

## Supplementary file 1

### Effect of microRNA-141-3p, E2F3, CDK3, and KAT2B overexpression on histologic tumor grade and metastasis status in untreated breast cancer tissues

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**Table S1.** List of primers used for RT-qPCR analysis

Gene Official Symbol	Primer Sequence (5'-3')	Accession Number	Product Length (bp)
TP53	F: GTTCCGAGAGCTGAATGAGG R: TTATGGCGGGAGGTAGACTG	<u>NM_000546.6</u>	123
E2F3	F: GCCTGACTCAATAGAGAGCCTAC R: AGTCTTTGGAAGCGGGTTAGG	<u>NM_001949.5</u>	155
CDK3	F: CTACCCATTGCCAAGAGAGGA R: CCAACCCAAAAACAACACAGG	<u>NM_001258.4</u>	133
KAT2B	F: GAAGATCCTGATGTGGCTGG R: AGGGTTTTGTGTTTCGGGTC	<u>NM_003884.5</u>	111
GAPDH	F: GAAGGTGAAGGTCGGAGTC R: GAAGATGGGATGGGATTTC	<u>NM_002046.7</u>	226
has-miR-141-3p	F: GCGCGTAACACTGTCTGGTA Universal reverse primer: CGTGGTTAGGGTCCGAGGTA RT-miR-141: CGTCGTACTCAACGTGGTTAGGGTCCGAGGTATAGGTTCCACGTG CGACGCCATCT	MIMAT000043 2	-
RNU6	F: GGATGACGCAAATTCGTGAAGC Universal reverse primer: CGTGGTTAGGGTCCGAGGTA RT-U6: CGTCGTACTCAACGTGGTTAGGGTCCGAGGTATAGGTTCCACGTG CGACGAATATG	<u>NG_045838.1</u>	-

F: Forward primer

R: Reverse primer

**Table S2.** List of predicted targets by Target scan showing the type of seed matching

		<b>Predicted consequential pairing of target region (top) and miRNA (bottom)</b>	<b>Site type</b>
Position 69-75 of E2F3	5'	. . .AGAACAUCUGUCAUGCAGUGUUG . . .	7mer-m8
3' UTR	3'	GGUAGAAAUGGUCUGUCACAAU	
hsa-miR-141-3p			
Position 2603-2610 of E2F3 3' UTR	5'	. . .ACAUGAGCUGUCAAAACAGUGUUA . . .	8mer
	3'	GGUAGAAAUGGUCUGUCACAAU	
hsa-miR-141-3p			
Position 2771-2777 of E2F3 3' UTR	5'	. . .UUGUAAUUUUUUAAGAGUGUUAU . . .	7mer-A1
	3'	GGUAGAAAUGGUCUGUCACAAU	
hsa-miR-141-3p			

\* 7mer-m8: An exact match to positions 2-8 of the mature miRNA (the seed + position 8)

\*\* 8 mer: An exact match to positions 2-8 of the mature miRNA (the seed + position 8) followed by an 'A'

**Table S3.** Clinicopathological features of patients included in the study.

<b>Clinicopathological characteristics</b>	<b>N (%)</b>
Normal tissues	23 (50%)
BC Tissues	23 (50%)
Tumor size(cm)	
2-5	12(52.17%)
5-10	6(26.09%)
>10	5(21.74%)
Histological Grade	
I	4 (17.39%)
II	10 (43.48%)
III	9 (39.13%)
Metastatic	
M0(Regional)	22(95.65%)
M1(Distant)	1(4.35%)
Estrogen receptor status	
Positive	8(34.78%)
Negative	7(30.44%)
Unknown	8(34.78%)
Progesterone receptor status	
Positive	8(34.78%)
Negative	7(30.44%)
Unknown	8(34.78%)
HER2 status	
Positive	4(17.39%)
Negative	10(43.48%)
Unknown	9(39.13%)
Molecular Subtypes	
Luminal A	5(21.74%)
Luminal B	3(13.04%)
HER2-positive	1(4.35%)
Triple negative	4(17.39%)

<b>Clinicopathological characteristics</b>	<b>N (%)</b>
Unknown	10(43.48%)