Figure S1. The effects of Notch inhibitor DAPT on cells.

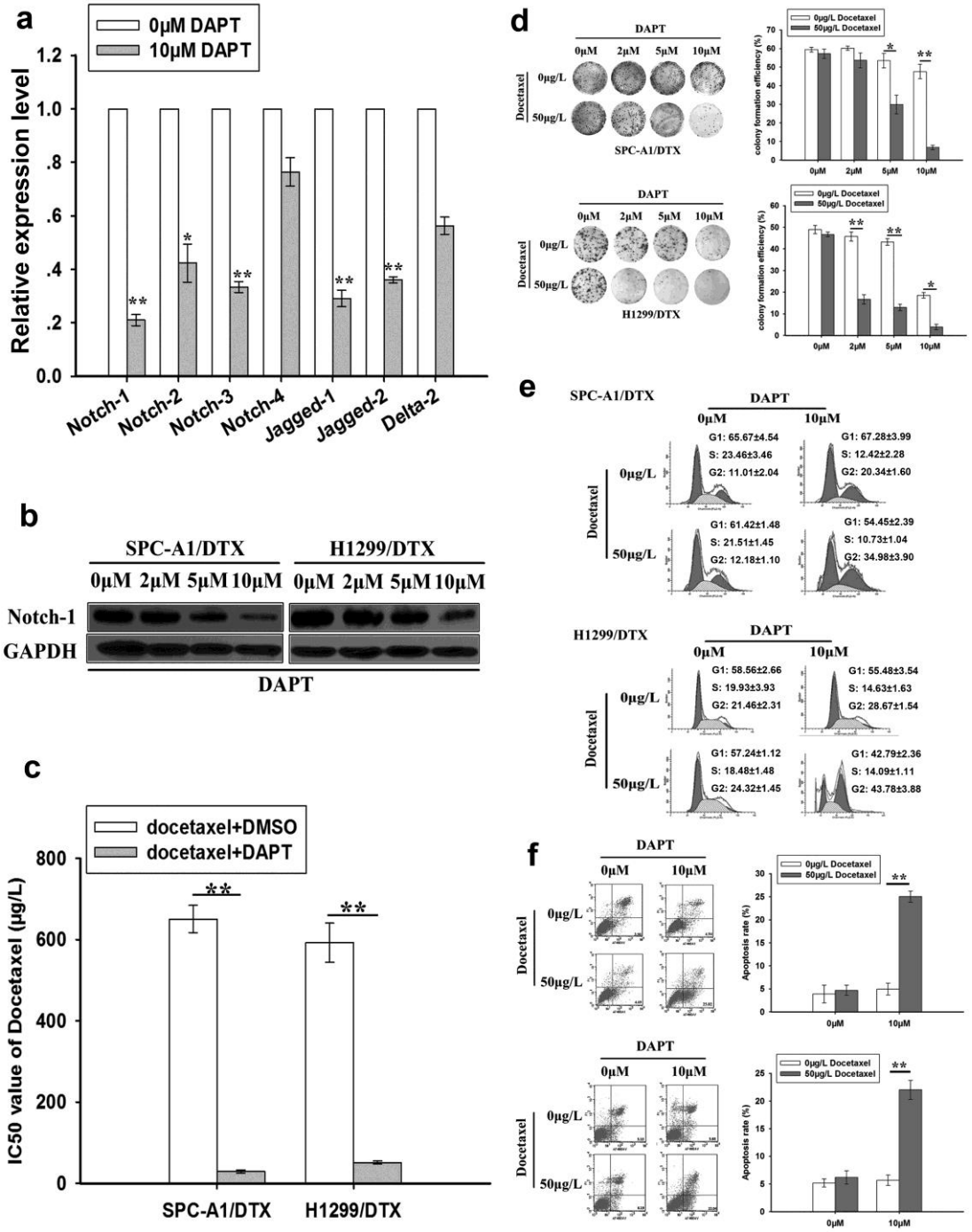

Figure S1. (**a**) DAPT decreases the expression of each receptor or ligand in Notch signaling pathway. (**b**) Protein levels of Notch-1 in two DTX-resistant cell lines treated with DAPT in different concentration (0, 2, 5 or 10μM). (**c**) The IC50 value of

DTX in two DTX-resistant cell lines treated with 10μM DAPT or not. (**d**) Colony formation assay in two DTX-resistant cell lines treated with 50μg/L DTX combining with DAPT in different concentrations (0, 2, 5 or 10μM). (**e**) Cell cycle analysis and (**f**) Cell apoptosis analysis in two DTX-resistant cell lines treated with 50μg/L DTX, 10μM DAPT or 50μg/L DTX combined with 10μM DAPT. *P<0.05 and **P<0.01.

