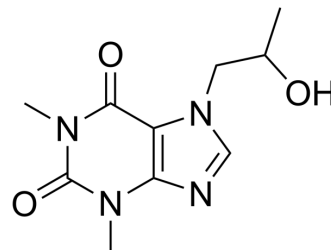


Proxiphylline

Cat. No.:	HY-B1742		
CAS No.:	603-00-9		
Molecular Formula:	C ₁₀ H ₁₄ N ₄ O ₃		
Molecular Weight:	238.24		
Target:	Adenosine Receptor		
Pathway:	GPCR/G Protein		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (419.74 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Proxiphylline is a methylxanthine derivative used as a cardiac stimulant, vasodilator and bronchodilator^[1].

In Vitro

Proxiphylline has shown vasodilatory and cardiac stimulatory effects. Proxiphylline produces an increase in the coronary flow associated with a definite positive inotropic effect^[1]. Proxiphylline inhibits tracheal PDE-activity and half-maximum relaxation of tracheal smooth muscle is obtained with 100 µg/mL proxiphylline^[2]
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Proxyphylline exhibits bronchodilatory effect^[3]. Proxyphylline inhibits cAMP and cGMP hydrolysis in human lung tissue. The apparent inhibition constant of proxyphylline is 0.06-0.7 mM at low cAMP concentrations and it is 1.0 mM at high cAMP concentrations^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Takeda K, et al. Effects of aminophylline, proxyphylline and a proxyphylline-Melilotus extract-rutin mixture(theoesberiven) on the heart and the coronary circulation. *Jpn J Pharmacol.* 1977 Oct;27(5):709-20.
- [2]. Kukovetz WR, et al. Overadditive synergism between theophylline, diprophylline and proxyphylline in tracheal smooth muscle relaxation. *Arzneimittelforschung.* 1983;33(10):1450-4.
- [3]. Rasmussen FV, et al. Pharmacokinetics and bronchodilatory effect of proxyphylline and theophylline. *Eur J Respir Dis.* 1984 Jan;65(1):20-7.
- [4]. Selvig K, et al. Inhibition of human lung cyclic nucleotide phosphodiesterases by proxyphylline, theophylline and their metabolites. *Acta Pharmacol Toxicol (Copenh).* 1982 Sep;51(3):250-2.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA