

Supplementary Table SI. Details of chemicals and reagents.

Category	Specification	Company	Country
Restriction enzymes	Pme I (Cat: R0560S) Xma I (Cat: R0180S) Xba I (Cat: R0145S) Pac I (Cat: R0547S) High-fidelity enzyme Q5 (Cat: M0491S) T7 Endonuclease I (Cat: M0302S)	New England Biolabs	Japan
Transfection reagents	Lipofectamine 3000 (Cat: L3000015) Trizol (Cat: 15596026CN) Gateway LR Clonase enzyme (Cat: 11791019)	Thermo Fisher Scientific, Inc.	USA
Western Blot reagent	Rabbit anti-human EZH2 polyclonal antibody (Cat: ab186006)	Abcam	USA
	goat anti-rabbit IgG HRP-labeled secondary antibody (Cat: BA1055)	Boster	China
	goat anti-mouse IgG HRP-labeled secondary antibody (Cat: A0216)	Biyuntian	China
	DAB color reagent kit (Cat: AR1000)	Boster	China
RT-PCR reagent	Genome extraction kit (Cat: G1N70-1KT)	Sigma-Aldrich	USA
	plasmid extraction kit (Cat: PLN350-1KT)	Sigma-Aldrich	USA
	PCR clean recovery kit (Cat: AP-PCR-250G)	Axygen	USA
	DL2000 DNA marker (Cat: 3427A)	Takara	Japan
MTT test	MTT kit, RIPA lysate, and BCA kit (Cat: C0000S)	Biyuntian	China
Cell lines	MDA-MB-231(Cat: TCHu227) 293A (Cat: SCSP-5094)	Cell Bank of Chinese Academy	China
Cell culture medium	L15 medium (Cat: 11415064) DMEM (Cat: 11995065) Penicillin/Streptomycin (Cat: 15140122) Fetal bovine serum (Cat: 16140089)	Gibco; Thermo Fisher Scientific, Inc.	USA

Supplementary Table SII. Details of sgRNAs and sense/antisense primers.

Name	Sequences (5' to 3')
EZH2 (gRNA)	GAGCTCATTGCGCGGGACTA
Template of EZH2 gRNA	GAAAGGACGAAACACCGGAGCTCATTGCGCGGGA CTAGTTTTAGAGCTAGAAAT
GFP gRNA	AATTAGATGGTGATGTTAA
Template of GFP gRNA	GAAAGGACGAAACACCG AATTAGATGGTGATGTTAAGTTTTAGAGCTAGAAAT
T7E I sense	TGTGGGAAACTATAGTGTA
T7E I antisense	ATTCTTATAAAATCTAGGCATC
CRISPR-F	GTATTTTCGATTTCTTGGCTTTATATATCTTGTGGA AAGGACGAAACACCG
CRISPR-R	GTTGATAACGGACTAGCCTTATTTTAACTTGCTAT TTCTAGCTCTAAAAC
GAPDH sense primer	ATGAGAAGTATGACAACAGCCT
GAPDH antisense primer	AGTCCTTCCACGATACCAAAGT
EZH2 sense primer	TGATGACGATGATGATGATGGAGAC
EZH2 antisense primer	TGTGCCCTTATCTGGAAACATTGAG