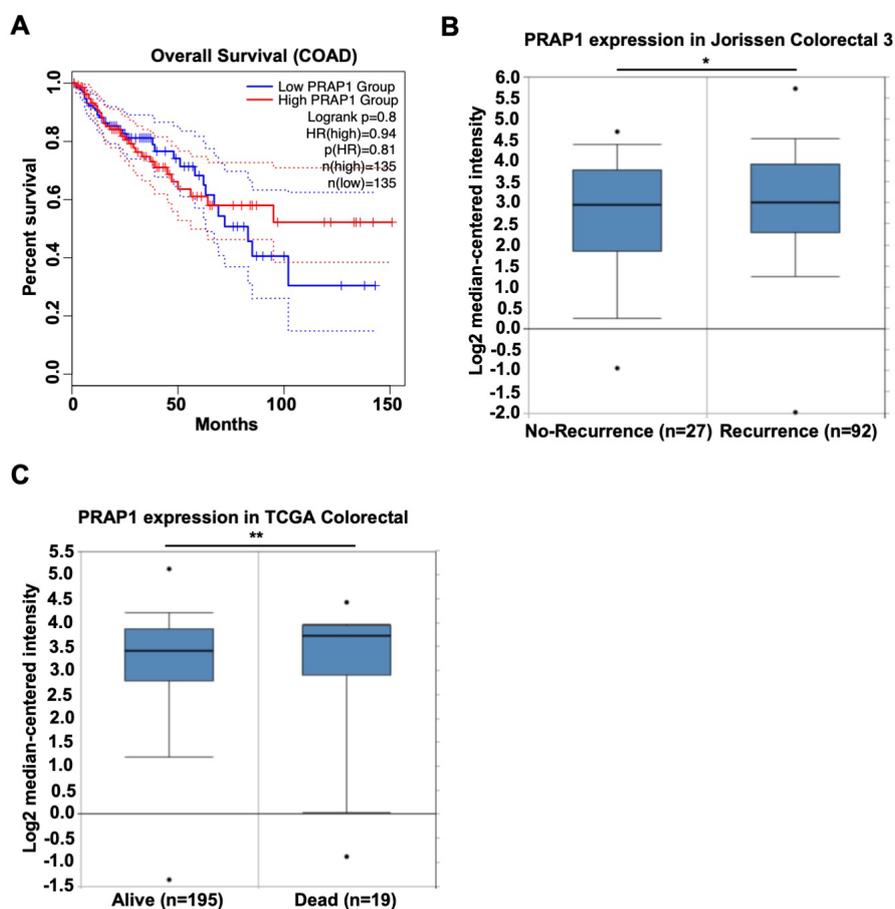


## Supplementary materials

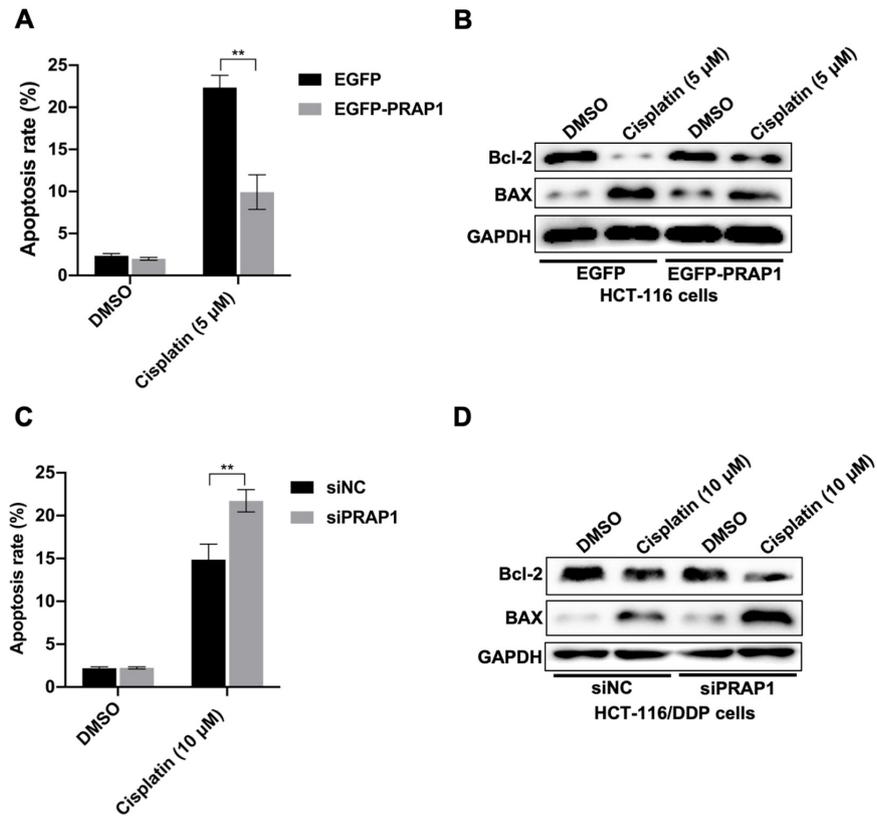
### Supplementary Figure legends

Figure S1



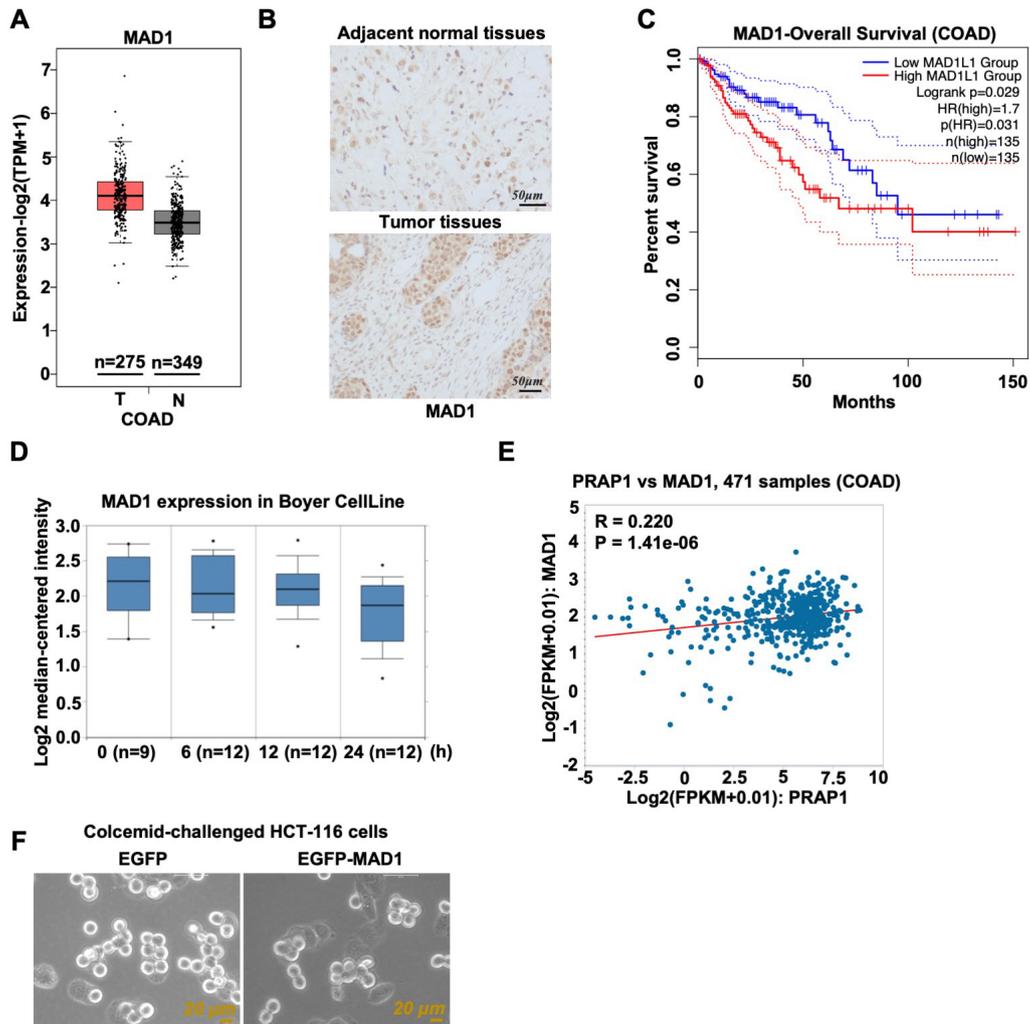
**Figure S1 PRAP1 expression in patients with CRC receiving chemotherapy. (A)** Human tumor tissues of patients with CRC (n=11) were collected. The expression of PRAP1 as determined by IHC staining. Scale bar, 50  $\mu$ m. **(B)** Overall survival of COAD based on PRAP1 expression status as analyzed by GEPIA 2.0. **(C)** Based on Oncomine database (Jorissen Colorectal 3), the PRAP1 expression was analyzed in recurrent (n=92) and non-recurrent (n=27) patients with CRC who received chemotherapy. **(D)** Based on Oncomine database (TCGA Colorectal), the PRAP1 expression was detected in alive (n=195) and dead (n=19) patients with CRC who received chemotherapy. \*P < 0.05; \*\*P < 0.01.

