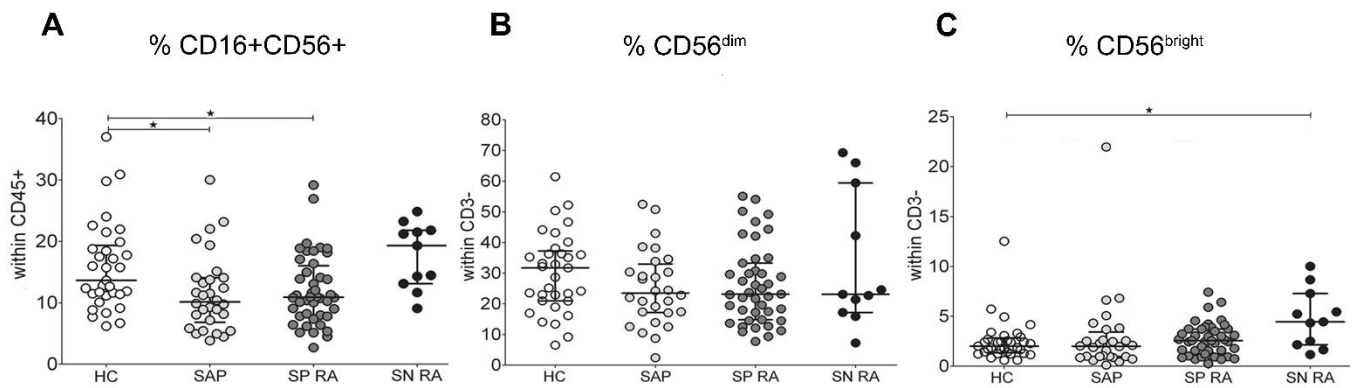
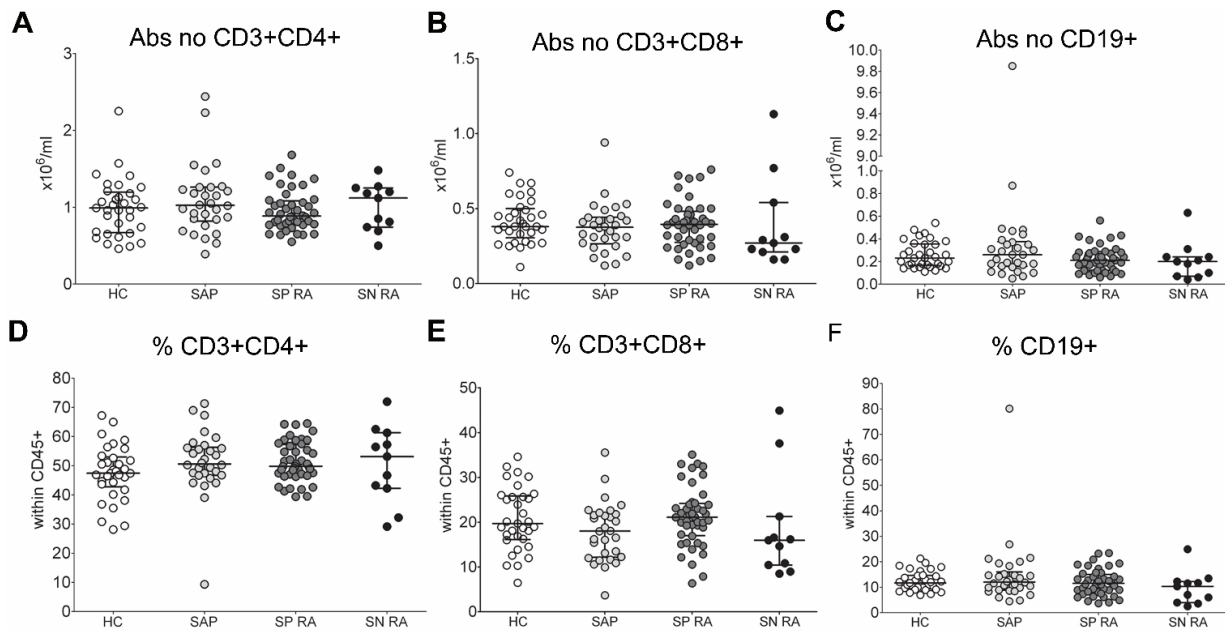


