

Tat-beclin 1

Cat. No.:	HY-P2260	
CAS No.:	1423821-88-8	
Molecular Formula:	C ₁₆₄ H ₂₅₁ N ₅₇ O ₄₅	
Molecular Weight:	3741.1	YGRKKRRQRRRGGTNVFNATFEIWHDGEFGT
Sequence:	Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Gly-Gly-Thr-Asn-Val-Phe-Asn-Ala-Thr-Ph e-Glu-Ile-Trp-His-Asp-Gly-Glu-Phe-Gly-Thr	
Sequence Shortening:	YGRKKRRQRRRGGTNVFNATFEIWHDGEFGT	
Target:	Autophagy; HIV	
Pathway:	Autophagy; Anti-infection	
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year	

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

H₂O : 25 mg/mL (6.68 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
1 mM		0.2673 mL	1.3365 mL	2.6730 mL
5 mM		0.0535 mL	0.2673 mL	0.5346 mL
10 mM		---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Tat-beclin 1, a peptide derived from a region of the autophagy protein (beclin 1), is a potent inducer of autophagy and interacts with negative regulator of autophagy, GPR-1 (GLIPR2). Tat-beclin 1 decreases the accumulation of polyglutamine expansion protein aggregates and the replication of several pathogens (including HIV-1) in vitro, and reduces mortality in mice infected with chikungunya (CHIKV) or West Nile virus (WNV)^[1].

IC₅₀ & Target

HIV-1

In Vitro

Tat-beclin 1 (10, 30, 50 μM; 24 hours) induces autophagy and results in a dose-dependent decrease in amounts of p62, a selective autophagy substrate, and a dose-dependent conversion of the non-lipidated form of LC3, LC3-I, to the lipidated, autophagosome-associated form of LC3, LC3-II, in multiple cell lines and primary murine embryonic fibroblasts (MEFs)^[1]. Tat-beclin 1 (10 μM; 2-4 hours post-infection) decreases the intracellular survival of L. monocytogenes in primary murine bone-marrow-derived macrophages (BMDMs)^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Tat-beclin 1 (15 mg/kg; i.p.; daily; beginning 1 day post-infection for 20 days) can induce autophagy in peripheral tissues in adult mice as well as in the central nervous system of neonatal mice (6-week-old GFP-LC3 mice)^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biomed Pharmacother. 2022 Aug 25;154:113606.

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REFERENCES

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

Caution: Product has not been fully validated for medical applications. For research use only.

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