Chlorphenesin carbamate

Cat. No.: HY-107944

CAS No.: 886-74-8

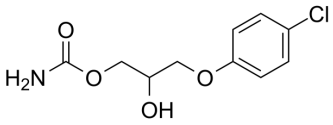
Molecular Formula: $C_{10}H_{12}ClNO_4$

Molecular Weight: 245.66

Target: Others

Pathway: Others

Storage: -20°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (508.83 mM; Need ultrasonic)

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

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

BIOLOGICAL ACTIVITY

Description

Chlorphenesin carbamate is a centrally acting skeletal muscle relaxant. Chlorphenesin carbamate can be used for the research of pain and discomfort related to skeletal muscle trauma and inflammation[1]. Chlorphenesin carbamate is a selective blocker of polysynaptic pathways at the spinal and supra-spinal levels[2]. Antinociceptive effect[3].

In Vivo

Chlorphenesin carbamate (CPC; 50 mg/kg i.v.) inhibits the mono (MSR) and poly-synaptic reflex (PSR), the latter being more susceptible than the former to CPC depression. Chlorphenesin carbamate has an apparent depressant action on the spinal neuron, and it hyperpolarized both the ventral and dorsal roots of the isolated frog spinal cord[2].
Chlorphenesin carbamate (CPC) has an antinociceptive action in adjuvant arthritic rats. Chlorphenesin carbamate (100-400 mg/kg, p.o.) has a dose-dependent antinociceptive effect in the behavioral study. Chlorphenesin carbamate (25-50 mg/kg, i.v.) depresses the evoked neuronal responses of nociceptive neurons in the ventrobasal thalamus (VB) in the electrophysiological study. Chlorphenesin carbamate (50 mg/kg, i.v.) depresses the spontaneous firings of the VB nociceptive neurons[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wister rats weighing 200-300 g[3]

Dosage:	50 mg/kg
Administration:	Intravenously administered
Result:	Significantly inhibited PSR, with the maximum inhibition at 40 min after the drug administration.

REFERENCES

[1]. 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)

[2]. 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.

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

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