Supplementary Methods

Monitoring of CMV and EBV reactivation in the peripheral blood

Surveillance was started one week after transplantation and performed weekly for both viruses throughout the inpatient period (Figure S1). Monitoring was sustained weekly for the first 100 days and then depending on requirements on 2-3 weekly basis. Peripheral blood donor chimerism was assessed between day 30-60 (Table S1).

DNA used for quantitative real-time PCR was extracted from whole blood samples (200µl) using the MagNaPure DNA Large Volume Kit (Roche Diagnostics) in an elution volume of 100µl according to the manufacturer's instructions.

For detection of CMV, a 109 bp fragment of the major immediate early gene 1 was amplified using the CMV MIE forward (5´-GAG CAG ACT CTC AGA GGA TCG G-3´) and CMV MIE reverse (5´-AAG CGG CCT CTG ATA ACC AAG-3´) primers. For EBV detection, a 77 bp fragment of the BGLF 5 gene (alkaline exonuclease) was amplified by 5´EBV forward (5´- TGA CCT CTT GCA TGG CCT CT -3´) and 3´EBV reverse (5´- TGA CCT CTT GCA TGG CCT CT -3´) primer sequences. The FAM/TAMRA labelled samples CMV MIE 2807R (5´-CAT GCA GAT CTC CTC AAT GCG GCG-3´) and EBV-BGLF5 (5´-CCA TCT ACC CAT CCT ACA CTG CGC TTT ACA -3´) were used for normalization. Quantification of real-time PCR was done on an ABI7500 instrument using the TaqMan Universal PCR Master Mix (Life Technologies). The lower limit of detection for CMV or EBV infection is at 250 virus copies per milliliter of peripheral blood.

Verification of virus IgG serology

Serology status for CMV and EBV was determined by the chemoluminescent microparticle CMIA assay (Abbott Diagnostics, Germany) on an Architect i2000 analyzer.

Cell sorting

PBMC were stained with the following antibodies for flow cytometric sorting: anti-CD4 FITC (SK3), anti-CD8 PE (SK1), anti-CD14 PerCP (MφP9, all clones BD Biosciences), and anti-TCRαβ (BW242/412, Miltenyi Biotec).