

SUPPLEMENTARY MATERIALS

Supplementary Figures

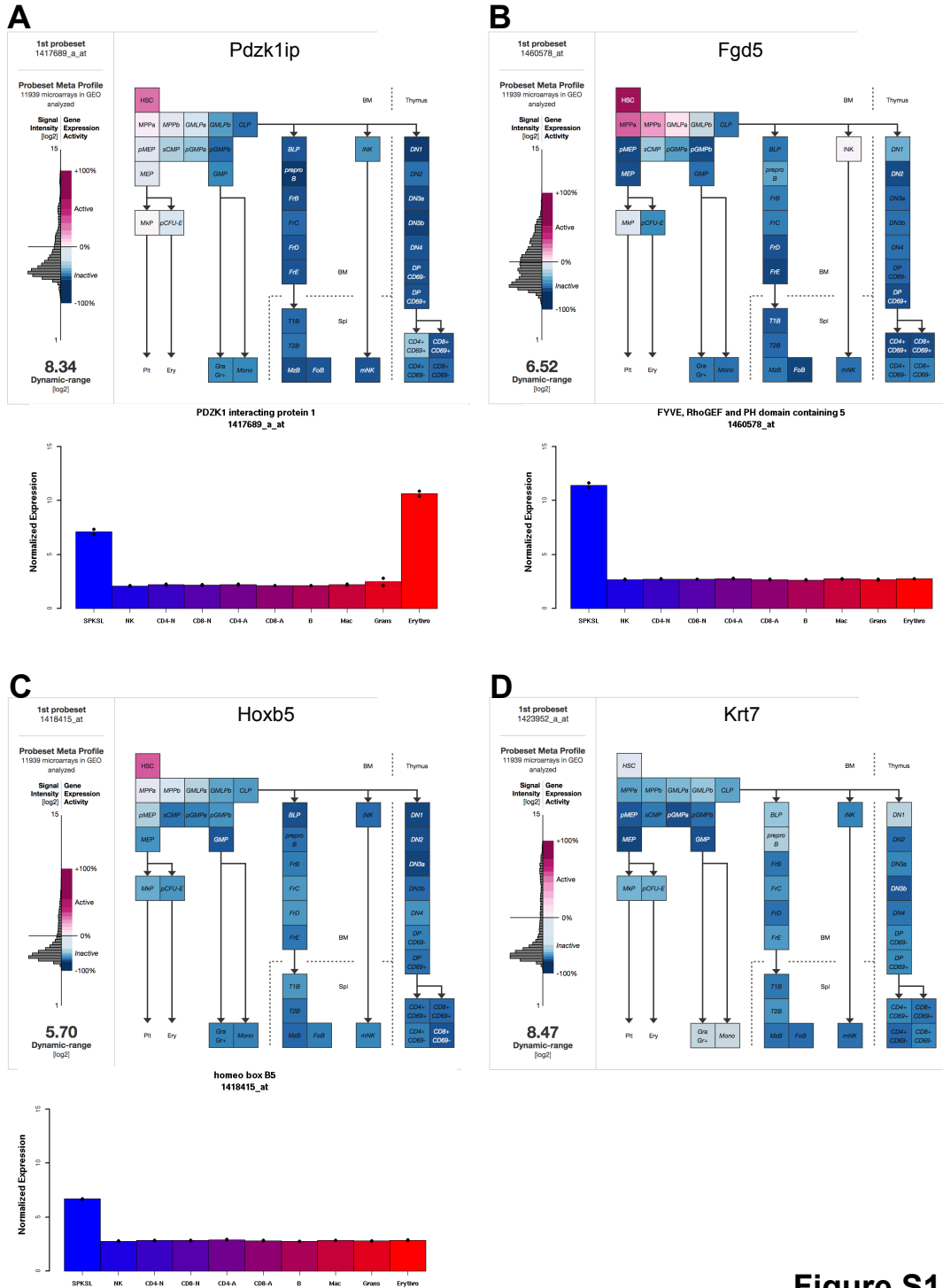


Figure S1

Figure S1. Expression patterns of reported HSC marker genes. (A) *Pdzk1ip*, (B) *Fgd5*, (C) *Hoxb5*, and (D) *Krt7*. Data was obtained from the Gene Expression Commons (top) and the Hematopoietic fingerprints. Hematopoietic fingerprint data for *Krt7* was not available.

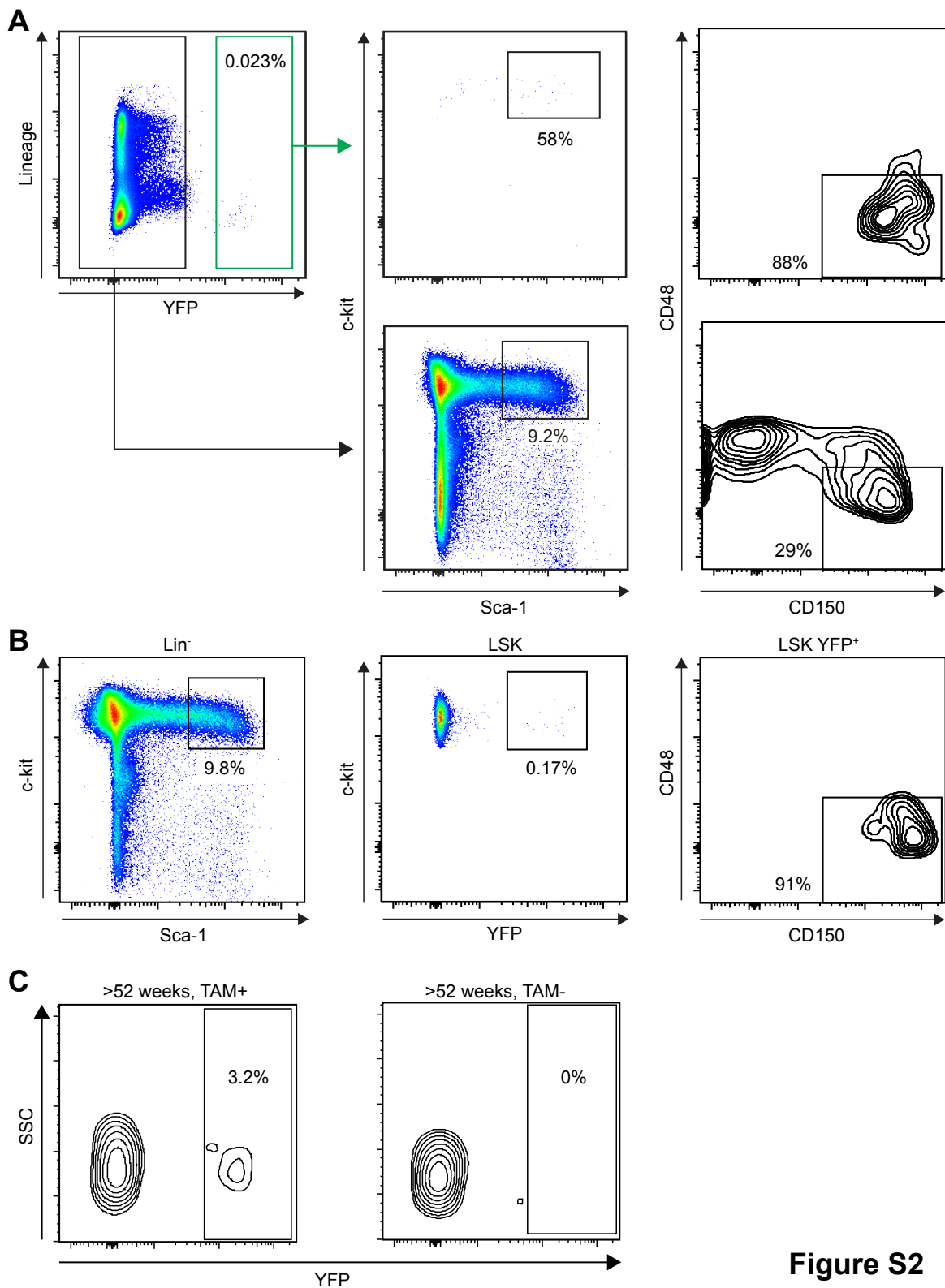


Figure S2

Figure S2. Additional gating schemes with the *Krt18-CreER/YFP* mice. **(A)** Live mononucleated cells were gated based on YFP expression, then based on c-kit and Sca-1 expression, then on

CD150 and CD48 expression. **(B)** c-kit⁺Sca-1⁺ cells were gated within the lineage⁻ cells, then gated based on YFP expression. Most LSK YFP⁺ cells were CD150⁺CD48⁻. **(C)** Labeling efficiency of HSCs in *Krt18-CreER/YFP* mice without tamoxifen treatment. Mice more than 52 weeks of age without tamoxifen had no YFP labeling in HSCs.