Figure S2. The effects of Notch-1 overexpression on cells.

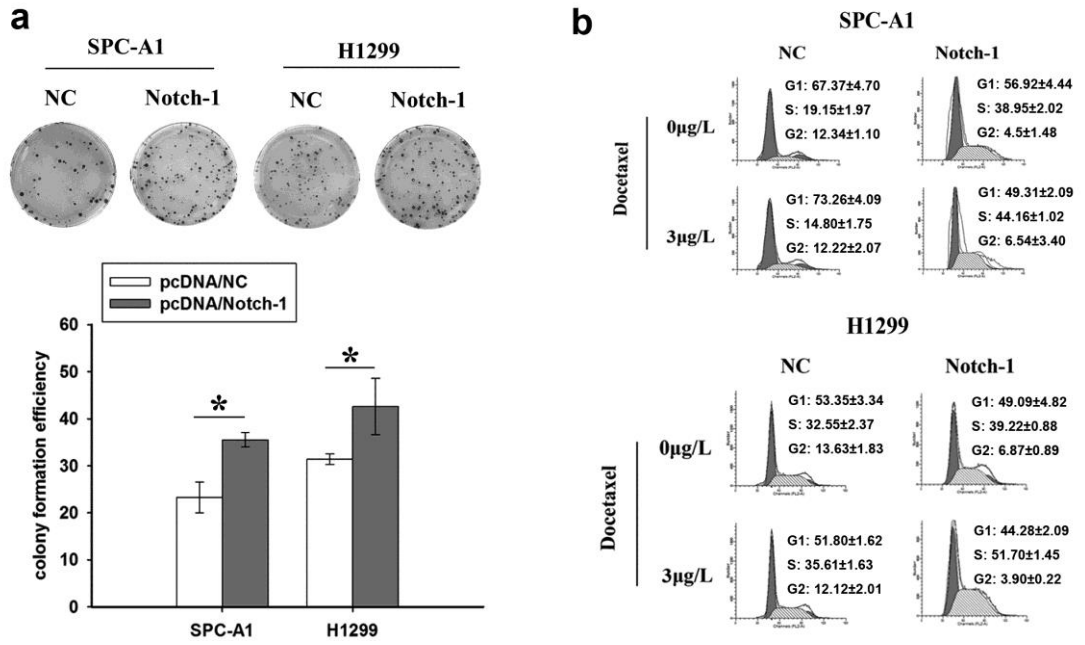

Figure S2. (**a**) Colony formation assay in two parental LAD cell lines with transfection of Notch-1 overexpression plasmid (pcDNA3/Notch-1). (**b**) Cell cycle analysis in two parental LAD cell lines with transfection of Notch-1 overexpression plasmid (pcDNA3/Notch-1) treated with 3μg/L Docetaxel. **P*<0.05

Figure S3. DAPT sensitizes DTX-resistant LAD cells to DTX in vivo.

