

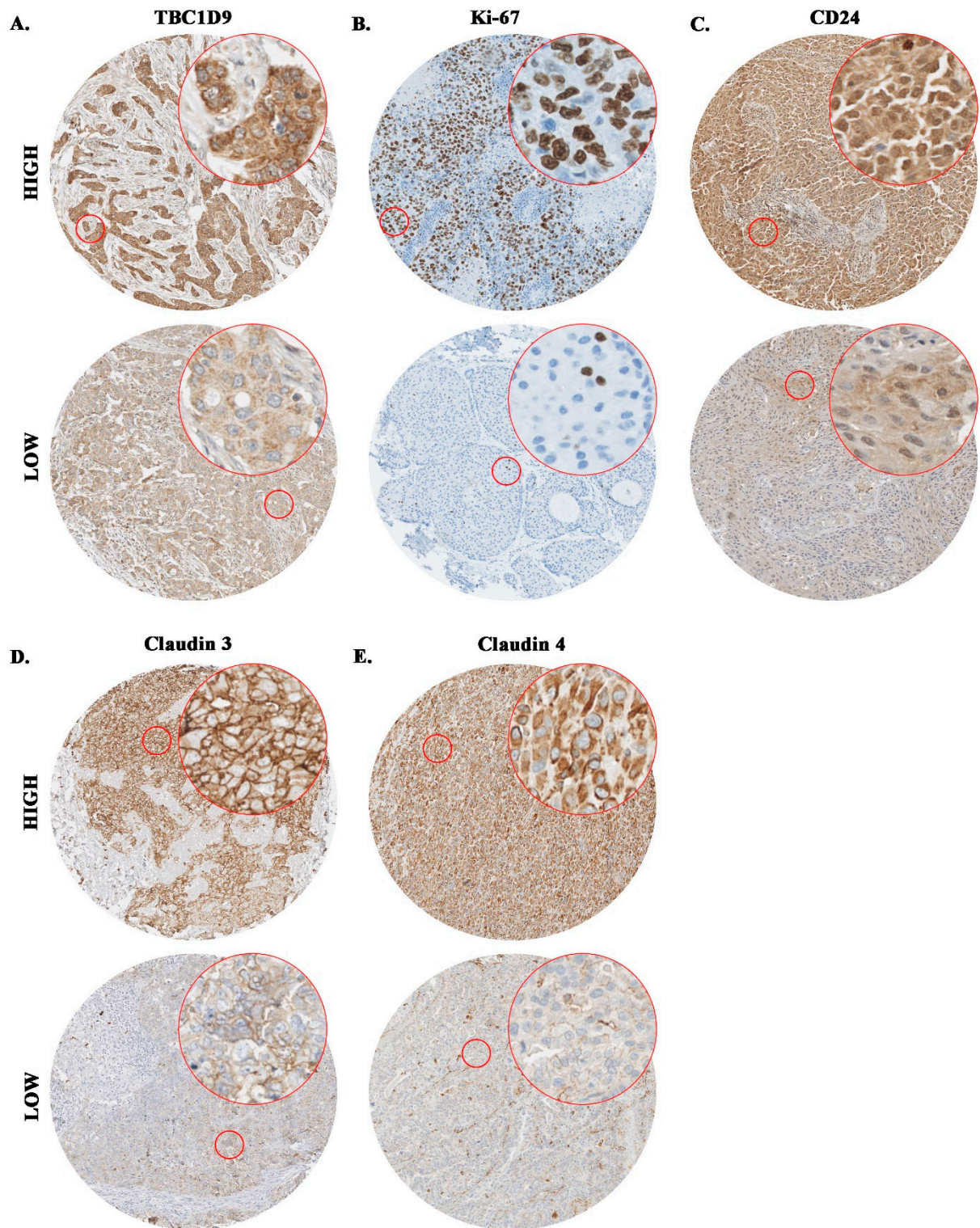
**Table S1.** Molecular classification of BC cell lines.

Cell Line	ER	PR	HER2	Subtype
MCF7	+	+	-	Luminal A
T47D	+	+	-	Luminal A
BT-474	+	+	+	Luminal B
SKBr3	-	-	+	HER2
JIMT-1	-	-	+	HER2
SUM159PT	-	-	-	TNBC
SUM149PT	-	-	-	TNBC
MDA-MB-231	-	-	-	TNBC
MDS-MB-468	-	-	-	TNBC
BT-549	-	-	-	TNBC

