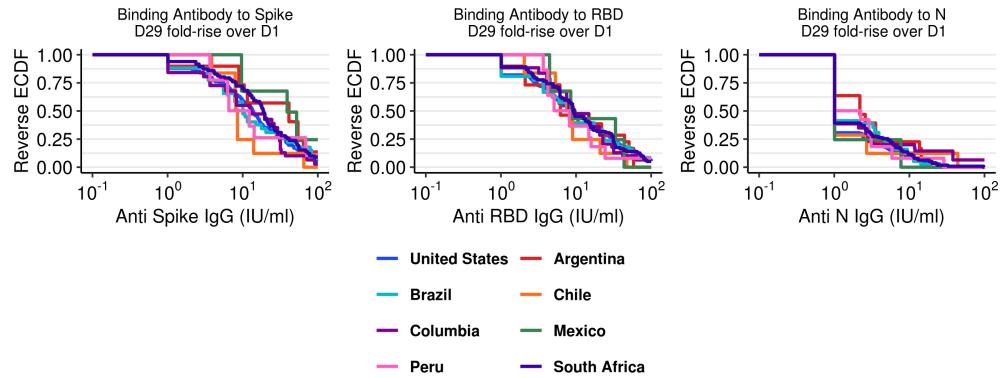


Figure 2.69: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

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

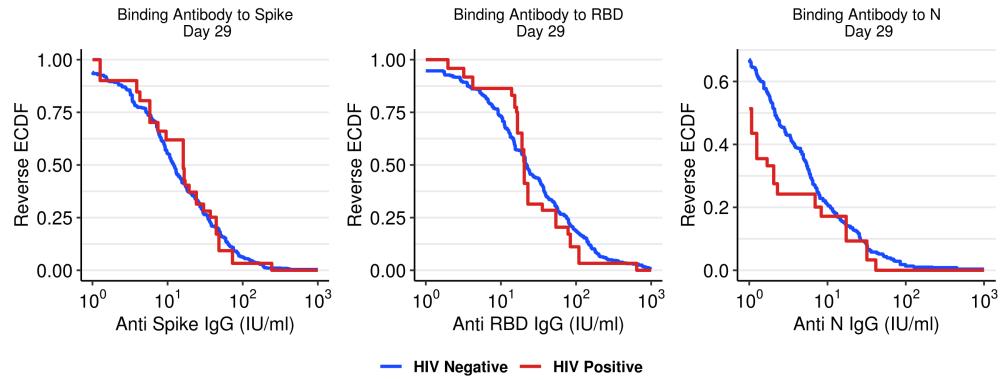


Figure 2.70: RCDF plots for D29 Ab markers: baseline positive vaccine arm by HIV positivity.

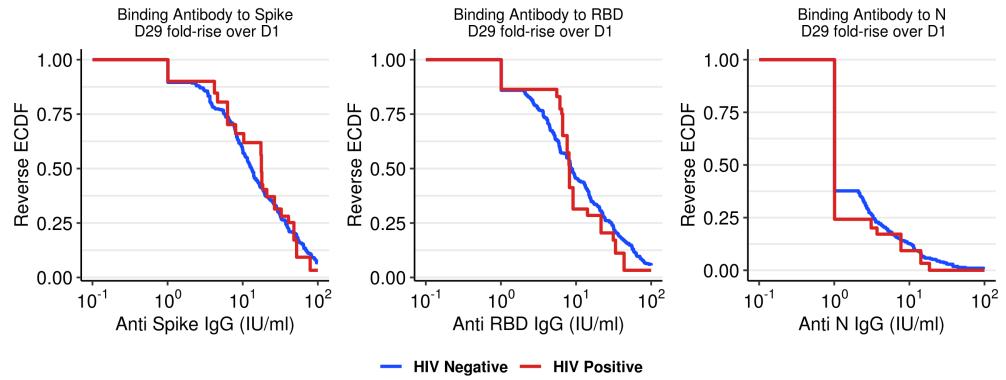


Figure 2.71: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

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

2.6.3 Baseline SARS-CoV-2 Positive Placebo Arm

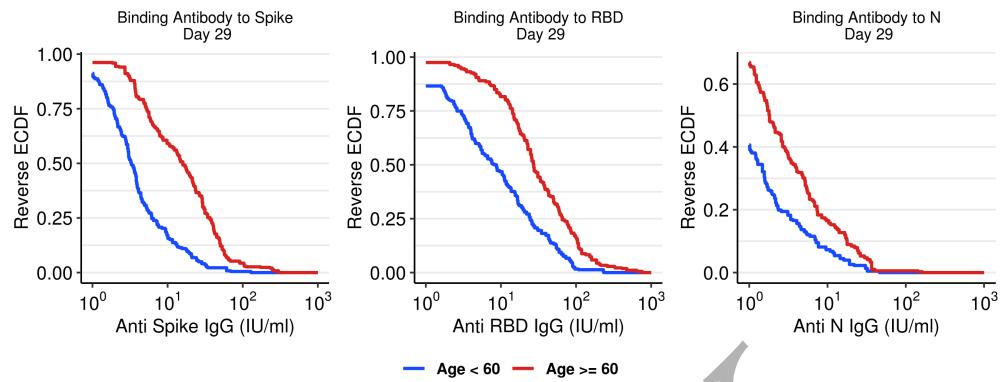


Figure 2.72: RCDF plots for D29 Ab markers: baseline positive placebo arm by age groups.

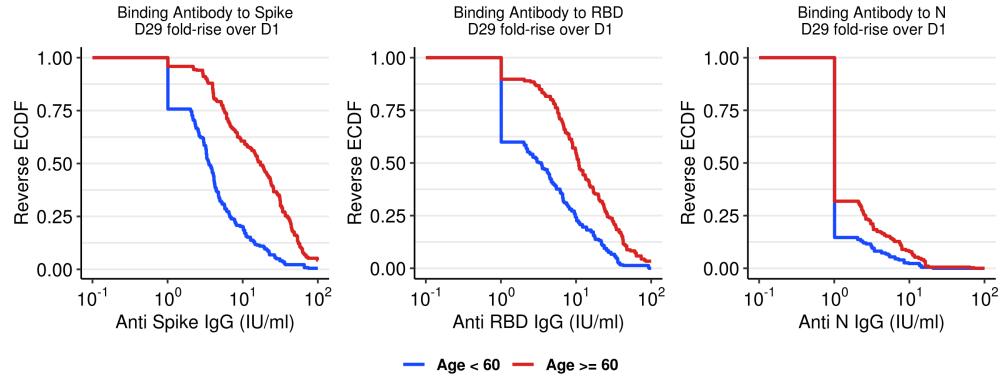


Figure 2.73: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age groups.

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

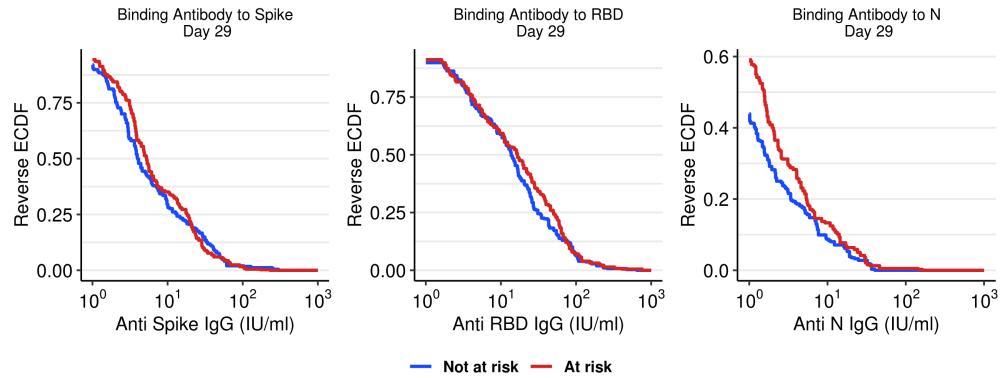


Figure 2.74: RCDF plots for D29 Ab markers: baseline positive placebo arm by high-risk condition.

