

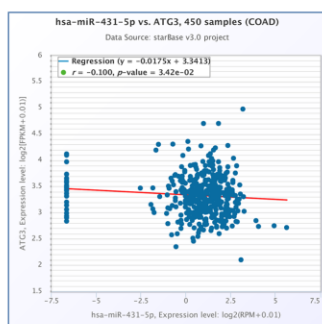
Supplementary Figure 1 Post-transcriptional mechanisms account for the upregulation of ATG3 in colon cancer.

Notes: (A) The comparable expression level of ATG3 hnRNA was observed among NCM460, SW620, and HCT116 cells indicated by qPCR assay. (B) The promoter methylation level is comparable between colon cancer and normal tissues demonstrated by online data from TCGA. **COAD: colon adenocarcinoma**, **ns** stands for no significant difference.

A

miRNA	GeneName	miRmap	microT	miRanda	AgoExpNum
hsa-miR-599	ATG3	1[6.0]	1[6.3]	1[6.2]	6
hsa-miR-431-5p	ATG3	1[6.0]	1[6.2]	1[6.3]	6
hsa-miR-3611	ATG3	1[4.0]	1[6.3]	0[0.0]	6
hsa-miR-758-3p	ATG3	0[0.0]	0[0.0]	1[6.3]	6
hsa-miR-584-5p	ATG3	1[4.0]	1[6.1]	0[0.0]	6
hsa-miR-206	ATG3	0[0.0]	1[5.0]	1[5.0]	5
hsa-miR-204-5p	ATG3	0[0.0]	0[0.0]	1[5.0]	5
hsa-miR-613	ATG3	0[0.0]	1[5.0]	1[5.0]	5
hsa-miR-1-3p	ATG3	0[0.0]	1[5.0]	1[5.0]	5
hsa-miR-410-3p	ATG3	0[0.0]	1[5.0]	1[4.0]	5

B



C

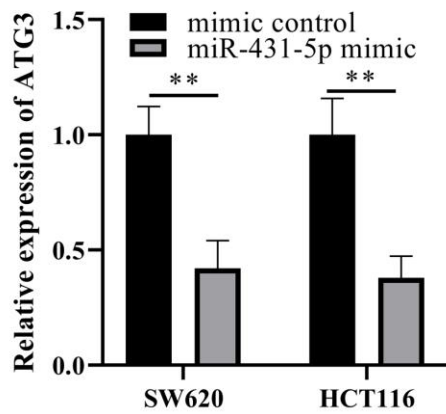
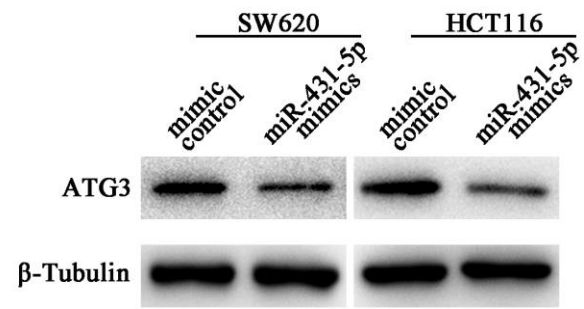
ONCOMiR
WashU Pan-Cancer miRNome Atlas

There are 9 cancer types where survival is significantly associated with hsa-miR-431-5p

miRNA Name	Cancer Abbreviation	Log Rank P-value	Log Rank HR	Z-score	Upregulated in:	Decreased Log2 Mean Expression	Living Log2 Mean Expression	T-Test P-value	T-Test HR
hsa-miR-431-5p	BLCA	1.15e-02	4.17e-01	2.825	Decreased	3.86	1.80	3.27e-01	6.50e-01
hsa-miR-431-5p	COAD	3.92e-02	8.60e-01	2.017	Living	1.38	1.53	4.38e-01	7.57e-01
hsa-miR-431-5p	HNSC	5.17e-03	6.65e-02	2.855	Decreased	2.02	1.63	1.63e-02	1.86e-01
hsa-miR-431-5p	KICH	5.45e-03	3.08e-01	1.887	Decreased	2.45	0.06	3.49e-01	5.73e-01
hsa-miR-431-5p	KIRC	1.97e-02	1.49e-01	2.661	Decreased	0.29	0.13	1.15e-01	3.10e-01
hsa-miR-431-5p	KIRP	9.12e-03	2.27e-01	3.237	Decreased	0.13	0.03	1.34e-01	5.41e-01
hsa-miR-431-5p	LGG	5.03e-03	2.82e-03	3.130	Decreased	0.56	0.16	1.30e-02	8.69e-02
hsa-miR-431-5p	PRAD	2.48e-02	6.18e-01	3.082	Decreased	0.26	0.03	3.96e-01	6.32e-01
hsa-miR-431-5p	UCEC	1.66e-02	9.51e-01	2.748	Decreased	2.94	1.15	1.92e-01	6.35e-01

Supplementary Figure 2 Online data suggest that miR-431-5p may target ATG3 in colon cancer.

Notes: (A) Starbase 2.0 analysis predicts that miR-431-5p might target ATG3 in colon cancer. (B) A negative correlation is indicated by data from Starbase 2.0. (C) miR-431-5p is a favorable indicator of prognosis in colon cancer demonstrating by the data from OncomiR database.

A**B**

Supplementary Figure 3 miR-431-5p can inhibit the level of ATG3 mRNA and protein in colon cancer.

Notes: (A) miR-431-5p mimics significantly inhibit the level of ATG3 mRNA in SW480 and HCT116 cells indicated by qPCR assays. (B) miR-431-5p mimics significantly inhibit the level of ATG3 protein in SW480 and HCT116 cells indicated by western blot. **stands for $P < 0.01$