

**Supplementary Table 1.** Clinical and molecular characteristics of the 21 patients with CRC included in the study.

Case	Sex	Age	Site	Grade	T	N	Basal CEA
P1	M	85	Left colon	G2	T3	N0	2,8
P2	M	71	Rectum	G2	T2	N0	ND
P3	M	65	Sigma	G2	T3	N0	2,2
P4	F	77	Rectum	G2	T2	N0	3
P5	F	51	Rectum	G2	T2	N0	ND
P6	F	57	Left colon	G2	T2	N0	0,5
P7	F	70	Rectum	G1	T2	N1	129
P8	M	80	Right colon	G2	T3	N0	4,4
P9	F	51	Rectum	G2	T4	N2	ND
P10	M	87	Right colon	G2	T3	N0	ND
P11	M	66	Right colon	G1	T2	N0	3,2
P12	M	52	Transverse colon	G2	T2	N0	3,9
P13	M	64	Sigma	G2	T3	N0	1
P14	F	85	Right colon	G2	T3	N0	ND
P15	M	62	Rectum	G2	T1	N0	2,7
P16	M	83	Sigma	G2	T3	N2	ND
P17	M	73	Right colon	G2	T3	N0	3,1
P18	M	85	Rectum	G2	T3	N1	4,2
P19	M	77	Sigma	G2	T3	N0	ND
P20	M	77	Right colon	G2	T3	N2	ND
P21	M	77	Left colon	G2	T2	N0	1,3

M: male; F: female; ND: no data.

**Supplementary Table 2.** Analysis of PP2A activity levels using 1D6 or FL-309 antibodies, SET overexpression, CIP2A overexpression, PPP2R2A downregulation and PPP2R5E downregulation in 21 CRC patients.

Patient sample	Reduced PP2A activity (1D6/FL-309)	SET <sup>a</sup> OE	CIP2A OE	PPP2R2A <sup>b</sup> DR	PPP2R5E DR
P1	yes/yes	yes	yes	no	no
P2	yes/yes	yes	yes	yes	no
P3	yes/yes	yes	yes	no	no
P4	no/yes	yes	no	no	no
P5	yes/yes	yes	no	no	no
P6	yes/yes	yes	yes	no	no
P7	yes/yes	yes	no	no	no
P8	yes/yes	no	yes	no	no
P9	yes/yes	no	yes	no	no
P10	yes/yes	no	yes	yes	no
P11	yes/yes	yes	yes	no	no
P12	yes/yes	yes	yes	yes	yes
P13	no/no	no	no	no	no
P14	yes/yes	no	yes	no	no
P15	yes/yes	yes	no	yes	no
P16	yes/yes	yes	yes	yes	no
P17	yes/yes	yes	yes	yes	yes
P18	no/no	no	no	no	no
P19	yes/yes	no	yes	yes	no
P20	yes/yes	yes	yes	yes	no
P21	yes/yes	no	yes	yes	yes

<sup>a</sup>OE: overexpression; <sup>b</sup>DR: downregulation.

**Supplementary Table 3.** Primer sequences used for PPP2R1B mutation analysis.

Name	Exons	Sequence (5'→3')	cDNA range <sup>a</sup>	Size PCR product
PPP2R1B-forward1 PPP2R1B-reverse1	1→5	AGCAGCAGGAGGAGAAAGAA TCATCTGAGCACAAAGGAACG	64-650	587
PPP2R1B-forward2 PPP2R1B-reverse2	4→8	TAGCAAGTGGGGATTGGTTC ATGGGCAAGTTCTCACCAAG	524-1064	541
PPP2R1B-forward3 PPP2R1B-reverse3	7→11	GCTGCCACAAAGTAAAAGAAC ACGAGCCAAGCCATACATAAAG	1021-1475	452
PPP2R1B-forward4 PPP2R1B-reverse4	11→14	CTTTATGTATGGCTTGGCTCGT TACTGGCTTCACTTCTCCCTGT	1454-1809	356

<sup>a</sup>cDNA nucleotide numbers based on NCBI Reference Sequence: NM\_002716.4. Start codon at nucleotide 85 and Stop codon at nucleotide 1890.