

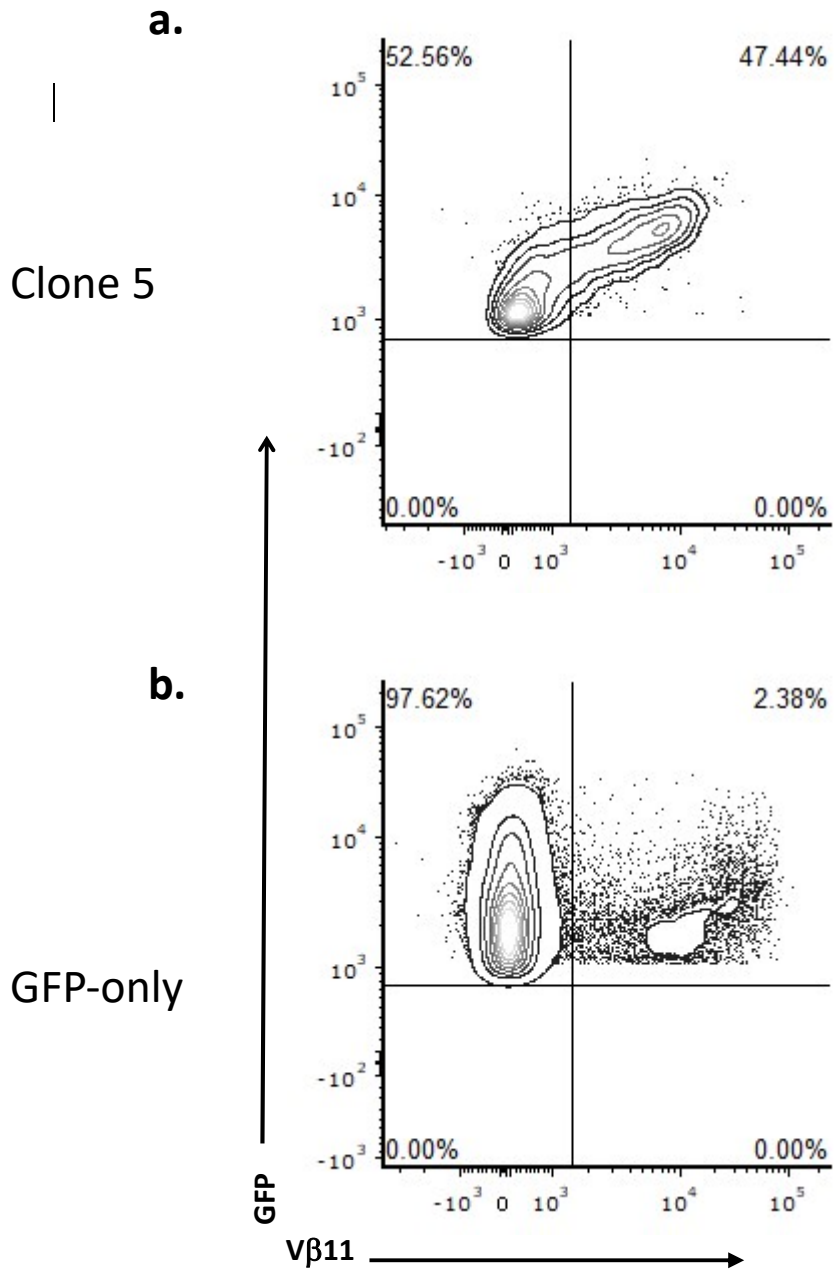
**Supplementary Table 1. Antibodies Used for Flow Cytometry**

Antigen	Clone
Human CD45	HI30
Human CD19	HIB19
Human CD3	SP34-2
Human CD4	SK3
Human CD8	RPA-T8
Human PD1	EH12.1
Human CD1a	HI149
Human CCR7	GO43H7
Human TCR V $\beta$ 11	IG125
Human TCR V $\beta$ 6-5	IMMU 222
Human TCR V $\beta$ 19-1	E17.5F3.15.13
Human TCR V $\beta$ 5-1	IMMU 157
Human TCR $\alpha\beta$	IP26
FITC	NAWESLEE