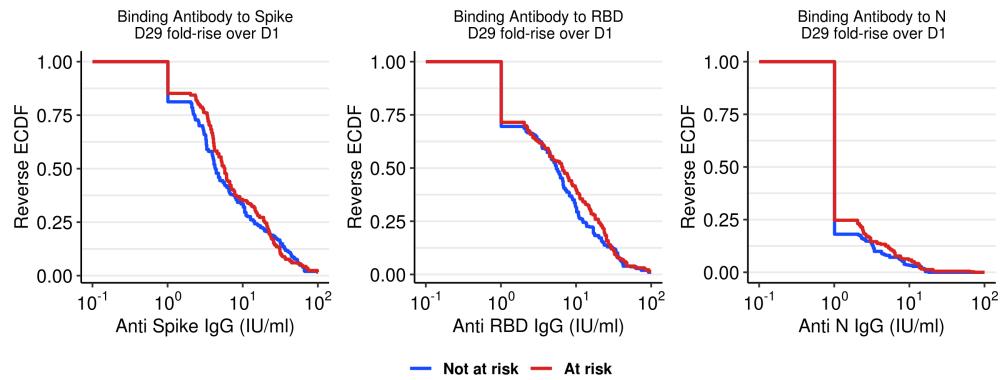


Figure 2.75: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by high-risk condition.

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

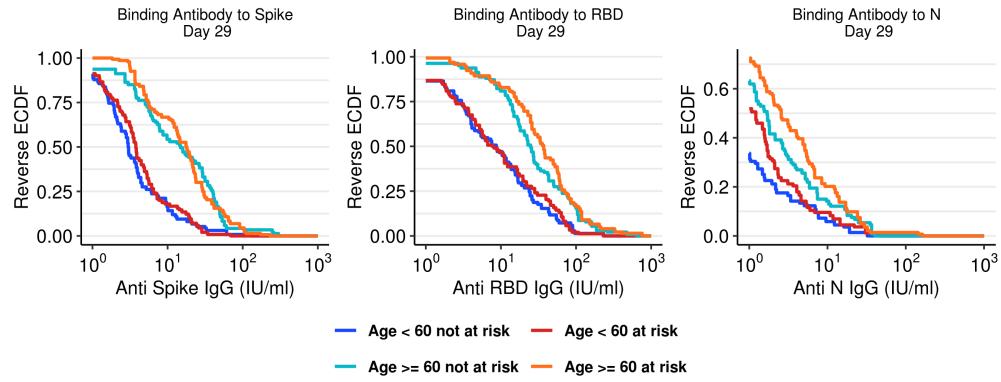


Figure 2.76: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and high-risk condition.

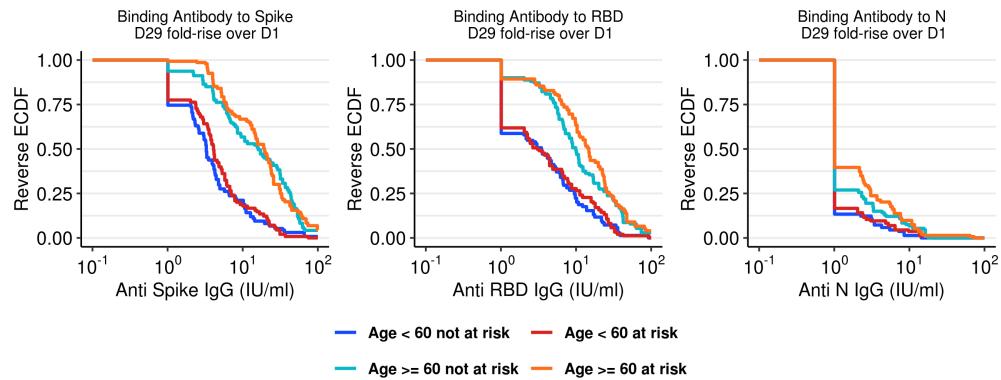


Figure 2.77: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and high-risk condition.

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

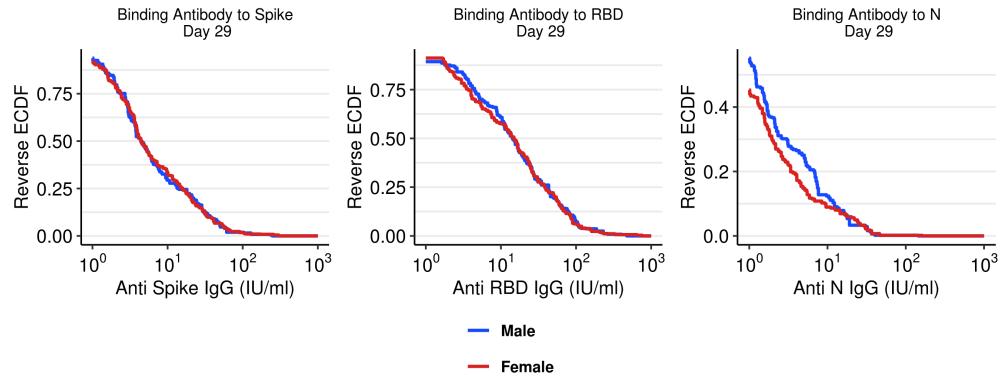


Figure 2.78: RCDF plots for D29 Ab markers: baseline positive placebo arm by sex assigned at birth.

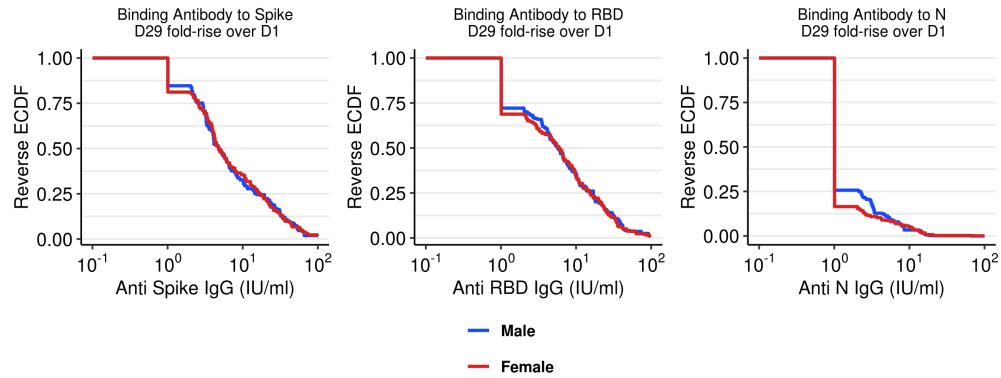


Figure 2.79: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by sex assigned at birth.

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

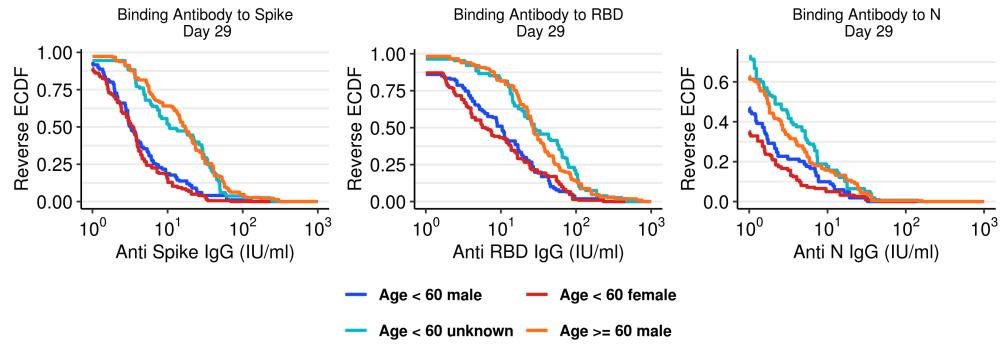


Figure 2.80: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

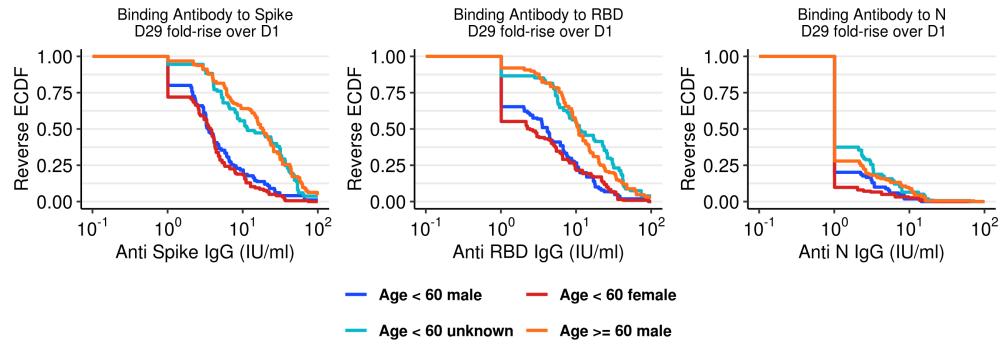


Figure 2.81: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and sex assigned at birth.

