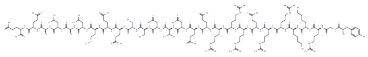
Data Sheet (Cat.No.TP3908)

TAT-EE3

Chemical Properties



CAS No. : 2899218-49-4

Formula: C135H228N48O49S

Molecular Weight: 3339.61

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-EE3 is a neuroprotective peptide that dissociates the interaction between TRPM2 and NMDARs. It inhibits the TRPM2-induced enhancement of NMDAR surface expression and current amplitude. TAT-EE3 protects neurons from ischemic damage both in vitro and in vivo, and is utilized for research on ischemic stroke.
Targets(IC50)	Calcium Channel,iGluR,TRP/TRPV Channel
In vitro	TAT-EE3 (10 μM, overnight) disrupts the interaction between TRPM2 and GluN2a/GluN2b in HEK293T cells and neurons, inhibiting TRPM2-induced enhancement of NMDA receptor surface expression and current amplitude. TAT-EE3 (10 μM, overnight) reduces OGD-induced intracellular Ca2+ overload, neuronal death, and mitochondrial depolarization in wild-type neurons, but has no effect on global TRPM2 knockout (gM2KO) neurons. TAT-EE3 (10 μM, 30-90 min) eliminates PMA-induced enhancement of NMDA receptor current in wild-type neurons without additional inhibitory effects on gM2KO neurons.
In vivo	Fifteen minutes prior to middle cerebral artery occlusion (MCAO), or every 12 hours post-MCAO for 7 days, TAT-EE3 (0.33 mg/kg [100 nmol/kg], administered via intraperitoneal injection) reduced infarct volume and improved neurological deficit scores in wild-type mice. However, this compound did not exhibit enhanced protective effects in neuron-specific TRPM2 knockout (nM2KO) mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2994 mL	1.4972 mL	2.9944 mL
5 mM	0.0599 mL	0.2994 mL	0.5989 mL
10 mM	0.0299 mL	0.1497 mL	0.2994 mL
50 mM	0.006 mL	0.0299 mL	0.0599 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.