

Supporting Information

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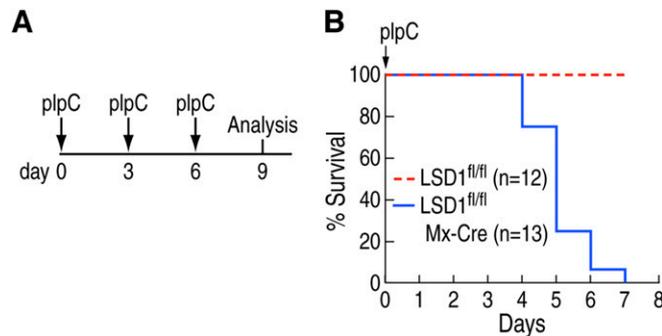


Fig. S1. LSD1 deficiency leads to sudden death due to endotoxic shock. (A) Schematic presentation of standard experimental design of plpC-induced gene deletion. (B) Survival curve after single plpC injection into *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice ($n = 13$) and the control (*LSD1^{fl/fl}*) mice ($n = 12$).

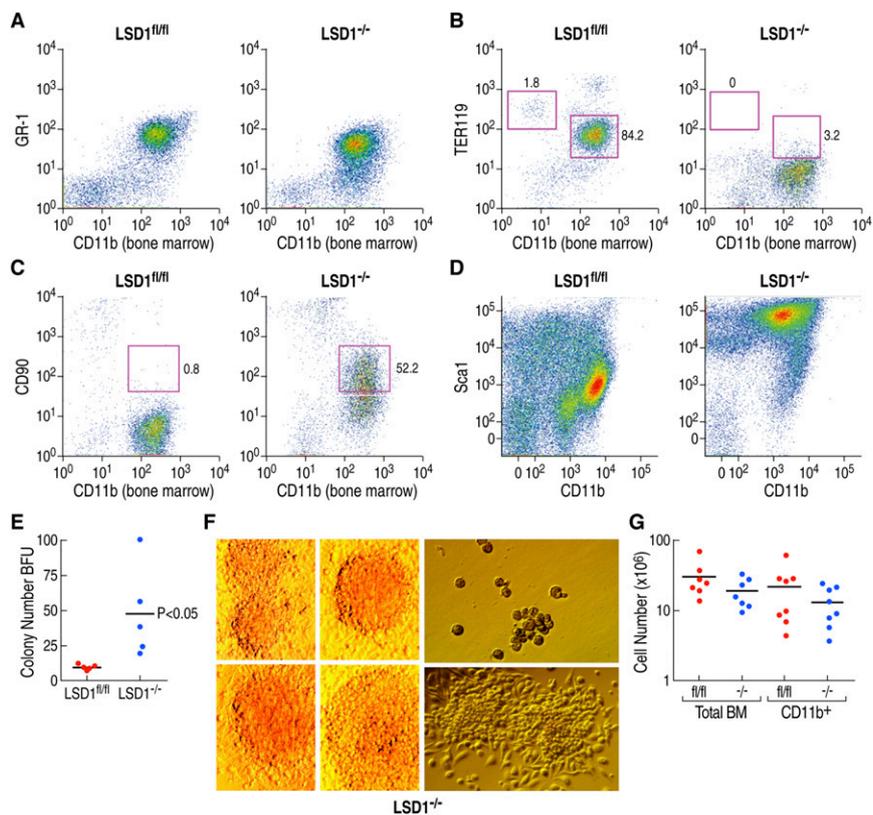


Fig. S2. LSD1-deficient mice have acute expansion of hyperproliferative and hyperinflammatory myeloid progenitors in BM. (A) The representative expression of CD11b and GR-1 of BM cells from *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice and the control mice are shown. (B) The representative expression of CD11b and TER119 of BM cells from *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice and the control are shown. Numbers are indicated as the percentage of indicated quadrant population among total BM cells; (C) The representative expression of CD11b and CD90 of BM cells from *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice and the control are shown. Numbers are indicated as the percentage of indicated quadrant population among total BM cells. (D) The representative expression of CD11b and Sca1 of BM cells from *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice and the control are shown. (E) Total BM cells were isolated from *LSD1^{fl/fl}*; Mx-Cre (*LSD1^{-/-}*) mice and the control were cultured in methylcellulose-based medium supplement with a mixture of cytokines. The number of BFU colonies is shown after in vitro serial transfer into the methylcellulose-based medium. Data are shown as an average of triplicates, and error bar indicates the SD. (F) *LSD1*-deficient BM cells gain self-renewal (colonies at *Left*) and become SCF- and IL-3-independent (colonies at *Right*). (G) Total or CD11b-positive BM cells were determined from *LSD1^{-/-}* mice and the control mice.

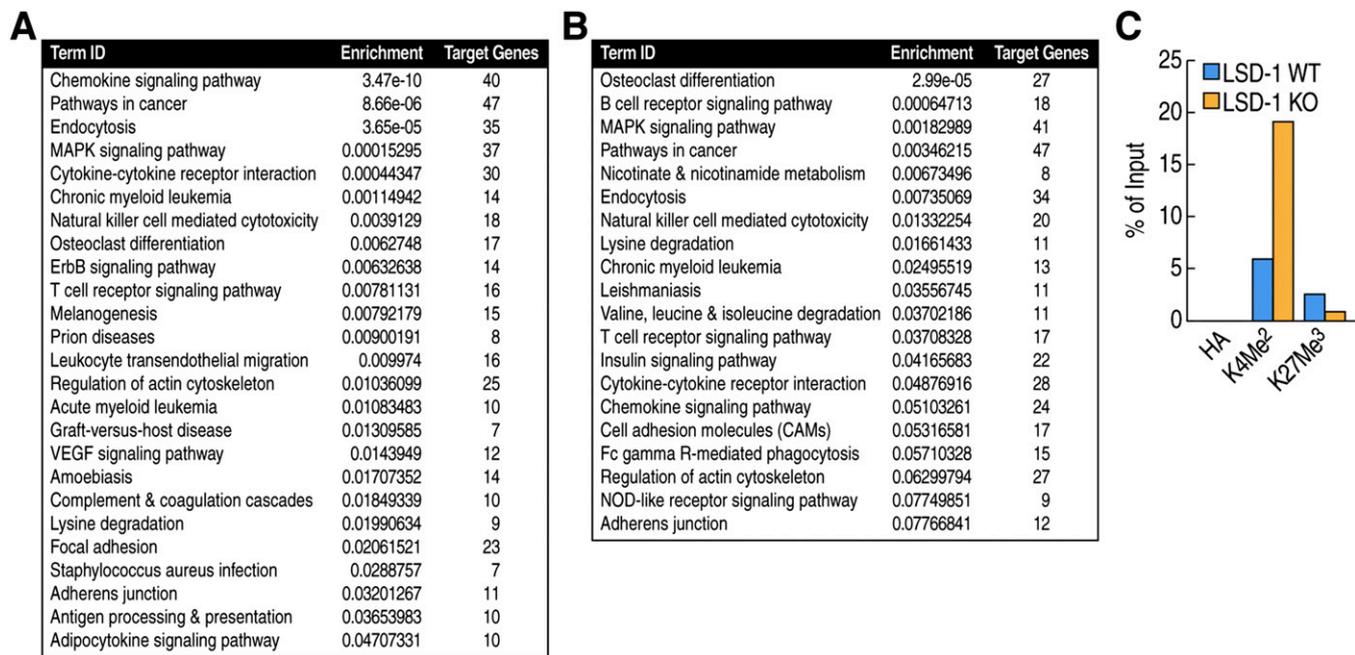


Fig. S5. LSD1 regulates gene expression. (A) Gene Ontology (GO) term analysis of up-regulated genes upon LSD1 deletion. (B) GO term analysis of down-regulated genes upon LSD1 deletion. (C) ChIP-PCR analysis of histone modifications on Gfi1b locus.