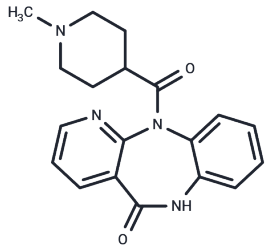
Data Sheet (Cat.No.T16362)

TargetMol

Nuvenzepine

Chemical Properties



CAS No. : 96487-37-5

Formula: C19H20N4O2

Molecular Weight: 336.39

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Nuvenzepine is an antagonist of mAChR. It has the potential for gastrospasm treatment.
Targets(IC50)	EGFR
In vitro	Nuvenzepine demonstrates nearly equal potency to pirenzepine in competitively inhibiting bethanechol-induced gallbladder contractions and exhibits a four-fold greater potency in preventing vagal-stimulated tracheal constrictions. Additionally, it has a four-fold higher affinity than pirenzepine in competitively antagonizing acetylcholine-induced contractions in both isolated ileal musculature and longitudinal ileum dispersed cells [1].
In vivo	Nuvenzepine, distinct from pirenzepine, actively moderates colonic motility and, when administered intraduodenally in anaesthetized cats, exhibits a prolonged, dose-dependent suppression of neostigmine-induced intestinal movement. This compound significantly reduces gastric acid secretion and intestinal hypermotility in rats while manifesting minimal atropine-like side effects. It is characterized by slow oral absorption, with an absolute bioavailability of 30 to 40%, slow elimination, negligible accumulation in the body, and minimal metabolism. Notably, Nuvenzepine's efficacy in inhibiting ileal motor activity is tenfold that of pirenzepine and demonstrates a 25-30 times higher potency in suppressing pentagastrin-stimulated gastric acid secretion in conscious cats, indicating its significant therapeutic potential.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9727 mL	14.8637 mL	29.7274 mL
5 mM	0.5945 mL	2.9727 mL	5.9455 mL
10 mM	0.2973 mL	1.4864 mL	2.9727 mL
50 mM	0.0595 mL	0.2973 mL	0.5945 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.

Reference

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.
Barocelli E, et al. Gastrointestinal activities of a new pirenzepine-analog, nuvenzepine, in the cat. Farmaco. 1990 Oct;45(10):1089-99.
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.