



Fig. S1. Flow cytometric gating strategy. Peripheral blood mononuclear cells (PBMC) were isolated by Ficoll gradient centrifugation. B cell subsets were evaluated using flow cytometry (BD FACS Canto). B cells in total ($CD19^+CD20^+$), transitional B cells (trB, $CD19^+CD20^+CD24^{hi}CD38^{hi}$), naïve mature B cells (NM, $CD19^+CD20^+CD24^{int}CD38^{int}$), memory B cells (M, $CD19^+CD20^+CD24^+CD38^{int/-}$), plasma cells (PC, $CD19^+CD20^-$), long-lived PC ($CD19^+CD20^-CD27^{hi}HLA-DR^{low}$) and plasmablasts (PB, $CD19^+CD20^-CD27^{hi}HLA-DR^{high}$) were differentiated via surface immunolabelling by the following monoclonal antibodies (mAb): APC-CD20, PerCP-CD27, FITC-CD20, PerCP-CD24, APC/Cy7-CD38, PE/Cy7-CD19 (all from BioLegend, San Diego, CA, USA); APC-CD27 mAb (Invitrogen by Thermo Fisher Scientific, Waltham, MA, USA); FITC-HLA-DR (BD Pharmingen, Heidelberg, Germany). Immunoglobulin (Ig)M, IgA, IgE and IgG serum levels were measured using cytometric bead assays (BD Pharmingen).