

COVID-19 Immunogenicity Analysis Report
MockENSEMBLE Study

USG COVID-19 Response Biostatistics Team

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Chapter 1

Tabular Description of Immunogenicity Data

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

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

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

(continued)

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

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

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

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

| Characteristics | Vaccine (N = 283) | Placebo (N = 280) | Total (N = 563) |
|---|----------------------|----------------------|--------------------|
| Age | | | |
| Age 18 - 59 | 141 (49.8%) | 139 (49.6%) | 280 (49.7%) |
| Age ≥ 60 | 142 (50.2%) | 141 (50.4%) | 283 (50.3%) |
| Mean (Range) | 56.1 (18.0, 85.0) | 56.4 (18.0, 85.0) | 56.3 (18.0, 85.0) |
| BMI | | | |
| Underweight BMI < 18.5 | | 2 (0.7%) | 2 (0.4%) |
| Normal 18.5 ≤ BMI < 25 | 62 (21.9%) | 45 (16.1%) | 107 (19.0%) |
| Overweight 25 ≤ BMI < 30 | 112 (39.6%) | 114 (40.7%) | 226 (40.1%) |
| Obese BMI ≥ 30 | 109 (38.5%) | 119 (42.5%) | 228 (40.5%) |
| Risk for Severe Covid-19 | | | |
| At-risk | 140 (49.5%) | 141 (50.4%) | 281 (49.9%) |
| Not at-risk | 143 (50.5%) | 139 (49.6%) | 282 (50.1%) |
| Age, Risk for Severe Covid-19 | | | |
| Age 18 - 59 At-risk | 69 (24.4%) | 69 (24.6%) | 138 (24.5%) |
| Age 18 - 59 Not at-risk | 72 (25.4%) | 70 (25.0%) | 142 (25.2%) |
| Age ≥ 60 At-risk | 71 (25.1%) | 72 (25.7%) | 143 (25.4%) |
| Age ≥ 60 Not at-risk | 71 (25.1%) | 69 (24.6%) | 140 (24.9%) |
| Sex | | | |
| Female | 160 (56.5%) | 154 (55.0%) | 314 (55.8%) |
| Male | 123 (43.5%) | 126 (45.0%) | 249 (44.2%) |
| Hispanic or Latino ethnicity | | | |
| Hispanic or Latino | 106 (37.5%) | 105 (37.5%) | 211 (37.5%) |
| Not Hispanic or Latino | 164 (58.0%) | 152 (54.3%) | 316 (56.1%) |
| Not reported and unknown | 13 (4.6%) | 23 (8.2%) | 36 (6.4%) |
| Race | | | |
| White | 108 (38.2%) | 108 (38.6%) | 216 (38.4%) |
| Black or African American | 111 (39.2%) | 94 (33.6%) | 205 (36.4%) |
| Asian | 5 (1.8%) | 10 (3.6%) | 15 (2.7%) |
| American Indian or Alaska Native | 49 (17.3%) | 48 (17.1%) | 97 (17.2%) |
| Native Hawaiian or Other Pacific Islander | | 1 (0.4%) | 1 (0.2%) |
| Multiracial | 9 (3.2%) | 15 (5.4%) | 24 (4.3%) |
| Not reported and unknown | 1 (0.4%) | 4 (1.4%) | 5 (0.9%) |
| Underrepresented Minority Status in the U.S. | | | |
| URM | 71 (25.1%) | 70 (25.0%) | 141 (25.0%) |
| Non-URM | 71 (25.1%) | 71 (25.4%) | 142 (25.2%) |
| Country | | | |
| United States | 142 (50.2%) | 141 (50.4%) | 283 (50.3%) |
| Argentina | 11 (3.9%) | 16 (5.7%) | 27 (4.8%) |
| Brazil | 29 (10.2%) | 30 (10.7%) | 59 (10.5%) |
| Chile | 1 (0.4%) | 1 (0.4%) | 2 (0.4%) |
| Columbia | 20 (7.1%) | 13 (4.6%) | 33 (5.9%) |
| Mexico | 4 (1.4%) | 5 (1.8%) | 9 (1.6%) |

(continued)

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

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

1.3 Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

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

| U.S. Random Subcohort Sample Sizes (N=793 Participants) (Janssen Trial) | | | | | | | | | | | | | | | | |
|---|------------------------------|------|-----|-----|------|------|-----|-----|------------------------------|-----|----|----|-----|-----|-----|----|
| | Baseline SARS-CoV-2 Negative | | | | | | | | Baseline SARS-CoV-2 Positive | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Vaccine | | | | | | | | | | | | | | | | |
| Observed | 57 | 56 | 58 | 56 | 56 | 55 | 58 | 58 | 18 | 18 | 17 | 18 | 18 | 17 | 18 | 18 |
| Estimated | 1522 | 1048 | 801 | 568 | 1854 | 1211 | 935 | 659 | 191 | 131 | 76 | 61 | 199 | 121 | 123 | 76 |
| Placebo | | | | | | | | | | | | | | | | |
| Observed | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 18 | 17 | 17 | 18 | 17 | 18 | 18 | 18 |
| Estimated | 1442 | 993 | 813 | 522 | 1860 | 1270 | 957 | 671 | 159 | 115 | 93 | 51 | 174 | 115 | 82 | 68 |

Demographic covariate strata:

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

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

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

1.4 Sample Sizes of Random Subcohort Strata for Measuring Antibody Markers

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

| Latin America and South Africa Random Subcohort Sample Sizes (N=792 Participants) (Janssen Trial) | | | | | | | | | | | | | | | | |
|---|------------------------------|------|------|------|------|-----|-----|-----|------------------------------|-----|-----|-----|-----|----|----|----|
| | Baseline SARS-CoV-2 Negative | | | | | | | | Baseline SARS-CoV-2 Positive | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Vaccine | | | | | | | | | | | | | | | | |
| Observed | 57 | 57 | 58 | 56 | 57 | 58 | 58 | 58 | 18 | 18 | 18 | 17 | 18 | 16 | 18 | 18 |
| Estimated | 3021 | 2018 | 1653 | 1051 | 1154 | 787 | 598 | 412 | 322 | 219 | 164 | 124 | 114 | 83 | 58 | 40 |
| Placebo | | | | | | | | | | | | | | | | |
| Observed | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 | 18 | 16 | 18 | 18 | 17 | 18 | 16 | 18 |
| Estimated | 3012 | 2083 | 1748 | 1099 | 1148 | 704 | 576 | 435 | 347 | 222 | 182 | 119 | 103 | 81 | 43 | 25 |

Demographic covariate strata:

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

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

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|-------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| All participants | | | | | | | | |
| | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 913 | 1147.9/19292 = 6.0% (4.7%, 7.5%) | 3005.2/19292 = 15.6% (13.4%, 18.1%) | 1609/19292 = 8.3% (6.8%, 10.3%) |
| | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 913 | 10495.8/19292 = 54.4% (50.8%, 58.0%) | 11972.4/19292 = 62.1% (58.5%, 65.5%) | 9022.3/19292 = 46.8% (43.2%, 50.3%) |
| | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 913 | 9225.7/19292 = 47.8% (44.3%, 51.3%) | 14549.4/19292 = 75.4% (72.1%, 78.5%) | 11326.9/19292 = 58.7% (55.1%, 62.2%) |
| | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 283 | 222.1/2102 = 10.6% (7.4%, 14.9%) | 492/2102 = 23.4% (18.5%, 29.1%) | 309.4/2102 = 14.7% (10.8%, 19.7%) |
| | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 283 | 1569.2/2102 = 74.7% (68.5%, 80.0%) | 1685.1/2102 = 80.2% (74.4%, 84.9%) | 1272.8/2102 = 60.6% (54.2%, 66.6%) |
| | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 283 | 1310.4/2102 = 62.3% (55.7%, 68.6%) | 1847.3/2102 = 87.9% (82.4%, 91.8%) | 1471.2/2102 = 70.0% (63.5%, 75.8%) |
| | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 280 | 61.5/1979 = 3.1% (1.6%, 5.8%) | 203.5/1979 = 10.3% (7.5%, 14.0%) | 76.5/1979 = 3.9% (2.2%, 6.7%) |
| | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 280 | 753.1/1979 = 38.1% (32.2%, 44.3%) | 981.2/1979 = 49.6% (43.1%, 56.0%) | 578.5/1979 = 29.2% (24.6%, 34.4%) |

| | | | | | | | |
|--------|---------|----------|-------------------------|-----|--------------------------------------|---------------------------------------|--------------------------------------|
| Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 280 | 636.7/1979 = 32.2% (26.9%, 37.9%) | 1156.6/1979 = 58.4% (51.8%, 64.8%) | 752.3/1979 = 38.0% (32.4%, 44.0%) |
|--------|---------|----------|-------------------------|-----|--------------------------------------|---------------------------------------|--------------------------------------|

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

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



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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|---------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Age | | | | | | | | |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 453 | 301.7/12615 = 2.4% (1.4%, 4.2%) | 1147.1/12615 = 9.1% (6.7%, 12.2%) | 518.8/12615 = 4.1% (2.6%, 6.4%) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 453 | 5383.1/12615 = 42.7% (37.8%, 47.7%) | 6355/12615 = 50.4% (45.4%, 55.4%) | 4392.4/12615 = 34.8% (30.2%, 39.8%) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 453 | 4453.6/12615 = 35.3% (30.7%, 40.2%) | 8294.6/12615 = 65.8% (60.8%, 70.4%) | 5991.1/12615 = 47.5% (42.5%, 52.5%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 141 | 81.9/1380 = 5.9% (2.8%, 12.0%) | 236.3/1380 = 17.1% (11.4%, 24.9%) | 145.7/1380 = 10.6% (6.2%, 17.4%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 141 | 925/1380 = 67.0% (58.2%, 74.8%) | 1029.7/1380 = 74.6% (66.3%, 81.5%) | 670.6/1380 = 48.6% (39.9%, 57.4%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 141 | 715.4/1380 = 51.8% (42.7%, 60.8%) | 1154.7/1380 = 83.7% (75.7%, 89.4%) | 831.2/1380 = 60.2% (51.1%, 68.7%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 20.8/1316 = 1.6% (0.5%, 5.2%) | 46.9/1316 = 3.6% (1.6%, 7.6%) | 20.8/1316 = 1.6% (0.5%, 5.2%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 316.1/1316 = 24.0% (17.1%, 32.6%) | 475.4/1316 = 36.1% (27.9%, 45.2%) | 193.3/1316 = 14.7% (10.0%, 21.1%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 232.3/1316 = 17.7% (11.8%, 25.5%) | 576.6/1316 = 43.8% (34.9%, 53.2%) | 279.7/1316 = 21.3% (14.7%, 29.7%) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 460 | 846.2/6677 = 12.7% (9.8%, 16.3%) | 1858/6677 = 27.8% (23.5%, 32.6%) | 1090.2/6677 = 16.3% (13.0%, 20.3%) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 460 | 5112.7/6677 = 76.6% (72.1%, 80.5%) | 5617.4/6677 = 84.1% (80.1%, 87.5%) | 4629.9/6677 = 69.3% (64.5%, 73.8%) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 460 | 4772.1/6677 = 71.5% (66.8%, 75.8%) | 6254.8/6677 = 93.7% (91.0%, 95.6%) | 5335.8/6677 = 79.9% (75.7%, 83.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|----------|--------|---------|---------------------|-------------------------|-----|-------------------------------------|-------------------------------------|-------------------------------------|
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 140.2/722 = 19.4% (13.2%, 27.6%) | 255.7/722 = 35.4% (27.4%, 44.4%) | 163.7/722 = 22.7% (16.1%, 31.0%) |
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 644.2/722 = 89.2% (82.7%, 93.5%) | 655.4/722 = 90.8% (84.4%, 94.7%) | 602.2/722 = 83.4% (75.8%, 89.0%) |
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 595.1/722 = 82.4% (74.4%, 88.3%) | 692.6/722 = 95.9% (89.9%, 98.4%) | 640.1/722 = 88.7% (81.3%, 93.3%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 40.7/663 = 6.1% (2.9%, 12.4%) | 156.6/663 = 23.6% (16.6%, 32.4%) | 55.7/663 = 8.4% (4.5%, 15.2%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 436.9/663 = 65.9% (56.1%, 74.5%) | 505.8/663 = 76.3% (66.8%, 83.7%) | 385.2/663 = 58.1% (48.4%, 67.2%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 404.4/663 = 61.0% (51.5%, 69.7%) | 580/663 = 87.5% (79.1%, 92.8%) | 472.7/663 = 71.3% (61.8%, 79.2%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|---------------------------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Risk for Severe Covid-19 | | | | | | | | |
| At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 596.8/7754 = 7.7% (5.5%, 10.6%) | 1264.2/7754 = 16.3% (13.0%, 20.2%) | 752.2/7754 = 9.7% (7.2%, 13.0%) |
| At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 4049.4/7754 = 52.2% (47.3%, 57.1%) | 4897/7754 = 63.2% (58.2%, 67.9%) | 3593.2/7754 = 46.3% (41.5%, 51.3%) |
| At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 3832.8/7754 = 49.4% (44.5%, 54.4%) | 5839.7/7754 = 75.3% (70.6%, 79.5%) | 4625/7754 = 59.6% (54.6%, 64.5%) |
| At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 140 | 84/855 = 9.8% (5.7%, 16.4%) | 180.6/855 = 21.1% (15.1%, 28.8%) | 111.3/855 = 13.0% (8.3%, 19.9%) |
| At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 140 | 637.1/855 = 74.5% (65.8%, 81.6%) | 684.9/855 = 80.1% (71.8%, 86.4%) | 556.5/855 = 65.1% (56.0%, 73.2%) |
| At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 140 | 557.1/855 = 65.2% (56.0%, 73.3%) | 772.5/855 = 90.4% (82.8%, 94.8%) | 620.9/855 = 72.6% (63.6%, 80.1%) |
| At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 53 | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 53 | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 53 | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 23.3/796 = 2.9% (1.3%, 6.7%) | 99.2/796 = 12.5% (8.3%, 18.3%) | 32.8/796 = 4.1% (2.0%, 8.3%) |
| At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 309.6/796 = 38.9% (30.9%, 47.5%) | 436.4/796 = 54.8% (45.4%, 63.9%) | 258.9/796 = 32.5% (25.5%, 40.5%) |
| At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 299.2/796 = 37.6% (30.0%, 45.8%) | 513/796 = 64.5% (55.0%, 72.9%) | 317.2/796 = 39.8% (32.2%, 48.1%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 459 | 551.2/11538 = 4.8% (3.3%, 6.8%) | 1741/11538 = 15.1% (12.2%, 18.5%) | 856.8/11538 = 7.4% (5.5%, 9.9%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 459 | 6446.4/11538 = 55.9% (50.8%, 60.8%) | 7075.5/11538 = 61.3% (56.3%, 66.1%) | 5429.1/11538 = 47.1% (42.2%, 52.0%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 459 | 5392.9/11538 = 46.7% (42.0%, 51.6%) | 8709.8/11538 = 75.5% (70.7%, 79.7%) | 6701.9/11538 = 58.1% (53.1%, 62.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|-------------|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|--------------------------------------|
| Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 143 | 138.1/1247 = 11.1% (6.8%, 17.5%) | 311.5/1247 = 25.0% (18.2%, 33.3%) | 198.1/1247 = 15.9% (10.5%, 23.3%) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 143 | 932/1247 = 74.7% (65.8%, 82.0%) | 1000.3/1247 = 80.2% (71.8%, 86.6%) | 716.3/1247 = 57.4% (48.5%, 65.9%) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 143 | 753.3/1247 = 60.4% (51.0%, 69.1%) | 1074.8/1247 = 86.2% (77.9%, 91.7%) | 850.3/1247 = 68.2% (58.9%, 76.2%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 38.2/1183 = 3.2% (1.3%, 7.7%) | 104.4/1183 = 8.8% (5.4%, 14.2%) | 43.7/1183 = 3.7% (1.6%, 8.2%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 443.4/1183 = 37.5% (29.4%, 46.3%) | 544.8/1183 = 46.1% (37.4%, 54.9%) | 319.6/1183 = 27.0% (21.0%, 34.0%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 337.5/1183 = 28.5% (21.6%, 36.6%) | 643.6/1183 = 54.4% (45.2%, 63.4%) | 435.2/1183 = 36.8% (29.0%, 45.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|--------------------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age, Risk for Severe Covid-19 | | | | | | | | |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 226 | 201.4/5064 = 4.0% (2.0%, 7.8%) | 534.7/5064 = 10.6% (6.9%, 15.8%) | 272.2/5064 = 5.4% (2.9%, 9.8%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 226 | 2039.2/5064 = 40.3% (33.6%, 47.3%) | 2617.9/5064 = 51.7% (44.8%, 58.6%) | 1773.5/5064 = 35.0% (28.6%, 42.0%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 226 | 1953.3/5064 = 38.6% (32.0%, 45.6%) | 3339.1/5064 = 65.9% (59.1%, 72.2%) | 2540.4/5064 = 50.2% (43.2%, 57.1%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 69 | 24.5/554 = 4.4% (1.3%, 14.2%) | 76.1/554 = 13.7% (7.4%, 24.0%) | 42/554 = 7.6% (3.2%, 16.9%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 69 | 373/554 = 67.3% (55.0%, 77.6%) | 413.9/554 = 74.7% (62.9%, 83.7%) | 309.4/554 = 55.9% (43.5%, 67.5%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 69 | 301.9/554 = 54.5% (41.7%, 66.7%) | 474.9/554 = 85.7% (74.3%, 92.6%) | 340.8/554 = 61.5% (48.6%, 73.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 4.5/533 = 0.8% (0.1%, 6.0%) | 21.8/533 = 4.1% (1.5%, 10.6%) | 4.5/533 = 0.8% (0.1%, 6.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 114.5/533 = 21.5% (12.6%, 34.2%) | 217.3/533 = 40.8% (28.6%, 54.2%) | 80.7/533 = 15.1% (8.0%, 26.7%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|-------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 98.3/533 = 18.4% (10.2%, 31.1%) | 260.8/533 = 48.9% (36.1%, 61.9%) | 107.3/533 = 20.1% (11.6%, 32.7%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 100.3/7551 = 1.3% (0.5%, 3.6%) | 612.4/7551 = 8.1% (5.3%, 12.2%) | 246.6/7551 = 3.3% (1.7%, 6.2%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 3343.9/7551 = 44.3% (37.5%, 51.3%) | 3737.1/7551 = 49.5% (42.5%, 56.5%) | 2618.9/7551 = 34.7% (28.3%, 41.7%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 2500.3/7551 = 33.1% (26.9%, 40.0%) | 4955.5/7551 = 65.6% (58.7%, 72.0%) | 3450.8/7551 = 45.7% (38.8%, 52.7%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 72 | 57.4/826 = 6.9% (2.7%, 16.6%) | 160.2/826 = 19.4% (11.3%, 31.2%) | 103.7/826 = 12.6% (6.4%, 23.2%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 72 | 552/826 = 66.8% (54.2%, 77.4%) | 615.8/826 = 74.5% (62.5%, 83.8%) | 361.2/826 = 43.7% (31.9%, 56.3%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 72 | 413.4/826 = 50.1% (37.5%, 62.6%) | 679.8/826 = 82.3% (70.4%, 90.1%) | 490.4/826 = 59.4% (46.6%, 71.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 16.3/783 = 2.1% (0.5%, 8.6%) | 25.1/783 = 3.2% (1.0%, 10.0%) | 16.3/783 = 2.1% (0.5%, 8.6%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 201.6/783 = 25.8% (16.4%, 38.1%) | 258.2/783 = 33.0% (22.4%, 45.6%) | 112.6/783 = 14.4% (8.7%, 22.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|----------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 134/783 = 17.1% (9.8%, 28.2%) | 315.8/783 = 40.3% (28.4%, 53.5%) | 172.3/783 = 22.0% (13.3%, 34.2%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 228 | 395.3/2690 = 14.7% (10.2%, 20.6%) | 729.4/2690 = 27.1% (21.3%, 33.8%) | 480/2690 = 17.8% (13.0%, 24.0%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 228 | 2010.2/2690 = 74.7% (68.3%, 80.3%) | 2279/2690 = 84.7% (78.9%, 89.1%) | 1819.7/2690 = 67.6% (60.8%, 73.8%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 228 | 1879.4/2690 = 69.9% (63.1%, 75.9%) | 2500.6/2690 = 93.0% (88.5%, 95.8%) | 2084.7/2690 = 77.5% (71.2%, 82.7%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 59.5/301 = 19.8% (11.0%, 32.9%) | 104.4/301 = 34.7% (23.3%, 48.2%) | 69.4/301 = 23.0% (13.6%, 36.3%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 264.2/301 = 87.8% (76.5%, 94.1%) | 271/301 = 90.0% (78.7%, 95.7%) | 247.1/301 = 82.1% (69.9%, 90.1%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 255.2/301 = 84.8% (74.4%, 91.4%) | 297.6/301 = 98.9% (92.1%, 99.8%) | 280.2/301 = 93.1% (85.1%, 96.9%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 72 | 18.8/263 = 7.2% (2.8%, 17.2%) | 77.4/263 = 29.4% (18.6%, 43.2%) | 28.3/263 = 10.8% (4.8%, 22.3%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 72 | 195.2/263 = 74.2% (60.7%, 84.3%) | 219.2/263 = 83.3% (70.7%, 91.2%) | 178.2/263 = 67.8% (54.1%, 79.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|----------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 72 | 200.9/263 = 76.4% (63.9%, 85.5%) | 252.2/263 = 95.9% (85.9%, 98.9%) | 209.8/263 = 79.8% (67.3%, 88.3%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 232 | 450.9/3987 = 11.3% (7.8%, 16.2%) | 1128.6/3987 = 28.3% (22.4%, 35.0%) | 610.3/3987 = 15.3% (11.1%, 20.8%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 232 | 3102.5/3987 = 77.8% (71.4%, 83.1%) | 3338.4/3987 = 83.7% (77.9%, 88.3%) | 2810.2/3987 = 70.5% (63.7%, 76.5%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 232 | 2892.6/3987 = 72.6% (65.9%, 78.3%) | 3754.2/3987 = 94.2% (90.3%, 96.5%) | 3251.1/3987 = 81.5% (75.6%, 86.3%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 80.7/421 = 19.2% (11.3%, 30.7%) | 151.3/421 = 35.9% (25.2%, 48.3%) | 94.3/421 = 22.4% (13.9%, 34.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 380/421 = 90.3% (81.0%, 95.3%) | 384.5/421 = 91.3% (82.2%, 96.0%) | 355.1/421 = 84.4% (73.4%, 91.3%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 339.9/421 = 80.7% (68.2%, 89.1%) | 395/421 = 93.8% (83.5%, 97.9%) | 359.9/421 = 85.5% (73.4%, 92.6%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 21.9/400 = 5.5% (1.8%, 15.8%) | 79.2/400 = 19.8% (11.4%, 32.2%) | 27.4/400 = 6.8% (2.5%, 17.2%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 241.8/400 = 60.4% (46.6%, 72.8%) | 286.6/400 = 71.7% (57.8%, 82.4%) | 207/400 = 51.7% (38.5%, 64.8%) |

(continued)

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

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

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



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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Sex | | | | | | | | |
| Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 416 | 550.9/8876.1 = 6.2% (4.3%, 8.8%) | 1423.2/8876.1 = 16.0% (12.7%, 20.0%) | 734.8/8876.1 = 8.3% (6.0%, 11.3%) |
| Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 416 | 5007.8/8876.1 = 56.4% (50.9%, 61.8%) | 5685.6/8876.1 = 64.1% (58.6%, 69.2%) | 4315.9/8876.1 = 48.6% (43.2%, 54.0%) |
| Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 416 | 4328.8/8876.1 = 48.8% (43.4%, 54.2%) | 6673.7/8876.1 = 75.2% (70.0%, 79.8%) | 5279.4/8876.1 = 59.5% (54.0%, 64.7%) |
| Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 123 | 90.8/877.8 = 10.3% (5.9%, 17.6%) | 235.2/877.8 = 26.8% (19.0%, 36.4%) | 128.4/877.8 = 14.6% (8.9%, 23.2%) |
| Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 123 | 672.9/877.8 = 76.7% (67.0%, 84.1%) | 702.9/877.8 = 80.1% (70.8%, 86.9%) | 569.7/877.8 = 64.9% (54.7%, 73.9%) |
| Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 123 | 575.7/877.8 = 65.6% (55.2%, 74.6%) | 769.4/877.8 = 87.7% (78.2%, 93.4%) | 622.5/877.8 = 70.9% (60.5%, 79.5%) |
| Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 126 | 32.1/899.8 = 3.6% (1.4%, 8.6%) | 93.2/899.8 = 10.4% (6.3%, 16.6%) | 41.5/899.8 = 4.6% (2.1%, 9.7%) |
| Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 126 | 339.6/899.8 = 37.7% (29.4%, 46.9%) | 451.6/899.8 = 50.2% (40.4%, 60.0%) | 259.8/899.8 = 28.9% (21.7%, 37.3%) |
| Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 126 | 239.7/899.8 = 26.6% (19.5%, 35.3%) | 558.1/899.8 = 62.0% (51.5%, 71.6%) | 310.9/899.8 = 34.6% (26.2%, 44.0%) |
| Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 497 | 597/10415.9 = 5.7% (4.1%, 8.0%) | 1582/10415.9 = 15.2% (12.2%, 18.7%) | 874.2/10415.9 = 8.4% (6.3%, 11.1%) |
| Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 497 | 5488/10415.9 = 52.7% (47.7%, 57.6%) | 6286.8/10415.9 = 60.4% (55.4%, 65.1%) | 4706.4/10415.9 = 45.2% (40.4%, 50.1%) |
| Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 497 | 4896.9/10415.9 = 47.0% (42.2%, 51.9%) | 7875.8/10415.9 = 75.6% (70.9%, 79.8%) | 6047.5/10415.9 = 58.1% (53.1%, 62.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|--------|--------|---------|---------------------|-------------------------|-----|--|---|--|
| Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 160 | 131.2/1224.2 = 10.7% (6.5%, 17.1%) | 256.8/1224.2 = 21.0% (15.1%, 28.5%) | 180.9/1224.2 = 14.8% (9.9%, 21.6%) |
| Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 160 | 896.2/1224.2 = 73.2% (64.5%, 80.5%) | 982.3/1224.2 = 80.2% (72.2%, 86.4%) | 703.1/1224.2 = 57.4% (48.5%, 65.9%) |
| Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 160 | 734.8/1224.2 = 60.0% (51.0%, 68.4%) | 1077.9/1224.2 = 88.1% (80.8%, 92.8%) | 848.7/1224.2 = 69.3% (60.4%, 77.0%) |
| Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 154 | 29.5/1079.2 = 2.7% (1.1%, 6.5%) | 110.3/1079.2 = 10.2% (6.5%, 15.7%) | 34.9/1079.2 = 3.2% (1.4%, 7.2%) |
| Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 154 | 413.5/1079.2 = 38.3% (29.9%, 47.5%) | 529.6/1079.2 = 49.1% (39.9%, 58.3%) | 318.7/1079.2 = 29.5% (22.8%, 37.3%) |
| Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 154 | 397/1079.2 = 36.8% (28.9%, 45.4%) | 598.5/1079.2 = 55.5% (46.2%, 64.3%) | 441.4/1079.2 = 40.9% (32.8%, 49.6%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age, sex | | | | | | | | |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 238 | 81/6678.1 = 1.2% (0.4%, 3.3%) | 588.5/6678.1 = 8.8% (5.7%, 13.4%) | 238.3/6678.1 = 3.6% (1.8%, 6.9%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 238 | 2658.5/6678.1 = 39.8% (33.2%, 46.8%) | 3137.6/6678.1 = 47.0% (40.1%, 54.0%) | 2104.1/6678.1 = 31.5% (25.4%, 38.4%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 238 | 2259.2/6678.1 = 33.8% (27.6%, 40.7%) | 4394.1/6678.1 = 65.8% (59.0%, 72.0%) | 3084.9/6678.1 = 46.2% (39.4%, 53.2%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 79 | 51.5/790.2 = 6.5% (2.5%, 16.2%) | 110.3/790.2 = 14.0% (7.4%, 24.7%) | 80/790.2 = 10.1% (4.9%, 19.8%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 79 | 509.5/790.2 = 64.5% (52.2%, 75.1%) | 587.7/790.2 = 74.4% (62.9%, 83.2%) | 350.5/790.2 = 44.4% (32.6%, 56.7%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 79 | 393.6/790.2 = 49.8% (37.7%, 62.0%) | 670.1/790.2 = 84.8% (74.2%, 91.5%) | 467.9/790.2 = 59.2% (46.9%, 70.5%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 73 | 14.7/711.4 = 2.1% (0.5%, 9.0%) | 30/711.4 = 4.2% (1.5%, 11.4%) | 14.7/711.4 = 2.1% (0.5%, 9.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 73 | 181.6/711.4 = 25.5% (15.6%, 38.8%) | 257/711.4 = 36.1% (24.7%, 49.3%) | 114.9/711.4 = 16.2% (9.3%, 26.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 73 | 157.7/711.4 = 22.2% (13.5%, 34.2%) | 273.7/711.4 = 38.5% (27.1%, 51.3%) | 172.4/711.4 = 24.2% (15.2%, 36.4%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 215 | 220.7/5936.9 = 3.7% (1.9%, 7.2%) | 558.6/5936.9 = 9.4% (6.1%, 14.1%) | 280.5/5936.9 = 4.7% (2.6%, 8.6%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 215 | 2724.6/5936.9 = 45.9% (38.7%, 53.3%) | 3217.4/5936.9 = 54.2% (46.9%, 61.4%) | 2288.3/5936.9 = 38.5% (31.7%, 45.9%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 215 | 2194.5/5936.9 = 37.0% (30.2%, 44.3%) | 3900.5/5936.9 = 65.7% (58.4%, 72.3%) | 2906.2/5936.9 = 49.0% (41.7%, 56.2%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 62 | 30.3/589.8 = 5.1% (1.6%, 15.7%) | 126/589.8 = 21.4% (12.3%, 34.4%) | 65.7/589.8 = 11.1% (4.9%, 23.4%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 62 | 415.4/589.8 = 70.4% (57.0%, 81.1%) | 442/589.8 = 74.9% (61.9%, 84.6%) | 320.1/589.8 = 54.3% (40.9%, 67.1%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 62 | 321.8/589.8 = 54.6% (40.8%, 67.6%) | 484.6/589.8 = 82.2% (68.8%, 90.6%) | 363.2/589.8 = 61.6% (47.6%, 73.9%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 66 | 6.1/604.6 = 1.0% (0.1%, 7.1%) | 16.9/604.6 = 2.8% (0.9%, 8.8%) | 6.1/604.6 = 1.0% (0.1%, 7.1%) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 66 | 134.6/604.6 = 22.3% (14.0%, 33.5%) | 218.5/604.6 = 36.1% (24.6%, 49.6%) | 78.4/604.6 = 13.0% (7.2%, 22.2%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 66 | 74.6/604.6 = 12.3% (6.2%, 23.1%) | 302.9/604.6 = 50.1% (36.6%, 63.6%) | 107.2/604.6 = 17.7% (9.6%, 30.3%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 259 | 516/3737.8 = 13.8% (9.7%, 19.2%) | 993.5/3737.8 = 26.6% (21.2%, 32.8%) | 635.9/3737.8 = 17.0% (12.6%, 22.6%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 259 | 2829.5/3737.8 = 75.7% (69.6%, 80.9%) | 3149.2/3737.8 = 84.3% (78.9%, 88.5%) | 2602.3/3737.8 = 69.6% (63.2%, 75.3%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 259 | 2637.7/3737.8 = 70.6% (64.3%, 76.2%) | 3481.7/3737.8 = 93.1% (89.2%, 95.7%) | 2962.6/3737.8 = 79.3% (73.5%, 84.0%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 81 | 79.7/433.9 = 18.4% (10.8%, 29.4%) | 146.5/433.9 = 33.8% (24.0%, 45.2%) | 101/433.9 = 23.3% (14.8%, 34.6%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 81 | 386.7/433.9 = 89.1% (79.0%, 94.7%) | 394.5/433.9 = 90.9% (80.7%, 96.0%) | 352.5/433.9 = 81.2% (69.7%, 89.1%) |
| Age ≥ 60 Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 81 | 341.2/433.9 = 78.6% (67.0%, 87.0%) | 407.7/433.9 = 94.0% (84.1%, 97.9%) | 380.7/433.9 = 87.7% (76.9%, 93.9%) |
| Age ≥ 60 Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) | 0/3584.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 81 | 14.7/367.8 = 4.0% (1.5%, 10.3%) | 80.4/367.8 = 21.8% (13.5%, 33.4%) | 20.2/367.8 = 5.5% (2.2%, 12.9%) |
| Age ≥ 60 Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 81 | 231.9/367.8 = 63.1% (49.9%, 74.5%) | 272.6/367.8 = 74.1% (60.8%, 84.1%) | 203.8/367.8 = 55.4% (42.8%, 67.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|-----------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age ≥ 60 Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 81 | 239.3/367.8 = 65.1% (52.2%, 76.0%) | 324.9/367.8 = 88.3% (76.5%, 94.6%) | 269/367.8 = 73.1% (60.4%, 82.9%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 201 | 330.2/2939.2 = 11.2% (7.6%, 16.4%) | 864.6/2939.2 = 29.4% (22.8%, 37.0%) | 454.3/2939.2 = 15.5% (10.8%, 21.6%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 201 | 2283.2/2939.2 = 77.7% (70.6%, 83.4%) | 2468.2/2939.2 = 84.0% (77.3%, 88.9%) | 2027.6/2939.2 = 69.0% (61.4%, 75.6%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 201 | 2134.3/2939.2 = 72.6% (65.2%, 79.0%) | 2773.1/2939.2 = 94.3% (90.0%, 96.9%) | 2373.2/2939.2 = 80.7% (74.1%, 86.0%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 61 | 60.5/288.1 = 21.0% (11.5%, 35.3%) | 109.2/288.1 = 37.9% (25.0%, 52.7%) | 62.7/288.1 = 21.8% (12.1%, 36.0%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 61 | 257.5/288.1 = 89.4% (80.2%, 94.6%) | 260.9/288.1 = 90.6% (81.7%, 95.4%) | 249.6/288.1 = 86.7% (76.8%, 92.7%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 61 | 253.9/288.1 = 88.1% (76.7%, 94.4%) | 284.9/288.1 = 98.9% (92.1%, 99.9%) | 259.3/288.1 = 90.0% (78.4%, 95.7%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 60 | 26/295.2 = 8.8% (3.1%, 22.4%) | 76.3/295.2 = 25.8% (15.0%, 40.7%) | 35.5/295.2 = 12.0% (5.1%, 25.6%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 60 | 205/295.2 = 69.5% (54.1%, 81.4%) | 233.2/295.2 = 79.0% (64.4%, 88.6%) | 181.4/295.2 = 61.5% (46.2%, 74.7%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 60 | 165.1/295.2 = 55.9% (40.9%, 69.9%) | 255.2/295.2 = 86.4% (71.4%, 94.2%) | 203.7/295.2 = 69.0% (53.3%, 81.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|-------------------------------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Hispanic or Latino ethnicity | | | | | | | | |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 374 | 539.6/10111.8 = 5.3% (3.6%, 7.8%) | 1493.4/10111.8 = 14.8% (11.7%, 18.5%) | 769.4/10111.8 = 7.6% (5.5%, 10.5%) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 374 | 5689.2/10111.8 = 56.3% (50.6%, 61.7%) | 6471.3/10111.8 = 64.0% (58.4%, 69.2%) | 4960.6/10111.8 = 49.1% (43.6%, 54.6%) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 374 | 4773.5/10111.8 = 47.2% (41.9%, 52.6%) | 7648.8/10111.8 = 75.6% (70.4%, 80.2%) | 6093.8/10111.8 = 60.3% (54.7%, 65.6%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 106 | 75/993.9 = 7.5% (3.6%, 15.1%) | 166.5/993.9 = 16.8% (10.2%, 26.2%) | 96.2/993.9 = 9.7% (4.9%, 18.2%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 106 | 707.6/993.9 = 71.2% (60.6%, 79.9%) | 791/993.9 = 79.6% (69.6%, 86.9%) | 545.7/993.9 = 54.9% (44.4%, 65.0%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 106 | 610.1/993.9 = 61.4% (50.5%, 71.3%) | 891.2/993.9 = 89.7% (80.3%, 94.9%) | 695.1/993.9 = 69.9% (59.1%, 78.9%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 105 | 19.6/1003.3 = 1.9% (0.5%, 6.7%) | 100.6/1003.3 = 10.0% (6.2%, 15.9%) | 34.5/1003.3 = 3.4% (1.4%, 8.1%) |
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 105 | 375.2/1003.3 = 37.4% (28.3%, 47.5%) | 524.4/1003.3 = 52.3% (41.8%, 62.5%) | 255.5/1003.3 = 25.5% (18.9%, 33.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 105 | 332.3/1003.3 = 33.1% (24.7%, 42.8%) | 553.3/1003.3 = 55.2% (45.1%, 64.8%) | 382.4/1003.3 = 38.1% (29.4%, 47.6%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 477 | 557.4/8055.6 = 6.9% (5.0%, 9.5%) | 1358.7/8055.6 = 16.9% (13.6%, 20.7%) | 772.6/8055.6 = 9.6% (7.2%, 12.7%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 477 | 4275.6/8055.6 = 53.1% (48.3%, 57.8%) | 4791.6/8055.6 = 59.5% (54.6%, 64.2%) | 3606.1/8055.6 = 44.8% (40.1%, 49.5%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 477 | 3945.2/8055.6 = 49.0% (44.2%, 53.8%) | 6040.3/8055.6 = 75.0% (70.4%, 79.1%) | 4553/8055.6 = 56.5% (51.6%, 61.3%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 164 | 147.1/1004.4 = 14.6% (9.7%, 21.5%) | 311.3/1004.4 = 31.0% (23.8%, 39.2%) | 213.1/1004.4 = 21.2% (15.2%, 28.8%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 164 | 793.6/1004.4 = 79.0% (71.3%, 85.1%) | 818.9/1004.4 = 81.5% (74.2%, 87.2%) | 683.4/1004.4 = 68.0% (59.5%, 75.5%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 164 | 656.1/1004.4 = 65.3% (56.8%, 73.0%) | 870.3/1004.4 = 86.6% (79.3%, 91.7%) | 714.1/1004.4 = 71.1% (62.7%, 78.3%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 152 | 38.2/801.6 = 4.8% (2.2%, 10.1%) | 89.3/801.6 = 11.1% (6.9%, 17.5%) | 38.2/801.6 = 4.8% (2.2%, 10.1%) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 152 | 352.6/801.6 = 44.0% (35.5%, 52.9%) | 422.4/801.6 = 52.7% (43.7%, 61.5%) | 301.5/801.6 = 37.6% (29.6%, 46.3%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|--------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|--|--|
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 152 | 284.7/801.6 = 35.5% (28.0%, 43.8%) | 477.8/801.6 = 59.6% (50.4%, 68.2%) | 319/801.6 = 39.8% (31.8%, 48.3%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 62 | 50.9/1124.6 = 4.5% (1.7%, 11.3%) | 153.1/1124.6 = 13.6% (7.1%, 24.5%) | 67.1/1124.6 = 6.0% (2.5%, 13.6%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 62 | 531/1124.6 = 47.2% (34.1%, 60.7%) | 709.5/1124.6 = 63.1% (48.4%, 75.7%) | 455.5/1124.6 = 40.5% (28.3%, 54.0%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 62 | 507/1124.6 = 45.1% (32.1%, 58.8%) | 860.4/1124.6 = 76.5% (62.1%, 86.6%) | 680/1124.6 = 60.5% (46.1%, 73.2%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 13 | 0/103.7 = 0.0% (0.0%, 0.0%) | 14.3/103.7 = 13.8% (1.7%, 60.3%) | 0/103.7 = 0.0% (0.0%, 0.0%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 13 | 68/103.7 = 65.5% (15.6%, 95.1%) | 75.2/103.7 = 72.5% (16.2%, 97.3%) | 43.7/103.7 = 42.2% (8.0%, 85.9%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 13 | 44.2/103.7 = 42.6% (9.3%, 84.3%) | 85.8/103.7 = 82.8% (13.9%, 99.3%) | 62.1/103.7 = 59.8% (14.2%, 93.1%) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 23 | 3.8/174.1 = 2.2% (0.2%, 17.4%) | 13.7/174.1 = 7.8% (2.4%, 23.0%) | 3.8/174.1 = 2.2% (0.2%, 17.4%) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 23 | 25.3/174.1 = 14.5% (5.9%, 31.4%) | 34.4/174.1 = 19.8% (8.7%, 39.0%) | 21.5/174.1 = 12.4% (4.8%, 28.5%) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 23 | 19.7/174.1 = 11.3% (4.0%, 27.8%) | 125.5/174.1 = 72.1% (45.9%, 88.7%) | 51/174.1 = 29.3% (11.2%, 57.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times \text{LLOQ}$ | % Greater than $4 \times \text{LLOQ}$ |
|-------|-------|-----|------------------------|--------|---|-----------|--|--|
|-------|-------|-----|------------------------|--------|---|-----------|--|--|

