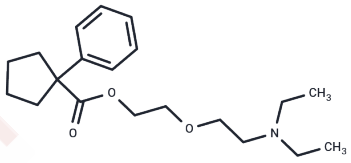
Data Sheet (Cat.No.T22284)

TargetMol

Pentoxyverine

Chemical Properties



CAS No. : 77-23-6

Formula: C20H31NO3

Molecular Weight: 333.47

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	Pentoxyverine (Carbetapentan) is an orally available cough suppressant, an antagonist of muscarinic receptor M1 and an agonist of the σ1 receptor, which causes alveolar relaxation and thus symptomatic relief.
Targets(IC50)	AChR,Sigma receptor
In vitro	Pentoxyverine binds human σ_1 receptors with moderate affinity (Ki ~100-300 nM) and activates typical σ_1-mediated cellular responses such as calcium flux[1].
In vivo	Pentoxyverine (30-60 mg/kg, i.p.) exhibits antinociceptive effects in mice in thermal and inflammatory pain models. Pentoxyverine's effects are σ_1 receptor-dependent, as shown by partial reversal with σ_1 antagonist BD1047[1].

Solubility Information

Solubility	DMSO: 200 mg/mL (599.75 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: 5 mg/mL (14.99 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	2.9988 mL	14.9939 mL	29.9877 mL
5 mM	0.5998 mL	2.9988 mL	5.9975 mL
10 mM	0.2999 mL	1.4994 mL	2.9988 mL
50 mM	0.060 mL	0.2999 mL	0.5998 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

Entrena JM, Sánchez-Fernández C, Nieto FR, González-Cano R, Yeste S, Cobos EJ, Baeyens JM. Sigma-1 Receptor Agonism Promotes Mechanical Allodynia After Priming the Nociceptive System with Capsaicin. Sci Rep. 2016 Nov 25;6:37835.

Brown C, Fezoui M, Selig WM, Schwartz CE, Ellis JL. Antitussive activity of sigma-1 receptor agonists in the guinea-pig. Br J Pharmacol. 2004 Jan;141(2):233-40.