Supplementary information

Table S1. Primers used in RT-qPCR and sequences used to generate constructs

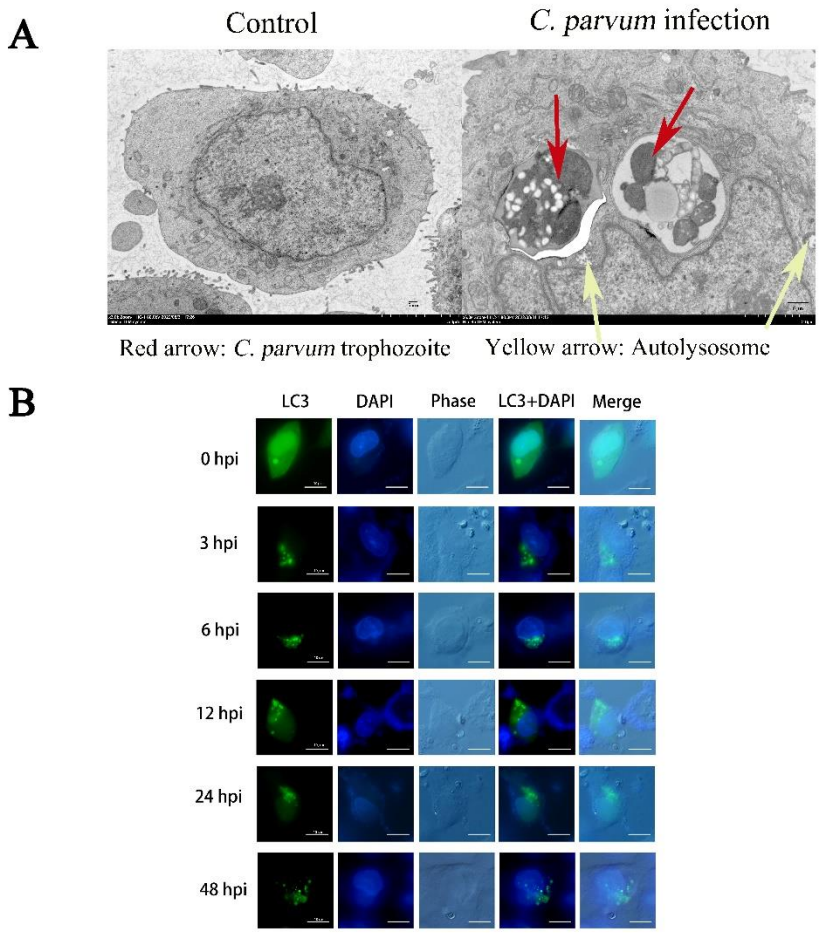
Target	**Primers**	
	Forward	**Reverse**
Human-SSU rRNA	TAG AGA TTG GAG GTT GTT CCT	CTC CAC CAA CTA AGA ACG GCC
C. parvum-SSU rRNA	CCG ATA ACG AAC GAG ACT CTG G	TAG GGT AGG CAC ACG CTG AGC C
mTOR	GTGCCGAGCATATGCCAAAG	CTCCCACTCGTGCAGTTTCT
GAPDH	GTC AGC CGC ATC TTC TTT TG	GCG CCC AAT ACG ACC AAA TC
U6	TGG AAC GCT TCA CGA ATT TGC G	GGA ACG ATA CAG AGA AGA TTA GC
miR-199a-3p	GCTGCGACAGTAGTCTGCACAT	AGTGCAGGGTCCGAGGTAGTATT
miR-199a-3p RT	GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTAACCA	

Table S2. RNA oligonucleotides for miRNAs and siRNAs

Target	Sense	Antisense
miR-199a-3p mimics	ACAGUAGUCUGCACAUUGGUUA	ACCAAUGUGCAGACUACUGUUU
miR-199a-3p mimics NC	UUC UCC GAA CGU GUC ACG UTT	ACG UGA CAC GUU CGG AGA
miR-199a-3p inhibitor	UAACCAAUGUGCAGACUACUGU	
miR-199a-3p inhibitor NC	CAG UAC UUU UGU GUA GUA CAA	
si-h-MTOR_010	GAGCATGCCGTCAATAATA	
genOFFTM st-h-MTOR_001	GTGCAACCCTTCTTTGACA	
genOFFTM st-h-MTOR_002	GCACCGTCTTTGCAAGTCA	

