

Supplementary Figure 2. Quality controls performed to validate the *in vivo* screening platform. A, Western blot demonstrating Cas9 expression in KP-Cas9-clone 7 and KP-Cas9-clone 9. Mouse β-actin was used as the internal control. B, C, Cell viability of KP-Cas9-clone 7 (B) and KP-Cas9-clone 9 (C) transfected with sgRNAs targeting the essential gene *Rbx1*. D, E, Tumor growth curve (D) and tumor weight (E) of sgRNA library transduced KP-Cas9-clone 7 & 9 subcutaneously injected into B6 WT mice. F, Percentage of maintained sgRNAs in mice injected with KP-clone 7 library (without Cas9) and KP-clone 9 library (without Cas9) cells. All data are shown as mean ± SEM. *****p <0.0001