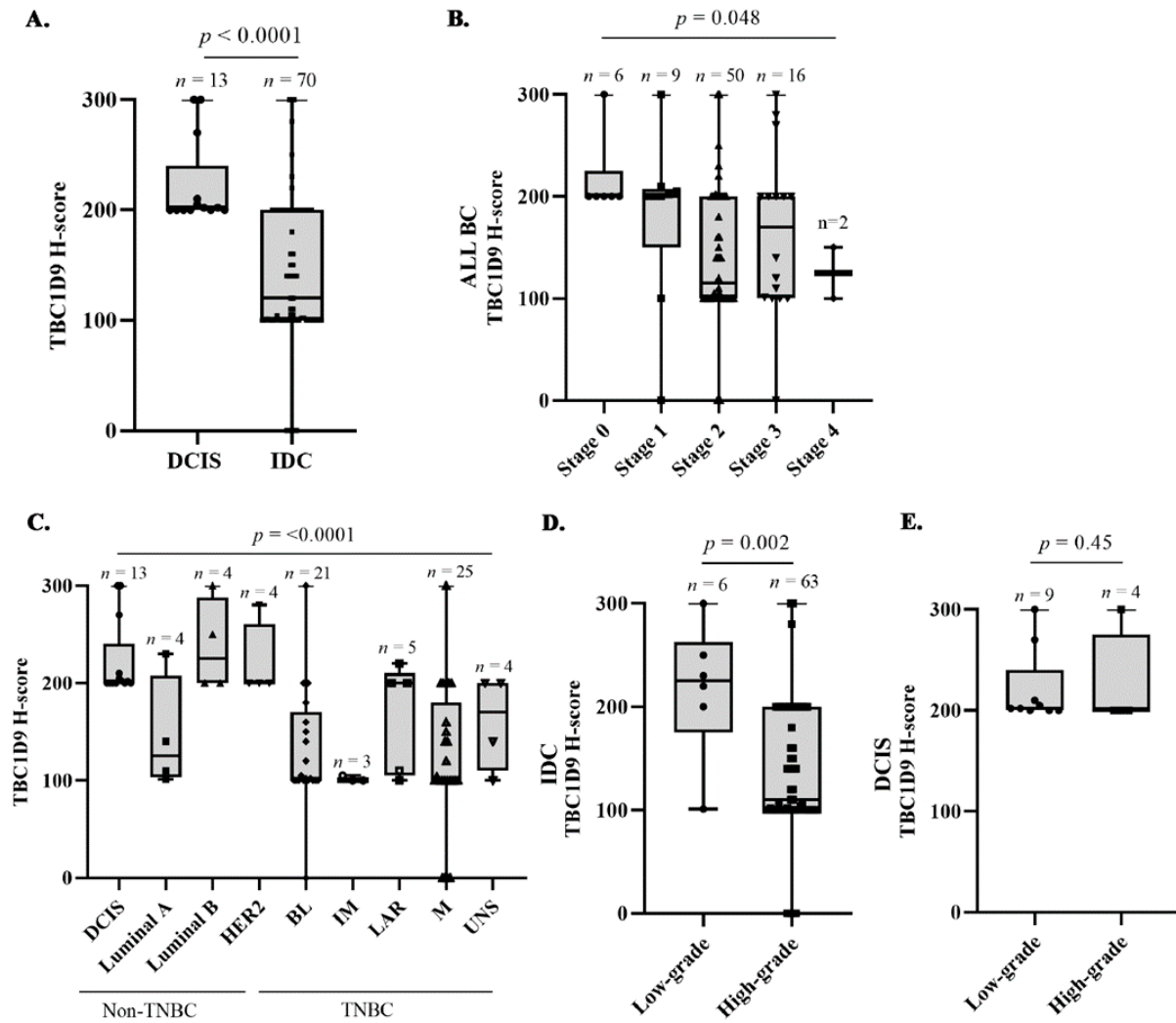
Abbreviations: +: Positive; -: Negative.

