Data Sheet (Cat.No.TP2164)

TargetMol

TP508 TFA (121341-81-9 free base)

Chemical Properties

CAS No. :

Formula: C99H147N28F3O38S

Molecular Weight: 2426.46

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	TP508 TFA is a nonproteolytic thrombin peptide. TP508 TFA activates endothelial NO synthase (eNOS) and stimulates the production of NO in human endothelial cells. It activates endothelial cells and stem cells to revascularize and regenerates tissues.
Targets(IC50)	Others
In vitro	TP508 mitigates the effects of nuclear radiation on human endothelial cells in culture restoring endothelial NO production, tube formation, and accelerating repair of radiation-induced DNA double-strand breaks. TP508 (50 μg/mL; 24 hours; HCAEC) treatment reverses radiation-induced endothelial dysfunction (ED) and loss of NO signaling by attenuating the downregulation of eNOS expression [1]. TP508 acts as an antagonist for the effects of thrombin. TP508 peptide inhibits these thrombin-induced effects through an RGD and αvβ3-related mechanism [3].
In vivo	In male CD-1 mice, the treatment of TP508 (10 mg/kg; i.v.) mitigates radiation-induced endothelial cell damage, also significantly increases survival of CD-1 mice when injected 24 h after 8.5 Gy exposure [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.4121 mL	2.0606 mL	4.1212 mL
5 mM	0.0824 mL	0.4121 mL	0.8242 mL
10 mM	0.0412 mL	0.2061 mL	0.4121 mL
50 mM	0.0082 mL	0.0412 mL	0.0824 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

Olszewska-Pazdrak B, et al. Nuclear Countermeasure Activity of TP508 Linked to Restoration of Endothelial Function and Acceleration of DNA Repair. Radiat Res. 2016 Aug;186(2):162-74.
Olszewska-Pazdrak B, et al. Systemic administration of thrombin peptide TP508 enhances VEGF-stimulated angiogenesis and attenuates effects of chronic hypoxia. J Vasc Res. 2013;50(3):186-9
Tsopanoglou NE, et al. On the mode of action of thrombin-induced angiogenesis: thrombin peptide, TP508, mediates effects in endothelial cells via alphavbeta3 integrin. Thromb Haemost. 2004 Oct;92(4):846-57.

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