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

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

MOCK

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Race | | | | | | | | |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 196 | 322.7/3997.3 = 8.1% (5.1%, 12.5%) | 782.4/3997.3 = 19.6% (14.4%, 26.0%) | 481.8/3997.3 = 12.1% (8.1%, 17.5%) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 196 | 2175.9/3997.3 = 54.4% (47.0%, 61.7%) | 2476.6/3997.3 = 62.0% (54.4%, 69.0%) | 1922.9/3997.3 = 48.1% (40.8%, 55.5%) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 196 | 1953/3997.3 = 48.9% (41.5%, 56.2%) | 3021/3997.3 = 75.6% (68.3%, 81.6%) | 2240.1/3997.3 = 56.0% (48.5%, 63.3%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 63 | 92/475.6 = 19.3% (10.8%, 32.2%) | 158.3/475.6 = 33.3% (22.1%, 46.8%) | 132/475.6 = 27.8% (17.4%, 41.2%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 63 | 397.7/475.6 = 83.6% (71.1%, 91.4%) | 423/475.6 = 88.9% (77.2%, 95.0%) | 342.4/475.6 = 72.0% (57.7%, 82.9%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 63 | 327.4/475.6 = 68.8% (55.1%, 79.9%) | 428.8/475.6 = 90.2% (77.7%, 96.0%) | 338.8/475.6 = 71.2% (57.6%, 81.8%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 56 | 19.3/346.9 = 5.6% (1.6%, 18.0%) | 44.2/346.9 = 12.8% (6.0%, 25.1%) | 19.3/346.9 = 5.6% (1.6%, 18.0%) |
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 56 | 153.1/346.9 = 44.1% (30.6%, 58.6%) | 178.3/346.9 = 51.4% (37.1%, 65.4%) | 128.2/346.9 = 36.9% (24.5%, 51.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 56 | 109/346.9 = 31.4% (20.5%, 44.8%) | 213/346.9 = 61.4% (46.6%, 74.4%) | 123.8/346.9 = 35.7% (23.8%, 49.7%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 332 | 302/5012.5 = 6.0% (4.0%, 8.9%) | 697.2/5012.5 = 13.9% (10.6%, 18.0%) | 379.4/5012.5 = 7.6% (5.3%, 10.8%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 332 | 2663.7/5012.5 = 53.1% (47.4%, 58.8%) | 3060.8/5012.5 = 61.1% (55.3%, 66.6%) | 2200.1/5012.5 = 43.9% (38.4%, 49.6%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 332 | 2268.2/5012.5 = 45.3% (39.6%, 51.0%) | 3778.3/5012.5 = 75.4% (70.0%, 80.1%) | 2760.2/5012.5 = 55.1% (49.2%, 60.8%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 111 | 51/600 = 8.5% (4.9%, 14.3%) | 137.9/600 = 23.0% (15.9%, 32.1%) | 69.9/600 = 11.7% (7.2%, 18.4%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 111 | 399.3/600 = 66.6% (55.3%, 76.2%) | 417.4/600 = 69.6% (58.3%, 78.9%) | 316.8/600 = 52.8% (42.3%, 63.1%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 111 | 346/600 = 57.7% (46.6%, 68.0%) | 494.8/600 = 82.5% (71.2%, 89.9%) | 408.1/600 = 68.0% (56.8%, 77.5%) |
| Black or African American | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |
| Black or African American | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---------------------------|--------|---------|---------------------|-------------------------|----|---------------------------------------|---------------------------------------|---------------------------------------|
| Black or African American | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |
| Black or African American | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 94 | 17.5/474.5 = 3.7% (1.4%, 9.6%) | 65.5/474.5 = 13.8% (7.9%, 23.1%) | 22.9/474.5 = 4.8% (2.0%, 11.4%) |
| Black or African American | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 94 | 200.6/474.5 = 42.3% (31.6%, 53.8%) | 228.4/474.5 = 48.1% (37.0%, 59.5%) | 180.3/474.5 = 38.0% (27.9%, 49.3%) |
| Black or African American | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 94 | 162.5/474.5 = 34.2% (24.8%, 45.2%) | 249.4/474.5 = 52.6% (40.9%, 64.0%) | 189.2/474.5 = 39.9% (29.8%, 50.9%) |
| Asian | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 18 | 37.5/324.9 = 11.6% (2.1%, 44.2%) | 56.2/324.9 = 17.3% (4.3%, 49.5%) | 37.5/324.9 = 11.6% (2.1%, 44.2%) |
| Asian | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 18 | 171.6/324.9 = 52.8% (23.8%, 80.0%) | 226.5/324.9 = 69.7% (38.5%, 89.4%) | 160.2/324.9 = 49.3% (21.0%, 78.1%) |
| Asian | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 18 | 113.5/324.9 = 34.9% (13.4%, 65.0%) | 284.5/324.9 = 87.5% (53.8%, 97.7%) | 228.5/324.9 = 70.3% (39.3%, 89.7%) |
| Asian | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5 | 0/32.2 = 0.0% | 0/32.2 = 0.0% | 0/32.2 = 0.0% |
| Asian | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 5 | 24.9/32.2 = 77.4% | 24.9/32.2 = 77.4% | 24.9/32.2 = 77.4% |
| Asian | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 5 | 20.1/32.2 = 62.3% | 32.2/32.2 = 100.0% | 20.1/32.2 = 62.3% |
| Asian | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 10 | 0/40.7 = 0.0% (0.0%, 0.0%) | 3.8/40.7 = 9.3% (0.3%, 75.9%) | 0/40.7 = 0.0% (0.0%, 0.0%) |
| Asian | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10 | 8.3/40.7 = 20.5% (1.8%, 78.4%) | 19.8/40.7 = 48.7% (8.0%, 91.2%) | 3.8/40.7 = 9.3% (0.3%, 75.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|----------------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Asian | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 10 | 8.3/40.7 = 20.5% (1.8%, 78.4%) | 21.4/40.7 = 52.6% (9.0%, 92.6%) | 11/40.7 = 27.1% (3.3%, 80.1%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 149 | 233.5/5037.1 = 4.6% (2.5%, 8.6%) | 644.9/5037.1 = 12.8% (8.8%, 18.2%) | 316.2/5037.1 = 6.3% (3.6%, 10.7%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 149 | 2641.2/5037.1 = 52.4% (43.9%, 60.8%) | 2981.2/5037.1 = 59.2% (50.5%, 67.4%) | 2322.6/5037.1 = 46.1% (37.9%, 54.6%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 149 | 2278.9/5037.1 = 45.2% (37.1%, 53.6%) | 3659.6/5037.1 = 72.7% (64.1%, 79.8%) | 2945.4/5037.1 = 58.5% (49.8%, 66.7%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 49 | 68.3/561.8 = 12.2% (5.4%, 25.2%) | 127.8/561.8 = 22.8% (12.5%, 37.8%) | 86.2/561.8 = 15.4% (7.2%, 29.8%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 49 | 425.1/561.8 = 75.7% (59.6%, 86.8%) | 455.2/561.8 = 81.0% (65.2%, 90.7%) | 350.2/561.8 = 62.3% (46.8%, 75.7%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 49 | 346.8/561.8 = 61.7% (46.1%, 75.3%) | 480.4/561.8 = 85.5% (70.2%, 93.7%) | 382.6/561.8 = 68.1% (52.3%, 80.6%) |
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---|--------|---------|---------------------|-------------------------|----|---------------------------------------|---------------------------------------|---------------------------------------|
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 48 | 6.6/554.6 = 1.2% (0.2%, 8.5%) | 43.2/554.6 = 7.8% (3.5%, 16.5%) | 6.6/554.6 = 1.2% (0.2%, 8.5%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 48 | 215.1/554.6 = 38.8% (25.9%, 53.4%) | 287.4/554.6 = 51.8% (36.8%, 66.5%) | 149.8/554.6 = 27.0% (17.2%, 39.7%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 48 | 176.9/554.6 = 31.9% (20.6%, 45.8%) | 297/554.6 = 53.5% (38.8%, 67.7%) | 187/554.6 = 33.7% (22.2%, 47.6%) |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 2 | 0/45.4 = 0.0% | 0/45.4 = 0.0% | 0/45.4 = 0.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 2 | 26.7/45.4 = 58.8% | 45.4/45.4 = 100.0% | 26.7/45.4 = 58.8% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 2 | 26.7/45.4 = 58.8% | 45.4/45.4 = 100.0% | 45.4/45.4 = 100.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 1 | 0/5.5 = 0.0% | 0/5.5 = 0.0% | 0/5.5 = 0.0% |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|--------------------------|--------|---------|---------------------|-------------------------|----|---------------------------------------|---------------------------------------|--------------------------------------|
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 12 | 192.3/231.3 = 83.2% (27.4%, 98.5%) | 192.3/231.3 = 83.2% (27.4%, 98.5%) | 106.2/231.3 = 45.9% (9.2%, 87.7%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 12 | 211/231.3 = 91.2% (25.9%, 99.7%) | 211/231.3 = 91.2% (25.9%, 99.7%) | 211/231.3 = 91.2% (25.9%, 99.7%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0/6.8 = 0.0% | 0/6.8 = 0.0% | 0/6.8 = 0.0% |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 6.8/6.8 = 100.0% | 6.8/6.8 = 100.0% | 6.8/6.8 = 100.0% |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 6.8/6.8 = 100.0% | 6.8/6.8 = 100.0% | 6.8/6.8 = 100.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0/254 = 0.0% | 0/254 = 0.0% | 0/254 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0/254 = 0.0% | 0/254 = 0.0% | 0/254 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0/254 = 0.0% | 0/254 = 0.0% | 0/254 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 4 | 1.4/28.3 = 4.9% | 1.4/28.3 = 4.9% | 1.4/28.3 = 4.9% |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 4 | 1.4/28.3 = 4.9% | 21.7/28.3 = 76.6% | 0/28.3 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 4 | 28.3/28.3 = 100.0% | 28.3/28.3 = 100.0% | 28.3/28.3 = 100.0% |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|---|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Underrepresented Minority Status in the U.S. | | | | | | | | |
| URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 187.6/3939 = 4.8% (2.7%, 8.3%) | 589.7/3939 = 15.0% (10.8%, 20.4%) | 252/3939 = 6.4% (3.9%, 10.3%) |
| URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 2041/3939 = 51.8% (45.0%, 58.5%) | 2449.3/3939 = 62.2% (55.3%, 68.6%) | 1702.8/3939 = 43.2% (36.8%, 49.9%) |
| URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 1780.2/3939 = 45.2% (38.8%, 51.7%) | 3007.6/3939 = 76.4% (69.8%, 81.9%) | 2367.6/3939 = 60.1% (53.2%, 66.6%) |
| URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 19.1/459 = 4.2% (1.7%, 9.7%) | 77.9/459 = 17.0% (9.5%, 28.4%) | 22.5/459 = 4.9% (2.2%, 10.5%) |
| URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 268.2/459 = 58.4% (45.3%, 70.4%) | 304.6/459 = 66.4% (53.0%, 77.6%) | 202.2/459 = 44.1% (32.3%, 56.5%) |
| URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 266/459 = 57.9% (45.0%, 69.9%) | 380.7/459 = 82.9% (69.8%, 91.1%) | 295.1/459 = 64.3% (51.1%, 75.6%) |
| URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) |
| URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) |
| URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) | 0/3770 = 0.0% (0.0%, 0.0%) |
| URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 5.7/418 = 1.4% (0.3%, 5.3%) | 45.1/418 = 10.8% (5.7%, 19.5%) | 14/418 = 3.3% (1.2%, 9.1%) |
| URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 164.3/418 = 39.3% (28.5%, 51.2%) | 193.7/418 = 46.3% (34.9%, 58.2%) | 136.5/418 = 32.6% (23.1%, 43.9%) |
| URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 130.5/418 = 31.2% (22.2%, 41.9%) | 227.4/418 = 54.4% (43.0%, 65.4%) | 155.7/418 = 37.3% (27.7%, 47.9%) |
| Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 328.5/4659 = 7.1% (4.5%, 10.9%) | 846.6/4659 = 18.2% (13.5%, 23.9%) | 515.1/4659 = 11.1% (7.6%, 15.8%) |
| Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 2499/4659 = 53.6% (46.9%, 60.2%) | 2819.5/4659 = 60.5% (53.6%, 67.0%) | 2168.4/4659 = 46.5% (40.0%, 53.2%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 2309.8/4659 = 49.6% (42.8%, 56.3%) | 3506.3/4659 = 75.3% (68.7%, 80.9%) | 2663.1/4659 = 57.2% (50.2%, 63.9%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 82.9/519 = 16.0% (8.7%, 27.5%) | 174.5/519 = 33.6% (23.0%, 46.3%) | 130/519 = 25.1% (15.7%, 37.5%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 446.3/519 = 86.0% (74.4%, 92.9%) | 471.6/519 = 90.9% (80.0%, 96.1%) | 391/519 = 75.3% (62.6%, 84.8%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 355/519 = 68.4% (55.5%, 79.0%) | 472.2/519 = 91.0% (79.6%, 96.3%) | 373.4/519 = 72.0% (59.2%, 82.0%) |
| Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 71 | 23.1/439 = 5.3% (1.7%, 14.9%) | 51.8/439 = 11.8% (6.0%, 21.8%) | 23.1/439 = 5.3% (1.7%, 14.9%) |
| Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 71 | 175.2/439 = 39.9% (28.8%, 52.2%) | 215.6/439 = 49.1% (37.1%, 61.3%) | 141.9/439 = 32.3% (22.2%, 44.4%) |
| Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 71 | 138.7/439 = 31.6% (22.2%, 42.8%) | 267.3/439 = 60.9% (48.1%, 72.3%) | 161.1/439 = 36.7% (26.5%, 48.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|--|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|---------------------------------------|
| Age, Underrepresented Minority Status in the U.S. | | | | | | | | |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 113 | 64.1/2570 = 2.5% (0.8%, 7.7%) | 291.2/2570 = 11.3% (6.6%, 18.9%) | 90.8/2570 = 3.5% (1.3%, 9.3%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 113 | 1082/2570 = 42.1% (33.1%, 51.7%) | 1319.8/2570 = 51.4% (41.9%, 60.7%) | 846.9/2570 = 33.0% (24.7%, 42.4%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 113 | 849.7/2570 = 33.1% (24.9%, 42.3%) | 1744.5/2570 = 67.9% (58.4%, 76.1%) | 1282.4/2570 = 49.9% (40.5%, 59.3%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0/322 = 0.0% (0.0%, 0.0%) | 43.1/322 = 13.4% (5.3%, 30.0%) | 0/322 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 153.7/322 = 47.7% (31.1%, 64.9%) | 178.9/322 = 55.6% (38.0%, 71.8%) | 100.1/322 = 31.1% (17.3%, 49.2%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 150.4/322 = 46.7% (30.2%, 64.0%) | 247.1/322 = 76.7% (58.7%, 88.5%) | 168.3/322 = 52.3% (35.1%, 68.9%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0/274 = 0.0% (0.0%, 0.0%) | 8.8/274 = 3.2% (0.4%, 21.4%) | 0/274 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 64.5/274 = 23.5% (11.7%, 41.7%) | 80.1/274 = 29.2% (15.9%, 47.5%) | 42.1/274 = 15.4% (6.3%, 32.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 33.3/274 = 12.1% (4.4%, 29.4%) | 88.9/274 = 32.4% (18.4%, 50.6%) | 42.1/274 = 15.4% (6.3%, 32.9%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 111 | 99.2/3065 = 3.2% (1.2%, 8.6%) | 386/3065 = 12.6% (7.4%, 20.7%) | 198.5/3065 = 6.5% (3.0%, 13.3%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 111 | 1246.2/3065 = 40.7% (31.7%, 50.3%) | 1477.6/3065 = 48.2% (38.8%, 57.8%) | 1025.5/3065 = 33.5% (25.0%, 43.1%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 111 | 1168.7/3065 = 38.1% (29.3%, 47.9%) | 2028.9/3065 = 66.2% (56.7%, 74.5%) | 1444.3/3065 = 47.1% (37.7%, 56.8%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 40.3/320 = 12.6% (4.5%, 30.5%) | 87.7/320 = 27.4% (14.3%, 46.0%) | 69.5/320 = 21.7% (10.3%, 40.2%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 258.4/320 = 80.7% (63.0%, 91.2%) | 283.7/320 = 88.6% (71.5%, 96.0%) | 214.1/320 = 66.9% (48.4%, 81.4%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 196/320 = 61.2% (43.0%, 76.8%) | 286.8/320 = 89.6% (71.6%, 96.7%) | 210.2/320 = 65.7% (47.5%, 80.2%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 10.2/289 = 3.5% (0.4%, 23.2%) | 23/289 = 8.0% (2.3%, 23.9%) | 10.2/289 = 3.5% (0.4%, 23.2%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 76.7/289 = 26.6% (13.7%, 45.2%) | 99.7/289 = 34.5% (19.7%, 53.1%) | 60.1/289 = 20.8% (9.6%, 39.3%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|---------------------|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 52.4/289 = 18.1% (8.3%, 35.0%) | 135.5/289 = 46.9% (30.1%, 64.5%) | 62.7/289 = 21.7% (10.5%, 39.5%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 114 | 123.4/1369 = 9.0% (4.8%, 16.2%) | 298.4/1369 = 21.8% (15.0%, 30.7%) | 161.2/1369 = 11.8% (6.9%, 19.5%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 114 | 959/1369 = 70.1% (60.9%, 77.9%) | 1129.5/1369 = 82.5% (74.1%, 88.6%) | 855.8/1369 = 62.5% (53.0%, 71.1%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 114 | 930.5/1369 = 68.0% (58.6%, 76.1%) | 1263/1369 = 92.3% (85.5%, 96.0%) | 1085.2/1369 = 79.3% (70.6%, 85.9%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 19.1/137 = 13.9% (5.6%, 30.8%) | 34.8/137 = 25.4% (13.1%, 43.4%) | 22.5/137 = 16.4% (7.2%, 33.3%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 114.5/137 = 83.6% (66.7%, 92.8%) | 125.8/137 = 91.8% (76.0%, 97.5%) | 102.2/137 = 74.6% (56.6%, 86.9%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 115.6/137 = 84.4% (68.6%, 93.0%) | 133.6/137 = 97.5% (83.1%, 99.7%) | 126.8/137 = 92.6% (79.0%, 97.6%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 5.7/144 = 3.9% (0.9%, 15.0%) | 36.2/144 = 25.2% (13.1%, 42.9%) | 14/144 = 9.7% (3.3%, 25.3%) |
| Age ≥ 60 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 99.8/144 = 69.3% (50.1%, 83.6%) | 113.6/144 = 78.9% (59.9%, 90.4%) | 94.4/144 = 65.5% (46.5%, 80.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age ≥ 60 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 97.2/144 = 67.5% (48.4%, 82.1%) | 138.5/144 = 96.2% (75.5%, 99.5%) | 113.6/144 = 78.9% (59.9%, 90.4%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 116 | 229.4/1594 = 14.4% (8.9%, 22.4%) | 460.6/1594 = 28.9% (21.1%, 38.1%) | 316.6/1594 = 19.9% (13.3%, 28.5%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 116 | 1252.8/1594 = 78.6% (69.9%, 85.3%) | 1341.9/1594 = 84.2% (76.0%, 89.9%) | 1142.9/1594 = 71.7% (62.5%, 79.4%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 116 | 1141.1/1594 = 71.6% (62.5%, 79.2%) | 1477.5/1594 = 92.7% (86.3%, 96.2%) | 1218.8/1594 = 76.5% (67.7%, 83.4%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 42.6/199 = 21.4% (10.1%, 39.7%) | 86.8/199 = 43.6% (27.5%, 61.3%) | 60.5/199 = 30.4% (16.7%, 48.7%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 187.9/199 = 94.4% (78.2%, 98.8%) | 187.9/199 = 94.4% (78.2%, 98.8%) | 176.9/199 = 88.9% (72.0%, 96.1%) |
| Age ≥ 60 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 159/199 = 79.9% (61.8%, 90.7%) | 185.3/199 = 93.1% (75.2%, 98.4%) | 163.2/199 = 82.0% (63.9%, 92.2%) |
| Age ≥ 60 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 36 | 12.9/150 = 8.6% (2.6%, 24.8%) | 28.8/150 = 19.2% (9.0%, 36.3%) | 12.9/150 = 8.6% (2.6%, 24.8%) |
| Age ≥ 60 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 36 | 98.4/150 = 65.6% (48.1%, 79.7%) | 115.9/150 = 77.3% (59.7%, 88.6%) | 81.8/150 = 54.5% (37.6%, 70.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 ×LLOQ | % Greater than 4 ×LLOQ |
|---------------------|--------|---------|---------------------|-------------------------|----|------------------------------------|-------------------------------------|------------------------------------|
| Age ≥ 60 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 36 | 86.3/150 = 57.6% (40.3%, 73.2%) | 131.8/150 = 87.9% (71.5%, 95.4%) | 98.4/150 = 65.6% (48.1%, 79.7%) |

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

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



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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|----------------|--------|---------|---------------------|-------------------------|-----|--|---|--|
| Country | | | | | | | | |
| United States | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 516.1/8598 = 6.0% (4.2%, 8.4%) | 1436.3/8598 = 16.7% (13.5%, 20.6%) | 767.1/8598 = 8.9% (6.6%, 11.9%) |
| United States | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 4540/8598 = 52.8% (48.0%, 57.5%) | 5268.8/8598 = 61.3% (56.4%, 65.9%) | 3871.2/8598 = 45.0% (40.4%, 49.8%) |
| United States | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 4090/8598 = 47.6% (42.9%, 52.3%) | 6513.9/8598 = 75.8% (71.2%, 79.8%) | 5030.7/8598 = 58.5% (53.6%, 63.2%) |
| United States | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 102/978 = 10.4% (6.3%, 16.9%) | 252.4/978 = 25.8% (19.0%, 34.1%) | 152.5/978 = 15.6% (10.4%, 22.7%) |
| United States | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 714.5/978 = 73.1% (64.7%, 80.0%) | 776.2/978 = 79.4% (71.4%, 85.6%) | 593.3/978 = 60.7% (52.2%, 68.5%) |
| United States | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 620.9/978 = 63.5% (54.5%, 71.6%) | 852.9/978 = 87.2% (79.4%, 92.4%) | 668.5/978 = 68.4% (59.4%, 76.1%) |
| United States | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 28.8/857 = 3.4% (1.3%, 8.1%) | 96.9/857 = 11.3% (7.1%, 17.4%) | 37.1/857 = 4.3% (2.0%, 9.2%) |
| United States | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 339.5/857 = 39.6% (31.7%, 48.1%) | 409.3/857 = 47.8% (39.4%, 56.2%) | 278.4/857 = 32.5% (25.3%, 40.5%) |
| United States | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 269.2/857 = 31.4% (24.7%, 39.0%) | 494.7/857 = 57.7% (49.3%, 65.8%) | 316.8/857 = 37.0% (29.8%, 44.7%) |
| Argentina | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 45 | 94.5/1628.6 = 5.8% (2.1%, 15.2%) | 234.2/1628.6 = 14.4% (7.3%, 26.3%) | 113.3/1628.6 = 7.0% (2.8%, 16.4%) |
| Argentina | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 45 | 739.4/1628.6 = 45.4% (30.8%, 60.8%) | 945.8/1628.6 = 58.1% (42.0%, 72.6%) | 686.4/1628.6 = 42.1% (28.1%, 57.6%) |
| Argentina | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 45 | 838.7/1628.6 = 51.5% (36.2%, 66.6%) | 1204.1/1628.6 = 73.9% (57.4%, 85.7%) | 874.1/1628.6 = 53.7% (38.1%, 68.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 ×LLOQ | % Greater than 4 ×LLOQ |
|-----------|--------|---------|---------------------|-------------------------|----|---|---|---|
| Argentina | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 11 | 19.5/129.4 = 15.0% (2.5%, 55.2%) | 46.5/129.4 = 35.9% (10.3%, 73.2%) | 37.3/129.4 = 28.9% (6.8%, 69.2%) |
| Argentina | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 11 | 99.4/129.4 = 76.8% (32.6%, 95.8%) | 99.4/129.4 = 76.8% (32.6%, 95.8%) | 99.4/129.4 = 76.8% (32.6%, 95.8%) |
| Argentina | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 11 | 102.4/129.4 = 79.1% (35.3%, 96.3%) | 111.5/129.4 = 86.2% (34.0%, 98.7%) | 102.4/129.4 = 79.1% (35.3%, 96.3%) |
| Argentina | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 5 | 0/1460 = 0.0% | 0/1460 = 0.0% | 0/1460 = 0.0% |
| Argentina | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 5 | 0/1460 = 0.0% | 0/1460 = 0.0% | 0/1460 = 0.0% |
| Argentina | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 5 | 0/1460 = 0.0% | 0/1460 = 0.0% | 0/1460 = 0.0% |
| Argentina | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 16 | 0/203 = 0.0% (0.0%, 0.0%) | 6.6/203 = 3.3% (0.4%, 24.3%) | 0/203 = 0.0% (0.0%, 0.0%) |
| Argentina | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 16 | 75.1/203 = 37.0% (14.7%, 66.6%) | 89/203 = 43.8% (19.1%, 72.1%) | 36.6/203 = 18.0% (6.6%, 40.6%) |
| Argentina | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 16 | 63.1/203 = 31.1% (11.6%, 60.7%) | 105.7/203 = 52.1% (24.8%, 78.2%) | 82.4/203 = 40.6% (16.8%, 69.8%) |
| Brazil | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 78 | 205/2605.6 = 7.9% (4.0%, 14.9%) | 515.8/2605.6 = 19.8% (12.5%, 29.9%) | 304.3/2605.6 = 11.7% (6.5%, 20.1%) |
| Brazil | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 78 | 1713.3/2605.6 = 65.8% (53.3%, 76.4%) | 1884.3/2605.6 = 72.3% (59.9%, 82.1%) | 1388.9/2605.6 = 53.3% (41.3%, 64.9%) |
| Brazil | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 78 | 1283.9/2605.6 = 49.3% (37.7%, 60.9%) | 1968/2605.6 = 75.5% (63.1%, 84.8%) | 1635.5/2605.6 = 62.8% (50.5%, 73.6%) |
| Brazil | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 29 | 7.3/338.2 = 2.2% (0.3%, 15.3%) | 31/338.2 = 9.2% (3.3%, 23.0%) | 7.3/338.2 = 2.2% (0.3%, 15.3%) |
| Brazil | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 29 | 257.8/338.2 = 76.2% (53.9%, 89.8%) | 293.6/338.2 = 86.8% (66.2%, 95.7%) | 184.7/338.2 = 54.6% (35.2%, 72.7%) |
| Brazil | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 29 | 219.5/338.2 = 64.9% (43.6%, 81.5%) | 296/338.2 = 87.5% (65.7%, 96.3%) | 256.9/338.2 = 75.9% (54.0%, 89.4%) |
| Brazil | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 15 | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) |
| Brazil | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 15 | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 ×LLOQ | % Greater than 4 ×LLOQ |
|----------|--------|---------|---------------------|-------------------------|----|---|---|---|
| Brazil | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 15 | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) | 0/4560.7 = 0.0% (0.0%, 0.0%) |
| Brazil | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 30 | 6.6/358.5 = 1.8% (0.2%, 13.2%) | 40.1/358.5 = 11.2% (4.4%, 25.6%) | 6.6/358.5 = 1.8% (0.2%, 13.2%) |
| Brazil | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 30 | 97.5/358.5 = 27.2% (14.8%, 44.6%) | 168.5/358.5 = 47.0% (28.6%, 66.2%) | 66.9/358.5 = 18.7% (9.2%, 34.1%) |
| Brazil | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 30 | 99.4/358.5 = 27.7% (14.9%, 45.7%) | 214.6/358.5 = 59.9% (39.5%, 77.3%) | 129.7/358.5 = 36.2% (21.8%, 53.6%) |
| Chile | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 13 | 72.9/356.4 = 20.5% (5.2%, 54.6%) | 139/356.4 = 39.0% (15.2%, 69.6%) | 91.7/356.4 = 25.7% (7.9%, 58.3%) |
| Chile | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 13 | 202.9/356.4 = 56.9% (26.3%, 83.1%) | 221.6/356.4 = 62.2% (29.7%, 86.5%) | 202.9/356.4 = 56.9% (26.3%, 83.1%) |
| Chile | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 13 | 231.4/356.4 = 64.9% (31.9%, 88.0%) | 321/356.4 = 90.1% (46.7%, 98.9%) | 266.8/356.4 = 74.9% (39.4%, 93.2%) |
| Chile | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0/9.1 = 0.0% | 0/9.1 = 0.0% | 0/9.1 = 0.0% |
| Chile | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0/9.1 = 0.0% | 0/9.1 = 0.0% | 0/9.1 = 0.0% |
| Chile | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0/9.1 = 0.0% | 0/9.1 = 0.0% | 0/9.1 = 0.0% |
| Chile | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0/430.3 = 0.0% | 0/430.3 = 0.0% | 0/430.3 = 0.0% |
| Chile | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0/430.3 = 0.0% | 0/430.3 = 0.0% | 0/430.3 = 0.0% |
| Chile | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0/430.3 = 0.0% | 0/430.3 = 0.0% | 0/430.3 = 0.0% |
| Chile | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0/13.9 = 0.0% | 0/13.9 = 0.0% | 0/13.9 = 0.0% |
| Chile | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 1 | 0/13.9 = 0.0% | 0/13.9 = 0.0% | 0/13.9 = 0.0% |
| Chile | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 1 | 0/13.9 = 0.0% | 0/13.9 = 0.0% | 0/13.9 = 0.0% |
| Chile | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 1 | 0/13.9 = 0.0% | 0/13.9 = 0.0% | 0/13.9 = 0.0% |
| Columbia | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 64 | 37.5/2092.3 = 1.8% (0.4%, 7.1%) | 167.5/2092.3 = 8.0% (3.7%, 16.6%) | 66/2092.3 = 3.2% (1.0%, 9.9%) |
| Columbia | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 64 | 1162.5/2092.3 = 55.6% (42.0%, 68.3%) | 1309.1/2092.3 = 62.6% (48.7%, 74.6%) | 944.2/2092.3 = 45.1% (32.5%, 58.5%) |
| Columbia | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 64 | 820.6/2092.3 = 39.2% (27.5%, 52.3%) | 1585.6/2092.3 = 75.8% (61.6%, 85.9%) | 1175.7/2092.3 = 56.2% (42.8%, 68.7%) |
| Columbia | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 20 | 36.1/250.4 = 14.4% (3.9%, 41.2%) | 54/250.4 = 21.6% (7.2%, 49.4%) | 36.1/250.4 = 14.4% (3.9%, 41.2%) |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|--------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Peru | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 19 | 18.8/729 = 2.6% (0.3%, 19.1%) | 47.3/729 = 6.5% (1.3%, 26.1%) | 18.8/729 = 2.6% (0.3%, 19.1%) |
| Peru | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 19 | 469.7/729 = 64.4% (37.4%, 84.6%) | 469.7/729 = 64.4% (37.4%, 84.6%) | 469.7/729 = 64.4% (37.4%, 84.6%) |
| Peru | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 19 | 434.3/729 = 59.6% (33.5%, 81.2%) | 575.7/729 = 79.0% (50.8%, 93.2%) | 575.7/729 = 79.0% (50.8%, 93.2%) |
| Peru | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 6 | 14.6/62.9 = 23.2% (0.7%, 92.5%) | 14.6/62.9 = 23.2% (0.7%, 92.5%) | 14.6/62.9 = 23.2% (0.7%, 92.5%) |
| Peru | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 6 | 62.9/62.9 = 100.0% (100.0%, 100.0%) | 62.9/62.9 = 100.0% (100.0%, 100.0%) | 53.8/62.9 = 85.5% (4.6%, 99.9%) |
| Peru | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 6 | 62.9/62.9 = 100.0% (100.0%, 100.0%) | 62.9/62.9 = 100.0% (100.0%, 100.0%) | 62.9/62.9 = 100.0% (100.0%, 100.0%) |
| Peru | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0/347.2 = 0.0% | 0/347.2 = 0.0% | 0/347.2 = 0.0% |
| Peru | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0/347.2 = 0.0% | 0/347.2 = 0.0% | 0/347.2 = 0.0% |
| Peru | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0/347.2 = 0.0% | 0/347.2 = 0.0% | 0/347.2 = 0.0% |
| Peru | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 5 | 0/49.2 = 0.0% (0.0%, 0.0%) | 6.6/49.2 = 13.4% (0.1%, 95.7%) | 6.6/49.2 = 13.4% (0.1%, 95.7%) |
| Peru | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 5 | 23.3/49.2 = 47.4% (1.3%, 98.4%) | 29.9/49.2 = 60.8% (1.3%, 99.5%) | 13.2/49.2 = 26.9% (0.6%, 95.5%) |
| Peru | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5 | 29.9/49.2 = 60.8% (1.3%, 99.5%) | 29.9/49.2 = 60.8% (1.3%, 99.5%) | 29.9/49.2 = 60.8% (1.3%, 99.5%) |
| South Africa | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 231 | 203/2951 = 6.9% (4.3%, 10.8%) | 436.7/2951 = 14.8% (10.8%, 19.9%) | 247.8/2951 = 8.4% (5.5%, 12.7%) |
| South Africa | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 231 | 1514.8/2951 = 51.3% (44.8%, 57.8%) | 1719.7/2951 = 58.3% (51.6%, 64.7%) | 1305.8/2951 = 44.2% (38.0%, 50.6%) |
| South Africa | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 231 | 1373.6/2951 = 46.5% (40.1%, 53.1%) | 2120.7/2951 = 71.9% (65.1%, 77.8%) | 1562/2951 = 52.9% (46.3%, 59.5%) |
| South Africa | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 70 | 35.3/295 = 12.0% (6.3%, 21.7%) | 86.3/295 = 29.3% (19.6%, 41.3%) | 54.2/295 = 18.4% (10.6%, 29.9%) |
| South Africa | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 70 | 205.3/295 = 69.6% (56.3%, 80.3%) | 211.7/295 = 71.7% (58.6%, 82.0%) | 172.6/295 = 58.5% (45.4%, 70.5%) |

(continued)

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

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than $2 \times$ LLOQ | % Greater than $4 \times$ LLOQ |
|----------------------|--------|---------|---------------------|-------------------------|-----|--|---|---|
| HIV Infection | | | | | | | | |
| Negative | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 848 | 1075.4/18035.1 = 6.0% (4.6%, 7.6%) | 2825.9/18035.1 = 15.7% (13.4%, 18.3%) | 1529.4/18035.1 = 8.5% (6.8%, 10.5%) |
| Negative | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 848 | 9909.2/18035.1 = 54.9% (51.2%, 58.6%) | 11346.4/18035.1 = 62.9% (59.2%, 66.5%) | 8466.2/18035.1 = 46.9% (43.3%, 50.6%) |
| Negative | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 848 | 8785.2/18035.1 = 48.7% (45.1%, 52.4%) | 13786/18035.1 = 76.4% (73.0%, 79.6%) | 10691.4/18035.1 = 59.3% (55.5%, 62.9%) |
| Negative | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 265 | 201.3/1980.7 = 10.2% (7.0%, 14.6%) | 457.7/1980.7 = 23.1% (18.1%, 29.0%) | 283.5/1980.7 = 14.3% (10.4%, 19.4%) |
| Negative | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 265 | 1475.1/1980.7 = 74.5% (68.0%, 80.0%) | 1584.8/1980.7 = 80.0% (73.9%, 85.0%) | 1178.8/1980.7 = 59.5% (52.9%, 65.8%) |
| Negative | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 265 | 1217.1/1980.7 = 61.4% (54.6%, 67.9%) | 1731.2/1980.7 = 87.4% (81.7%, 91.5%) | 1377.9/1980.7 = 69.6% (62.8%, 75.6%) |
| Negative | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 266 | 51.4/1886.3 = 2.7% (1.4%, 5.2%) | 190.7/1886.3 = 10.1% (7.3%, 13.9%) | 66.3/1886.3 = 3.5% (2.0%, 6.1%) |
| Negative | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 266 | 722.7/1886.3 = 38.3% (32.2%, 44.8%) | 944.8/1886.3 = 50.1% (43.4%, 56.8%) | 554.2/1886.3 = 29.4% (24.5%, 34.8%) |
| Negative | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 266 | 609/1886.3 = 32.3% (26.8%, 38.3%) | 1118.4/1886.3 = 59.3% (52.4%, 65.9%) | 724.6/1886.3 = 38.4% (32.6%, 44.6%) |
| Positive | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 65 | 72.5/1256.9 = 5.8% (2.2%, 14.3%) | 179.2/1256.9 = 14.3% (7.4%, 25.7%) | 79.7/1256.9 = 6.3% (2.6%, 14.7%) |
| Positive | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 65 | 586.6/1256.9 = 46.7% (32.9%, 61.0%) | 626.1/1256.9 = 49.8% (35.7%, 63.9%) | 556.1/1256.9 = 44.2% (30.7%, 58.7%) |
| Positive | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 65 | 440.5/1256.9 = 35.0% (23.1%, 49.1%) | 763.4/1256.9 = 60.7% (45.9%, 73.9%) | 635.5/1256.9 = 50.6% (36.4%, 64.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % Greater than 2 × LLOQ | % Greater than 4 × LLOQ |
|----------|--------|---------|---------------------|-------------------------|----|--------------------------------------|---------------------------------------|--------------------------------------|
| Positive | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 18 | 20.7/121.3 = 17.1% (3.8%, 51.9%) | 34.3/121.3 = 28.3% (9.8%, 58.9%) | 25.9/121.3 = 21.4% (5.9%, 54.3%) |
| Positive | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 18 | 94/121.3 = 77.5% (46.3%, 93.2%) | 100.3/121.3 = 82.7% (50.5%, 95.7%) | 94/121.3 = 77.5% (46.3%, 93.2%) |
| Positive | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 18 | 93.4/121.3 = 77.0% (41.7%, 94.0%) | 116.1/121.3 = 95.7% (67.9%, 99.6%) | 93.4/121.3 = 77.0% (41.7%, 94.0%) |
| Positive | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 14 | 10.1/92.7 = 10.9% (1.0%, 58.7%) | 12.8/92.7 = 13.8% (2.0%, 56.0%) | 10.1/92.7 = 10.9% (1.0%, 58.7%) |
| Positive | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 14 | 30.4/92.7 = 32.8% (9.8%, 68.6%) | 36.4/92.7 = 39.3% (12.7%, 74.2%) | 24.3/92.7 = 26.2% (7.0%, 62.7%) |
| Positive | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 14 | 27.7/92.7 = 29.9% (8.4%, 66.4%) | 38.3/92.7 = 41.2% (13.5%, 76.0%) | 27.7/92.7 = 29.9% (8.4%, 66.4%) |

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

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| All participants | | | | | | | | |
| | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 913 | 1147.9/19292 = 6.0% (4.7%, 7.5%) | 4910.8/19292 = 25.5% (22.5%, 28.6%) | 3005.2/19292 = 15.6% (13.4%, 18.1%) |
| | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 913 | 10495.8/19292 = 54.4% (50.8%, 58.0%) | 15270.4/19292 = 79.2% (76.0%, 82.0%) | 11972.4/19292 = 62.1% (58.5%, 65.5%) |
| | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 913 | 9225.7/19292 = 47.8% (44.3%, 51.3%) | 16592.4/19292 = 86.0% (83.1%, 88.5%) | 14549.4/19292 = 75.4% (72.1%, 78.5%) |
| | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 283 | 222.1/2102 = 10.6% (7.4%, 14.9%) | 740.9/2102 = 35.2% (29.4%, 41.6%) | 492/2102 = 23.4% (18.5%, 29.1%) |
| | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 283 | 1569.2/2102 = 74.7% (68.5%, 80.0%) | 1873/2102 = 89.1% (84.0%, 92.7%) | 1685.1/2102 = 80.2% (74.4%, 84.9%) |
| | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 283 | 1310.4/2102 = 62.3% (55.7%, 68.6%) | 2004.5/2102 = 95.4% (91.7%, 97.5%) | 1847.3/2102 = 87.9% (82.4%, 91.8%) |
| | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) | 0/19333 = 0.0% (0.0%, 0.0%) |
| | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 280 | 61.5/1979 = 3.1% (1.6%, 5.8%) | 399.9/1979 = 20.2% (16.1%, 25.0%) | 203.5/1979 = 10.3% (7.5%, 14.0%) |
| | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 280 | 753.1/1979 = 38.1% (32.2%, 44.3%) | 1300.3/1979 = 65.7% (58.9%, 72.0%) | 981.2/1979 = 49.6% (43.1%, 56.0%) |

| | | | | | | | |
|--------|---------|----------|-------------------------|-----|--------------------------------------|-------------------------------------|---------------------------------------|
| Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 280 | 636.7/1979 = 32.2% (26.9%, 37.9%) | 1430/1979 = 72.3% (65.5%, 78.1%) | 1156.6/1979 = 58.4% (51.8%, 64.8%) |
|--------|---------|----------|-------------------------|-----|--------------------------------------|-------------------------------------|---------------------------------------|

