ML 10302 hydrochloride

Cat. No.: HY-14442

CAS No.: 186826-17-5

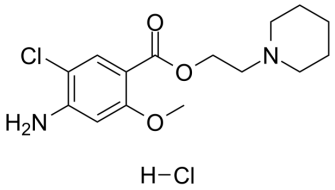
Molecular Formula: $C_{15}H_{22}Cl_2N_2O_3$

Molecular Weight: 349.25

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	ML 10302 hydrochloride is a potent and selective 5-HT_4 receptor agonist, with an EC_{50} of 4 nM. ML 10302 hydrochloride displays more than 680-fold selectivity over 5-HT_3 receptor in binding assay[1][2].		
IC_{50} & Target	5-HT_4 Receptor 4 nM (EC50)	5-HT_4 Receptor 1.07 nM (Ki)	5-HT_3 Receptor 782 nM (Ki)
In Vitro	ML 10302 hydrochloride shows K_is of 1.07 nM and 782 nM for 5-HT_4 receptor and 5-HT_3 receptor, respectively, in binding assay[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
In Vivo	ML 10302 hydrochloride (20 mg/kg; s.c.) induces the soluble form of amyloid precursor protein (sAPPα) production in the cortex of mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

Animal Model:	8-weeks old adult male C57BL/6j wild-type mice (23-27 g)[3]
Dosage:	5 mg/kg, 10 mg/kg, 20 mg/kg
Administration:	Subcutaneous injection
Result:	Significantly increased sAPPα level in the cortex.

REFERENCES

[1]. Langlois, M., et al. Design of a potent 5-HT4 receptor agonist with nanomolar affinity. Bioorganic & Medicinal Chemistry Letters. 1994. 4(12), 1433–1436.

[2]. D Yang, et al. New esters of 4-amino-5-chloro-2-methoxybenzoic acid as potent agonists and antagonists for 5-HT4 receptors. J Med Chem. 1997 Feb 14;40(4):608-21.

[3]. M Cachard-Chastel, et al. 5-HT4 receptor agonists increase sAPPα levels in the cortex and hippocampus of male C57BL/6j mice. Br J Pharmacol. 2007 Apr; 150(7): 883–892.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA