



**Supplementary information, Figure S4. LKB1 signaling in DCs controls Th17 cell differentiation, in part, by shaping IL-6–STAT3 signaling.** **a**, Real-time PCR analysis of *Stk11* mRNA expression in CD4<sup>+</sup>CD44<sup>hi</sup>CCR6<sup>+</sup> Th17 cells from WT and LKB1<sup>ADC</sup> mice. **b**, Analysis of *Ifng* and *Il17* mRNA expression in popliteal draining lymph node (DLN) and splenic cells from KLH immunized WT and LKB1<sup>ADC</sup> mice after *ex vivo* stimulation with KLH for 48 h. **c**, Real-time PCR analysis of *Il6* and *Tgfb2* mRNA expression in splenic CD8α<sup>+</sup> cDCs and CD8α<sup>-</sup> cDCs from WT and LKB1<sup>ADC</sup> mice. **d**, Cytokine analysis in the supernatant from naïve OT-II CD4<sup>+</sup> T cells co-cultured with WT or LKB1-deficient splenic DCs for 3 days. **e**, Relative thymidine incorporation of WT Tregs co-cultured with splenic DCs from WT and LKB1<sup>ADC</sup> mice in the presence or absence of anti-TGFβ (values cultured with WT thymic DCs without antibody treatment was set as 1). **f**, Flow cytometry analysis of splenic Foxp3<sup>+</sup>CD4<sup>+</sup> Tregs from WT, LKB1<sup>ADC</sup>, *Il6*<sup>-/-</sup>, or LKB1<sup>ADC</sup>/*Il6*<sup>-/-</sup> mice. **g**, Flow cytometry analysis (left) and statistics (right) of IL-17 expression in naïve OT-II CD4<sup>+</sup> T cells cultured with splenic DCs from WT, LKB1<sup>ADC</sup>, *Il6*<sup>-/-</sup>, or LKB1<sup>ADC</sup>/*Il6*<sup>-/-</sup> mice for 5 days. **h**, Tumor growth curve in WT (*n* = 28), LKB1<sup>ADC</sup> (*n* = 21), *Il6*<sup>-/-</sup> (*n* = 5), or LKB1<sup>ADC</sup>/*Il6*<sup>-/-</sup> (*n* = 19) mice following inoculation of MC38 tumor cells. **i**, WT and LKB1<sup>ADC</sup> mice were inoculated with MC38 tumor cells and treated with or without 1 mg/kg/d Stat3 inhibitor JSI-124 for 13 days started from day 4 for tumor growth curve analysis (*n* = 5, JSI-124-treated WT; *n* = 6 for other groups). Statistics was shown for LKB1<sup>ADC</sup>-vehicle group vs LKB1<sup>ADC</sup>-JSI-124 group. Data in plots indicate the means ± s.e.m; each symbol represents an individual mouse. Numbers in gates indicate percentage of cells. NS, not significant; \**P* < 0.05, \*\**P* < 0.01, \*\*\**P* < 0.001; \*\*\*\**P* < 0.0001; two-tailed unpaired Student's *t* test (b–e) or two-way ANOVA (h, i). Data are from two (a–d, f, g, i) or three (e, h) independent experiments.