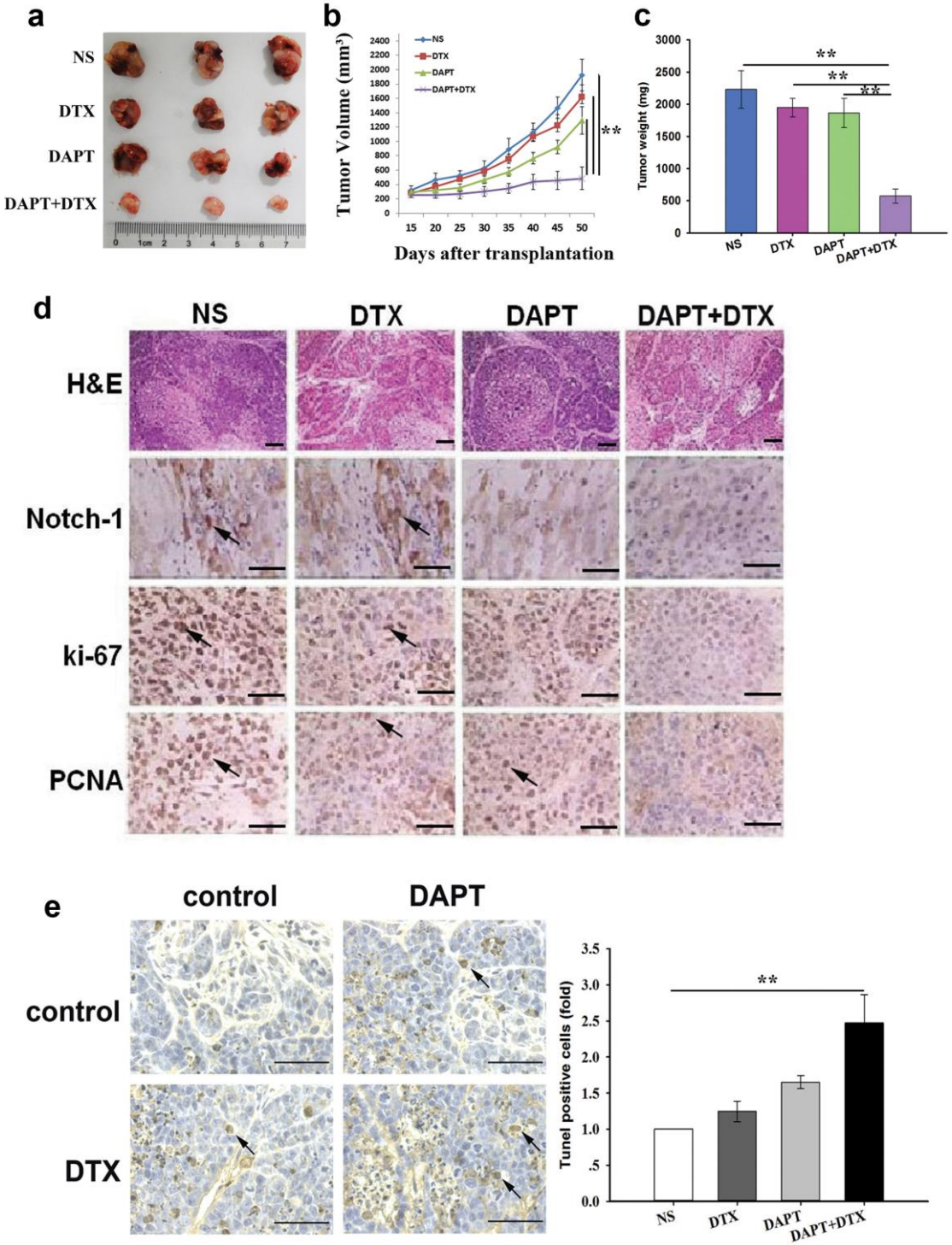

Figure S3. (**a**) The xenograft tumors were obtained and measured. (**b**) The values of tumor volume after transplantation. (**c**) The tumor weight of different treated xenograft tumors models. (**d**) The immunohistochemistry staining of ki-67, Notch-1

and PCNA in tumor samples from the different treated xenograft tumors models. (**e**) TUNEL staining in tumor samples from the different treated xenograft tumors models. Bar=50μm. **P<0.01.

Figure S4. The effects of miR-451 on cells.

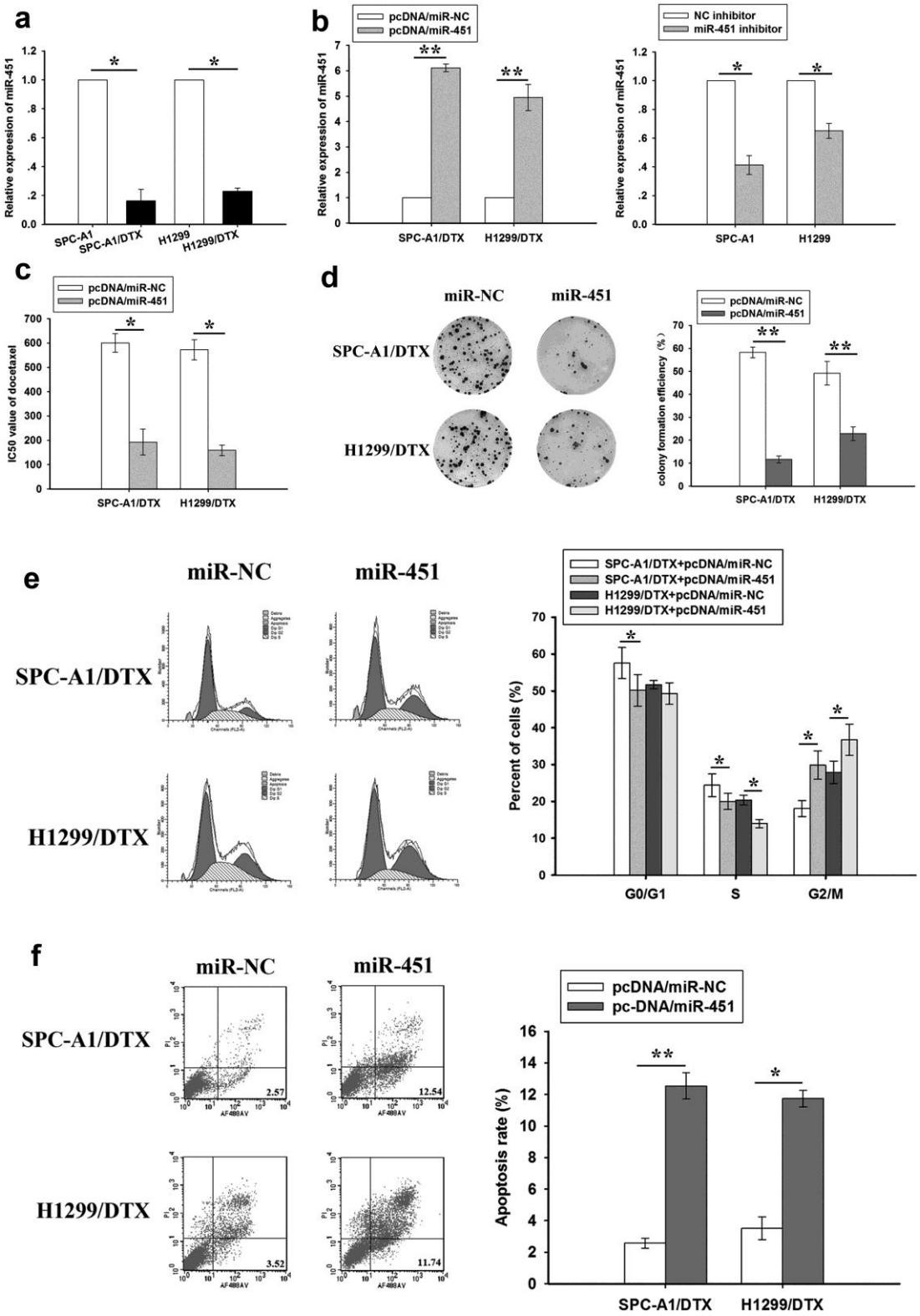

Figure S4. (**a**) The expression of miR-451 in in two parental LAD cell lines and their docetaxel-resistant cell lines. (**b**) The expression of miR-451 in in two parental LAD

cell lines treated with miR-451 inhibitor and their docetaxel-resistant cell lines with transfection of miR-451 overexpression plasmid (pcDNA/miR-451). (**c**) The IC50 value of Docetaxel in two docetaxel-resistant cell lines with transfection of miR-451 overexpression plasmid (pcDNA/miR-451). (**d**) Colony formation assay in two docetaxel-resistant cell lines with transfection of miR-451 overexpression plasmid (pcDNA/miR-451). (**e**) Cell cycle analysis and (**f**) Cell apoptosis analysis in two docetaxel-resistant cell lines with transfection of miR-451 overexpression plasmid (pcDNA/miR-451). *P<0.05 and **P<0.01.

Table S1: Primers sequences used in our research.

