

Supplementary figures

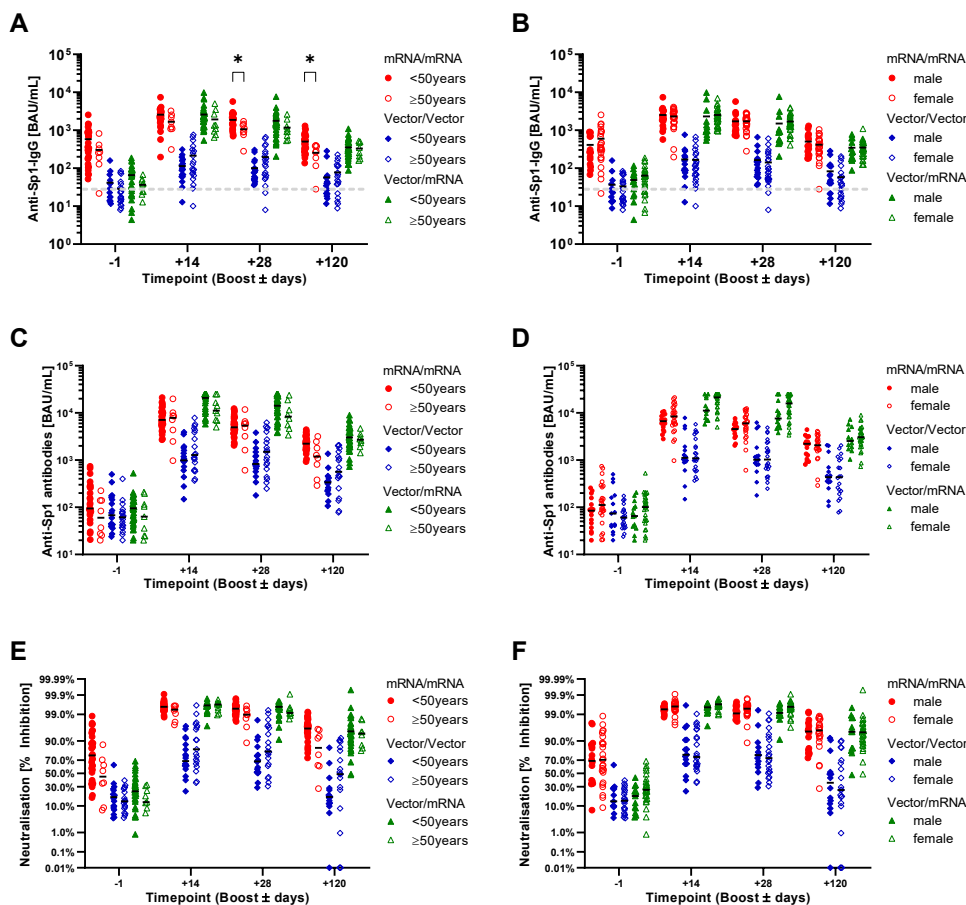


Figure S1: Analysis of anti-SARS-CoV-2-Sp1 antibodies in the different groups (red – mRNA/mRNA, blue – Vector/Vector, green mRNA/Vector) with respect to age and gender. (A, C, and E) Anti-SARS-CoV-2-Sp1-IgG (A), anti-SARS-CoV-2-Sp1 antibodies (C) and neutralizing antibodies (E) in individuals <50 years (filled symbols) and ≥ 50 years (open symbols). (B, D, and F) Anti-SARS-CoV-2-Sp1-IgG (B), anti-SARS-CoV-2-Sp1 antibodies (D) and neutralizing antibodies (F) in males (filled symbols) and females (open symbols). Statistical analyses by Mixed-effects analysis with Tukey's multiple comparison test (A). * $p < 0.05$