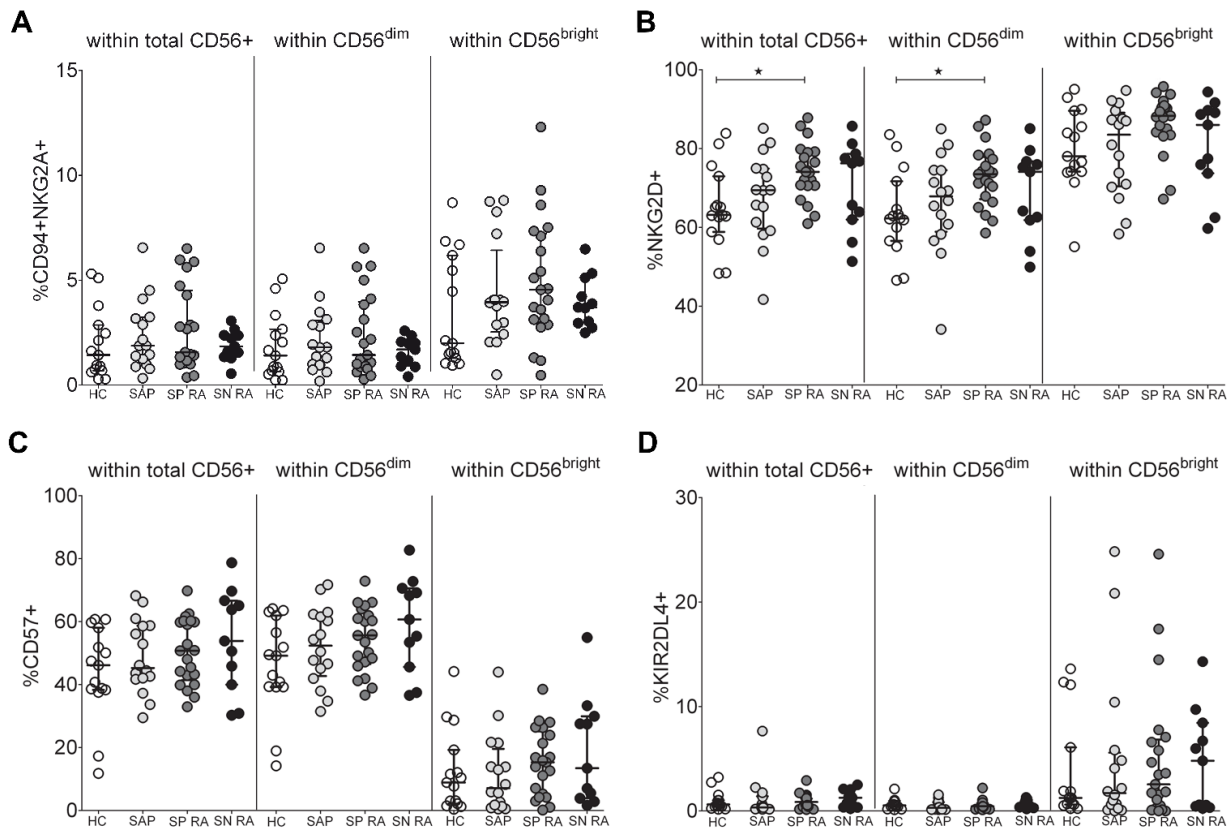
Supplementary Figure 1. Frequencies of total NK cells are decreased in SAP and SP RA. Frequencies of (A) total CD56+CD16+ NK cells within CD45+ leukocytes in the blood of HC (n = 33), SAP (n = 30), early SP RA (n = 44), and SN RA (n = 11). The frequencies of (B) CD56^{dim} and (C) CD56^{bright} NK cells within CD3⁻ cells were assessed using PBMC from HC (n = 32), SAP (n = 28), early SP RA (n = 43) and early SN RA patients (n = 10). The horizontal line in the scatter dot plots indicates the median; error bars indicate interquartile ranges. Statistical significance: * p < 0.05. NK: natural killer; SN: seronegative; SAP: seropositive arthralgia patients; HC: healthy control; SP: seropositive; RA: rheumatoid arthritis; PBMC: peripheral blood mononuclear cells.



Supplementary Figure 2. Numbers of circulating T cells and B cells in patients and controls. Absolute numbers of (A) CD3+CD4+ T cells, (B) CD3+CD8+ T cells, (C) CD19+ B cells, and the relative frequencies within CD45+ lymphocytes of (D) CD3+CD4+ T cells, (E) CD3+CD8+ T cells, and (F) CD19+ B cells were assessed in the peripheral blood of HC (n = 33), SAP (n = 30), early RA SP (n = 44), and SN RA (n = 11). The horizontal line in the scatter dot plots indicates the median; error bars indicate interquartile ranges. SN: seronegative; SAP: seropositive arthralgia patients; HC: healthy control; SP: seropositive; RA: rheumatoid arthritis.



Supplementary Figure 3. CD56^{dim} NK cells from SP RA contain higher frequencies of NKG2D+ cells. Frequencies of (A) CD94+NKG2A+, (B) NKG2D+, (C) CD57+, and (D) KIR2DL4+ cells within total CD56+, CD56^{dim}, and CD56^{bright} NK cell subsets were assessed using PBMC from HC (n = 15), SAP (n = 16), early SP RA (n = 21), and SN RA (n = 11). The horizontal line in the scatter dot plots indicates the median; error bars indicate interquartile ranges. Statistical significance: * p < 0.05. NK: natural killer; SN: seronegative; SAP: seropositive arthralgia patients; HC: healthy control; SP: seropositive; RA: rheumatoid arthritis; PBMC: peripheral blood mononuclear cells.



Supplementary Figure 4. Frequency of CD16+ cells is significantly higher within CD56^{dim} NK cells compared to CD56^{bright} NK cells. (A) Gating strategy showing distribution of CD16+ cells within CD56^{dim} and CD56^{bright} NK cell subsets (representative plots from 1 HC are shown). (B) Frequency of CD16+ cells within CD56^{dim} and CD56^{bright} NK cell subsets was assessed using PBMC from HC (n = 15), SAP (n = 16), early SP RA (n = 21), and SN RA (n = 11). The horizontal line in the scatter dot plots indicates the median; error bars indicate interquartile ranges. Paired t test was used. Statistical significance: * p < 0.05. NK: natural killer; SN: seronegative; SAP: seropositive arthralgia patients; HC: healthy control; SP: seropositive; RA: rheumatoid arthritis; PBMC: peripheral blood mononuclear cells.

