Table S1. Clinical Characteristics of the External Validation Cohort, Stratified by postDose 2 Antibody Response.
MMF, mycophenolate mofetil. Continuous variables are shown in median [IQR] and categorical variables in N (%).
|                     | Negative (n=292) | Positive (n=220) |
|---------------------|------------------|------------------|
| **Age (y)**         | 60 [51, 67]      | 62 [52, 69]      |
| **Male sex**        | 166 (56.8)       | 141 (64.1)       |
| **Non-white race**  | 73 (25.0)        | 54 (24.5)        |
| **Organ transplanted** |                 |                  |
| Kidney              | 124 (42.5)       | 59 (26.8)        |
| Liver               | 58 (19.9)        | 57 (25.9)        |
| Pancreas            | 26 (8.9)         | 24 (10.9)        |
| Heart               | 24 (8.2)         | 20 (9.1)         |
| Lung                | 60 (20.5)        | 60 (27.3)        |
| Intestine           | 0 (0.0)          | 0 (0.0)          |
| Other               | 0 (0.0)          | 0 (0.0)          |
| **Time since transplant (y)** | 2 [1, 4]      | 3 [2, 8]        |
| **Immunosuppressive agents** |            |                  |
| MMF                 | 250 (85.6)       | 134 (60.9)       |
| Tacrolimus          | 266 (91.1)       | 198 (90.0)       |
| Corticosteroids     | 254 (87.0)       | 179 (81.4)       |
| Azathioprine        | 6 (2.1)          | 11 (5.0)         |
| Sirolimus           | 21 (7.2)         | 37 (16.8)        |
| Everolimus          | 15 (5.1)         | 30 (13.6)        |
| **Vaccine product: MRNA-1273 (vs. BNT162b2)** | 113 (38.7) | 116 (52.7)    |
Table S2. Factors Associated with Positive (vs. Negative) Antibody Response in a Regression Framework.

aOR, adjusted odds ratio; CI, confidence interval; and MMF, mycophenolate mofetil. × denotes a product term of two predictors.

| Predictors                                      | aOR  | 95% CI       |
|-------------------------------------------------|------|--------------|
| Age (per 10-y increase)                         | 0.89 | (0.80-0.99)  |
| Male sex                                        | 1.38 | (1.02-1.89)  |
| MMF                                             | 0.14 | (0.10-0.20)  |
| Tacrolimus                                      | 0.69 | (0.44-1.07)  |
| Time since transplant (per 1-y increase; 0-7 y)  | 1.27 | (1.16-1.38)  |
| Time since transplant (per 1-y increase; >7 y)   | 1.01 | (0.98-1.05)  |
| Transplanted organ                              |      |              |
| Kidney, multiple, or others                     | Ref  |              |
| Liver                                           | 11.43| (4.70-29.17) |
| Lung                                            | 0.45 | (0.27-0.75)  |
| Heart                                           | 1.59 | (1.04-2.43)  |
| Liver transplant × Time since transplant (per 1-y increase; 0-7 y) | 0.74 | (0.60-0.91)  |
| Liver transplant × Time since transplant (per 1-y increase; >7 y) | 1.08 | (0.98-1.21)  |