

PRODUCT INFORMATION



Tat-NTS Peptide (trifluoroacetate salt)

Item No. 37443

Formal Name: (S)-N¹-((6S,9S,12S,15S,18S,21S)-1-amino-22-((S)-2-(((2S,5S,8S,11S,14S,17S)-1-amino-2-benzyl-8,11-bis(3-guanidinopropyl)-18-(1H-imidazol-4-yl)-14-isobutyl-5-isopropyl-1,4,7,10,13,16-hexaoxo-3,6,9,12,15-pentaazaoctadecan-17-yl)carbonyl)pyrrolidin-1-yl)-21-benzyl-9,12,15-tris(3-guanidinopropyl)-18-(hydroxymethyl)-1-imino-7,10,13,16,19,22-hexaoxo-2,8,11,14,17,20-hexaazadocosan-6-yl)-2-((2S,5S,8S,11S,14S,20S)-20-amino-8,11-bis(4-aminobutyl)-2,5,14-tris(3-guanidinopropyl)-21-(4-hydroxyphenyl)-4,7,10,13,16,19-hexaoxo-3,6,9,12,15,18-hexaazahenicosanamido)pentanediamide, trifluoroacetate salt

H—Tyr—Gly—Arg—Lys—Lys—Arg—Arg—Gln—Arg—Arg—
Arg—Arg—Ser—Phe—Pro—His—Leu—Arg—Arg—Val—
Phe—NH₂
• XCF₃COOH

Synonym: Tat-Nuclear Translocation Signal Peptide

Peptide Sequence: YGRKRRRQRRRRSFPHLRRVF-NH₂

MF: C₁₂₅H₂₁₂N₅₄O₂₄ • XCF₃COOH

FW: 2,855.4

Purity: ≥98%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

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

Laboratory Procedures

Tat-NTS Peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Tat-NTS Peptide (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Tat-NTS peptide is a cell-penetrating peptide composed of the HIV-1 Tat protein transduction domain linked to a 10-amino acid peptide corresponding to residues 228-237 of the repeat III domain of annexin A1, which functions as a nuclear translocation signal (NTS).¹ It blocks the protein-protein interaction between annexin A1 and importin β, preventing nuclear translocation of annexin A1 in primary mouse hippocampal neurons.¹ Tat-NTS inhibits glucose-oxygen deprivation and reperfusion-induced apoptosis in primary mouse hippocampal neurons. *In vivo*, Tat-NTS (10 mg/kg) reduces infarct size and neuronal apoptosis, as well as decreases the time to reach the platform in the Morris water maze test in a mouse model of ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO).

Reference

1. Li, X., Zheng, L., Xia, Q., *et al.* A novel cell-penetrating peptide protects against neuron apoptosis after cerebral ischemia by inhibiting the nuclear translocation of annexin A1. *Cell Death Differ.* **26(2)**, 260-275 (2019).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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