

Figure S1. p53 expression and expression of RYBP in liver metastasis and cells transfected with an empty vector. (A) Expression of p53 was evaluated using a positive cell distribution pattern (absent, sporadic, mosaic and diffuse) and intensity (weak and strong) of nuclear staining and categorised as wt (absent and weakly and sporadically positive staining) and mutant p53 (strongly mosaic and diffuse staining; red box). (B) Expression of RYBP in liver metastatic tumour and adjacent normal tissue. (C) Western blot analysis of RYBP in CRC cell lines following transfection with empty and RYBP expression vector. Scale bar, 100 μ m. RYBP, ring1 and YY-1 binding protein; wt, wild-type.

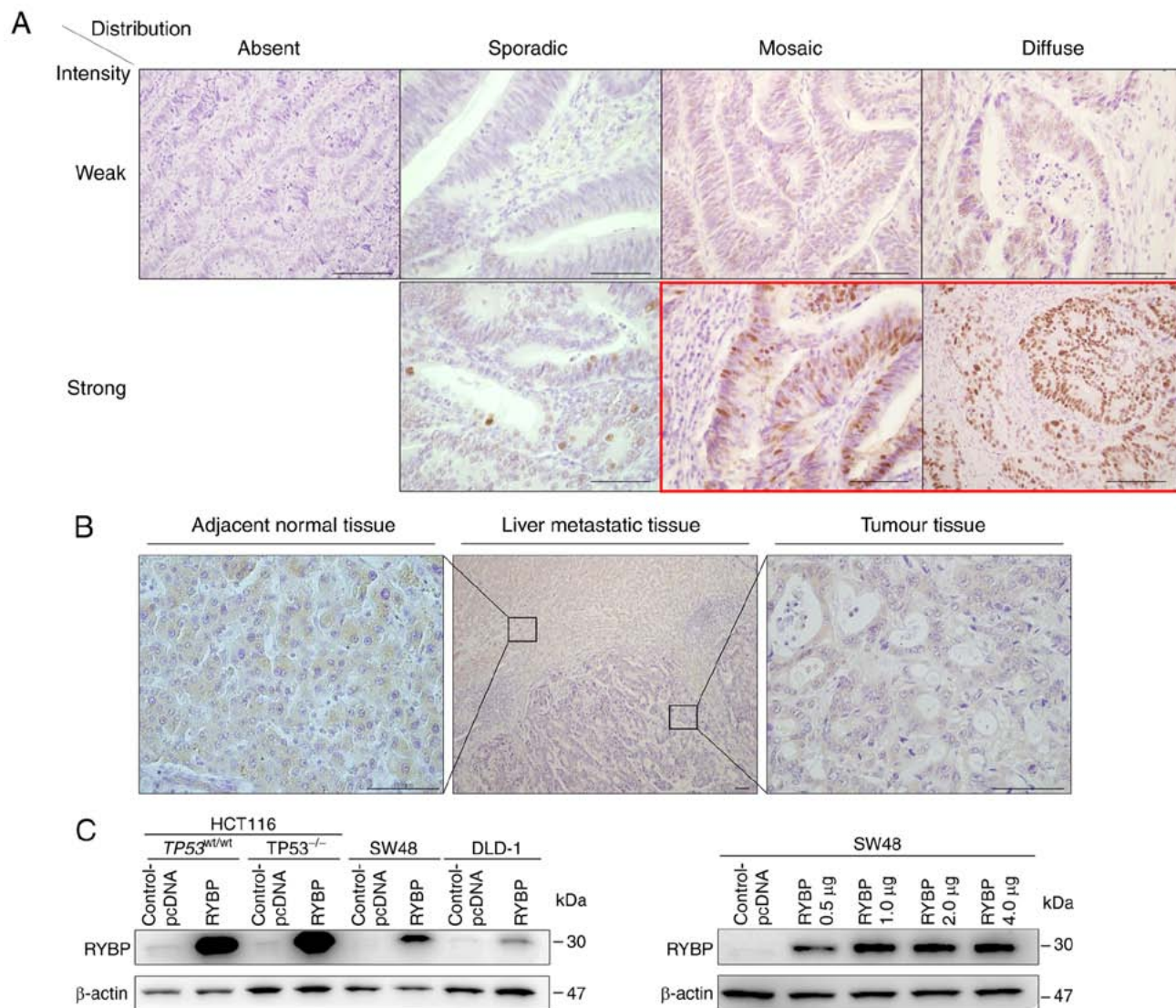


Figure S3. RYBP induces p53/p21 signalling pathway activity. Densitometric quantification of (A) p53, (B) p21, (C) cyclin D1 and (D) Bax protein, relative to β -actin following RYBP knockdown and overexpression. All experiments were performed three times independently. * $P < 0.05$, ** $P < 0.01$. n.s., not significant; RYBP, ring1 and YY-1 binding protein; si, small interfering; wt, wild-type.

