**Supplementary Paragraph. The study serology assay validation and LLOQ**

The assays for the pertussis, tetanus and diphtheria antigens had been validated in accordance with the International Conference on Harmonisation (ICH) guidelinesto demonstrate that they were fit for the intended purpose of the study. The lower limit of quantification (LLOQ) of the assays (where values below these have reduced accuracy compared to the values in the assay range as shown in the assay validation) were: 12 IU/ml (PT), 4.063 IU/ml (FHA), 1.438 IU/ml (FIM), 4.063 IU/ml (PRN), 0.03 IU/ml (DT), 0.02 IU/ml (TT). The lower limit of detection (LLOD) of the assays were: 2.128 IU/ml (PT), 0.715 IU/ml (FHA), 0.636 IU/ml (FIM), 0.806 IU/ml (PRN), 0.0077 IU/ml (DT), 0.0086 IU/ml (TT).