Table S3. The inserted sequence of mTOR -WT and mTOR MUT

Target	**sense**
mTOR-WT	ATGTAAATGAAAAGAACTACTGTATGTAAATGAA AAGAACTACTGTATGTAAATGAAAAGA
mTOR -MUT	ATGTAAATGAAAAGACACGACATATGTAAATG AAAAGACACGACATATGTAAATGAAAAGA



Supplementary Fig. 1 A Autophagic vacuoles in control and *C. parvum*-infected HCT-8 cells were detected with transmission electron microscopy (TEM) at 12 hpi. (Black arrowheads: two intracellular vesicular structures suspected of encapsulating organelles and ascospores are visible; yellow arrowheads: autophagic lysosome, *n*=3 biologically independent samples Scale bar: 5 μm). **B** Cells were transfected with a plasmid stably expressing EGFP–LC3 and infected with *C. parvum* sporozoites(*n*=3 biologically independent samples). Autophagy was evaluated at different time points after infection. (Scale bar: 10 μm)

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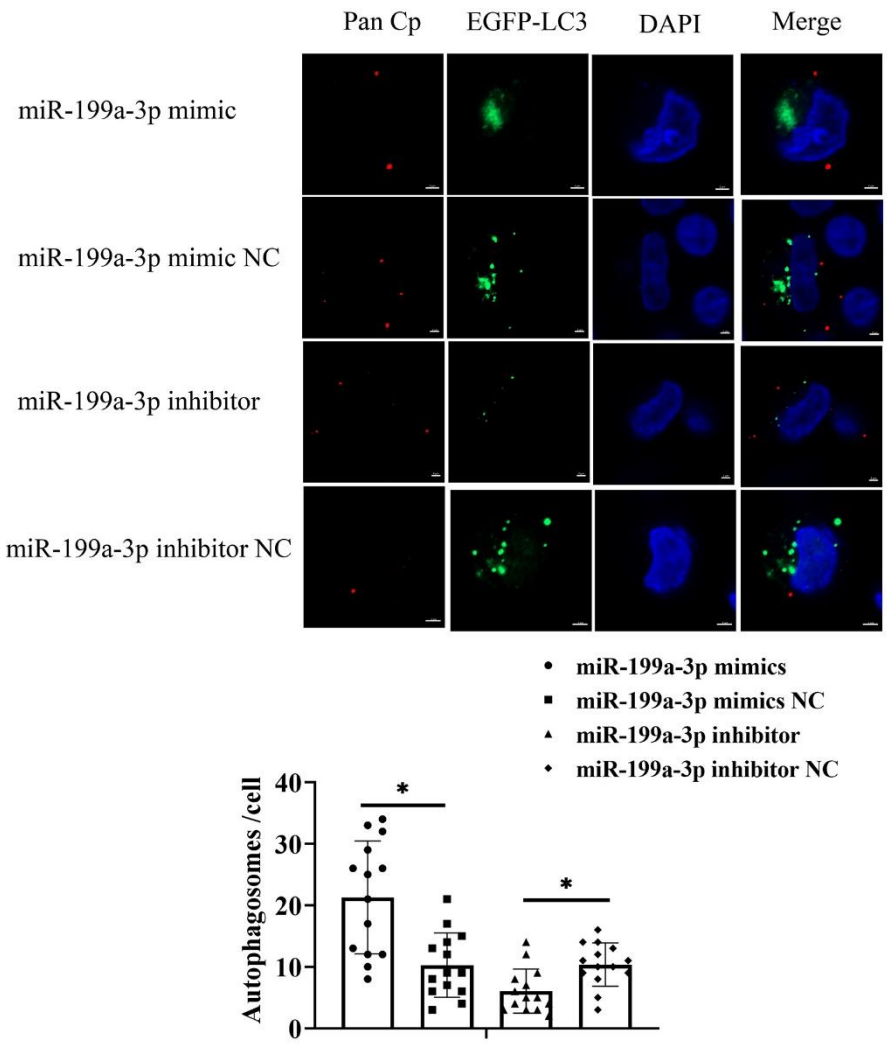
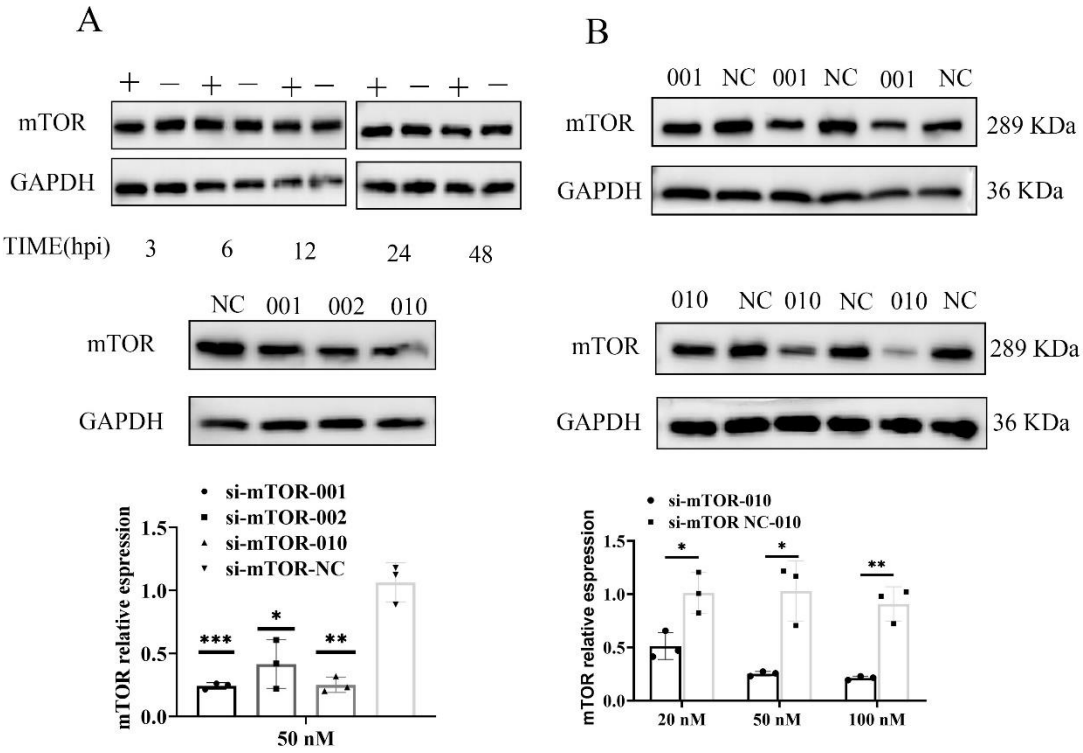
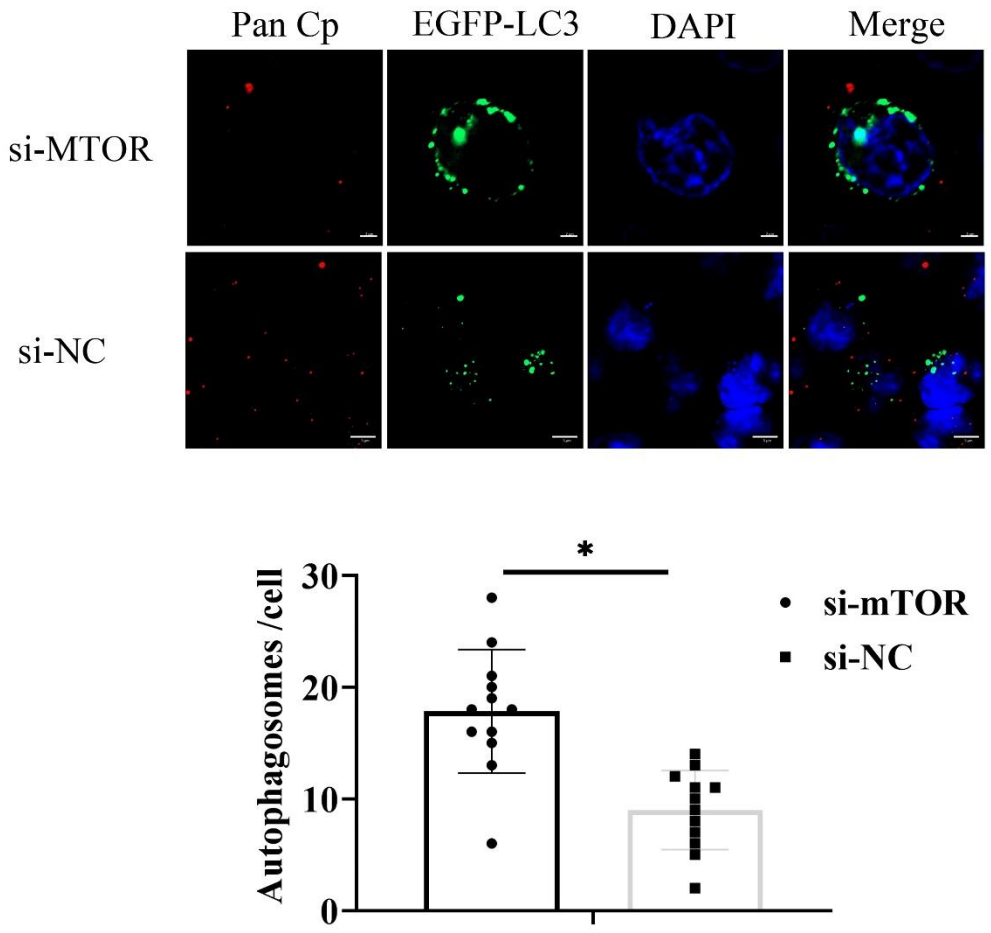