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------------|--------|---------|---------------------|-------------------------|-----|--|---|--|
| Age | | | | | | | | |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 453 | 301.7/12615 = 2.4% (1.4%, 4.2%) | 2269.5/12615 = 18.0% (14.5%, 22.1%) | 1147.1/12615 = 9.1% (6.7%, 12.2%) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 453 | 5383.1/12615 = 42.7% (37.8%, 47.7%) | 9121.9/12615 = 72.3% (67.7%, 76.5%) | 6355/12615 = 50.4% (45.4%, 55.4%) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 453 | 4453.6/12615 = 35.3% (30.7%, 40.2%) | 10055.4/12615 = 79.7% (75.3%, 83.5%) | 8294.6/12615 = 65.8% (60.8%, 70.4%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 141 | 81.9/1380 = 5.9% (2.8%, 12.0%) | 373.5/1380 = 27.1% | 236.3/1380 = 17.1% (11.4%, 24.9%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 141 | 925/1380 = 67.0% (58.2%, 74.8%) | 1182.7/1380 = 85.7% (78.3%, 90.9%) | 1029.7/1380 = 74.6% (66.3%, 81.5%) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 141 | 715.4/1380 = 51.8% (42.7%, 60.8%) | 1291.6/1380 = 93.6% (88.2%, 96.6%) | 1154.7/1380 = 83.7% (75.7%, 89.4%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) | 0/12512 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 20.8/1316 = 1.6% (0.5%, 5.2%) | 129.4/1316 = 9.8% (6.0%, 15.7%) | 46.9/1316 = 3.6% (1.6%, 7.6%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 316.1/1316 = 24.0% (17.1%, 32.6%) | 717.2/1316 = 54.5% (45.1%, 63.6%) | 475.4/1316 = 36.1% (27.9%, 45.2%) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 232.3/1316 = 17.7% (11.8%, 25.5%) | 817.8/1316 = 62.1% (52.7%, 70.7%) | 576.6/1316 = 43.8% (34.9%, 53.2%) |
| Age ≥ 60 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 460 | 846.2/6677 = 12.7% (9.8%, 16.3%) | 2641.4/6677 = 39.6% (34.7%, 44.6%) | 1858/6677 = 27.8% (23.5%, 32.6%) |
| Age ≥ 60 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 460 | 5112.7/6677 = 76.6% (72.1%, 80.5%) | 6148.5/6677 = 92.1% (88.9%, 94.4%) | 5617.4/6677 = 84.1% (80.1%, 87.5%) |
| Age ≥ 60 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 460 | 4772.1/6677 = 71.5% (66.8%, 75.8%) | 6537/6677 = 97.9% (96.2%, 98.9%) | 6254.8/6677 = 93.7% (91.0%, 95.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------|--------|---------|---------------------|-------------------------|-----|-------------------------------------|-------------------------------------|-------------------------------------|
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 140.2/722 = 19.4% (13.2%, 27.6%) | 367.4/722 = 50.9% (41.9%, 59.9%) | 255.7/722 = 35.4% (27.4%, 44.4%) |
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 644.2/722 = 89.2% (82.7%, 93.5%) | 690.3/722 = 95.6% (90.1%, 98.1%) | 655.4/722 = 90.8% (84.4%, 94.7%) |
| Age ≥ 60 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 595.1/722 = 82.4% (74.4%, 88.3%) | 712.9/722 = 98.7% (91.4%, 99.8%) | 692.6/722 = 95.9% (89.9%, 98.4%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) | 0/6821 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 40.7/663 = 6.1% (2.9%, 12.4%) | 270.5/663 = 40.8% (32.0%, 50.3%) | 156.6/663 = 23.6% (16.6%, 32.4%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 436.9/663 = 65.9% (56.1%, 74.5%) | 583.1/663 = 87.9% (79.7%, 93.1%) | 505.8/663 = 76.3% (66.8%, 83.7%) |
| Age ≥ 60 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 404.4/663 = 61.0% (51.5%, 69.7%) | 612.1/663 = 92.3% (84.4%, 96.4%) | 580/663 = 87.5% (79.1%, 92.8%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Risk for Severe Covid-19 | | | | | | | | |
| At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 596.8/7754 = 7.7% (5.5%, 10.6%) | 1831/7754 = 23.6% (19.7%, 28.0%) | 1264.2/7754 = 16.3% (13.0%, 20.2%) |
| At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 4049.4/7754 = 52.2% (47.3%, 57.1%) | 6287.2/7754 = 81.1% (76.9%, 84.7%) | 4897/7754 = 63.2% (58.2%, 67.9%) |
| At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 3832.8/7754 = 49.4% (44.5%, 54.4%) | 6662.1/7754 = 85.9% (81.7%, 89.3%) | 5839.7/7754 = 75.3% (70.6%, 79.5%) |
| At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 140 | 84/855 = 9.8% (5.7%, 16.4%) | 284.6/855 = 33.3% (25.8%, 41.7%) | 180.6/855 = 21.1% (15.1%, 28.8%) |
| At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 140 | 637.1/855 = 74.5% (65.8%, 81.6%) | 788.4/855 = 92.2% (86.2%, 95.7%) | 684.9/855 = 80.1% (71.8%, 86.4%) |
| At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 140 | 557.1/855 = 65.2% (56.0%, 73.3%) | 815.8/855 = 95.4% (89.0%, 98.2%) | 772.5/855 = 90.4% (82.8%, 94.8%) |
| At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 53 | 0/7777 = 0% (0.0%, 0.0%) | 0/7777 = 0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 53 | 0/7777 = 0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 53 | 0/7777 = 0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) | 0/7777 = 0.0% (0.0%, 0.0%) |
| At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 23.3/796 = 2.9% (1.3%, 6.7%) | 207.9/796 = 26.1% (19.3%, 34.3%) | 99.2/796 = 12.5% (8.3%, 18.3%) |
| At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 309.6/796 = 38.9% (30.9%, 47.5%) | 570.4/796 = 71.7% (61.9%, 79.7%) | 436.4/796 = 54.8% (45.4%, 63.9%) |
| At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 299.2/796 = 37.6% (30.0%, 45.8%) | 649.7/796 = 81.6% (72.5%, 88.2%) | 513/796 = 64.5% (55.0%, 72.9%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 459 | 551.2/11538 = 4.8% (3.3%, 6.8%) | 3079.8/11538 = 26.7% (22.7%, 31.1%) | 1741/11538 = 15.1% (12.2%, 18.5%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 459 | 6446.4/11538 = 55.9% (50.8%, 60.8%) | 8983.2/11538 = 77.9% (73.2%, 81.9%) | 7075.5/11538 = 61.3% (56.3%, 66.1%) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 459 | 5392.9/11538 = 46.7% (42.0%, 51.6%) | 9930.4/11538 = 86.1% (81.9%, 89.4%) | 8709.8/11538 = 75.5% (70.7%, 79.7%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------------|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|---------------------------------------|
| Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 143 | 138.1/1247 = 11.1% (6.8%, 17.5%) | 456.3/1247 = 36.6% (28.4%, 45.7%) | 311.5/1247 = 25.0% (18.2%, 33.3%) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 143 | 932/1247 = 74.7% (65.8%, 82.0%) | 1084.7/1247 = 87.0% (79.0%, 92.2%) | 1000.3/1247 = 80.2% (71.8%, 86.6%) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 143 | 753.3/1247 = 60.4% (51.0%, 69.1%) | 1188.7/1247 = 95.3% (89.9%, 97.9%) | 1074.8/1247 = 86.2% (77.9%, 91.7%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) | 0/11556 = 0.0% (0.0%, 0.0%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 38.2/1183 = 3.2% (1.3%, 7.7%) | 192/1183 = 16.2% (11.4%, 22.5%) | 104.4/1183 = 8.8% (5.4%, 14.2%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 443.4/1183 = 37.5% (29.4%, 46.3%) | 729.9/1183 = 61.7% (52.1%, 70.4%) | 544.8/1183 = 46.1% (37.4%, 54.9%) |
| Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 337.5/1183 = 28.5% (21.6%, 36.6%) | 780.3/1183 = 66.0% (56.2%, 74.5%) | 643.6/1183 = 54.4% (45.2%, 63.4%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age, Risk for Severe Covid-19 | | | | | | | | |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 226 | 201.4/5064 = 4.0% (2.0%, 7.8%) | 820.5/5064 = 16.2% (11.6%, 22.2%) | 534.7/5064 = 10.6% (6.9%, 15.8%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 226 | 2039.2/5064 = 40.3% (33.6%, 47.3%) | 3814/5064 = 75.3% (69.3%, 80.5%) | 2617.9/5064 = 51.7% (44.8%, 58.6%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 226 | 1953.3/5064 = 38.6% (32.0%, 45.6%) | 4035.1/5064 = 79.7% (73.5%, 84.7%) | 3339.1/5064 = 65.9% (59.1%, 72.2%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 69 | 24.5/554 = 4.4% (1.3%, 14.2%) | 136.3/554 = 24.6% (15.9%, 36.0%) | 76.1/554 = 13.7% (7.4%, 24.0%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 69 | 373/554 = 67.3% (55.0%, 77.6%) | 500.3/554 = 90.3% (81.7%, 95.1%) | 413.9/554 = 74.7% (62.9%, 83.7%) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 69 | 301.9/554 = 54.5% (41.7%, 66.7%) | 514.8/554 = 92.9% (83.2%, 97.2%) | 474.9/554 = 85.7% (74.3%, 92.6%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 26 | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) | 0/5050 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 4.5/533 = 0.8% (0.1%, 6.0%) | 77.7/533 = 14.6% (7.6%, 26.1%) | 21.8/533 = 4.1% (1.5%, 10.6%) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 114.5/533 = 21.5% (12.6%, 34.2%) | 335.2/533 = 62.9% (49.4%, 74.6%) | 217.3/533 = 40.8% (28.6%, 54.2%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 98.3/533 = 18.4% (10.2%, 31.1%) | 388.1/533 = 72.8% (59.7%, 82.9%) | 260.8/533 = 48.9% (36.1%, 61.9%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 100.3/7551 = 1.3% (0.5%, 3.6%) | 1448.9/7551 = 19.2% (14.4%, 25.1%) | 612.4/7551 = 8.1% (5.3%, 12.2%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 3343.9/7551 = 44.3% (37.5%, 51.3%) | 5307.9/7551 = 70.3% (63.6%, 76.2%) | 3737.1/7551 = 49.5% (42.5%, 56.5%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 2500.3/7551 = 33.1% (26.9%, 40.0%) | 6020.3/7551 = 79.7% (73.4%, 84.8%) | 4955.5/7551 = 65.6% (58.7%, 72.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 72 | 57.4/826 = 6.9% (2.7%, 16.6%) | 237.2/826 = 28.7% (18.6%, 41.6%) | 160.2/826 = 19.4% (11.3%, 31.2%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 72 | 552/826 = 66.8% (54.2%, 77.4%) | 682.4/826 = 82.6% (70.9%, 90.3%) | 615.8/826 = 74.5% (62.5%, 83.8%) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 72 | 413.4/826 = 50.1% (37.5%, 62.6%) | 776.8/826 = 94.0% (86.2%, 97.6%) | 679.8/826 = 82.3% (70.4%, 90.1%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) | 0/7462 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 16.3/783 = 2.1% (0.5%, 8.6%) | 51.7/783 = 6.6% (2.9%, 14.2%) | 25.1/783 = 3.2% (1.0%, 10.0%) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 201.6/783 = 25.8% (16.4%, 38.1%) | 382/783 = 48.8% (36.0%, 61.7%) | 258.2/783 = 33.0% (22.4%, 45.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 134/783 = 17.1% (9.8%, 28.2%) | 429.7/783 = 54.9% (41.7%, 67.4%) | 315.8/783 = 40.3% (28.4%, 53.5%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 228 | 395.3/2690 = 14.7% (10.2%, 20.6%) | 1010.4/2690 = 37.6% (31.1%, 44.5%) | 729.4/2690 = 27.1% (21.3%, 33.8%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 228 | 2010.2/2690 = 74.7% (68.3%, 80.3%) | 2473.2/2690 = 91.9% (87.1%, 95.1%) | 2279/2690 = 84.7% (78.9%, 89.1%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 228 | 1879.4/2690 = 69.9% (63.1%, 75.9%) | 2627/2690 = 97.7% (94.3%, 99.1%) | 2500.6/2690 = 93.0% (88.5%, 95.8%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 59.5/301 = 19.8% (11.0%, 32.9%) | 148.3/301 = 49.3% (36.4%, 62.2%) | 104.4/301 = 34.7% (23.3%, 48.2%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 264.2/301 = 87.8% (76.5%, 94.1%) | 288.1/301 = 95.7% (85.4%, 98.8%) | 271/301 = 90.0% (78.7%, 95.7%) |
| Age ≥ 60 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 255.2/301 = 84.8% (74.4%, 91.4%) | 301/301 = 100.0% (100.0%, 100.0%) | 297.6/301 = 98.9% (92.1%, 99.8%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) | 0/2727 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 72 | 18.8/263 = 7.2% (2.8%, 17.2%) | 130.2/263 = 49.5% (36.3%, 62.8%) | 77.4/263 = 29.4% (18.6%, 43.2%) |
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 72 | 195.2/263 = 74.2% (60.7%, 84.3%) | 235.2/263 = 89.4% (77.8%, 95.3%) | 219.2/263 = 83.3% (70.7%, 91.2%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age ≥ 60 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 72 | 200.9/263 = 76.4% (63.9%, 85.5%) | 261.6/263 = 99.5% (96.2%, 99.9%) | 252.2/263 = 95.9% (85.9%, 98.9%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 232 | 450.9/3987 = 11.3% (7.8%, 16.2%) | 1630.9/3987 = 40.9% (34.2%, 48.0%) | 1128.6/3987 = 28.3% (22.4%, 35.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 232 | 3102.5/3987 = 77.8% (71.4%, 83.1%) | 3675.3/3987 = 92.2% (87.6%, 95.2%) | 3338.4/3987 = 83.7% (77.9%, 88.3%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 232 | 2892.6/3987 = 72.6% (65.9%, 78.3%) | 3910/3987 = 98.1% (95.7%, 99.1%) | 3754.2/3987 = 94.2% (90.3%, 96.5%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 80.7/421 = 19.2% (11.3%, 30.7%) | 219.1/421 = 52.1% (39.6%, 64.3%) | 151.3/421 = 35.9% (25.2%, 48.3%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 380/421 = 90.3% (81.0%, 95.3%) | 402.2/421 = 95.5% (86.9%, 98.6%) | 384.5/421 = 91.3% (82.2%, 96.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 339.9/421 = 80.7% (68.2%, 89.1%) | 411.9/421 = 97.8% (85.5%, 99.7%) | 395/421 = 93.8% (83.5%, 97.9%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) | 0/4094 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 21.9/400 = 5.5% (1.8%, 15.8%) | 140.4/400 = 35.1% (23.7%, 48.5%) | 79.2/400 = 19.8% (11.4%, 32.2%) |
| Age ≥ 60 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 241.8/400 = 60.4% (46.6%, 72.8%) | 347.8/400 = 87.0% (74.3%, 93.9%) | 286.6/400 = 71.7% (57.8%, 82.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------|--------|---------|---------------------|-------------------------|----|-------------------------------------|-------------------------------------|-------------------------------------|
| Age \geq 60 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 203.5/400 = 50.9% (37.6%, 64.0%) | 350.5/400 = 87.6% (74.9%, 94.4%) | 327.8/400 = 82.0% (68.9%, 90.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Sex | | | | | | | | |
| Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 416 | 550.9/8876.1 = 6.2% (4.3%, 8.8%) | 2145.5/8876.1 = 24.2% (20.0%, 28.9%) | 1423.2/8876.1 = 16.0% (12.7%, 20.0%) |
| Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 416 | 5007.8/8876.1 = 56.4% (50.9%, 61.8%) | 6980.1/8876.1 = 78.6% (73.6%, 82.9%) | 5685.6/8876.1 = 64.1% (58.6%, 69.2%) |
| Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 416 | 4328.8/8876.1 = 48.8% (43.4%, 54.2%) | 7617.1/8876.1 = 85.8% (81.2%, 89.4%) | 6673.7/8876.1 = 75.2% (70.0%, 79.8%) |
| Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 123 | 90.8/877.8 = 10.3% (5.9%, 17.6%) | 357.9/877.8 = 40.8% (31.5%, 50.7%) | 235.2/877.8 = 26.8% (19.0%, 36.4%) |
| Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 123 | 672.9/877.8 = 76.7% (67.0%, 84.1%) | 763.3/877.8 = 87.0% (77.8%, 92.7%) | 702.9/877.8 = 80.1% (70.8%, 86.9%) |
| Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 123 | 575.7/877.8 = 65.6% (55.2%, 74.6%) | 835.3/877.8 = 95.2% (88.5%, 98.0%) | 769.4/877.8 = 87.7% (78.2%, 93.4%) |
| Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) | 0/11015.9 = 0.0% (0.0%, 0.0%) |
| Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 126 | 32.1/899.8 = 3.6% (1.4%, 8.6%) | 188.9/899.8 = 21.0% (14.7%, 29.1%) | 93.2/899.8 = 10.4% (6.3%, 16.6%) |
| Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 126 | 339.6/899.8 = 37.7% (29.4%, 46.9%) | 574.7/899.8 = 63.9% (53.1%, 73.4%) | 451.6/899.8 = 50.2% (40.4%, 60.0%) |
| Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 126 | 239.7/899.8 = 26.6% (19.5%, 35.3%) | 665.8/899.8 = 74.0% (63.3%, 82.4%) | 558.1/899.8 = 62.0% (51.5%, 71.6%) |
| Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 497 | 597/10415.9 = 5.7% (4.1%, 8.0%) | 2765.4/10415.9 = 26.5% (22.5%, 31.0%) | 1582/10415.9 = 15.2% (12.2%, 18.7%) |
| Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 497 | 5488/10415.9 = 52.7% (47.7%, 57.6%) | 8290.3/10415.9 = 79.6% (75.2%, 83.4%) | 6286.8/10415.9 = 60.4% (55.4%, 65.1%) |
| Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 497 | 4896.9/10415.9 = 47.0% (42.2%, 51.9%) | 8975.3/10415.9 = 86.2% (82.0%, 89.5%) | 7875.8/10415.9 = 75.6% (70.9%, 79.8%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------|--------|---------|---------------------|-------------------------|-----|--|---|---|
| Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 160 | 131.2/1224.2 = 10.7% (6.5%, 17.1%) | 383.1/1224.2 = 31.3% (23.8%, 39.8%) | 256.8/1224.2 = 21.0% (15.1%, 28.5%) |
| Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 160 | 896.2/1224.2 = 73.2% (64.5%, 80.5%) | 1109.7/1224.2 = 90.7% (84.0%, 94.7%) | 982.3/1224.2 = 80.2% (72.2%, 86.4%) |
| Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 160 | 734.8/1224.2 = 60.0% (51.0%, 68.4%) | 1169.2/1224.2 = 95.5% (90.1%, 98.0%) | 1077.9/1224.2 = 88.1% (80.8%, 92.8%) |
| Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) | 0/8317.1 = 0.0% (0.0%, 0.0%) |
| Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 154 | 29.5/1079.2 = 2.7% (1.1%, 6.5%) | 211/1079.2 = 19.6% (14.0%, 26.6%) | 110.3/1079.2 = 10.2% (6.5%, 15.7%) |
| Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 154 | 413.5/1079.2 = 38.3% (29.9%, 47.5%) | 725.6/1079.2 = 67.2% (57.4%, 75.7%) | 529.6/1079.2 = 49.1% (39.9%, 58.3%) |
| Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 154 | 397/1079.2 = 36.8% (28.9%, 45.4%) | 764.1/1079.2 = 70.8% (61.0%, 79.0%) | 598.5/1079.2 = 55.5% (46.2%, 64.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age, sex | | | | | | | | |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 238 | 81/6678.1 = 1.2% (0.4%, 3.3%) | 1247.4/6678.1 = 18.7% (13.8%, 24.7%) | 588.5/6678.1 = 8.8% (5.7%, 13.4%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 238 | 2658.5/6678.1 = 39.8% (33.2%, 46.8%) | 4822.6/6678.1 = 72.2% (65.8%, 77.9%) | 3137.6/6678.1 = 47.0% (40.1%, 54.0%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 238 | 2259.2/6678.1 = 33.8% (27.6%, 40.7%) | 5316.6/6678.1 = 79.6% (73.4%, 84.7%) | 4394.1/6678.1 = 65.8% (59.0%, 72.0%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 79 | 51.5/790.2 = 6.5% (2.5%, 16.2%) | 189.7/790.2 = 24.0% (15.0%, 36.1%) | 110.3/790.2 = 14.0% (7.4%, 24.7%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 79 | 509.5/790.2 = 64.5% (52.2%, 75.1%) | 697.7/790.2 = 88.3% (78.5%, 94.0%) | 587.7/790.2 = 74.4% (62.9%, 83.2%) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 79 | 393.6/790.2 = 49.8% (37.7%, 62.0%) | 744.4/790.2 = 94.2% (86.3%, 97.7%) | 670.1/790.2 = 84.8% (74.2%, 91.5%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) | 0/4732.7 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 73 | 14.7/711.4 = 2.1% (0.5%, 9.0%) | 66.5/711.4 = 9.4% (4.5%, 18.6%) | 30/711.4 = 4.2% (1.5%, 11.4%) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 73 | 181.6/711.4 = 25.5% (15.6%, 38.8%) | 388.5/711.4 = 54.6% (41.5%, 67.1%) | 257/711.4 = 36.1% (24.7%, 49.3%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 73 | 157.7/711.4 = 22.2% (13.5%, 34.2%) | 417.9/711.4 = 58.7% (45.4%, 70.9%) | 273.7/711.4 = 38.5% (27.1%, 51.3%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 215 | 220.7/5936.9 = 3.7% (1.9%, 7.2%) | 1022.1/5936.9 = 17.2% (12.4%, 23.4%) | 558.6/5936.9 = 9.4% (6.1%, 14.1%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 215 | 2724.6/5936.9 = 45.9% (38.7%, 53.3%) | 4299.3/5936.9 = 72.4% (65.4%, 78.5%) | 3217.4/5936.9 = 54.2% (46.9%, 61.4%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 215 | 2194.5/5936.9 = 37.0% (30.2%, 44.3%) | 4738.8/5936.9 = 79.8% (73.2%, 85.1%) | 3900.5/5936.9 = 65.7% (58.4%, 72.3%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 62 | 30.3/589.8 = 5.1% (1.6%, 15.7%) | 183.7/589.8 = 31.2% (20.1%, 44.8%) | 126/589.8 = 21.4% (12.3%, 34.4%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 62 | 415.4/589.8 = 70.4% (57.0%, 81.1%) | 485/589.8 = 82.2% (69.2%, 90.5%) | 442/589.8 = 74.9% (61.9%, 84.6%) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 62 | 321.8/589.8 = 54.6% (40.8%, 67.6%) | 547.2/589.8 = 92.8% (83.1%, 97.1%) | 484.6/589.8 = 82.2% (68.8%, 90.6%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) | 0/7779.3 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 66 | 6.1/604.6 = 1.0% (0.1%, 7.1%) | 62.8/604.6 = 10.4% (5.0%, 20.2%) | 16.9/604.6 = 2.8% (0.9%, 8.8%) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 66 | 134.6/604.6 = 22.3% (14.0%, 33.5%) | 328.8/604.6 = 54.4% (40.4%, 67.7%) | 218.5/604.6 = 36.1% (24.6%, 49.6%) |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-----------------|--------|---------|---------------------|-------------------------|-----|---|--|---|
| Age ≥ 60 Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 81 | 239.3/367.8 = 65.1% (52.2%, 76.0%) | 346.3/367.8 = 94.1% (82.9%, 98.2%) | 324.9/367.8 = 88.3% (76.5%, 94.6%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 201 | 330.2/2939.2 = 11.2% (7.6%, 16.4%) | 1123.4/2939.2 = 38.2% (31.0%, 46.0%) | 864.6/2939.2 = 29.4% (22.8%, 37.0%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 201 | 2283.2/2939.2 = 77.7% (70.6%, 83.4%) | 2680.7/2939.2 = 91.2% (85.7%, 94.7%) | 2468.2/2939.2 = 84.0% (77.3%, 88.9%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 201 | 2134.3/2939.2 = 72.6% (65.2%, 79.0%) | 2878.3/2939.2 = 97.9% | 2773.1/2939.2 = 94.3% (90.0%, 96.9%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 61 | 60.5/288.1 = 21.0% (11.5%, 35.3%) | 174.1/288.1 = 60.4% (46.3%, 73.0%) | 109.2/288.1 = 37.9% (25.0%, 52.7%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 61 | 257.5/288.1 = 89.4% (80.2%, 94.6%) | 278.3/288.1 = 96.6% (89.7%, 98.9%) | 260.9/288.1 = 90.6% (81.7%, 95.4%) |
| Age ≥ 60 Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 61 | 253.9/288.1 = 88.1% (76.7%, 94.4%) | 288.1/288.1 = 100.0% (100.0%, 100.0%) | 284.9/288.1 = 98.9% (92.1%, 99.9%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 24 | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) | 0/3236.5 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 60 | 26/295.2 = 8.8% (3.1%, 22.4%) | 126/295.2 = 42.7% (29.1%, 57.5%) | 76.3/295.2 = 25.8% (15.0%, 40.7%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 60 | 205/295.2 = 69.5% (54.1%, 81.4%) | 245.9/295.2 = 83.3% (68.4%, 92.0%) | 233.2/295.2 = 79.0% (64.4%, 88.6%) |
| Age ≥ 60 Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 60 | 165.1/295.2 = 55.9% (40.9%, 69.9%) | 265.9/295.2 = 90.1% (74.7%, 96.5%) | 255.2/295.2 = 86.4% (71.4%, 94.2%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------------------------------------|--------|---------|---------------------|-------------------------|-----|--|--|--|
| Hispanic or Latino ethnicity | | | | | | | | |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 374 | 539.6/10111.8 = 5.3% (3.6%, 7.8%) | 2477.3/10111.8 = 24.5% (20.3%, 29.3%) | 1493.4/10111.8 = 14.8% (11.7%, 18.5%) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 374 | 5689.2/10111.8 = 56.3% (50.6%, 61.7%) | 8215.3/10111.8 = 81.2% (76.2%, 85.4%) | 6471.3/10111.8 = 64.0% (58.4%, 69.2%) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 374 | 4773.5/10111.8 = 47.2% (41.9%, 52.6%) | 8600.3/10111.8 = 85.1% (80.3%, 88.8%) | 7648.8/10111.8 = 75.6% (70.4%, 80.2%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 106 | 75/993.9 = 7.5% (3.6%, 15.1%) | 293.4/993.9 = 29.5% (20.8%, 40.0%) | 166.5/993.9 = 16.8% (10.2%, 26.2%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 106 | 707.6/993.9 = 71.2% (60.6%, 79.9%) | 907/993.9 = 91.3% (82.8%, 95.8%) | 791/993.9 = 79.6% (69.6%, 86.9%) |
| Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 106 | 610.1/993.9 = 61.4% (50.5%, 71.3%) | 965.3/993.9 = 97.1% (91.0%, 99.1%) | 891.2/993.9 = 89.7% (80.3%, 94.9%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 44 | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) | 0/10019.2 = 0.0% (0.0%, 0.0%) |
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 105 | 19.6/1003.3 = 1.9% (0.5%, 6.7%) | 182/1003.3 = 18.1% (12.5%, 25.6%) | 100.6/1003.3 = 10.0% (6.2%, 15.9%) |
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 105 | 375.2/1003.3 = 37.4% (28.3%, 47.5%) | 645.1/1003.3 = 64.3% (53.5%, 73.8%) | 524.4/1003.3 = 52.3% (41.8%, 62.5%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 105 | 332.3/1003.3 = 33.1% (24.7%, 42.8%) | 688.2/1003.3 = 68.6% (57.9%, 77.6%) | 553.3/1003.3 = 55.2% (45.1%, 64.8%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 477 | 557.4/8055.6 = 6.9% (5.0%, 9.5%) | 2157.3/8055.6 = 26.8% (22.7%, 31.3%) | 1358.7/8055.6 = 16.9% (13.6%, 20.7%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 477 | 4275.6/8055.6 = 53.1% (48.3%, 57.8%) | 6192.9/8055.6 = 76.9% (72.4%, 80.8%) | 4791.6/8055.6 = 59.5% (54.6%, 64.2%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 477 | 3945.2/8055.6 = 49.0% (44.2%, 53.8%) | 7026.7/8055.6 = 87.2% (83.5%, 90.2%) | 6040.3/8055.6 = 75.0% (70.4%, 79.1%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 164 | 147.1/1004.4 = 14.6% (9.7%, 21.5%) | 416.6/1004.4 = 41.5% (33.6%, 49.8%) | 311.3/1004.4 = 31.0% (23.8%, 39.2%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 164 | 793.6/1004.4 = 79.0% (71.3%, 85.1%) | 880.2/1004.4 = 87.6% (80.6%, 92.4%) | 818.9/1004.4 = 81.5% (74.2%, 87.2%) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 164 | 656.1/1004.4 = 65.3% (56.8%, 73.0%) | 935.4/1004.4 = 93.1% (86.8%, 96.6%) | 870.3/1004.4 = 86.6% (79.3%, 91.7%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) | 0/7726.8 = 0.0% (0.0%, 0.0%) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 152 | 38.2/801.6 = 4.8% (2.2%, 10.1%) | 204.2/801.6 = 25.5% (18.7%, 33.7%) | 89.3/801.6 = 11.1% (6.9%, 17.5%) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 152 | 352.6/801.6 = 44.0% (35.5%, 52.9%) | 553.8/801.6 = 69.1% (59.7%, 77.1%) | 422.4/801.6 = 52.7% (43.7%, 61.5%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|--|--|
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 152 | 284.7/801.6 = 35.5% (28.0%, 43.8%) | 602.6/801.6 = 75.2% (65.7%, 82.7%) | 477.8/801.6 = 59.6% (50.4%, 68.2%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 62 | 50.9/1124.6 = 4.5% (1.7%, 11.3%) | 276.2/1124.6 = 24.6% (14.8%, 37.9%) | 153.1/1124.6 = 13.6% (7.1%, 24.5%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 62 | 531/1124.6 = 47.2% (34.1%, 60.7%) | 862.3/1124.6 = 76.7% (62.1%, 86.8%) | 709.5/1124.6 = 63.1% (48.4%, 75.7%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 62 | 507/1124.6 = 45.1% (32.1%, 58.8%) | 965.4/1124.6 = 85.8% (71.0%, 93.7%) | 860.4/1124.6 = 76.5% (62.1%, 86.6%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 13 | 0/103.7 = 0.0% (0.0%, 0.0%) | 30.9/103.7 = 29.8% (5.8%, 74.6%) | 14.3/103.7 = 13.8% (1.7%, 60.3%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 13 | 68/103.7 = 65.5% (15.6%, 95.1%) | 85.8/103.7 = 82.8% (13.9%, 99.3%) | 75.2/103.7 = 72.5% (16.2%, 97.3%) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 13 | 44.2/103.7 = 42.6% (9.3%, 84.3%) | 103.7/103.7 = 100.0% (100.0%, 100.0%) | 85.8/103.7 = 82.8% (13.9%, 99.3%) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0/1587 = 0.0% | 0/1587 = 0.0% | 0/1587 = 0.0% |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 23 | 3.8/174.1 = 2.2% (0.2%, 17.4%) | 13.7/174.1 = 7.8% (2.4%, 23.0%) | 13.7/174.1 = 7.8% (2.4%, 23.0%) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 23 | 25.3/174.1 = 14.5% (5.9%, 31.4%) | 101.3/174.1 = 58.2% (30.3%, 81.7%) | 34.4/174.1 = 19.8% (8.7%, 39.0%) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 23 | 19.7/174.1 = 11.3% (4.0%, 27.8%) | 139.1/174.1 = 79.9% (52.6%, 93.4%) | 125.5/174.1 = 72.1% (45.9%, 88.7%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------|-------|-----|------------------------|--------|---|-----------|---------------|---------------|
|-------|-------|-----|------------------------|--------|---|-----------|---------------|---------------|

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

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

MOCK

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Race | | | | | | | | |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 196 | 322.7/3997.3 = 8.1% (5.1%, 12.5%) | 1219.7/3997.3 = 30.5% (24.1%, 37.8%) | 782.4/3997.3 = 19.6% (14.4%, 26.0%) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 196 | 2175.9/3997.3 = 54.4% (47.0%, 61.7%) | 3115.1/3997.3 = 77.9% (70.8%, 83.7%) | 2476.6/3997.3 = 62.0% (54.4%, 69.0%) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 196 | 1953/3997.3 = 48.9% (41.5%, 56.2%) | 3523.3/3997.3 = 88.1% (82.2%, 92.3%) | 3021/3997.3 = 75.6% (68.3%, 81.6%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 63 | 92/475.6 = 19.3% (10.8%, 32.2%) | 212.9/475.6 = 44.8% (32.2%, 58.0%) | 158.3/475.6 = 33.3% (22.1%, 46.8%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 63 | 397.7/475.6 = 83.6% (71.1%, 91.4%) | 434.1/475.6 = 91.3% (79.6%, 96.5%) | 423/475.6 = 88.9% (77.2%, 95.0%) |
| White Non-Hispanic | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 63 | 327.4/475.6 = 68.8% (55.1%, 79.9%) | 464.5/475.6 = 97.7% (84.4%, 99.7%) | 428.8/475.6 = 90.2% (77.7%, 96.0%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) | 0/3812.6 = 0.0% (0.0%, 0.0%) |
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 56 | 19.3/346.9 = 5.6% (1.6%, 18.0%) | 100.5/346.9 = 29.0% (17.9%, 43.2%) | 44.2/346.9 = 12.8% (6.0%, 25.1%) |
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 56 | 153.1/346.9 = 44.1% (30.6%, 58.6%) | 241.1/346.9 = 69.5% (54.2%, 81.4%) | 178.3/346.9 = 51.4% (37.1%, 65.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| White Non-Hispanic | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 56 | 109/346.9 = 31.4% (20.5%, 44.8%) | 269.3/346.9 = 77.6% (62.3%, 87.9%) | 213/346.9 = 61.4% (46.6%, 74.4%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 332 | 302/5012.5 = 6.0% (4.0%, 8.9%) | 1206.7/5012.5 = 24.1% (19.6%, 29.2%) | 697.2/5012.5 = 13.9% (10.6%, 18.0%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 332 | 2663.7/5012.5 = 53.1% (47.4%, 58.8%) | 3784.2/5012.5 = 75.5% (70.0%, 80.3%) | 3060.8/5012.5 = 61.1% (55.3%, 66.6%) |
| Black or African American | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 332 | 2268.2/5012.5 = 45.3% (39.6%, 51.0%) | 4426.6/5012.5 = 88.3% (84.1%, 91.5%) | 3778.3/5012.5 = 75.4% (70.0%, 80.1%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 111 | 51/600 = 8.5% (4.9%, 14.3%) | 187.2/600 = 31.2% (22.7%, 41.1%) | 137.9/600 = 23.0% (15.9%, 32.1%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 111 | 399.3/600 = 66.6% (55.3%, 76.2%) | 496.2/600 = 82.7% (71.6%, 90.1%) | 417.4/600 = 69.6% (58.3%, 78.9%) |
| Black or African American | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 111 | 346/600 = 57.7% (46.6%, 68.0%) | 542.1/600 = 90.3% (80.8%, 95.4%) | 494.8/600 = 82.5% (71.2%, 89.9%) |
| Black or African American | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |
| Black or African American | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------|--------|---------|---------------------|-------------------------|----|---------------------------------------|---------------------------------------|---------------------------------------|
| Black or African American | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 38 | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) | 0/4983 = 0.0% (0.0%, 0.0%) |
| Black or African American | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 94 | 17.5/474.5 = 3.7% (1.4%, 9.6%) | 95.7/474.5 = 20.2% (13.0%, 30.0%) | 65.5/474.5 = 13.8% (7.9%, 23.1%) |
| Black or African American | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 94 | 200.6/474.5 = 42.3% (31.6%, 53.8%) | 298.5/474.5 = 62.9% (50.1%, 74.1%) | 228.4/474.5 = 48.1% (37.0%, 59.5%) |
| Black or African American | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 94 | 162.5/474.5 = 34.2% (24.8%, 45.2%) | 321.7/474.5 = 67.8% (54.6%, 78.7%) | 249.4/474.5 = 52.6% (40.9%, 64.0%) |
| Asian | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 18 | 37.5/324.9 = 11.6% (2.1%, 44.2%) | 56.2/324.9 = 17.3% (4.3%, 49.5%) | 56.2/324.9 = 17.3% (4.3%, 49.5%) |
| Asian | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 18 | 171.6/324.9 = 52.8% (23.8%, 80.0%) | 282.7/324.9 = 87.0% (52.2%, 97.6%) | 226.5/324.9 = 69.7% (38.5%, 89.4%) |
| Asian | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 18 | 113.5/324.9 = 34.9% (13.4%, 65.0%) | 304.7/324.9 = 93.8% (56.3%, 99.4%) | 284.5/324.9 = 87.5% (53.8%, 97.7%) |
| Asian | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5 | 0/32.2 = 0.0% | 10.6/32.2 = 32.7% | 0/32.2 = 0.0% |
| Asian | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 5 | 24.9/32.2 = 77.4% | 24.9/32.2 = 77.4% | 24.9/32.2 = 77.4% |
| Asian | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 5 | 20.1/32.2 = 62.3% | 32.2/32.2 = 100.0% | 32.2/32.2 = 100.0% |
| Asian | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0/258 = 0.0% | 0/258 = 0.0% | 0/258 = 0.0% |
| Asian | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 10 | 0/40.7 = 0.0% (0.0%, 0.0%) | 8.3/40.7 = 20.5% (1.8%, 78.4%) | 3.8/40.7 = 9.3% (0.3%, 75.9%) |
| Asian | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10 | 8.3/40.7 = 20.5% (1.8%, 78.4%) | 24.3/40.7 = 59.8% (12.5%, 94.0%) | 19.8/40.7 = 48.7% (8.0%, 91.2%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------------------|--------|---------|---------------------|-------------------------|-----|---|---|---|
| Asian | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 10 | 8.3/40.7 = 20.5% (1.8%, 78.4%) | 39.3/40.7 = 96.6% (48.3%, 99.9%) | 21.4/40.7 = 52.6% (9.0%, 92.6%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 149 | 233.5/5037.1 = 4.6% (2.5%, 8.6%) | 1213.1/5037.1 = 24.1% (17.8%, 31.7%) | 644.9/5037.1 = 12.8% (8.8%, 18.2%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 149 | 2641.2/5037.1 = 52.4% (43.9%, 60.8%) | 4028.1/5037.1 = 80.0% (71.7%, 86.3%) | 2981.2/5037.1 = 59.2% (50.5%, 67.4%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 149 | 2278.9/5037.1 = 45.2% (37.1%, 53.6%) | 4116.7/5037.1 = 81.7% (73.6%, 87.8%) | 3659.6/5037.1 = 72.7% (64.1%, 79.8%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 49 | 68.3/561.8 = 12.2% (5.4%, 25.2%) | 223.4/561.8 = 39.8% (26.3%, 55.0%) | 127.8/561.8 = 22.8% (12.5%, 37.8%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 49 | 425.1/561.8 = 75.7% (59.6%, 86.8%) | 516.9/561.8 = 92.0% (76.6%, 97.6%) | 455.2/561.8 = 81.0% (65.2%, 90.7%) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 49 | 346.8/561.8 = 61.7% (46.1%, 75.3%) | 540.5/561.8 = 96.2% (85.2%, 99.1%) | 480.4/561.8 = 85.5% (70.2%, 93.7%) |
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|--------|---------|---------------------|-------------------------|----|---------------------------------------|---------------------------------------|---------------------------------------|
| American Indian or Alaska Native | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 18 | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) | 0/5012.8 = 0.0% (0.0%, 0.0%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 48 | 6.6/554.6 = 1.2% (0.2%, 8.5%) | 100.9/554.6 = 18.2% (10.1%, 30.5%) | 43.2/554.6 = 7.8% (3.5%, 16.5%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 48 | 215.1/554.6 = 38.8% (25.9%, 53.4%) | 376.8/554.6 = 67.9% (51.7%, 80.8%) | 287.4/554.6 = 51.8% (36.8%, 66.5%) |
| American Indian or Alaska Native | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 48 | 176.9/554.6 = 31.9% (20.6%, 45.8%) | 383.7/554.6 = 69.2% (52.6%, 82.0%) | 297/554.6 = 53.5% (38.8%, 67.7%) |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 2 | 0/45.4 = 0.0% | 26.7/45.4 = 58.8% | 0/45.4 = 0.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 2 | 26.7/45.4 = 58.8% | 45.4/45.4 = 100.0% | 45.4/45.4 = 100.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 2 | 26.7/45.4 = 58.8% | 45.4/45.4 = 100.0% | 45.4/45.4 = 100.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 1 | 0/5.5 = 0.0% | 0/5.5 = 0.0% | 0/5.5 = 0.0% |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|--------|---------|---------------------|-------------------------|----|---------------------------------------|--|--|
| Native Hawaiian or Other Pacific Islander | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 1 | 5.5/5.5 = 100.0% | 5.5/5.5 = 100.0% | 5.5/5.5 = 100.0% |
| Native Hawaiian or Other Pacific Islander | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 1 | 5.5/5.5 = 100.0% | 5.5/5.5 = 100.0% | 5.5/5.5 = 100.0% |
| Multiracial | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 25 | 18.8/579.7 = 3.2% (0.4%, 23.2%) | 150.8/579.7 = 26.0% (11.2%, 49.5%) | 117.7/579.7 = 20.3% (8.0%, 42.7%) |
| Multiracial | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 25 | 366.1/579.7 = 63.2% (40.0%, 81.5%) | 522.1/579.7 = 90.1% (70.1%, 97.2%) | 403.7/579.7 = 69.6% (46.0%, 86.1%) |
| Multiracial | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 25 | 363.3/579.7 = 62.7% (39.1%, 81.5%) | 500.3/579.7 = 86.3% (61.6%, 96.1%) | 451.3/579.7 = 77.8% (52.9%, 91.6%) |
| Multiracial | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 9 | 0/77.7 = 0.0% (0.0%, 0.0%) | 33.5/77.7 = 43.1% (6.9%, 88.6%) | 14.2/77.7 = 18.3% (1.6%, 75.5%) |
| Multiracial | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 9 | 53.5/77.7 = 68.8% (12.0%, 97.3%) | 71.4/77.7 = 91.8% (27.1%, 99.7%) | 71.4/77.7 = 91.8% (27.1%, 99.7%) |
| Multiracial | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 9 | 39.2/77.7 = 50.5% (8.7%, 91.7%) | 77.7/77.7 = 100.0% (100.0%, 100.0%) | 77.7/77.7 = 100.0% (100.0%, 100.0%) |
| Multiracial | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0/447.1 = 0.0% | 0/447.1 = 0.0% | 0/447.1 = 0.0% |
| Multiracial | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0/447.1 = 0.0% | 0/447.1 = 0.0% | 0/447.1 = 0.0% |
| Multiracial | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0/447.1 = 0.0% | 0/447.1 = 0.0% | 0/447.1 = 0.0% |
| Multiracial | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 15 | 10.1/90.7 = 11.2% (0.7%, 70.1%) | 30.2/90.7 = 33.3% (8.1%, 73.9%) | 15.6/90.7 = 17.2% (2.3%, 64.5%) |
| Multiracial | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 15 | 48.2/90.7 = 53.2% (16.6%, 86.7%) | 69.2/90.7 = 76.3% (30.6%, 95.9%) | 56/90.7 = 61.8% (21.9%, 90.3%) |
| Multiracial | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 15 | 35.3/90.7 = 39.0% (10.4%, 77.8%) | 62.4/90.7 = 68.8% (26.6%, 93.1%) | 62.4/90.7 = 68.8% (26.6%, 93.1%) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 12 | 0/231.3 = 0.0% (0.0%, 0.0%) | 112/231.3 = 48.4% (9.3%, 89.6%) | 93.2/231.3 = 40.3% (5.6%, 88.4%) |

(continued)

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

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

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

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

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 2309.8/4659 = 49.6% (42.8%, 56.3%) | 4052.7/4659 = 87.0% (81.4%, 91.1%) | 3506.3/4659 = 75.3% (68.7%, 80.9%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 82.9/519 = 16.0% (8.7%, 27.5%) | 247.5/519 = 47.7% (35.7%, 59.9%) | 174.5/519 = 33.6% (23.0%, 46.3%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 446.3/519 = 86.0% (74.4%, 92.9%) | 482.7/519 = 93.0% (82.1%, 97.5%) | 471.6/519 = 90.9% (80.0%, 96.1%) |
| Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 355/519 = 68.4% (55.5%, 79.0%) | 507.9/519 = 97.9% (85.7%, 99.7%) | 472.2/519 = 91.0% (79.6%, 96.3%) |
| Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) | 0/4758 = 0.0% (0.0%, 0.0%) |
| Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 71 | 23.1/439 = 5.3% (1.7%, 14.9%) | 124/439 = 28.2% (18.6%, 40.4%) | 51.8/439 = 11.8% (6.0%, 21.8%) |
| Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 71 | 175.2/439 = 39.9% (28.8%, 52.2%) | 297.6/439 = 67.8% (54.5%, 78.7%) | 215.6/439 = 49.1% (37.1%, 61.3%) |
| Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 71 | 138.7/439 = 31.6% (22.2%, 42.8%) | 340.9/439 = 77.7% (64.7%, 86.8%) | 267.3/439 = 60.9% (48.1%, 72.3%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|---------------------------------------|
| Age, Underrepresented Minority Status in the U.S. | | | | | | | | |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 113 | 64.1/2570 = 2.5% (0.8%, 7.7%) | 435.4/2570 = 16.9% (10.9%, 25.4%) | 291.2/2570 = 11.3% (6.6%, 18.9%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 113 | 1082/2570 = 42.1% (33.1%, 51.7%) | 1776.7/2570 = 69.1% (59.7%, 77.2%) | 1319.8/2570 = 51.4% (41.9%, 60.7%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 113 | 849.7/2570 = 33.1% (24.9%, 42.3%) | 2107.9/2570 = 82.0% (73.5%, 88.3%) | 1744.5/2570 = 67.9% (58.4%, 76.1%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0/322 = 0.0% (0.0%, 0.0%) | 60.9/322 = 18.9% (8.7%, 36.3%) | 43.1/322 = 13.4% (5.3%, 30.0%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 153.7/322 = 47.7% (31.1%, 64.9%) | 250.4/322 = 77.8% (59.9%, 89.1%) | 178.9/322 = 55.6% (38.0%, 71.8%) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 150.4/322 = 46.7% (30.2%, 64.0%) | 268.3/322 = 83.3% (65.9%, 92.8%) | 247.1/322 = 76.7% (58.7%, 88.5%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) | 0/2435 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0/274 = 0.0% (0.0%, 0.0%) | 8.8/274 = 3.2% (0.4%, 21.4%) | 8.8/274 = 3.2% (0.4%, 21.4%) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 64.5/274 = 23.5% (11.7%, 41.7%) | 149.2/274 = 54.5% (36.9%, 71.0%) | 80.1/274 = 29.2% (15.9%, 47.5%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 33.3/274 = 12.1% (4.4%, 29.4%) | 149.2/274 = 54.5% (36.9%, 71.0%) | 88.9/274 = 32.4% (18.4%, 50.6%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 111 | 99.2/3065 = 3.2% (1.2%, 8.6%) | 750.1/3065 = 24.5% (17.1%, 33.7%) | 386/3065 = 12.6% (7.4%, 20.7%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 111 | 1246.2/3065 = 40.7% (31.7%, 50.3%) | 2139.1/3065 = 69.8% (60.5%, 77.7%) | 1477.6/3065 = 48.2% (38.8%, 57.8%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 111 | 1168.7/3065 = 38.1% (29.3%, 47.9%) | 2525/3065 = 82.4% (74.2%, 88.4%) | 2028.9/3065 = 66.2% (56.7%, 74.5%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 40.3/320 = 12.6% (4.5%, 30.5%) | 123.3/320 = 38.5% (23.2%, 56.6%) | 87.7/320 = 27.4% (14.3%, 46.0%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 258.4/320 = 80.7% (63.0%, 91.2%) | 283.7/320 = 88.6% (71.5%, 96.0%) | 283.7/320 = 88.6% (71.5%, 96.0%) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 196/320 = 61.2% (43.0%, 76.8%) | 308.9/320 = 96.5% (77.3%, 99.6%) | 286.8/320 = 89.6% (71.6%, 96.7%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) | 0/3130 = 0.0% (0.0%, 0.0%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 10.2/289 = 3.5% (0.4%, 23.2%) | 62.7/289 = 21.7% (10.5%, 39.5%) | 23/289 = 8.0% (2.3%, 23.9%) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 76.7/289 = 26.6% (13.7%, 45.2%) | 168.8/289 = 58.4% (40.3%, 74.5%) | 99.7/289 = 34.5% (19.7%, 53.1%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|------------------------|--------|---------|---------------------|-------------------------|-----|--------------------------------------|---------------------------------------|---------------------------------------|
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 52.4/289 = 18.1% (8.3%, 35.0%) | 204.6/289 = 70.8% (52.4%, 84.2%) | 135.5/289 = 46.9% (30.1%, 64.5%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 114 | 123.4/1369 = 9.0% (4.8%, 16.2%) | 408.1/1369 = 29.8% (21.9%, 39.1%) | 298.4/1369 = 21.8% (15.0%, 30.7%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 114 | 959/1369 = 70.1% (60.9%, 77.9%) | 1273.2/1369 = 93.0% (86.4%, 96.5%) | 1129.5/1369 = 82.5% (74.1%, 88.6%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 114 | 930.5/1369 = 68.0% (58.6%, 76.1%) | 1345/1369 = 98.3% (93.0%, 99.6%) | 1263/1369 = 92.3% (85.5%, 96.0%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 19.1/137 = 13.9% (5.6%, 30.8%) | 49.5/137 = 36.1% (21.4%, 53.9%) | 34.8/137 = 25.4% (13.1%, 43.4%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 114.5/137 = 83.6% (66.7%, 92.8%) | 133.6/137 = 97.5% (83.1%, 99.7%) | 125.8/137 = 91.8% (76.0%, 97.5%) |
| Age ≥ 60 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 115.6/137 = 84.4% (68.6%, 93.0%) | 137/137 = 100.0% (100.0%, 100.0%) | 133.6/137 = 97.5% (83.1%, 99.7%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) | 0/1335 = 0.0% (0.0%, 0.0%) |
| Age ≥ 60 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 5.7/144 = 3.9% (0.9%, 15.0%) | 66.6/144 = 46.3% (29.2%, 64.2%) | 36.2/144 = 25.2% (13.1%, 42.9%) |
| Age ≥ 60 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 99.8/144 = 69.3% (50.1%, 83.6%) | 135.7/144 = 94.2% (76.9%, 98.8%) | 113.6/144 = 78.9% (59.9%, 90.4%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-----------------------|--------|---------|---------------------|-------------------------|-----|---------------------------------------|---------------------------------------|---------------------------------------|
| Age \geq 60 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 97.2/144 = 67.5% (48.4%, 82.1%) | 138.5/144 = 96.2% (75.5%, 99.5%) | 138.5/144 = 96.2% (75.5%, 99.5%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 116 | 229.4/1594 = 14.4% (8.9%, 22.4%) | 614.1/1594 = 38.5% (29.9%, 48.0%) | 460.6/1594 = 28.9% (21.1%, 38.1%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 116 | 1252.8/1594 = 78.6% (69.9%, 85.3%) | 1445.2/1594 = 90.7% (83.6%, 94.9%) | 1341.9/1594 = 84.2% (76.0%, 89.9%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 116 | 1141.1/1594 = 71.6% (62.5%, 79.2%) | 1527.7/1594 = 95.8% (90.1%, 98.3%) | 1477.5/1594 = 92.7% (86.3%, 96.2%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 42.6/199 = 21.4% (10.1%, 39.7%) | 124.2/199 = 62.4% (44.5%, 77.5%) | 86.8/199 = 43.6% (27.5%, 61.3%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 187.9/199 = 94.4% (78.2%, 98.8%) | 199/199 = 100.0% (100.0%, 100.0%) | 187.9/199 = 94.4% (78.2%, 98.8%) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 159/199 = 79.9% (61.8%, 90.7%) | 199/199 = 100.0% (100.0%, 100.0%) | 185.3/199 = 93.1% (75.2%, 98.4%) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) | 0/1628 = 0.0% (0.0%, 0.0%) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 36 | 12.9/150 = 8.6% (2.6%, 24.8%) | 61.3/150 = 40.9% (25.6%, 58.2%) | 28.8/150 = 19.2% (9.0%, 36.3%) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 36 | 98.4/150 = 65.6% (48.1%, 79.7%) | 128.8/150 = 85.9% (69.0%, 94.3%) | 115.9/150 = 77.3% (59.7%, 88.6%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------------|--------|---------|---------------------|-------------------------|----|------------------------------------|-------------------------------------|-------------------------------------|
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 36 | 86.3/150 = 57.6% (40.3%, 73.2%) | 136.3/150 = 90.9% (74.7%, 97.1%) | 131.8/150 = 87.9% (71.5%, 95.4%) |

