Supplementary Material

## Supplementary Figures

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**Supplementary Figure 1.** **Both** **peptide FLPNF and TAT-GSG-FLPNF significantly induced the autophagy in INS-1 cells.** INS-1 cells were exposed to 200 µM peptide FLPNF or TAT-GSG-FLPNF for 24 h. Both peptide FLPNF and TAT-GSG-FLPNF significantly induced the autophagy at a concentration of 200μM, and the TAT-GSG-FLPNF was more effective than peptide FLPNF**.** (a) Western blot analysis revealed changes in LC3-I and LC3-II at a concentration of 200 µM of the peptide FLPNF and TAT-GSG-FLPNF. β-actin was used as loading control. (b) The graph represents the quantification of LC3-II protein levels (n=4). \*\*p < 0.01, \*\*\*p < 0.001, and ns *vs.* DMSO group. #p<0.05 *vs.* peptide FLPNF group.



**Supplementary Figure 2.** **Peptide FLPNF hardly affects INS-1 cell viability.** INS-1 cells were exposed to different concentrations (0, 25, 50, 100, 200, and 400 μM) of peptide FLPNF. Cellular viability was determined by CCK-8 assay (n=4). Peptide FLPNF did not cause a decrease in viability of INS-1 cells at different concentrations for different time, even after exposure to 400 µM for 96 hours. ns *vs.* 0 μM group.