Product Data Sheet

Product Name: YM-46303
Cat. No.: GC32416

Chemical Properties

Cas. No.	171722-81-9		
SMILES	O=C(OC12CCN(CC2)CC1)NC3=CC=CC=C3C4=CC=CC=C4.[H]Cl		
Formula	$C_{20}H_{23}ClN_2O_2$	M.Wt	358.86
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	YM-46303		

Background

YM-46303 is an mAChR antagonist which exhibits the highest affinities for M1 and M3 receptors, and selectivity for M3 over M2 receptor.

YM-46303 shows approximately ten times higher inhibitory activity on bladder pressure in reflexly-evoked rhythmic contraction, and about 5-fold greater selectivity for urinary bladder contraction against salivary secretion in rats compared to oxybutynin. Further evaluation of antimuscarinic effects on bradycardia and pressor in pithed rats, and on tremor in mice, show that YM-46303 can be useful for the treatment of urinary urge incontinence as a bladder-selective M3 antagonist with potent activities and fewer side effects[1]. YM-46303 shows in vivo selective inhibitory activities on bladder pressure in reflexly-evoked rhythmic contraction against oxotremorine-induced salivary secretion. In addition, YM-46303 has potent activity in a guinea pig model of methacholine-induced bronchospasm on intravenous administration[2].

[1]. Naito R, et al. Selective muscarinic antagonists. II. Synthesis and antimuscarinic properties of biphenylylcarbamate derivatives. Chem Pharm Bull (Tokyo). 1998 Aug;46(8):1286-94. [2]. Nagashima S, et al. Novel quinuclidinyl heteroarylcarbamate

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derivatives as muscarinic receptor antagonists. Bioorg Med Chem. 2014 Jul 1;22(13):3478-87.

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