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------|--------|---------|---------------------|-------------------------|-----|--|---|---|
| Country | | | | | | | | |
| United States | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 516.1/8598 = 6.0% (4.2%, 8.4%) | 2207.7/8598 = 25.7% (21.7%, 30.1%) | 1436.3/8598 = 16.7% (13.5%, 20.6%) |
| United States | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 4540/8598 = 52.8% (48.0%, 57.5%) | 6634.2/8598 = 77.2% (72.7%, 81.1%) | 5268.8/8598 = 61.3% (56.4%, 65.9%) |
| United States | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 4090/8598 = 47.6% (42.9%, 52.3%) | 7505.6/8598 = 87.3% (83.5%, 90.3%) | 6513.9/8598 = 75.8% (71.2%, 79.8%) |
| United States | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 102/978 = 10.4% (6.3%, 16.9%) | 357.9/978 = 36.6% (28.8%, 45.1%) | 252.4/978 = 25.8% (19.0%, 34.1%) |
| United States | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 714.5/978 = 73.1% (64.7%, 80.0%) | 866.7/978 = 88.6% (81.1%, 93.4%) | 776.2/978 = 79.4% (71.4%, 85.6%) |
| United States | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 620.9/978 = 63.5% (54.5%, 71.6%) | 913.3/978 = 93.4% (86.7%, 96.8%) | 852.9/978 = 87.2% (79.4%, 92.4%) |
| United States | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) | 0/8528 = 0.0% (0.0%, 0.0%) |
| United States | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 28.8/857 = 3.4% (1.3%, 8.1%) | 199.4/857 = 23.3% (17.2%, 30.7%) | 96.9/857 = 11.3% (7.1%, 17.4%) |
| United States | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 339.5/857 = 39.6% (31.7%, 48.1%) | 582.5/857 = 68.0% (59.0%, 75.8%) | 409.3/857 = 47.8% (39.4%, 56.2%) |
| United States | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 269.2/857 = 31.4% (24.7%, 39.0%) | 628.7/857 = 73.4% (64.6%, 80.6%) | 494.7/857 = 57.7% (49.3%, 65.8%) |
| Argentina | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 45 | 94.5/1628.6 = 5.8% (2.1%, 15.2%) | 440.7/1628.6 = 27.1% (16.1%, 41.8%) | 234.2/1628.6 = 14.4% (7.3%, 26.3%) |
| Argentina | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 45 | 739.4/1628.6 = 45.4% (30.8%, 60.8%) | 1327.9/1628.6 = 81.5% (65.3%, 91.2%) | 945.8/1628.6 = 58.1% (42.0%, 72.6%) |
| Argentina | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 45 | 838.7/1628.6 = 51.5% (36.2%, 66.6%) | 1363.4/1628.6 = 83.7% (67.4%, 92.7%) | 1204.1/1628.6 = 73.9% (57.4%, 85.7%) |

(continued)

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

(continued)

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

(continued)

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

(continued)

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

(continued)

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

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------|--------|---------|---------------------|-------------------------|-----|--|---|---|
| HIV Infection | | | | | | | | |
| Negative | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 848 | 1075.4/18035.1 = 6.0% (4.6%, 7.6%) | 4652.1/18035.1 = 25.8% (22.7%, 29.1%) | 2825.9/18035.1 = 15.7% (13.4%, 18.3%) |
| Negative | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 848 | 9909.2/18035.1 = 54.9% (51.2%, 58.6%) | 14493.5/18035.1 = 80.4% (77.1%, 83.3%) | 11346.4/18035.1 = 62.9% (59.2%, 66.5%) |
| Negative | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 848 | 8785.2/18035.1 = 48.7% (45.1%, 52.4%) | 15658.3/18035.1 = 86.8% (83.8%, 89.3%) | 13786/18035.1 = 76.4% (73.0%, 79.6%) |
| Negative | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 265 | 201.3/1980.7 = 10.2% (7.0%, 14.6%) | 696/1980.7 = 35.1% (29.2%, 41.6%) | 457.7/1980.7 = 23.1% (18.1%, 29.0%) |
| Negative | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 265 | 1475.1/1980.7 = 74.5% (68.0%, 80.0%) | 1751.7/1980.7 = 88.4% (83.1%, 92.3%) | 1584.8/1980.7 = 80.0% (73.9%, 85.0%) |
| Negative | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 265 | 1217.1/1980.7 = 61.4% (54.6%, 67.9%) | 1888.3/1980.7 = 95.3% (91.5%, 97.5%) | 1731.2/1980.7 = 87.4% (81.7%, 91.5%) |
| Negative | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 100 | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) | 0/18198.3 = 0.0% (0.0%, 0.0%) |
| Negative | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 266 | 51.4/1886.3 = 2.7% (1.4%, 5.2%) | 385.7/1886.3 = 20.4% (16.2%, 25.5%) | 190.7/1886.3 = 10.1% (7.3%, 13.9%) |
| Negative | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 266 | 722.7/1886.3 = 38.3% (32.2%, 44.8%) | 1237.4/1886.3 = 65.6% (58.6%, 72.0%) | 944.8/1886.3 = 50.1% (43.4%, 56.8%) |
| Negative | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 266 | 609/1886.3 = 32.3% (26.8%, 38.3%) | 1380.3/1886.3 = 73.2% (66.2%, 79.2%) | 1118.4/1886.3 = 59.3% (52.4%, 65.9%) |
| Positive | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 65 | 72.5/1256.9 = 5.8% (2.2%, 14.3%) | 258.8/1256.9 = 20.6% (12.2%, 32.6%) | 179.2/1256.9 = 14.3% (7.4%, 25.7%) |
| Positive | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 65 | 586.6/1256.9 = 46.7% (32.9%, 61.0%) | 776.9/1256.9 = 61.8% (46.6%, 75.0%) | 626.1/1256.9 = 49.8% (35.7%, 63.9%) |
| Positive | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 65 | 440.5/1256.9 = 35.0% (23.1%, 49.1%) | 934.1/1256.9 = 74.3% (58.7%, 85.5%) | 763.4/1256.9 = 60.7% (45.9%, 73.9%) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------|--------|---------|---------------------|-------------------------|----|--------------------------------------|--|---------------------------------------|
| Positive | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 18 | 20.7/121.3 = 17.1% (3.8%, 51.9%) | 44.9/121.3 = 37.0% (14.4%, 67.3%) | 34.3/121.3 = 28.3% (9.8%, 58.9%) |
| Positive | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 18 | 94/121.3 = 77.5% (46.3%, 93.2%) | 121.3/121.3 = 100.0% (100.0%, 100.0%) | 100.3/121.3 = 82.7% (50.5%, 95.7%) |
| Positive | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 18 | 93.4/121.3 = 77.0% (41.7%, 94.0%) | 116.1/121.3 = 95.7% (67.9%, 99.6%) | 116.1/121.3 = 95.7% (67.9%, 99.6%) |
| Positive | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) | 0/1134.7 = 0.0% (0.0%, 0.0%) |
| Positive | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 14 | 10.1/92.7 = 10.9% (1.0%, 58.7%) | 14.2/92.7 = 15.3% (2.6%, 55.3%) | 12.8/92.7 = 13.8% (2.0%, 56.0%) |
| Positive | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 14 | 30.4/92.7 = 32.8% (9.8%, 68.6%) | 62.9/92.7 = 67.8% (24.3%, 93.3%) | 36.4/92.7 = 39.3% (12.7%, 74.2%) |
| Positive | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 14 | 27.7/92.7 = 29.9% (8.4%, 66.4%) | 49.7/92.7 = 53.6% (18.4%, 85.5%) | 38.3/92.7 = 41.2% (13.5%, 76.0%) |

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

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

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------------------|--------|---------|---------------------|-------------------------|-----|----------------------|
| All participants | | | | | | |
| | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 913 | 0.05 (0.05, 0.05) |
| | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 913 | 0.80 (0.80, 0.80) |
| | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 913 | 0.15 (0.15, 0.15) |
| | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 283 | 0.05 (0.05, 0.05) |
| | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 283 | 0.80 (0.79, 0.81) |
| | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 283 | 0.15 (0.15, 0.15) |
| | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 109 | 0.05 (0.05, 0.05) |
| | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 109 | 0.80 (0.80, 0.80) |
| | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 109 | 0.15 (0.15, 0.15) |
| | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 280 | 0.05 (0.05, 0.05) |
| | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 280 | 0.80 (0.79, 0.80) |
| | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 280 | 0.15 (0.15, 0.15) |
| | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 913 | 1.41 (1.24, 1.59) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 913 | 17.09 (15.39, 18.96) |
| | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 913 | 9.28 (8.44, 10.21) |
| | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 283 | 2.52 (2.00, 3.19) |
| | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 283 | 30.05 (25.07, 36.02) |
| | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 283 | 14.92 (12.80, 17.39) |
| | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 109 | 0.05 (0.05, 0.05) |
| | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 109 | 0.80 (0.80, 0.80) |
| | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 109 | 0.15 (0.15, 0.15) |
| | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 280 | 0.87 (0.70, 1.09) |
| | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 280 | 9.52 (7.86, 11.52) |
| | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 280 | 5.00 (4.20, 5.95) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------|--------|---------|---------------------|-------------------------|-----|------------------------|
| Age | | | | | | |
| Age 18 - 59 | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 453 | 0.05 (0.05, 0.05) |
| Age 18 - 59 | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 453 | 0.80 (0.80, 0.80) |
| Age 18 - 59 | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 453 | 0.15 (0.15, 0.15) |
| Age 18 - 59 | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) |
| Age 18 - 59 | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) |
| Age 18 - 59 | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) |
| Age 18 - 59 | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0.05 (0.05, 0.05) |
| Age 18 - 59 | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0.80 (0.80, 0.80) |
| Age 18 - 59 | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0.15 (0.15, 0.15) |
| Age 18 - 59 | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.05 (0.05, 0.05) |
| Age 18 - 59 | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 0.80 (0.79, 0.81) |
| Age 18 - 59 | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 0.15 (0.15, 0.15) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 453 | 0.94 (0.80, 1.11) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 453 | 10.80 (9.40, 12.41) |
| Age 18 - 59 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 453 | 6.06 (5.32, 6.91) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 141 | 1.76 (1.29, 2.41) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 141 | 20.39 (16.05, 25.89) |
| Age 18 - 59 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 141 | 10.36 (8.49, 12.65) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0.05 (0.05, 0.05) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0.80 (0.80, 0.80) |
| Age 18 - 59 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0.15 (0.15, 0.15) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.52 (0.39, 0.69) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 5.48 (4.31, 6.98) |
| Age 18 - 59 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 2.84 (2.26, 3.57) |
| Age \geq 60 | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 460 | 0.05 (0.05, 0.05) |
| Age \geq 60 | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 460 | 0.80 (0.80, 0.80) |
| Age \geq 60 | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 460 | 0.15 (0.15, 0.15) |
| Age \geq 60 | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 0.05 (0.05, 0.05) |
| Age \geq 60 | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 0.81 (0.78, 0.84) |
| Age \geq 60 | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age \geq 60 | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0.05 (0.05, 0.05) |
| Age \geq 60 | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0.80 (0.80, 0.80) |
| Age \geq 60 | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0.15 (0.15, 0.15) |
| Age \geq 60 | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) |
| Age \geq 60 | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) |
| Age \geq 60 | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 460 | 2.98 (2.49, 3.57) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 460 | 40.62 (35.11, 47.01) |
| Age \geq 60 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 460 | 20.78 (18.47, 23.38) |
| Age \geq 60 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 5.00 (3.66, 6.83) |
| Age \geq 60 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 63.07 (48.83, 81.48) |
| Age \geq 60 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 29.97 (23.96, 37.48) |
| Age \geq 60 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0.05 (0.05, 0.05) |
| Age \geq 60 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0.80 (0.80, 0.80) |
| Age \geq 60 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age \geq 60 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 2.46 (1.77, 3.42) |
| Age \geq 60 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 28.45 (21.21, 38.17) |
| Age \geq 60 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 15.36 (12.18, 19.37) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Risk for Severe Covid-19 | | | | | | |
| At-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 0.05 (0.05, 0.05) |
| At-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 0.80 (0.80, 0.80) |
| At-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 0.15 (0.15, 0.15) |
| At-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 140 | 0.05 (0.05, 0.05) |
| At-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 140 | 0.80 (0.80, 0.80) |
| At-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 140 | 0.15 (0.15, 0.15) |
| At-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 53 | 0.05 (0.05, 0.05) |
| At-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 53 | 0.80 (0.80, 0.80) |
| At-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 53 | 0.15 (0.15, 0.15) |
| At-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) |
| At-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) |
| At-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) |
| At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 1.34 (1.12, 1.59) |
| At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 17.44 (15.14, 20.09) |
| At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 9.51 (8.27, 10.93) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 140 | 2.53 (1.88, 3.39) |
| At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 140 | 34.36 (27.39, 43.11) |
| At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 140 | 15.52 (12.72, 18.95) |
| At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 53 | 0.05 (0.05, 0.05) |
| At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 53 | 0.80 (0.80, 0.80) |
| At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 53 | 0.15 (0.15, 0.15) |
| At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 1.16 (0.86, 1.56) |
| At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 12.07 (9.52, 15.31) |
| At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 6.30 (5.07, 7.82) |
| Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 459 | 0.05 (0.05, 0.05) |
| Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 459 | 0.80 (0.80, 0.80) |
| Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 459 | 0.15 (0.15, 0.15) |
| Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 143 | 0.05 (0.05, 0.05) |
| Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 143 | 0.80 (0.79, 0.82) |
| Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 143 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |
| Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.05 (0.05, 0.05) |
| Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 0.80 (0.79, 0.81) |
| Not at-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 0.15 (0.15, 0.15) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 459 | 1.45 (1.23, 1.72) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 459 | 16.85 (14.56, 19.50) |
| Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 459 | 9.14 (8.03, 10.39) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 143 | 2.52 (1.80, 3.53) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 143 | 27.41 (21.07, 35.65) |
| Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 143 | 14.52 (11.67, 18.08) |
| Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------|--------|---------|---------------------|-------------------------|-----|-----------------------|
| Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.72 (0.52, 0.98) |
| Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 8.11 (6.15, 10.70) |
| Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 4.29 (3.33, 5.51) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------------------------|--------|---------|---------------------|-------------------------|-----|------------------------|
| Age, Risk for Severe Covid-19 | | | | | | |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 226 | 0.05 (0.05, 0.05) |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 226 | 0.80 (0.80, 0.80) |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 226 | 0.15 (0.15, 0.15) |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.06) |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) |
| Age 18 - 59 At-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 26 | 0.05 (0.05, 0.05) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 26 | 0.80 (0.80, 0.80) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 26 | 0.15 (0.15, 0.15) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.05) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) |
| Age 18 - 59 At-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 226 | 0.88 (0.70, 1.11) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 226 | 11.21 (9.32, 13.48) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 226 | 6.37 (5.24, 7.73) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 69 | 1.80 (1.22, 2.64) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 69 | 24.92 (18.62, 33.36) |
| Age 18 - 59 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 69 | 10.40 (7.91, 13.67) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 26 | 0.05 (0.05, 0.05) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 26 | 0.80 (0.80, 0.80) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 26 | 0.15 (0.15, 0.15) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.66 (0.45, 0.98) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 7.06 (5.28, 9.43) |
| Age 18 - 59 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 3.41 (2.58, 4.52) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 72 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 72 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 72 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 0.80 (0.79, 0.81) |
| Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.99 (0.79, 1.23) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 10.54 (8.66, 12.82) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 5.86 (4.92, 6.99) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 72 | 1.74 (1.10, 2.75) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 72 | 17.82 (12.58, 25.23) |
| Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 72 | 10.34 (7.83, 13.65) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------------------|--------|---------|---------------------|-------------------------|-----|----------------------|
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.44 (0.29, 0.65) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 4.62 (3.24, 6.58) |
| Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 2.51 (1.80, 3.50) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 228 | 0.05 (0.05, 0.05) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 228 | 0.80 (0.80, 0.80) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 228 | 0.15 (0.15, 0.15) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) |
| Age \geq 60 At-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) |
| Age \geq 60 At-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0.05 (0.05, 0.05) |
| Age \geq 60 At-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0.80 (0.80, 0.80) |
| Age \geq 60 At-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0.15 (0.15, 0.15) |
| Age \geq 60 At-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 72 | 0.05 (0.05, 0.06) |
| Age \geq 60 At-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 72 | 0.80 (0.80, 0.80) |
| Age \geq 60 At-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 72 | 0.15 (0.15, 0.16) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age \geq 60 At-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 228 | 2.93 (2.27, 3.79) |
| Age \geq 60 At-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 228 | 40.07 (32.47, 49.44) |
| Age \geq 60 At-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 228 | 20.22 (17.20, 23.77) |
| Age \geq 60 At-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 4.73 (3.07, 7.28) |
| Age \geq 60 At-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 62.08 (43.89, 87.80) |
| Age \geq 60 At-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 32.45 (25.59, 41.17) |
| Age \geq 60 At-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0.05 (0.05, 0.05) |
| Age \geq 60 At-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0.80 (0.80, 0.80) |
| Age \geq 60 At-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0.15 (0.15, 0.15) |
| Age \geq 60 At-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 72 | 3.60 (2.43, 5.33) |
| Age \geq 60 At-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 72 | 35.83 (24.46, 52.47) |
| Age \geq 60 At-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 72 | 21.81 (16.61, 28.64) |
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 232 | 0.05 (0.05, 0.05) |
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 232 | 0.80 (0.80, 0.80) |
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 232 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) |
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.82 (0.78, 0.87) |
| Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.05) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) |
| Age \geq 60 Not at-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 232 | 3.02 (2.36, 3.86) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 232 | 41.01 (33.61, 50.04) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 232 | 21.17 (17.96, 24.94) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 5.21 (3.36, 8.07) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 63.79 (44.40, 91.66) |
| Age \geq 60 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 28.30 (20.07, 39.92) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Age \geq 60 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Age \geq 60 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Age \geq 60 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| Age \geq 60 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 1.91 (1.19, 3.09) |
| Age \geq 60 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 24.45 (16.12, 37.10) |
| Age \geq 60 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 12.20 (8.69, 17.11) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Sex | | | | | | |
| Male | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 416 | 0.05 (0.05, 0.05) |
| Male | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 416 | 0.80 (0.80, 0.80) |
| Male | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 416 | 0.15 (0.15, 0.15) |
| Male | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 123 | 0.05 (0.05, 0.05) |
| Male | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 123 | 0.80 (0.80, 0.80) |
| Male | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 123 | 0.15 (0.15, 0.15) |
| Male | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0.05 (0.05, 0.05) |
| Male | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0.80 (0.80, 0.80) |
| Male | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0.15 (0.15, 0.15) |
| Male | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 126 | 0.05 (0.05, 0.05) |
| Male | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 126 | 0.80 (0.79, 0.81) |
| Male | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 126 | 0.15 (0.15, 0.15) |
| Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 416 | 1.43 (1.19, 1.72) |
| Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 416 | 17.21 (14.63, 20.24) |
| Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 416 | 9.36 (8.08, 10.84) |

(continued)

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

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------|--------|---------|---------------------|-------------------------|-----|-----------------------|
| Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 154 | 0.87 (0.63, 1.18) |
| Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 154 | 9.31 (7.08, 12.24) |
| Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 154 | 4.75 (3.65, 6.18) |

MOCK

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------|--------|---------|---------------------|-------------------------|-----|------------------------|
| Age, sex | | | | | | |
| Age 18 - 59 Female | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 238 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Female | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 238 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Female | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 238 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Female | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 79 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Female | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 79 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Female | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 79 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Female | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Female | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Female | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Female | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 73 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Female | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 73 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Female | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 73 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 238 | 0.91 (0.73, 1.13) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 238 | 10.17 (8.45, 12.25) |
| Age 18 - 59 Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 238 | 5.84 (4.88, 6.98) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 79 | 1.66 (1.12, 2.46) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 79 | 19.70 (14.23, 27.28) |
| Age 18 - 59 Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 79 | 10.12 (7.91, 12.94) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 73 | 0.50 (0.33, 0.75) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 73 | 5.30 (3.71, 7.58) |
| Age 18 - 59 Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 73 | 2.63 (1.87, 3.69) |
| Age 18 - 59 Male | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 215 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Male | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 215 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Male | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 215 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Male | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 62 | 0.05 (0.05, 0.06) |
| Age 18 - 59 Male | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 62 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Male | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 62 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 Male | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Male | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Male | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Male | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 66 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Male | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 66 | 0.80 (0.79, 0.82) |
| Age 18 - 59 Male | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 66 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 215 | 0.98 (0.77, 1.25) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 215 | 11.55 (9.37, 14.25) |
| Age 18 - 59 Male | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 215 | 6.32 (5.22, 7.66) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 62 | 1.92 (1.15, 3.20) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 62 | 21.34 (14.85, 30.68) |
| Age 18 - 59 Male | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 62 | 10.70 (7.70, 14.87) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------------------|--------|---------|---------------------|-------------------------|-----|----------------------|
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 66 | 0.54 (0.35, 0.83) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 66 | 5.70 (4.04, 8.05) |
| Age 18 - 59 Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 66 | 3.12 (2.31, 4.22) |
| Age \geq 60 Female | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 259 | 0.05 (0.05, 0.05) |
| Age \geq 60 Female | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 259 | 0.80 (0.80, 0.80) |
| Age \geq 60 Female | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 259 | 0.15 (0.15, 0.15) |
| Age \geq 60 Female | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 81 | 0.05 (0.05, 0.05) |
| Age \geq 60 Female | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 81 | 0.82 (0.78, 0.86) |
| Age \geq 60 Female | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 81 | 0.15 (0.15, 0.15) |
| Age \geq 60 Female | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0.05 (0.05, 0.05) |
| Age \geq 60 Female | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0.80 (0.80, 0.80) |
| Age \geq 60 Female | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0.15 (0.15, 0.15) |
| Age \geq 60 Female | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 81 | 0.05 (0.05, 0.05) |
| Age \geq 60 Female | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 81 | 0.80 (0.80, 0.80) |
| Age \geq 60 Female | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 81 | 0.15 (0.15, 0.15) |

(continued)

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

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Age \geq 60 Male | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 24 | 0.05 (0.05, 0.05) |
| Age \geq 60 Male | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 24 | 0.80 (0.80, 0.80) |
| Age \geq 60 Male | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 24 | 0.15 (0.15, 0.15) |
| Age \geq 60 Male | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 60 | 2.38 (1.32, 4.27) |
| Age \geq 60 Male | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 60 | 29.49 (17.05, 51.02) |
| Age \geq 60 Male | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 60 | 15.93 (10.61, 23.92) |

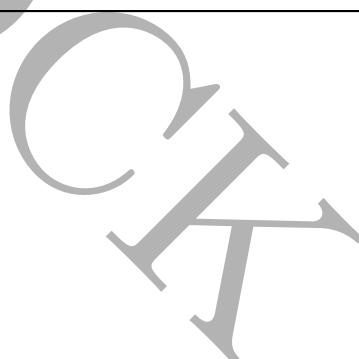


Table 7g. Geometric mean titers (GMTs) and geometric mean concentrations (GMCs) by Hispanic or Latino ethnicity

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------------------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Hispanic or Latino ethnicity | | | | | | |
| Hispanic or Latino | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 374 | 0.05 (0.05, 0.05) |
| Hispanic or Latino | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 374 | 0.80 (0.80, 0.80) |
| Hispanic or Latino | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 374 | 0.15 (0.15, 0.15) |
| Hispanic or Latino | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 106 | 0.05 (0.05, 0.05) |
| Hispanic or Latino | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 106 | 0.80 (0.80, 0.80) |
| Hispanic or Latino | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 106 | 0.15 (0.15, 0.15) |
| Hispanic or Latino | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 44 | 0.05 (0.05, 0.05) |
| Hispanic or Latino | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 44 | 0.80 (0.80, 0.80) |
| Hispanic or Latino | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 44 | 0.15 (0.15, 0.15) |
| Hispanic or Latino | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 105 | 0.05 (0.05, 0.05) |
| Hispanic or Latino | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 105 | 0.80 (0.80, 0.80) |
| Hispanic or Latino | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 105 | 0.15 (0.15, 0.15) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 374 | 1.48 (1.24, 1.77) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 374 | 17.87 (15.17, 21.05) |
| Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 374 | 9.55 (8.26, 11.04) |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |
| Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 152 | 0.05 (0.05, 0.05) |
| Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 152 | 0.80 (0.79, 0.81) |
| Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 152 | 0.15 (0.15, 0.15) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 477 | 1.37 (1.16, 1.63) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 477 | 16.37 (14.27, 18.78) |
| Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 477 | 9.23 (8.11, 10.50) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 164 | 3.09 (2.24, 4.24) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 164 | 36.03 (27.77, 46.75) |
| Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 164 | 15.94 (12.70, 20.00) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------------|--------|---------|---------------------|-------------------------|-----|------------------------|
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 152 | 1.06 (0.74, 1.51) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 152 | 10.83 (8.01, 14.64) |
| Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 152 | 5.11 (3.81, 6.86) |
| Not reported and unknown | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 62 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 62 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 62 | 0.16 (0.15, 0.16) |
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 13 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 13 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 13 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 62 | 1.03 (0.60, 1.79) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 62 | 15.50 (10.38, 23.14) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 62 | 7.49 (4.99, 11.25) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 13 | 2.45 (1.39, 4.30) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 13 | 17.50 (9.29, 32.94) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 13 | 11.83 (6.16, 22.73) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 23 | 0.53 (0.32, 0.89) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 23 | 6.17 (3.91, 9.75) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 23 | 4.41 (2.97, 6.55) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Race | | | | | | |
| White Non-Hispanic | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 196 | 0.05 (0.05, 0.05) |
| White Non-Hispanic | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 196 | 0.80 (0.80, 0.80) |
| White Non-Hispanic | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 196 | 0.15 (0.15, 0.15) |
| White Non-Hispanic | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 63 | 0.05 (0.05, 0.05) |
| White Non-Hispanic | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 63 | 0.82 (0.78, 0.86) |
| White Non-Hispanic | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 63 | 0.15 (0.15, 0.15) |
| White Non-Hispanic | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) |
| White Non-Hispanic | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) |
| White Non-Hispanic | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) |
| White Non-Hispanic | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| White Non-Hispanic | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| White Non-Hispanic | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 196 | 1.50 (1.13, 1.98) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 196 | 17.65 (14.16, 22.00) |
| White Non-Hispanic | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 196 | 9.28 (7.55, 11.41) |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Black or African American | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 38 | 0.05 (0.05, 0.05) |
| Black or African American | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 38 | 0.80 (0.80, 0.80) |
| Black or African American | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 38 | 0.15 (0.15, 0.15) |
| Black or African American | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 94 | 0.05 (0.05, 0.05) |
| Black or African American | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 94 | 0.81 (0.79, 0.82) |
| Black or African American | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 94 | 0.15 (0.15, 0.15) |
| Black or African American | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 332 | 1.33 (1.10, 1.62) |
| Black or African American | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 332 | 16.19 (13.79, 18.99) |
| Black or African American | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 332 | 9.18 (7.98, 10.57) |
| Black or African American | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 111 | 1.82 (1.24, 2.66) |
| Black or African American | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 111 | 20.44 (14.38, 29.07) |
| Black or African American | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 111 | 12.52 (9.57, 16.39) |
| Black or African American | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 38 | 0.05 (0.05, 0.05) |
| Black or African American | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 38 | 0.80 (0.80, 0.80) |
| Black or African American | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 38 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------------|--------|---------|---------------------|-------------------------|----|------------------------|
| Black or African American | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 94 | 0.93 (0.57, 1.49) |
| Black or African American | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 94 | 10.46 (6.88, 15.91) |
| Black or African American | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 94 | 4.71 (3.31, 6.71) |
| Asian | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 18 | 0.05 (0.05, 0.05) |
| Asian | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 18 | 0.80 (0.80, 0.80) |
| Asian | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 18 | 0.15 (0.15, 0.15) |
| Asian | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5 | 0.07 (0.04, 0.12) |
| Asian | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) |
| Asian | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) |
| Asian | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) |
| Asian | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) |
| Asian | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) |
| Asian | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 10 | 0.05 (0.05, 0.05) |
| Asian | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10 | 0.80 (0.80, 0.80) |
| Asian | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 10 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------------------------------|--------|---------|---------------------|-------------------------|-----|--------------------------|
| Asian | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 18 | 2.15 (1.01, 4.58) |
| Asian | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 18 | 20.66 (10.86, 39.30) |
| Asian | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 18 | 10.30 (6.01, 17.63) |
| Asian | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5 | 3.89 (2.24, 6.74) |
| Asian | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 5 | 52.83 (12.92, 215.97) |
| Asian | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 5 | 24.28 (8.61, 68.46) |
| Asian | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) |
| Asian | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) |
| Asian | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) |
| Asian | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 10 | 0.51 (0.16, 1.61) |
| Asian | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10 | 6.07 (2.15, 17.12) |
| Asian | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 10 | 5.58 (2.70, 11.54) |
| American Indian or Alaska Native | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 149 | 0.05 (0.05, 0.05) |
| American Indian or Alaska Native | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 149 | 0.80 (0.80, 0.80) |
| American Indian or Alaska Native | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 149 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------------------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| American Indian or Alaska Native | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 49 | 0.05 (0.05, 0.05) |
| American Indian or Alaska Native | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 49 | 0.80 (0.80, 0.80) |
| American Indian or Alaska Native | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 49 | 0.15 (0.15, 0.15) |
| American Indian or Alaska Native | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 18 | 0.05 (0.05, 0.05) |
| American Indian or Alaska Native | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 18 | 0.80 (0.80, 0.80) |
| American Indian or Alaska Native | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 18 | 0.15 (0.15, 0.15) |
| American Indian or Alaska Native | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 48 | 0.05 (0.05, 0.05) |
| American Indian or Alaska Native | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 48 | 0.80 (0.80, 0.80) |
| American Indian or Alaska Native | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 48 | 0.15 (0.15, 0.15) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 149 | 1.34 (1.01, 1.79) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 149 | 16.66 (12.81, 21.68) |
| American Indian or Alaska Native | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 149 | 8.81 (6.94, 11.18) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 49 | 2.79 (1.56, 4.98) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 49 | 34.07 (22.72, 51.09) |
| American Indian or Alaska Native | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 49 | 14.32 (10.15, 20.21) |

(continued)

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

(continued)

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

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 4 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 4 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 4 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 12 | 2.50 (0.90, 6.94) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 12 | 21.32 (14.43, 31.50) |
| Not reported and unknown | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 12 | 20.41 (12.24, 34.04) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 1.70 (1.70, 1.70) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 30.53 (30.53, 30.53) |
| Not reported and unknown | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 26.52 (26.52, 26.52) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------------------------|--------|---------|---------------------|-------------------------|---|-------------------------|
| Not reported and unknown | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) |
| Not reported and unknown | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 4 | 2.85 (1.31, 6.21) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 4 | 8.77 (4.28, 17.98) |
| Not reported and unknown | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 4 | 15.88 (13.13, 19.20) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Underrepresented Minority Status in the U.S. | | | | | | |
| URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) |
| URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) |
| URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) |
| URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) |
| URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) |
| URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) |
| URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.05 (0.05, 0.06) |
| URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 0.80 (0.80, 0.80) |
| URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 0.15 (0.15, 0.15) |
| URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 1.33 (1.07, 1.66) |
| URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 15.83 (13.04, 19.22) |
| URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 9.26 (7.76, 11.04) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 1.60 (1.06, 2.41) |
| URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 17.64 (12.36, 25.18) |
| URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 12.18 (9.07, 16.36) |
| URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.93 (0.65, 1.32) |
| URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 10.38 (7.41, 14.55) |
| URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 4.59 (3.28, 6.41) |
| Non-URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) |
| Non-URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) |
| Non-URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) |
| Non-URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) |
| Non-URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.82 (0.78, 0.85) |
| Non-URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Non-URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Non-URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Non-URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |
| Non-URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) |
| Non-URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) |
| Non-URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) |
| Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 1.36 (1.05, 1.77) |
| Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 16.64 (13.58, 20.37) |
| Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 8.85 (7.31, 10.73) |
| Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 3.92 (2.47, 6.21) |
| Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 47.58 (34.24, 66.13) |
| Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 17.81 (13.03, 24.36) |
| Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) |
| Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) |
| Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------|--------|---------|---------------------|-------------------------|----|------------------------|
| Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 71 | 1.05 (0.65, 1.70) |
| Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 71 | 10.56 (7.07, 15.79) |
| Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 71 | 5.08 (3.67, 7.03) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--|--------|---------|---------------------|-------------------------|-----|------------------------|
| Age, Underrepresented Minority Status in the U.S. | | | | | | |
| Age 18 - 59 URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 113 | 0.05 (0.05, 0.05) |
| Age 18 - 59 URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 113 | 0.80 (0.80, 0.80) |
| Age 18 - 59 URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 113 | 0.15 (0.15, 0.15) |
| Age 18 - 59 URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.05) |
| Age 18 - 59 URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.80 (0.80, 0.80) |
| Age 18 - 59 URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) |
| Age 18 - 59 URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age 18 - 59 URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age 18 - 59 URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age 18 - 59 URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.04, 0.06) |
| Age 18 - 59 URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) |
| Age 18 - 59 URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 113 | 0.95 (0.71, 1.28) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 113 | 10.76 (8.28, 13.99) |
| Age 18 - 59 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 113 | 6.41 (5.02, 8.18) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------|--------|---------|---------------------|-------------------------|-----|------------------------|
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 1.12 (0.65, 1.93) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 10.28 (6.59, 16.03) |
| Age 18 - 59 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 7.81 (5.31, 11.49) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age 18 - 59 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.47 (0.29, 0.75) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 5.34 (3.44, 8.28) |
| Age 18 - 59 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 2.09 (1.35, 3.24) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 111 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 111 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 111 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Non-URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Age 18 - 59 Non-URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Non-URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Non-URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Non-URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Non-URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Non-URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 111 | 0.93 (0.65, 1.31) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 111 | 10.19 (7.79, 13.33) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 111 | 5.89 (4.51, 7.70) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 3.04 (1.60, 5.79) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 33.89 (21.53, 53.37) |
| Age 18 - 59 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 12.01 (7.99, 18.06) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------------|--------|---------|---------------------|-------------------------|-----|-----------------------|
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.70 (0.36, 1.36) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 6.36 (3.69, 10.95) |
| Age 18 - 59 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 3.16 (2.04, 4.87) |
| Age \geq 60 URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 114 | 0.05 (0.05, 0.05) |
| Age \geq 60 URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 114 | 0.80 (0.80, 0.80) |
| Age \geq 60 URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 114 | 0.15 (0.15, 0.15) |
| Age \geq 60 URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) |
| Age \geq 60 URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) |
| Age \geq 60 URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) |
| Age \geq 60 URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age \geq 60 URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age \geq 60 URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age \geq 60 URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.04, 0.05) |
| Age \geq 60 URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) |
| Age \geq 60 URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-----------------------|--------|---------|---------------------|-------------------------|-----|--------------------------|
| Age \geq 60 URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 114 | 2.50 (1.82, 3.42) |
| Age \geq 60 URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 114 | 32.68 (25.29, 42.23) |
| Age \geq 60 URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 114 | 18.45 (14.88, 22.87) |
| Age \geq 60 URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 3.64 (2.20, 6.03) |
| Age \geq 60 URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 62.80 (37.48, 105.23) |
| Age \geq 60 URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 34.65 (24.94, 48.14) |
| Age \geq 60 URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age \geq 60 URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age \geq 60 URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age \geq 60 URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 3.39 (2.20, 5.22) |
| Age \geq 60 URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 36.78 (23.53, 57.49) |
| Age \geq 60 URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 20.48 (13.85, 30.30) |
| Age \geq 60 Non-URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 116 | 0.05 (0.05, 0.05) |
| Age \geq 60 Non-URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 116 | 0.80 (0.80, 0.80) |
| Age \geq 60 Non-URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 116 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-----------------------|--------|---------|---------------------|-------------------------|-----|--------------------------|
| Age \geq 60 Non-URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.05) |
| Age \geq 60 Non-URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.85 (0.75, 0.95) |
| Age \geq 60 Non-URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.06) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.80 (0.80, 0.80) |
| Age \geq 60 Non-URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 116 | 2.88 (2.00, 4.14) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 116 | 42.70 (32.17, 56.68) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 116 | 19.37 (15.50, 24.20) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 5.88 (3.21, 10.74) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 82.09 (52.81, 127.62) |
| Age \geq 60 Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 33.58 (20.94, 53.86) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-----------------------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 36 | 2.30 (1.30, 4.08) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 36 | 28.08 (17.06, 46.21) |
| Age \geq 60 Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 36 | 12.71 (8.41, 19.22) |



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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| Country | | | | | | |
| United States | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 0.05 (0.05, 0.05) |
| United States | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 0.80 (0.80, 0.80) |
| United States | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 0.15 (0.15, 0.15) |
| United States | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 0.05 (0.05, 0.05) |
| United States | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 0.81 (0.79, 0.83) |
| United States | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 0.15 (0.15, 0.15) |
| United States | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| United States | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| United States | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |
| United States | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) |
| United States | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) |
| United States | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) |
| United States | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 1.35 (1.13, 1.61) |
| United States | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 16.26 (14.12, 18.73) |
| United States | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 9.04 (7.92, 10.31) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|---------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| United States | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 2.57 (1.88, 3.51) |
| United States | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 29.87 (23.41, 38.11) |
| United States | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 14.91 (12.00, 18.51) |
| United States | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) |
| United States | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) |
| United States | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) |
| United States | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.99 (0.73, 1.34) |
| United States | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 10.47 (8.05, 13.63) |
| United States | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 4.83 (3.83, 6.10) |
| Argentina | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 45 | 0.05 (0.05, 0.05) |
| Argentina | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 45 | 0.80 (0.80, 0.80) |
| Argentina | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 45 | 0.15 (0.15, 0.15) |
| Argentina | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 11 | 0.05 (0.05, 0.05) |
| Argentina | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 11 | 0.80 (0.80, 0.80) |
| Argentina | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 11 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-----------|--------|---------|---------------------|-------------------------|----|--------------------------|
| Argentina | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 5 | 0.05 (0.05, 0.05) |
| Argentina | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) |
| Argentina | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) |
| Argentina | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 16 | 0.05 (0.05, 0.05) |
| Argentina | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 16 | 0.80 (0.80, 0.80) |
| Argentina | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 16 | 0.15 (0.15, 0.15) |
| Argentina | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 45 | 1.47 (0.91, 2.36) |
| Argentina | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 45 | 19.39 (12.92, 29.08) |
| Argentina | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 45 | 10.05 (6.85, 14.75) |
| Argentina | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 11 | 3.37 (0.76, 15.00) |
| Argentina | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 11 | 48.05 (19.88, 116.17) |
| Argentina | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 11 | 22.23 (10.96, 45.09) |
| Argentina | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 5 | 0.05 (0.05, 0.05) |
| Argentina | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) |
| Argentina | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-----------|--------|---------|---------------------|-------------------------|----|-----------------------|
| Argentina | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 16 | 0.79 (0.33, 1.89) |
| Argentina | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 16 | 7.57 (3.41, 16.81) |
| Argentina | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 16 | 4.51 (2.20, 9.24) |
| Brazil | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 78 | 0.05 (0.05, 0.05) |
| Brazil | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 78 | 0.80 (0.80, 0.80) |
| Brazil | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 78 | 0.15 (0.15, 0.15) |
| Brazil | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 29 | 0.05 (0.05, 0.06) |
| Brazil | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 29 | 0.80 (0.80, 0.80) |
| Brazil | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 29 | 0.15 (0.15, 0.15) |
| Brazil | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 15 | 0.05 (0.05, 0.05) |
| Brazil | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 15 | 0.80 (0.80, 0.80) |
| Brazil | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 15 | 0.15 (0.15, 0.15) |
| Brazil | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 30 | 0.05 (0.05, 0.05) |
| Brazil | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 30 | 0.80 (0.80, 0.80) |
| Brazil | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 30 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Brazil | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 78 | 1.89 (1.25, 2.85) |
| Brazil | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 78 | 24.23 (17.26, 34.03) |
| Brazil | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 78 | 9.82 (6.87, 14.04) |
| Brazil | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 29 | 2.05 (1.26, 3.33) |
| Brazil | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 29 | 25.63 (15.10, 43.50) |
| Brazil | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 29 | 15.35 (9.85, 23.90) |
| Brazil | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 15 | 0.05 (0.05, 0.05) |
| Brazil | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 15 | 0.80 (0.80, 0.80) |
| Brazil | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 15 | 0.15 (0.15, 0.15) |
| Brazil | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 30 | 0.61 (0.30, 1.23) |
| Brazil | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 30 | 7.43 (4.21, 13.11) |
| Brazil | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 30 | 4.73 (2.69, 8.31) |
| Chile | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 13 | 0.05 (0.05, 0.05) |
| Chile | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 13 | 0.80 (0.80, 0.80) |
| Chile | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 13 | 0.15 (0.15, 0.15) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|-------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Chile | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Chile | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Chile | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) |
| Chile | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Chile | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Chile | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) |
| Chile | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Chile | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Chile | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) |
| Chile | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 13 | 4.14 (1.65, 10.37) |
| Chile | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 13 | 22.09 (12.75, 38.27) |
| Chile | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 13 | 13.15 (6.95, 24.87) |
| Chile | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Chile | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Chile | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.37 (0.37, 0.37) |

(continued)

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

(continued)

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

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|--------|--------|---------|---------------------|-------------------------|----|-------------------------|
| Mexico | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 4 | 1.96 (0.42, 9.23) |
| Mexico | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 4 | 32.46 (7.08, 148.71) |
| Mexico | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 4 | 13.89 (3.79, 50.94) |
| Mexico | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) |
| Mexico | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) |
| Mexico | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) |
| Mexico | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 5 | 0.66 (0.25, 1.69) |
| Mexico | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 5 | 12.36 (7.69, 19.86) |
| Mexico | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5 | 6.18 (3.37, 11.36) |
| Peru | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 19 | 0.05 (0.05, 0.05) |
| Peru | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 19 | 0.80 (0.80, 0.80) |
| Peru | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 19 | 0.15 (0.15, 0.15) |
| Peru | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 6 | 0.05 (0.05, 0.05) |
| Peru | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 6 | 0.80 (0.80, 0.80) |
| Peru | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 6 | 0.15 (0.15, 0.15) |

(continued)

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

(continued)

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

(continued)

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------------------|--------|---------|---------------------|-------------------------|-----|-------------------------|
| HIV Infection | | | | | | |
| Negative | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 848 | 0.05 (0.05, 0.05) |
| Negative | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 848 | 0.80 (0.80, 0.80) |
| Negative | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 848 | 0.15 (0.15, 0.15) |
| Negative | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 265 | 0.05 (0.05, 0.05) |
| Negative | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 265 | 0.80 (0.79, 0.81) |
| Negative | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 265 | 0.15 (0.15, 0.15) |
| Negative | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 100 | 0.05 (0.05, 0.05) |
| Negative | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 100 | 0.80 (0.80, 0.80) |
| Negative | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 100 | 0.15 (0.15, 0.15) |
| Negative | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 266 | 0.05 (0.05, 0.05) |
| Negative | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 266 | 0.80 (0.79, 0.80) |
| Negative | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 266 | 0.15 (0.15, 0.15) |
| Negative | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 848 | 1.43 (1.26, 1.63) |
| Negative | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 848 | 17.56 (15.77, 19.55) |
| Negative | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 848 | 9.55 (8.65, 10.54) |

(continued)

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

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | GMT/GMC |
|----------|--------|---------|---------------------|-------------------------|----|------------------------|
| Positive | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 14 | 0.83 (0.17, 4.12) |
| Positive | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 14 | 10.02 (3.90, 25.74) |
| Positive | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 14 | 3.18 (1.04, 9.69) |

