Data Sheet (Cat.No.T38861)

TargetMol

Tat-beclin 1

Chemical Properties

CAS No. : 1423821-88-8

Formula:

Molecular Weight:

H—Tyr—Gly—Arg—Lys—Lys—Arg—Arg—Gln—Arg—Arg—Arg—Gly—Gly—Thr—Asn—Val—Phe—Asn—Ala—Thr—Phe—Glu—Ile—Trp—His—Asp—Gly—Glu—Phe—Gly—Thr—OH

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Tat-beclin 1, a peptide derived from the autophagy protein beclin 1, is a powerful inducer of autophagy. It interacts with GAPR-1 (GLIPR2), a negative regulator of autophagy. Tat-beclin 1 effectively reduces polyglutamine expansion protein aggregates and inhibits various pathogens, such as HIV-1, in laboratory experiments. Additionally, it decreases mortality in mice infected with chikungunya (CHIKV) or West Nile virus (WNV).
Targets(IC50)	HIV Protease,Autophagy
In vitro	Tat-beclin 1, at concentrations of 10, 30, and 50 μM administered for 24 hours, promotes autophagy, leading to a dose-dependent reduction in p62 levels—a selective autophagy marker—and facilitates the transformation of LC3-I into its autophagosome-associated, lipidated counterpart, LC3-II, across various cell lines and in primary murine embryonic fibroblasts (MEFs). Additionally, at a concentration of 10 μM and applied 2-4 hours after infection, Tat-beclin 1 significantly reduces the intracellular survival rate of L. monocytogenes within primary murine bone-marrow-derived macrophages (BMDMs).
In vivo	Tat-beclin 1, administered intraperitoneally at a dosage of 15 mg/kg daily starting one day after infection and continuing for 20 days, induces autophagy in the peripheral tissues of adult mice and in the central nervous system of neonatal mice (6-week-old GFP-LC3 mice)[1].

Reference

Sanae Shoji-Kawata, et al. Identification of a Candidate Therapeutic Autophagy-Inducing Peptide. Nature. 2013 Feb 14;494(7436):201-6.

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