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

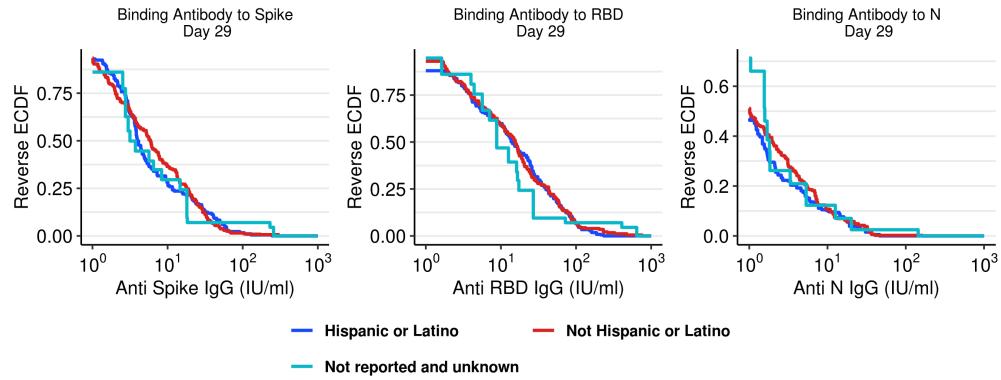


Figure 2.82: RCDF plots for D29 Ab markers: baseline positive placebo arm by ethnicity.

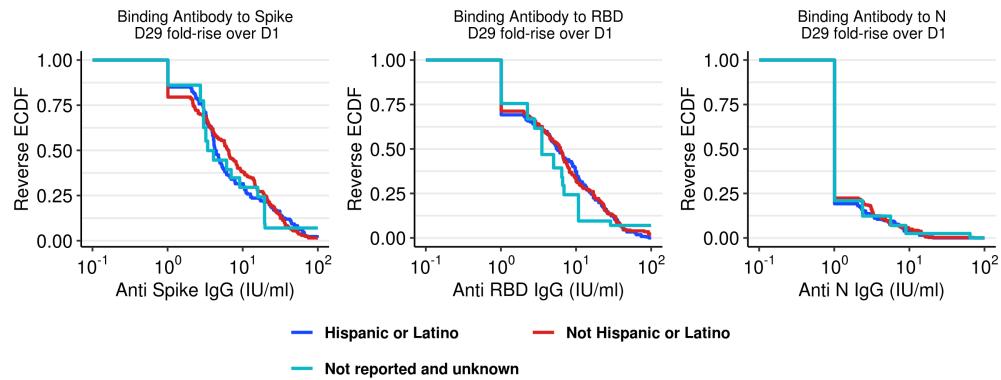


Figure 2.83: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by ethnicity.

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

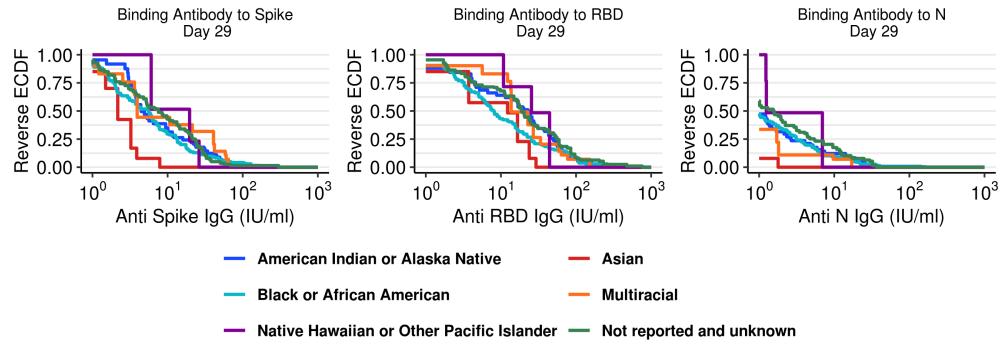


Figure 2.84: RCDF plots for D29 Ab markers: baseline positive placebo arm by race.

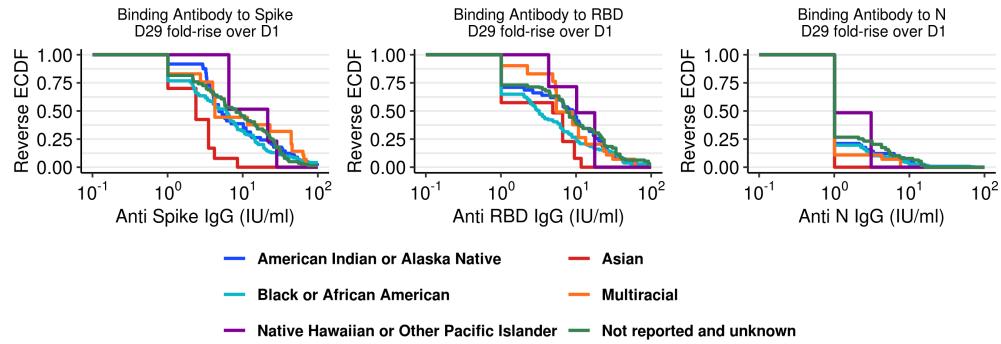


Figure 2.85: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by race.

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

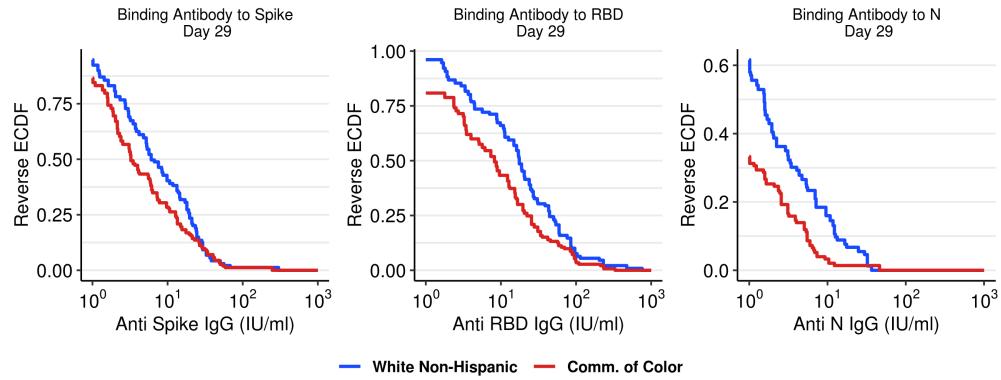


Figure 2.86: RCDF plots for D29 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

