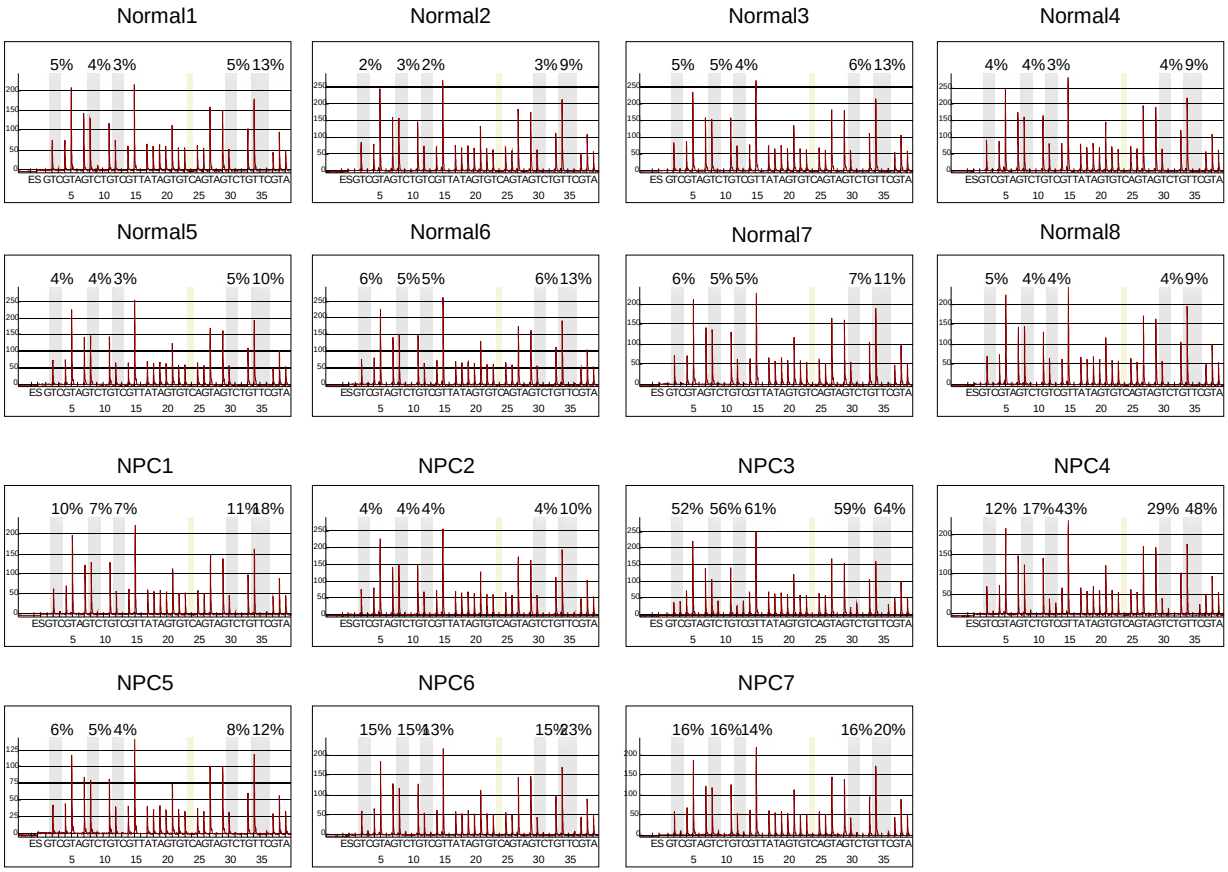
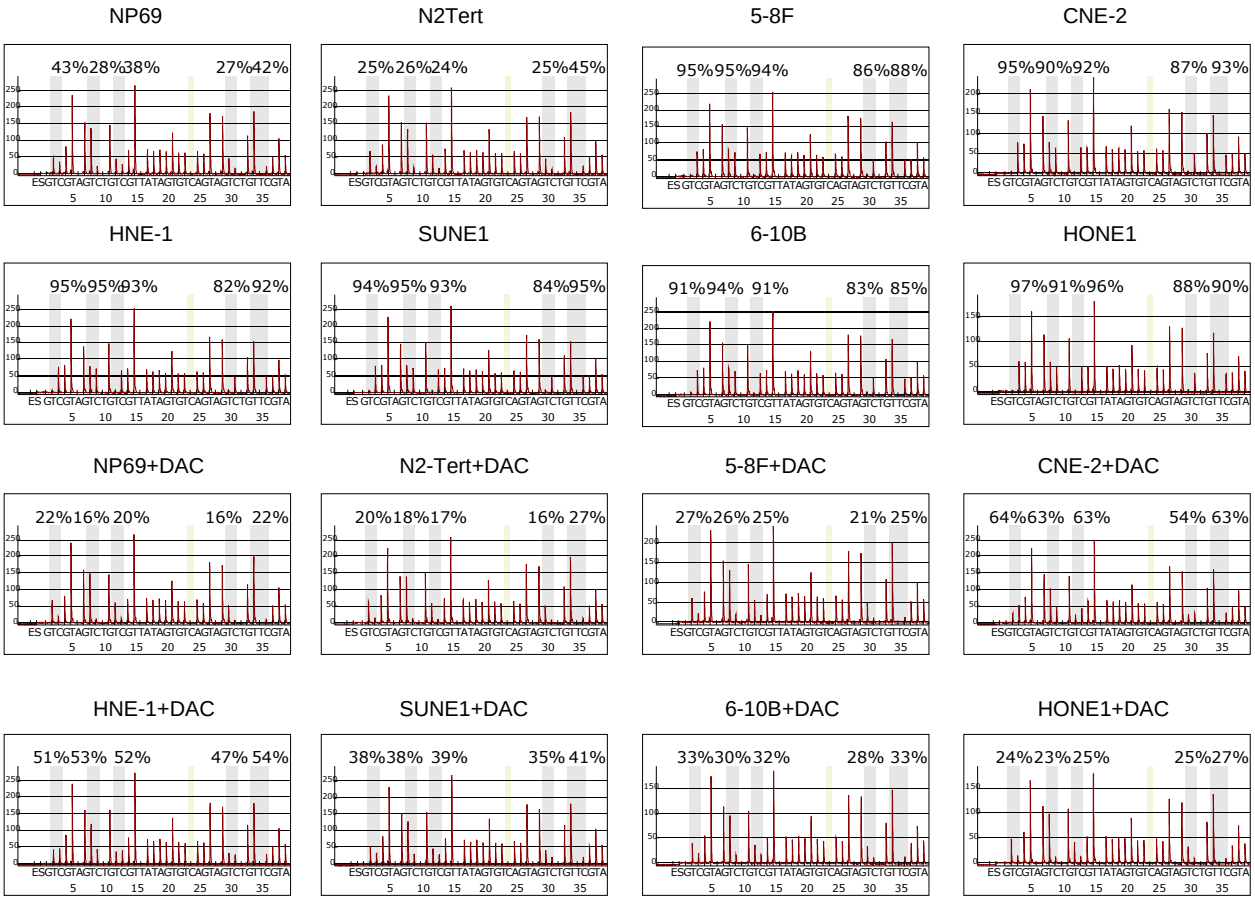
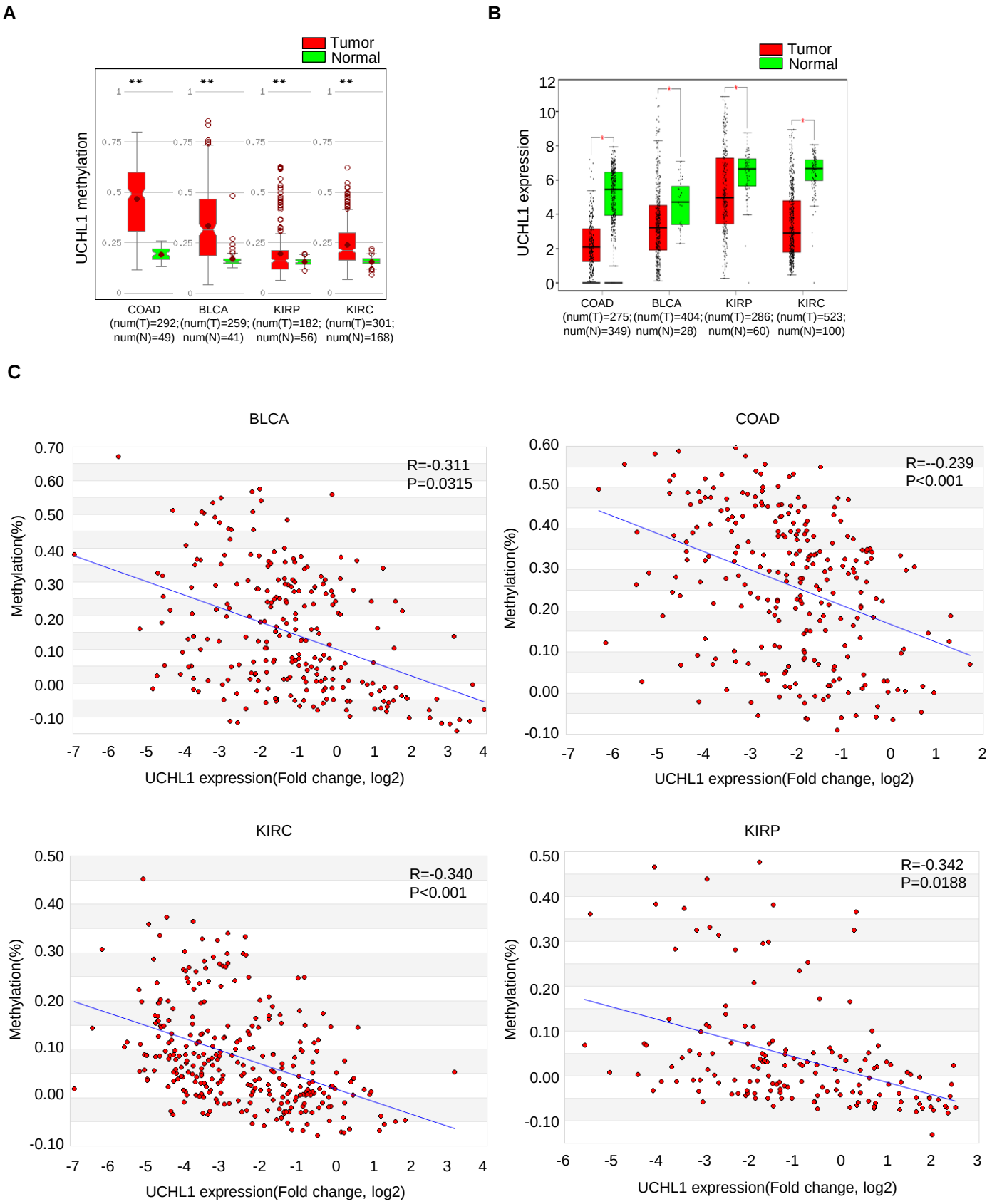


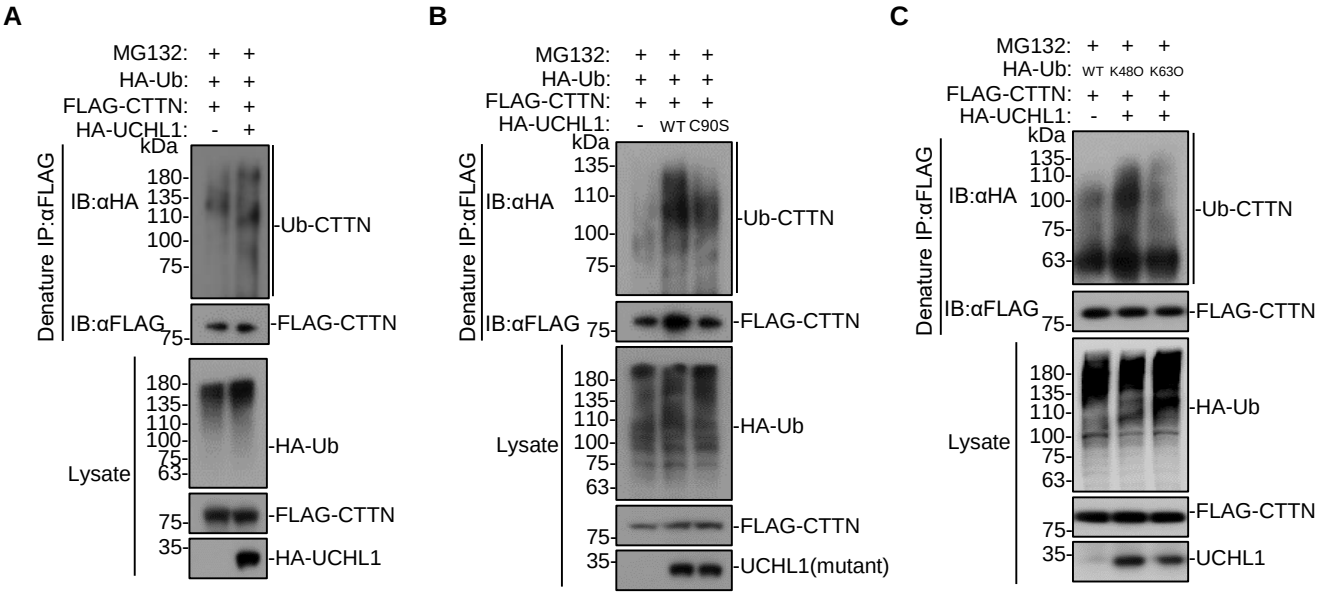
Supplementary Figure S1 The *UCHL1* is hypermethylated in nasopharyngeal carcinoma tissues. Bisulfite pyrosequencing analysis of the UCHL1 promoter region in normal(n=8) and nasopharyngeal carcinoma(n=7) tissues.



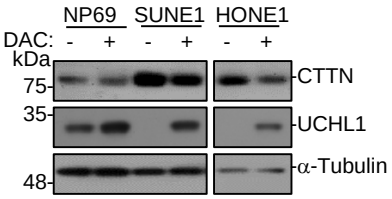
Supplementary Figure S2 *UCHL1* is hypermethylated in nasopharyngeal carcinoma cell lines. Bisulfite pyrosequencing analysis of the UCHL1 promoter region in