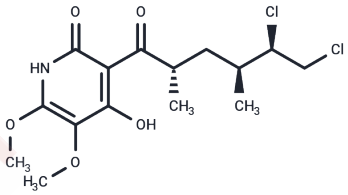
Data Sheet (Cat.No.T9714)

TargetMol

Atpenin A5

Chemical Properties



CAS No. : 119509-24-9

Formula: C15H21Cl2NO5

Molecular Weight: 366.24

Storage: Store at low temperature,Store under nitrogen
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	Atpenin A5 is a potent and highly specific complex II inhibitor (IC50 ~10 nM), as well as an effective mKATP channel agonist and cardioprotective agent [1].
Targets(IC50)	Potassium Channel
In vitro	Atpenin A5 effectively inhibits submitochondrial particles (SMPs), mitochondria, and cardiomyocytes, exhibiting IC50 values of 8.3 nM, 9.3 nM, and 8.5 nM, respectively. It acts as a potent, specific inhibitor of complex II. Moreover, at a concentration of 1 nM, Atpenin A5 (AA5) activates the mitochondrial ATP-sensitive potassium (mKATP) channel and offers protection against simulated ischemia-reperfusion (IR) injury in isolated cardiomyocytes[1].
In vivo	Atpenin A5, a potent succinate dehydrogenase (SDH) inhibitor, promotes cardiomyocyte mitosis and regeneration in the postnatal heart following myocardial infarction (MI). Mice injected with Atpenin A5 (100 μg/kg) showed increased myocardial thickness at the infarct zone and a significant reduction in scar size compared with controls[2].

Solubility Information

Solubility	DMSO: 100 mg/mL (273.04 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: 4 mg/mL (10.92 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7304 mL	13.6522 mL	27.3045 mL
5 mM	0.5461 mL	2.7304 mL	5.4609 mL
10 mM	0.273 mL	1.3652 mL	2.7304 mL
50 mM	0.0546 mL	0.273 mL	0.5461 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.

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