

**Supplementary Table 1.** Clinical characteristics for the 28 BRCA1-mutated serous ovarian cancer patients

Case	Age	Stage <sup>a</sup>	Grade <sup>b</sup>	Exon	Mutation	AA change	Mutation type <sup>c</sup>
1	70	IIIC	PD	11	c.2331 T > A	p.Y777X	NS
2	47	IIIC	MD	11	c.2311 T > G	p.L771V	MS
3	54	IIIC	PD	11	c.2566 T > C	p.Y856H	MS
4	68	IIIC	MD	11	c.2612 C > T	p.P871L	MS
5	64	IIIC	MD	11	c.2612 C > T	p.P871L	MS
6	57	IA	PD	11	c.2566 T > C	p.Y856H	MS
7	63	IIIC	PD	11	c.2612 C > T	p.P871L	MS
8	56	IIIC	PD	11	c.2709 T > A	p.C903X	NS
9	49	IIB	PD	11	c.3710 C > T	p.A1237V	MS
10	52	IIB	MD	11	c.3109 C > T	p.Q1037X	NS
11	58	IIIC	PD	11	c.2212 G > A	p.V738I	MS
12	61	IIIC	PD	11	c.2312 T > C	p.L771S	MS
13	53	IIIC	PD	11	c.2363 T > C	p.V788A	MS
14	57	IIIC	PD	11	c.2429 A > G	p.N810S	MS
15	66	IIIC	MD	11	c.2741 A > G	p.E914G	MS
16	58	IIB	MD	8	c.470-471delCT	p.S157X	NS
17	70	IA	MD	8	c.491 C > T	p.T164I	MS
18	48	IIIC	PD	2	c.63 C > G	p.I21M	MS
19	51	IA	PD	11	c.1010delA	p.K339RfsX2	FS
20	50	IIB	MD	3	c.127 T > A	p.F43I	MS
21	62	IIIC	PD	11	c.4046_4047insG	p.E1352GfsX4	FS
22	49	IIIC	PD	14	c.4372 C > T	p.Q1458X	NS
23	55	IIIC	MD	14	c.4454 C > T	p.T1485I	MS
24	64	IIB	PD	24	c.5666 G > C	p.G1889A	MS
25	52	IIB	PD	24	c.5906 T > C	p.F1969S	MS
26	68	IIIC	PD	24	c.6489 T > A	p.F2163L	MS
27	61	IIIC	MD	24	c.6677C > G	p.S2226X	NS
28	58	IIB	PD	24	c.6856 G > T	p.D2286Y	MS