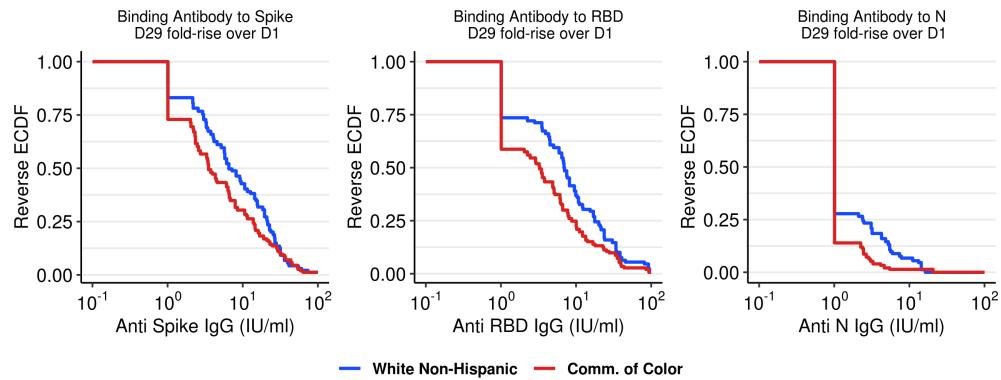


Figure 2.87: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

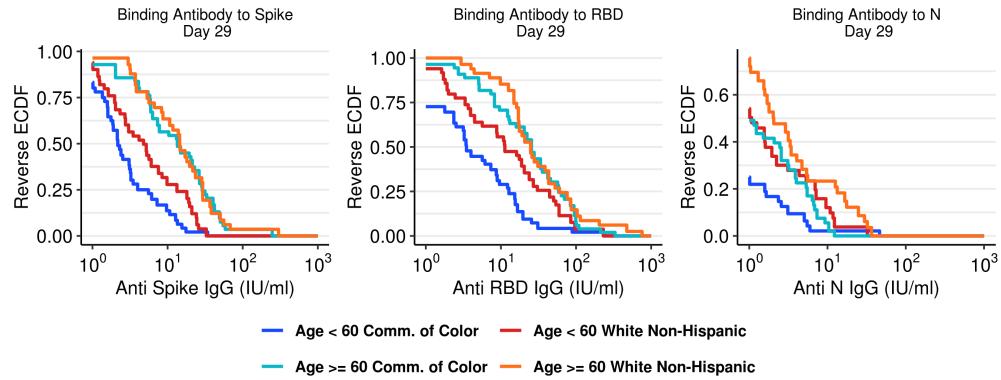


Figure 2.88: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

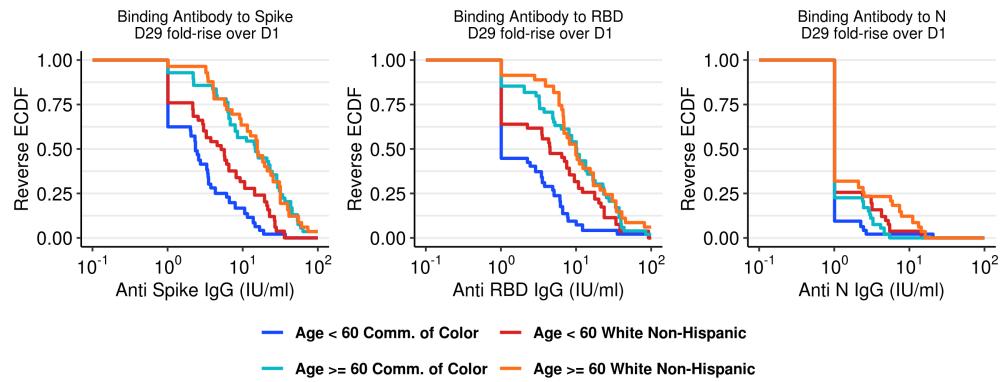


Figure 2.89: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

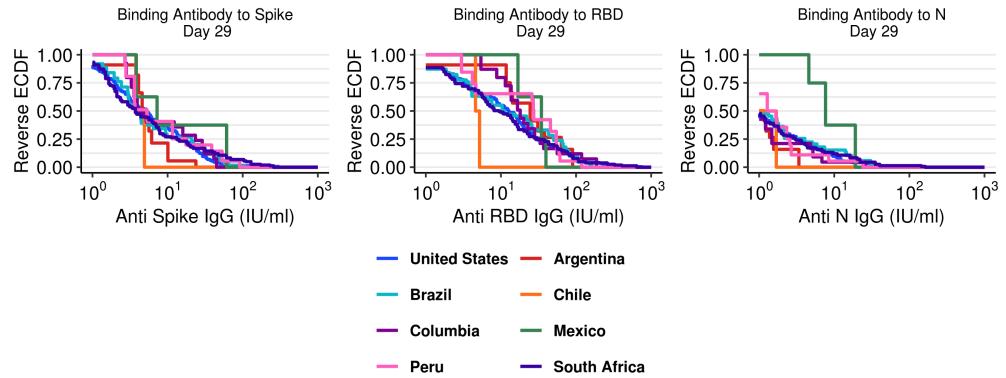


Figure 2.90: RCDF plots for D29 Ab markers: baseline positive placebo arm by country of residence.

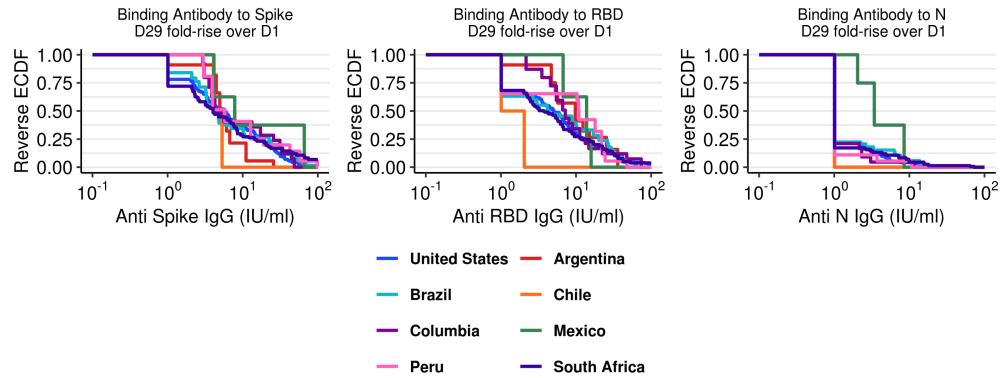


Figure 2.91: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by country of residence.

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

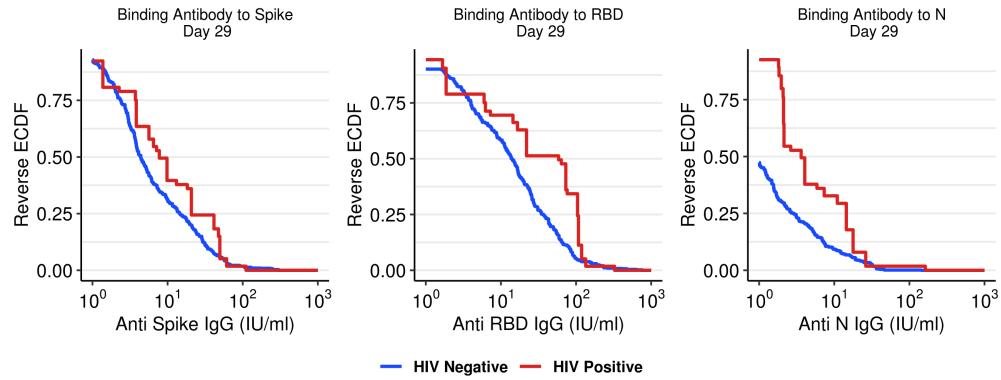


Figure 2.92: RCDF plots for D29 Ab markers: baseline positive placebo arm by HIV positivity.

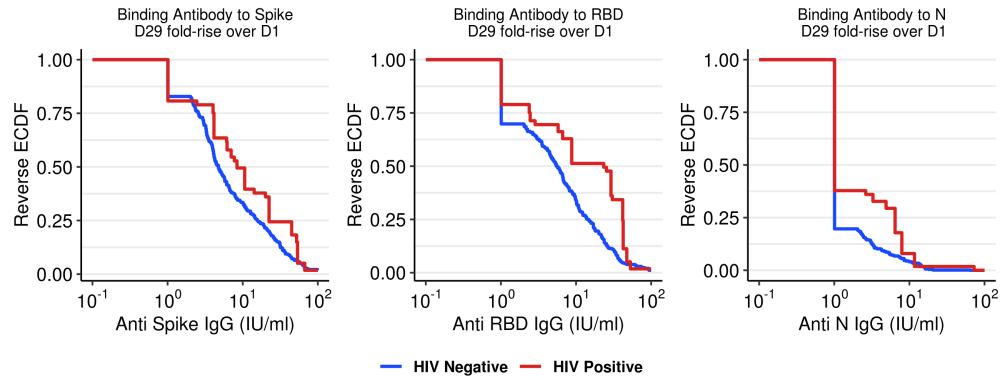


Figure 2.93: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by HIV positivity.

