

A novel crosstalk between BRCA1 and sirtuin 1 in ovarian cancer

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Supplementary Table S1. Clinical characteristics for the 20 BRCA1-mutated serous ovarian cancer patients

Case	Age	Stage ^a	Grade ^b	Exon	Mutation	AA change	Mutation type ^c
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	56	IIIC	PD	11	c.2709 T > A	p.C903X	NS
8	49	IIB	PD	11	c.3710 C > T	p.A1237V	MS
9	52	IIB	MD	11	c.3109 C > T	p.Q1037X	NS
10	61	IIIC	PD	11	c.2312 T > C	p.L771S	MS
11	57	IIIC	PD	11	c.2429 A > G	p.N810S	MS
12	66	IIIC	MD	11	c.2741 A > G	p.E914G	MS
13	58	IIB	MD	8	c.470-471delCT	p.S157X	NS
14	48	IIIC	PD	2	c.63 C > G	p.I21M	MS
15	51	IA	PD	11	c.1010delA	p.K339RfsX2	FS
16	50	IIB	MD	3	c.127 T > A	p.F43I	MS
17	62	IIIC	PD	11	c.4046_4047insG	p.E1352GfsX4	FS
18	55	IIIC	MD	14	c.4454 C > T	p.T1485I	MS
19	52	IIB	PD	24	c.5906 T > C	p.F1969S	MS
20	58	IIB	PD	24	c.6856 G > T	p.D2286Y	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 Table S2. Clinical characteristics for the 16 BRCA2-mutated serous ovarian cancer patients

Case	Age	Stage ^a	Grade ^b	Exon	Mutation	AA change	Mutation type ^c
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	56	IA	MD	10	c.1022 G > C	p.C341S	MS
5	62	IIIC	PD	10	c.1261C > T	p.Q421X	NS
6	49	IIIC	PD	11	c.3109 C > T	p.Q1037X	NS
7	65	IIIC	PD	11	c.5164-5165delAG	p.S1722YfsX4	FS
8	59	IIIC	MD	11	c.2981 C > T	p.A994V	MS
9	54	IIIC	PD	11	c.2981 C > T	p.A994V	MS
10	51	IA	MD	11	c.3710 C > T	p.A1237V	MS
11	49	IIIC	PD	11	c.5722-5723delCT	p.L1908RfsX2	FS
12	50	IIIC	MD	11	c.3710 C > T	p.A1237V	MS
13	67	IIB	PD	11	c.6539 T > A	p.L2180X	NS
14	62	IIIC	PD	11	c.3109 C > T	p.Q1037X	NS
15	58	IIIC	PD	24	c.10115 C > A	p.A3372D	MS
16	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 Table S3. Primers used in this study

Gene	Primers	Description
BRCA1-SH-F	5'-CCGGAACCTGTCTCCACAAAGTG TGCTCGAGCACACTTTGTGGAGACA GGTTTTTTTG	Lentiviral packaging sequences for BRCA1 knockdown
BRCA1-SH-R	5'-AATTCAAAAAACCTGTCTCCAC AAAGTGTGCTCGAGCACACTTTGTG GAGACAGGTT	
BRCA1-CON-F	5'-ccggTTCTCCGAACGTGTCACGTctcg agACGTGACACGTTTCGGAGAAAttttg	Lentiviral packaging sequences for negative control
BRCA1-CON-R	5'-aattcaaaaaTTCTCCGAACGTGTCAC GTctcagACGTGACACGTTTCGGAGAA	
BRCA1-RTP-F	5'-GGCTATCCTCTCAGAGTGACATT	Real-time PCR for BRCA1
BRCA1-RTP-R	5'-GCTTTATCAGGTTATGTTGCATGG	
Nampt-RTP-F	5'-AGGGCTTTGTCATTCCCAGA	Real-time PCR for Nampt
Nampt -RTP-R	5'-TGGCCACTGTGATTGGATAACC	
SIRT1-RTP-F	5'-GCGATTGGGTACCGAGATAAC	Real-time PCR for SIRT1
SIRT1-RTP-R	5'-GGCCTTGGAGTCCAGTCACTA	
GAPDH-RTP-F	5'-AGGTGAAGGTCGGAGTCA	Real-time PCR for GAPDH
GAPDH -RTP-R	5'-GGTCATTGATGGCAACAA	
BRCA1-BSP-F	5'-TTGTAGTTTTTTTAAAGAGT	Methylation analysis for BRCA1 promoter (Round I)
BRCA1-BSP-R	5'-TACTACCTTTACCCAAAACAAAA	
BRCA1-BSP-F	5'-GTAGTTTTTTTAAAGAGTTGTA	Methylation analysis for BRCA1 promoter (Round II)
BRCA1-BSP-R	5'-ACCTTTACCCAAAACAAAA	

List of abbreviations used: BSP, bisulfite-sequencing PCR; CON, control; SH, shRNAs; RTP, real-time PCR; F, forward primer; R, reverse primer.