



**Supplementary Figure 4: Spike-specific CD4+ T cell responses post homologous or heterologous booster vaccination in subcohorts.**

Percentage of CD154 (CD40L), IFN $\gamma$ , IL-2 and TNF $\alpha$  activation-induced markers of S1+S2 spike-specific CD4+ T cells after deduction of negative (unstimulated) control. Values below 0.001 are equaled to 0.001 as non-responder (zero) threshold. Each dot represents a single patient. Numbers indicate the number of responders/total patients. Each dot represents a single patient. Medians are compared using the Mann-Whitney U test after check for normal distribution using the Shapiro-Wilk test. \* $p < 0.05$ , \*\* $p < 0.01$ , and n.s. indicates not significant.