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

2.7.1 Baseline SARS-CoV-2 Negative

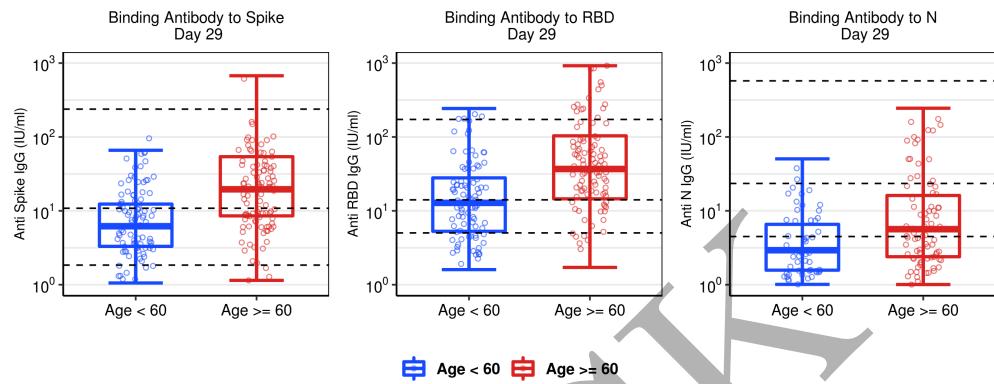


Figure 2.94: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

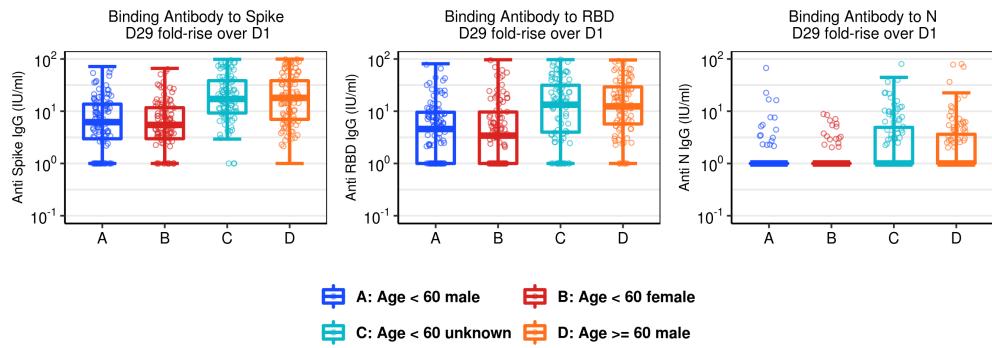


Figure 2.95: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and sex assigned at birth.

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

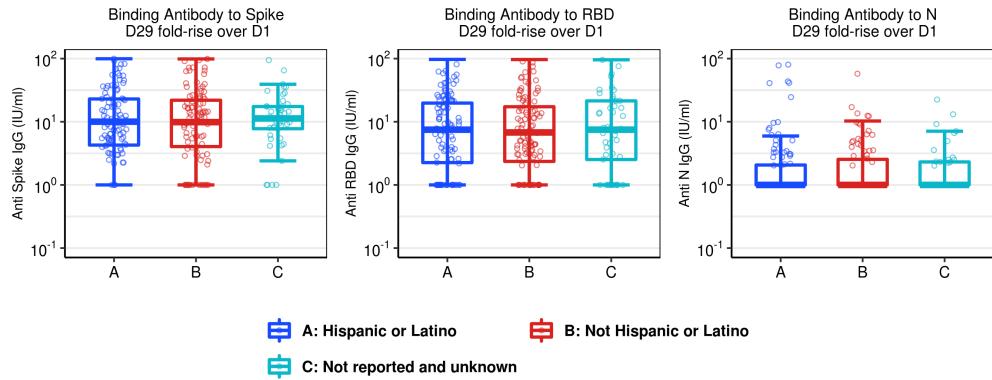


Figure 2.96: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by ethnicity.

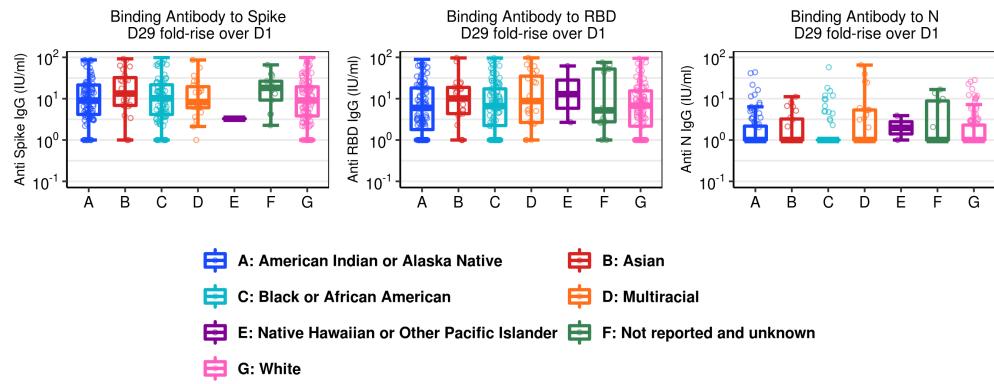


Figure 2.97: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by race.

