Product Data Sheet

Product Name: Rispenzepine
Cat. No.: GC31035

Chemical Properties

Cas. No.	96449-05-7		
SMILES	O=C1C2=CC=CN=C2N(C(C3CN(C)CCC3)=O)C4=CC=CC=C4N1		
Formula	$C_{19}H_{20}N_4O_2$	M.Wt	336.39
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Rispenzepine		

Background

Rispenzepine is a novel antimuscarinic compound with a preferential action at M1, and M3 receptor subtypes.

The presence of muscarinic autoreceptors in human and guinea pig trachea is investigated by comparing the effects of the muscarinic receptor antagonists Pirenzepine (M1), Methoctramine (M2), 4-DAMP (M3), and Rispenzepine (M1/M3) on cholinergic neural contractile responses evoked by electrical field stimulation (EFS) and [3H]ACh release. The M1, M1/M3, or M3 antagonists inhibit the EFS-evoked cholinergic contractile response in a concentration-dependent manner (4-DAMP > Rispenzepine > Pirenzepine), whereas Methoctramine facilitates this response at low concentrations (<3 μM). In ACh release studies, the M3 antagonist has no significant effect, whereas Pirenzepine, Methoctramine, and Rispenzepine significantly increase ACh release in guinea pig trachea. Rispenzepine almost completely inhibits cholinergic, contractile responses at 0.3 μM (92.7±6.2% inhibition, n=6, $p<0.05$; pD2 value of 7.31±0.15) [1].

[1]. Patel HJ, et al. Evidence for prejunctional muscarinic autoreceptors in human and guinea pig trachea. Am J Respir Crit Care Med. 1995 Sep;152(3):872-8.

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