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

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| All participants | | | | | | | | |
| | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 913 | 0.05 (0.05, 0.05) | 1.41 (1.24, 1.59) | 1.59 (1.50, 1.68) |
| | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 913 | 0.80 (0.80, 0.80) | 17.09 (15.39, 18.96) | 7.12 (6.47, 7.83) |
| | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 913 | 0.15 (0.15, 0.15) | 9.28 (8.44, 10.21) | 10.07 (9.17, 11.06) |
| | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 283 | 0.05 (0.05, 0.05) | 2.52 (2.00, 3.19) | 2.02 (1.76, 2.32) |
| | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 283 | 0.80 (0.79, 0.81) | 30.05 (25.07, 36.02) | 12.22 (10.28, 14.53) |
| | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 283 | 0.15 (0.15, 0.15) | 14.92 (12.80, 17.39) | 16.29 (14.02, 18.93) |
| | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 109 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 109 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 109 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 280 | 0.05 (0.05, 0.05) | 0.87 (0.70, 1.09) | 1.38 (1.28, 1.50) |
| | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 280 | 0.80 (0.79, 0.80) | 9.52 (7.86, 11.52) | 4.42 (3.77, 5.18) |
| | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 280 | 0.15 (0.15, 0.15) | 5.00 (4.20, 5.95) | 5.59 (4.75, 6.57) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Age | | | | | | | | |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 453 | 0.05 (0.05, 0.05) | 0.94 (0.80, 1.11) | 1.32 (1.24, 1.40) |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 453 | 0.80 (0.80, 0.80) | 10.80 (9.40, 12.41) | 4.62 (4.08, 5.23) |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 453 | 0.15 (0.15, 0.15) | 6.06 (5.32, 6.91) | 6.59 (5.80, 7.50) |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) | 1.76 (1.29, 2.41) | 1.66 (1.40, 1.96) |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) | 20.39 (16.05, 25.89) | 8.35 (6.66, 10.47) |
| Age 18 - 59 | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) | 10.36 (8.49, 12.65) | 11.28 (9.27, 13.73) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.05 (0.05, 0.05) | 0.52 (0.39, 0.69) | 1.15 (1.07, 1.24) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 0.80 (0.79, 0.81) | 5.48 (4.31, 6.98) | 2.73 (2.27, 3.29) |
| Age 18 - 59 | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 0.15 (0.15, 0.15) | 2.84 (2.26, 3.57) | 3.28 (2.67, 4.02) |
| Age ≥ 60 | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 460 | 0.05 (0.05, 0.05) | 2.98 (2.49, 3.57) | 2.25 (2.00, 2.53) |
| Age ≥ 60 | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 460 | 0.80 (0.80, 0.80) | 40.62 (35.11, 47.01) | 16.10 (13.92, 18.63) |
| Age ≥ 60 | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 460 | 0.15 (0.15, 0.15) | 20.78 (18.47, 23.38) | 22.42 (19.91, 25.25) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Age \geq 60 | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 0.05 (0.05, 0.05) | 5.00 (3.66, 6.83) | 2.96 (2.33, 3.75) |
| Age \geq 60 | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 0.81 (0.78, 0.84) | 63.07 (48.83, 81.48) | 25.30 (19.75, 32.41) |
| Age \geq 60 | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 0.15 (0.15, 0.15) | 29.97 (23.96, 37.48) | 32.89 (26.55, 40.75) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) | 2.46 (1.77, 3.42) | 1.99 (1.65, 2.40) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) | 28.45 (21.21, 38.17) | 11.51 (8.70, 15.23) |
| Age \geq 60 | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) | 15.36 (12.18, 19.37) | 16.09 (12.54, 20.64) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Risk for Severe Covid-19 | | | | | | | | |
| At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 0.05 (0.05, 0.05) | 1.34 (1.12, 1.59) | 1.59 (1.45, 1.74) |
| At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 0.80 (0.80, 0.80) | 17.44 (15.14, 20.09) | 7.27 (6.38, 8.29) |
| At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 0.15 (0.15, 0.15) | 9.51 (8.27, 10.93) | 10.41 (9.09, 11.91) |
| At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 140 | 0.05 (0.05, 0.05) | 2.53 (1.88, 3.39) | 1.93 (1.61, 2.32) |
| At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 140 | 0.80 (0.80, 0.80) | 34.36 (27.39, 43.11) | 13.48 (10.70, 16.98) |
| At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 140 | 0.15 (0.15, 0.15) | 15.52 (12.72, 18.95) | 16.77 (13.71, 20.51) |
| At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 53 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 53 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 53 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) | 1.16 (0.86, 1.56) | 1.48 (1.32, 1.66) |
| At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) | 12.07 (9.52, 15.31) | 5.10 (4.06, 6.40) |
| At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) | 6.30 (5.07, 7.82) | 6.98 (5.64, 8.64) |
| Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 459 | 0.05 (0.05, 0.05) | 1.45 (1.23, 1.72) | 1.58 (1.47, 1.71) |
| Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 459 | 0.80 (0.80, 0.80) | 16.85 (14.56, 19.50) | 7.01 (6.13, 8.02) |
| Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 459 | 0.15 (0.15, 0.15) | 9.14 (8.03, 10.39) | 9.85 (8.67, 11.20) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 143 | 0.05 (0.05, 0.05) | 2.52 (1.80, 3.53) | 2.09 (1.71, 2.54) |
| Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 143 | 0.80 (0.79, 0.82) | 27.41 (21.07, 35.65) | 11.43 (8.95, 14.59) |
| Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 143 | 0.15 (0.15, 0.15) | 14.52 (11.67, 18.08) | 15.97 (12.92, 19.75) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 139 | 0.05 (0.05, 0.05) | 0.72 (0.52, 0.98) | 1.32 (1.18, 1.47) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 139 | 0.80 (0.79, 0.81) | 8.11 (6.15, 10.70) | 4.02 (3.24, 4.99) |
| Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 139 | 0.15 (0.15, 0.15) | 4.29 (3.33, 5.51) | 4.81 (3.82, 6.06) |



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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|------------------------|
| Age, Risk for Severe Covid-19 | | | | | | | | |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 226 | 0.05 (0.05, 0.05) | 0.88 (0.70, 1.11) | 1.33 (1.21, 1.47) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 226 | 0.80 (0.80, 0.80) | 11.21 (9.32, 13.48) | 4.80 (4.07, 5.67) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 226 | 0.15 (0.15, 0.15) | 6.37 (5.24, 7.73) | 7.04 (5.84, 8.48) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.06) | 1.80 (1.22, 2.64) | 1.54 (1.24, 1.92) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) | 24.92 (18.62, 33.36) | 9.84 (7.33, 13.20) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) | 10.40 (7.91, 13.67) | 11.21 (8.50, 14.78) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 26 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 26 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 26 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.05) | 0.66 (0.45, 0.98) | 1.20 (1.07, 1.33) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) | 7.06 (5.28, 9.43) | 3.07 (2.34, 4.02) |
| Age 18 - 59 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) | 3.41 (2.58, 4.52) | 3.82 (2.90, 5.03) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) | 0.99 (0.79, 1.23) | 1.31 (1.21, 1.41) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) | 10.54 (8.66, 12.82) | 4.50 (3.78, 5.36) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) | 5.86 (4.92, 6.99) | 6.31 (5.30, 7.52) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 72 | 0.05 (0.05, 0.05) | 1.74 (1.10, 2.75) | 1.74 (1.36, 2.21) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 72 | 0.80 (0.80, 0.80) | 17.82 (12.58, 25.23) | 7.49 (5.42, 10.33) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 72 | 0.15 (0.15, 0.15) | 10.34 (7.83, 13.65) | 11.33 (8.65, 14.86) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.05 (0.05, 0.05) | 0.44 (0.29, 0.65) | 1.12 (1.02, 1.24) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 0.80 (0.79, 0.81) | 4.62 (3.24, 6.58) | 2.52 (1.96, 3.25) |
| Age 18 - 59 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 0.15 (0.15, 0.15) | 2.51 (1.80, 3.50) | 2.95 (2.22, 3.94) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 228 | 0.05 (0.05, 0.05) | 2.93 (2.27, 3.79) | 2.22 (1.87, 2.63) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 228 | 0.80 (0.80, 0.80) | 40.07 (32.47, 49.44) | 15.90 (12.90, 19.59) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 228 | 0.15 (0.15, 0.15) | 20.22 (17.20, 23.77) | 21.75 (18.44, 25.64) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) | 4.73 (3.07, 7.28) | 2.92 (2.10, 4.05) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) | 62.08 (43.89, 87.80) | 24.07 (16.76, 34.57) |
| Age \geq 60 At-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) | 32.45 (25.59, 41.17) | 35.22 (27.77, 44.68) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|----------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 72 | 0.05 (0.05, 0.06) | 3.60 (2.43, 5.33) | 2.29 (1.78, 2.95) |
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 72 | 0.80 (0.80, 0.80) | 35.83 (24.46, 52.47) | 14.28 (9.74, 20.93) |
| Age ≥ 60 At-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 72 | 0.15 (0.15, 0.16) | 21.81 (16.61, 28.64) | 23.67 (18.02, 31.08) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 232 | 0.05 (0.05, 0.05) | 3.02 (2.36, 3.86) | 2.27 (1.94, 2.66) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 232 | 0.80 (0.80, 0.80) | 41.01 (33.61, 50.04) | 16.24 (13.30, 19.83) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 232 | 0.15 (0.15, 0.15) | 21.17 (17.96, 24.94) | 22.89 (19.41, 26.99) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) | 5.21 (3.36, 8.07) | 2.99 (2.15, 4.17) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.82 (0.78, 0.87) | 63.79 (44.40, 91.66) | 26.22 (18.72, 36.72) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) | 28.30 (20.07, 39.92) | 31.33 (22.63, 43.37) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Not at-risk | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|------------------------|
| Age \geq 60 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.05) | 1.91 (1.19, 3.09) | 1.81 (1.39, 2.36) |
| Age \geq 60 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.80 (0.80, 0.80) | 24.45 (16.12, 37.10) | 10.00 (6.78, 14.75) |
| Age \geq 60 Not at-risk | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.15) | 12.20 (8.69, 17.11) | 12.48 (8.62, 18.08) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Sex | | | | | | | | |
| Male | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 416 | 0.05 (0.05, 0.05) | 1.43 (1.19, 1.72) | 1.55 (1.43, 1.69) |
| Male | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 416 | 0.80 (0.80, 0.80) | 17.21 (14.63, 20.24) | 7.16 (6.17, 8.31) |
| Male | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 416 | 0.15 (0.15, 0.15) | 9.36 (8.08, 10.84) | 10.13 (8.77, 11.72) |
| Male | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 123 | 0.05 (0.05, 0.05) | 2.88 (1.96, 4.24) | 2.23 (1.78, 2.80) |
| Male | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 123 | 0.80 (0.80, 0.80) | 31.72 (23.68, 42.49) | 12.97 (9.77, 17.22) |
| Male | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 123 | 0.15 (0.15, 0.15) | 16.03 (12.43, 20.69) | 17.73 (13.90, 22.63) |
| Male | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 55 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Male | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 55 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Male | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 55 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 126 | 0.05 (0.05, 0.05) | 0.88 (0.61, 1.27) | 1.41 (1.23, 1.61) |
| Male | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 126 | 0.80 (0.79, 0.81) | 9.77 (7.11, 13.44) | 4.52 (3.47, 5.90) |
| Male | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 126 | 0.15 (0.15, 0.15) | 5.33 (4.08, 6.96) | 5.75 (4.41, 7.49) |
| Female | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 497 | 0.05 (0.05, 0.05) | 1.38 (1.17, 1.64) | 1.62 (1.49, 1.75) |
| Female | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 497 | 0.80 (0.80, 0.80) | 16.98 (14.69, 19.63) | 7.08 (6.19, 8.09) |
| Female | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 497 | 0.15 (0.15, 0.15) | 9.22 (8.06, 10.54) | 10.02 (8.77, 11.44) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Female | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 160 | 0.05 (0.05, 0.05) | 2.30 (1.70, 3.09) | 1.88 (1.58, 2.25) |
| Female | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 160 | 0.80 (0.79, 0.82) | 28.91 (22.56, 37.04) | 11.71 (9.28, 14.78) |
| Female | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 160 | 0.15 (0.15, 0.15) | 14.17 (11.60, 17.32) | 15.33 (12.54, 18.74) |
| Female | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 54 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Female | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 54 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Female | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 54 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Female | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 154 | 0.05 (0.05, 0.05) | 0.87 (0.63, 1.18) | 1.36 (1.23, 1.52) |
| Female | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 154 | 0.80 (0.80, 0.80) | 9.31 (7.08, 12.24) | 4.34 (3.48, 5.42) |
| Female | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 154 | 0.15 (0.15, 0.15) | 4.75 (3.65, 6.18) | 5.45 (4.30, 6.92) |

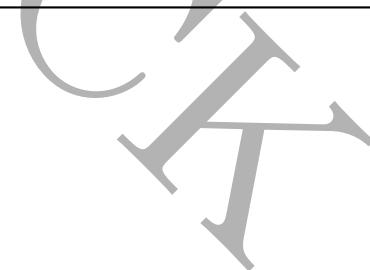


Table 8f. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by Age, sex

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|------------------------|
| Age, sex | | | | | | | | |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 238 | 0.05 (0.05, 0.05) | 0.91 (0.73, 1.13) | 1.31 (1.21, 1.42) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 238 | 0.80 (0.80, 0.80) | 10.17 (8.45, 12.25) | 4.37 (3.70, 5.15) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 238 | 0.15 (0.15, 0.15) | 5.84 (4.88, 6.98) | 6.36 (5.33, 7.58) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 79 | 0.05 (0.05, 0.05) | 1.66 (1.12, 2.46) | 1.57 (1.27, 1.96) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 79 | 0.80 (0.80, 0.80) | 19.70 (14.23, 27.28) | 8.03 (5.93, 10.87) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 79 | 0.15 (0.15, 0.15) | 10.12 (7.91, 12.94) | 10.81 (8.40, 13.92) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 73 | 0.05 (0.05, 0.05) | 0.50 (0.33, 0.75) | 1.16 (1.04, 1.30) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 73 | 0.80 (0.80, 0.80) | 5.30 (3.71, 7.58) | 2.71 (2.07, 3.56) |
| Age 18 - 59 Female | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 73 | 0.15 (0.15, 0.15) | 2.63 (1.87, 3.69) | 3.16 (2.35, 4.24) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 215 | 0.05 (0.05, 0.05) | 0.98 (0.77, 1.25) | 1.33 (1.21, 1.46) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 215 | 0.80 (0.80, 0.80) | 11.55 (9.37, 14.25) | 4.92 (4.08, 5.93) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 215 | 0.15 (0.15, 0.15) | 6.32 (5.22, 7.66) | 6.87 (5.69, 8.30) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 62 | 0.05 (0.05, 0.06) | 1.92 (1.15, 3.20) | 1.77 (1.35, 2.32) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 62 | 0.80 (0.80, 0.80) | 21.34 (14.85, 30.68) | 8.81 (6.23, 12.46) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 62 | 0.15 (0.15, 0.15) | 10.70 (7.70, 14.87) | 11.94 (8.75, 16.30) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 66 | 0.05 (0.05, 0.05) | 0.54 (0.35, 0.83) | 1.14 (1.04, 1.25) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 66 | 0.80 (0.79, 0.82) | 5.70 (4.04, 8.05) | 2.75 (2.11, 3.59) |
| Age 18 - 59 Male | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 66 | 0.15 (0.15, 0.15) | 3.12 (2.31, 4.22) | 3.43 (2.57, 4.56) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 259 | 0.05 (0.05, 0.05) | 2.94 (2.28, 3.79) | 2.35 (1.99, 2.77) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 259 | 0.80 (0.80, 0.80) | 42.41 (34.81, 51.66) | 16.78 (13.76, 20.47) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 259 | 0.15 (0.15, 0.15) | 20.86 (17.74, 24.54) | 22.58 (19.19, 26.58) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 81 | 0.05 (0.05, 0.05) | 4.16 (2.76, 6.28) | 2.61 (1.94, 3.51) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 81 | 0.82 (0.78, 0.86) | 58.11 (41.55, 81.27) | 23.29 (16.91, 32.08) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 81 | 0.15 (0.15, 0.15) | 26.18 (19.12, 35.85) | 28.96 (21.55, 38.92) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-----------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|--------------------------|-------------------------|
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 31 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 31 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 31 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 81 | 0.05 (0.05, 0.05) | 2.52 (1.73, 3.68) | 1.86 (1.51, 2.29) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 81 | 0.80 (0.80, 0.80) | 27.65 (20.60, 37.10) | 10.77 (7.93, 14.63) |
| Age ≥ 60 Female | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 81 | 0.15 (0.15, 0.15) | 14.91 (11.39, 19.53) | 15.69 (11.73, 20.99) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 201 | 0.05 (0.05, 0.05) | 3.03 (2.35, 3.91) | 2.13 (1.81, 2.51) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 201 | 0.80 (0.80, 0.80) | 38.47 (31.05, 47.65) | 15.28 (12.35, 18.90) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 201 | 0.15 (0.15, 0.15) | 20.68 (17.44, 24.52) | 22.21 (18.68, 26.42) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 61 | 0.05 (0.05, 0.05) | 6.59 (4.21, 10.32) | 3.58 (2.45, 5.22) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 61 | 0.80 (0.80, 0.80) | 71.36 (48.36, 105.31) | 28.66 (19.50, 42.12) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 61 | 0.15 (0.15, 0.15) | 36.72 (27.52, 48.99) | 39.85 (29.87, 53.16) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 24 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 24 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 24 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|-------------------------|
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 60 | 0.05 (0.05, 0.05) | 2.38 (1.32, 4.27) | 2.16 (1.56, 3.01) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 60 | 0.80 (0.80, 0.80) | 29.49 (17.05, 51.02) | 12.51 (7.65, 20.45) |
| Age ≥ 60 Male | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 60 | 0.15 (0.15, 0.16) | 15.93 (10.61, 23.92) | 16.60 (10.73, 25.70) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-------------------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Hispanic or Latino ethnicity | | | | | | | | |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 374 | 0.05 (0.05, 0.05) | 1.48 (1.24, 1.77) | 1.54 (1.42, 1.67) |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 374 | 0.80 (0.80, 0.80) | 17.87 (15.17, 21.05) | 7.60 (6.55, 8.81) |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 374 | 0.15 (0.15, 0.15) | 9.55 (8.26, 11.04) | 10.24 (8.85, 11.85) |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 106 | 0.05 (0.05, 0.05) | 2.07 (1.41, 3.02) | 1.71 (1.40, 2.10) |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 106 | 0.80 (0.80, 0.80) | 26.47 (19.85, 35.29) | 10.79 (8.23, 14.14) |
| Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 106 | 0.15 (0.15, 0.15) | 14.30 (11.44, 17.89) | 15.52 (12.42, 19.39) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 44 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 44 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 44 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 105 | 0.05 (0.05, 0.05) | 0.81 (0.57, 1.15) | 1.35 (1.20, 1.52) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 105 | 0.80 (0.80, 0.80) | 9.25 (6.85, 12.50) | 4.29 (3.34, 5.50) |
| Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 105 | 0.15 (0.15, 0.15) | 5.02 (3.84, 6.56) | 5.47 (4.21, 7.12) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 477 | 0.05 (0.05, 0.05) | 1.37 (1.16, 1.63) | 1.65 (1.51, 1.80) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 477 | 0.80 (0.80, 0.80) | 16.37 (14.27, 18.78) | 6.65 (5.84, 7.58) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 477 | 0.15 (0.15, 0.15) | 9.23 (8.11, 10.50) | 10.02 (8.83, 11.37) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 164 | 0.05 (0.05, 0.05) | 3.09 (2.24, 4.24) | 2.45 (2.00, 3.01) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 164 | 0.81 (0.79, 0.83) | 36.03 (27.77, 46.75) | 14.80 (11.60, 18.89) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 164 | 0.15 (0.15, 0.15) | 15.94 (12.70, 20.00) | 17.53 (14.06, 21.84) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 152 | 0.05 (0.05, 0.05) | 1.06 (0.74, 1.51) | 1.48 (1.30, 1.69) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 152 | 0.80 (0.79, 0.81) | 10.83 (8.01, 14.64) | 5.15 (4.04, 6.57) |
| Not Hispanic or Latino | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 152 | 0.15 (0.15, 0.15) | 5.11 (3.81, 6.86) | 5.95 (4.68, 7.58) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 62 | 0.05 (0.05, 0.05) | 1.03 (0.60, 1.79) | 1.53 (1.24, 1.89) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 62 | 0.80 (0.80, 0.80) | 15.50 (10.38, 23.14) | 6.41 (4.41, 9.30) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 62 | 0.16 (0.15, 0.16) | 7.49 (4.99, 11.25) | 9.04 (6.43, 12.72) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 13 | 0.05 (0.05, 0.05) | 2.45 (1.39, 4.30) | 1.51 (1.05, 2.17) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 13 | 0.80 (0.80, 0.80) | 17.50 (9.29, 32.94) | 6.33 (2.95, 13.59) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|------------------------|------------------------|
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 13 | 0.15 (0.15, 0.15) | 11.83 (6.16, 22.73) | 12.84 (6.68, 24.66) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) | 0.53 (0.32, 0.89) | 1.15 (0.99, 1.34) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) | 6.17 (3.91, 9.75) | 2.62 (1.75, 3.93) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) | 4.41 (2.97, 6.55) | 4.70 (3.18, 6.95) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Race | | | | | | | | |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 196 | 0.05 (0.05, 0.05) | 1.50 (1.13, 1.98) | 1.80 (1.56, 2.08) |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 196 | 0.80 (0.80, 0.80) | 17.65 (14.16, 22.00) | 7.33 (5.97, 9.01) |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 196 | 0.15 (0.15, 0.15) | 9.28 (7.55, 11.41) | 10.30 (8.46, 12.53) |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 63 | 0.05 (0.05, 0.05) | 3.69 (2.18, 6.25) | 2.83 (1.98, 4.05) |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 63 | 0.82 (0.78, 0.86) | 45.03 (30.91, 65.61) | 17.94 (12.42, 25.91) |
| White Non-Hispanic | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 63 | 0.15 (0.15, 0.15) | 17.98 (12.82, 25.22) | 19.97 (14.53, 27.46) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 23 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 23 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 23 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) | 1.16 (0.67, 2.02) | 1.57 (1.25, 1.98) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) | 12.32 (7.77, 19.56) | 5.50 (3.69, 8.22) |
| White Non-Hispanic | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) | 5.02 (3.41, 7.38) | 5.70 (4.04, 8.03) |
| Black or African American | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 332 | 0.05 (0.05, 0.05) | 1.33 (1.10, 1.62) | 1.53 (1.40, 1.67) |
| Black or African American | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 332 | 0.80 (0.80, 0.80) | 16.19 (13.79, 18.99) | 6.48 (5.55, 7.57) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Black or African American | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 332 | 0.15 (0.15, 0.15) | 9.18 (7.98, 10.57) | 9.83 (8.54, 11.31) |
| Black or African American | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 111 | 0.05 (0.05, 0.05) | 1.82 (1.24, 2.66) | 1.84 (1.53, 2.21) |
| Black or African American | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 111 | 0.80 (0.80, 0.80) | 20.44 (14.38, 29.07) | 8.91 (6.64, 11.95) |
| Black or African American | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 111 | 0.15 (0.15, 0.15) | 12.52 (9.57, 16.39) | 13.64 (10.44, 17.80) |
| Black or African American | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 38 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Black or African American | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 38 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Black or African American | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 38 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Black or African American | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 94 | 0.05 (0.05, 0.05) | 0.93 (0.57, 1.49) | 1.41 (1.20, 1.66) |
| Black or African American | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 94 | 0.81 (0.79, 0.82) | 10.46 (6.88, 15.91) | 4.80 (3.34, 6.89) |
| Black or African American | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 94 | 0.15 (0.15, 0.15) | 4.71 (3.31, 6.71) | 5.23 (3.69, 7.42) |
| Asian | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 18 | 0.05 (0.05, 0.05) | 2.15 (1.01, 4.58) | 1.60 (0.95, 2.69) |
| Asian | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 18 | 0.80 (0.80, 0.80) | 20.66 (10.86, 39.30) | 7.82 (3.95, 15.48) |
| Asian | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 18 | 0.15 (0.15, 0.15) | 10.30 (6.01, 17.63) | 11.42 (6.84, 19.08) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|----------------------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|--------------------------|------------------------|
| Asian | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5 | 0.07 (0.04, 0.12) | 3.89 (2.24, 6.74) | 1.53 (0.88, 2.65) |
| Asian | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) | 52.83 (12.92, 215.97) | 18.19 (3.57, 92.66) |
| Asian | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) | 24.28 (8.61, 68.46) | 26.35 (9.35, 74.29) |
| Asian | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Asian | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Asian | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Asian | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 10 | 0.05 (0.05, 0.05) | 0.51 (0.16, 1.61) | 1.34 (0.91, 1.97) |
| Asian | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10 | 0.80 (0.80, 0.80) | 6.07 (2.15, 17.12) | 3.14 (1.49, 6.63) |
| Asian | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 10 | 0.15 (0.15, 0.15) | 5.58 (2.70, 11.54) | 6.05 (2.93, 12.52) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 149 | 0.05 (0.05, 0.05) | 1.34 (1.01, 1.79) | 1.51 (1.34, 1.71) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 149 | 0.80 (0.80, 0.80) | 16.66 (12.81, 21.68) | 7.23 (5.72, 9.13) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 149 | 0.15 (0.15, 0.15) | 8.81 (6.94, 11.18) | 9.43 (7.43, 11.97) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 49 | 0.05 (0.05, 0.05) | 2.79 (1.56, 4.98) | 2.17 (1.56, 3.03) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 49 | 0.80 (0.80, 0.80) | 34.07 (22.72, 51.09) | 13.32 (8.76, 20.24) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|-------------------------|
| American Indian or Alaska Native | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 49 | 0.15 (0.15, 0.15) | 14.32 (10.15, 20.21) | 15.66 (11.16, 21.98) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 18 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 18 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 18 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 48 | 0.05 (0.05, 0.05) | 0.70 (0.43, 1.15) | 1.31 (1.13, 1.52) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 48 | 0.80 (0.80, 0.80) | 9.20 (6.04, 14.01) | 4.24 (3.02, 5.94) |
| American Indian or Alaska Native | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 48 | 0.15 (0.15, 0.15) | 4.46 (2.94, 6.77) | 5.13 (3.55, 7.41) |
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) | 2.86 (1.01, 8.14) | 1.68 (0.93, 3.05) |
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) | 24.67 (9.77, 62.29) | 9.82 (3.89, 24.79) |
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) | 10.65 (8.80, 12.90) | 11.56 (9.55, 14.00) |
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 3.09 (3.09, 3.09) | 1.00 (1.00, 1.00) |
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 18.62 (18.62, 18.62) | 7.41 (7.41, 7.41) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|-------------------------|
| Native Hawaiian or Other Pacific Islander | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 12.15 (12.15, 12.15) | 13.18 (13.18, 13.18) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 25 | 0.05 (0.05, 0.05) | 1.26 (0.63, 2.52) | 1.60 (1.15, 2.24) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 25 | 0.80 (0.80, 0.80) | 16.70 (10.38, 26.86) | 7.00 (4.53, 10.81) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 25 | 0.15 (0.15, 0.15) | 11.25 (6.17, 20.52) | 12.72 (7.16, 22.62) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) | 2.79 (1.15, 6.76) | 1.83 (1.08, 3.08) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) | 35.72 (15.57, 81.92) | 13.49 (5.68, 32.02) |
| Multiracial | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) | 9.78 (5.54, 17.26) | 10.62 (6.02, 18.73) |
| Multiracial | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Multiracial | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Multiracial | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Multiracial | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 15 | 0.05 (0.05, 0.05) | 1.85 (0.49, 6.95) | 1.99 (0.90, 4.38) |
| Multiracial | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 15 | 0.80 (0.80, 0.80) | 16.42 (6.17, 43.75) | 7.21 (3.09, 16.87) |
| Multiracial | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 15 | 0.15 (0.15, 0.15) | 7.36 (2.96, 18.26) | 8.00 (3.21, 19.93) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 12 | 0.05 (0.05, 0.05) | 2.50 (0.90, 6.94) | 2.05 (1.22, 3.44) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 12 | 0.80 (0.80, 0.80) | 21.32 (14.43, 31.50) | 8.49 (5.75, 12.54) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|-------------------------|
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 12 | 0.15 (0.15, 0.15) | 20.41 (12.24, 34.04) | 22.15 (13.28, 36.95) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 1.70 (1.70, 1.70) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 30.53 (30.53, 30.53) | 12.15 (12.15, 12.15) |
| Not reported and unknown | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 26.52 (26.52, 26.52) | 28.78 (28.78, 28.78) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 2 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 2 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 2 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 4 | 0.05 (0.05, 0.05) | 2.85 (1.31, 6.21) | 1.41 (0.85, 2.34) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 4 | 0.80 (0.80, 0.80) | 8.77 (4.28, 17.98) | 3.53 (1.76, 7.09) |
| Not reported and unknown | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 4 | 0.15 (0.15, 0.15) | 15.88 (13.13, 19.20) | 17.23 (14.25, 20.84) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|------------------------|
| Underrepresented Minority Status in the U.S. | | | | | | | | |
| URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) | 1.33 (1.07, 1.66) | 1.47 (1.33, 1.64) |
| URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) | 15.83 (13.04, 19.22) | 6.51 (5.44, 7.80) |
| URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) | 9.26 (7.76, 11.04) | 10.03 (8.42, 11.95) |
| URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) | 1.60 (1.06, 2.41) | 1.51 (1.27, 1.80) |
| URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) | 17.64 (12.36, 25.18) | 7.55 (5.54, 10.29) |
| URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) | 12.18 (9.07, 16.36) | 12.89 (9.46, 17.55) |
| URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 70 | 0.05 (0.05, 0.06) | 0.93 (0.65, 1.32) | 1.32 (1.16, 1.50) |
| URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 70 | 0.80 (0.80, 0.80) | 10.38 (7.41, 14.55) | 4.61 (3.45, 6.16) |
| URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 70 | 0.15 (0.15, 0.15) | 4.59 (3.28, 6.41) | 5.42 (4.04, 7.27) |
| Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 227 | 0.05 (0.05, 0.05) | 1.36 (1.05, 1.77) | 1.74 (1.53, 1.98) |
| Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 227 | 0.80 (0.80, 0.80) | 16.64 (13.58, 20.37) | 7.03 (5.83, 8.47) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 227 | 0.15 (0.15, 0.15) | 8.85 (7.31, 10.73) | 10.06 (8.43, 12.00) |
| Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) | 3.92 (2.47, 6.21) | 2.74 (2.01, 3.74) |
| Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.82 (0.78, 0.85) | 47.58 (34.24, 66.13) | 18.96 (13.75, 26.15) |
| Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) | 17.81 (13.03, 24.36) | 19.75 (14.71, 26.52) |
| Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 28 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 28 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 28 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 71 | 0.05 (0.05, 0.05) | 1.05 (0.65, 1.70) | 1.55 (1.28, 1.87) |
| Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 71 | 0.80 (0.80, 0.80) | 10.56 (7.07, 15.79) | 4.94 (3.53, 6.92) |
| Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 71 | 0.15 (0.15, 0.15) | 5.08 (3.67, 7.03) | 5.75 (4.30, 7.69) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--|-----------------------|---------|---------------------|-------------------------|-----|----------------------|------------------------|-----------------------|
| Age, Underrepresented Minority Status in the U.S. | | | | | | | | |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 113 | 0.05 (0.05, 0.05) | 0.95 (0.71, 1.28) | 1.31 (1.16, 1.47) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 113 | 0.80 (0.80, 0.80) | 10.76 (8.28, 13.99) | 4.51 (3.55, 5.73) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 113 | 0.15 (0.15, 0.15) | 6.41 (5.02, 8.18) | 6.96 (5.47, 8.86) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.05) | 1.12 (0.65, 1.93) | 1.31 (1.08, 1.58) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.80 (0.80, 0.80) | 10.28 (6.59, 16.03) | 4.56 (3.16, 6.58) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) | 7.81 (5.31, 11.49) | 8.17 (5.44, 12.28) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.04, 0.06) | 0.47 (0.29, 0.75) | 1.07 (0.94, 1.21) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) | 5.34 (3.44, 8.28) | 2.54 (1.79, 3.60) |
| Age 18 - 59 URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) | 2.09 (1.35, 3.24) | 2.60 (1.81, 3.75) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 111 | 0.05 (0.05, 0.05) | 0.93 (0.65, 1.31) | 1.49 (1.28, 1.73) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 111 | 0.80 (0.80, 0.80) | 10.19 (7.79, 13.33) | 4.41 (3.45, 5.62) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|---------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|--------------------------|-------------------------|
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 111 | 0.15 (0.15, 0.15) | 5.89 (4.51, 7.70) | 6.88 (5.41, 8.75) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) | 3.04 (1.60, 5.79) | 2.26 (1.47, 3.46) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) | 33.89 (21.53, 53.37) | 13.52 (8.71, 20.98) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) | 12.01 (7.99, 18.06) | 13.49 (9.31, 19.56) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) | 0.70 (0.36, 1.36) | 1.37 (1.08, 1.74) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) | 6.36 (3.69, 10.95) | 3.24 (2.10, 5.00) |
| Age 18 - 59 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) | 3.16 (2.04, 4.87) | 3.69 (2.54, 5.37) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 114 | 0.05 (0.05, 0.05) | 2.50 (1.82, 3.42) | 1.85 (1.51, 2.27) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 114 | 0.80 (0.80, 0.80) | 32.68 (25.29, 42.23) | 12.98 (10.04, 16.78) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 114 | 0.15 (0.15, 0.15) | 18.45 (14.88, 22.87) | 19.90 (16.02, 24.73) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.05, 0.05) | 3.64 (2.20, 6.03) | 2.11 (1.45, 3.08) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) | 62.80 (37.48, 105.23) | 24.66 (14.61, 41.63) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|--------------------------|-------------------------|
| Age ≥ 60 URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) | 34.65 (24.94, 48.14) | 37.60 (27.07, 52.24) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 35 | 0.05 (0.04, 0.05) | 3.39 (2.20, 5.22) | 1.96 (1.49, 2.59) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 35 | 0.80 (0.80, 0.80) | 36.78 (23.53, 57.49) | 14.28 (8.99, 22.70) |
| Age ≥ 60 URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 35 | 0.15 (0.15, 0.15) | 20.48 (13.85, 30.30) | 21.84 (14.51, 32.89) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 116 | 0.05 (0.05, 0.05) | 2.88 (2.00, 4.14) | 2.34 (1.84, 2.97) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 116 | 0.80 (0.80, 0.80) | 42.70 (32.17, 56.68) | 17.25 (13.12, 22.67) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 116 | 0.15 (0.15, 0.15) | 19.37 (15.50, 24.20) | 20.91 (16.71, 26.17) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.05) | 5.88 (3.21, 10.74) | 3.74 (2.43, 5.74) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.85 (0.75, 0.95) | 82.09 (52.81, 127.62) | 32.68 (21.02, 50.80) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) | 33.58 (20.94, 53.86) | 36.45 (22.73, 58.45) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-----------------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|------------------------|
| Age \geq 60 Non-URM | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age \geq 60 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 36 | 0.05 (0.05, 0.06) | 2.30 (1.30, 4.08) | 1.95 (1.42, 2.67) |
| Age \geq 60 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 36 | 0.80 (0.80, 0.80) | 28.08 (17.06, 46.21) | 11.12 (6.74, 18.34) |
| Age \geq 60 Non-URM | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 36 | 0.15 (0.15, 0.15) | 12.71 (8.41, 19.22) | 13.47 (8.79, 20.64) |

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

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|----------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| Country | | | | | | | | |
| United States | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 454 | 0.05 (0.05, 0.05) | 1.35 (1.13, 1.61) | 1.61 (1.48, 1.76) |
| United States | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 454 | 0.80 (0.80, 0.80) | 16.26 (14.12, 18.73) | 6.79 (5.96, 7.73) |
| United States | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 454 | 0.15 (0.15, 0.15) | 9.04 (7.92, 10.31) | 10.05 (8.87, 11.38) |
| United States | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 142 | 0.05 (0.05, 0.05) | 2.57 (1.88, 3.51) | 2.07 (1.72, 2.49) |
| United States | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 142 | 0.81 (0.79, 0.83) | 29.87 (23.41, 38.11) | 12.31 (9.82, 15.43) |
| United States | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 142 | 0.15 (0.15, 0.15) | 14.91 (12.00, 18.51) | 16.17 (13.06, 20.02) |
| United States | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 56 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| United States | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 56 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| United States | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 56 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| United States | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 141 | 0.05 (0.05, 0.05) | 0.99 (0.73, 1.34) | 1.43 (1.27, 1.61) |
| United States | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 141 | 0.80 (0.80, 0.80) | 10.47 (8.05, 13.63) | 4.78 (3.82, 5.97) |
| United States | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 141 | 0.15 (0.15, 0.15) | 4.83 (3.83, 6.10) | 5.58 (4.54, 6.87) |
| Argentina | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 45 | 0.05 (0.05, 0.05) | 1.47 (0.91, 2.36) | 1.56 (1.26, 1.93) |
| Argentina | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 45 | 0.80 (0.80, 0.80) | 19.39 (12.92, 29.08) | 7.49 (4.94, 11.36) |
| Argentina | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 45 | 0.15 (0.15, 0.15) | 10.05 (6.85, 14.75) | 10.17 (6.69, 15.46) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|-----------|-----------------------|---------|---------------------|-------------------------|----|----------------------|--------------------------|-------------------------|
| Argentina | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 11 | 0.05 (0.05, 0.05) | 3.37 (0.76, 15.00) | 2.83 (1.29, 6.20) |
| Argentina | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 11 | 0.80 (0.80, 0.80) | 48.05 (19.88, 116.17) | 17.59 (6.48, 47.70) |
| Argentina | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 11 | 0.15 (0.15, 0.15) | 22.23 (10.96, 45.09) | 24.13 (11.90, 48.93) |
| Argentina | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 5 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Argentina | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Argentina | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Argentina | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 16 | 0.05 (0.05, 0.05) | 0.79 (0.33, 1.89) | 1.21 (0.99, 1.49) |
| Argentina | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 16 | 0.80 (0.80, 0.80) | 7.57 (3.41, 16.81) | 3.97 (2.20, 7.18) |
| Argentina | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 16 | 0.15 (0.15, 0.15) | 4.51 (2.20, 9.24) | 4.72 (2.30, 9.65) |
| Brazil | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 78 | 0.05 (0.05, 0.05) | 1.89 (1.25, 2.85) | 1.82 (1.47, 2.26) |
| Brazil | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 78 | 0.80 (0.80, 0.80) | 24.23 (17.26, 34.03) | 10.13 (7.43, 13.82) |
| Brazil | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 78 | 0.15 (0.15, 0.15) | 9.82 (6.87, 14.04) | 10.97 (7.80, 15.44) |
| Brazil | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 29 | 0.05 (0.05, 0.06) | 2.05 (1.26, 3.33) | 1.47 (1.18, 1.83) |
| Brazil | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 29 | 0.80 (0.80, 0.80) | 25.63 (15.10, 43.50) | 10.69 (6.73, 16.97) |
| Brazil | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 29 | 0.15 (0.15, 0.15) | 15.35 (9.85, 23.90) | 16.46 (10.48, 25.87) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|------------------------|
| Brazil | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 15 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Brazil | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 15 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Brazil | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 15 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Brazil | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 30 | 0.05 (0.05, 0.05) | 0.61 (0.30, 1.23) | 1.39 (1.12, 1.74) |
| Brazil | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 30 | 0.80 (0.80, 0.80) | 7.43 (4.21, 13.11) | 3.33 (2.07, 5.34) |
| Brazil | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 30 | 0.15 (0.15, 0.15) | 4.73 (2.69, 8.31) | 5.55 (3.46, 8.89) |
| Chile | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 13 | 0.05 (0.05, 0.05) | 4.14 (1.65, 10.37) | 2.92 (1.54, 5.53) |
| Chile | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 13 | 0.80 (0.80, 0.80) | 22.09 (12.75, 38.27) | 8.79 (5.08, 15.23) |
| Chile | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 13 | 0.15 (0.15, 0.15) | 13.15 (6.95, 24.87) | 13.87 (7.04, 27.31) |
| Chile | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Chile | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Chile | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 0.37 (0.37, 0.37) | 1.00 (1.00, 1.00) |
| Chile | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Chile | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Chile | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |

(continued)

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

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|------------------------|
| Mexico | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) | 0.74 (0.29, 1.90) | 1.26 (0.89, 1.80) |
| Mexico | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) | 16.10 (5.55, 46.75) | 6.58 (2.32, 18.63) |
| Mexico | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) | 11.26 (4.24, 29.93) | 11.85 (4.35, 32.23) |
| Mexico | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 4 | 0.06 (0.04, 0.08) | 1.96 (0.42, 9.23) | 1.84 (0.59, 5.74) |
| Mexico | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 4 | 0.80 (0.80, 0.80) | 32.46 (7.08, 148.71) | 12.92 (2.82, 59.19) |
| Mexico | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 4 | 0.15 (0.15, 0.15) | 13.89 (3.79, 50.94) | 15.07 (4.11, 55.28) |
| Mexico | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Mexico | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Mexico | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Mexico | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 5 | 0.05 (0.05, 0.05) | 0.66 (0.25, 1.69) | 1.00 (1.00, 1.00) |
| Mexico | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) | 12.36 (7.69, 19.86) | 4.92 (3.06, 7.91) |
| Mexico | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) | 6.18 (3.37, 11.36) | 6.71 (3.65, 12.32) |
| Peru | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 19 | 0.05 (0.05, 0.05) | 2.12 (1.05, 4.28) | 1.45 (1.09, 1.93) |
| Peru | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 19 | 0.80 (0.80, 0.80) | 22.76 (9.92, 52.21) | 9.59 (4.44, 20.71) |
| Peru | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 19 | 0.15 (0.15, 0.15) | 13.64 (8.00, 23.25) | 14.45 (8.22, 25.38) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|--------------------------|-------------------------|
| Peru | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 6 | 0.05 (0.05, 0.05) | 5.16 (2.20, 12.11) | 2.30 (0.99, 5.37) |
| Peru | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 6 | 0.80 (0.80, 0.80) | 69.02 (32.43, 146.86) | 27.47 (12.91, 58.46) |
| Peru | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 6 | 0.15 (0.15, 0.15) | 22.38 (12.79, 39.16) | 24.29 (13.88, 42.50) |
| Peru | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 1 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Peru | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 1 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Peru | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 1 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Peru | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 5 | 0.05 (0.05, 0.05) | 1.54 (0.31, 7.56) | 1.56 (0.82, 2.99) |
| Peru | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 5 | 0.80 (0.80, 0.80) | 7.47 (0.98, 56.72) | 4.66 (1.05, 20.65) |
| Peru | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5 | 0.15 (0.15, 0.15) | 6.77 (1.68, 27.23) | 6.33 (1.29, 30.93) |
| South Africa | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 231 | 0.05 (0.05, 0.05) | 1.19 (0.95, 1.51) | 1.52 (1.37, 1.69) |
| South Africa | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 231 | 0.80 (0.80, 0.80) | 15.16 (12.68, 18.13) | 6.13 (5.17, 7.27) |
| South Africa | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 231 | 0.15 (0.15, 0.16) | 8.54 (7.24, 10.08) | 8.96 (7.55, 10.64) |
| South Africa | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 70 | 0.05 (0.05, 0.06) | 2.59 (1.62, 4.13) | 2.22 (1.69, 2.92) |
| South Africa | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 70 | 0.80 (0.80, 0.80) | 26.69 (18.00, 39.59) | 10.84 (7.42, 15.85) |
| South Africa | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 70 | 0.15 (0.15, 0.15) | 14.64 (10.61, 20.20) | 16.39 (12.27, 21.88) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|--------------|-----------------------|---------|---------------------|-------------------------|----|----------------------|------------------------|-----------------------|
| South Africa | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 27 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| South Africa | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 27 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| South Africa | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 27 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| South Africa | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 69 | 0.05 (0.05, 0.05) | 1.31 (0.84, 2.04) | 1.48 (1.22, 1.79) |
| South Africa | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 69 | 0.81 (0.78, 0.84) | 12.55 (8.32, 18.93) | 5.65 (3.97, 8.04) |
| South Africa | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 69 | 0.15 (0.15, 0.16) | 6.61 (4.63, 9.43) | 7.33 (5.22, 10.30) |

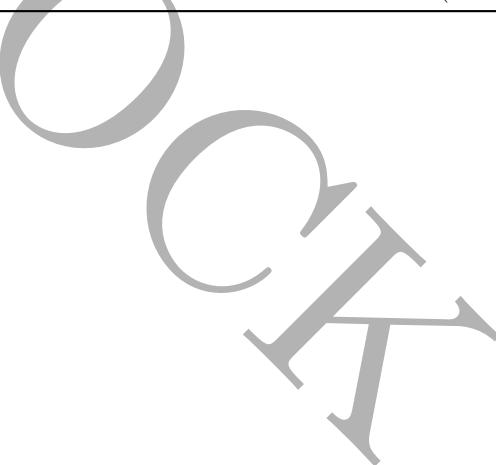
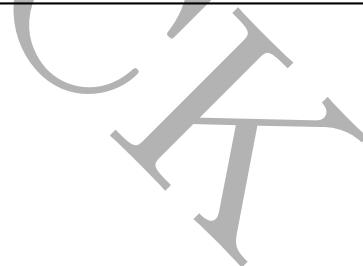


Table 8l. Geometric mean titer ratios (GMTRs) or geometric mean concentration ratios (GMCRs) between post-vaccinations/pre-vaccination by HIV Infection

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|----------------------|-----------------------|---------|---------------------|-------------------------|-----|----------------------|-------------------------|-------------------------|
| HIV Infection | | | | | | | | |
| Negative | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 848 | 0.05 (0.05, 0.05) | 1.43 (1.26, 1.63) | 1.60 (1.50, 1.70) |
| Negative | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 848 | 0.80 (0.80, 0.80) | 17.56 (15.77, 19.55) | 7.31 (6.62, 8.07) |
| Negative | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 848 | 0.15 (0.15, 0.15) | 9.55 (8.65, 10.54) | 10.37 (9.41, 11.44) |
| Negative | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 265 | 0.05 (0.05, 0.05) | 2.42 (1.90, 3.08) | 2.00 (1.74, 2.29) |
| Negative | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 265 | 0.80 (0.79, 0.81) | 29.55 (24.46, 35.70) | 12.04 (10.06, 14.40) |
| Negative | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 265 | 0.15 (0.15, 0.15) | 14.91 (12.69, 17.52) | 16.31 (13.93, 19.09) |
| Negative | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 100 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Negative | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 100 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Negative | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 100 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Negative | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 266 | 0.05 (0.05, 0.05) | 0.87 (0.70, 1.10) | 1.37 (1.27, 1.48) |
| Negative | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 266 | 0.80 (0.79, 0.80) | 9.49 (7.77, 11.60) | 4.44 (3.77, 5.23) |
| Negative | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 266 | 0.15 (0.15, 0.15) | 5.12 (4.28, 6.12) | 5.69 (4.81, 6.73) |
| Positive | D29 fold-rise over D1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 65 | 0.05 (0.05, 0.05) | 1.05 (0.66, 1.68) | 1.46 (1.20, 1.78) |
| Positive | D29 fold-rise over D1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 65 | 0.80 (0.80, 0.80) | 11.52 (7.30, 18.16) | 4.88 (3.24, 7.34) |
| Positive | D29 fold-rise over D1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 65 | 0.15 (0.15, 0.15) | 6.21 (4.22, 9.14) | 6.60 (4.51, 9.67) |

