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Supplemental Information

Targeting YTHDF1 effectively re-sensitizes cisplatin-resistant colon cancer cells by modulating GLS-mediated glutamine metabolism

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SUPPLEMENTAL INFORMATION

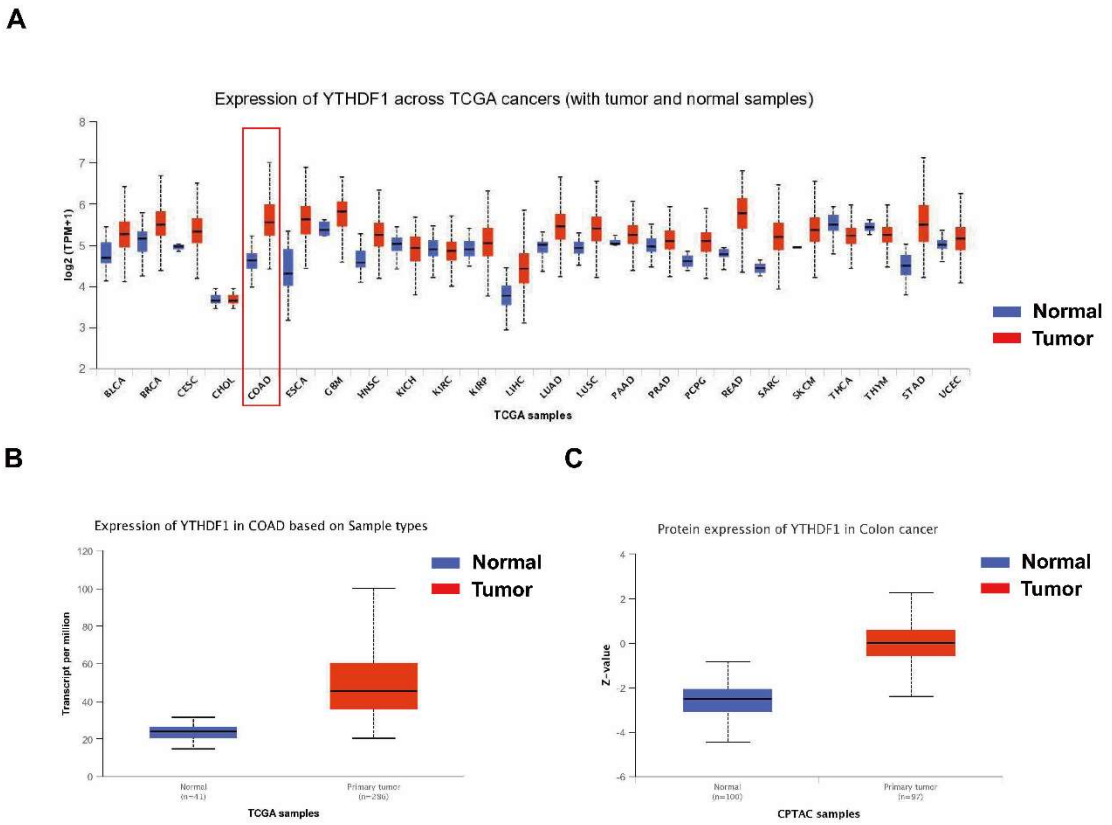

Figure S1. YTHDF1 is highly expressed in colon cancers. (A) Analysis of the expression of YTHDF1 from TCGA cancers. (B) Comparison of YTHDF1 mRNA expressions between normal colon tissues and colon tumors from TCGA database. (C) Comparison of YTHDF1 protein expressions between normal colon tissues and colon tumors from CPTAC database.

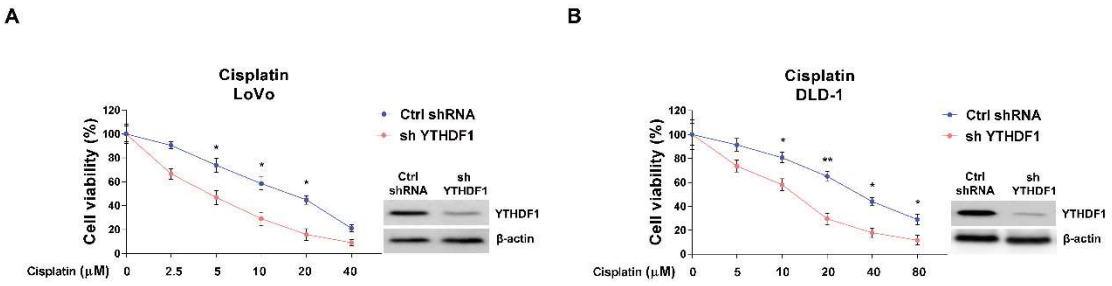

Figure S2. Effects of YTHDF1 silencing on cisplatin sensitivity of CRC cells. (A) YTHDF1 was stably knocked down in LoVo and (B) DLD-1 cells. Cells were treated with cisplatin at the indicated concentrations for 48 hours. Cell viability was determined by MTT assay. Data were presented as mean±S.D. *, $p<0.05$; **, $p<0.01$.

