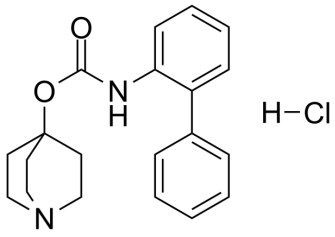
YM-46303

Cat. No.:	HY-U00104
CAS No.:	171722-81-9
Molecular Formula:	$C_{20}H_{23}ClN_2O_2$
Molecular Weight:	358.86
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	YM-46303 is an mAChR antagonist which exhibits the highest affinities for M1 and M3 receptors, and selectivity for M3 over M2 receptor.
IC_{50} & Target	mAChR[1]
In Vivo	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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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

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