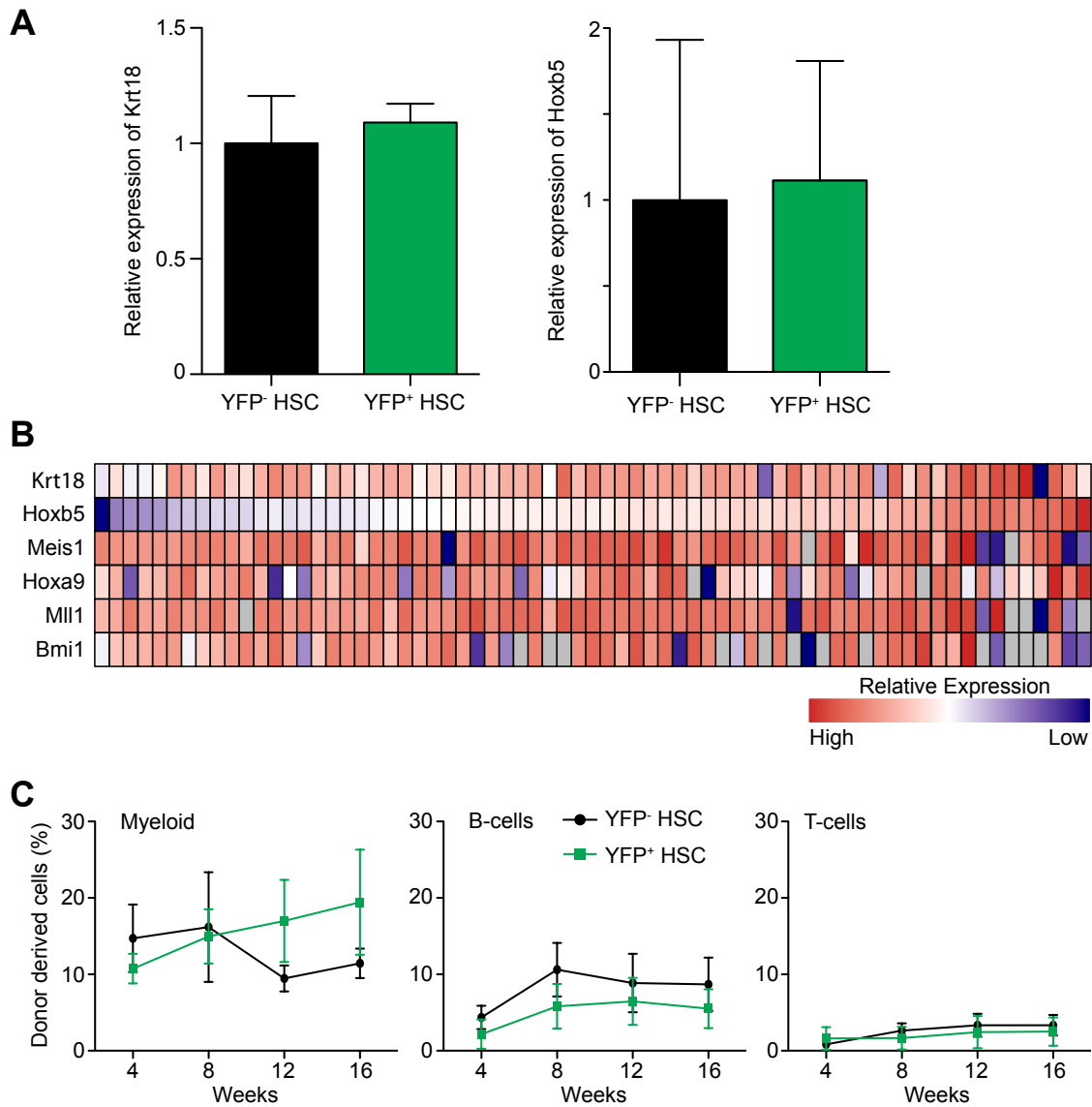


Figure S3

Figure S3. *Krt18* expression in HSCs. **(A)** Expression levels of *Krt18* (left) and *Hoxb5* (right) in both YFP⁻ and YFP⁺ HSCs in *Krt18-CreER/YFP* mice 1 week after tamoxifen treatment (n=3). *Krt18* and *Hoxb5* were expressed at similar levels in both fractions of HSCs. **(B)** Single cell qPCR analysis on HSCs. Most single sorted HSCs expressed known HSC marker genes such as *Hoxb5*, *Meis1*, *Hoxa9*, *Mll1*, and *Bmi1*. *Krt18* was expressed in most single sorted HSCs. Cells were sorted based on the expression levels of *Hoxb5*. **(C)** Donor type reconstitution in

myeloid cells (left), B-cells (middle), and T-cells (right) after transplanting 30 YFP⁻ or YFP⁺ HSCs from *Krt18-CreER/YFP* mice. Data in (**A** and **C**) represents mean±SEM.

