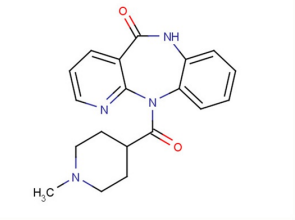
Data Sheet (Cat.No.T16362)

TargetMol
A DRUG SCREENING EXPERT

Nuvenzepine

Chemical Properties



CAS No.:	96487-37-5
Formula:	C19H20N4O2
Molecular Weight:	336.39
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Nuvenzepine is an antagonist of mAChR. It has the potential for gastrospasm treatment.
Targets(IC_{50})	mAChR: None
In vitro	Nuvenzepine is almost equipotent to pirenzepine in competitively preventing bethanechol-induced gall-bladder contractions and it shows a four-fold higher potency than pirenzepine in blocking vagal-stimulated tracheal constrictions. Nuvenzepine displays a four-fold higher affinity than pirenzepine in competitively antagonizing acetylcholine-induced contractions on isolated ileal musculature and on longitudinal ileum dispersed cells [1].
In vivo	Nuvenzepine is also active, unlike pirenzepine, on colonic stimulated motility. In anaesthetized cats, intraduodenally administration of Nuvenzepine shows a long-lasting and dose-dependent inhibition of neostigmine-induced intestinal motility. Nuvenzepine has been found to be very active in inhibiting gastric acid secretion and intestinal hypermotility in rats, with very slight atropine-like side effects. The oral absorption rate is relatively slow, that the absolute bioavailability is 30 to 40%, that the elimination rate is slow and there is no accumulation in the body, and that there is very little metabolism. Nuvenzepine displays a potency 10 times greater than that of pirenzepine on ileal motor activity. Nuvenzepine inhibits pentagastrin-stimulated gastric acid secretion resulting 25-30 times more potent than pirenzepine in conscious cats [2][3].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.973 mL	14.864 mL	29.727 mL
5 mM	0.595 mL	2.973 mL	5.945 mL
10 mM	0.297 mL	1.486 mL	2.973 mL
50 mM	0.059 mL	0.297 mL	0.595 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Barocelli E, et al. Functional comparison between nuvenzepine and pirenzepine on different guinea pig isolated smooth muscle preparations. Pharmacol Res. 1994 Aug-Sep;30(2):161-70.
2. Barocelli E, et al. Gastrointestinal activities of a new pirenzepine-analog, nuvenzepine, in the cat. Farmaco. 1990 Oct;45(10):1089-99.
3. Caselli G, et al. Determination of nuvenzepine in human plasma by a sensitive [3H]pirenzepine radioreceptor binding assay. J Pharm Sci. 1991 Feb;80(2):173-7.

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