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

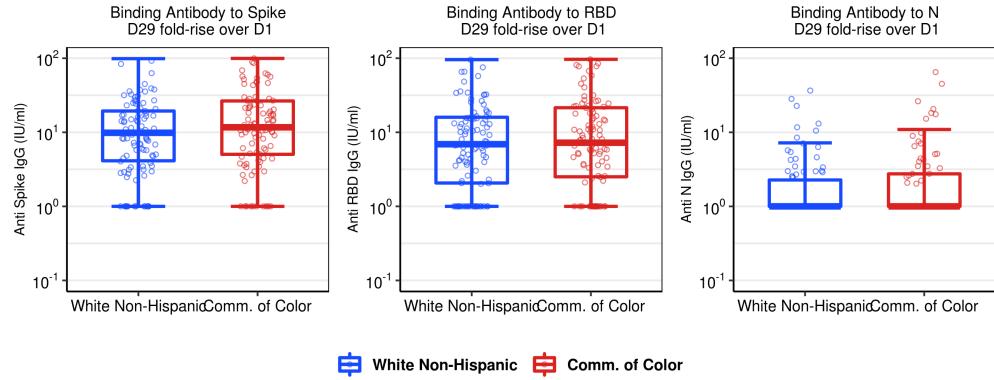


Figure 2.98: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

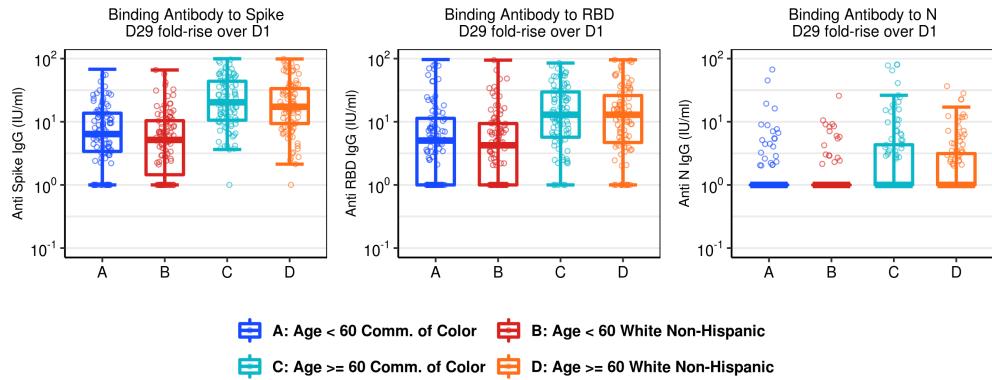


Figure 2.99: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

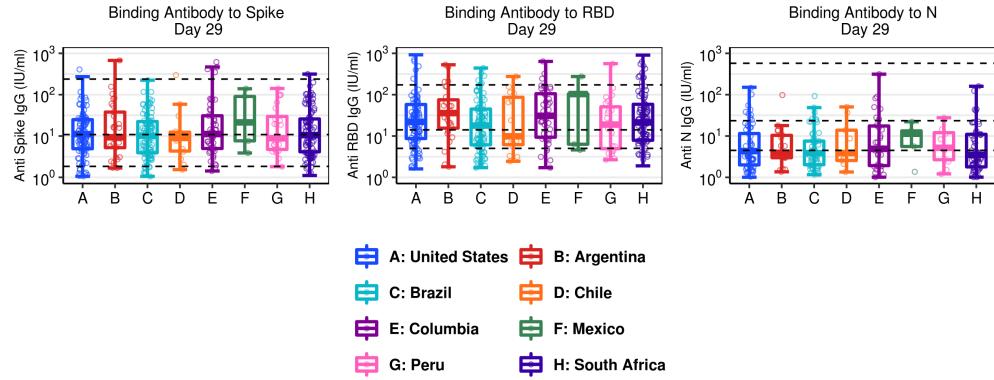


Figure 2.100: Boxplots of D29 Ab markers: Baseline negative vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

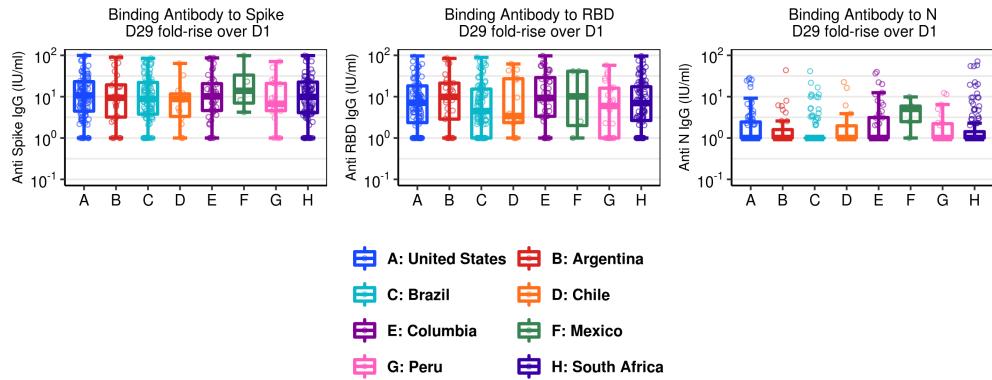


Figure 2.101: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by country of residence.

2.7. BOXPLOTS OF ANTIBODY MARKERS BY DEMOGRAPHICS FOR PER-PROTOCOL COHORT357

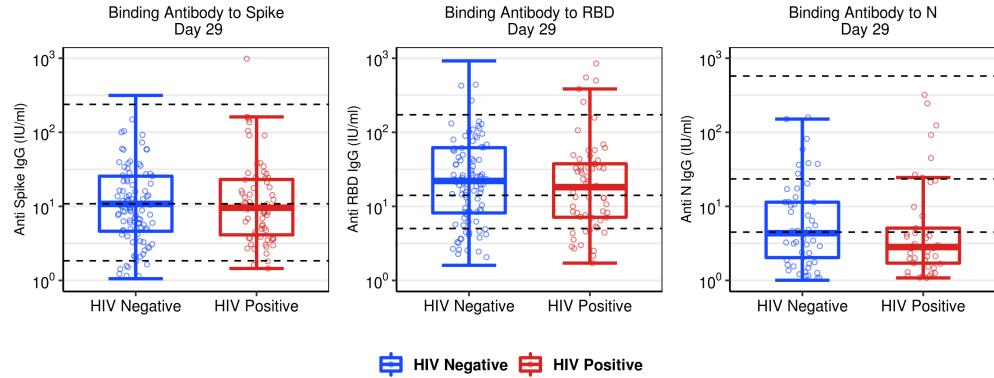


Figure 2.102: Boxplots of D29 Ab markers: Baseline negative vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

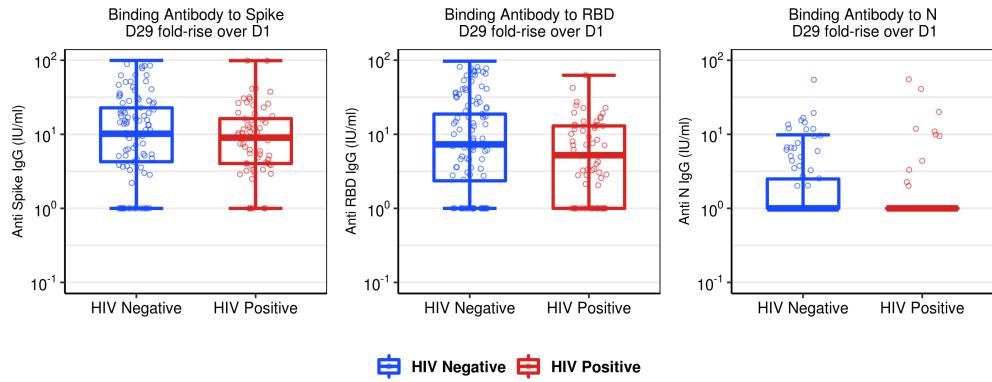


Figure 2.103: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by HIV positivity.

2.7.2 Baseline SARS-CoV-2 Positive

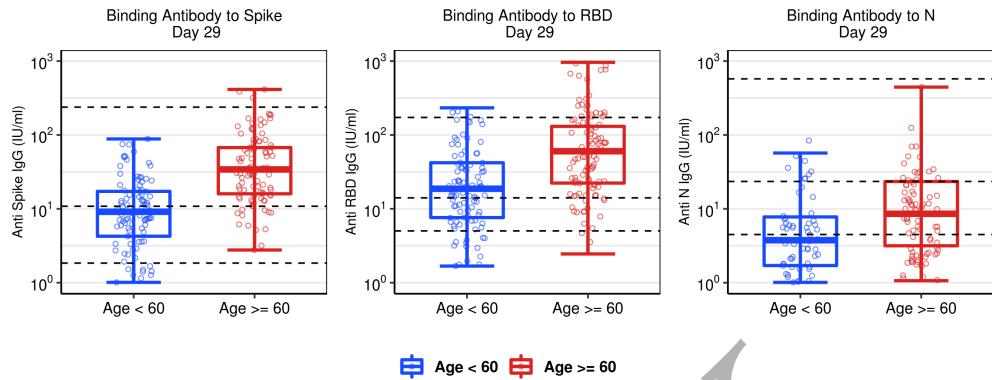


Figure 2.104: Boxplots of D29 Ab markers: baseline positive vaccine arm by age group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

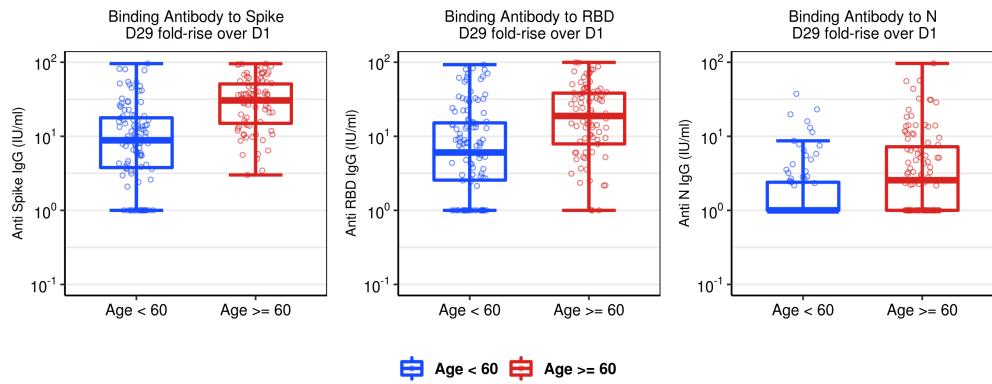


Figure 2.105: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age group.

