Supplementary Figure 1

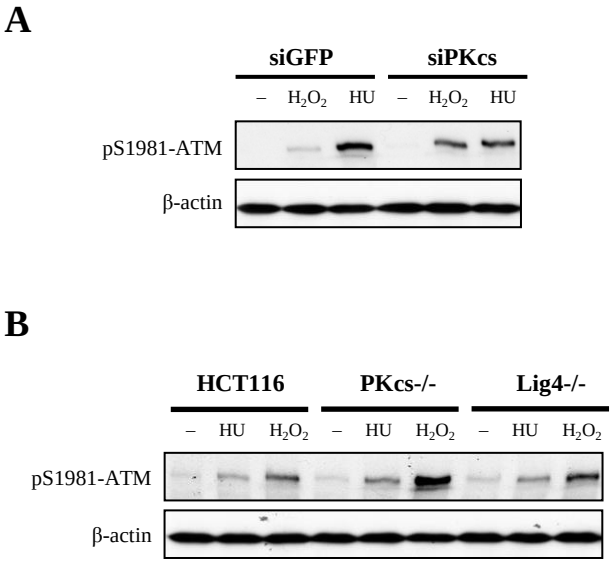

Figure S1. ATM hyperactivation to oxidative stress is independent of DSB repair and the NHEJ pathway. (A) HeLa cells were transfected with control siRNA or DNA-PKcs siRNA. At 72 h after initial transfection, HeLa cells were treated with 50 μM H_2O_2 or 5mM hydroxyurea for 30 min followed by western blot analysis. The reduction of HU-induced ATM Ser1981 phosphorylation in DNA-PKcs knockdown cells likely reflected the decreased level of total ATM protein. (B) Wild type, DNA-PKcs-/-, and Lig4-/- HCT116 cells were treated with 50 μM H_2O_2 or 5mM hydroxyurea for 30 min followed by western blot analysis.

Supplementary Figure 2

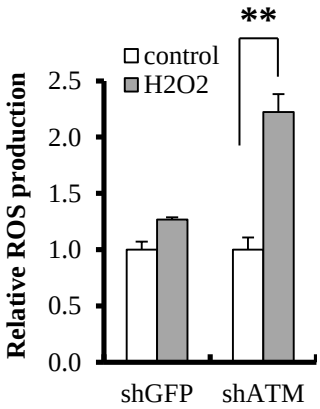

Figure S2. ATM depletion increases ROS production. HeLa cells were transfected with control or siATM for 48 h and were analyzed for total ROS production in response to H_2O_2 treatment (50 μM H_2O_2, 30min). **, $P < 0.01$.