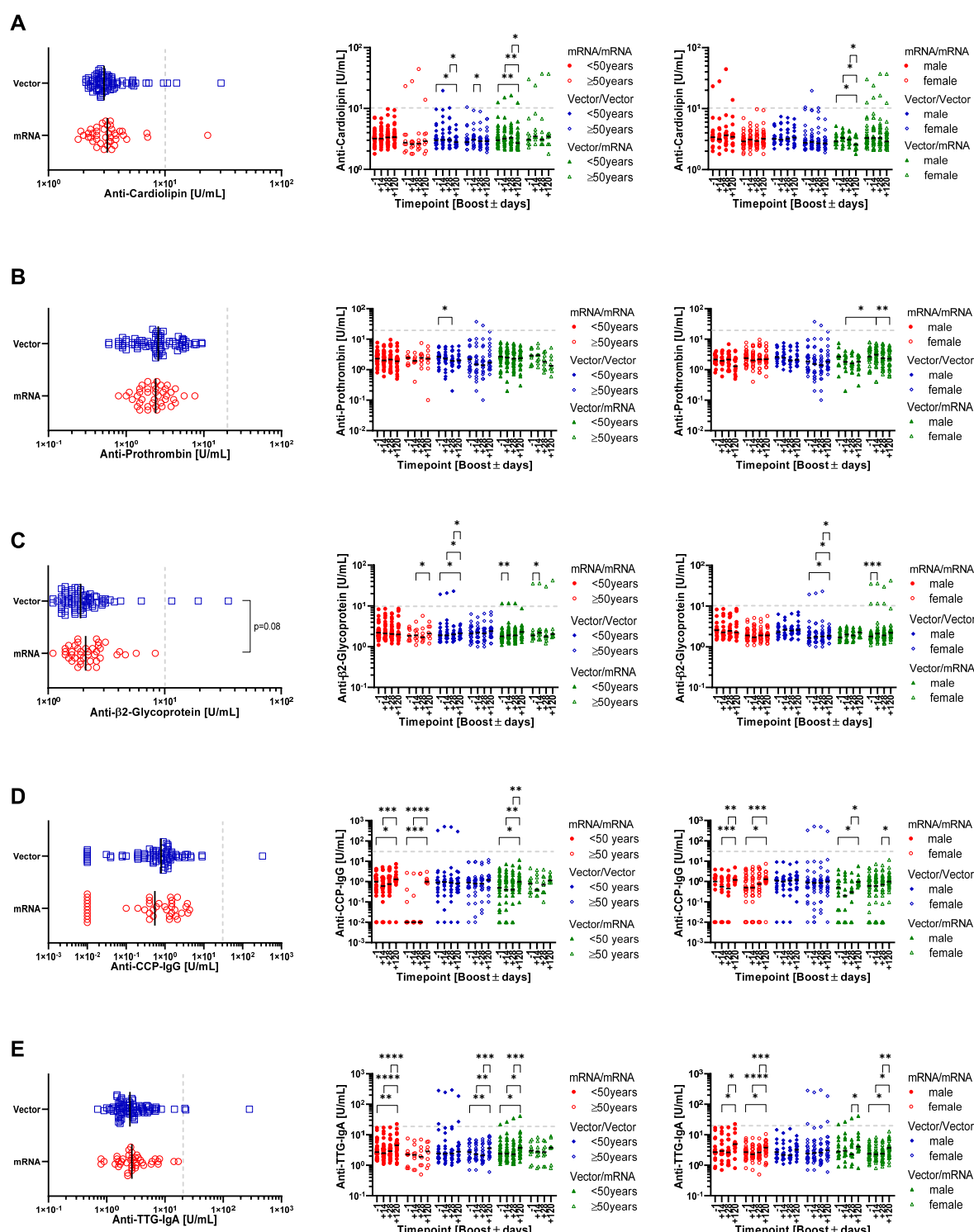


Figure S2: Analysis of autoantibodies based on prime vaccinations in serum samples 1 day before boost (blue – vector prime, red – mRNA prime) and in the different groups (red – mRNA/mRNA, blue – Vector/Vector, green mRNA/Vector) with respect to age and gender. (A) Anti-Cardiolipin antibodies: left, autoantibody levels before boost based on prime vaccinations; middle, analysis in individuals <50 years (filled symbols) and ≥50 years (open symbols) based on the study groups; right, analysis in males (filled symbols) and females (open symbols) based on the study groups. (B) Anti-Prothrombin antibodies: left, autoantibody levels before boost based on prime vaccinations; middle, analysis in

individuals <50 years (filled symbols) and ≥50 years (open symbols) based on the study groups; right, analysis in males (filled symbols) and females (open symbols) based on the study groups. **(C)** Anti-β2-Glycoprotein antibodies: left, autoantibody levels before boost based on prime vaccinations; middle, analysis in individuals <50 years (filled symbols) and ≥50 years (open symbols) based on the study groups; right, analysis in males (filled symbols) and females (open symbols) based on the study groups. **(D)** Anti-CCP antibodies: left, autoantibody levels before boost based on prime vaccinations; middle, analysis in individuals <50 years (filled symbols) and ≥50 years (open symbols) based on the study groups; right, analysis in males (filled symbols) and females (open symbols) based on the study groups. **(E)** Anti-TTG antibodies: left, autoantibody levels before boost based on prime vaccinations; middle, analysis in individuals <50 years (filled symbols) and ≥50 years (open symbols) based on the study groups; right, analysis in males (filled symbols) and females (open symbols) based on the study groups. Statistical analyses by Mixed-effects analysis with Tukey's multiple comparison test within and between groups **(A-C)**. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.001$

Table 1. Number of samples analyzed with the different methods at the different timepoints.

| timepoint | mRNA/mRNA | | | | Vector/Vector | | | | Vector/mRNA | | | |
|--------------------------------|-----------|----|----|-----|---------------|----|----|-----|-------------|----|----|-----|
| | -1 | 14 | 28 | 120 | -1 | 14 | 28 | 120 | -1 | 14 | 28 | 120 |
| anti-SARS-CoV-2-Sp1-IgG | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| anti-SARS-CoV-2-Sp1 antibodies | 41 | 41 | 40 | 38 | 37 | 37 | 37 | 34 | 42 | 41 | 41 | 41 |
| neutralizing antibodies | 41 | 41 | 40 | 38 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| IFN-γ release assay | | | | 39 | | | | 33 | | | | 41 |
| anti-Prothrombin | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| anti-Cardiolipin | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| anti-β2-Glycoprotein | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| anti-CCP | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| anti-TTG-IgA | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |
| ANA | 41 | 41 | 40 | 39 | 37 | 37 | 37 | 34 | 42 | 42 | 42 | 41 |