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

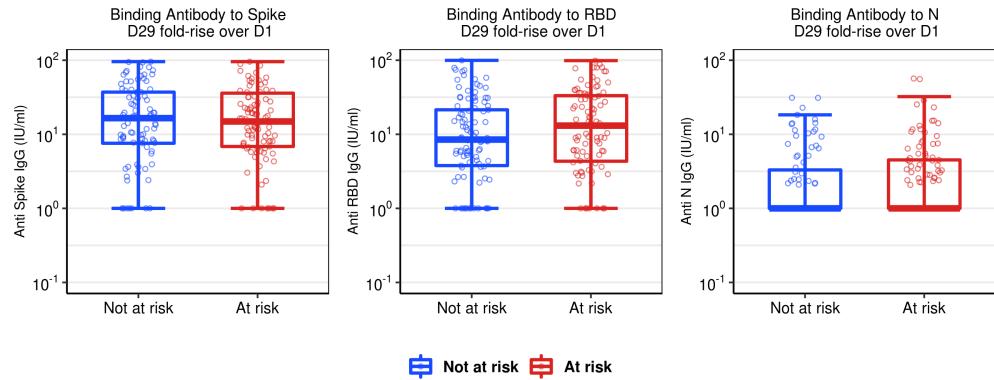


Figure 2.106: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.

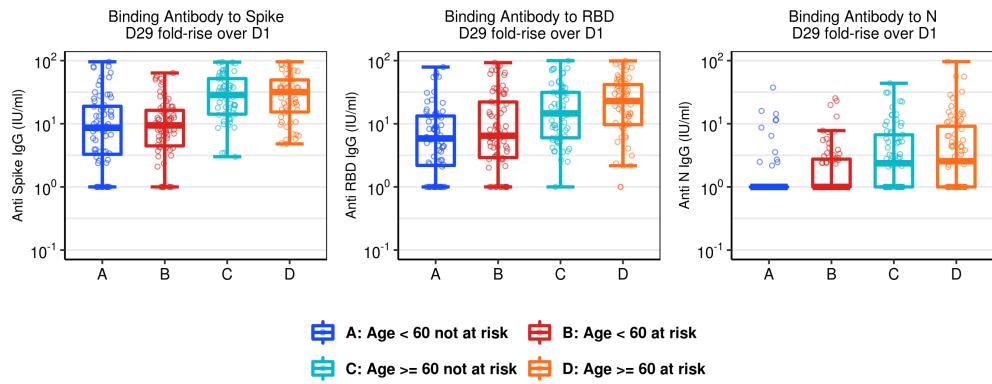


Figure 2.107: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

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

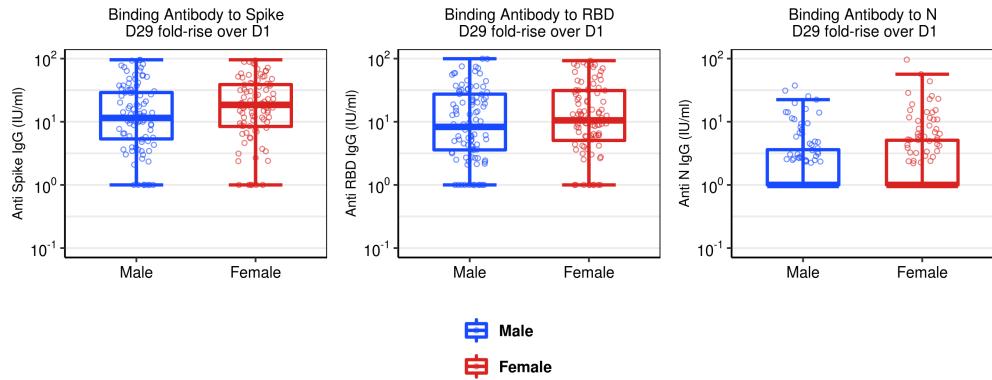


Figure 2.108: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.

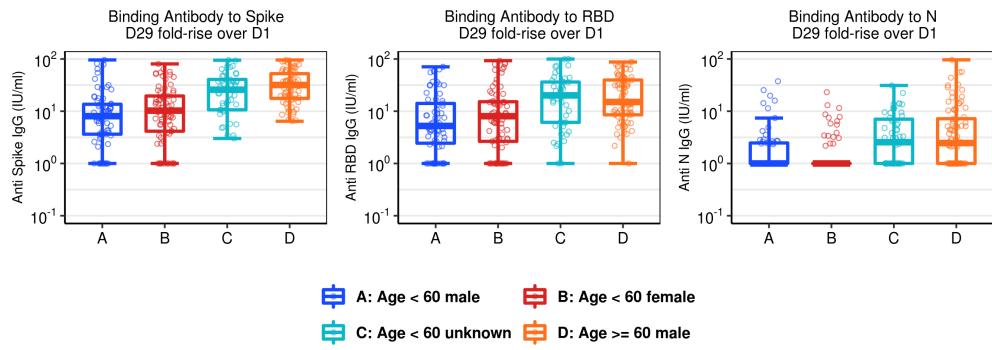


Figure 2.109: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

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

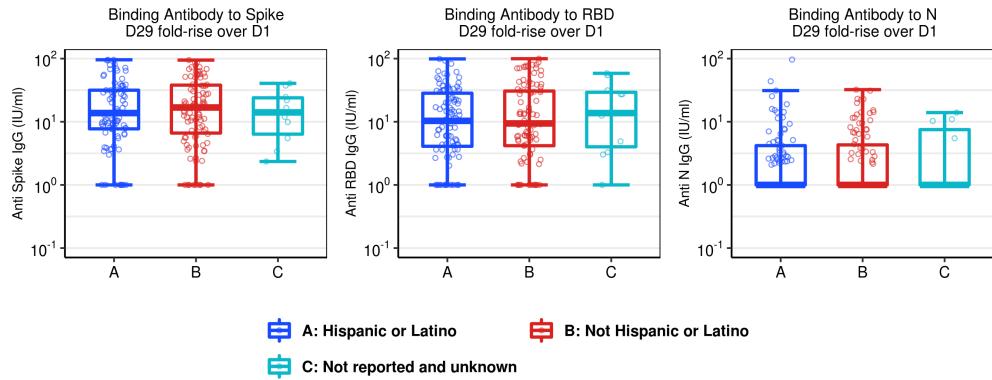


Figure 2.110: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by ethnicity.

