

Transdermal Peptide TD-1 HCl

Chemical Properties

CAS No. :

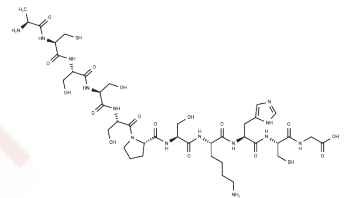
Formula: C40H67ClN14O16S2

Molecular Weight: 1099.63

Keep away from moisture

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	Transdermal Peptide TD-1 HCl is a novel peptide for enhanced transdermal drug delivery that facilitates the penetration of the skin barrier by several drugs and large hydrophilic proteins, such as insulin and human growth hormone.
Targets(IC50)	Others
In vitro	In vitro, 0.5 mg/mL Transdermal Peptide TD-1 HCl markedly enhanced the transdermal penetration of curcumin liposomes (Cur-Lips) in mouse skin models ($Q_n = 2.20 \mu\text{g}/\text{cm}^2/\text{h}$), and maintained strong anti-melanoma activity even in the presence of 150 mM NaCl and serum. Transdermal Peptide TD-1 HCl combined with Cur-Lips significantly inhibited B16F10 melanoma cell proliferation ($P < 0.001$), while Transdermal Peptide TD-1 HCl alone showed no cytotoxicity at low concentrations[1].
In vivo	In vivo, topical application of Transdermal Peptide TD-1 HCl (0.5 mg/mL) with Cur-Lips gel twice daily for 12 days significantly reduced tumor volume and weight in B16F10 melanoma-bearing mice ($P < 0.001$), induced tumor cell apoptosis, and downregulated serum VEGF levels[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9094 mL	4.547 mL	9.094 mL
5 mM	0.1819 mL	0.9094 mL	1.8188 mL
10 mM	0.0909 mL	0.4547 mL	0.9094 mL
50 mM	0.0182 mL	0.0909 mL	0.1819 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

Zhu Y, Xiao W, Zhong W, Xi C, Ye J, Zhang Q, Wu H, Du S. Study of the skin-penetration promoting effect and mechanism of combined system of curcumin liposomes prepared by microfluidic chip and skin penetrating peptides TD-1 for topical treatment of primary melanoma. Int J Pharm. 2023 Aug 25;643:123256.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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