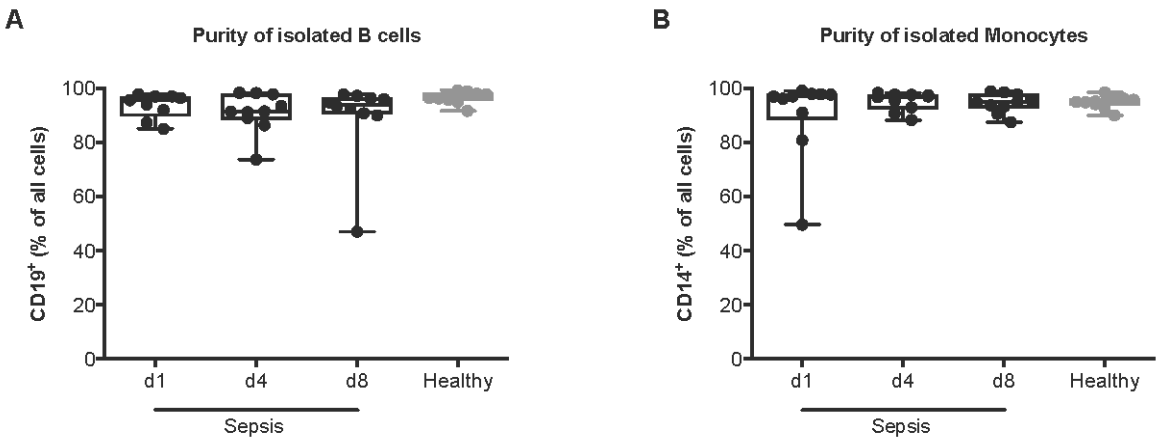
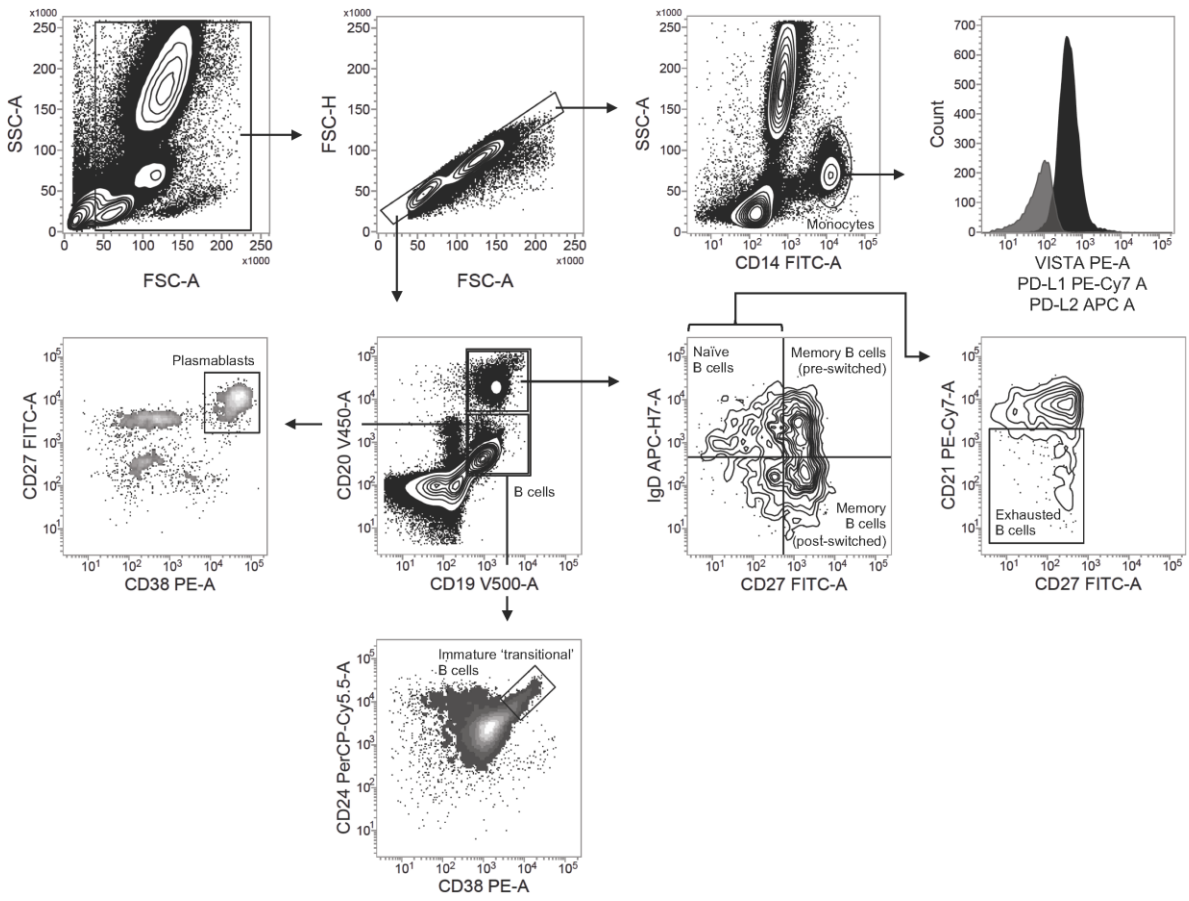
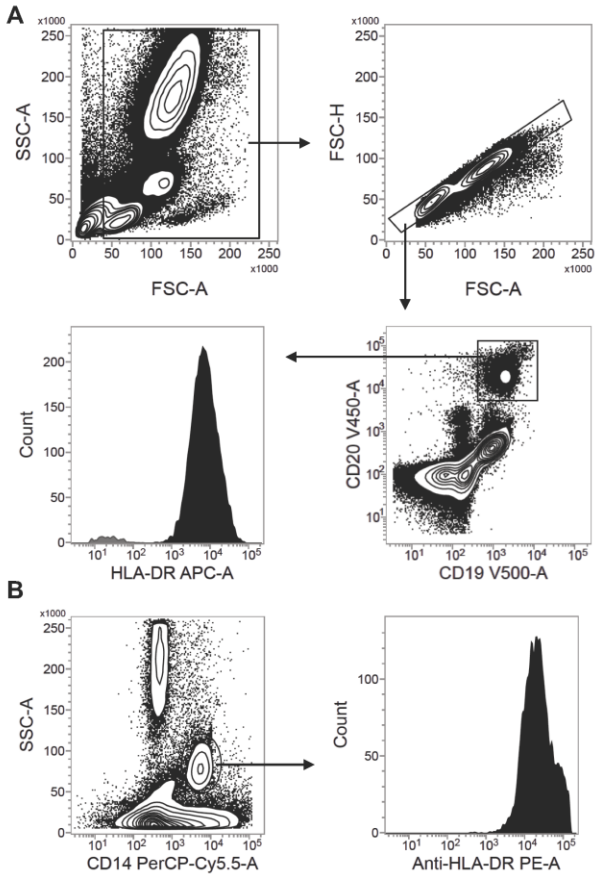


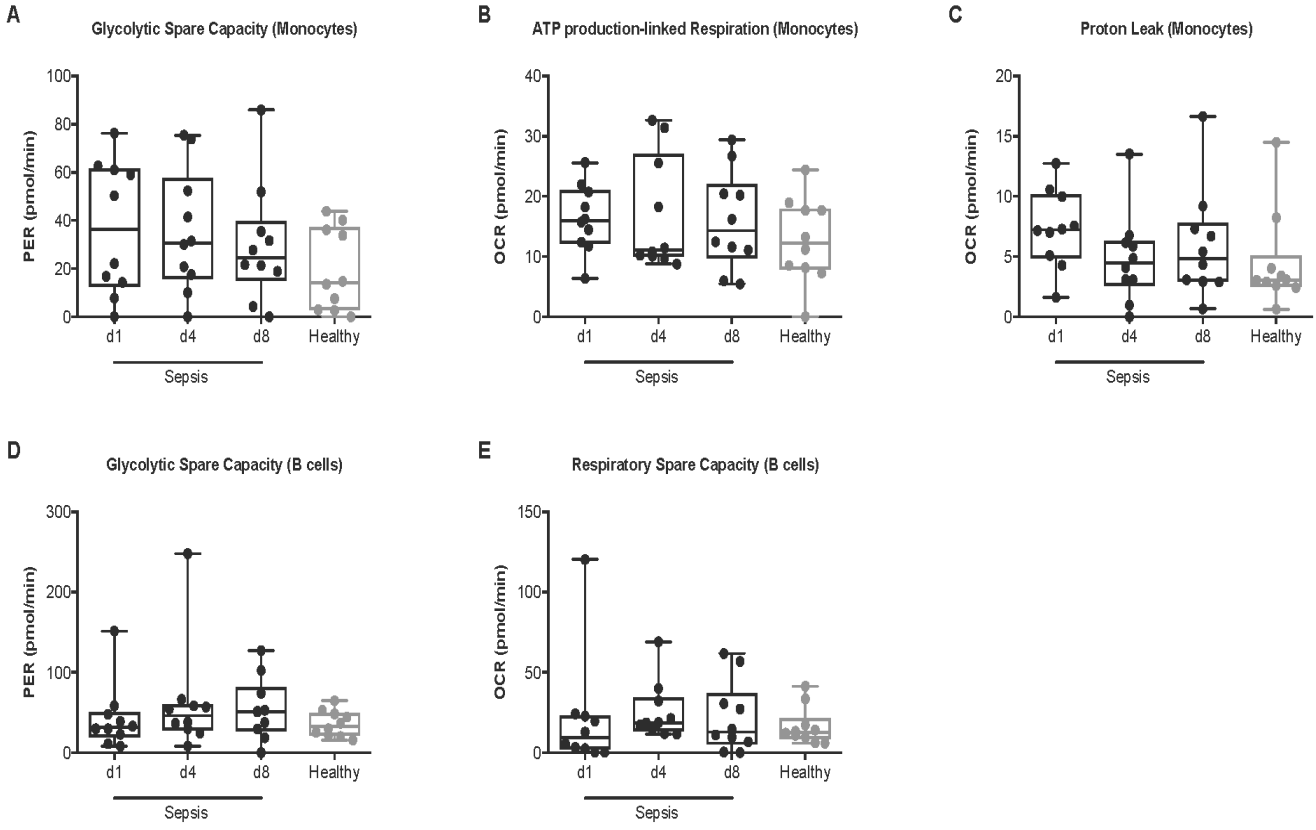
Supplementary Figure 1. Purity control of isolated **(A)** $CD19^+$ B cells and **(B)** $CD14^+$ monocytes at d1, d4 and d8. Each data point represents an individual patient/healthy control (n = 10 per group). Horizontal line within the box marks the median, boxes depict the IQR and whiskers indicate the total range.



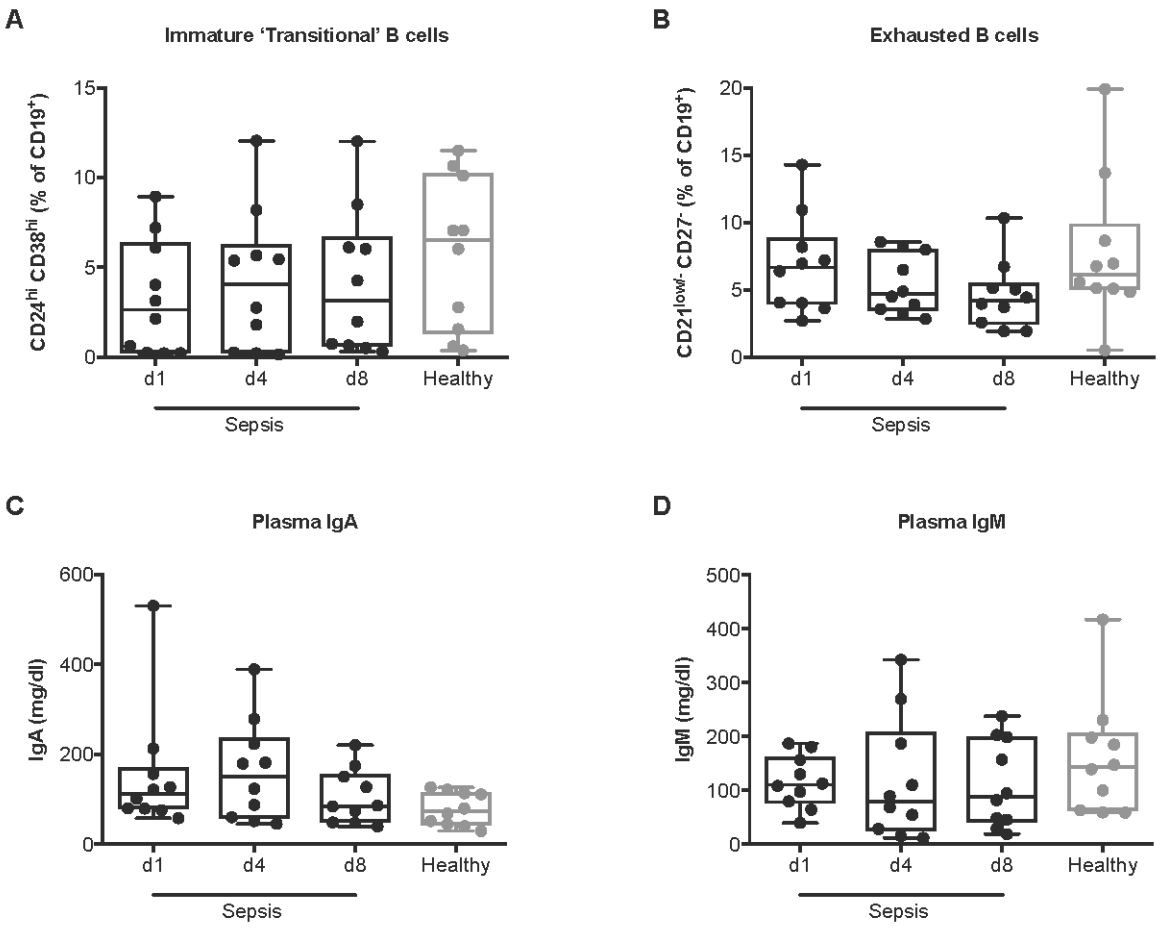
Supplementary Figure 2. **Representative gating strategy for the analysis of monocytes and B cells in whole blood.