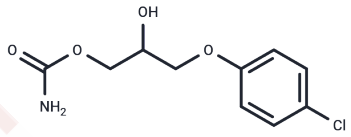
# Data Sheet (Cat.No.T21376)

TargetMol

## Chlorphenesin Carbamate

### Chemical Properties



CAS No. : 886-74-8

Formula: C10H12ClNO4

Molecular Weight: 245.66

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Chlorphenesin Carbamate is a skeletal muscle relaxant acting on the central nervous system, which can be used in research related to skeletal muscle injury and inflammation-associated pain. Its mechanism of action mainly involves the selective blockade of spinal polysynaptic transmission pathways and certain analgesic activity. |
| Targets(IC50) | Others |
| In vivo | Chlorphenesin Carbamate (CPC) inhibits monosynaptic reflex (MSR) and polysynaptic reflex (PSR) at an intravenous dose of 50 mg/kg. The polysynaptic reflex is more sensitive to CPC inhibition than the monosynaptic reflex.In addition, CPC exerts a marked inhibitory effect on spinal neurons and induces hyperpolarization of both ventral and dorsal roots in the isolated frog spinal cord [2].<br>Chlorphenesin Carbamate (CPC) exhibits antinociceptive effects in a rat model of adjuvant-induced arthritis.Behavioral studies show that CPC produces dose-dependent antinociceptive effects when administered orally at doses of 100-400 mg/kg. Electrophysiological studies demonstrate that intravenous administration of CPC at 25-50 mg/kg inhibits evoked responses of nociceptive neurons in the ventrobasal thalamus (VB). At an intravenous dose of 50 mg/kg, CPC also suppresses spontaneous firing of nociceptive neurons in the VB region [3]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 100 mg/mL (407.07 mM),Sonication is recommended.<br>H2O: Insoluble,<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 4.0707 mL | 20.3533 mL | 40.7067 mL |
| 5 mM | 0.8141 mL | 4.0707 mL | 8.1413 mL |
| 10 mM | 0.4071 mL | 2.0353 mL | 4.0707 mL |
| 50 mM | 0.0814 mL | 0.4071 mL | 0.8141 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

Ji-young Yu, et al. Relative bioavailability of generic and branded 250-mg and 500-mg oral chlorphenesin carbamate tablets in healthy Korean volunteers: a single-dose, randomized-sequence, open-label, two-period crossover trial. Clin Ther. 2009 Nov;31(11):2735-43.

M Kurachi, et al. Effect of a muscle relaxant, chlorphenesin carbamate, on the spinal neurons of rats. Jpn J Pharmacol. 1984 Sep;36(1):7-13.

S Okuyama, et al. Antinociceptive effect of chlorphenesin carbamate in adjuvant arthritic rats. Res Commun Chem Pathol Pharmacol. 1987 Feb;55(2):147-60.

Watanabe S, Araki H, Kawasaki H, Ueki S. [Electroencephalographic effects of chlorphenesin carbamate, a new central muscle relaxant, in rabbits (author's transl)]. Nihon Yakurigaku Zasshi. 1977 May;73(4):479-96. Japanese. PubMed PMID: 908544.