Figure S1 Validation of TPD52 transfection efficiency. The overexpression efficiency of TPD52 in BT474 cells and the knockdown efficiency of TPD52 in MDA-MB-231 cells were detected (A,B). ***P<0.001 *vs*. vector or NC. TPD52, tumor suppressor D52; OE-, overexpression; si- small interfering RNA; NC, negative control.

Figure S2 Validation of miR-218-5p transfection efficiency. The expression of miR-218-5p was detected in BT474 and MDA-MB-231 cells stably transfected with miR-218-5p inhibitor or miR-218-5p mimics. ***P<0.001 *vs*. NC. miR, microRNA; NC, negative control.
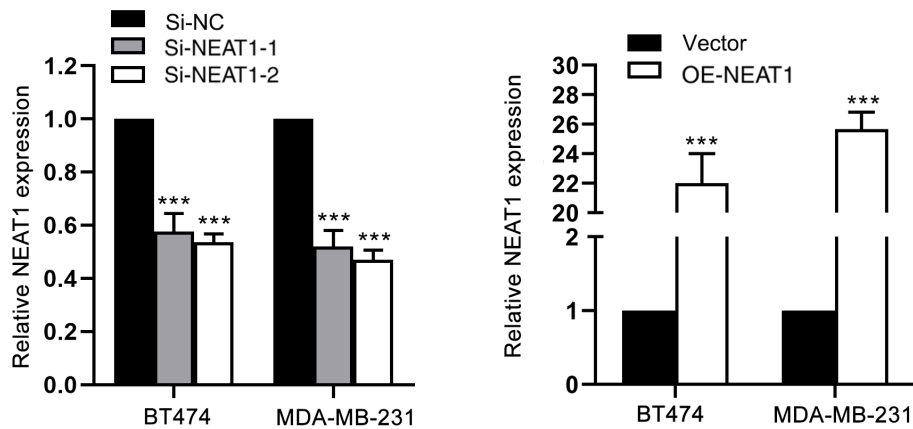

Figure S3 Validation of NEAT1 transfection efficiency. NEAT1 expression was measured in BT474 and MDA-MB-231 cells transfected with si-NEAT1-1 or -2 or NEAT1 overexpression plasmid. ***P<0.001 *vs*. NC. NEAT1, nuclear enriched abundant transcript 1; si-, small interfering RNA; OE, overexpression.

Table S1 Sequences of PCR primers and antibodies used in the study

Sequences of PCR primers		
Name	Primer	Sequence (5'-3')
TPD52	Forward	AGGACTACCAGTCCCCGTTT
	Reverse	TTCCTGCTCCTCTTCCGAGA
NEAT1	Forward	AAACGCTGGGAGGGTACAAG
	Reverse	ATGCCCAAACTAGACCTGCC
miR-218-5p	Forward	GCAGTTGTGCTTGATCTAAC
	Reverse	TCCAGTTTTTTTTTTTTTTTACATGGT
GAPDH	Forward	GGAGCGAGATCCCTCCAAAAT
	Reverse	GGCTGTTGTCATACTTCTCATGG
U6	Forward	AGCGGGAAATCGTGCGTGACA
	Reverse	GTGGACTTGGGAGAGGACTGG
Antibodies		
Name		Company
anti-TPD52		Abcam
anti-Ki-67		Abcam
anti-MCM2		Abcam
anti-proliferating cell nuclear antigen		Cell Signaling Technology
anti-GAPDH		Proteintech Group
HRP conjugated Goat Anti-Mouse IgG		Wuhan Boster Biological Technology
HRP conjugated Goat Anti-Rabbit IgG		Wuhan Boster Biological Technology
Anti-Ki-67		Abcam
anti-PCNA		Cell Signaling Technology
Biotin Conjugated AffiniPure Donkey Anti-Rabbit IgG		Wuhan Boster Biological Technology

TPD52, tumor protein D52; NEAT1, nuclear enriched abundant transcript 1; miR, microRNA; HRP, horse-radish peroxidase.