Figure S2



**Figure S2 Effect of PRAP1 on cell apoptosis in HCT-116 cells and HCT-116/DDP cells. (A)** Quantitative analysis of cell apoptosis in cisplatin-treated HCT-116 cells with or without PRAP1 transfection. **(B)** Protein levels of Bcl-2 and BAX as determined by western blotting in cisplatin-treated HCT-116 cells with or without PRAP1 transfection. **(C)** Quantitative analysis of cell apoptosis in cisplatin-treated HCT-116/DDP cells with or without PRAP1 transfection. **(D)** Protein levels of Bcl-2 and BAX as determined by western blotting in cisplatin-treated HCT-116/DDP cells with or without PRAP1 transfection. \*\*P < 0.01.

Figure S3



**Figure S3 Expression pattern of MAD1 in CRC specimens and the role of MAD1 on mitotic arrest.** (A) MAD1 expression in patients with CRC (n=275) and control group (n=349) as analyzed by GEPIA 2. (B) Human tumor tissues of patients with CRC (n=11) were collected. The expression of MAD1 as determined by IHC staining. Scale bar, 50  $\mu$ m. (C) Overall survival of COAD based on PRAP1 expression status as analyzed by GEPIA 2.0. (D) PRAP1 expression was detected in the cisplatin-treated CRC clinic cell line at 0, 6, 12, and 24 h (n=9, 12, 12 and 12). (E) Expression association between PRAP1 and MAD1L1 was analyzed using Encyclopedia of RNA Interactomes (ENCORI) Starbase (n=471). (F) Representative photographs of colcemid-challenged HCT-116 cells with or without EGFP-MAD1 transfection which were examined by Livecyte Cell Analysis System. The rounded-up cell morphology was accepted to be under mitotic arrest (top). \*P < 0.05; \*\*P < 0.01.

**Table S1 Clinic parameters of enrolled colorectal carcinoma patients.**

Number	Gender	Age	Pathology	Anatomic_neoplasm
1	Male	63	Moderately differentiated colorectal carcinoma	Ascending Colon
2	Male	55	Moderately differentiated colorectal carcinoma	Transverse Colon
3	Male	47	Highly differentiated colorectal carcinoma	Ascending Colon
4	Male	72	Highly differentiated colorectal carcinoma	Hepatic Flexure
5	Female	61	Highly differentiated colorectal carcinoma	Ascending Colon
6	Male	58	Moderately differentiated colorectal carcinoma	Ascending Colon
7	Male	43	Moderately differentiated colorectal carcinoma	Transverse Colon
8	Male	70	Poorly differentiated colorectal carcinoma	Ascending Colon
9	Male	65	Highly differentiated colorectal carcinoma	Transverse Colon
10	Male	52	Poorly differentiated colorectal carcinoma	Ascending Colon
11	Male	59	Moderately differentiated colorectal carcinoma	Ascending Colon