**Supplementary Table 2.** Clinical characteristics for the 23 BRCA2-mutated serous ovarian cancer patients

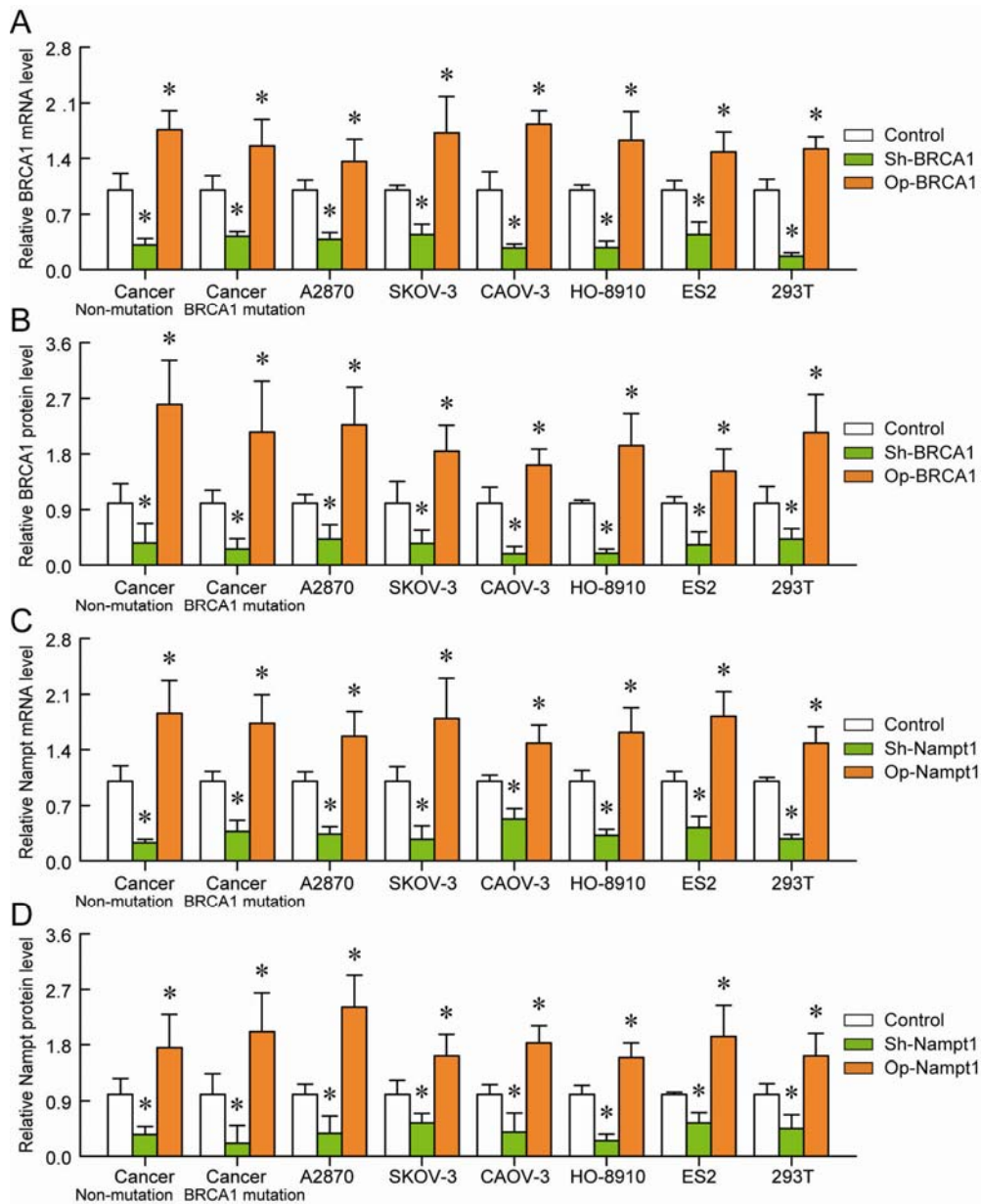
Case	Age	Stage <sup>a</sup>	Grade <sup>b</sup>	Exon	Mutation	AA change	Mutation type <sup>c</sup>
1	51	IIIC	PD	3	c.147 A > T	p.E49D	MS
2	58	IIB	PD	4	c.380 C > T	p.A127V	MS
3	69	IIIC	PD	11	c.3109 C > T	p.Q1037X	NS
4	48	IIIC	MD	10	c.945 T > A	p.C315X	NS
5	56	IA	MD	10	c.1022 G > C	p.C341S	MS
6	63	IIB	PD	10	c.1062 del T	p.F354LfsX4	FS
7	70	IIIC	PD	10	c.1169C > T	p.S390F	MS
8	62	IIIC	PD	10	c.1261C > T	p.Q421X	NS
9	55	IIB	MD	10	c.1652 A > T	p.D551V	MS
10	49	IIIC	PD	11	c.3109 C > T	p.Q1037X	NS
11	68	IIIC	PD	10	c.1062 del T	p.F354LfsX4	FS
12	65	IIIC	PD	11	c.5164-5165delAG	p.S1722YfsX4	FS
13	59	IIIC	MD	11	c.2981 C > T	p.A994V	MS
14	66	IIB	PD	11	c.3410 T > A	p.L1137X	NS
15	54	IIIC	PD	11	c.2981 C > T	p.A994V	MS
16	51	IA	MD	11	c.3710 C > T	p.A1237V	MS
17	49	IIIC	PD	11	c.5722-5723delCT	p.L1908RfsX2	FS
18	50	IIIC	MD	11	c.3710 C > T	p.A1237V	MS
19	67	IIB	PD	11	c.6539 T > A	p.L2180X	NS
20	62	IIIC	PD	11	c.3109 C > T	p.Q1037X	NS
21	58	IIIC	PD	24	c.10115 C > A	p.A3372D	MS
22	70	IIIC	MD	24	c.10373 G > C	p.S3458T	MS
23	55	IIB	PD	24	c.10739 A > C	p.N3580T	MS

a: The tumor stages were assessed according to the International Federation of Gynecology and Obstetrics.

b: PD: poorly differentiated; MD: moderately differentiated.

c: NS: nonsense mutation; MS: missense mutation ; FS: frame-shift.

**Supplementary Figure 1.** Knockdown and overexpression efficiency of BRCA1 and Nampt in ovarian cancer cells.



RT-PCR (A and C) and western blotting (B and D) showing the BRCA1 (A and B) and Nampt (C and D) levels before, and after knockdown or overexpression by lentiviral vectors, and normalized to  $\beta$ -actin expression. The RT-PCR and westerns results from three independent experiments are represented as mean  $\pm$  SD. sh: short hairpin RNAs; op: overexpression.

## **Supplementary Methods**

**Semi-quantitative PCR.** BRCA1 and Nampt-knockdown or overexpression efficiency were measured by semi-quantitative PCR. PCR analysis of BRCA1 or Nampt was performed at 48 h after transfection according to standard protocols. Detailed isolation and reverse-transcribed protocols were established as described in the text (Materials and Methods). The specific primer sequences for BRCA1 (sc-29219-PR) or Nampt (sc-45843-PR) were purchased from Santa Cruz Biotechnology. PCR amplification was performed in a Techne TC-512 gradient thermal cycler. PCR reaction conditions were as follows: 95 °C for 10 min; 32 cycles of 95 °C for 30 s, 60 °C for 30 s and 72 °C for 45 s; followed by an extension reaction at 72 °C for 10 min. The reaction products were analyzed by agarose gel electrophoresis and visualized by UV light after staining with ethidium bromide.

**Western blotting.** BRCA1 and Nampt-knockdown or overexpression efficiency was assayed by western blotting. Western blotting analysis of BRCA1 or Nampt was performed at 48 h after transfection according to standard protocols. The protein concentration was determined by the Bio-Rad Protein Assay Kit (Bio-Rad). Briefly, 30 µg protein was separated by 8% SDS polyacrylamide gels, and transferred to polyvinyl difluoride membranes (Millipore). The membranes were blocked in TBS containing 0.1% Tween-20 and 5% non-fat dry milk for 60 min at room temperature, and incubated with antibody to BRCA1 (sc-642) or Nampt (sc-67020) (1:500; Santa Cruz Biotechnology) overnight at 4 °C. Then, the membranes were washed by PBS-Tween followed by 1 h incubation at room temperature with horseradish peroxidase-conjugated secondary antibody (1:5000; Santa Cruz Biotechnology) and detected using the enhanced chemiluminescence (Amersham Life Science).