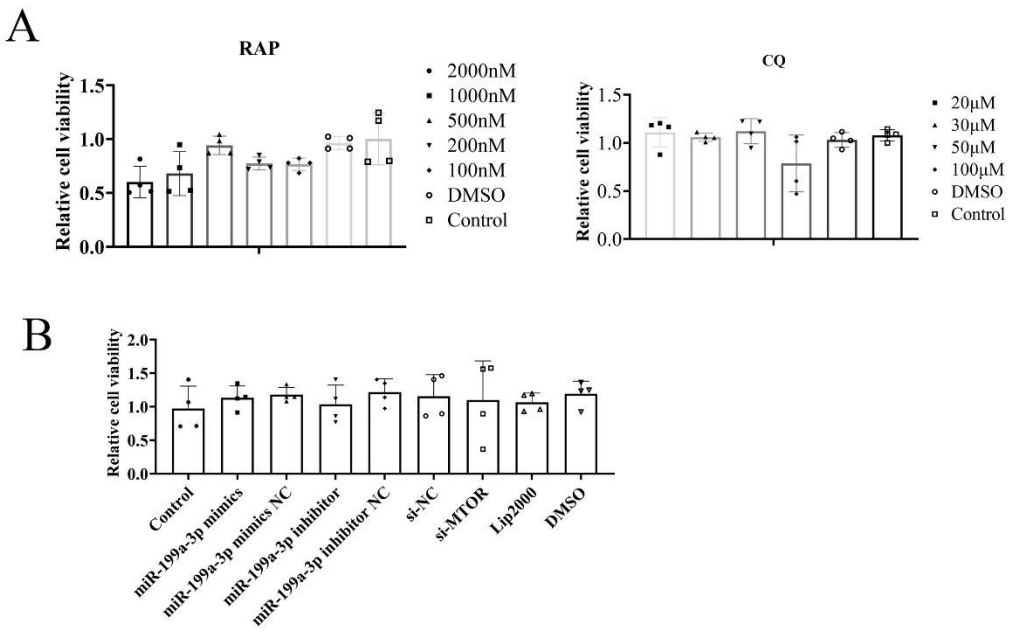
Supplementary Fig. 2. Cells were cotransfected with miR-199a-3p mimic or miR-199a-3p inhibitor and a plasmid encoding EGFP–LC3 for 24 h, and then exposed to equal numbers of *C. parvum* sporozoites for 12 h. *C. parvum* were stained with Pan Cp followed by goat anti-mouse IgG Alexa Fluor 594, and the nucleus was stained with DAPI(*n*=3 biologically independent samples). The autophagosome was evaluated with confocal microscopy (red dots: *C. parvum*; green dots: autophagosome; Scale bar,2 μm).