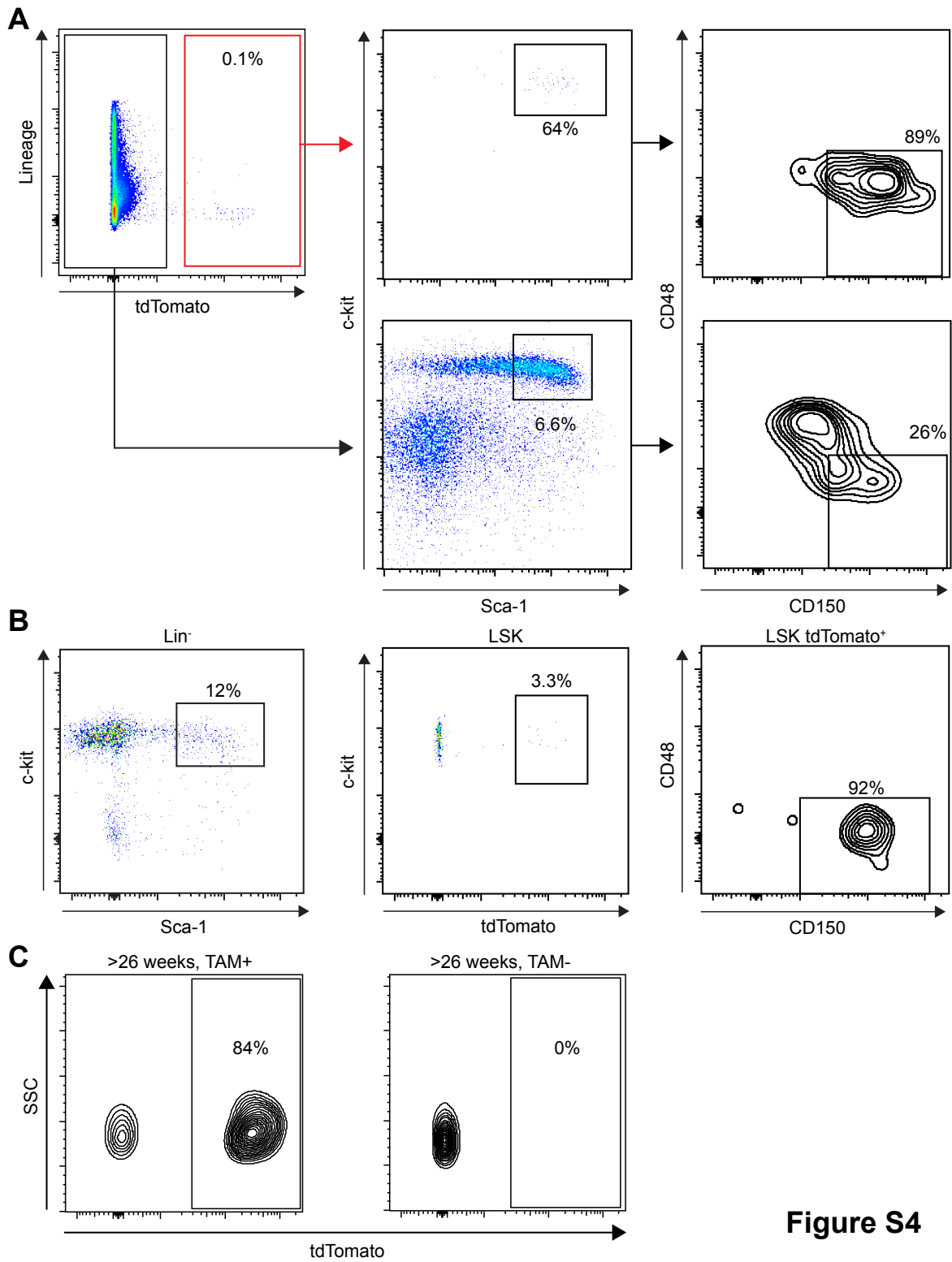


Figure S4

Figure S4. Additional gating schemes with the *Fgd5-CreER/tdTomato* mice. (A) Live mononucleated cells were gated based on tdTomato expression, then based on c-kit and Sca-1 expression, then on CD150 and CD48 expression. (B) c-kit⁺Sca-1⁺ cells were gated within the

lineage⁻ cells, then gated based on tdTomato expression. Most LSK tdTomato⁺ cells were CD150⁺CD48⁻. (C) Labeling efficiency of HSCs in *Fgd5-CreER/tdTomato* mice without tamoxifen treatment. Mice more than 26 weeks of age without tamoxifen had no tdTomato labeling in HSCs.

Supplementary Table 1 (List of primers used in the study)

Name	Sequence (5'-3')
Actb F	CGTCGACAACGGCTCCGGCATG
Actb R	GGGCCTCGTCACCCACATAGGAG
Krt18 F	ATTTTCAGTCTCAACGATGCCCT
Krt18 R	TGCCATCCACGATCTTACGG
Hoxb5 F	GCAGACTCCACAGATATTCC
Hoxb5 R	CAGGTAGCGATTGAAGTGG
Meis1 F	ATGGGTTCCCTCGGTCAATG
Meis1 R	CATTTCTCAAAAATCAGTGCTAAGA
Hoxa9 F	AAACAATGCCGAGAATGAGAG
Hoxa9 R	AAACAGAAACTCCTTCTCCAG
Mll1 F	TGAACATCCTCAACCCACTC
Mll1 R	GTCTTCCTTAAAGTCCACTCTG
Bmi1 F	CCGGGATCTTTTATCAAGCA
Bmi1 R	TTGCTGGTCTCCAAGTAACGT