

PRODUCT INFORMATION



Tat-Becin 1 (acetate)

Item No. 35838

Formal Name: L-tyrosylglycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutaminyl-L-arginyl-L-arginyl-L-arginylglycylglycyl-L-threonyl-L-asparaginyl-L-valyl-L-phenylalanyl-L-asparaginyl-L-alanyl-L-threonyl-L-phenylalanyl-L- α -glutamyl-L-isoleucyl-L-tryptophyl-L-histidyl-L- α -aspartylglycyl-L- α -glutamyl-L-phenylalanylglycyl-L-threonine, acetate

Synonym: Tat-BECN1

Peptide Sequence: H-YGRKKRRQRRRGGTNVFNATFEIWHDGEFGT-OH

MF: $C_{164}H_{251}N_{57}O_{45} \cdot XC_2H_4O_2$

FW: 3,741.1

Purity: $\geq 98\%$

Supplied as: A solid

Storage: $-20^\circ C$

Stability: ≥ 4 years

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

• XCH_3CO_2H

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tat-Becin 1 (acetate) is supplied as a solid. Aqueous solutions of tat-becin 1 (acetate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of tat-becin 1 (acetate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Tat-becin 1 is an autophagy-inducing peptide.¹ It is composed of the HIV-1 Tat protein transduction domain linked via a diglycine linker to an 18-amino acid peptide corresponding to residues 267-284 of beclin-1 with amino acid substitutions at positions 275, 279, and 281 to enhance hydrophobicity. Tat-becin 1 (30 μM) binds to the beclin-1-interacting protein Golgi-associated plant pathogenesis-related protein 1 (GAPR-1) in HeLa cells and induces conversion of LC3-I to LC3-II via lipidation and autophagosome formation in MCF-7 cells. It decreases viral titers in HeLa cells infected with Sindbis virus, chikungunya, or West Nile virus when used at a concentration of 10 μM . Tat-becin 1 (0.5-5 μM) inhibits HIV p24 antigen release and viral replication in primary human monocyte-derived macrophages (MDMs). *In vivo*, Tat-becin 1 (14 mg/kg) reduces intramuscular viral titers, neonatal mortality, and paralysis and increases muscle cell autophagosome formation in chikungunya-infected neonatal mice.

Reference

1. Shoji-Kawata, S., Sumpster, R., Jr., Leveno, M., *et al.* Identification of a candidate therapeutic autophagy-inducing peptide. *Nature* **494**, 201-206 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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