(continued)

| Group | Visit | Arm | Baseline SARS-CoV-2 | Marker | N | Baseline GMT/GMC | Post Baseline GMT/GMC | GMTR/GMCR |
|----------|-----------------------|---------|---------------------|-------------------------|----|----------------------|-------------------------|-------------------------|
| Positive | D29 fold-rise over D1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 18 | 0.06 (0.05, 0.07) | 4.99 (2.24, 11.13) | 2.43 (1.17, 5.04) |
| Positive | D29 fold-rise over D1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 18 | 0.80 (0.80, 0.80) | 39.49 (22.01, 70.85) | 15.72 (8.76, 28.20) |
| Positive | D29 fold-rise over D1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 18 | 0.15 (0.15, 0.15) | 15.07 (9.94, 22.85) | 16.07 (10.41, 24.78) |
| Positive | D29 fold-rise over D1 | Placebo | Negative | Anti N IgG (BAU/ml) | 9 | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Positive | D29 fold-rise over D1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 9 | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Positive | D29 fold-rise over D1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 9 | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive | D29 fold-rise over D1 | Placebo | Positive | Anti N IgG (BAU/ml) | 14 | 0.05 (0.05, 0.05) | 0.83 (0.17, 4.12) | 1.60 (0.74, 3.49) |
| Positive | D29 fold-rise over D1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 14 | 0.80 (0.80, 0.80) | 10.02 (3.90, 25.74) | 4.10 (1.61, 10.43) |
| Positive | D29 fold-rise over D1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 14 | 0.15 (0.15, 0.15) | 3.18 (1.04, 9.69) | 3.86 (1.36, 10.94) |



1.9 The ratios of GMTs/GMCs between groups

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|-------------------------|-------|---------|---------------------|-------------------------|----------------------|----------------------|----------------------|
| Age | | | | | | | |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.98 (0.94, 1.03) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.81 (0.78, 0.84) | 0.80 (0.80, 0.80) | 1.02 (0.98, 1.05) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.01 (0.95, 1.06) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|-------------------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.81) | 1.00 (0.99, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.01) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 2.98 (2.49, 3.57) | 0.94 (0.80, 1.11) | 3.16 (2.48, 4.02) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 40.62 (35.11, 47.01) | 10.80 (9.40, 12.41) | 3.76 (3.07, 4.60) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 20.78 (18.47, 23.38) | 6.06 (5.32, 6.91) | 3.43 (2.88, 4.09) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 5.00 (3.66, 6.83) | 1.76 (1.29, 2.41) | 2.83 (1.82, 4.41) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 63.07 (48.83, 81.48) | 20.39 (16.05, 25.89) | 3.09 (2.18, 4.39) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 29.97 (23.96, 37.48) | 10.36 (8.49, 12.65) | 2.89 (2.14, 3.90) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age ≥ 60 vs Age 18 - 59 | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 2.46 (1.77, 3.42) | 0.52 (0.39, 0.69) | 4.76 (3.08, 7.38) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|------------------------------|--------|---------|---------------------|-------------------------|-------------------------|----------------------|----------------------|
| Age \geq 60 vs Age 18 - 59 | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 28.45 (21.21, 38.17) | 5.48 (4.31, 6.98) | 5.19 (3.55, 7.59) |
| Age \geq 60 vs Age 18 - 59 | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 15.36 (12.18, 19.37) | 2.84 (2.26, 3.57) | 5.40 (3.90, 7.48) |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|---------------------------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Risk for Severe Covid-19 | | | | | | | |
| At-risk vs Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.06 (1.00, 1.13) |
| At-risk vs Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.82) | 0.99 (0.97, 1.01) |
| At-risk vs Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.99 (0.94, 1.05) |
| At-risk vs Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.81) | 1.00 (0.99, 1.00) |
| At-risk vs Not at-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 1.34 (1.12, 1.59) | 1.45 (1.23, 1.72) | 0.92 (0.72, 1.17) |
| At-risk vs Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 17.44 (15.14, 20.09) | 16.85 (14.56, 19.50) | 1.03 (0.84, 1.27) |
| At-risk vs Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 9.51 (8.27, 10.93) | 9.14 (8.03, 10.39) | 1.04 (0.86, 1.26) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|------------------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| At-risk vs Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 2.53 (1.88, 3.39) | 2.52 (1.80, 3.53) | 1.00 (0.64, 1.57) |
| At-risk vs Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 34.36 (27.39, 43.11) | 27.41 (21.07, 35.65) | 1.25 (0.89, 1.77) |
| At-risk vs Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 15.52 (12.72, 18.95) | 14.52 (11.67, 18.08) | 1.07 (0.79, 1.44) |
| At-risk vs Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| At-risk vs Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 1.16 (0.86, 1.56) | 0.72 (0.52, 0.98) | 1.61 (1.05, 2.49) |
| At-risk vs Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 12.07 (9.52, 15.31) | 8.11 (6.15, 10.70) | 1.49 (1.03, 2.14) |
| At-risk vs Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 6.30 (5.07, 7.82) | 4.29 (3.33, 5.51) | 1.47 (1.05, 2.05) |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|--|-------|---------|---------------------|-------------------------|----------------------|----------------------|----------------------|
| Age 18 - 59, Risk for Severe Covid-19 | | | | | | | |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.06) | 0.05 (0.05, 0.05) | 1.07 (0.98, 1.16) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.96 (0.89, 1.03) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.81) | 0.99 (0.98, 1.01) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|--|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.88 (0.70, 1.11) | 0.99 (0.79, 1.23) | 0.89 (0.65, 1.23) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 11.21 (9.32, 13.48) | 10.54 (8.66, 12.82) | 1.06 (0.81, 1.39) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 6.37 (5.24, 7.73) | 5.86 (4.92, 6.99) | 1.09 (0.84, 1.41) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1.80 (1.22, 2.64) | 1.74 (1.10, 2.75) | 1.03 (0.57, 1.88) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 24.92 (18.62, 33.36) | 17.82 (12.58, 25.23) | 1.40 (0.89, 2.20) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 10.40 (7.91, 13.67) | 10.34 (7.83, 13.65) | 1.01 (0.68, 1.49) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.66 (0.45, 0.98) | 0.44 (0.29, 0.65) | 1.52 (0.87, 2.67) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 7.06 (5.28, 9.43) | 4.62 (3.24, 6.58) | 1.53 (0.97, 2.42) |

(continued)

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

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|---|-------|---------|---------------------|-------------------------|----------------------|----------------------|----------------------|
| Age \geq 60, Risk for Severe Covid-19 | | | | | | | |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (0.99, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.06 (0.98, 1.14) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.82 (0.78, 0.87) | 0.97 (0.92, 1.03) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.06) | 0.05 (0.05, 0.05) | 1.07 (0.98, 1.17) |
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |

(continued)

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

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|---|--------|---------|---------------------|-------------------------|-------------------------|------------------------|----------------------|
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 21.81 (16.61, 28.64) | 12.20 (8.69, 17.11) | 1.79 (1.16, 2.76) |
| | | | | | | | |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|----------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Sex | | | | | | | |
| Male vs Female | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.07 (1.01, 1.14) |
| Male vs Female | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.82) | 0.99 (0.97, 1.01) |
| Male vs Female | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.99 (0.94, 1.05) |
| Male vs Female | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.79, 0.81) | 0.80 (0.80, 0.80) | 1.01 (0.99, 1.02) |
| Male vs Female | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 1.43 (1.19, 1.72) | 1.38 (1.17, 1.64) | 1.03 (0.80, 1.33) |
| Male vs Female | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 17.21 (14.63, 20.24) | 16.98 (14.69, 19.63) | 1.01 (0.81, 1.27) |
| Male vs Female | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 9.36 (8.08, 10.84) | 9.22 (8.06, 10.54) | 1.02 (0.83, 1.25) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|----------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Male vs Female | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 2.88 (1.96, 4.24) | 2.30 (1.70, 3.09) | 1.25 (0.76, 2.06) |
| Male vs Female | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 31.72 (23.68, 42.49) | 28.91 (22.56, 37.04) | 1.10 (0.74, 1.63) |
| Male vs Female | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 16.03 (12.43, 20.69) | 14.17 (11.60, 17.32) | 1.13 (0.81, 1.58) |
| Male vs Female | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Male vs Female | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.88 (0.61, 1.27) | 0.87 (0.63, 1.18) | 1.01 (0.61, 1.69) |
| Male vs Female | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 9.77 (7.11, 13.44) | 9.31 (7.08, 12.24) | 1.05 (0.67, 1.65) |
| Male vs Female | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5.33 (4.08, 6.96) | 4.75 (3.65, 6.18) | 1.12 (0.75, 1.68) |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|--|-------|---------|---------------------|-------------------------|----------------------|----------------------|----------------------|
| Hispanic or Latino ethnicity | | | | | | | |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.01 (0.96, 1.07) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.81 (0.79, 0.83) | 0.99 (0.97, 1.01) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.02 (0.96, 1.08) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.81) | 0.99 (0.98, 1.01) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|--|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Hispanic or Latino vs Not Hispanic or Latino | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 1.48 (1.24, 1.77) | 1.37 (1.16, 1.63) | 1.08 (0.84, 1.38) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 17.87 (15.17, 21.05) | 16.37 (14.27, 18.78) | 1.09 (0.88, 1.35) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 9.55 (8.26, 11.04) | 9.23 (8.11, 10.50) | 1.03 (0.85, 1.26) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 2.07 (1.41, 3.02) | 3.09 (2.24, 4.24) | 0.67 (0.41, 1.10) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 26.47 (19.85, 35.29) | 36.03 (27.77, 46.75) | 0.73 (0.49, 1.09) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 14.30 (11.44, 17.89) | 15.94 (12.70, 20.00) | 0.90 (0.65, 1.24) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.81 (0.57, 1.15) | 1.06 (0.74, 1.51) | 0.77 (0.46, 1.28) |
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 9.25 (6.85, 12.50) | 10.83 (8.01, 14.64) | 0.85 (0.55, 1.33) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|---|--------|---------|---------------------|-------------------------|----------------------|----------------------|----------------------|
| Hispanic or Latino vs Not Hispanic or Latino | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 5.02 (3.84, 6.56) | 5.11 (3.81, 6.86) | 0.98 (0.65, 1.49) |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|---|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Underrepresented Minority Status in the U.S. | | | | | | | |
| URM vs Non-URM | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.99 (0.94, 1.04) |
| URM vs Non-URM | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.82 (0.78, 0.85) | 0.98 (0.93, 1.02) |
| URM vs Non-URM | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.06) | 0.05 (0.05, 0.05) | 1.02 (0.91, 1.14) |
| URM vs Non-URM | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 1.33 (1.07, 1.66) | 1.36 (1.05, 1.77) | 0.98 (0.69, 1.38) |
| URM vs Non-URM | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 15.83 (13.04, 19.22) | 16.64 (13.58, 20.37) | 0.95 (0.72, 1.26) |
| URM vs Non-URM | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 9.26 (7.76, 11.04) | 8.85 (7.31, 10.73) | 1.05 (0.81, 1.36) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|----------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| URM vs Non-URM | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 1.60 (1.06, 2.41) | 3.92 (2.47, 6.21) | 0.41 (0.22, 0.76) |
| URM vs Non-URM | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 17.64 (12.36, 25.18) | 47.58 (34.24, 66.13) | 0.37 (0.23, 0.60) |
| URM vs Non-URM | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 12.18 (9.07, 16.36) | 17.81 (13.03, 24.36) | 0.68 (0.44, 1.05) |
| URM vs Non-URM | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| URM vs Non-URM | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.93 (0.65, 1.32) | 1.05 (0.65, 1.70) | 0.89 (0.49, 1.61) |
| URM vs Non-URM | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10.38 (7.41, 14.55) | 10.56 (7.07, 15.79) | 0.98 (0.58, 1.66) |
| URM vs Non-URM | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 4.59 (3.28, 6.41) | 5.08 (3.67, 7.03) | 0.90 (0.57, 1.44) |

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

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|----------------------|--------|---------|---------------------|-------------------------|------------------------|-------------------------|----------------------|
| HIV Infection | | | | | | | |
| Positive vs Negative | Day 1 | Vaccine | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Vaccine | Positive | Anti N IgG (BAU/ml) | 0.06 (0.05, 0.07) | 0.05 (0.05, 0.05) | 1.14 (0.94, 1.38) |
| Positive vs Negative | Day 1 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.81) | 0.99 (0.98, 1.01) |
| Positive vs Negative | Day 1 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 1 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 0.96 (0.93, 0.99) |
| Positive vs Negative | Day 1 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.79, 0.80) | 1.00 (0.99, 1.00) |
| Positive vs Negative | Day 1 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 29 | Vaccine | Negative | Anti N IgG (BAU/ml) | 1.05 (0.66, 1.68) | 1.43 (1.26, 1.63) | 0.73 (0.45, 1.20) |
| Positive vs Negative | Day 29 | Vaccine | Negative | Anti RBD IgG (BAU/ml) | 11.52 (7.30, 18.16) | 17.56 (15.77, 19.55) | 0.66 (0.41, 1.05) |
| Positive vs Negative | Day 29 | Vaccine | Negative | Anti Spike IgG (BAU/ml) | 6.21 (4.22, 9.14) | 9.55 (8.65, 10.54) | 0.65 (0.43, 0.97) |

(continued)

| Group 1 vs 2 | Visit | Arm | Baseline SARS-CoV-2 | Marker | Group 1 GMT/GMC | Group 2 GMT/GMC | Ratios of GMT/GMC |
|----------------------|--------|---------|---------------------|-------------------------|-------------------------|-------------------------|----------------------|
| Positive vs Negative | Day 29 | Vaccine | Positive | Anti N IgG (BAU/ml) | 4.99 (2.24, 11.13) | 2.42 (1.90, 3.08) | 2.06 (0.90, 4.75) |
| Positive vs Negative | Day 29 | Vaccine | Positive | Anti RBD IgG (BAU/ml) | 39.49 (22.01, 70.85) | 29.55 (24.46, 35.70) | 1.34 (0.72, 2.48) |
| Positive vs Negative | Day 29 | Vaccine | Positive | Anti Spike IgG (BAU/ml) | 15.07 (9.94, 22.85) | 14.91 (12.69, 17.52) | 1.01 (0.65, 1.58) |
| Positive vs Negative | Day 29 | Placebo | Negative | Anti N IgG (BAU/ml) | 0.05 (0.05, 0.05) | 0.05 (0.05, 0.05) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 29 | Placebo | Negative | Anti RBD IgG (BAU/ml) | 0.80 (0.80, 0.80) | 0.80 (0.80, 0.80) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 29 | Placebo | Negative | Anti Spike IgG (BAU/ml) | 0.15 (0.15, 0.15) | 0.15 (0.15, 0.15) | 1.00 (1.00, 1.00) |
| Positive vs Negative | Day 29 | Placebo | Positive | Anti N IgG (BAU/ml) | 0.83 (0.17, 4.12) | 0.87 (0.70, 1.10) | 0.95 (0.18, 4.88) |
| Positive vs Negative | Day 29 | Placebo | Positive | Anti RBD IgG (BAU/ml) | 10.02 (3.90, 25.74) | 9.49 (7.77, 11.60) | 1.06 (0.39, 2.83) |
| Positive vs Negative | Day 29 | Placebo | Positive | Anti Spike IgG (BAU/ml) | 3.18 (1.04, 9.69) | 5.12 (4.28, 6.12) | 0.62 (0.20, 1.96) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--------------------|---------------------|-----|--------|-------------------------|----------------------|----------------------|----------------------|
| Arm | | | | | | | |
| Vaccine vs Placebo | Negative | - | Day 29 | Anti N IgG (BAU/ml) | 0.06 (0.05, 0.08) | 0.25 (0.23, 0.29) | 0.16 (0.13, 0.18) |
| Vaccine vs Placebo | Negative | - | Day 29 | Anti RBD IgG (BAU/ml) | 0.54 (0.51, 0.58) | 0.79 (0.76, 0.82) | 0.62 (0.58, 0.66) |
| Vaccine vs Placebo | Negative | - | Day 29 | Anti Spike IgG (BAU/ml) | 0.48 (0.44, 0.51) | 0.86 (0.83, 0.88) | 0.75 (0.72, 0.78) |
| Vaccine vs Placebo | Positive | - | Day 29 | Anti N IgG (BAU/ml) | 0.07 (0.03, 0.12) | 0.15 (0.07, 0.23) | 0.13 (0.07, 0.19) |
| Vaccine vs Placebo | Positive | - | Day 29 | Anti RBD IgG (BAU/ml) | 0.37 (0.28, 0.45) | 0.23 (0.15, 0.31) | 0.31 (0.22, 0.39) |
| Vaccine vs Placebo | Positive | - | Day 29 | Anti Spike IgG (BAU/ml) | 0.3 (0.21, 0.38) | 0.23 (0.16, 0.3) | 0.29 (0.21, 0.37) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------------|---------------------|---------|--------|-------------------------|----------------------|----------------------|----------------------|
| Baseline SARS-CoV-2 | | | | | | | |
| Positive vs Negative | - | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.05 (0.01, 0.09) | 0.1 (0.03, 0.17) | 0.08 (0.02, 0.14) |
| Positive vs Negative | - | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0.03 (0.02, 0.06) | 0.2 (0.16, 0.25) | 0.1 (0.07, 0.14) |
| Positive vs Negative | - | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.2 (0.13, 0.27) | 0.1 (0.04, 0.15) | 0.18 (0.11, 0.24) |
| Positive vs Negative | - | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0.38 (0.32, 0.44) | 0.66 (0.59, 0.72) | 0.5 (0.43, 0.56) |
| Positive vs Negative | - | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.15 (0.07, 0.22) | 0.09 (0.05, 0.13) | 0.12 (0.06, 0.18) |
| Positive vs Negative | - | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0.32 (0.27, 0.38) | 0.72 (0.65, 0.78) | 0.58 (0.52, 0.65) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|-------------------------|---------------------|---------|--------|-------------------------|----------------------|-----------------------|----------------------|
| Age | | | | | | | |
| Age ≥ 60 vs Age 18 - 59 | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.1 (0.07, 0.14) | 0.22 (0.15, 0.28) | 0.19 (0.13, 0.24) |
| Age ≥ 60 vs Age 18 - 59 | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 vs Age 18 - 59 | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.34 (0.27, 0.4) | 0.2 (0.15, 0.25) | 0.34 (0.27, 0.4) |
| Age ≥ 60 vs Age 18 - 59 | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 vs Age 18 - 59 | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.36 (0.29, 0.42) | 0.18 (0.14, 0.23) | 0.28 (0.23, 0.33) |
| Age ≥ 60 vs Age 18 - 59 | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 vs Age 18 - 59 | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.13 (0.05, 0.22) | 0.24 (0.11, 0.35) | 0.18 (0.07, 0.29) |
| Age ≥ 60 vs Age 18 - 59 | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0.05 (0, 0.11) | 0.31 (0.2, 0.41) | 0.2 (0.12, 0.29) |
| Age ≥ 60 vs Age 18 - 59 | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.22 (0.12, 0.32) | 0.1 (0.02, 0.18) | 0.16 (0.07, 0.25) |
| Age ≥ 60 vs Age 18 - 59 | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0.42 (0.29, 0.53) | 0.33 (0.21, 0.44) | 0.4 (0.27, 0.51) |
| Age ≥ 60 vs Age 18 - 59 | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.31 (0.19, 0.41) | 0.05 (-0.03, 0.11) | 0.12 (0.04, 0.21) |

(continued)

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------------|---------------------|---------|--------|-------------------------|----------------------|--------------------|----------------------|
| Age \geq 60 vs Age 18 - 59 | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0.43 (0.31, 0.54) | 0.3 (0.19, 0.4) | 0.44 (0.31, 0.54) |

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



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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---------------------------------|---------------------|---------|--------|-------------------------|------------------------|------------------------|------------------------|
| Risk for Severe Covid-19 | | | | | | | |
| At-risk vs Not at-risk | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.03 (0, 0.06) | -0.03 (-0.09, 0.03) | 0.01 (-0.04, 0.06) |
| At-risk vs Not at-risk | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| At-risk vs Not at-risk | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.04 (-0.11, 0.03) | 0.03 (-0.03, 0.09) | 0.02 (-0.05, 0.09) |
| At-risk vs Not at-risk | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| At-risk vs Not at-risk | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.03 (-0.04, 0.1) | 0 (-0.06, 0.05) | 0 (-0.07, 0.06) |
| At-risk vs Not at-risk | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| At-risk vs Not at-risk | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.01 (-0.09, 0.07) | -0.03 (-0.15, 0.08) | -0.04 (-0.14, 0.06) |
| At-risk vs Not at-risk | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (-0.05, 0.04) | 0.1 (0.01, 0.19) | 0.04 (-0.03, 0.1) |
| At-risk vs Not at-risk | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0 (-0.12, 0.11) | 0.05 (-0.03, 0.14) | 0 (-0.11, 0.1) |
| At-risk vs Not at-risk | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0.01 (-0.1, 0.13) | 0.1 (-0.03, 0.22) | 0.09 (-0.04, 0.21) |
| At-risk vs Not at-risk | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.05 (-0.08, 0.17) | 0 (-0.07, 0.06) | 0.04 (-0.05, 0.14) |
| At-risk vs Not at-risk | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0.09 (-0.02, 0.2) | 0.16 (0.03, 0.27) | 0.1 (-0.03, 0.23) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--|---------------------|---------|--------|-------------------------|------------------------|------------------------|------------------------|
| Age 18 - 59, Risk for Severe Covid-19 | | | | | | | |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.03 (0, 0.07) | -0.03 (-0.1, 0.05) | 0.02 (-0.03, 0.08) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.04 (-0.14, 0.06) | 0.05 (-0.03, 0.14) | 0.02 (-0.08, 0.12) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.05 (-0.04, 0.15) | 0 (-0.08, 0.08) | 0 (-0.09, 0.1) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.03 (-0.13, 0.08) | -0.04 (-0.2, 0.11) | -0.06 (-0.19, 0.07) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | -0.01 (-0.08, 0.04) | 0.08 (-0.02, 0.2) | 0.01 (-0.06, 0.08) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0 (-0.16, 0.17) | 0.08 (-0.04, 0.2) | 0 (-0.15, 0.15) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | -0.04 (-0.19, 0.12) | 0.14 (-0.05, 0.31) | 0.08 (-0.1, 0.25) |
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.04 (-0.13, 0.22) | -0.01 (-0.11, 0.08) | 0.03 (-0.1, 0.17) |

(continued)

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|------------------------|---------|--------|-------------------------|-----------------------|-------------------|----------------------|
| Age 18 - 59 At-risk vs Age 18 - 59 Not at-risk | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0.01 (-0.12, 0.16) | 0.18 (0, 0.35) | 0.09 (-0.1, 0.26) |
| | | | | | | | |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|---------------------|---------|--------|-------------------------|------------------------|------------------------|------------------------|
| Age ≥ 60, Risk for Severe Covid-19 | | | | | | | |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.03 (-0.03, 0.1) | -0.03 (-0.13, 0.06) | -0.01 (-0.1, 0.08) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.03 (-0.11, 0.05) | 0 (-0.06, 0.05) | 0.01 (-0.06, 0.08) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.03 (-0.12, 0.06) | 0 (-0.04, 0.02) | -0.01 (-0.06, 0.04) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.01 (-0.14, 0.16) | -0.03 (-0.21, 0.15) | -0.01 (-0.18, 0.16) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0.02 (-0.1, 0.12) | 0.14 (-0.04, 0.32) | 0.1 (-0.07, 0.26) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.02 (-0.15, 0.09) | 0 (-0.11, 0.09) | -0.01 (-0.14, 0.09) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0.14 (-0.05, 0.31) | 0.02 (-0.11, 0.16) | 0.12 (-0.05, 0.28) |
| Age ≥ 60 At-risk vs Age ≥ 60 Not at-risk | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.04 (-0.09, 0.18) | 0.02 (0, 0.15) | 0.05 (-0.03, 0.15) |

(continued)

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|---------------------|---------|--------|-------------------------|----------------------|----------------------|----------------------|
| Age \geq 60 At-risk vs Age \geq 60 Not at-risk | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0.26 (0.07, 0.42) | 0.12 (0.04, 0.25) | 0.14 (0.01, 0.27) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------|---------------------|---------|--------|-------------------------|------------------------|------------------------|-----------------------|
| Sex | | | | | | | |
| Male vs Female | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0 (-0.02, 0.04) | -0.02 (-0.09, 0.04) | 0.01 (-0.04, 0.06) |
| Male vs Female | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Male vs Female | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.04 (-0.04, 0.11) | -0.01 (-0.07, 0.05) | 0.04 (-0.04, 0.11) |
| Male vs Female | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Male vs Female | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.02 (-0.05, 0.09) | 0 (-0.06, 0.05) | 0 (-0.07, 0.06) |
| Male vs Female | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Male vs Female | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0 (-0.08, 0.08) | 0.09 (-0.03, 0.22) | 0.06 (-0.05, 0.17) |
| Male vs Female | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0.01 (-0.04, 0.06) | 0.01 (-0.08, 0.11) | 0 (-0.07, 0.07) |
| Male vs Female | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.03 (-0.09, 0.15) | -0.04 (-0.14, 0.05) | 0 (-0.11, 0.1) |
| Male vs Female | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | -0.01 (-0.13, 0.12) | -0.03 (-0.17, 0.1) | 0.01 (-0.12, 0.15) |
| Male vs Female | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.06 (-0.08, 0.18) | 0 (-0.07, 0.06) | 0 (-0.11, 0.09) |
| Male vs Female | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | -0.1 (-0.21, 0.02) | 0.03 (-0.1, 0.16) | 0.07 (-0.07, 0.2) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|--|---------------------|---------|--------|-------------------------|------------------------|------------------------|-------------------------|
| Hispanic or Latino ethnicity | | | | | | | |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.02 (-0.05, 0.02) | -0.02 (-0.08, 0.04) | -0.02 (-0.07, 0.03) |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.03 (-0.04, 0.1) | 0.04 (-0.02, 0.1) | 0.05 (-0.03, 0.12) |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.02 (-0.09, 0.05) | -0.02 (-0.08, 0.03) | 0.01 (-0.06, 0.07) |
| Hispanic or Latino vs Not Hispanic or Latino | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.07 (-0.15, 0.02) | -0.12 (-0.24, 0.01) | -0.14 (-0.25, -0.02) |
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | -0.03 (-0.08, 0.03) | -0.07 (-0.17, 0.03) | -0.01 (-0.09, 0.06) |
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.08 (-0.2, 0.04) | 0.04 (-0.06, 0.12) | -0.02 (-0.13, 0.08) |
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | -0.07 (-0.19, 0.07) | -0.05 (-0.18, 0.09) | 0 (-0.14, 0.13) |
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.04 (-0.17, 0.09) | 0.04 (-0.03, 0.11) | 0.03 (-0.08, 0.12) |

(continued)

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|---------------------|---------|--------|-------------------------|-----------------------|-----------------------|------------------------|
| Hispanic or Latino vs Not Hispanic or Latino | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | -0.02 (-0.14, 0.1) | -0.07 (-0.2, 0.07) | -0.04 (-0.18, 0.09) |

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



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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|---|---------------------|---------|--------|-------------------------|-------------------------|-------------------------|-------------------------|
| Underrepresented Minority Status in the U.S. | | | | | | | |
| URM vs Non-URM | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.02 (-0.07, 0.02) | -0.08 (-0.16, 0.01) | -0.03 (-0.1, 0.04) |
| URM vs Non-URM | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| URM vs Non-URM | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.02 (-0.11, 0.08) | 0 (-0.08, 0.09) | 0.02 (-0.08, 0.11) |
| URM vs Non-URM | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| URM vs Non-URM | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.04 (-0.14, 0.05) | 0.01 (-0.06, 0.08) | 0.01 (-0.08, 0.1) |
| URM vs Non-URM | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| URM vs Non-URM | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | -0.12 (-0.24, -0.03) | -0.24 (-0.39, -0.07) | -0.17 (-0.31, -0.01) |
| URM vs Non-URM | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | -0.04 (-0.14, 0.01) | -0.1 (-0.24, 0.03) | -0.01 (-0.12, 0.09) |
| URM vs Non-URM | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.28 (-0.42, -0.11) | -0.09 (-0.23, 0.04) | -0.24 (-0.39, -0.09) |
| URM vs Non-URM | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | -0.01 (-0.17, 0.16) | 0 (-0.16, 0.17) | -0.03 (-0.19, 0.14) |
| URM vs Non-URM | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.1 (-0.27, 0.07) | -0.1 (-0.22, 0.04) | -0.08 (-0.22, 0.06) |
| URM vs Non-URM | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (-0.15, 0.14) | -0.09 (-0.25, 0.08) | -0.06 (-0.23, 0.1) |

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

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

| Comparison | Baseline SARS-CoV-2 | Arm | Visit | Marker | Responder | % 2-Fold Rise | % 4-Fold Rise |
|----------------------|---------------------|---------|--------|-------------------------|------------------------|-------------------------|-------------------------|
| HIV Infection | | | | | | | |
| Positive vs Negative | Negative | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0 (-0.04, 0.08) | -0.05 (-0.14, 0.07) | -0.01 (-0.09, 0.1) |
| Positive vs Negative | Negative | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Positive vs Negative | Negative | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | -0.08 (-0.23, 0.07) | -0.19 (-0.34, -0.05) | -0.13 (-0.28, 0.02) |
| Positive vs Negative | Negative | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Positive vs Negative | Negative | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | -0.14 (-0.26, 0.01) | -0.13 (-0.28, -0.01) | -0.16 (-0.31, -0.02) |
| Positive vs Negative | Negative | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | 0 (0, 0) | 0 (0, 0) | 0 (0, 0) |
| Positive vs Negative | Positive | Vaccine | Day 29 | Anti N IgG (BAU/ml) | 0.07 (-0.07, 0.42) | 0.02 (-0.22, 0.33) | 0.05 (-0.14, 0.36) |
| Positive vs Negative | Positive | Placebo | Day 29 | Anti N IgG (BAU/ml) | 0.08 (-0.02, 0.56) | -0.05 (-0.19, 0.35) | 0.04 (-0.09, 0.46) |
| Positive vs Negative | Positive | Vaccine | Day 29 | Anti RBD IgG (BAU/ml) | 0.03 (-0.29, 0.2) | 0.12 (0.08, 0.17) | 0.03 (-0.3, 0.17) |
| Positive vs Negative | Positive | Placebo | Day 29 | Anti RBD IgG (BAU/ml) | -0.06 (-0.29, 0.31) | 0.02 (-0.42, 0.29) | -0.11 (-0.38, 0.25) |
| Positive vs Negative | Positive | Vaccine | Day 29 | Anti Spike IgG (BAU/ml) | 0.16 (-0.2, 0.34) | 0 (-0.28, 0.06) | 0.08 (-0.2, 0.15) |
| Positive vs Negative | Positive | Placebo | Day 29 | Anti Spike IgG (BAU/ml) | -0.02 (-0.25, 0.34) | -0.2 (-0.55, 0.13) | -0.18 (-0.47, 0.17) |

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

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

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

| Visit | Marker | Baseline SARS-CoV-2 Negative | | | | | | | |
|--------|-------------------------|------------------------------|---|-------------------------|-----|--------------------------------|----------------------|----------------------|-------------------------|
| | | Vaccine | | | | Placebo | | | |
| | | N | Resp rate | GMT/GMC | N | Resp rate | GMT/GMC | Resp Rate Difference | GMTR/GMCR |
| Day 29 | Anti N IgG (BAU/ml) | 913 | 1147.9/19292 = 6.0% (4.7%, 7.5%) | 1.41 (1.24, 1.59) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0.05 (0.05, 0.05) | 0.06 (0.05, 0.08) | 29.98 (26.53, 33.88) |
| Day 29 | Anti RBD IgG (BAU/ml) | 913 | 10495.8/19292 = 54.4% (50.8%, 58.0%) | 17.09 (15.39, 18.96) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0.80 (0.80, 0.80) | 0.54 (0.51, 0.58) | 21.44 (19.32, 23.80) |
| Day 29 | Anti Spike IgG (BAU/ml) | 913 | 9225.7/19292 = 47.8% (44.3%, 51.3%) | 9.28 (8.44, 10.21) | 109 | 0/19333 = 0.0% (0.0%, 0.0%) | 0.15 (0.15, 0.15) | 0.48 (0.44, 0.51) | 60.35 (54.88, 66.38) |

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

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

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

| Visit | Marker | Baseline SARS-CoV-2 Positive | | | | | | | |
|--------|-------------------------|------------------------------|---------------------------------------|-------------------------|-----|--------------------------------------|-----------------------|----------------------|----------------------|
| | | Vaccine | | | | Placebo | | | |
| | | N | Resp rate | GMT/GMC | N | Resp rate | GMT/GMC | Resp Rate Difference | GMTR/GMCR |
| Day 29 | Anti N IgG (BAU/ml) | 283 | 222.1/2102 = 10.6% (7.4%, 14.9%) | 2.52 (2.00, 3.19) | 280 | 61.5/1979 = 3.1% (1.6%, 5.8%) | 0.87 (0.70, 1.09) | 0.07 (0.03, 0.12) | 2.90 (2.10, 4.00) |
| Day 29 | Anti RBD IgG (BAU/ml) | 283 | 1569.2/2102 = 74.7% (68.5%, 80.0%) | 30.05 (25.07, 36.02) | 280 | 753.1/1979 = 38.1% (32.2%, 44.3%) | 9.52 (7.86, 11.52) | 0.37 (0.28, 0.45) | 3.16 (2.43, 4.11) |
| Day 29 | Anti Spike IgG (BAU/ml) | 283 | 1310.4/2102 = 62.3% (55.7%, 68.6%) | 14.92 (12.80, 17.39) | 280 | 636.7/1979 = 32.2% (26.9%, 37.9%) | 5.00 (4.20, 5.95) | 0.3 (0.21, 0.38) | 2.98 (2.37, 3.76) |

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

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

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

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

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

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

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

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

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

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Chapter 2

Graphical Description of Immunogenicity Data

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

2.1.1 Baseline SARS-CoV-2 Negative

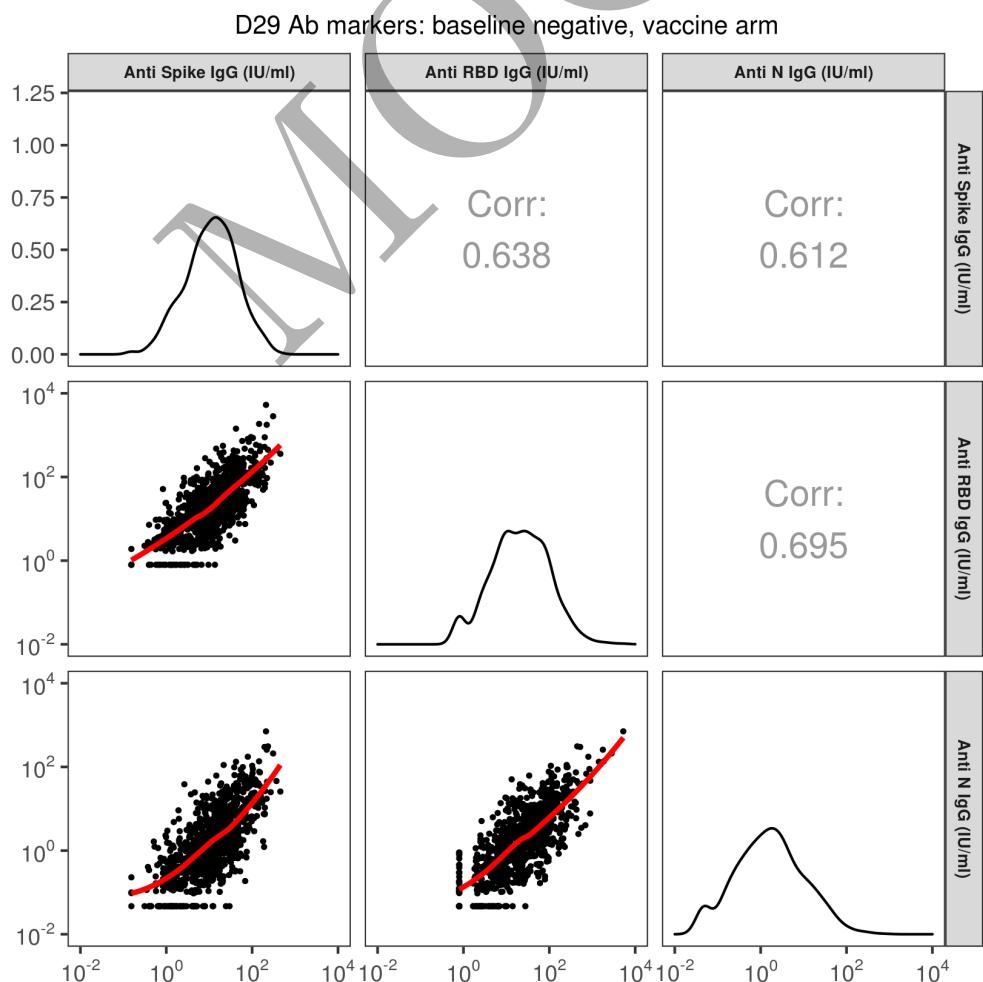


Figure 2.1: Pair plots of D29 Ab markers: baseline negative vaccine arm

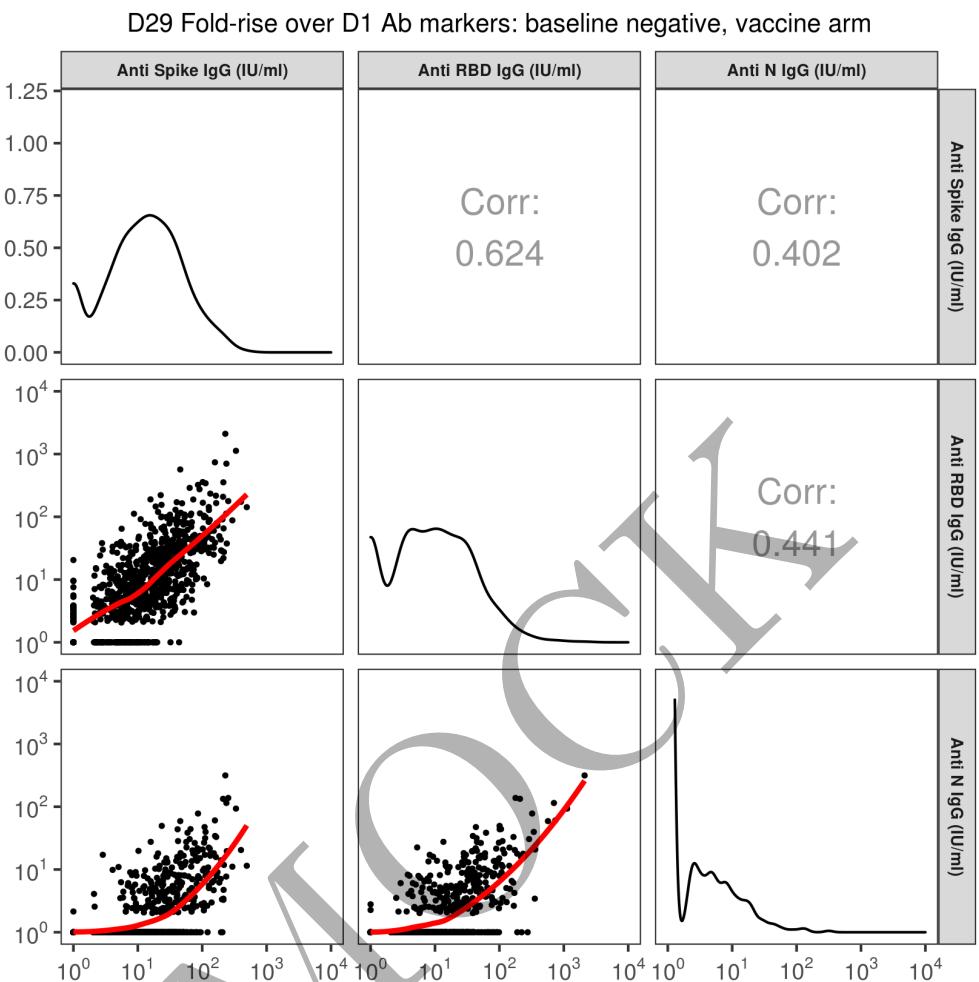


Figure 2.2: Pair plots of D29 fold-rise over D1 Ab markers: baseline negative vaccine arm