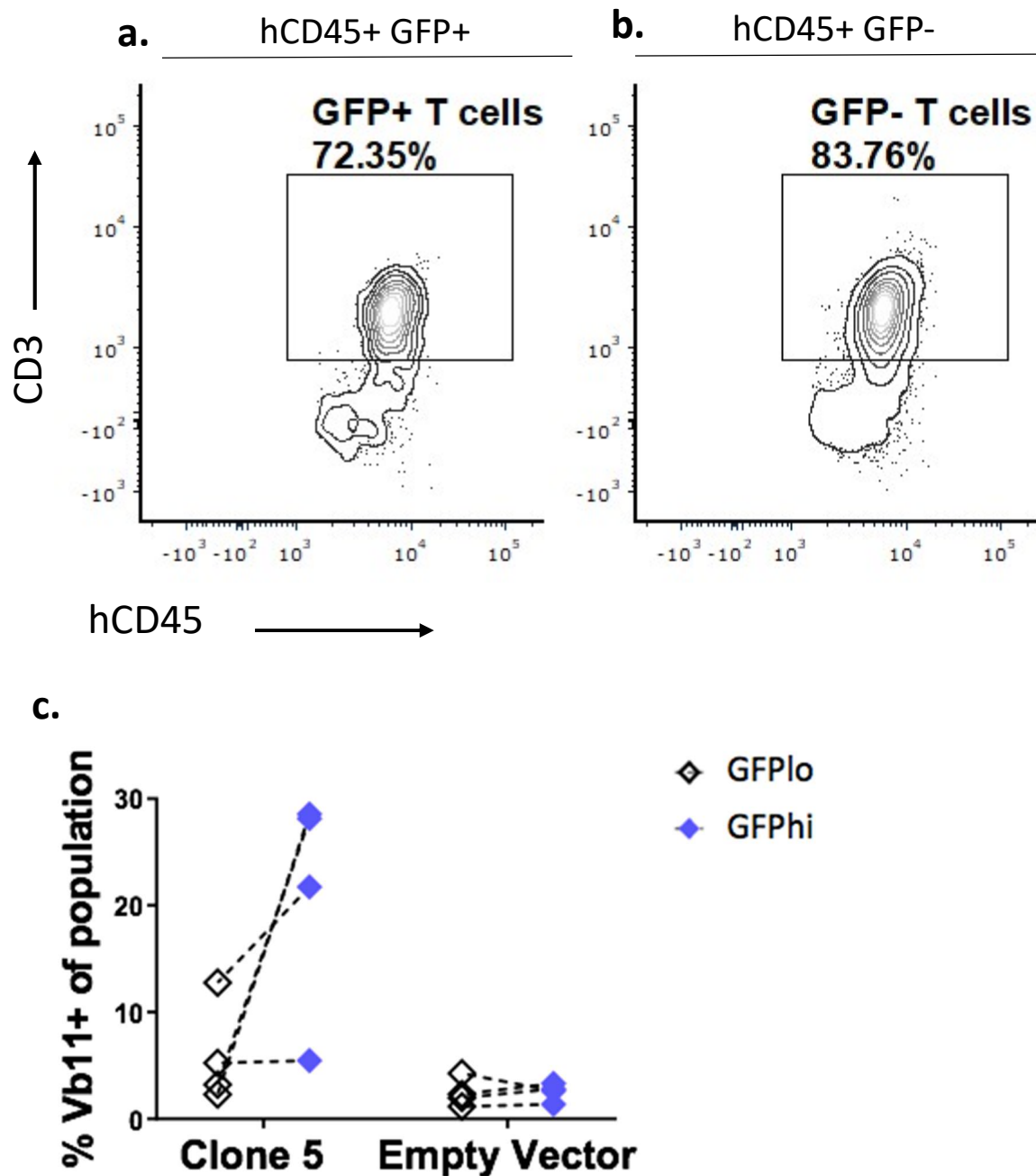
### Supplementary Table 2. Total Mice Grafted

The table shows the total number of mice grafted and the number of mice analyzed in this report in parentheses. Only mice with single positive and double positive cells in the thymus graft were included in this report and the remaining animals were considered to be engraftment failures, which is not uncommon in this model, especially when HSCs undergo lentiviral transduction.

	<b>HLA-DQ8+ HSCs</b>	<b>HLA-DQ8- HSCs</b>
<b>Clone 5</b>	<b>10 (4)</b>	<b>6 (6)</b>
<b>GFP-Only</b>	<b>6 (4)</b>	<b>4 (2)</b>



**Supplementary Figure 1. TCR expression correlates with GFP expression in thymocytes of mice receiving Clone 5-transduced HSCs.** Representative flow cytometry plots of GFP<sup>+</sup> thymocytes from mice transplanted with **a.** Clone 5 or **b.** GFP-only transduced cells are shown.



**Supplementary Figure 2. CD3 Expression is seen among human CD45+ cells in GFP+ and GFP- populations but Vb11 levels vary within GFP+ populations.** Representative flow cytometry plots of PBMCs from mice transplanted with Clone 5 transduced cells are shown. CD3 expression within hCD45 is roughly equivalent in GFP+ and GFP- populations. **a.** Expression of CD3 is seen on a subset of hCD45+ cells in GFP+ PBMCs. **b.** Expression of CD3 is seen on a subset of hCD45+ cells in GFP- PBMCs. **c.** Quantification of Vb11 expression in GFP hi and GFP lo CD4+ T cells in the spleen on Clone 5 and EV mice.