Data Sheet (Cat.No.TP2157L)

TargetMol

TAT-DEF-Elk-1 TFA (1220751-16-5 free base)

Chemical Properties

CAS No. :

Formula: C157H260N57F3O42

Molecular Weight: 3675.09

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-DEF-Elk-1 TFA is a cell-penetrating peptide Elk-1 inhibitor, mimics and specifically interferes with the DEF domain of Elk-1. TAT-DEF-Elk-1 blocks Elk-1 phosphorylation and prevents Elk-1 nuclear translocation without interfering with ERK nor MSK1 activation. TAT-DEF-Elk-1 is a useful tool to analyze the role of Elk-1 in this process during the development of neuronal plasticity
Targets(IC50)	Others
In vitro	Elk-1 phosphorylation on Ser383/389 has a dual function and triggers both Elk-1 nuclear translocation and SRE-dependent gene expression. TAT-DEF-Elk-1 (5 μM; 2 hours) treatment shows significant inhibition of c-Fos, Zif268, and JunB, but has no effects on c-Jun expression. TAT-DEF-Elk-1 (5-10 μM; 1 hour) specifically inhibits glutamate-induced elk-1 activation and does not interfere with ERK, MSK-1, or CREB phosphorylation [1].
In vivo	TAT-DEF-Elk-1 (i.p.; 1mg/kg; daily; 14 days) reflects antidepressant efficacy in mice, it decreases immobility similar to the antidepressant desipramine and fluoxetine [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.2721 mL	1.3605 mL	2.721 mL
5 mM	0.0544 mL	0.2721 mL	0.5442 mL
10 mM	0.0272 mL	0.1361 mL	0.2721 mL
50 mM	0.0054 mL	0.0272 mL	0.0544 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

Lavaur J, et al. A TAT-DEF-Elk-1 peptide regulates the cytonuclear trafficking of Elk-1 and controls cytoskeleton dynamics.J Neurosci. 2007 Dec 26;27(52):14448-58.

Apazoglou K, et al. Antidepressive effects of targeting ELK-1 signal transduction.Nat Med. 2018 May;24(5):591-597.

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