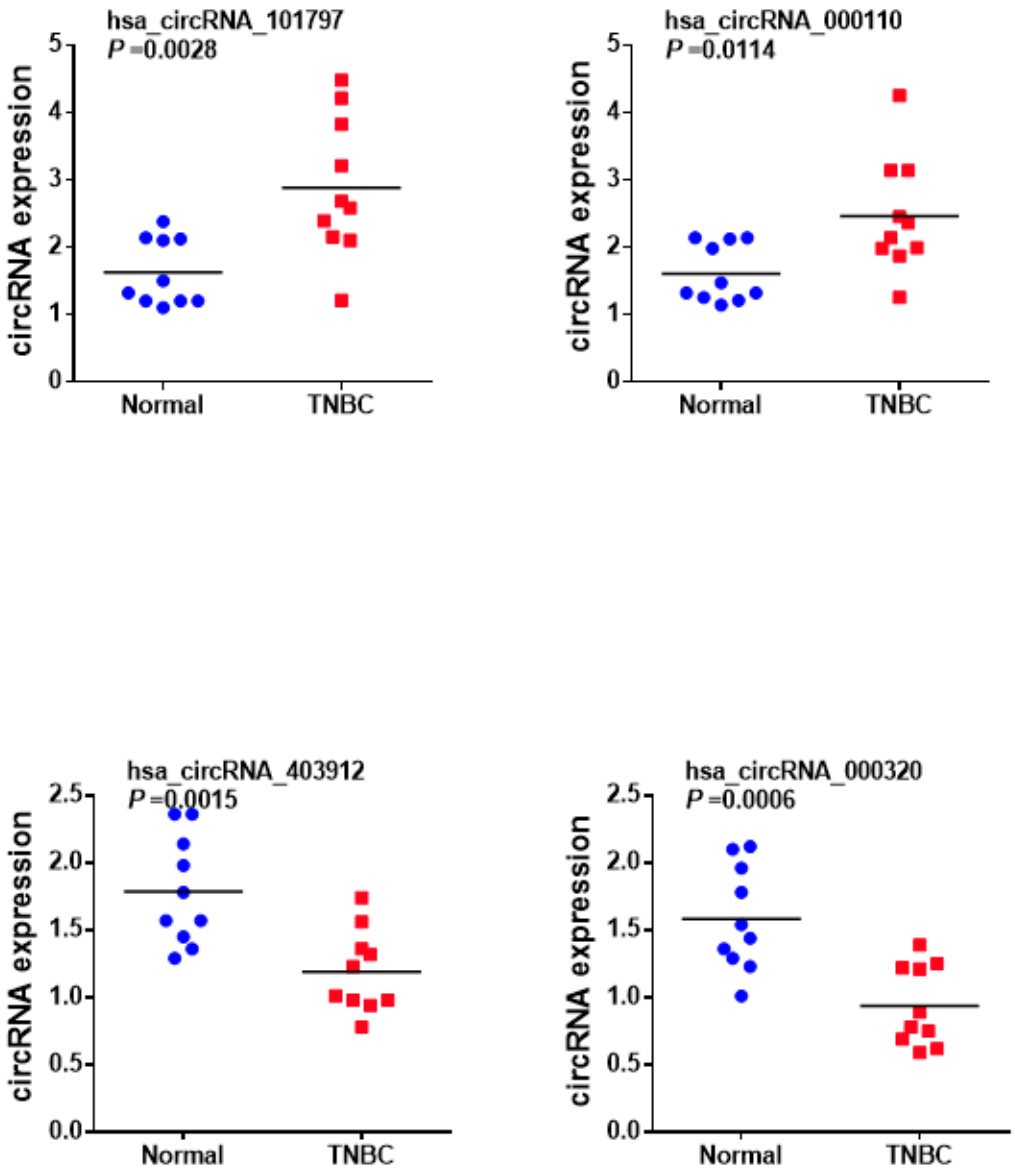
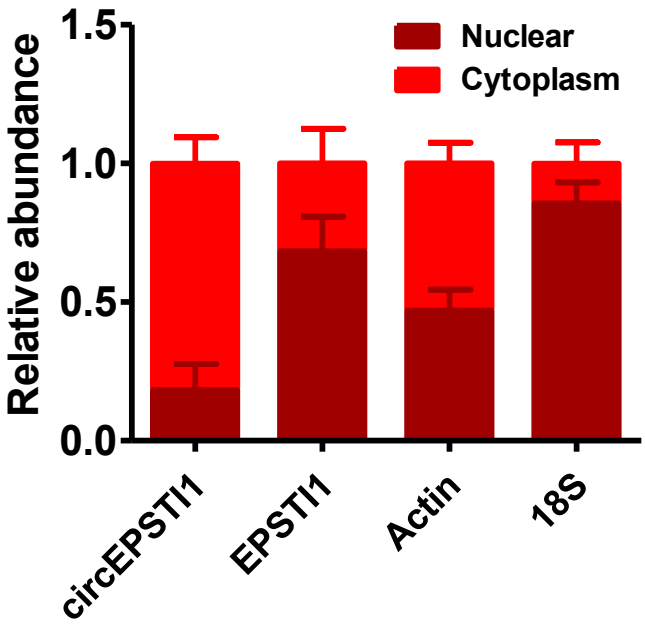
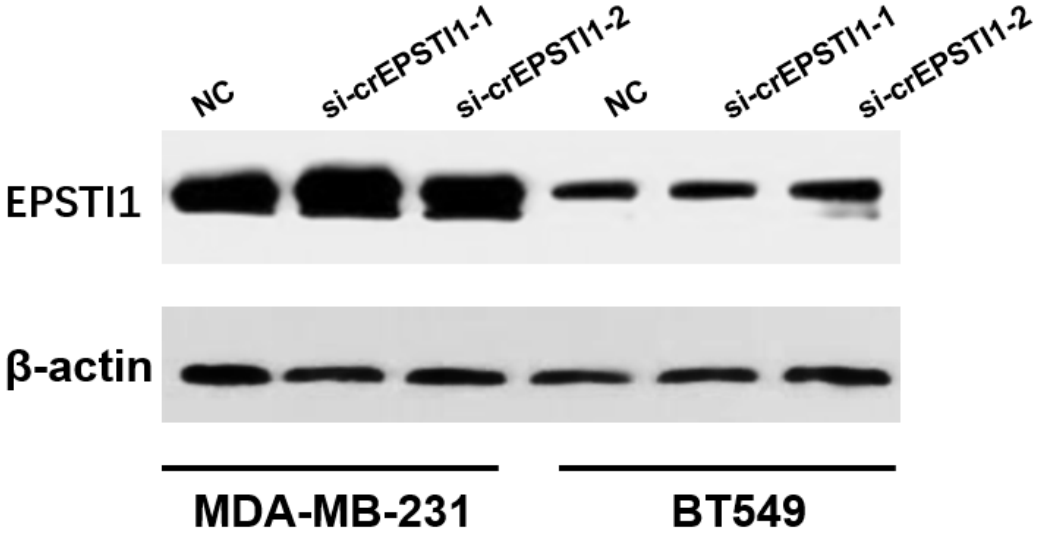
Supplementary Figures



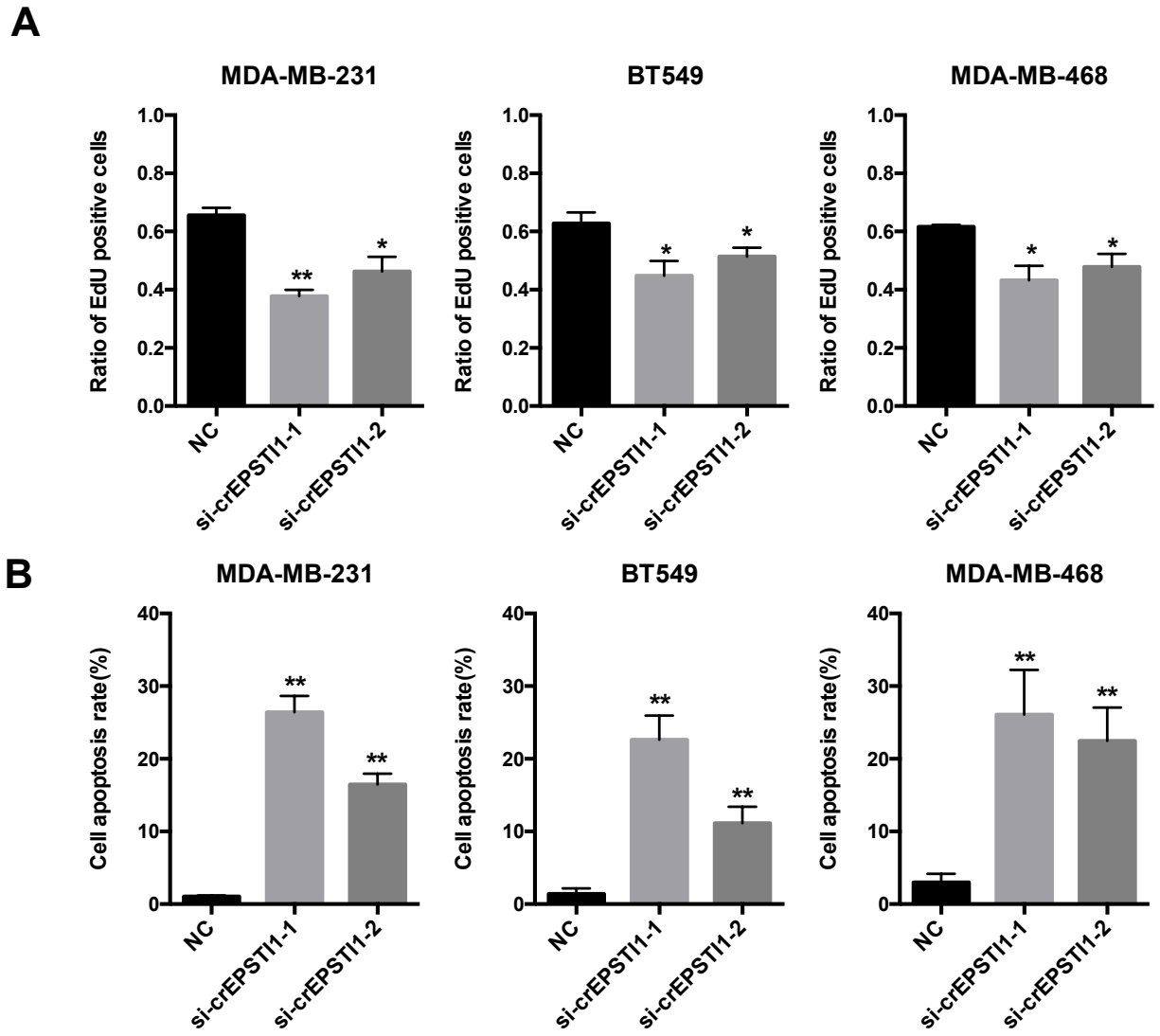
Supplementary Fig. S1 Validation of 4 differentially expressed circRNA candidates in 10 paired TNBC tissues and matched normal tissues by qRT-PCR.