** Single cells were gated from all cellular events. Monocytes were identified as $CD14^{+}$. PD-L1, PD-L2 and VISTA expression levels were determined via Mean Fluorescence Intensity (MFI) minus background MFI of FMO controls (depicted in grey). B cells were identified as $CD19^{+}$ and further characterized as pre-switched memory B cells ($CD20^{+}$, $CD27^{+}$, IgD^{+}), post-switched memory B cells ($CD20^{+}$, $CD27^{+}$, IgD^{-}), naïve B cells ($CD20^{+}$, $CD27^{-}$, IgD^{+}), plasmablasts ($CD20^{-}$, $CD38^{+}$), exhausted B cells ($CD20^{+}$, $CD27^{-}$, $CD21^{low/-}$) and immature 'transitional' B cells ($CD24^{bright}$, $CD38^{bright}$). FMO controls were used for proper gating of CD27 and IgD positive cells.



Supplementary Figure 3. **Representative gating strategy for quantification of HLA-DR. (A)** Single cells were gated from all cellular events. B cells were identified as $CD19^{+}$ and $CD20^{+}$ and HLA-DR was determined by MFI minus background MFI of FMO control (depicted in grey). **(B)** Monocytes were identified as $CD14^{+}$. The average number of HLA-DR molecules per monocyte was quantified using BD Quantibrite PE tubes.



Supplementary Figure 4. **(A)** Glycolytic spare capacity, **(B)** ATP-production linked respiration and **(C)** proton leak of monocytes ($CD14^+$) and **(D)** glycolytic spare capacity and **(E)** respiratory spare capacity of B cells ($CD19^+$) was calculated at d1, d4 and d8 using PER and OCR. Each data point represents an individual patient/healthy control (n = 10 per group). Horizontal line within the box marks the median, boxes depict the IQR and whiskers indicate the total range. Group comparisons were performed by Mann-Whitney U test.



Supplementary Figure 5. Frequencies of **(A)** immature 'transitional' B cells ($CD19^{+}$, $CD24^{bright}$, $CD38^{bright}$) and **(B)** exhausted B cells ($CD19^{+}$, $CD20^{+}$, $CD27^{-}$, $CD21^{low/-}$). Plasma concentration of **(C)** IgA and **(D)** IgM. Each data point represents an individual patient/healthy control (n = 10 per group). Horizontal line within the box marks the median, boxes depict the IQR and whiskers indicate the total range. Group comparisons were performed by Mann-Whitney U test.