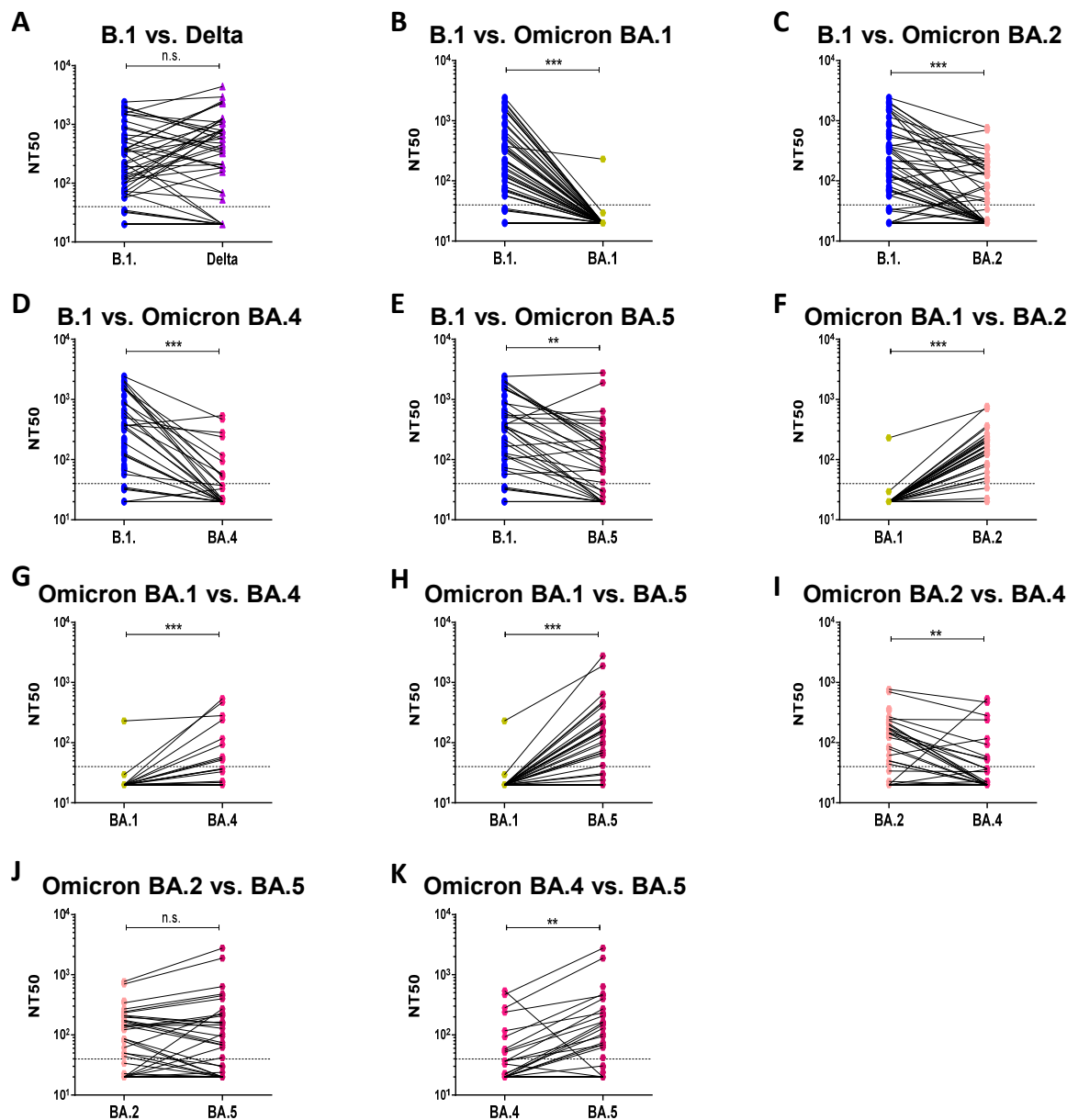
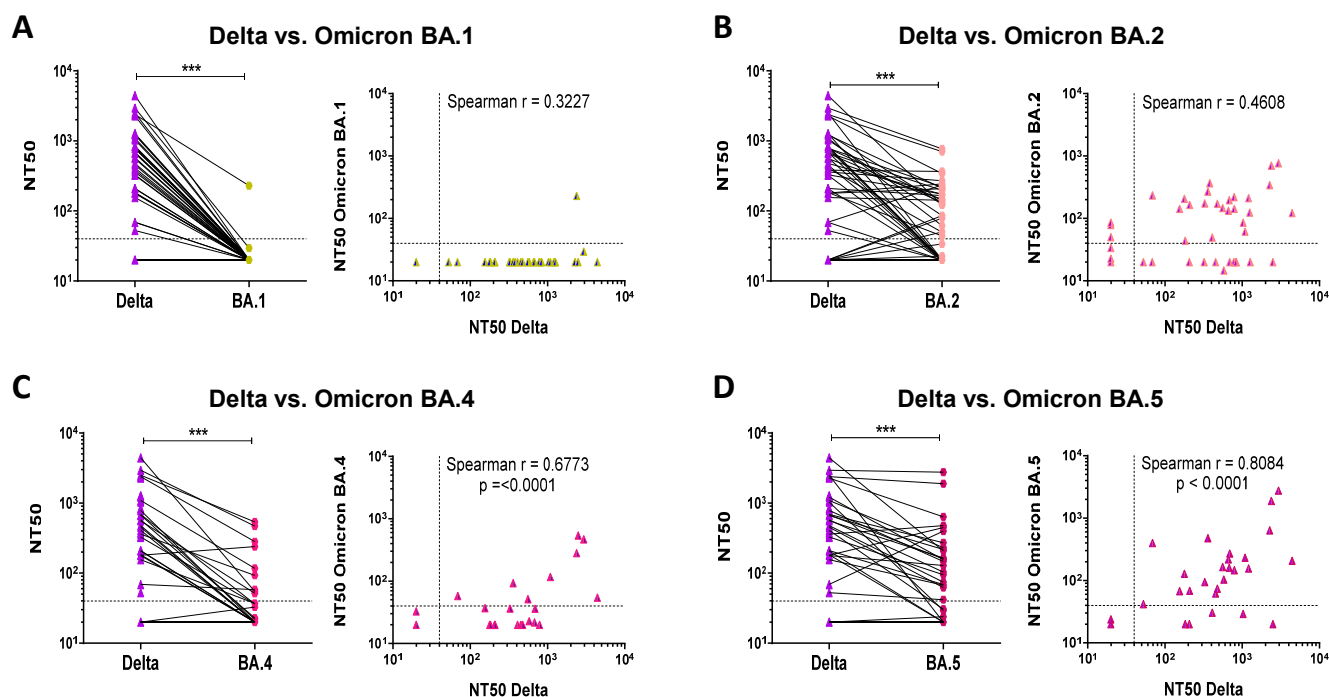




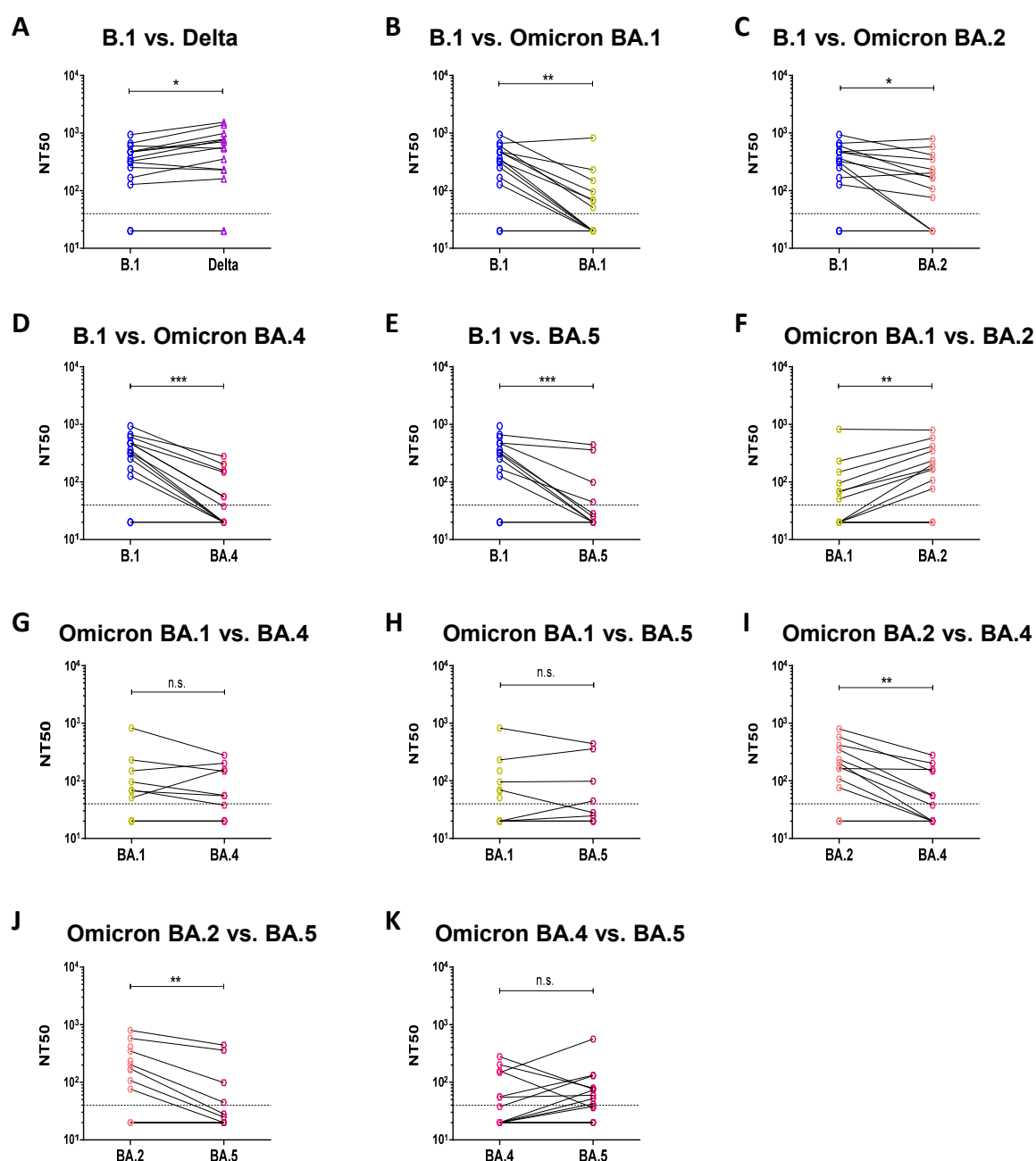
Supplementary materials



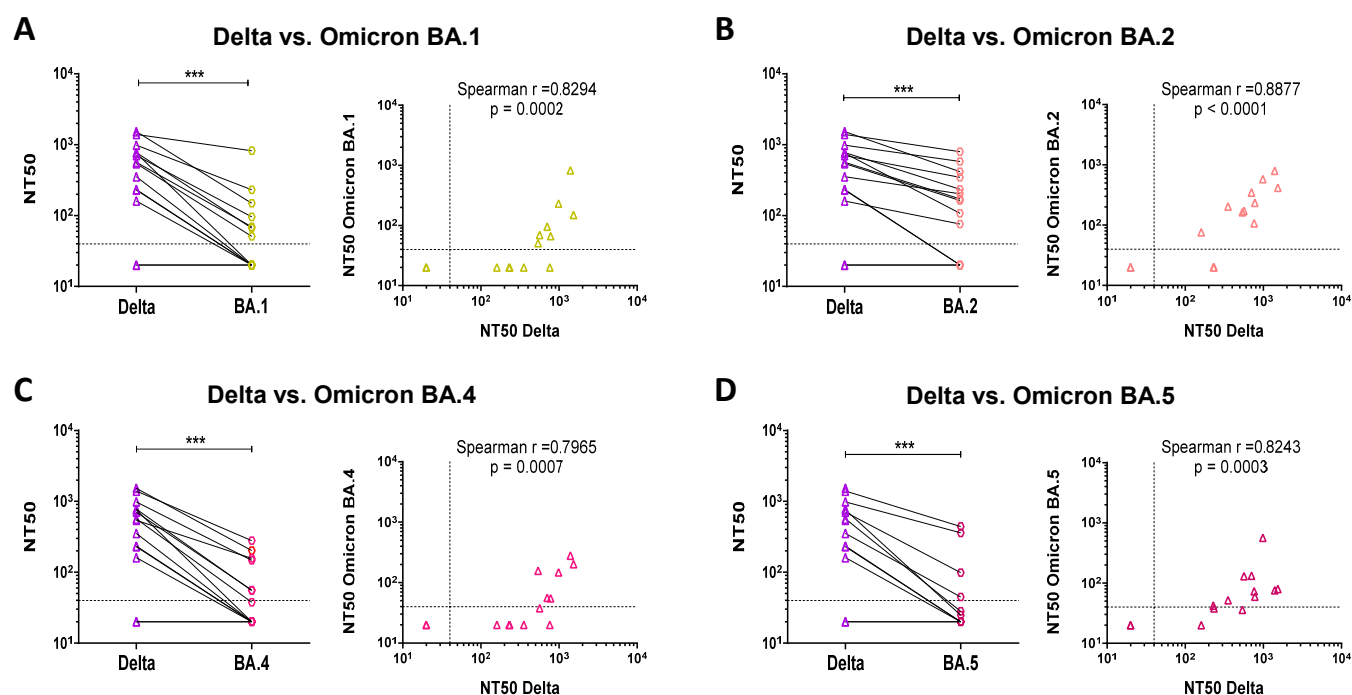
**Supplementary Figure S1. Pairwise comparison of 50% neutralizing titers (NT50) of convalescent sera against tested strains.** Comparison of NT50 B.1 versus Delta (A), B.1 versus Omicron BA.1 (B), B.1 versus Omicron BA.2 (C), B.1 versus Omicron BA.4 (D), B.1 versus Omicron BA.5 (E), Omicron BA.1 versus Omicron BA.2 (F), Omicron BA.1 versus Omicron BA.4 (G), Omicron BA.1 versus Omicron BA.5 (H), Omicron BA.2 versus Omicron BA.4 (I), Omicron BA.2 versus Omicron BA.5 (J) and Omicron BA.4 versus Omicron BA.5 (K). Cells were infected with the strain indicated on the x-axis. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Differences between groups were compared using a Wilcoxon signed rank test. P-values < 0.05 were considered significant. \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .



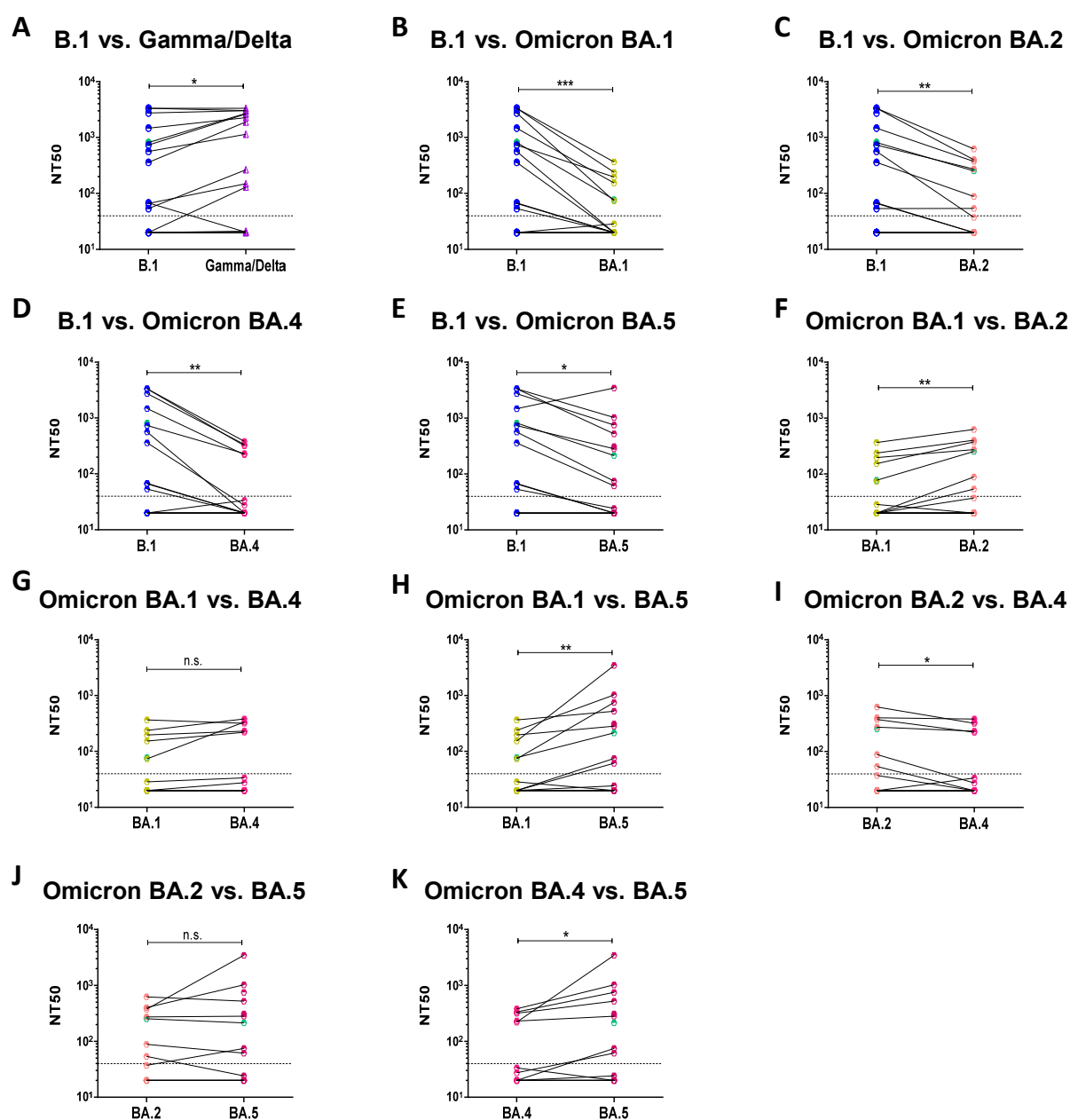
**Supplementary Figure S2. Pairwise comparison and correlation of 50% neutralizing titers (NT50) of convalescent sera against Delta and Omicron sublineages.** NT50 between Delta and Omicron sublineages BA.1 (A), BA.2 (B), BA.4 (C) and BA.5 (D) were compared. Cells were infected with the strain indicated on the x-axis. Paired samples (left panel), and Spearman correlation (right panel) are shown. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Differences between groups were compared using a Wilcoxon signed rank test. The Spearman correlation coefficient ( $r$ ) is indicated. P-values  $< 0.05$  were considered significant. \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .



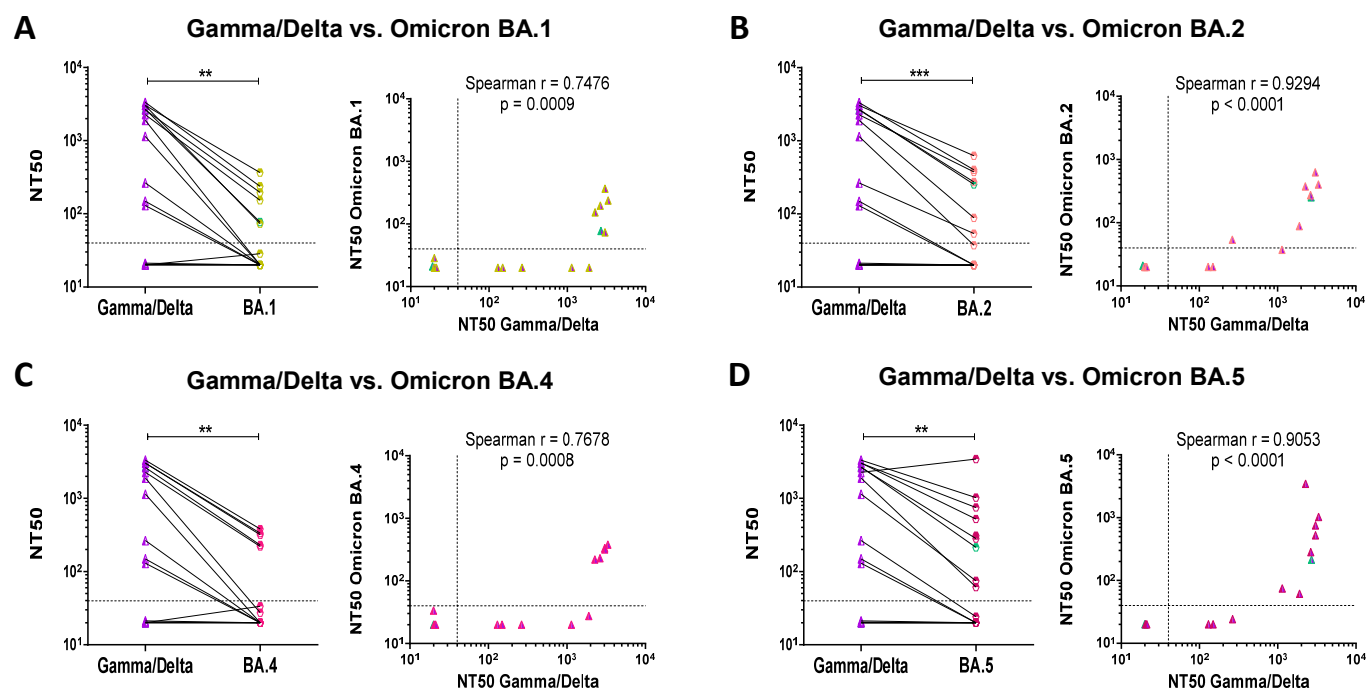
**Supplementary Figure S3. Pairwise comparison of 50% neutralizing titers (NT50) sera from triple-vaccinated individuals against tested strains.** Comparison of NT50 B.1 versus Delta (A), B.1 versus Omicron BA.1 (B), B.1 versus Omicron BA.2 (C), B.1 versus Omicron BA.4 (D), B.1 versus Omicron BA.5 (E), Omicron BA.1 versus Omicron BA.2 (F), Omicron BA.1 versus Omicron BA.4 (G), Omicron BA.1 versus Omicron BA.5 (H), Omicron BA.2 versus Omicron BA.4 (I), Omicron BA.2 versus Omicron BA.5 (J) and Omicron BA.4 versus Omicron BA.5 (K). Cells were infected with the strain indicated on the x-axis. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Differences between groups were compared using a Wilcoxon signed rank test. P-values < 0.05 were considered significant. \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .



**Supplementary Figure S4. Pairwise comparison of 50% neutralizing titers (NT50) of sera from triple-vaccinated individuals against Delta and Omicron sublineages.** NT50 between Delta and Omicron sublineages BA.1 (A), BA.2 (B), BA.4 (C) and BA.5 (D) were compared. Cells were infected with the strain indicated on the x-axis. Paired samples (left panel) and Spearman correlation (right panel) are shown. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Differences between groups were compared using Wilcoxon signed rank test. The Spearman correlation coefficient ( $r$ ) is indicated. P-values  $< 0.05$  were considered significant. \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .



**Supplementary Figure S5. Pairwise comparison of 50% neutralizing titers (NT50) of BTI sera against tested strains.** Comparison of NT50 B.1 versus Gamma/Delta (A), B.1 versus Omicron BA.1 (B), B.1 versus Omicron BA.2 (C), B.1 versus Omicron BA.4 (D), B.1 versus Omicron BA.5 (E), Omicron BA.1 versus Omicron BA.2 (F), Omicron BA.1 versus Omicron BA.4 (G), Omicron BA.1 versus Omicron BA.5 (H), Omicron BA.2 versus Omicron BA.4 (I), Omicron BA.2 versus Omicron BA.5 (J) and Omicron BA.4 versus Omicron BA.5 (K). Cells were infected with the strain indicated on the x-axis. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Differences between groups were compared using a Wilcoxon signed rank test. P-values < 0.05 were considered significant. \*: p<0.05; \*\*: p<0.01; \*\*\*: p<0.001.



**Supplementary Figure S6. Pairwise comparison and correlation of 50% neutralizing titers (NT50) of BTI sera against Delta and Omicron sublineages.** NT50 between Delta and Omicron sublineages BA.1 (A), BA.2 (B), BA.4 (C) and BA.5 were compared (D). Cells were infected with the strain indicated on the x-axis. Paired samples (left panel) and Spearman correlation (right panel) are shown. The dotted line represents the 1:40 serum dilution cut-off. Sera which did not neutralize SARS-CoV-2 at the 1:40 dilution were considered non-neutralizing. Gamma-BTI are identified with green symbols. Differences between groups were compared using Wilcoxon signed rank test. The Spearman correlation coefficient ( $r$ ) is indicated. P-values  $< 0.05$  were considered significant. \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .