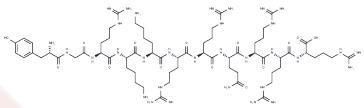
Data Sheet (Cat.No.TP1809)

TAT

Chemical Properties



CAS No. : 191936-91-1

Formula: C64H118N32O14

Molecular Weight: 1559.83

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 peptide (YGRKKRRQRRR), originating from the human immunodeficiency virus-1 (HIV-1) transactivator of transcription (TAT), enhances the solubility and production of heterologous proteins[1]. This cell-penetrating peptide demonstrates significant potential in biotechnological applications.
Targets(IC50)	HIV Protease
In vitro	TAT (YGRKKRRQRRR), corresponding to amino acids 47-57 of the HIV-1 TAT protein, embodies the positively charged protein transduction domain (TAT-PTD) that efficiently permeates the plasma membrane of live cells. This characteristic is utilized for intracellular delivery of proteins, drugs, and genes. Owing to its TAT-PTD, TAT (YGRKKRRQRRR; TAT-PTD) can traverse the cell's hydrophobic lipid bilayer through passive diffusion[1].

Solubility Information

Solubility	H2O: Soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6411 mL	3.2055 mL	6.411 mL
5 mM	0.1282 mL	0.6411 mL	1.2822 mL
10 mM	0.0641 mL	0.3205 mL	0.6411 mL
50 mM	0.0128 mL	0.0641 mL	0.1282 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

Ziegler A, et al. Interaction of the protein transduction domain of HIV-1 TAT with heparan sulfate: binding mechanism and thermodynamic parameters. Biophys J. 2004 Jan;86(1 Pt 1):254-63.