Supplementary Tables S1-S3:

Table S1 | Primary antibodies used in this study.

Primary Antibodies	Companies
β-actin (mouse monoclonal anti-)	Sigma Aldrich (A-3853)
Atg5 (rabbit polyclonal anti-)	Cell Signaling (#2630)
Atg8 (rabbit polyclonal anti-)	See reference (*41*)
GAPDH (rabbit polyclonal anti-)	Trevigen (#2275)
H3 C-terminal (rabbit polyclonal anti-)	Active Motif (#39164)
H3K4me3 (rabbit polyclonal anti-)	LP Bio (AR-0169)
H3K4me3 (rabbit polyclonal anti-)	Active Motif (#39159)
H4 (rabbit polyclonal anti-)	Active Motif (#61199)
H4K8ac (rabbit polyclonal anti-)	Active Motif (#39171)
H4K12ac (rabbit polyclonal anti-)	Active Motif (#39165)
H4K16ac (rabbit polyclonal anti-)	Millipore (#07-329)
H4K16ac (rabbit polyclonal anti-)	Active Motif (#39167)
HA (mouse monoclonal anti-)	Sigma Aldrich(H-3663)
hMOF (mouse monoclonal anti-)	GeneTex Inc. (8C4C4)
hMOF (rabbit polyclonal anti-)	GeneTex Inc. (GTX104587)
LC3B (rabbit polyclonal anti-)	Sigma Aldrich (L-7543)
LC3A/B (rabbit polyclonal anti-)	Cell Signaling (#4108)
Pgk-1 (rabbit polyclonal anti-)	Dr. Jeremy Thorner University of California
SIRT1 (mouse monoclonal anti-)	Sigma Aldrich (WHO023411)

Table S2 | Reagents used in this study.

Reagents	Companies
Bafilomycin A1 (Baf A)	Santa Cruz Biotechnology
Chloroquine (CQ)	Sigma Aldrich
4',6-diamidino-2-phenylindole (DAPI)	Molecular Probes/Invitrogen
Ex527	Tocris
Hoechst	Molecular Probes/Invitrogen
3-methyladenine (3MA)	Tocris
2-propylpentanoic acid (VPA)	Sigma Aldrich
Rapamycin	LC Laboratories
Torin1	Tocris

Table S3 |ON-TARGETplus SMART pool small interfering RNAs used in this study. This technology is based on the use of four duplex siRNAs targeting four different regions of the mRNA to be targeted (SMARTpool). This technology is also based on dual-strand modification (ON-TARGETplus) proven to reduce off target effects caused by both strands.

ON-TARGET plus SMARTpools siRNAs	Companies
ATG7 (human, ATG7 NM_006395) CCAACACACUCGAGUCUUU GCCCACAGAUGGAGUAGCA GAUCUAAAUCUCAAACUGA GCCAGAGGAUUCAACAUGA	Dharmacon (L-020112)
hMOF (human, MYST1 NM_032188) CGAAAUUGAUGCCUGGUAU GAGAGGAAUUCUAUGUACA AAAGUGCCCAGUAUAAGAA GCAUUCUGCUGAAGUGAUC	Dharmacon (L-014800)
SIRT1 (human, SIR2L1 NM_012238) CCACCUGAGUUGGAUGAUA GCGAUUGGGUACCGAGAUA GCAAAGGAGCAGAUUAGUA GGAUAGGUCCAUAUACUUU	Dharmacon (L-003540)
Non-targeting siRNA #1 UGGUUUACAUGUCGACUAA Negative control siRNA with at least 4 mismatches to any human, mouse, or rat gene. Microarray tested.	Dharmacon (D-001810)