Name	Sequences
sh-control	5’- CACCGTTCTCCGAACGTGTCACGTCAAGAGATTACGTGACACGTTCGGAGAATTTTTTG-3’
	5’- GATCCAAAAAATTCTCCGAACGTGTCACGTAATCTCTTGACGTGACACGTTCGGAGACC-3’
sh-Notch-1	5’-CACCGAAGTGTCTGAGGCCAGCAAGATTCAAGAGATCTTGCTGGCCTCAGACACTTTTTTTTG-3’
	5’-GATCCAAAAAAAAAGTGTCTGAGGCCAGCAAGATCTCTTGAATCTTGCTGGCCTCAGACACTTC-3’
NC inhibitor	5’-CAGUACUUUGUGUAGUACAA-3’
miR-451 inhibitor	5’-AACUCAGUAAUGGUAACGGUUU-3’
NC mimics	**F** 5’-UUCUCCGAACGUGUCACGUTT-3’
	R 5’-ACGUGACACGUUCGGAGAATT-3’
miR-451 mimics	**F** 5’-AAACCGUUACCAUUACUGAGUU-3’
	R 5’-CUCAGUAAUGGUAACGGUUUUU-3’
c-Jun	**F:** GTCCGGACTCAGATCTCGAGCTATGACTGCAAAGATGGAAAC
	R: TATCTAGATCCGGTGGATCCTCAAAATGTTTGCAACTGCTGC
miR-451 promoter	
R1 136-427bp	**F** 5’- ATGGCTTGAAAAGCACTGTGA-3’
	R 5’- TCCAGGTAAGTGCACCTTCTC-3’
R2 402-705bp	**F** 5’- GAGAAGGTGCACTTACCTGGA-3’
	R 5’- AATTAAATGCTGGTGGATGGG-3’
R3 685-986bp	**F** 5’- CCCATCCACCAGCATTTAATT-3’
	R 5’- TCCTAGTAGAGCAACCCCCAA-3’
R4 957-1273bp	**F** 5’- TTGGGGGTTGCTCTACTAGGA-3’
	R 5’- TGTGACCTCAGGAAATAGAAC-3’
R5 1252-1548bp	**F** 5’- GTTCTATTTCCTGAGGTCACA-3’
	R 5’- TGGCGAAACCCCATCTCCACT-3’
R6 1532-1829bp	**F** 5’- AGTGGAGATGGGGTTTCGCCA-3’
	R 5’- AGATTATGCTACTGTACTCCA-3’
R7 1820-2104bp	**F** 5’- TGGAGTACAGTAGCATAATCT-3’
	R 5’- CTTGATGTAGGCTGGAACATT-3’
R8 2096-2402bp	**F** 5’- AATGTTCCAGCCTACATCAAG-3’
	R 5’- TTCTTGCAATGGTCCCAGGTG-3’
R9 2392-2706bp	**F** 5’- CACCTGGGACCATTGCAAGAA-3’
	R 5’- TTGTCCCCAGTCACACAGTTT-3’
R10 2697-3005bp	**F** 5’- AAACTGTGTGACTGGGGACAA-3’
	R 5’- TACAATCGTGAGCCACCATG-3’

Table S2. Primers used in Quantitative Real-Time Polymerase Chain Reaction (q-PCR).

Name	Primer
Notch-1	**F:** 5'-CCGTCATCTCCGACTTCATCT-3′
	R: 5'-GTGTCTCCTCCCTGTTGTTCTG-3′
Notch-2	**F:** 5'-CCCAATGGGCAAGAAGTCTA-3’
	R: 5'-CACAATGTGGTGGTGGGATA-3’
Notch-3	**F:** 5'-TCTTGCTGCTGGTCATTCTC-3'
	R: 5'-TGCCTCATCCTCTTCAGTTG-3'
Notch-4	**F:** 5'-CACTGAGCCAAGGCATAGAC-3’
	R: 5'-ATCTCCACCTCACACCACTG-3’
Jagged-1	**F:** 5′-AATGGTTATCGCTGTATCTG-3′
	R: 5′-ACTGTTTCGGGCTATGTT-3′
Jagged-2	**F:** 5’-GATTGGCGGCTATTACTGTG-3’
	R: 5’-AGGCAGTCGTCAATGTTCTC-3’
Delta-1	**F:** 5’-AGACGGAGACCATGAACAAC-3’
	R: 5’-AGATGCTTCTCCACCCCTGA-3’
MDR-1	**F:** 5’-CCCATCATTGCA ATAGCAGG-3’
	R: 5’-TGTTCAAACTTCTGCTCCTGA-3’
miR-451	**F:** 5’-ACACTCCAGCTGGGAAACCGTTACCATTA -3’
	R: 5’-TGGTGTCGTGGAGTCG-3’
miR-200b	**F:** 5'-GTGGAGGGTCCGAGGTATTC-3'
	R: 5'-CGTAATACTGCCTGGTAATGATG-3'
miR-100	**F:** 5’-GCGGCAACCCGTAGATCCGAA-3’
	R: 5’-GTGCAGGGTCCGAGGT-3’
Let-7c	**F:**5’-CGCTCGAGCAGAGCTGTTTATGGCC-3’
	R:5’-GCGGATCCGCCTGGCCAGGCAGG-3’
miR-650	**F:** 5’-CGCTCGAGAGTGGGCAGAGGAATGCCTG-3’
	R: 5’-GCGGATCCGAAGAGGTCTGGGGGACTGC-3’
U6	**F:** 5’-CTCGCTTCGGCAGCACA-3’
	R: 5’-AACGCTTCACGAATTTGCGT-3’
GAPDH	**F:** 5’-TGGGTGTGAACCATGAGAAGT-3’
	R: 5’-TGAGTCCTTCCACGATACCAA-3’