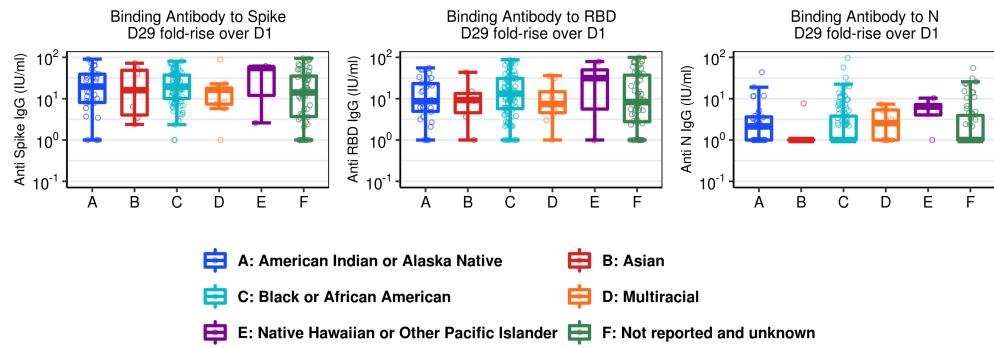


Figure 2.111: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

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

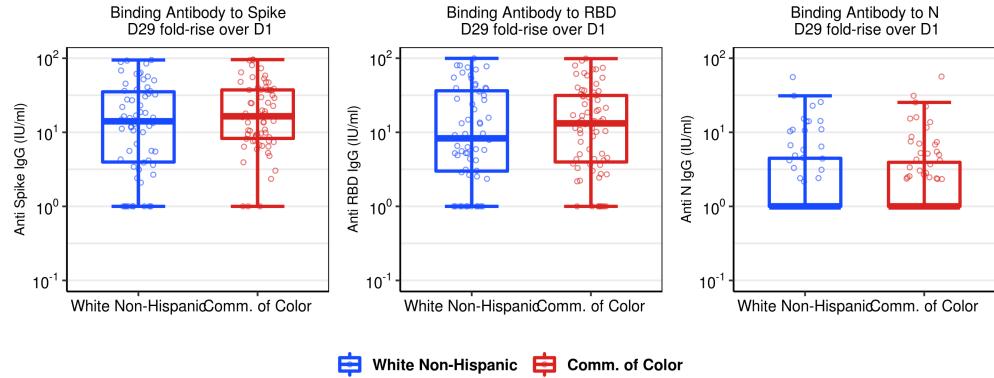


Figure 2.112: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

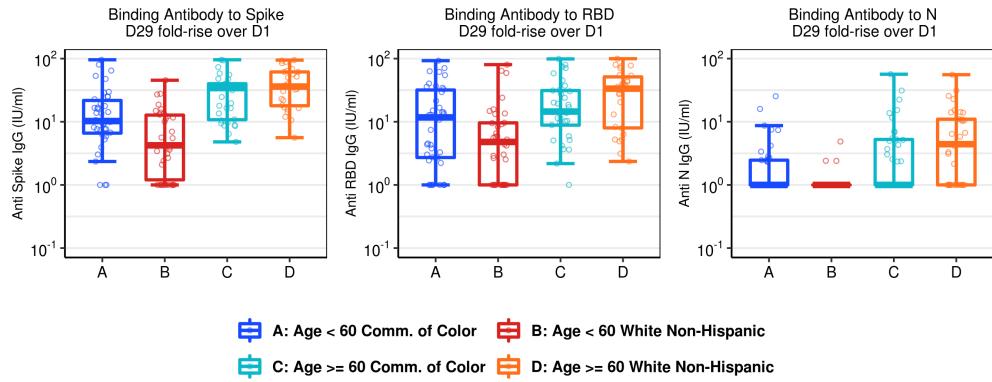


Figure 2.113: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

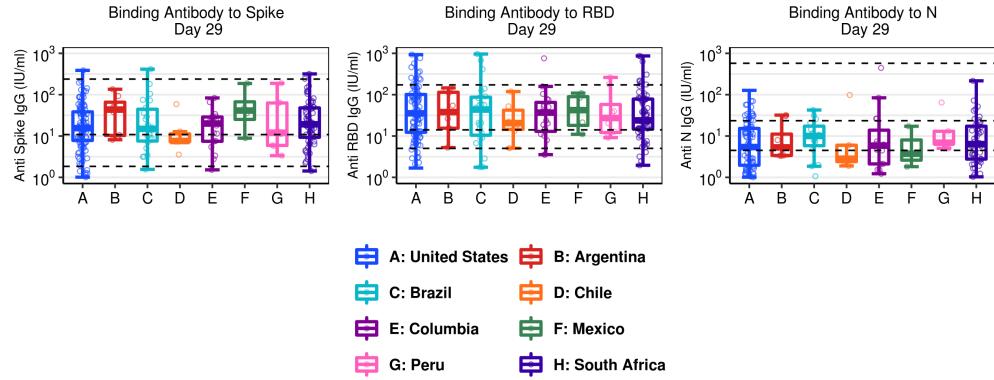


Figure 2.114: Boxplots of D29 Ab markers: baseline positive vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

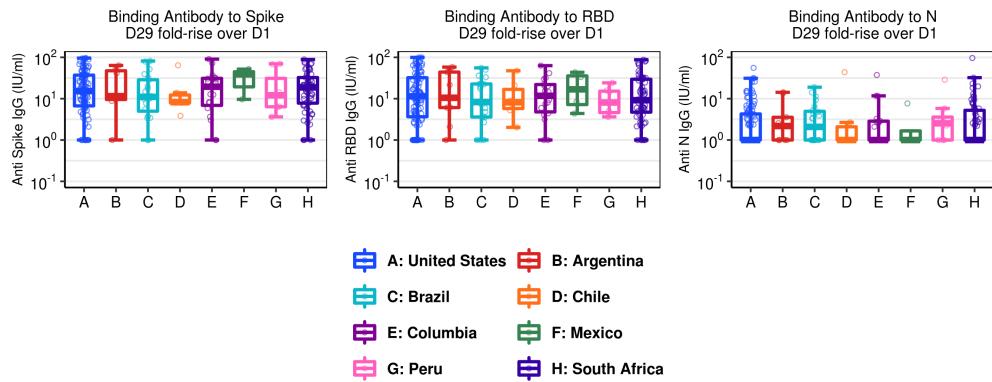


Figure 2.115: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.

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

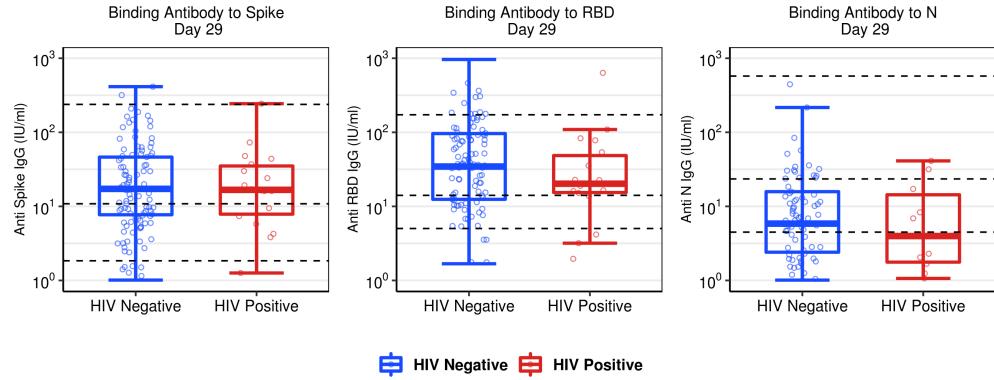


Figure 2.116: Boxplots of D29 Ab markers: baseline positive vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

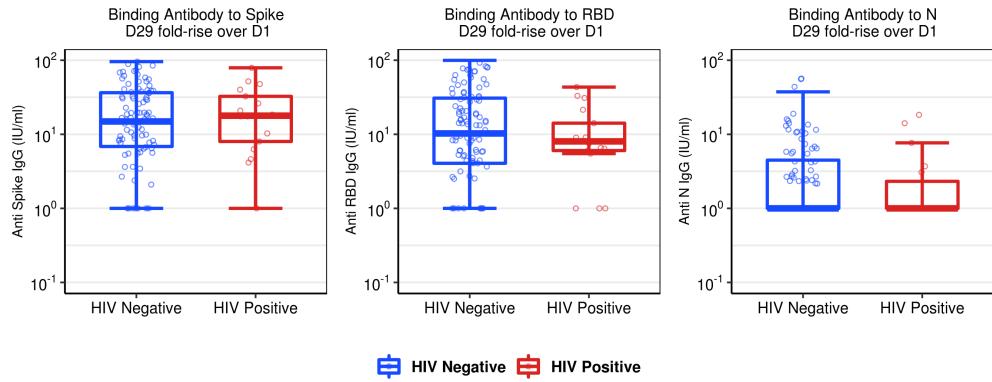


Figure 2.117: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by HIV positivity.

Chapter 3

Appendix

- This report was built from the [CoVPN/correlates_reporting](#) repository with commit hash b400af2c05e50f0d638fb3ba48a84b9adceccb5c. A diff of the changes introduced by that commit may be viewed at https://github.com/CoVPN/correlates_reporting/commit/b400af2c05e50f0d638fb3ba48a84b9adceccb5c
- The sha256 hash sum of the raw input file, “COVID_ENSEMBLE_practicedata.csv”: 0b430fc0b10936460ae8fe7bfc3f78
- The sha256 hash sum of the processed file, “janssen_pooled_mock_data_processed.csv”: 6de79476ebd54c8c802b471c21898ae8a99edaf8fc55ba85bdd26e5b510eb056