**Table S2.** Primer sequence.

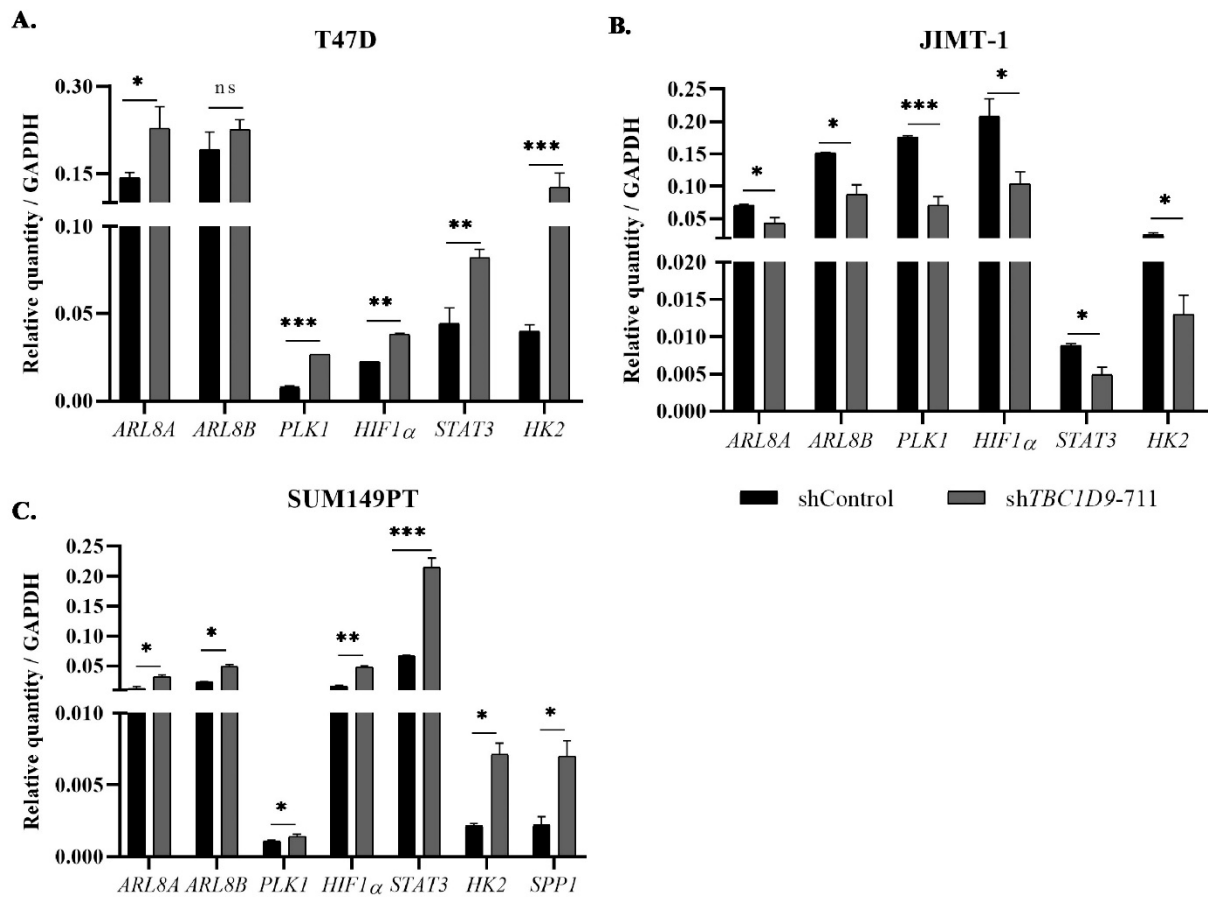
Gene Symbol	Description	Size (bp)	Primer sequence 5'→3' Forward/Reverse
<b>TBC1D9</b>	TBC1 Domain Family Member 9	90	CAGCAGCCTCGTCTCCTCCAG/ GGGACGCTGTTGCCATTTAGG
<b>ARL8A</b>	ADP ribosylation factor like GTPase 8A	116	TAGTCCTGGGTAACAAGCGAGAC / TGCAAGAGATGGAGTAGCAGCAG
<b>ARL8B</b>	ADP ribosylation factor like GTPase 8B	122	TGATACCCACAGTGGGCTTCAAC / TGACTCCTCTGCAATACCGCTC
<b>PLK1</b>	Polo like kinase 1	123	GCACAGTGTCAATGCCTCCAAGC / GCCGTACTTGTCCGAATAGTCC
<b>HIF-1α</b>	Homo sapiens hypoxia inducible factor 1 subunit alpha (HIF1A), 3 transcripts	144	TATGAGCCAGAA- GAACTTTTAGGCC/CCACCTCTTTGG- CAAGCATCCTG
<b>HK2</b>	Hexokinase 2	94	GAATGGGAAGTGGGGTGGA / TGTGGTCAAAGAGCTCGTCC
<b>SPP1</b>	Homo sapiens secreted phosphoprotein 1	108	AAGAAGTTTCGCAGACCTGACATC / AACGGGGATGGCCTTGTATGC
<b>STAT3</b>	Signal transducer and activator of transcription 3	133	CCTTTGAGACCGAGGTGTATCACC / GGTCAGCATGTTGTACCACAGG
<b>HPRT1</b>	Homo sapiens hypoxanthine phosphoribosyltransferase 1	86	CGTCGTGATTAGTGATGATGAACCA/ ACACCCTTTCCAAATCCTCAGC
<b>GAPDH</b>	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase	93	CGGGGCTCTCCAGAACATCAT/ ATGCCAGTGAGCTTCCCGTTC



**Figure S1.** Representative images of IHC staining for different antibodies. Figure S1: Representative images of IHC staining for different antibodies. TBC1D9 (A), Ki-67 (B), CD24 (C), Claudin 3 (D), and Claudin 4 (E). Scale bar 100µm.



**Figure S2.** TBC1D9 expression in BC tissue samples from our cohort. Stratified by DCIS vs. IDC (A) and according to BC stage (B) and the molecular subtypes of BC (C). BC samples were stratified by grade for IDC (D) and DCIS (E). BL, = basal-like, IM = immunomodulatory, LAR = luminal androgen receptor, M = mesenchymal, UNS = unclassified.



**Figure S3.** Validation of signaling altered by knockdown of TBC1D9 in BC cell lines. T47D: luminal A (A), JIMT-1: HER2 (B), SUM149PT: TNBC (C), and HK = GAPDH. ; ns: not significant