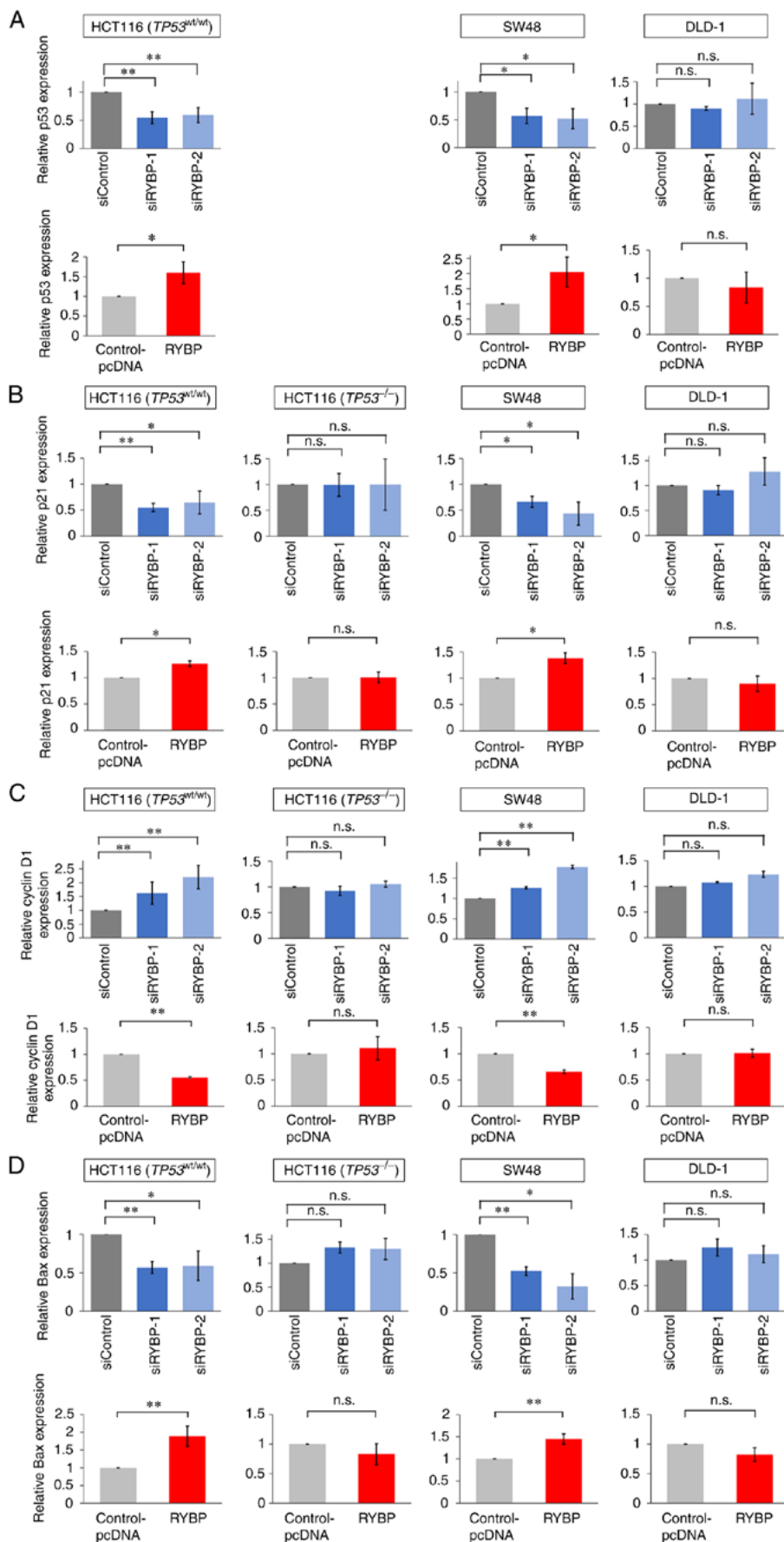


Figure S4. Levels of RYBP, p53, p21, cyclin D1 and Bax protein normalised to β -actin from same membrane. Levels of RYBP, p53, p21, cyclin D1 and Bax protein in HCT116 ($TP53^{wt/wt}$), HCT116 ($TP53^{-/-}$), SW48 and DLD-1 cells with RYBP (A) knockdown and (B) overexpression. RYBP, ring1 and YY-1 binding protein; wt, wild-type; si, small interfering.

