



Supplementary Materials

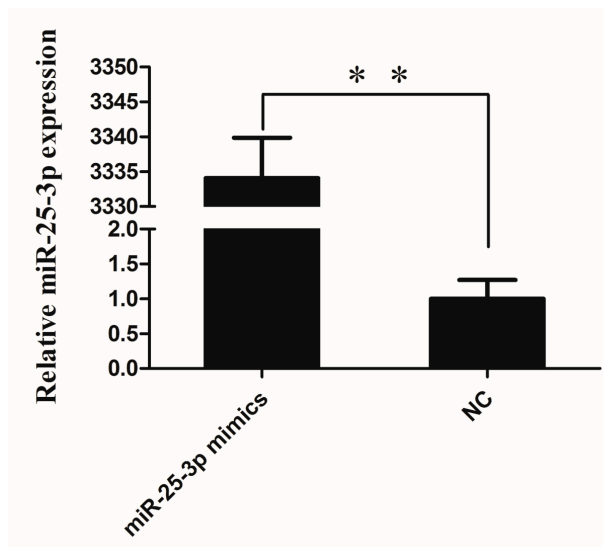


Figure S1. The mRNA expression of miR-25-3p was detected by qRT-PCR. NC, negative control (miR-239b-5p of caenorhabditis elegans). Data were presented as means ± SD ($n = 3$), ** $p < 0.01$.

■ AliBaba2.1

```
seq( 1860.. 1919)   tagctgagcgccccaggctccatttgtttgatggggagcctagtggagttcagaagggtc
Segment s:
2.3.1.0   1854 1863   1===
2.3.1.0   1867 1877   ===YY1===
1.6.1.0   1868 1877   =AP-2alph=
2.3.2.3   1868 1877   ===BRF1===
1.1.3.0   1882 1891   =C/EBPalp=
1.6.1.0   1890 1899   =AP-2alph=
```

■ Genomatix

Matrix	Start position	End position	Core sim.	Matrix sim.	Sequence
Activator protein 2 alpha (AP2)	1908	1922	0.906	0.942	agcGCCCcaggctcc

Figure S2. Transcription factor AP-2 α binding sites in the core promoter of mouse miR-25-3p were predicted by AliBaba 2.1 and Genomatix softwares programs.

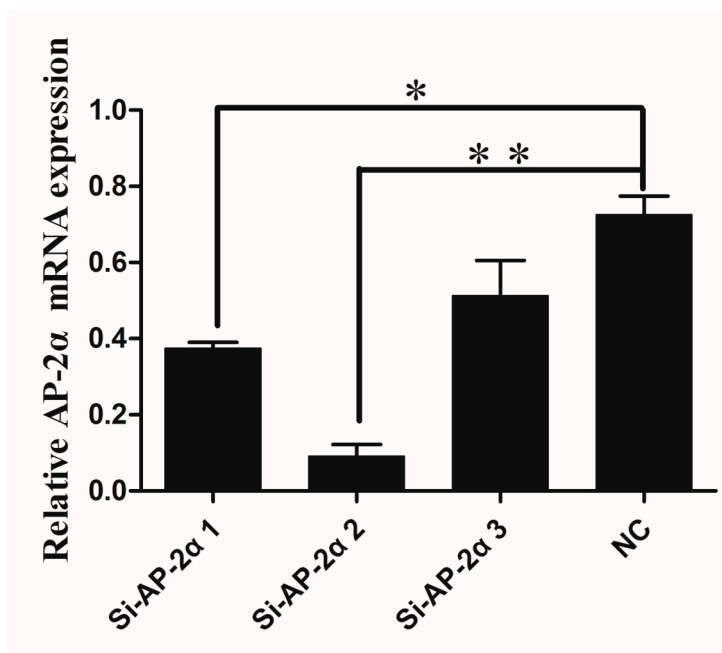


Figure S3. The mRNA expression of AP-2α was detected by qRT-PCR. Data were presented as means \pm SD ($n = 3$), * $p < 0.05$; ** $p < 0.01$.

Table S1. Oligonucleotide sequences of miR-25-3p and AP-2α siRNAs.

