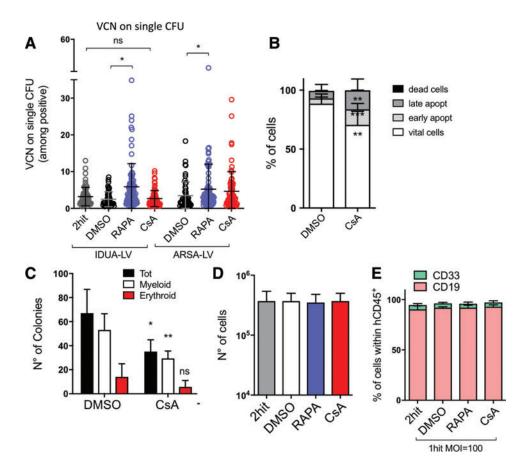
## **Supplementary Data**



Supplementary Figure S1. (A) BM-derived CD34 $^+$  cells were transduced with *IDUA*-LV, as reported in Fig. 1A. VCN/human genome were evaluated, picking single colonies after 15 days in culture ( $M\pm SD$ ,  $n\geq 50$ , Kruskal–Wallis with Dunn's multiple comparison test vs. each DMS0; ns, not significant; \* $p\leq 0.05$ ). (B and C) mPB-CD34 $^+$  cells were transduced or not with a lab-grade PGK-*GFP* LV in the presence of DMS0/CsA, and apoptosis (B) or colonies count (C) were reported ( $M\pm SD$ , n=10, Mann–Whitney test vs. each DMS0, \*\* $p\leq 0.01$ , \*\*\* $p\leq 0.001$ ). (D) BM-CD34 $^+$  cells were counted at the time of transplantation in NSG mice, as reported in Fig. 1 for *IDUA*-LV. (E) Percentages of human B, T, and myeloid lineages within human cells were shown in the BM of mice from the experiments reported in Fig. 1 at 22 weeks post transplant.