

Table S1 Primer sequences for PCR analysis

Gene (mouse)	Primer sequence (5'–3')	
<i>Risa</i>	Forward	TCTGGAGAGCCCAACCT
	Reverse	TCCTTCAAACGCGAGAGAG
<i>Beclin-1</i>	Forward	GAGTGGAATGAAATCAATGCTGC
	Reverse	TTTCCACCTCTTCTTTGAACTGC
<i>LC3B</i>	Forward	CCGTCCGAGAAGACCTTCAA
	Reverse	TCTTGCGGCAGGAGAACCTA
<i>GAPDH</i>	Forward	CCTCGTCCCGTAGACAAAATG
	Reverse	TGAGGTCAATGAAGGGGTCGT

Risa lncRNA AK044604, *LC3B* light chain 3 beta, *GAPDH* glyceraldehyde-3-phosphate dehydrogenase

Table S2 Primary antibodies for Western blotting assays

Name	Corporation
Anti-Beclin 1 antibody	Abcam, Servicebio
Anti-Desmin antibody	Abcam, Servicebio
Anti-GAPDH antibody	Good here
Anti-GSK3 β (phospho Ser9) antibody	CST
Anti-GSK3 β antibody	CST, Servicebio
Anti-LC3B antibody	Sigma
Anti-Nephrin antibody	Abcam
Anti-NPHS2 antibody	Abcam
Anti-Sirt1 antibody	Bioss
Anti-Sirt1 (phospho Ser27) antibody	Bioss
Anti-SQSTM1/p62 antibody	Servicebio
Anti-WT1 antibody	CST, Servicebio

GAPDH glyceraldehyde-3-phosphate dehydrogenase, *GSK3 β* glycogen synthase kinase 3 β , *LC3B* light chain 3 beta, *NPHS2* podocin, *Sirt1* sirtuin 1

Table S3 Primary antibodies for immunofluorescence staining

Name	Corporation
Anti-GSK3 β (phospho Ser9) antibody	CST
Anti-LC3B antibody	Sigma, CST
Anti-Nephrin antibody	Servicebio, Abcam
Anti-Sirt1 (phospho Ser27) antibody	Bioss
Anti-SQSTM1/p62 antibody	Servicebio
Anti-Synaptopodin antibody	Santa
Anti-WT1 antibody	CST

GSK3 β glycogen synthase kinase 3 β , *LC3B* light chain 3 beta

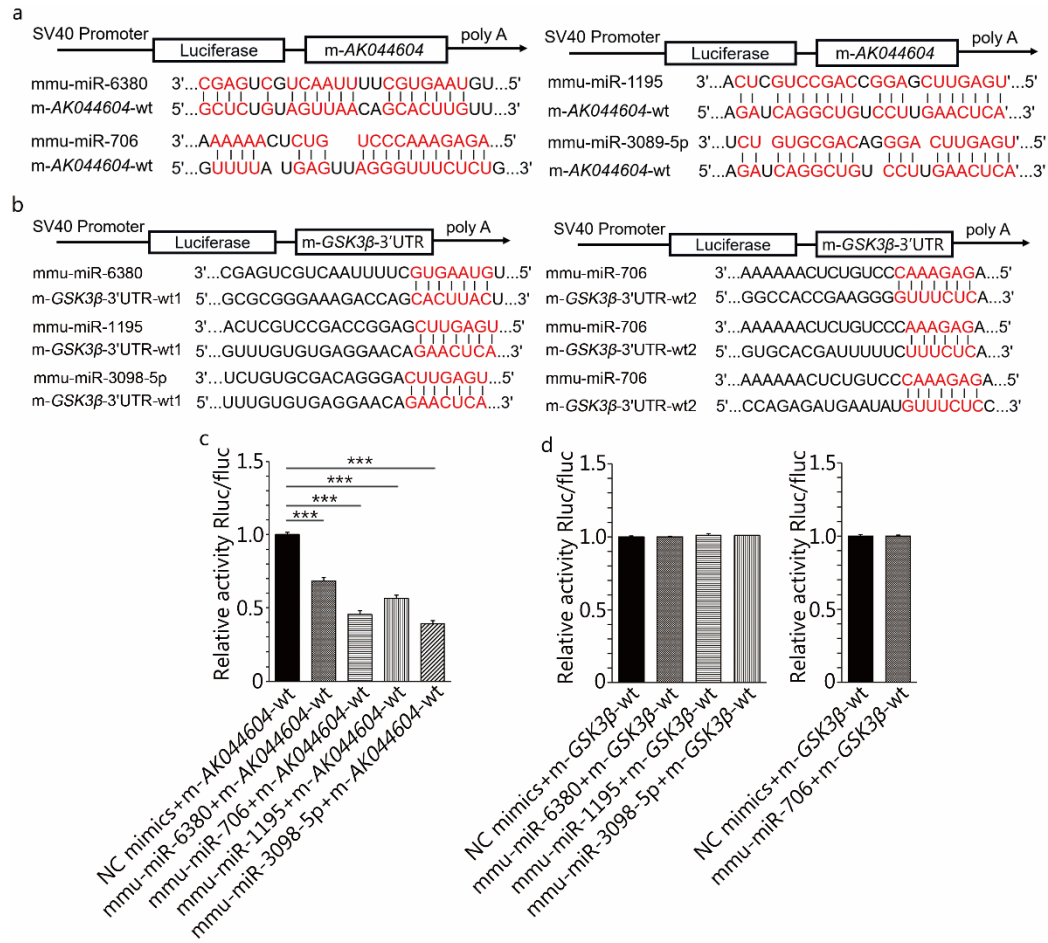


Fig. S1 Dual luciferase reporter assay were applied to detect the binding site and interaction between *Risa* or *GSK3β* and predicted miRNAs. **a** Schematic of mmu-miR-6380, mmu-miR-706, mmu-miR-1195 and mmu-miR-3098-5p binding to m-AK044604 targets. **b** Schematic of mmu-miR-6380, mmu-miR-1195, mmu-miR-3098-5p and mmu-miR-706 binding to m-GSK3β-3'UTR targets. **c** The interaction between mmu-miR-6380, mmu-miR-706, mmu-miR-1195, mmu-miR-3098-5p and m-AK044604. **d** The interaction between mmu-miR-6380, mmu-miR-1195, mmu-miR-3098-5p, mmu-miR-706 and m-GSK3β-3'UTR. Values are expressed as mean ± SD of three independent experiments. ****P* < 0.001. *Risa* lncRNA AK044604, *GSK3β* glycogen synthase kinase 3β, NC normal control