**Nuvenzepine**

Cat. No.: HY-U00119  
CAS No.: 96487-37-5  
Molecular Formula: C₁₉H₂₀N₄O₂  
Molecular Weight: 336.39  
Target: mAChR  
Pathway: GPCR/G Protein; Neuronal Signaling  
Storage:  
- Powder: -20°C, 3 years; 4°C, 2 years  
- In solvent: -80°C, 6 months; -20°C, 1 month

**BIOLOGICAL ACTIVITY**

**Description**  
Nuvenzepine is an mAChR antagonist, has the potential for gastrospasm treatment.

**IC₅₀ & Target**  
mAChR[¹]

**In Vitro**  
Nuvenzepine shows a four-fold higher affinity than pirenzepine in competitively antagonizing acetylcholine-induced contractions on isolated ileal musculature and on longitudinal ileum dispersed cells. Nuvenzepine is almost equipotent to pirenzepine in competitively preventing bethanechol-induced gall-bladder contractions and it displays a four-fold higher potency than pirenzepine in blocking vagal-stimulated tracheal constrictions[¹].

**In Vivo**  
Intraduodenally administration of Nuvenzepine displays a long-lasting and dose-dependent inhibition of neostigmine-induced intestinal motility in anaesthetized cats. On ileal motor activity, Nuvenzepine shows a potency 10 times greater than that of pirenzepine. Nuvenzepine is also active, unlike pirenzepine, on colonic stimulated motility. Furthermore, in conscious cats, Nuvenzepine inhibits pentagastrin-stimulated gastric acid secretion resulting 25-30 times more potent than pirenzepine[²]. 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[³].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**

Caution: Product has not been fully validated for medical applications. For research use only.

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