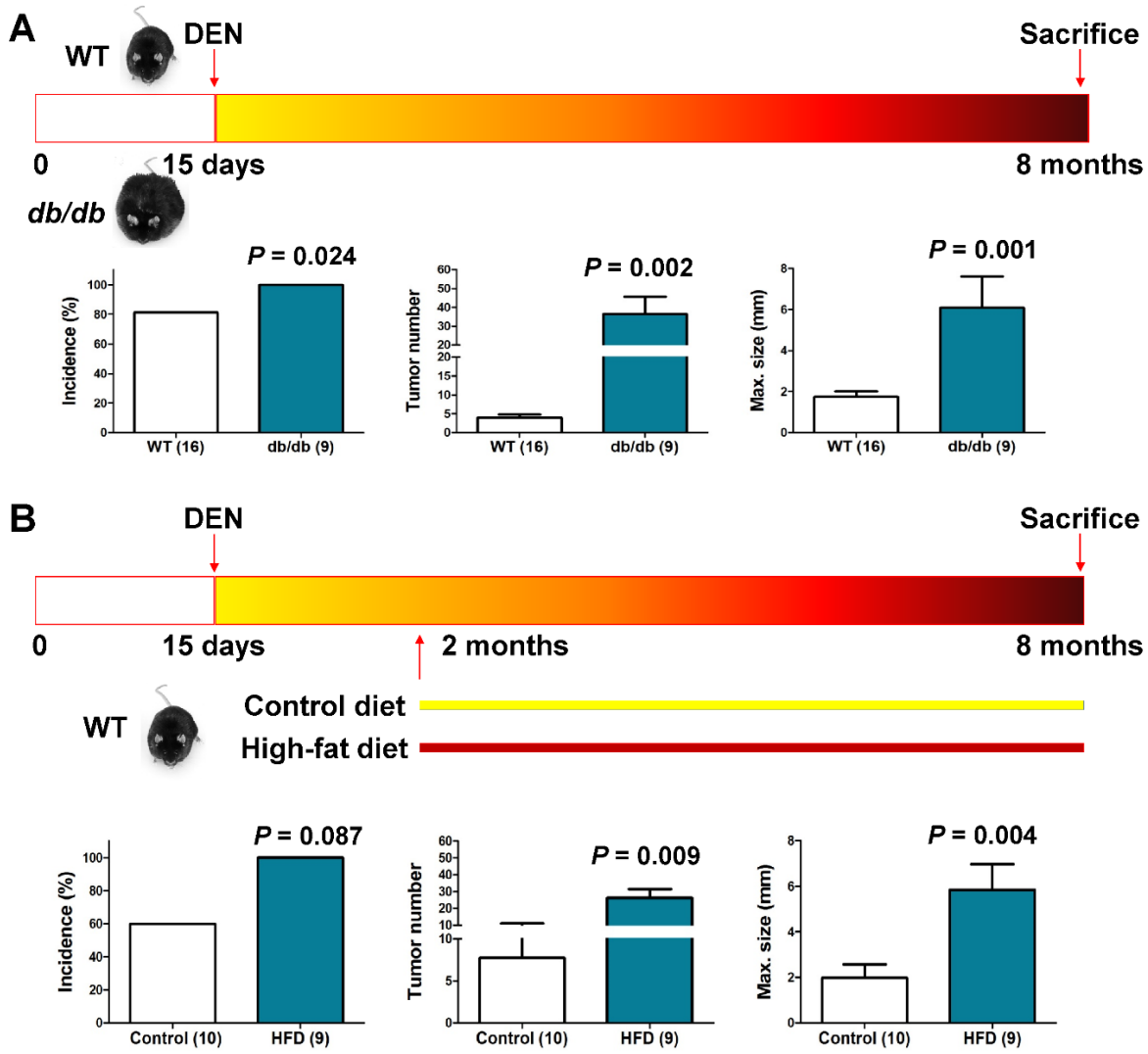
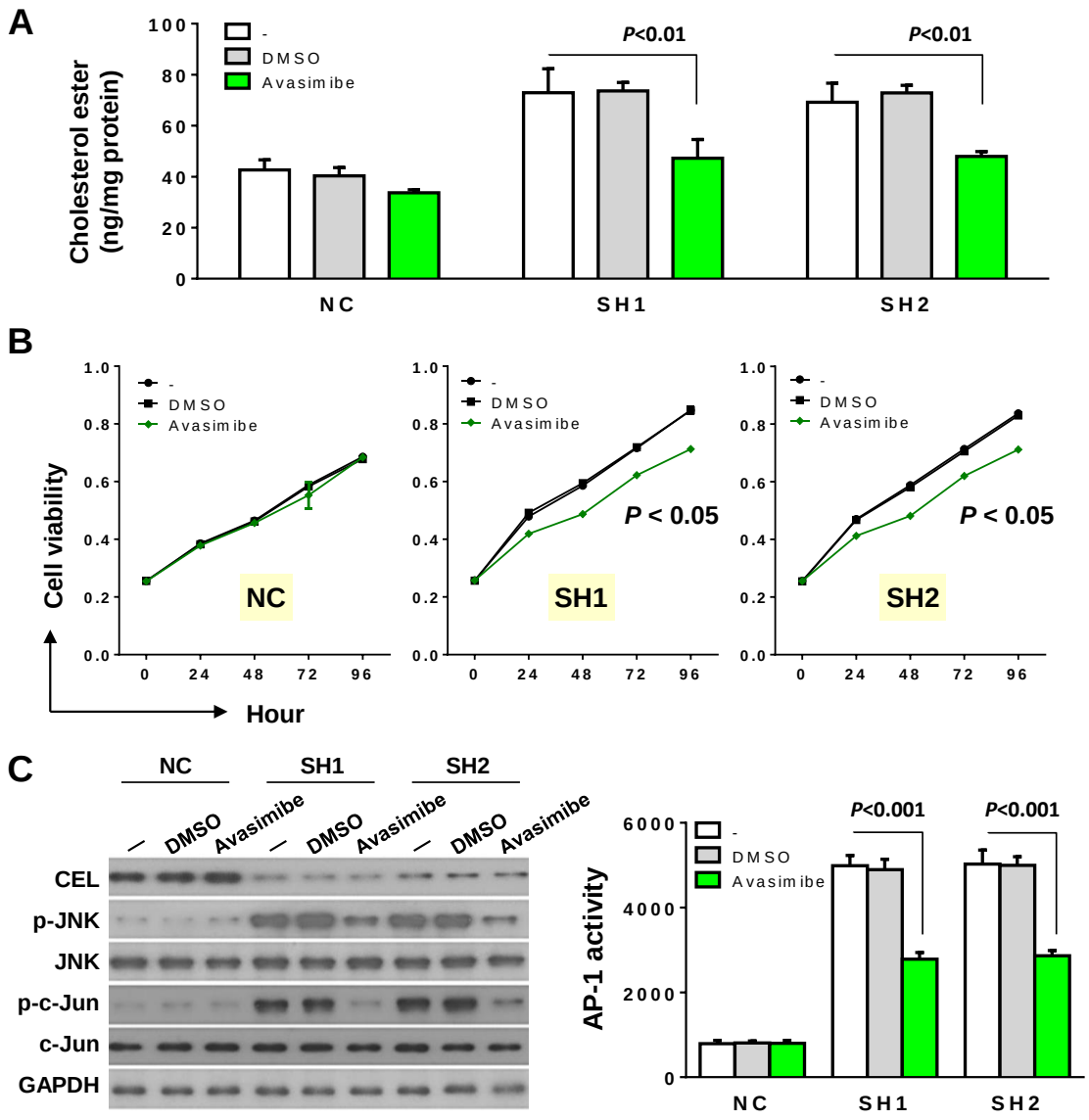
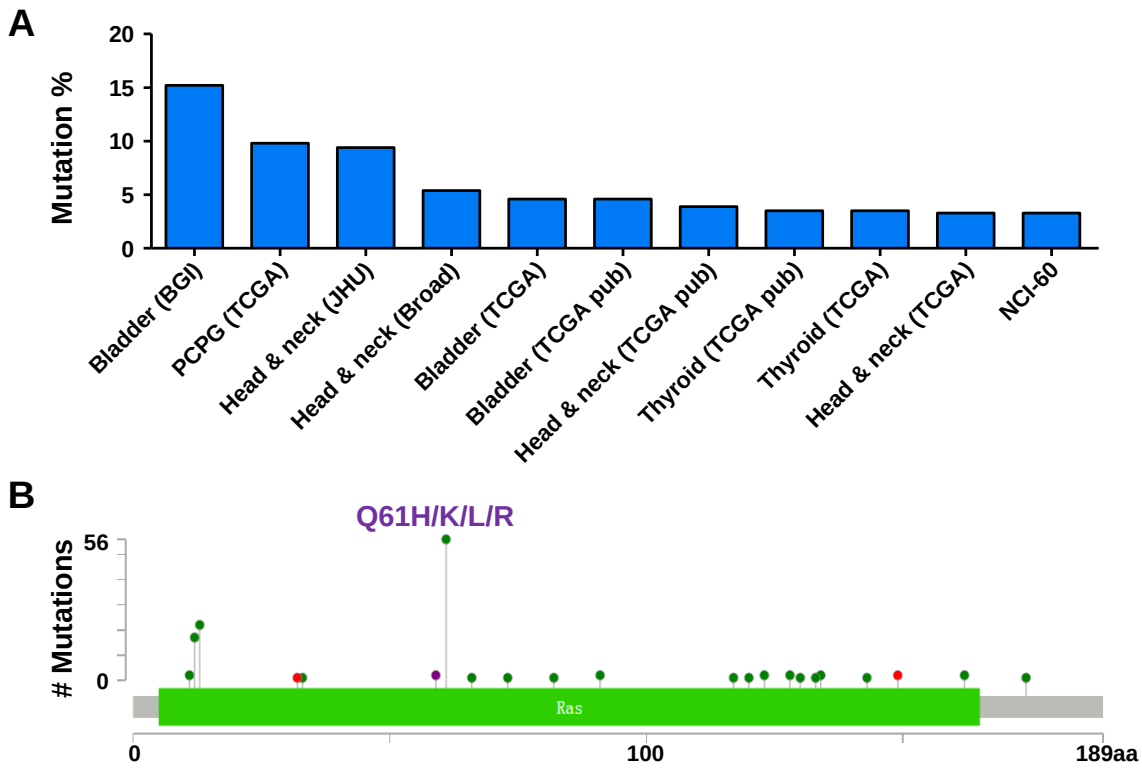
Supplementary Figures



Supplementary Figure 1 Genetic and dietary obesity increases susceptibility to DEN-induced hepatocarcinogenesis in mice. (**A**) Wild-type (WT) and genetic obese (*db/db*) mice received DEN (5 mg/kg, intra-peritoneal injection) at day 13 to 15. Mice were sacrificed at 8 months of age. HCC incidence, number of HCCs per mouse and maximal size of the tumors were counted. (**B**) C57BL/6 mice fed with high fat diet (HFD) or normal chow till 8 months of age. HCC incidence, number of HCCs per mouse and maximal size of the tumor were counted.



Supplementary Figure 2 Reducing cholesteryl ester by drug treatment counteracts the effect of *CEL* knock-down. **(A)** Treatment with Avasimibe, an inhibitor of the cholesterol esterification enzyme ACAT, significantly reduced the level of cholesterol ester in MIHA cells. **(B)** Consistent with the reduction of cholesterol ester, Avasimibe treatment significantly inhibited cell growth of *CEL* knock-down MIHA cells. **(C)** Avasimibe suppressed the signaling cascade and AP-1 activity induced by knock-down of *CEL*. Data are means±SD. NC, negative control; SH1&SH2, shRNAs targeting *CEL*.



Supplementary Figure 3 Mutations in human *HRAS* in TCGA database. (**A**) Mutation frequencies of *HRAS* in selected TCGA studies. (**B**) Codon 61 of *HRAS* is a mutation hot spot in human cancers. Data are from cBioPortal for Cancer Genomics (May 2015).