2.1.2 Baseline SARS-CoV-2 Positive

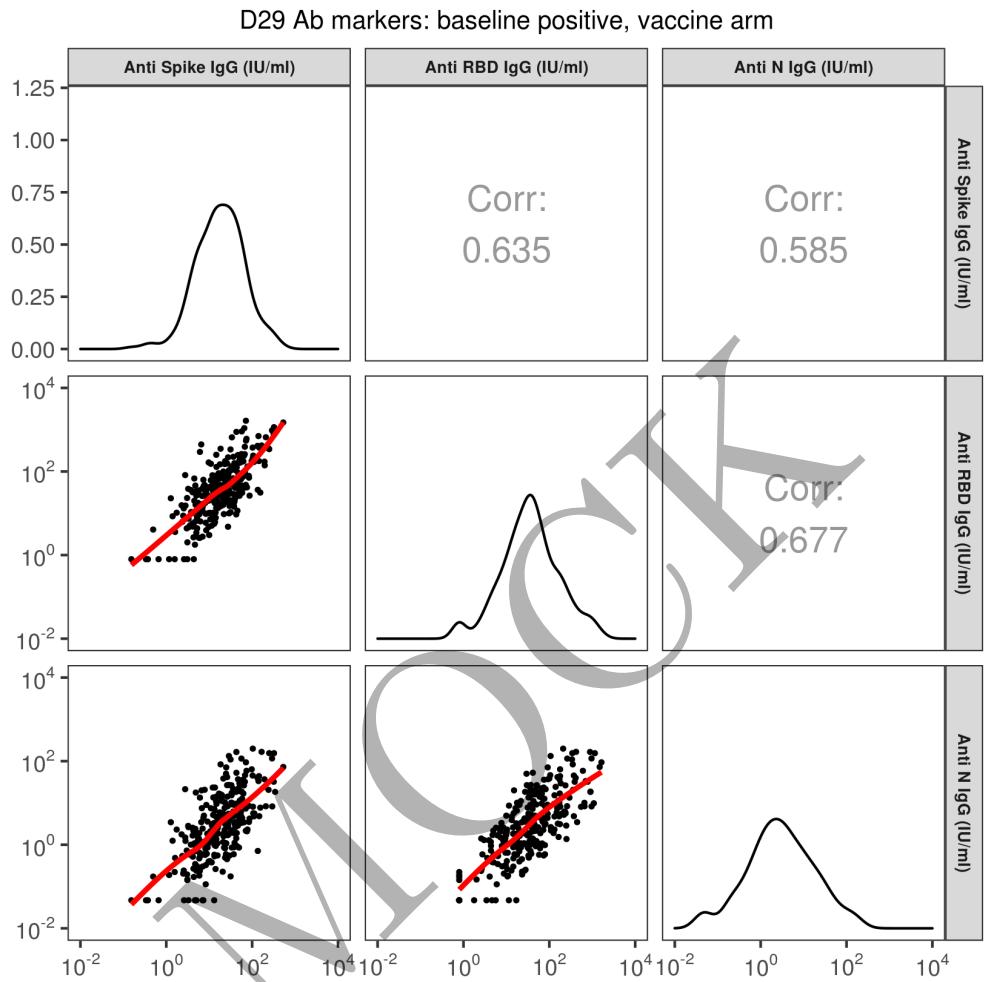


Figure 2.3: Pair plots of D29 Ab markers: baseline positive vaccine arm

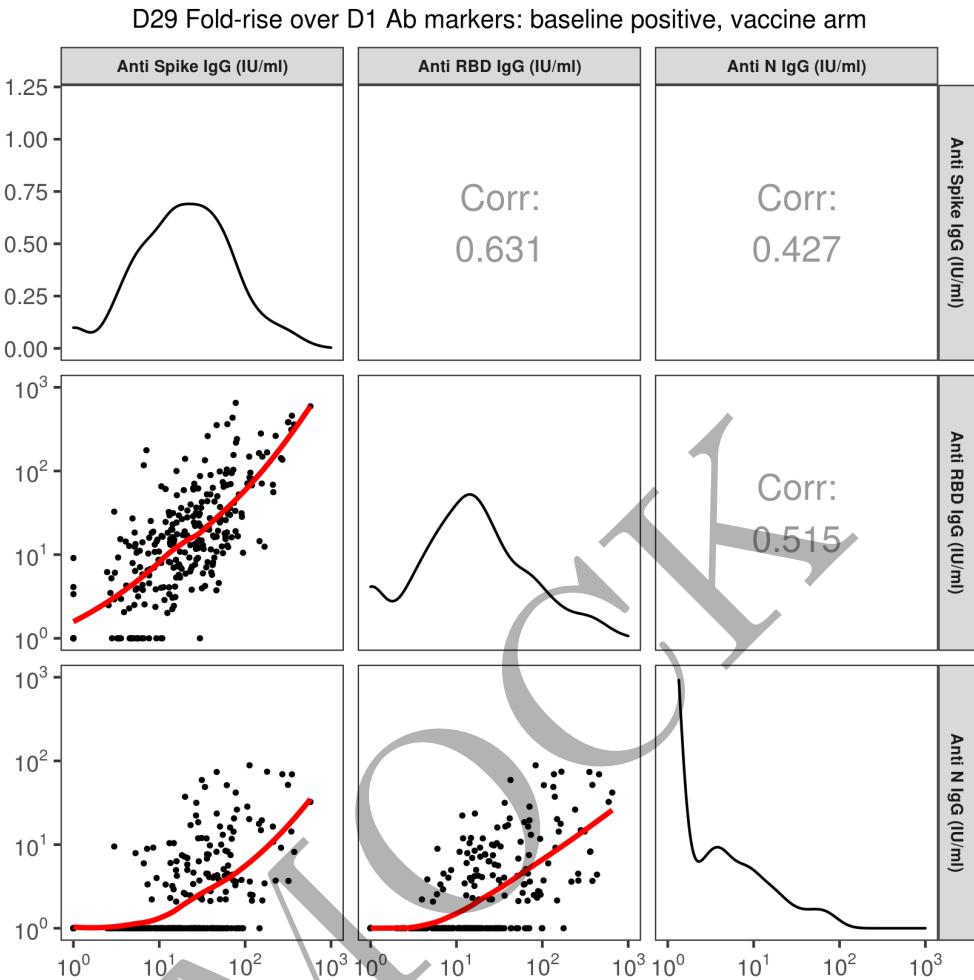


Figure 2.4: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm

2.1.3 Baseline SARS-CoV-2 Positive Placebo Arm

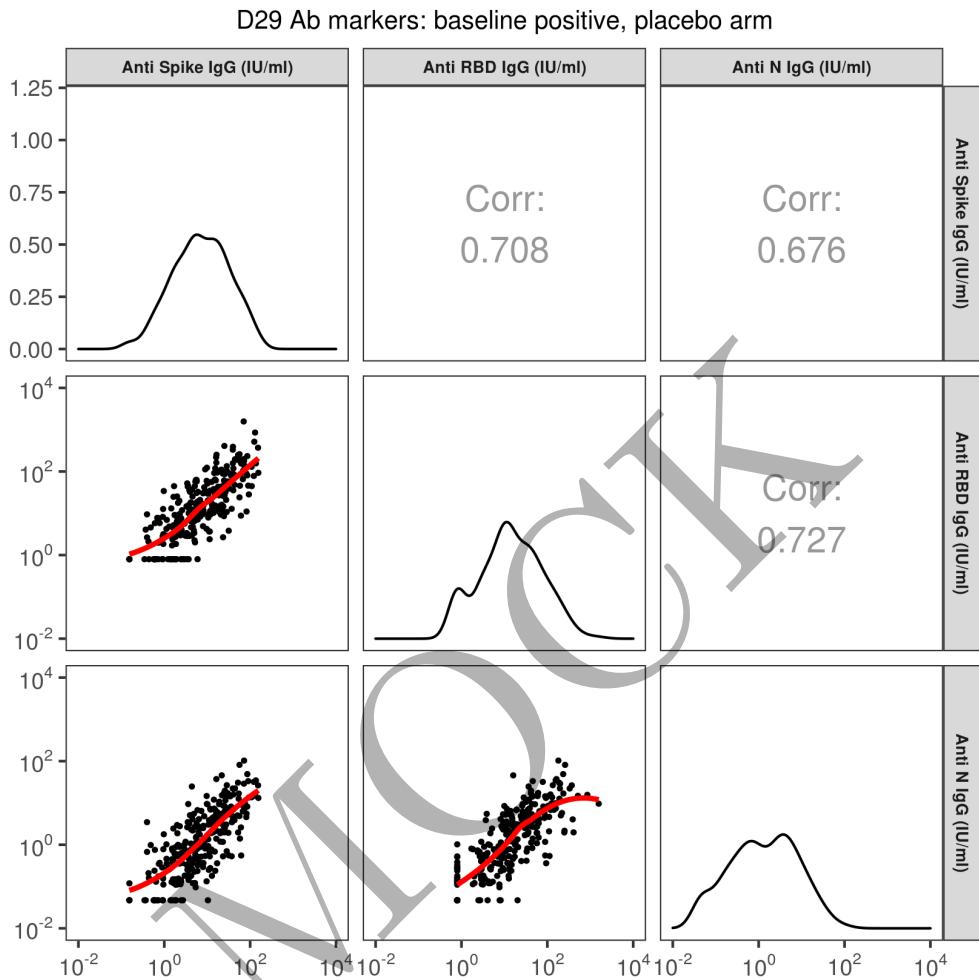


Figure 2.5: Pair plots of D29 Ab markers: baseline positive placebo arm

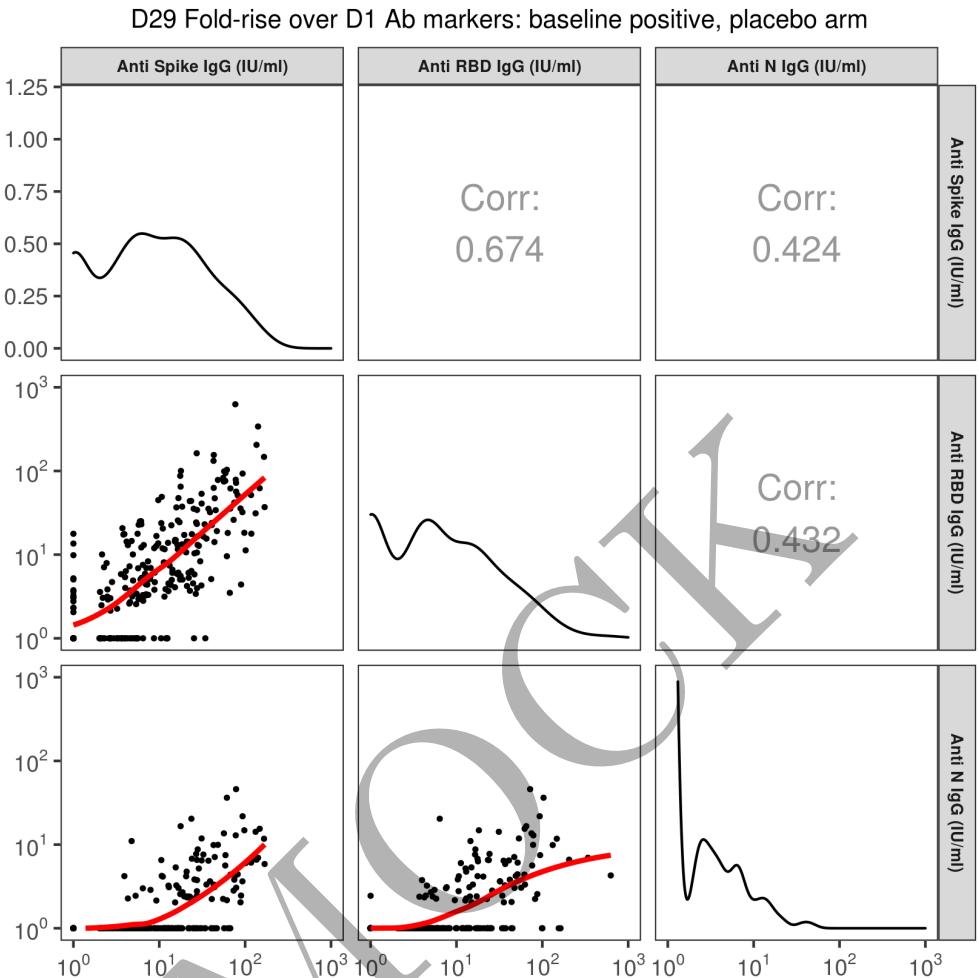


Figure 2.6: Pair plots of D29 fold-rise over D1 Ab markers: baseline positive placebo arm

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

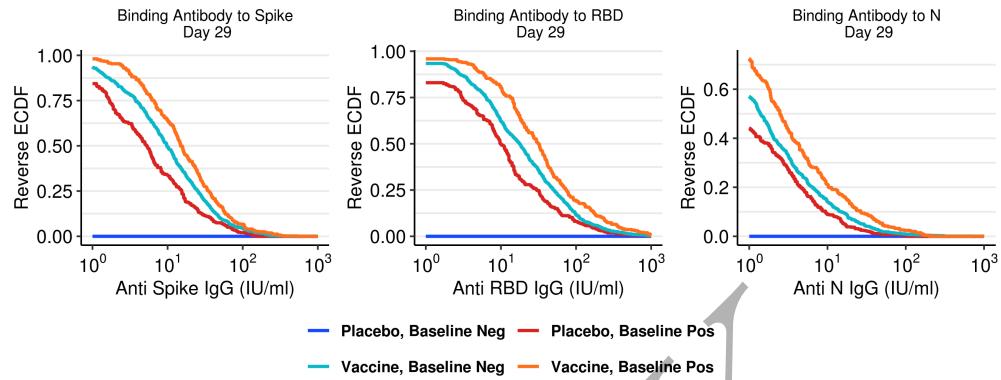


Figure 2.7: RCDF plots for D29 Ab markers: by baseline status x randomization arm

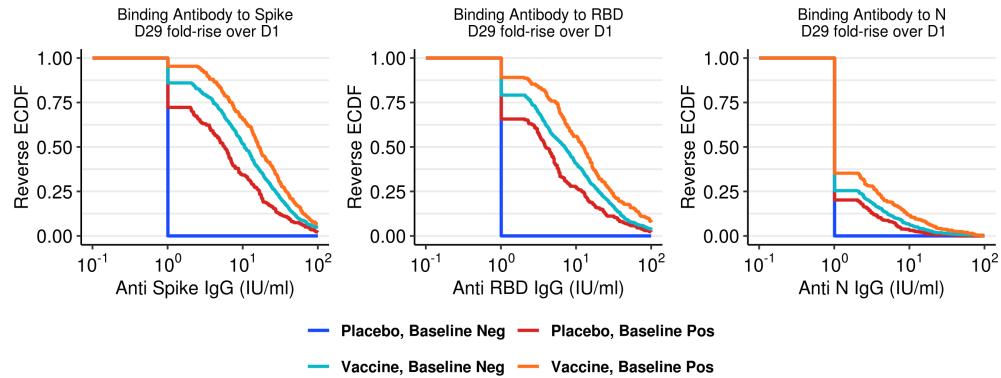


Figure 2.8: RCDF plots for D29 fold-rise over D1 Ab markers: by baseline status x randomization arm



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

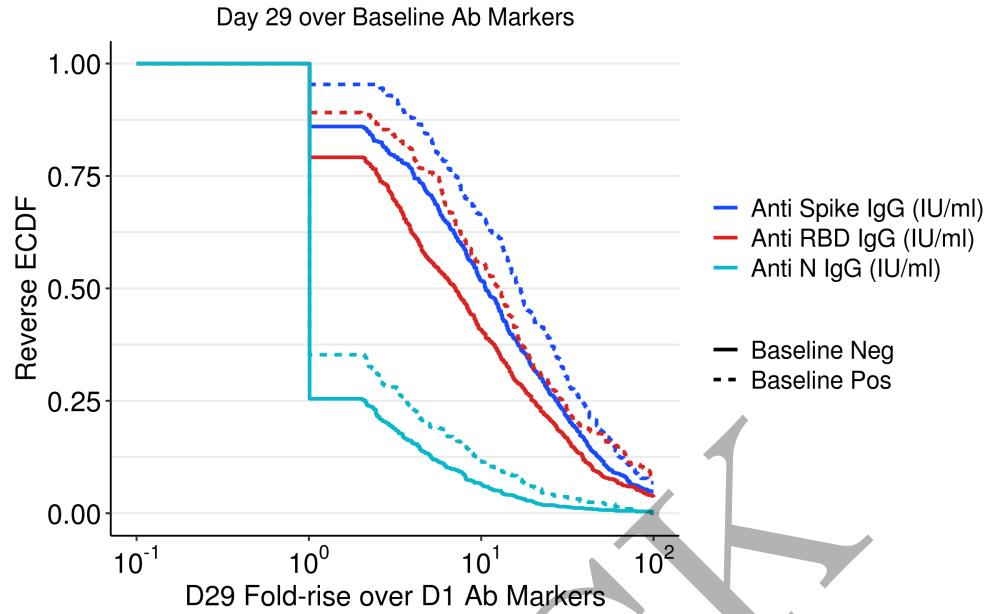


Figure 2.10: RCDF plots for D29 over D1 fold-rise bAb markers: by baseline status for the vaccine arm



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



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



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



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

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

2.3.1 Baseline SARS-CoV-2 Negative

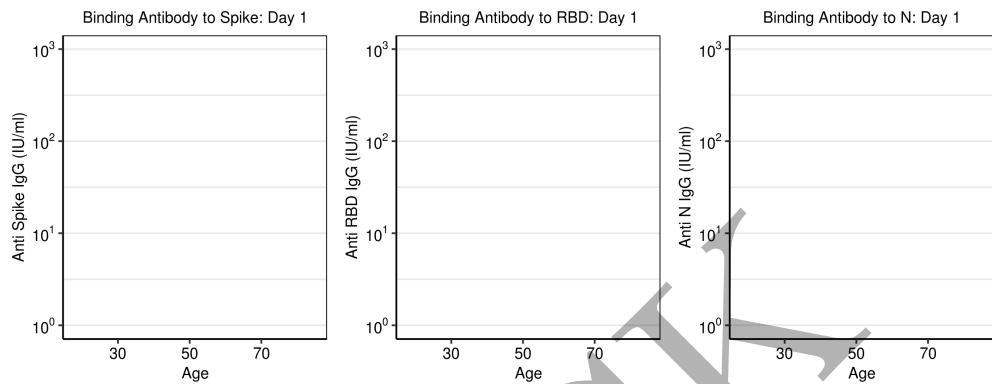


Figure 2.15: Scatter plots for D1 Ab markers vs. age: baseline negative vaccine arm

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

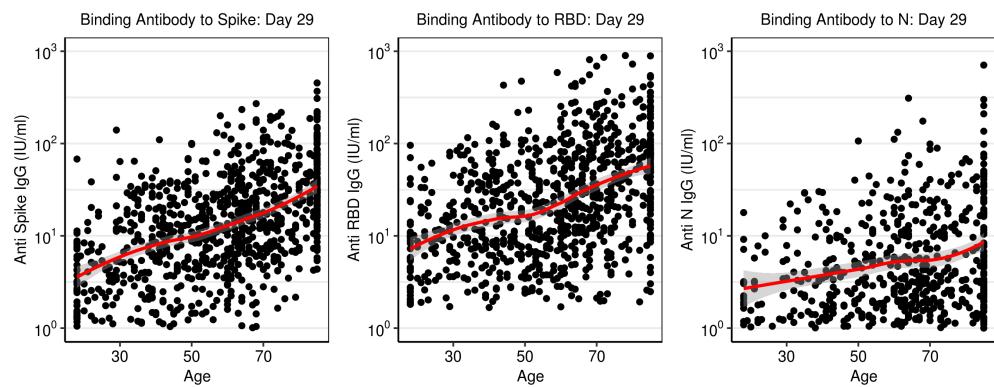


Figure 2.16: Scatter plots for D29 Ab markers vs. age: baseline negative vaccine arm

2.3.2 Baseline SARS-CoV-2 Positive



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

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

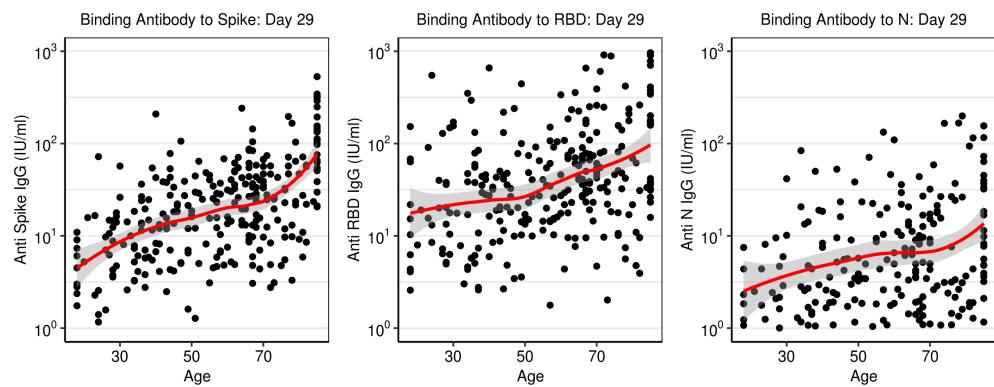


Figure 2.18: Scatter plots for D29 Ab markers vs. age: baseline positive vaccine arm

2.3.3 Baseline SARS-CoV-2 Positive Placebo Arm



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

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

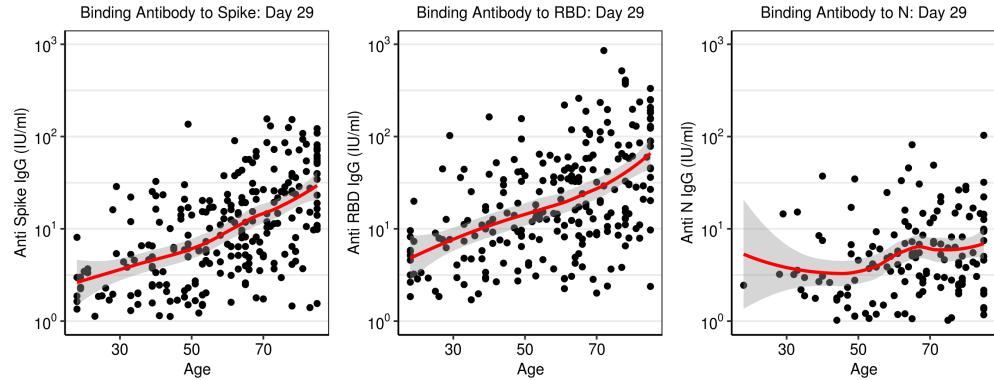


Figure 2.20: Scatter plots for D29 Ab markers vs. age: baseline positive placebo arm

2.3.4 Baseline SARS-CoV-2 Negative Placebo Arm

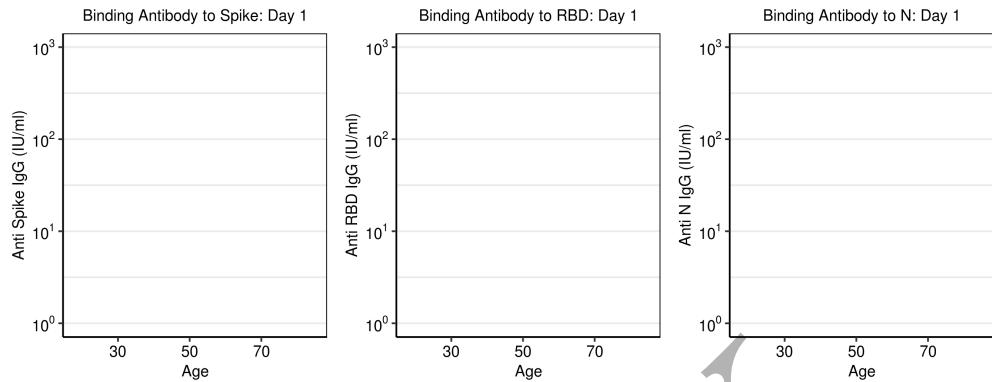


Figure 2.21: Scatter plots for D1 Ab markers vs. age: baseline negative placebo arm

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

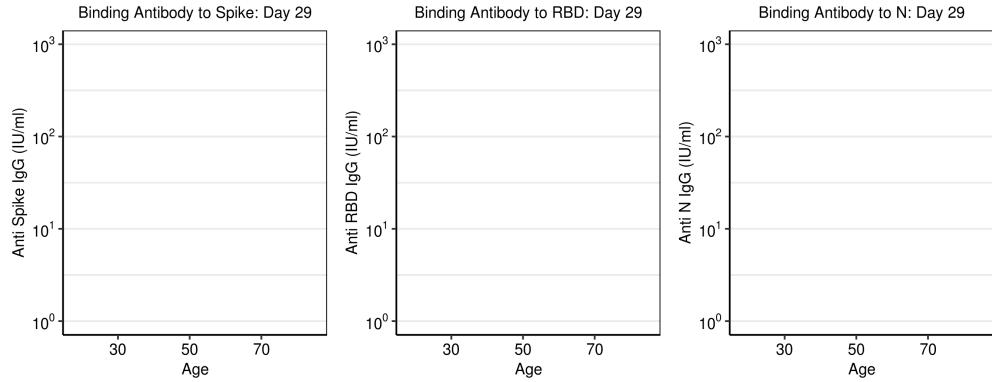


Figure 2.22: Scatter plots for D29 Ab markers vs. age: baseline negative placebo arm

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

2.4.1 Baseline SARS-CoV-2 Negative



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



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

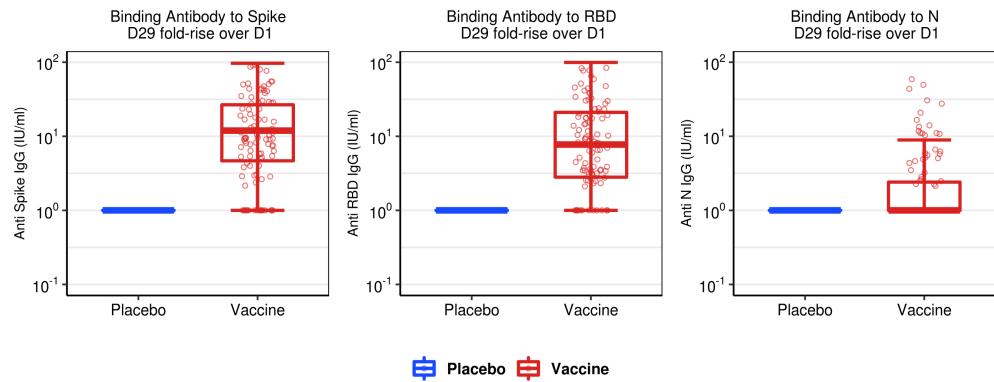


Figure 2.25: Boxplots of D29 fold-rise over D1 Ab markers: baseline negative vaccine + placebo arms

2.4.2 Baseline SARS-CoV-2 Positive

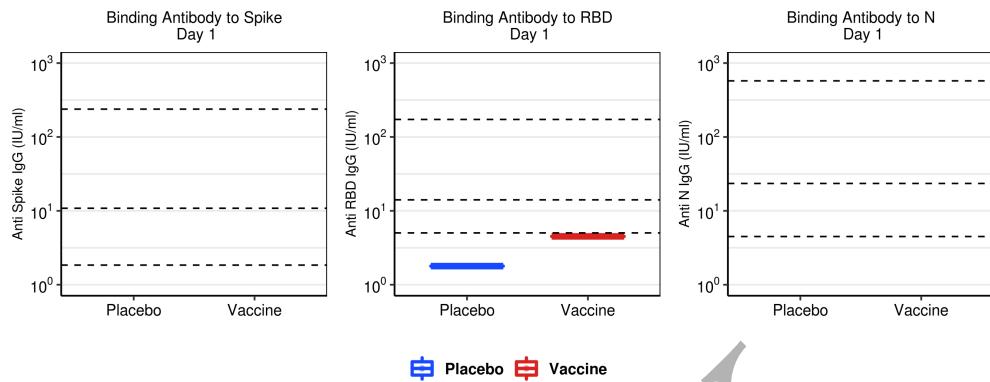


Figure 2.26: Boxplots of D1 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

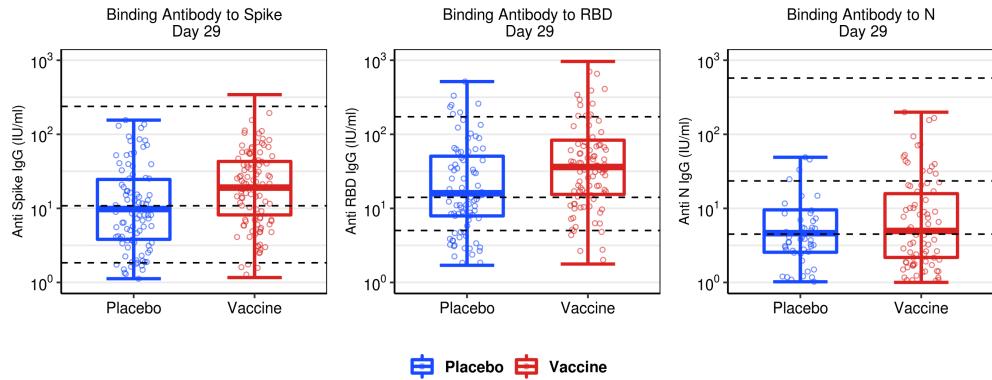


Figure 2.27: Boxplots of D29 Ab markers: baseline positive vaccine + placebo arms. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.



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

2.4.3 Baseline negative vs. positive vaccine recipients



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



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



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

2.4.4 Baseline negative vs. positive placebo recipients



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



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



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

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

2.5.1 Baseline SARS-CoV-2 Negative

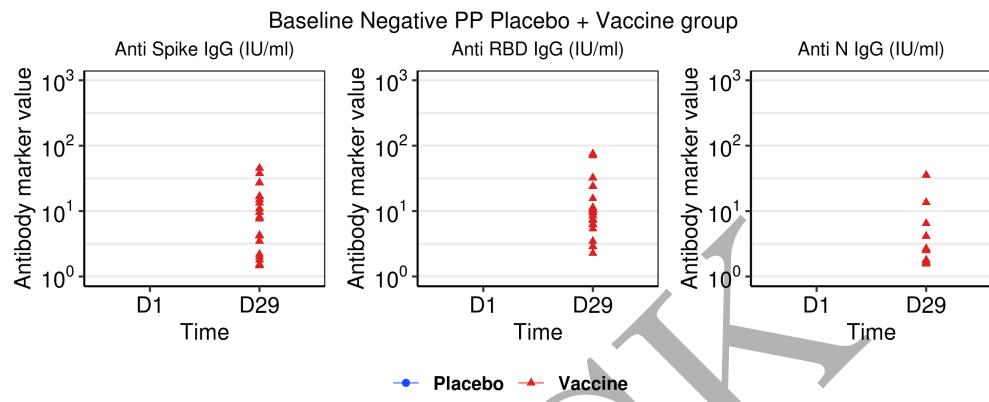


Figure 2.35: Spaghetti plots of Ab markers over time: baseline negative vaccine + placebo arm

2.5.2 Baseline SARS-CoV-2 Positive



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

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

2.6.1 Baseline SARS-CoV-2 Negative

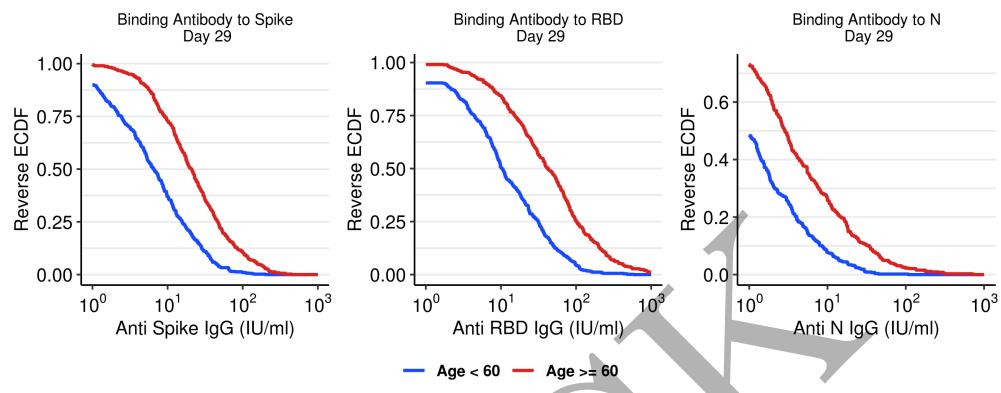


Figure 2.37: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age groups.

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



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

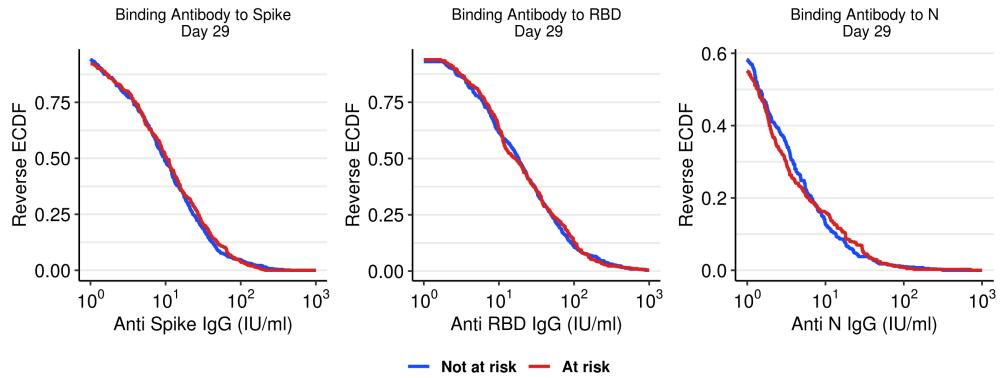


Figure 2.39: RCDF plots for D29 Ab markers: baseline negative vaccine arm by high-risk condition.

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



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

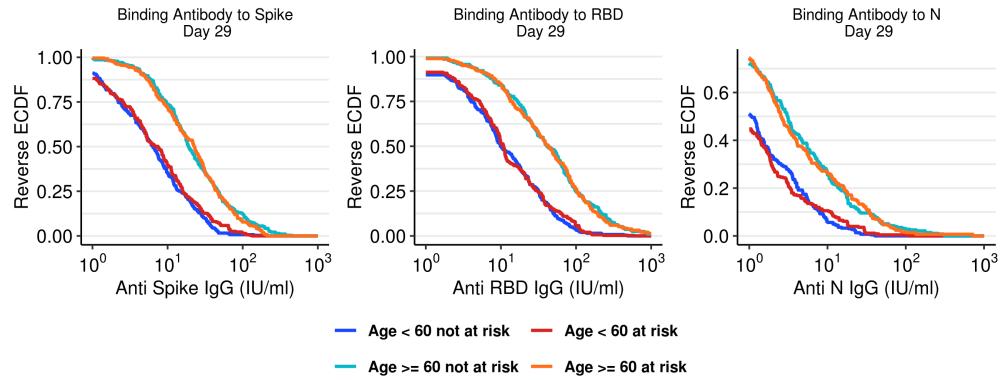


Figure 2.41: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and high-risk condition.

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



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



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

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



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

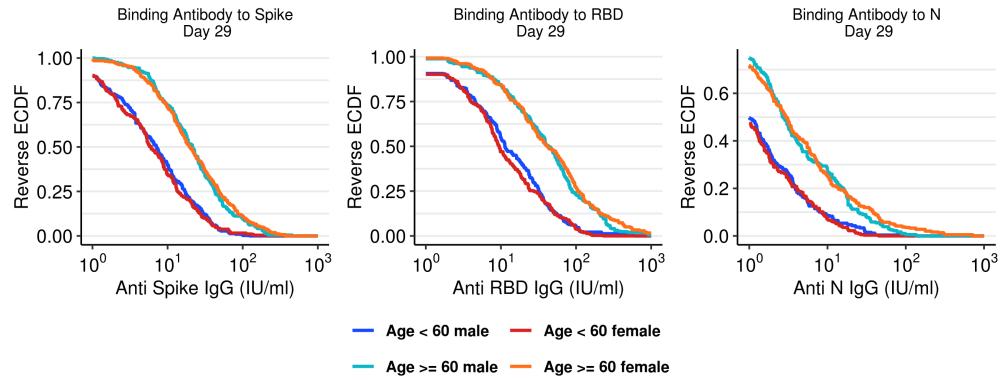


Figure 2.45: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

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

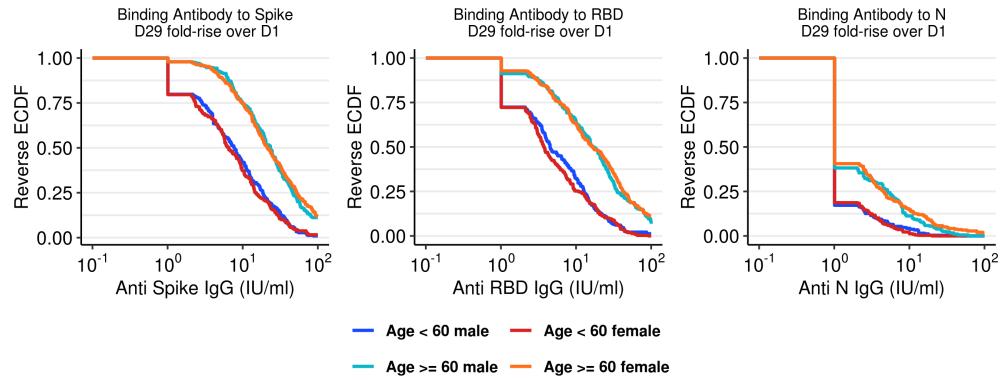


Figure 2.46: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and sex assigned at birth.

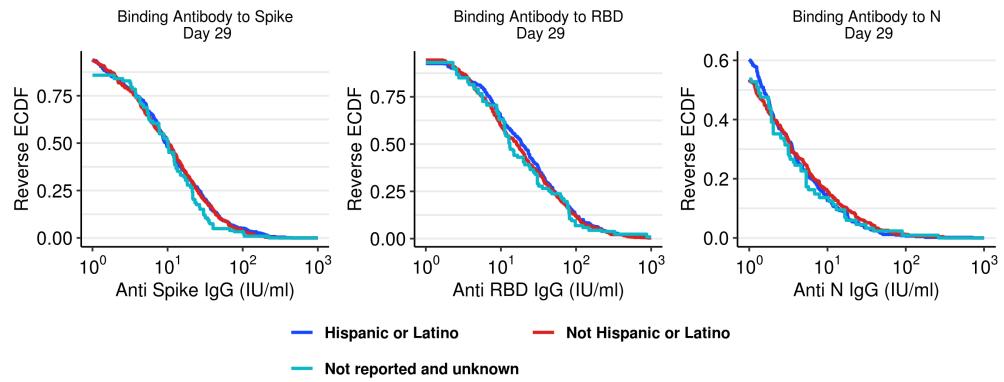


Figure 2.47: RCDF plots for D29 Ab markers: baseline negative vaccine arm by ethnicity.

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



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

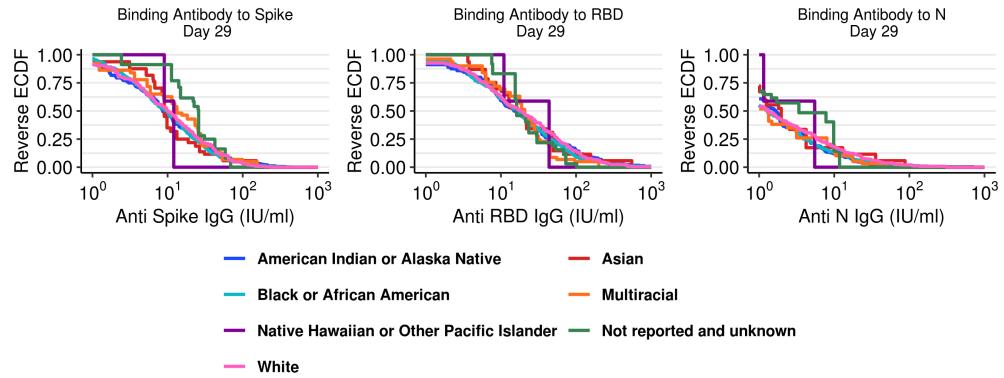


Figure 2.49: RCDF plots for D29 Ab markers: baseline negative vaccine arm by race.

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



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

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

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



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

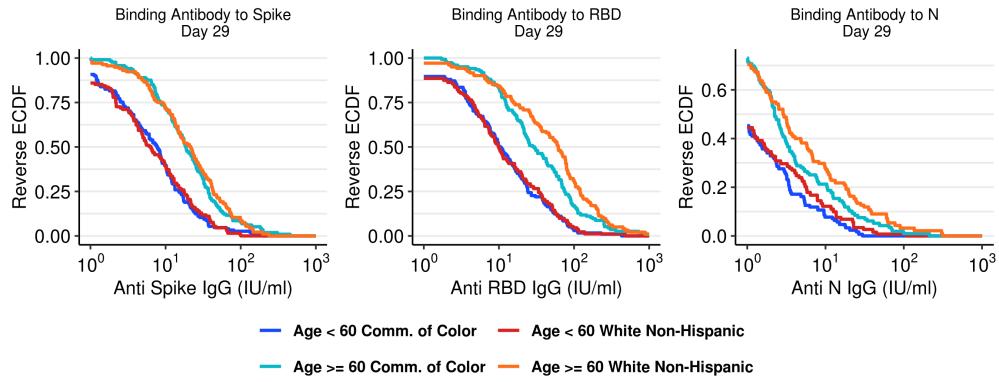


Figure 2.53: RCDF plots for D29 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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

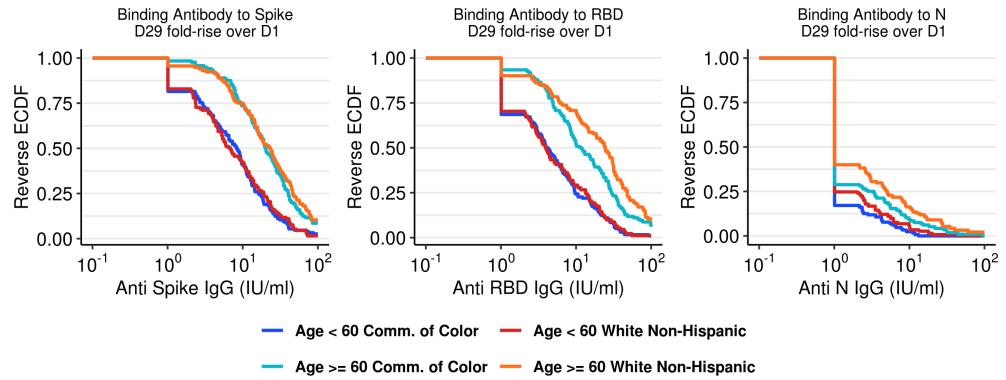


Figure 2.54: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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

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

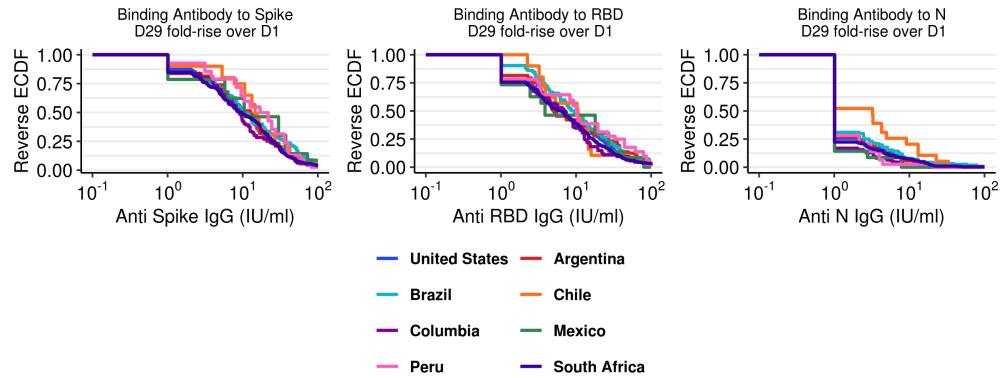


Figure 2.56: RCDF plots for D29 fold-rise over D1 Ab markers: baseline negative vaccine arm by country of residence.

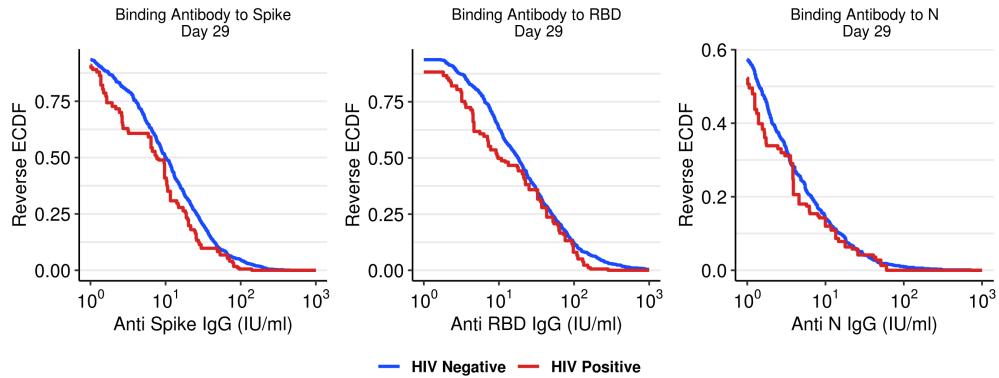


Figure 2.57: RCDF plots for D29 Ab markers: baseline negative vaccine arm by HIV positivity.

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



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

2.6.2 Baseline SARS-CoV-2 Positive



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

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



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

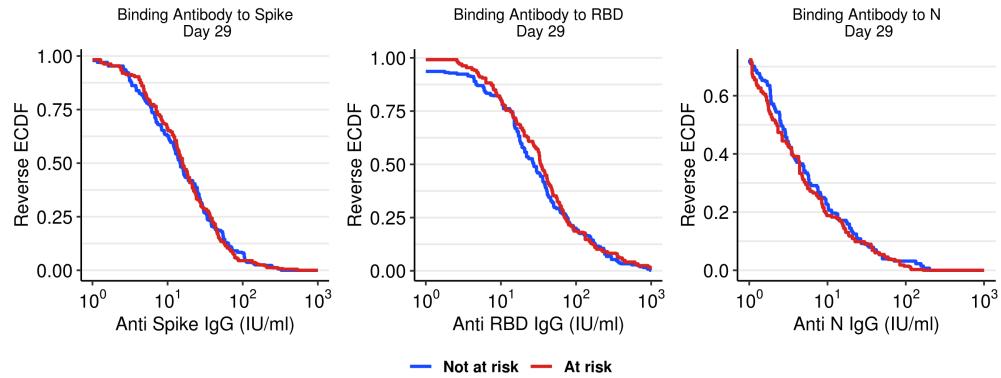


Figure 2.61: RCDF plots for D29 Ab markers: baseline positive vaccine arm by high-risk condition.

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



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

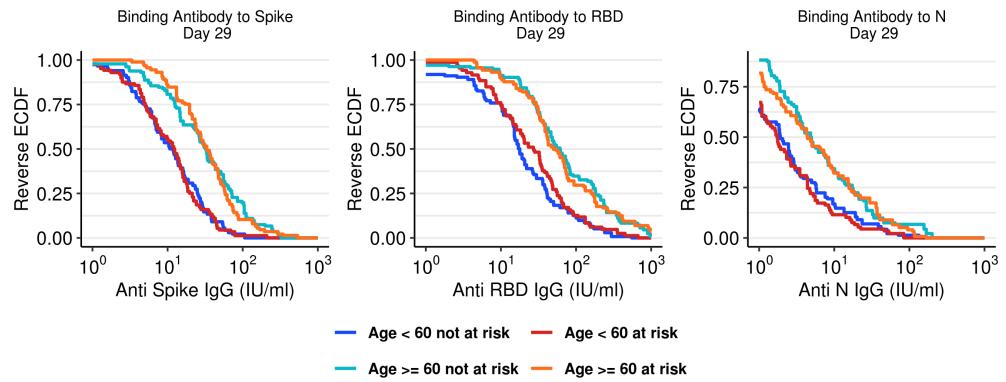


Figure 2.63: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and high-risk condition.

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

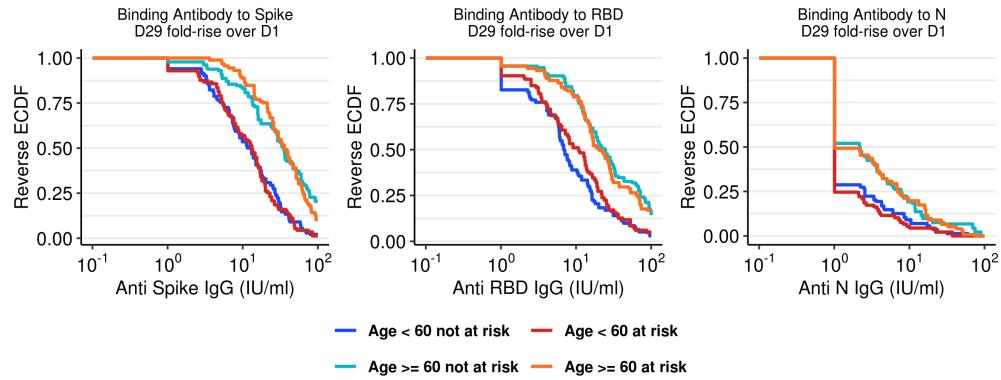


Figure 2.64: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.