NPEC (NP69, N2-Tert) and NPC (5-8F, CNE2, HNE1, SUNE1,6-10B, HONE1) cell lines treated with or wothout DAC.



Supplementary Figure S3 Promoter hypermethylation mediates downregulation of UCHL1 in four types of solid tumor. (**A**) UCHL1 methylation levels in normal and tumor tissues(CAOD; BLCA; KIRP; KIRC) analyzing in the MethHC database.(**B**) Relative expression of UCHL1 in normal and tumor tissues(CAOD; BLCA; KIRP; KIRC) analyzing by the GEPIA website.(**C**)Correlation analysis between UCHL1 methylation(%) and UCHL1 mRNA expression(Fold change, log2) in normal and tumor tissues(CAOD; BLCA; KIRP; KIRC) in the MethHC database. (* indicated P < 0.05; * * indicated P < 0.01).



Supplementary Figure S4 UCHL1 targets CTTN for K48-linked ubiquitination. (**A-B**) Denature-immunoprecipitation (Denature-IP) (with anti-FLAG) and immunoblot analysis (with anti-FLAG, anti-HA, or anti-UCHL1) of HEK293 cells transfected with plasmids encoding FLAG-CTTN, HA-Ubiquitin and empty vector, UCHL1 (**A**), or UCHL1(C90S) (**B**) for 24 h followed by treatment with MG132 for 6 h. (**C**) Denature-immunoprecipitation (Denature-IP) (with anti-FLAG) and immunoblot analysis (with anti-FLAG, anti-HA or anti-UCHL1) of HEK293 cells transfected with plasmids encoding FLAG-CTTN and HA-Ubiquitin, HA-Ubiquitin(K48O), or HA-Ubiquitin(K63) and empty vector or UCHL1 for 24 h followed by treatment with MG132 for 6 h. Data are representative of at least three independent experiments.



Supplementary Figure S5 Hypermethylation of UCHL1 suppresses degradation of CTTN. Immunoblot analysis of CTTN, UCHL1 and α-Tubulin in NP69, SUNE1 and HONE1 cells treated with or without DAC (10μM). Data are representative of at least three independent experiments.