

Disitertide acetate

Chemical Properties

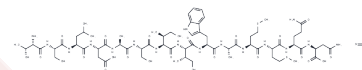
CAS No. :

Formula: C70H113N17O24S2

Molecular Weight: 1640.88

Storage: Store at low temperature, 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	Disitertide acetate (P144 acetate) is a peptidic transforming growth factor-beta 1 (TGF-β1) inhibitor specifically designed to block the interaction with its receptor. Disitertide acetate is also a PI3K inhibitor and an apoptosis inducer.
Targets(IC50)	TGF-beta/Smad
In vitro	Disitertide acetate (P144, 100 µg/mL) suppresses the protein expression levels of PI3K and p-Akt, and induce the protein expression of Bax in MC3T3-E1 cells[2]. Disitertide acetate (TGF-β1 inhibitor) abrogates the MACC1- AS1 expression in GC cells, suggesting that targeting TGFβ signaling pathway may be a potential strategy to inhibit MSC-induced stemness and chemoresistance[3]. Disitertide acetate (10 µg/mL to 200 µg/mL) affects proliferation, induces apoptosis as well as anoikis in A172 and U-87 MG GBM cell lines[5].
In vivo	Disitertide acetate (Topical application, 300 µg/mL) may promote scar maturation and improvement of hypertrophic scar morphology features in an "in vivo" model in nude mice after two weeks of treatment[4].

Solubility Information

Solubility	DMSO: 10 mg/mL (6.09 mM), Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6094 mL	3.0471 mL	6.0943 mL
5 mM	0.1219 mL	0.6094 mL	1.2189 mL
10 mM	0.0609 mL	0.3047 mL	0.6094 mL
50 mM	0.0122 mL	0.0609 mL	0.1219 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

Cindy Neuzillet, et al. Targeting the TGF β pathway for cancer therapy. *Pharmacol Ther.* 2015 Mar;147:22-31.

Jun Yang, et al. Upregulation of microRNA-590 in rheumatoid arthritis promotes apoptosis of bone cells through transforming growth factor- β 1/phosphoinositide 3-kinase/Akt signaling. *Int J Mol Med.* 2019 May;43(5):2212-2220.

Wanming He, et al. MSC-regulated lncRNA MACC1-AS1 promotes stemness and chemoresistance through fatty acid oxidation in gastric cancer. *Oncogene.* 2019 Jun;38(23):4637-4654.

Shan Shan Qiu, et al. Effect of P144[®] (Anti-TGF- β) in an "In Vivo" Human Hypertrophic Scar Model in Nude Mice. *PLoS One.* 2015 Dec 31;10(12):e0144489.

Gabriel Gallo-Oller, et al. P144, a Transforming Growth Factor beta inhibitor peptide, generates antitumoral effects and modifies SMAD7 and SKI levels in human glioblastoma cell lines. *Cancer Lett.* 2016 Oct 10;381(1):67-75.

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