

## HIV-1 TAT (48-60) Acetate

## Chemical Properties

CAS No. :

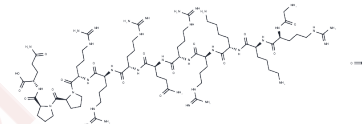
Formula: C72H135N35O18

Molecular Weight: 1779.07

Keep away from moisture, Store at low temperature

Storage: 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	HIV-1 TAT (48-60) Acetate, a commonly used membrane-permeable carrier peptide, is an arginine-rich basic peptide derived from the human immunodeficiency virus (HIV-1 Tat) protein that enables intracellular delivery of compounds.
Targets(IC50)	HIV Protease
In vitro	<p>Exogenous Tat proteins are able to activate the viral genome by penetrating the cell membrane and entering the nucleus. The HIV-1 TAT (48-60) Acetate peptide contains only the basic domain of the full-length peptide, but retains intact translocating activity, and at a standard dose of 1 mM is even more efficient at nuclear localization than other active peptides. [1]</p> <p>Cell-penetrating peptides are regarded as promising carriers for the delivery of large and hydrophilic molecules into cells. HIV-1 TAT (48-60) Acetate appeared to enter cells by endocytosis as observed by confocal laser scanning microscopy. [2]</p> <p>HIV-1 TAT (48-60) Acetate induces the formation of rod-like structures in DMPC, presumably inverted micelles, which may be intermediates as it crosses eukaryotic cell membranes. [3]</p>

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5621 mL	2.8105 mL	5.6209 mL
5 mM	0.1124 mL	0.5621 mL	1.1242 mL
10 mM	0.0562 mL	0.281 mL	0.5621 mL
50 mM	0.0112 mL	0.0562 mL	0.1124 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Vivès E, et al. A truncated HIV-1 Tat protein basic domain rapidly translocates through the plasma membrane and accumulates in the cell nucleus. *J Biol Chem.* 1997 Jun 20;272(25):16010-7.

Thorén PE, et al. Uptake of analogs of penetratin, Tat(48-60) and oligoarginine in live cells. *Biochem Biophys Res Commun.* 2003 Jul 18;307(1):100-7.

Afonin S, et al. The cell-penetrating peptide TAT(48-60) induces a non-lamellar phase in DMPC membranes. *Chemphyschem.* 2006 Oct 13;7(10):2134-42.

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