Supplementary Fig. 3 A MTOR protein expression levels were detected with Western blotting(*n*=3 biologically independent samples). **B** Optimal concentrations of three pairs of small interfering RNA (siRNA; si-MTOR) were determined with RT–qPCR and Western blotting(*n*=3 biologically independent samples).

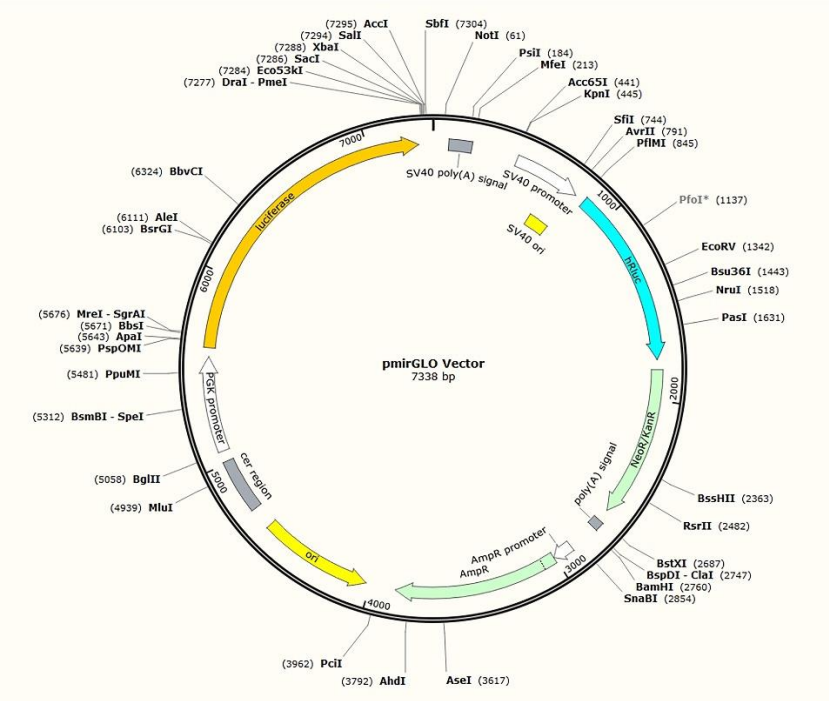


Supplementary Fig. 4. Cells were cotransfected with si-MTOR or si-NC and a plasmid encoding EGFP–LC3 for 24 h, and then exposed to equal numbers of *C. parvum* sporozoites for 12 h. *C. parvum* were stained with Pan Cp followed by goat anti-mouse IgG Alexa Fluor 594, and the nucleus was stained with DAPI(*n*=3 biologically independent samples). The autophagosome was evaluated with confocal microscopy.(red dots: *C. parvum*; green dots: autophagosome, si-mTOR group Scale bar, 2 μm and si-NC group Scale bar, 5 μm).