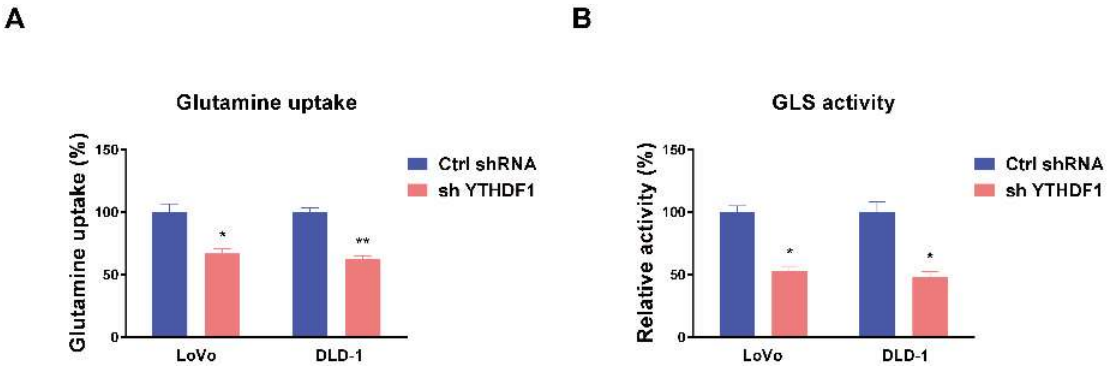

Figure S3. Effects of YTHDF1 silencing on glutamine metabolism of CRC cells. (A) YTHDF1 was stably knocked down in LoVo and DLD-1 cells. The glutamine uptake and (B) GLS activity were measured. Data were presented as mean±S.D. *, $p<0.05$; **, $p<0.01$.

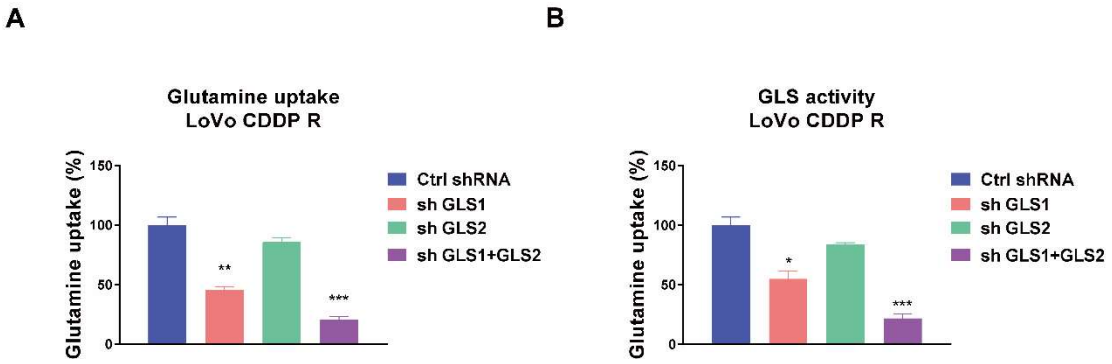

Figure S4. Effects of GLS silencing on glutamine metabolism of CRC cells. (A) LoVo CDDP R cells were transfected with control shRNA, shGLS1alone, shGLS2 alone or shGLS1+shGLS2 for 48 hours. The glutamine uptake and (B) GLS activity were measured. Data were presented as mean±S.D. *, p<0.05; **, p<0.01; ***, p<0.001.

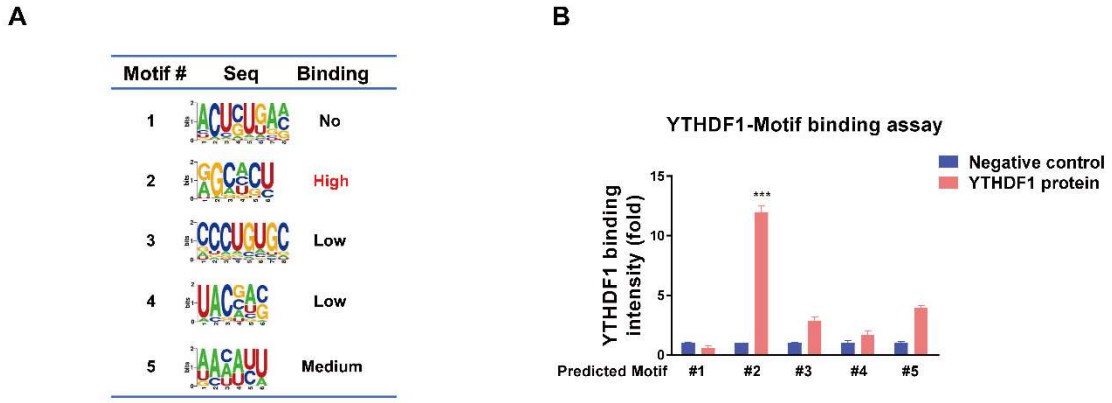

Figure S5. Binding capacity of YTHDF1 on predicted motifs. (A) List of binding motifs of YTHDF1 on 3'-UTR of GLS1. (B) Quantification of EMSA assay for detecting the binding of YTHDF1 on motifs. Data were presented as mean±S.D. ***, p<0.001.