

Proxyphylline

Chemical Properties

CAS No. :	603-00-9
Formula:	C10H14N4O3
Molecular Weight:	238.243
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Proxyphylline (7-(2-Hydroxypropyl)theophylline) is a dual of adenosine A1/A2a receptor inhibitor and phosphodiesterase (PDE) inhibitor. Proxyphylline acts as a cardiac stimulant, vasodilator and bronchodilator.
Targets(IC50)	Adenosine Receptor,PDE
In vitro	Proxyphylline inhibits tracheal PDE-activity and half-maximum relaxation of tracheal smooth muscle is obtained with 100 µg/mL proxyphylline[1]

Solubility Information

Solubility	DMSO: 70.00 mg/mL (293.82 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: 2.00 mg/mL (8.39 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	4.1974 mL	20.9872 mL	41.9745 mL
5 mM	0.8395 mL	4.1974 mL	8.3949 mL
10 mM	0.4197 mL	2.0987 mL	4.1974 mL
50 mM	0.0839 mL	0.4197 mL	0.8395 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

- Kukovetz W R , G Pöch, Holzmann S . Overadditive synergism between theophylline, diprophylline and proxyphylline in tracheal smooth muscle relaxation[J]. Arzneimittel-Forschung, 1983, 33(10):1450-1454.
- Takeda K , Katano Y , Nakagawa Y , et al. EFFECTS OF AMINOPHYLLINE, PROXYPHYLLINE AND A PROXYPHYLLINE-MELILOTUS EXTRACT-RUTIN MIXTURE (THEOESBERIVEN) ON THE HEART AND THE CORONARY CIRCULATION[J]. The Japanese Journal of Pharmacology, 1977, 27(5):709-720.
- Rasmussen F V , Waldorff S , Madsen L . Pharmacokinetics and bronchodilatory effect of proxyphylline and theophylline.[J]. Eur J Respir Dis, 1984, 65(1):20-27.

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