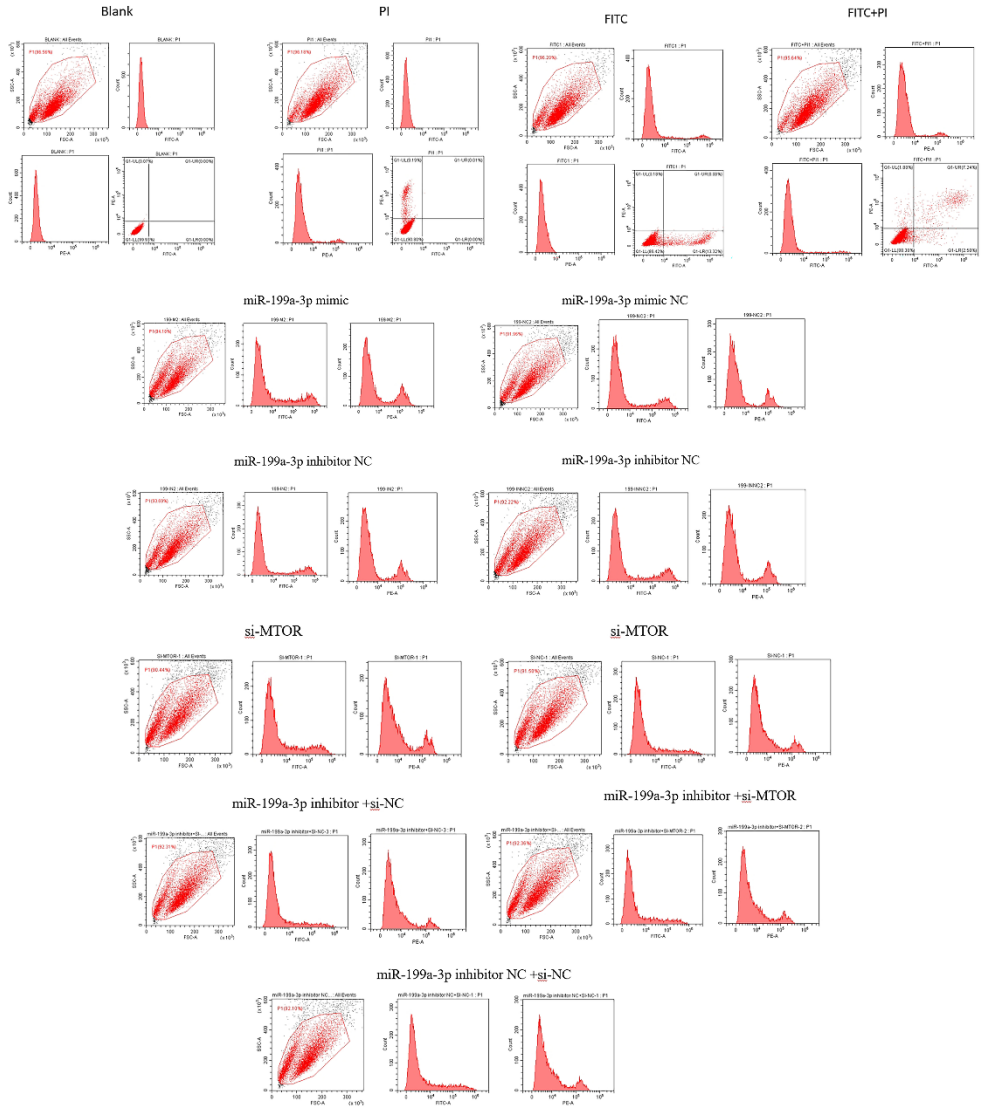


Supplementary Fig. 5 A Concentration screening of autophagy inducers and other drugs(*n*=4 biologically independent samples). **B** Effects of transfection of miR-199a-3p mimic and miR-199a-3p inhibitor and si-MTOR or si-NC with Lip2000 on cell activity(*n*=4 biologically independent samples)**.**

Supplementary Fig. 6 Structure diagram of double luciferase carrier.



Supplementary Fig. 7 Gating strategy for flow cytometry analysis**.**



Supplementary Fig. 8 Uncropped blots images for western blot.