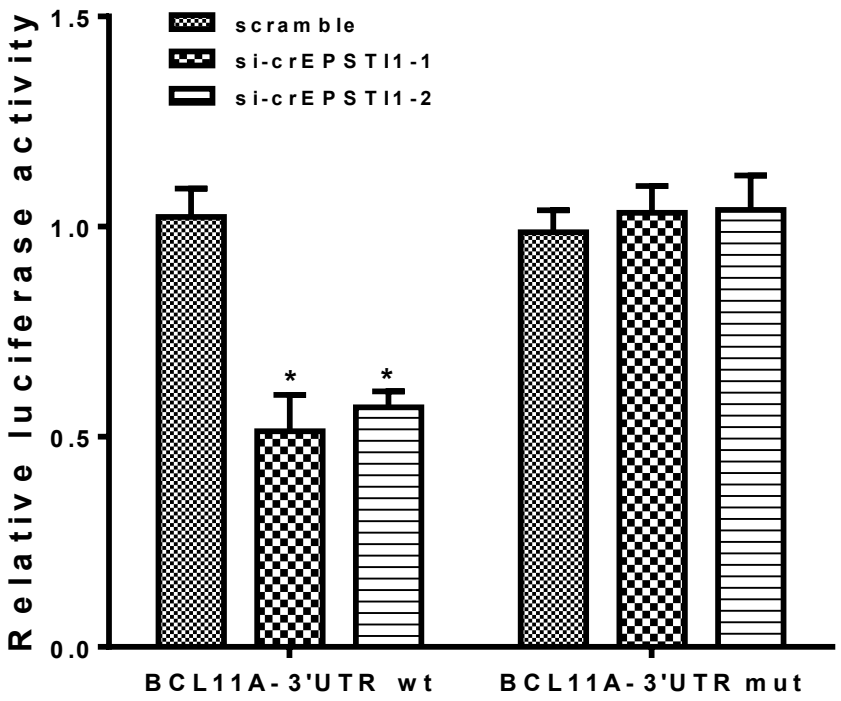
Supplementary Fig. S2. qRT-PCR analysis of circEPSTI1 and EPSTI1 RNA in either the cytoplasm or the nucleus in MDA-MB-231 cells.



Supplementary Fig. S3. Western blots analysis of EPSTI1 protein levels after treatment with **two siRNAs of circEPSTI1 in both MDA-MB-231 and BT549.**



Supplementary Fig. S4. (A) EdU assay and (B) apoptosis assay in MDA-MB-231, BT549 and MDA-MB-468 cells transfected with control or circEPSTI1 siRNAs. *P < 0.05; **P < 0.01



Supplementary Fig. S5. Luciferase assay of si-circEPSTI1 effects on BCL11A-3'UTR.