Name	Sequence (5'-3')
miR-25-3p mimics	CAUUGCACUUGUCUCGGUCUGA UCAGACCGAGACAAGUGCAAUG
miR-25-3p NC	UUUGUACUACACAAAAGUACUG CAGUACUUUUGUGUAGUACAAA
miR-25-3p inhibitor	UCAGACCGAGACAAGUGCAAUG
miR-25-3p inhibitor-NC	CAGUACUUUUGUGUAGUACAAA
siAP-2α-1	F: GGAGAGCGAAGUCUAAGAATT R: UUCUUAGACUUCGCUCUCCTT
siAP-2α-2	F: CCAAAGCAGUAGCAGAAUUTT R: AAUUCUGCUACUGCUUUGGTT
siAP-2α-3	F: GCAUCCUUCGAGCAAUAAATT R: UUUAUUGCUCGAAGGAUGCTT

Note: Italics bases represent protective bases.

Table S2. Primers for amplification of *Akt1* 3' UTR and its mutated fragment.

Name	Primer sequence (5'-3')
Akt1	F: <u>GGGTTTAAACGCCAGGTCAGGAGGAAA</u> ACTA
	R: <u>CCGCTCGAGCTTCTGGTGCCTTCTTGCTG</u>
	Mut-F: GACGCGACCATGCTAGTTGTGGGCTCATG
	Mut-R: CATGAGCCCACAACCTAGCATGGTCCGCTC

Note: Italics, protective bases; underlined, enzyme loci; shadow, mutation sites

Table S3. Primers for amplification of miR-25-3p promoters and AP-2α transcription factor binding sites mutated fragment.

Name	Primer sequence (5'-3')	Size (bp)	Tm (°C)
miR-25-3p-P1	F: <u>GGGGTACC</u> ACTGACTTTAGAGGGCGGTG R: <u>CCAAGCTT</u> TGTCAGACCGAGACAAGTGC	2034	61
miR-25-3p-P2	F: <u>GGGGTACC</u> GCTTCTCGATTTCGACCTCCT R: <u>CCAAGCTT</u> TGTCAGACCGAGACAAGTGC	1779	60
miR-25-3p-P3	F: <u>GGGGTACC</u> GCAGACACCTTAAACACCTTCC	1623	60

	R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>		
miR-25-3p-P4	F: <u>GGGGTACCCATCACCTATGTCCACCAGCA</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	1425	60
miR-25-3p-P5	F: <u>GGGGTACCCCTGGGTCTCTCTGTAGCCA</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	1218	60
miR-25-3p-P6	F: <u>GGGGTACCTTCCCGCTTTCCCATGAACC</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	782	60
miR-25-3p-P7	F: <u>GGGGTACCTCTCCGACTTTCCACTGCTC</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	602	59
miR-25-3p-P8	F: <u>GGGGTACCAGGCTGCTTGCTGCTTGAAT</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	383	59
miR-25-3p-P9	F: <u>GGGGTACCCCCAGGACACAACCTCTG</u> R: <u>CCAAGCTTTGTCAGACCGAGACAAGTGC</u>	263	59
AP-2 α -mut	F: TAGCTGAGCGCCCTGTACTCCATTTGTTGA R: TCAAACAAATGGAGTACAGGGCGCTCAGCTA		

Note: Italics, protective bases; underlined, enzyme loci.

Table S4. Primers for ChIP assays.

Name	Primer sequence (5'-3')	Size (bp)	T _m (°C)
ChIP-AP-2 α	F: TGCTGAGCTAGCACTTCCC R: CTGTCCTGTGAGGGAGACCA	132	60

Table S5. Primers for qRT-PCR.

Primer	Primer sequence (5'-3')	Size(bp)	T _m (°C)
miR-25-3p Loop	CTCAACTGGTGTCTGGAGTCGGCAATTCAGTT GAGTCAGACCG	66	60
miR-25-3p	F: CTGGTAGGCATTGC ACTTGTCT R: TCAACTGGTGTCTGGAG		
U6 Loop	CTCAACTGGTGTCTGGAGTCGGCAATTCAGTT GAGAAAAATATGGAACGCT		
U6	F: CTGGTAGGGTGTCTGCTTCGGCAG R: TCAACTGGTGTCTGGAG	150	60
Akt1	F: GATGGAGGCCAGGGTACAAA R: GCAGCGACACCACAAAATGA	176	59
PI3K	F: GAAATCTCCTGGGATGTGTCGT R: ATCTGGTGGCTCTCGGAGTAA	223	59
β -actin	F: CAAGAGAGGTATCCTGACCCT R: TGATCTGGGTACATCTTTTAC	188	58

Note: red, loop sequences; yellow, universal sequences; bold bases, protective bases.