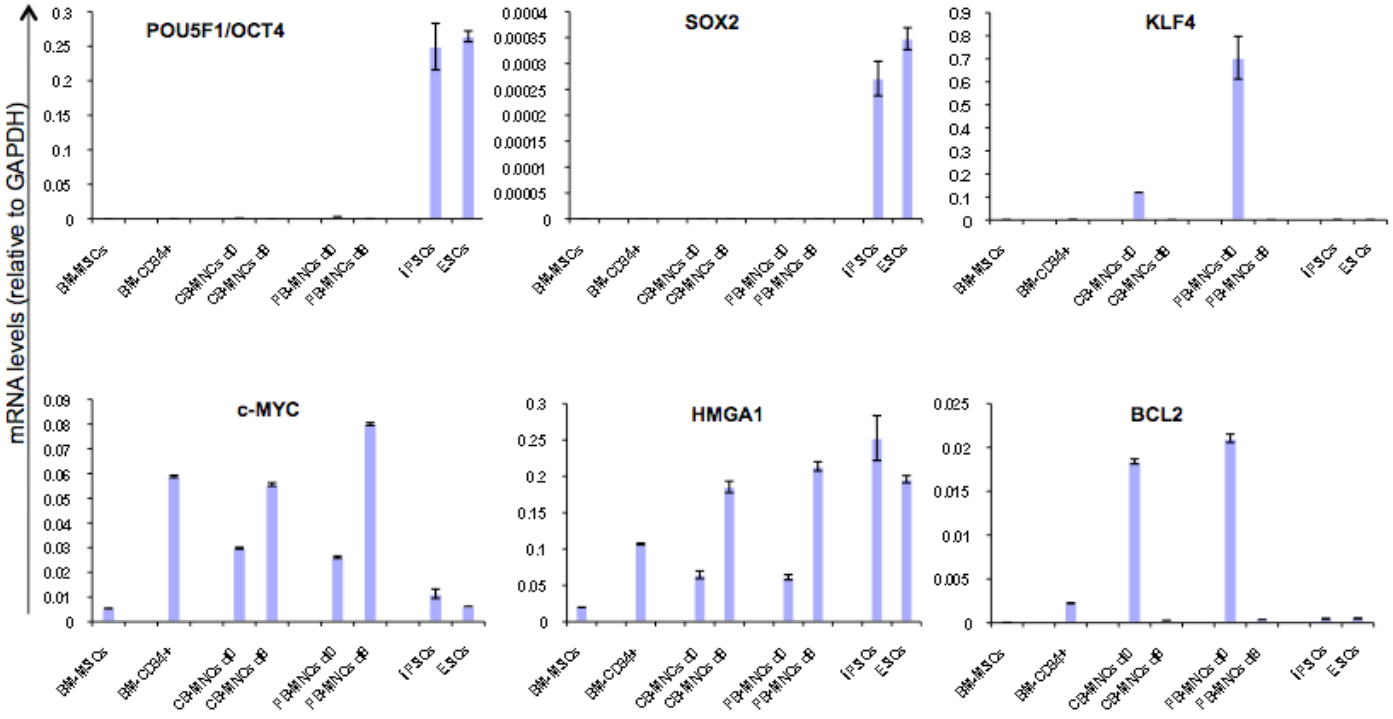

Supplementary information, Figure S9 Analysis of mRNA levels of key genes involved in reprogramming in blood mononuclear cells (MNCs) before (day 0) and after culture and priming (day 8). MNCs from cord blood (CB) or adult peripheral blood (PB) were thawed at day 0. Some were used to make total RNA while the others were cultured for 8 days before reprogramming by the episomal vectors. Day 8 MNC RNA samples were also made in parallel. As controls, RNAs from cultured MSCs and CD34+ cells from adult bone marrow (BM), iPSC, and ESC line were also used for quantitative RT-PCR analysis (the *GAPDH* gene as a normalization control). The relative mRNA levels (mean +/-SEM, n≥6) are plotted. As expected, the *OCT4* and *SOX2* mRNA levels in postnatal somatic cells (MSCs, CD34+ and MNCs) are negligible as compared to that in iPSCs and ESCs. Notably, *c-MYC* and *HMGA1* mRNA levels are significantly higher in cultured CD34+ cells than in cultured MSCs from the same BM donor. After the culture for 8 days, the levels of HMGA1 as well as c-MYC in MNCs are significantly increased. The *BCL2* mRNA levels in newly thawed MNCs are very high, as compared to all the cultured cells (CD34+ cells are the third highest). *BCL2* is known to express highly in human CD34+ cells as well as B cells and required for their resistance to cell death. Thus it is not surprising that *BCL2* mRNA was very high in newly thawed (and survived) B cells (~10%) within CB and PB MNCs. After the culture, percentages of CD19+ B cells reduced to <0.5%. Only $CD34^{dim}$ cells (up to 8%) were found in the cultured MNCs.