Supplementary Table S1. Primers and RNA sequences used in this study

List of oligonucleotide sequences	**5'→ 3'**
primers for qRT-PCR	
circEPSTI1-qF	AAGCTGAAGAAGCTGAACTC
circEPSTI1-qR	GTGTATGCACTTGTGTATTGC
EPSTI1-qF	GACAGAAGTGCCTGTCAAAGTG
EPSTI1-qR	GCCGTTTCAGTTCCAGTAATTC
β-actin -qF	CATGTACGTTGCTATCCAGGC
β-actin -qR	CTCCTTAATGTCACGCACGAT
18S-qF	TTAATTCCGATAACGAACGAGA
18S-qR	CGCTGAGCCAGTCAGTGTAG
BCL11A-qF	TGGTATCCCTTCAGGACTAGGT
BCL11A-qR	TCCAAGTGATGTCTCGGTGGT
siRNAs	
si-crEPSTI1-1	GCAAUACACAAGUGCAUACTT
si-crEPSTI1-2	AGCAAUACACAAGUGCAUATT
Negative control	UUCUCCGAACGUGUCACGUTT
Oligos for plasmid construction	
LUC-UTRcricEPSTI1-F	gcagaattCTAGGTGGAAGCCAGTCAGA
LUC-UTRcricEPSTI1-R	gcaggatcGTGTATGCACTTGTGTATTGC
primers for site-directed mutation	
LUC-UTRcricEPSTI1-Mut1-F : AGCTAAAATCTCTAGAATCTGTAAGAATCAAGAAGGAAGCT	
LUC-UTRcricEPSTI1-Mut1-R : CAGATTCTAGAGATTTTAGCTTTTGCTTGTATTTAGATTGC	
LUC-UTRcricEPSTI1-Mut2-F : ATTCAGAGTCTCTAGAGCAATAAACTGGAGGAGAAAAAAAG	
LUC-UTRcricEPSTI1-Mut2-R : ATTGCTCTAGAGACTCTGAATTGCCTTCATTTTTTGGAGTT	
LUC-UTRcricEPSTI1-Mut3-F : AACCTTAGAATTCTCGCATTTAGAGAGCATCAGCAATACAC	
LUC-UTRcricEPSTI1-Mut3-R : TAAATGCGAGAATTCTAAGGTTTTCTTGAAGTCTTTTTTTC	

Supplementary Table S2. The top ten up-regulated and down-regulated circRNAs in TNBC

circRNA	chrom	circRNA_type	Fold Change (abs)	Regulation
hsa_circRNA_000479	chr13	exonic	7.6281409	Up
hsa_circRNA_101797	chr16	exonic	4.8781993	Up
hsa_circRNA_000432	chr12	exonic	4.3371933	Up
hsa_circRNA_100012	chr1	exonic	4.2774198	Up
hsa_circRNA_000110	chr1	exonic	3.8854213	Up
hsa_circRNA_069718	chr4	exonic	3.7157459	Up
hsa_circRNA_103637	chr4	exonic	3.688537	Up
hsa_circRNA_038632	chr16	exonic	3.686909	Up
hsa_circRNA_002172	chr14	sense overlapping	3.6770438	Up
hsa_circRNA_013055	chr1	exonic	3.4792793	Up
hsa_circRNA_101093	chr12	exonic	7.2128671	Down
hsa_circRNA_000320	chr11	intronic	4.5055624	Down
hsa_circRNA_000319	chr11	intronic	4.186804	Down
hsa_circRNA_403912	chr7	exonic	3.4829476	Down
hsa_circRNA_001596	chr6	sense overlapping	3.275472	Down
hsa_circRNA_100460	chr1	exonic	3.1615607	Down
hsa_circRNA_100446	chr1	exonic	3.1451731	Down
hsa_circRNA_012722	chr1	exonic	3.0409123	Down
hsa_circRNA_104671	chr8	exonic	2.9987161	Down
hsa_circRNA_100499	chr1	exonic	2.8737785	Down

Supplementary Table S3. The information of TNBC patients in circular RNA microarray assays

	TNBC case 1	TNBC case 2	TNBC case 3
Sex	Female	Female	Female
Age (years)	43	60	29
Tumor size (cm)	2.3	2.6	4.5
Number of lymph node metastasis	1	2	3
TNM Staging	II	II	II
Histological grade	G3	G3	G2
Ki-67	60%+	40%+	20%+