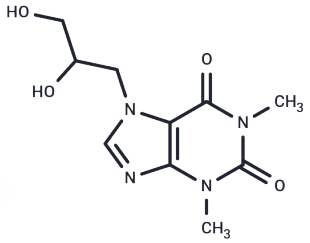
Data Sheet (Cat.No.T0892)

TargetMol

Diphylline

Chemical Properties



CAS No. : 479-18-5

Formula: C10H14N4O4

Molecular Weight: 254.24

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Diphylline (Diprophylline) is a xanthine derivative. Diphylline exerts bronchodilator effects and to a lesser extent vasodilator and diuretic properties. Diphylline probably acts as a competitive inhibitor of phosphodiesterase which leads to an increase in intracellular cAMP. This results in relaxation of bronchial smooth muscle and other smooth muscles. Diphylline may also antagonize adenosinereceptors. Diphylline is used in the treatment of acute bronchial asthma, chronic bronchitis and emphysema.
Targets(IC50)	Adenosine Receptor,PDE

Solubility Information

Solubility	DMSO: 55 mg/mL (216.33 mM),Sonication is recommended. H2O: 47 mg/mL (184.86 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9333 mL	19.6665 mL	39.3329 mL
5 mM	0.7867 mL	3.9333 mL	7.8666 mL
10 mM	0.3933 mL	1.9666 mL	3.9333 mL
50 mM	0.0787 mL	0.3933 mL	0.7867 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.

Reference

Schwabe U, et al. Naunyn Schmiedebergs Arch Pharmacol. 1985 Sep;330(3):212-21.

Zhang Z, Zhou H, Gu W, et al.CGI1746 targets σ1R to modulate ferroptosis through mitochondria-associated membranes.Nature Chemical Biology.2024: 1-11.

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