



**Figure S1** Establishment and screening of DNAJB4 knockdown stable transgenic cell lines in breast cancer cell lines. (A) qPCR is used to detect the interference efficiency of different siRNAs on DNAJB4 gene expression. (B) After different siRNA interferes with cells, western blot is used to detect the expression level of DNAJB4 protein in cell lines. (C) Image J quantitatively analyzes the Western blot results. CON, control; NC, negative control; qPCR, real-time polymerase chain reaction.

The siRNA sequence and shRNA sequence of the control viral vector are as follows:

The siRNA sequence: TTCTCCGAACGTGTCACGTAA

The shRNA sequence:

Top strand:

GATCCGTTCTCCGAACGTGTCACGTAATCAAGAGATTACGTGACACGTTCCGAGAATTTTTTC

Bottom strand:

AATTGAAAAAATCTCCGAACGTGTCACGTAATCTCTTGAATTACGTGACACGTTCCGAGAACG

Target gene siRNA sequence and shRNA sequence:

The siRNA sequence 1: **G**GGAA**T**GAGAA**AGGAGCTTCAGAT**

The shRNA sequence 1:

Top strand:

GATCC**GGGAATTGAGAAAGGAGCTTCAGAT**TTCAAGAGAA**ATCTGAAGCTCCTTTCTCAATCCCTTTTTTG**

Bottom strand:

AATTCAAAAA**GGGAATTGAGAAAGGAGCTTCAGAT**TCTCTGAA**ATCTGAAGCTCCTTTCTCAATCCCG**

The siRNA sequence 2: **GAGGCATTGTGTGGCTGCTCAATTA**

The shRNA sequence 2:

Top strand:

GATCC**GAGGCATTGTGTGGCTGCTCAATTA**TTCAGAGATA**AATTGAGCAGCCACACAATGCCTCTTTTTTG**

Bottom strand:

AATTCAAAAA**GAGGCATTGTGTGGCTGCTCAATTA**TCTCTGAA**AATTGAGCAGCCACACAATGCCTCG**

The siRNA sequence 3: **TGAGGTGTCCTCCAGATACTATA**

The shRNA sequence 3:

Top strand:

GATCC**TGAGGTGTCCTCCAGATACTATA**TTCAGAGATATAGTATCTGGGAAGGACACCTCAATTTTTTG

Bottom strand:

AATTCAAAAA**TGAGGTGTCCTCCAGATACTATA**TCTCTGAA**TATAGTATCTGGGAAGGACACCTCAGC**

**Figure S2** Interference target design and primer synthesis.

**Table S1** The primer sequence used in qPCR

Primers	Sequence (5' to 3')
DNAJB4	
Sense primer	5'-CCAGCAGACATTGATTTTATCATT-3'
Antisense primer	5'-CCATCCAGTGTTGGTACATTAATT-3'
β-actin	
Sense primer	5'-AGCACTGTGTTGGCGTACAG-3'
Antisense primer	5'-TCCCTGGAGAAGAGCTACGA-3'

qPCR, real-time polymerase chain reaction.

**Table S2** Basic information sheet for 80 breast cancer patients included in the study

Item	Mean ± SD/n
Age (years)	56.18±14.40
Gender	
Male	0
Female	80
BMI (kg/m <sup>2</sup> )	20.82±2.31
Menopause	
No	26
Yes	54
Follow time (months)	40.70±2.06
Grand	
I	18
II	36
III	26
T	
1	23
2	39
3	18
N	
0	21
1	27
2	26
3	6
Recurrence	
No	55
Yes	25

BMI, body mass index; SD, standard deviation.