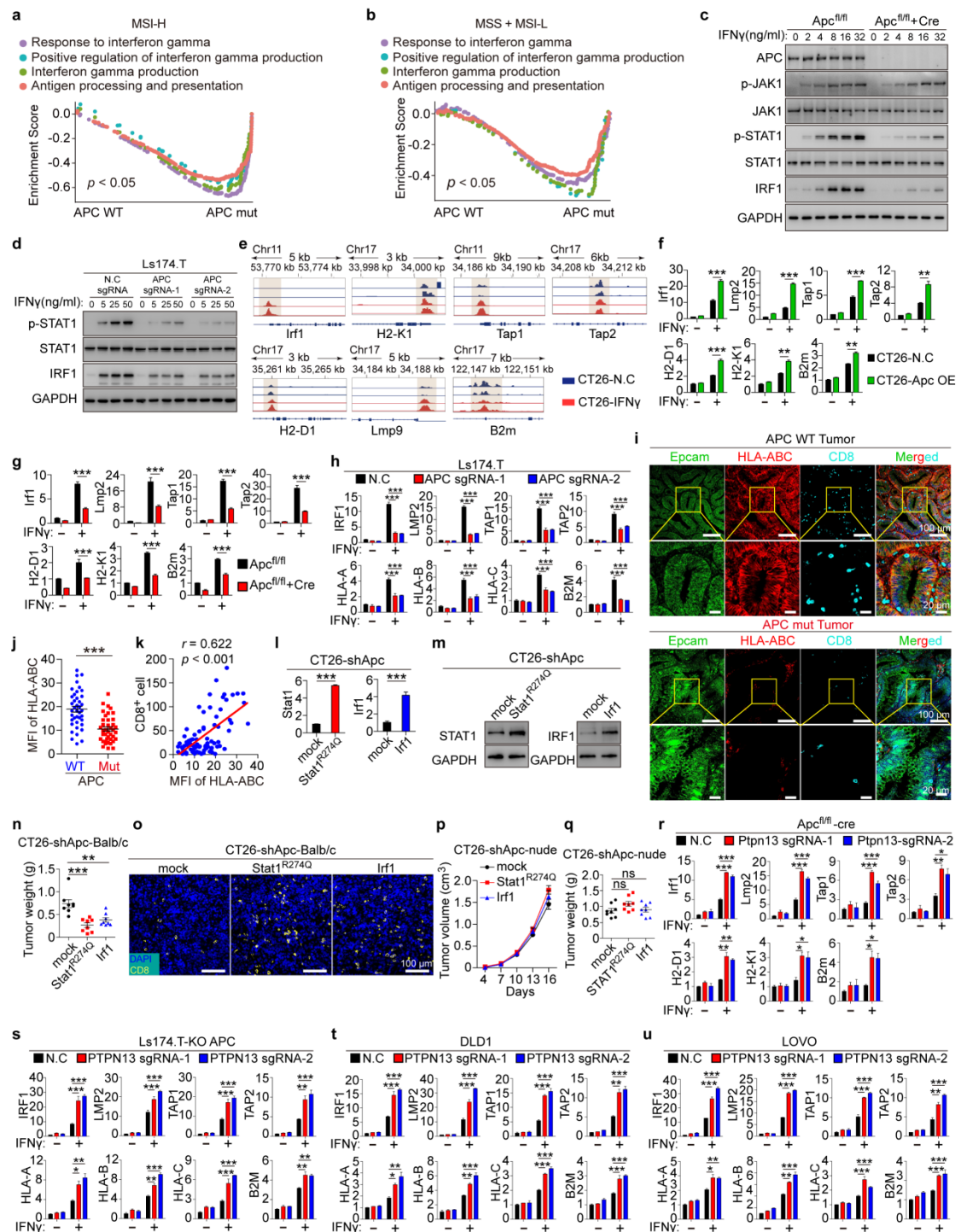




Supplementary information, Fig. S4. Additional data on the role of APC-loss in attenuating IFN γ -STAT1- IRF1-MHC-I antigen presentation signaling. **a, b**, GSEA using GO pathways were performed between APC mutated and APC WT groups respectively in MSI-H (A) and MSS+MSI-L (B) subgroup of TCGA dataset. **c**, Intestinal organoids from Apc^{fl/fl} mice were cultured with adenovirus-GFP or adenovirus-Cre infection and stimulated with IFN γ with indicated concentrations for 2 h. Total cell lysates of indicated organoids were subjected to immunoblot analysis with antibodies to the indicated proteins. Data represents three independent experiments. **d**, Total cell lysates from gradient IFN γ concentration treated Ls174.T cell were subjected to immunoblot analysis with antibodies to the indicated proteins. Data represents three independent experiments. **e**, ChIP-Seq tracks of the Irf1, Psmb9,

Tap1, Tap2, H2-D1, H2-K1, B2m, Cxcl9, Cxcl10, and Cxcl11 gene loci of IFN γ (red) or PBS (blue) treated CT26 cells. Grey shaded regions are significantly differential between conditions. Two replicates shown per condition. **f-h**, Irf1, Lmp2, Tap1, Tap2, MHC-I and B2m mRNA expression (qRT-PCR) in indicated cells. Data were from three independent experiments. **i**, Representative immunofluorescence (IF) staining of Epcam (green), HLA-ABC (red) and CD8 (cyan) in APC-WT and APC-mutated CRC primary tissues. **j**, Mean fluorescence intensity (MFI) of HLA-ABC IF staining in APC-WT and APC-mutated CRC primary tissues. $n = 40$ per group, unpaired t -test. **k**, Scatter plot showing correlation between MFI of HLA-ABC and CD8 IF staining in APC-WT and APC-mutated CRC primary tissues. $n = 80$, Pearson's r . **l**, Expression of Stat1 and Irf1 in Apc-silenced CT26 cells transfected Stat1^{R274Q} or Irf1 lentivirus was determined by qRT-PCR. Data represent three independent experiments, unpaired t test. **m**, Expression of Stat1 and Irf1 in Apc-silenced CT26 cells transfected Stat1^{R274Q} or Irf1 lentivirus was determined by western blot. Data represent three independent experiments. **n**, Scatter plots show tumor weight of indicated cells formed in Balb/c mice. $n = 8$, one-way ANOVA. **o**, Representative immunofluorescence staining of CD8 in tumor tissues. **p**, Indicated cells were subcutaneously xenotransplanted to nude mice, tumor growth was monitored at indicated times. $n = 8$ for each group, two-way ANOVA. **q**, Scatter plots show tumor weight of indicated cells formed in nude mice. $n = 8$, one-way ANOVA. **r-u**, Irf1, Lmp2, Tap1, Tap2, MHC-I and B2m mRNA expression (qRT-PCR) in indicated cells. Data were from three independent experiments. All data are mean $\pm$ s.e.m., * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.