

Splitomicin

Chemical Properties

CAS No. :	5690-03-9
Formula:	C ₁₃ H ₁₀ O ₂
Molecular Weight:	198.22
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	Splitomicin (1-Naphthalenepropanoic Acid) (IC ₅₀ of 60 μM), a specific inhibitor of NAD (+)-dependent histone deacetylase Sir2p, displays a high activity in a cell-based assay.
Targets(IC ₅₀)	HDAC,Sirtuin
In vitro	Splitomicin inhibits Sir2p deacetylase activity by altering or blocking access to the acetylated histone binding pocket. [1] Splitomicin inhibits platelet aggregation induced by thrombin, collagen, AA and U46619 via inhibition of cyclic AMP phosphodiesterase activity and subsequent inhibition of intracellular Ca(++) mobilization, TXB ₂ formation and ATP release. [2]
In vivo	In a photochemical injury mouse model, splitomicin (80 mg/kg/d i.p.) enhances tissue factor activity in the arterial vessel wall and promotes carotid artery thrombus formation. [3]

Solubility Information

Solubility	DMSO: 19.8 mg/mL (99.89 mM),Sonication is recommended. Ethanol: 19.8 mg/mL (99.89 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (10.09 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.0449 mL	25.2245 mL	50.449 mL
5 mM	1.009 mL	5.0449 mL	10.0898 mL
10 mM	0.5045 mL	2.5224 mL	5.0449 mL
50 mM	0.1009 mL	0.5045 mL	1.009 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

Bedalov A, et al. Proc Natl Acad Sci U S A. 2001, 98(26), 15113-15118.

Liu FC, et al. Thromb Res. 2009, 124(2), 199-207.

Parker BL, et al. J Biol Chem. 2014, 289(37), 25890-25906.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481