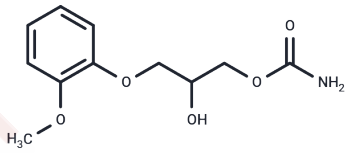
Data Sheet (Cat.No.T1409)

TargetMol

Methocarbamol

Chemical Properties



CAS No. : 532-03-6

Formula: C11H15NO5

Molecular Weight: 241.24

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	Methocarbamol (AHR 85) is a centrally acting muscle relaxant whose mode of action has not been established. It is used as an adjunct in the symptomatic treatment of musculoskeletal conditions associated with painful muscle spasm.
Targets(IC50)	Carbonic Anhydrase,Sodium Channel
In vitro	Methocarbamol is metabolized via dealkylation and hydroxylation followed by conjugation to form both glucuronides and sulfates. [1]
In vivo	Methocarbamol results in a median terminal half-life, mean transit time, mean absorption time, and apparent oral clearance of 2.89 hours, 2.67 hours, 0.410 hours, and 16.5 mL/min/kg in the horse. Methocarbamol is rapidly absorbed and extensively metabolized after oral administration to horses as indicated by a short absorption time and modest systemic bioavailability of 54.4% in the horse. [1] Methocarbamol is a centrally acting muscle relaxant available in both IV and oral forms in cats. [2] Methocarbamol (100 mg/kg) does not change the heart rate, cardiac output, mean pulmonary arterial blood pressure, systolic, diastolic and mean aortic blood pressure, respiratory rate and arterial blood gases, but mild to moderate depression is observed in five of eight horses administered i.v. Methocarbamol, and in all horses administered oral Methocarbamol. Plasma Methocarbamol concentration declines very rapidly during the initial or rapid disposition phase after i.v. administration; the terminal elimination half-life ranged from 59 minutes to 90 minutes in horse. Peak plasma Methocarbamol concentrations following oral administration occur within 15 to 45 minutes in horse. [3]

Solubility Information

Solubility	DMSO: 75 mg/mL (310.89 mM),Sonication is recommended. Ethanol: 45 mg/mL (186.54 mM),Sonication is recommended. H2O: 2 mg/mL (8.29 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: 3.3 mg/mL (13.68 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1452 mL	20.7262 mL	41.4525 mL
5 mM	0.829 mL	4.1452 mL	8.2905 mL
10 mM	0.4145 mL	2.0726 mL	4.1452 mL
50 mM	0.0829 mL	0.4145 mL	0.829 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

Rumpler MJ, et al. J Vet Pharmacol Ther, 2014, 37(1), 25-34.
Kuo K, et al. J Vet Emerg Crit Care (San Antonio), 2013, 23(4), 436-441.
Muir WW 3rd, et al. Equine Vet J Suppl, 1992, (11), 41-44.