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

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



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

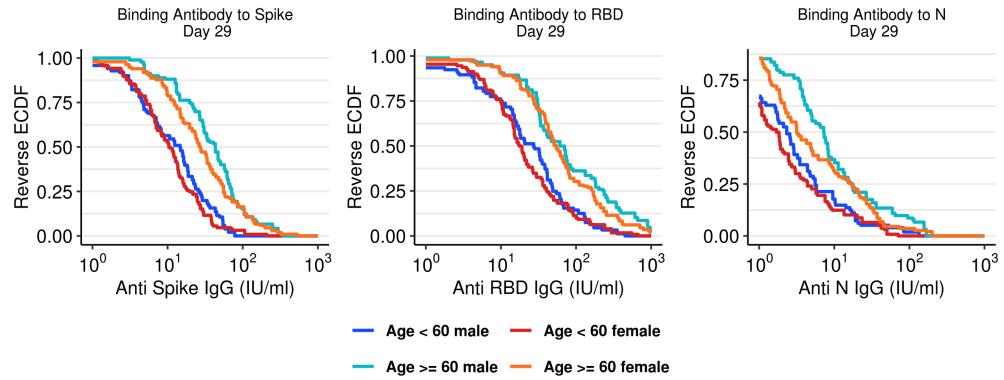


Figure 2.67: RCDF plots for D29 Ab markers: baseline positive vaccine arm by age and sex assigned at birth.

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



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

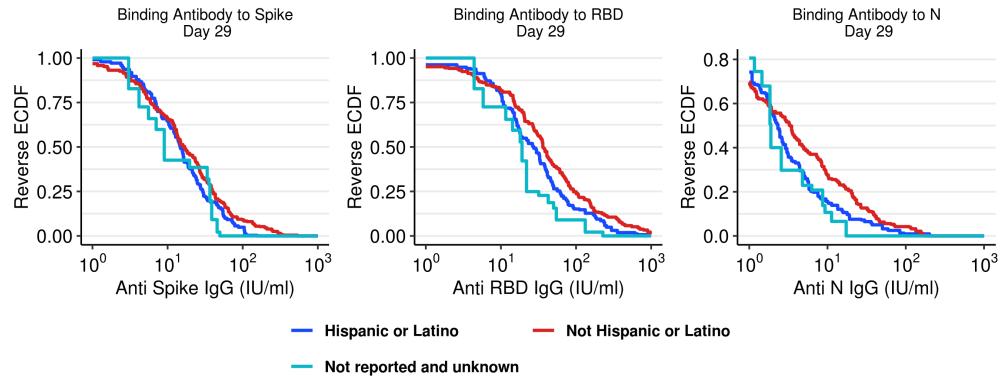


Figure 2.69: RCDF plots for D29 Ab markers: baseline positive vaccine arm by ethnicity.

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



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

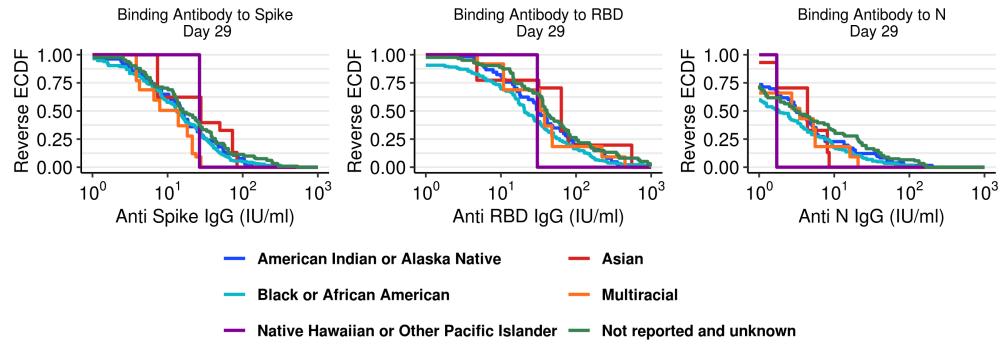


Figure 2.71: RCDF plots for D29 Ab markers: baseline positive vaccine arm by race.

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



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

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

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

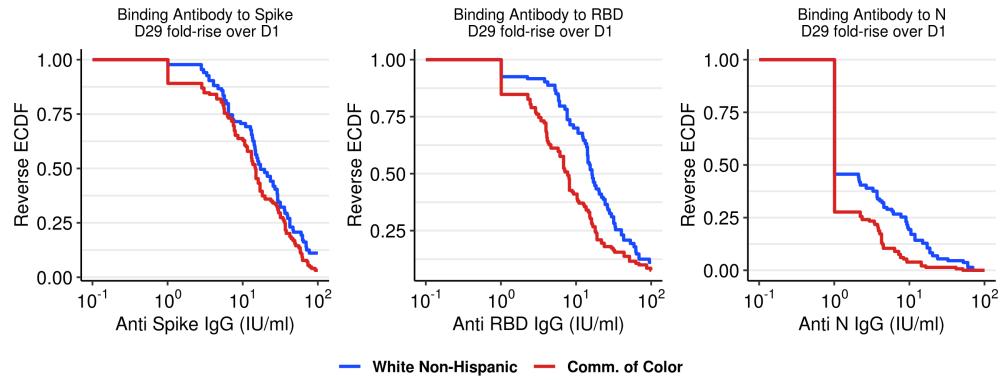


Figure 2.74: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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

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

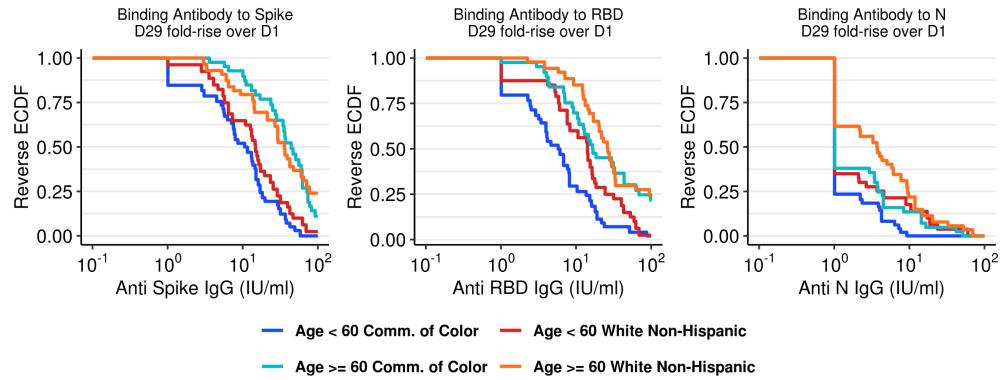


Figure 2.76: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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

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

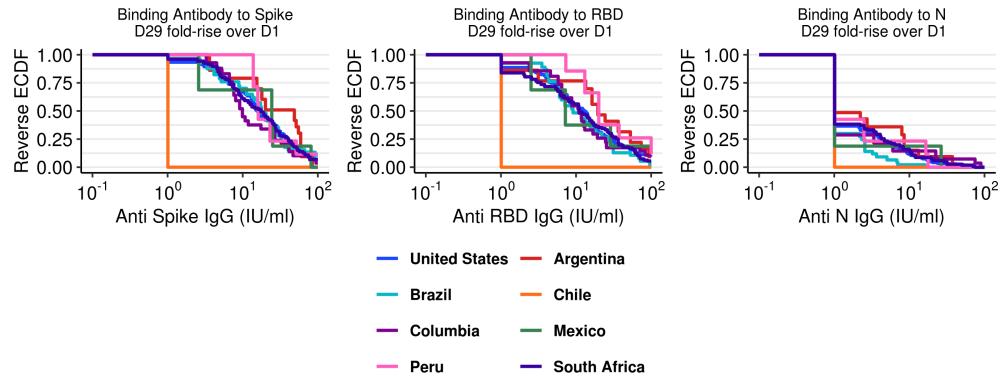


Figure 2.78: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by country of residence.



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

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



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

2.6.3 Baseline SARS-CoV-2 Positive Placebo Arm



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

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



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



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

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



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

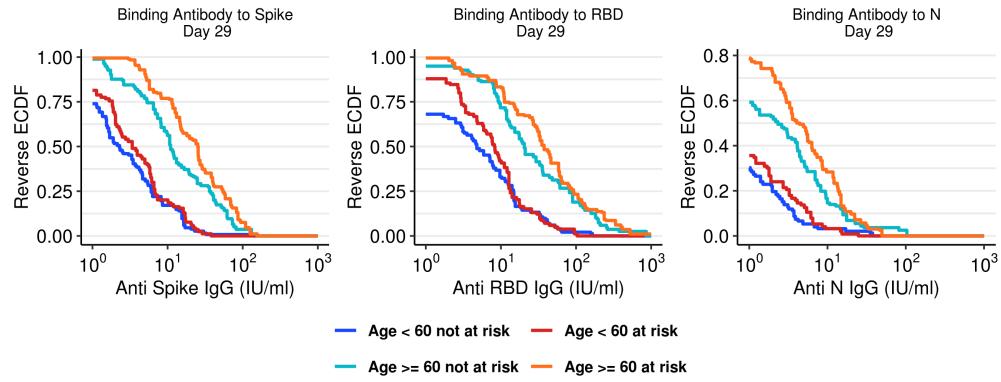


Figure 2.85: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and high-risk condition.

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



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



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

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

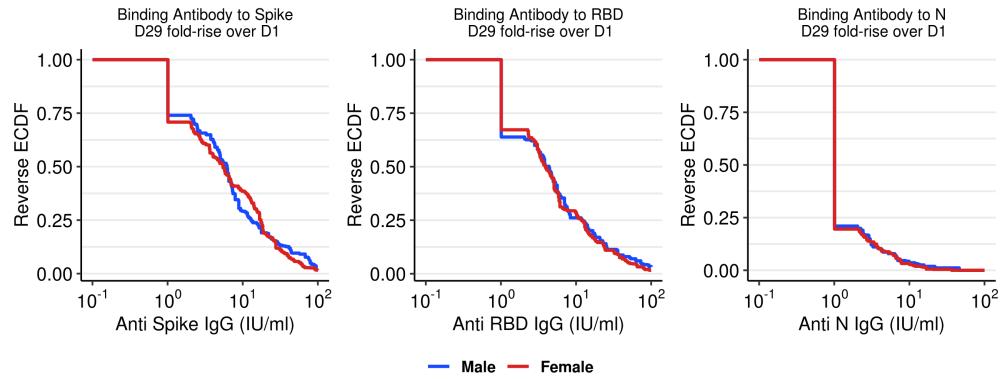


Figure 2.88: RCDF plots for D29 fold-rise over D1 Ab markers: baseline positive placebo arm by sex assigned at birth.



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

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



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

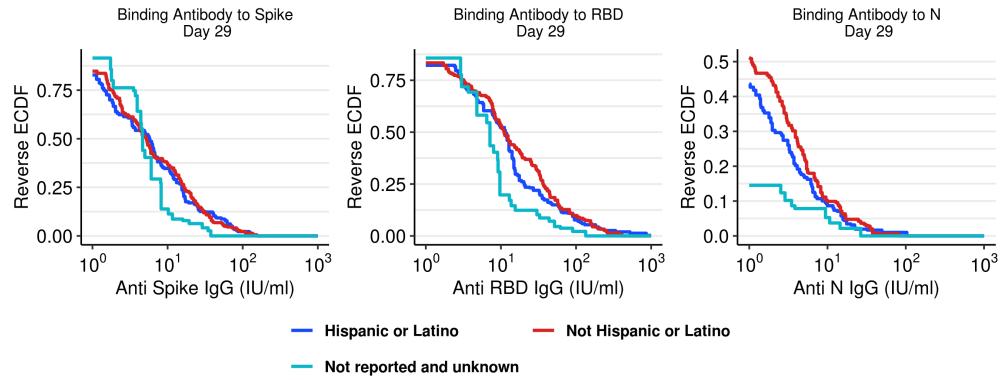


Figure 2.91: RCDF plots for D29 Ab markers: baseline positive placebo arm by ethnicity.

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



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



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

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



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

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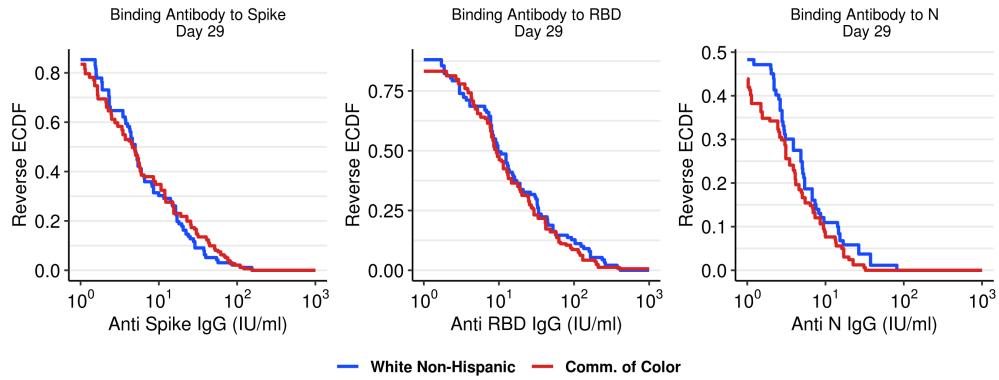


Figure 2.95: RCDF plots for D29 Ab markers: baseline positive placebo arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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



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

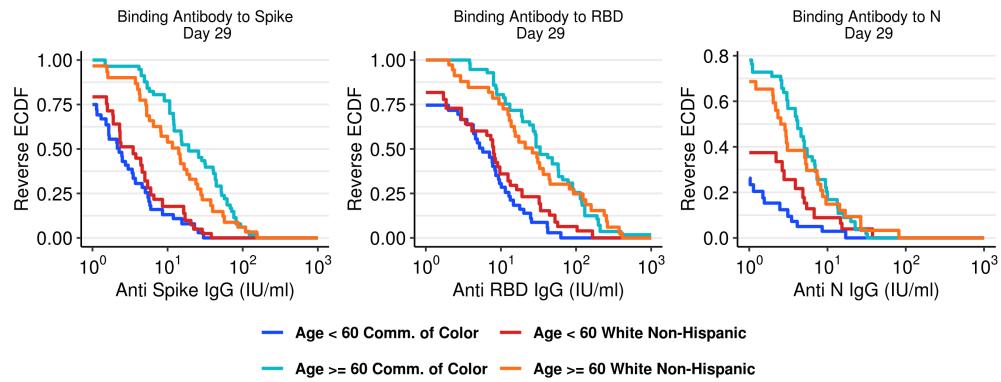


Figure 2.97: RCDF plots for D29 Ab markers: baseline positive placebo arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

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



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



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

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



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

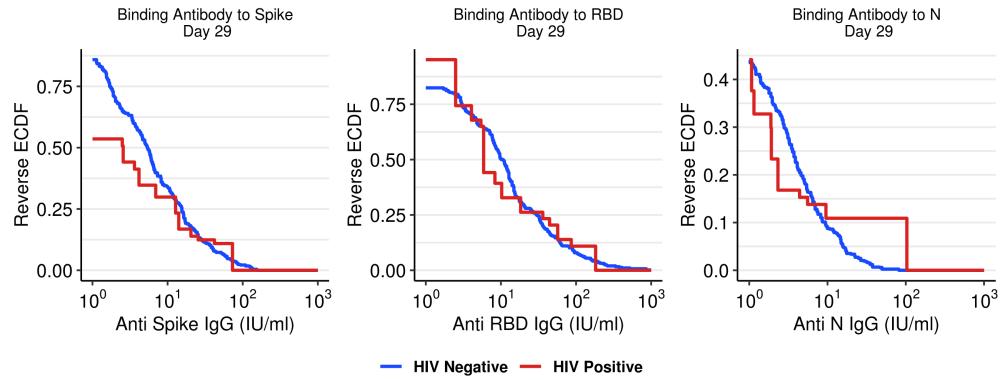


Figure 2.101: RCDF plots for D29 Ab markers: baseline positive placebo arm by HIV positivity.

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



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

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

2.7.1 Baseline SARS-CoV-2 Negative



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

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



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

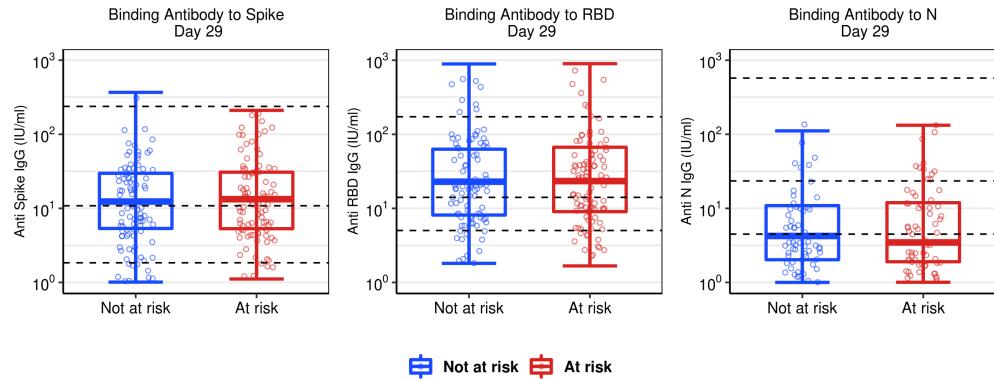


Figure 2.105: Boxplots of D29 Ab markers: Baseline negative vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

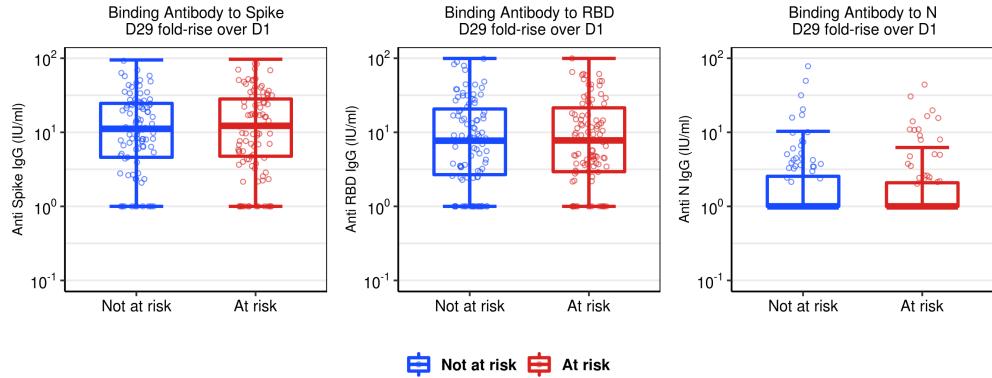


Figure 2.106: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by high-risk condition.



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

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



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



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

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



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



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

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



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

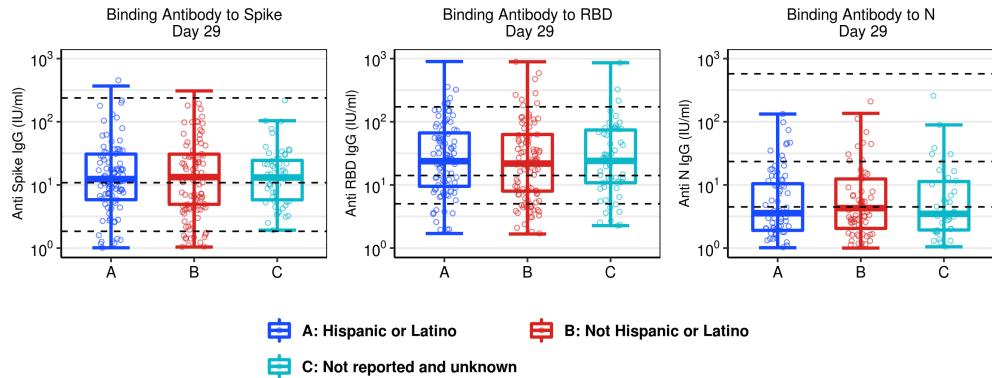


Figure 2.113: Boxplots of D29 Ab markers: Baseline negative vaccine arm by ethnicity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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



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

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



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

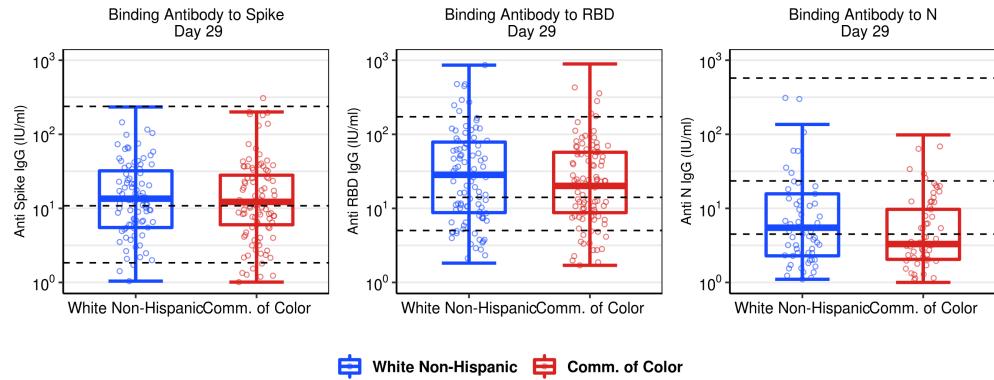


Figure 2.117: Boxplots of D29 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial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

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

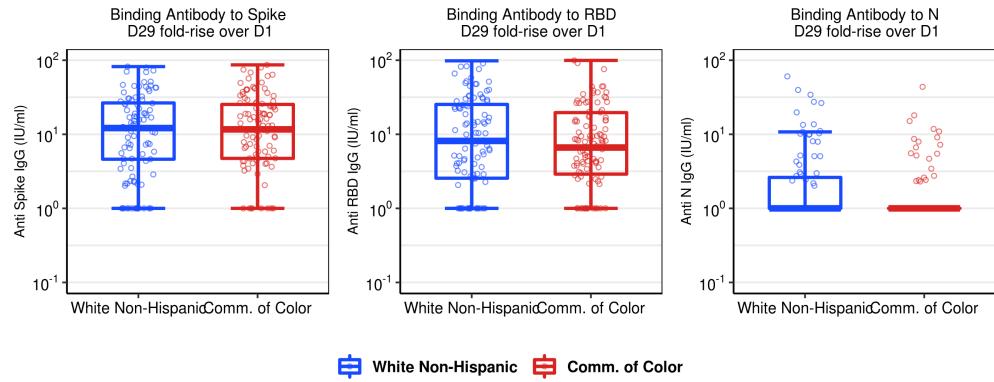


Figure 2.118: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

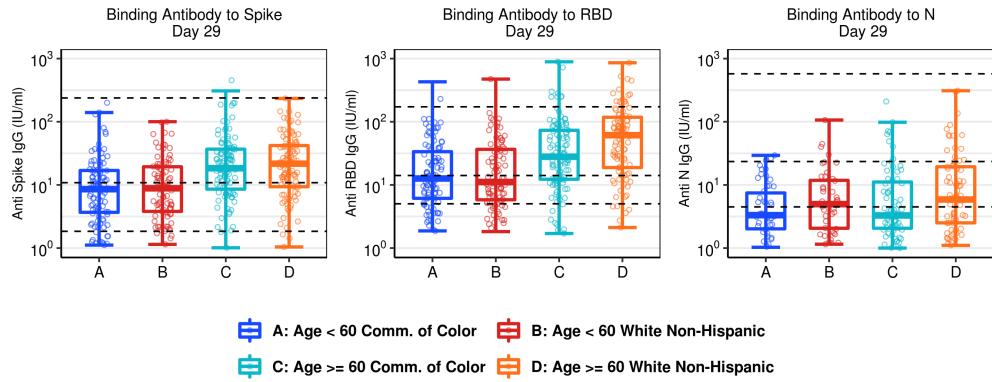


Figure 2.119: Boxplots of D29 Ab markers: Baseline negative vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States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

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



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

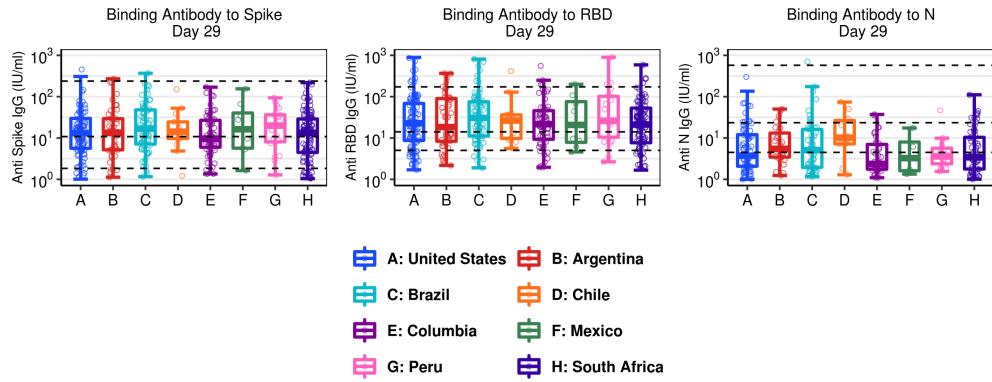


Figure 2.121: Boxplots of D29 Ab markers: Baseline negative vaccine arm by country of residence. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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

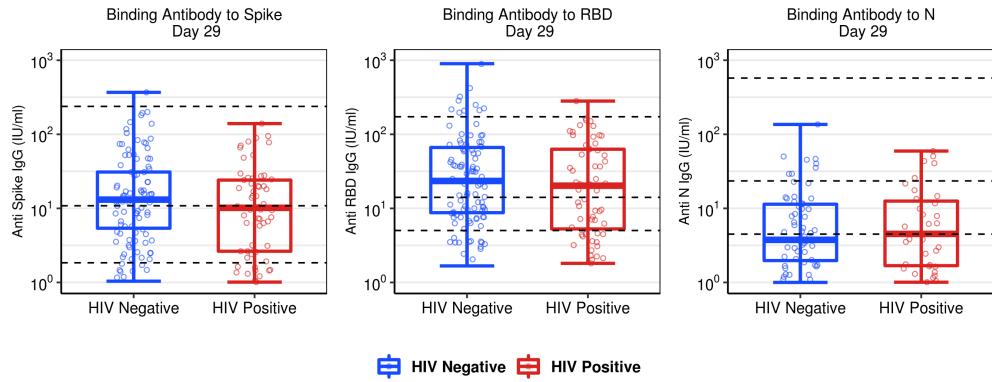


Figure 2.123: Boxplots of D29 Ab markers: Baseline negative vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

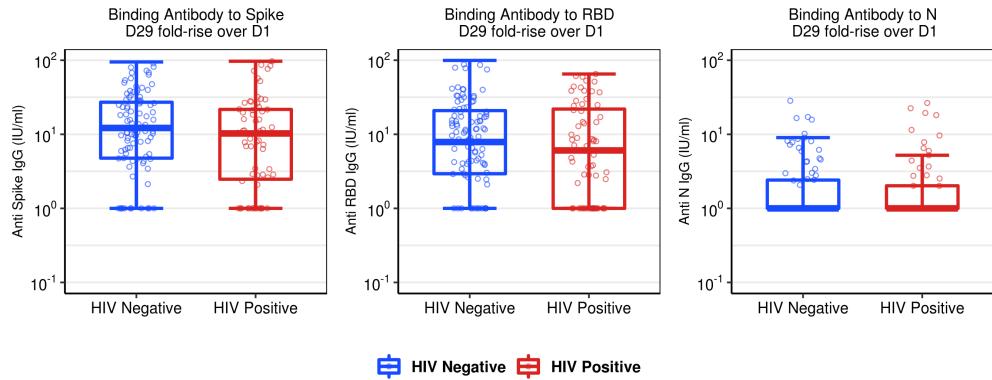


Figure 2.124: Boxplots of D29 fold-rise over D1 Ab markers: Baseline negative vaccine arm by HIV positivity.

2.7.2 Baseline SARS-CoV-2 Positive



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

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



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

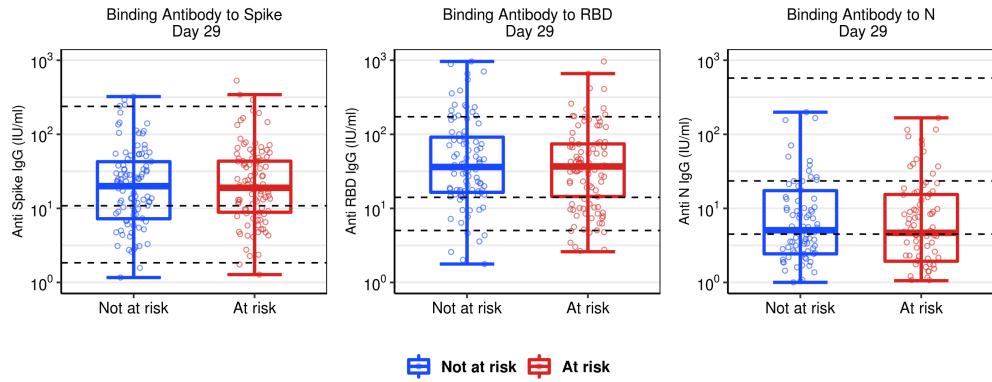


Figure 2.127: Boxplots of D29 Ab markers: baseline positive vaccine arm by high-risk condition. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

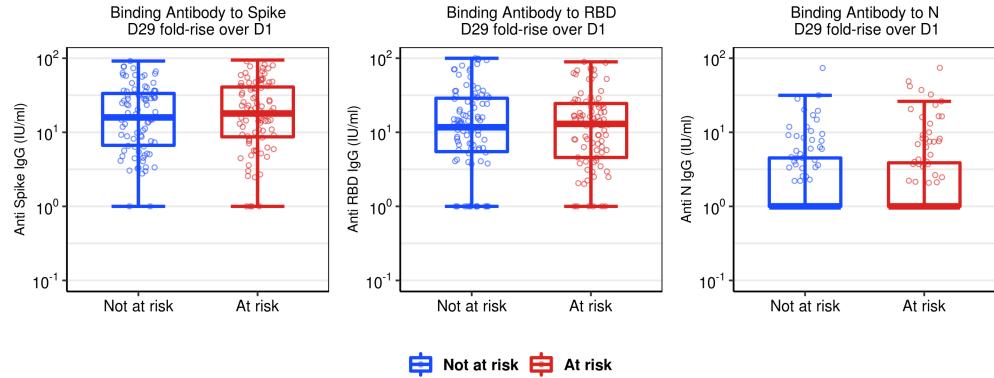


Figure 2.128: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by high-risk condition.



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

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

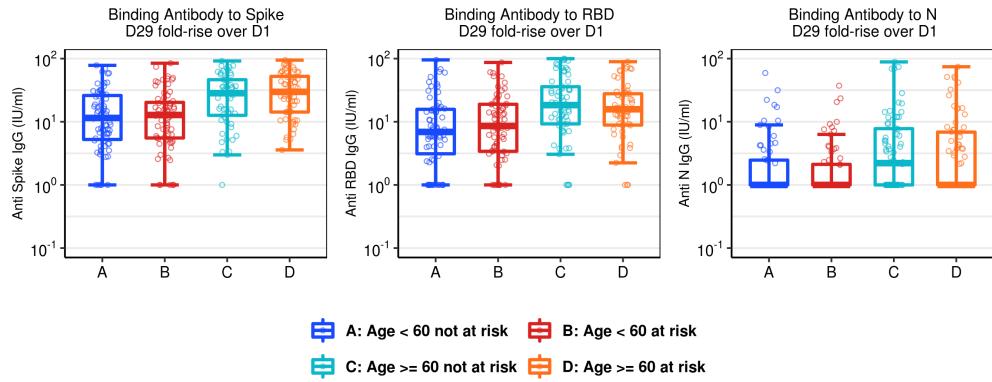


Figure 2.130: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and high-risk condition.

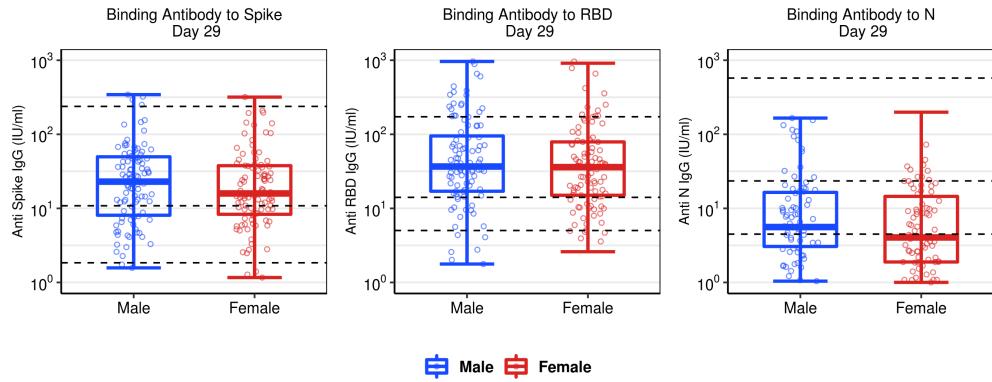


Figure 2.131: Boxplots of D29 Ab markers: baseline positive vaccine arm by sex assigned at birth. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

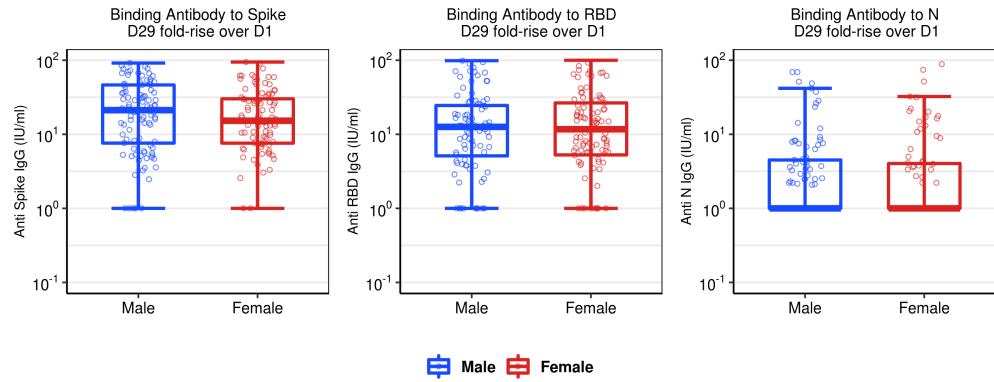


Figure 2.132: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by sex assigned at birth.



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

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



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

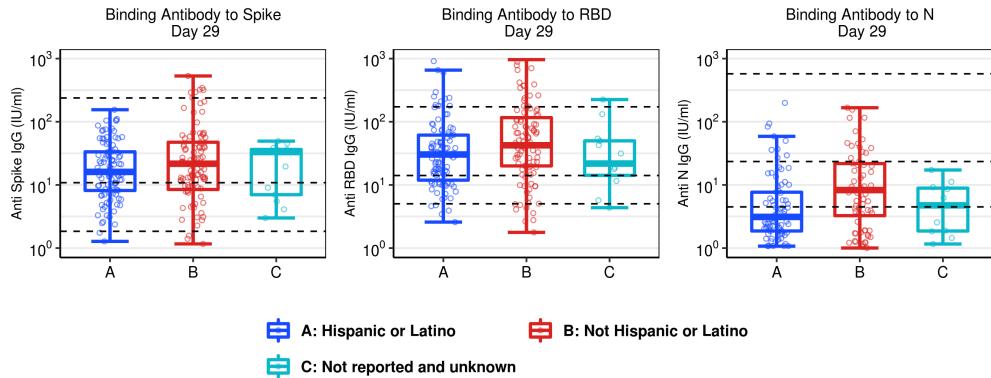


Figure 2.135: Boxplots of D29 Ab markers: baseline positive vaccine arm by ethnicity The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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

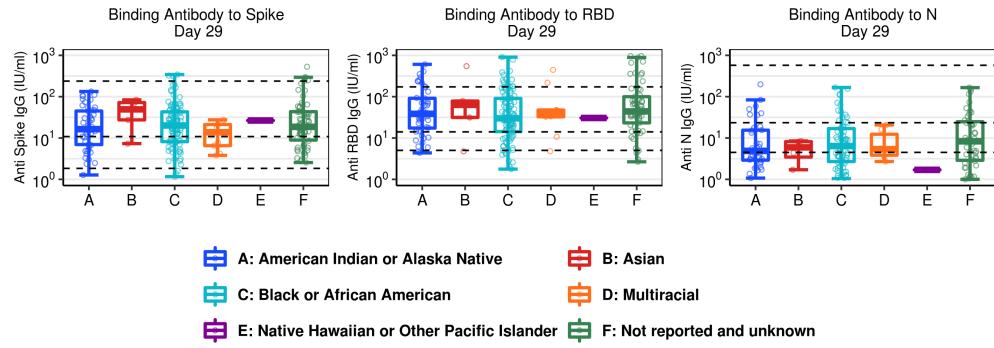


Figure 2.137: Boxplots of D29 Ab markers: baseline positive vaccine arm by race. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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

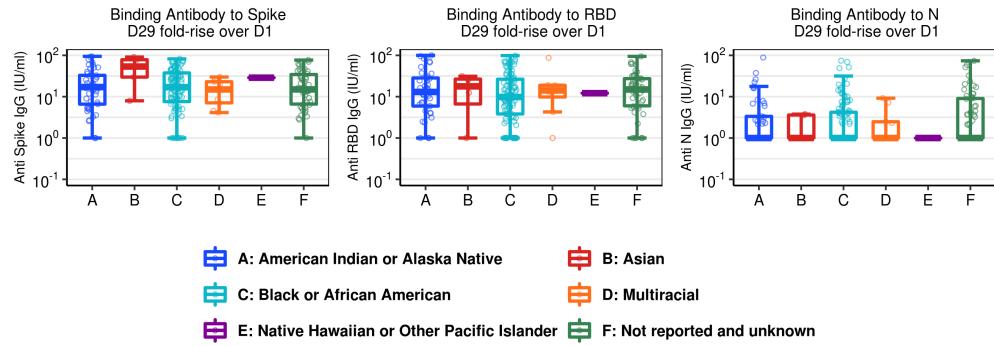


Figure 2.138: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by race.

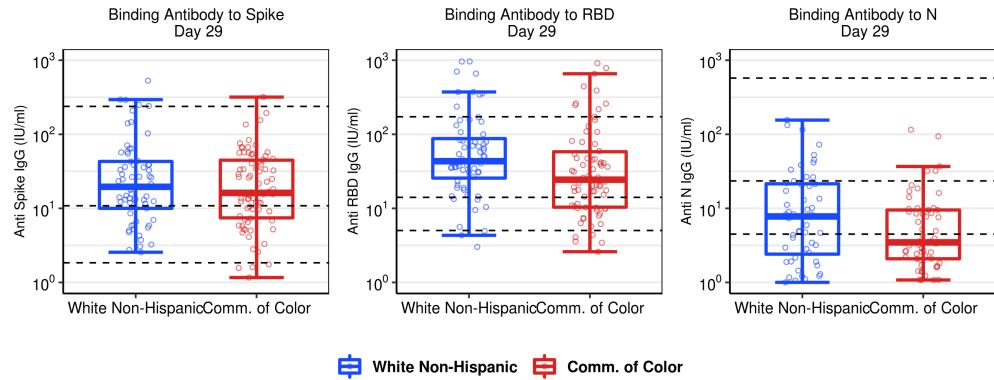


Figure 2.139: Boxplots of D29 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States trial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

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

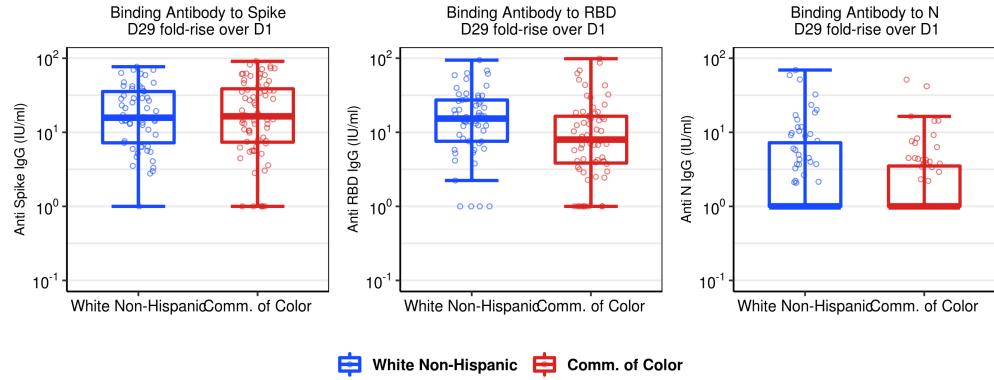


Figure 2.140: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.

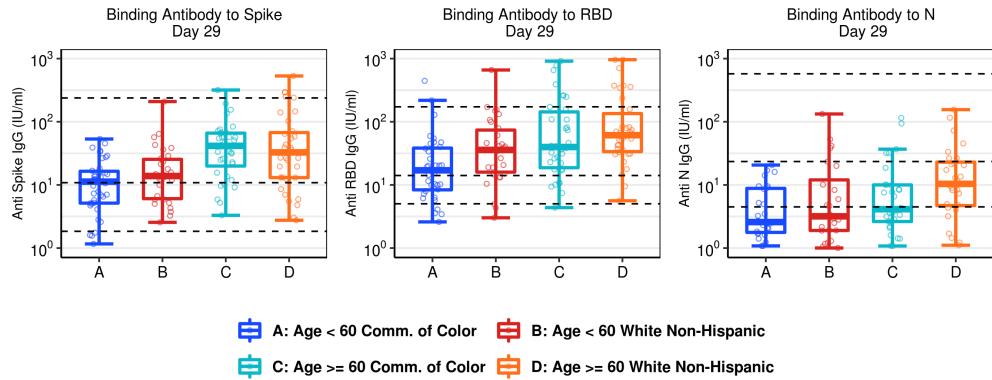


Figure 2.141: Boxplots of D29 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays. These plots are restricted to only United States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

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

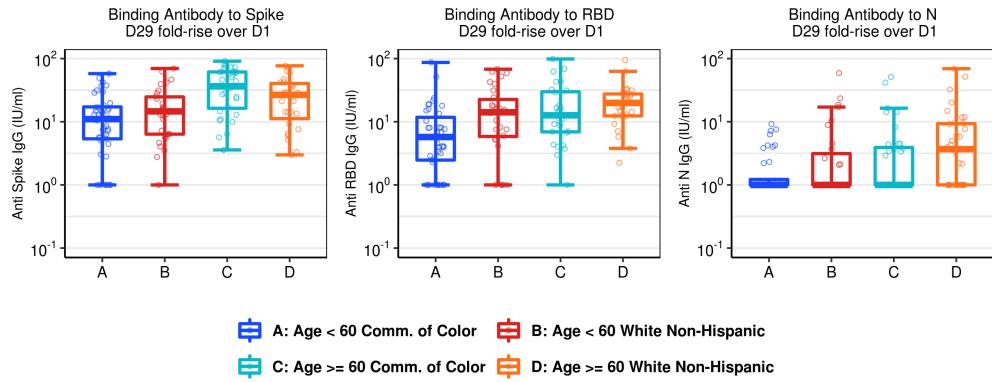


Figure 2.142: Boxplots of D29 fold-rise over D1 Ab markers: baseline positive vaccine arm by age and dichotomous classification of race and ethnic group. These plots are restricted to only United States trial participants.



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

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



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

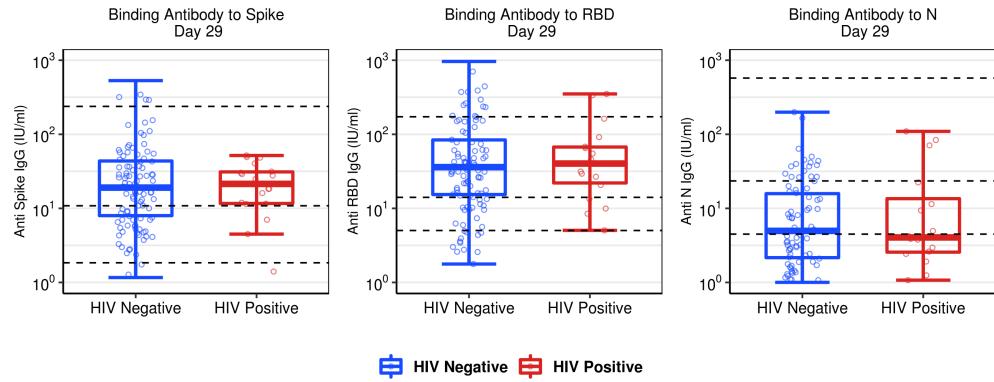


Figure 2.145: Boxplots of D29 Ab markers: baseline positive vaccine arm by HIV positivity. The three dashed lines in each figure are ULOQ, positivity cut-off, LLOQ from top to bottom for binding antibody assays.

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



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

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MOCK

Chapter 3

Appendix

- This report was built from the [CoVPN/correlates_reporting](#) repository with commit hash 63c74713482d25db2923861ba343e82314c3e419. A diff of the changes introduced by that commit may be viewed at https://github.com/CoVPN/correlates_reporting/commit/63c74713482d25db2923861ba343e82314c3e419
- The sha256 hash sum of the raw input file, “COVID_ENSEMBLE_practicedata.csv”: c5c374aafab433f963f8b9a6426b1ff
- The sha256 hash sum of the processed file, “janssen_pooled_mock_data_processed.csv”: 5d6af1d6b6307d64f61e32e01a297faedb5e41c17bcedb7807f46f4f8200c75