
Product Data Sheet

Product Name: MDL 72832 hydrochloride

Cat. No.: GC10985

Chemical Properties

Cas. No. 113777-40-5

Chemical Name 8-(4-(((2,3-dihydrobenzo[b][1,4]dioxin-2-yl)methyl)amino)butyl)-8-azaspiro[4.5]decane-7,9-dione hydrochloride

SMILES O=C(N1CCCCNCC2COC3=CC=CC=C3O2)CC4(CC1=O)CCCC4.Cl

Formula $C_{22}H_{30}N_2O_4.HCl$ M.Wt 422.95

Solubility Soluble to 5 mM in Water Storage Store at RT

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C 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

Background

MDL 72832 hydrochloride is a potent and selective ligand for 5-HT_{1A} receptor with pIC₅₀ value of 9.1 [1].

The 5-HT_{1A} receptor is a G protein-coupled receptor for endogenous neurotransmitter serotonin (5-HT) and mediates inhibitory neurotransmission.

MDL 72832 hydrochloride is a potent and selective ligand for 5-HT_{1A} receptor [1]. Also, MDL 72832 exhibited affinity with pK_D values of 6.32 and 6.34 for 5-HT_{1C} and 5-HT_{1D} receptors, respectively [1].

In rats, MDL 72832 inhibited 8-OH-DPAT-induced cardiovascular effects. In guinea-pigs, 8-OH-DPAT inhibited the contraction of the field-stimulated guinea-pig ileum in a concentration-dependent way. While MDL 72832 inhibited 8-OH-DPAT-induced neuronal inhibition. MDL 72832 is a ligand for 5-HT_{1A} receptor with mixed antagonist and agonist properties [1]. In pre-satiated rats, (+) -MDL 72832 (1.0 mg/kg) stimulated food intake

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

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and (-) -MDL 72832 (0.03 mg/kg) significantly increased food intake [2]. In rats, MDL 72832 increased postsynaptic 5-HT_{1A} receptors mediating hypothermia and exhibited agonist property [3].

References:

- [1]. Mir AK, Hibert M, Tricklebank MD, et al. MDL 72832: a potent and stereoselective ligand at central and peripheral 5-HT_{1A} receptors. *Eur J Pharmacol*, 1988, 149(1-2): 107-120.
- [2]. Neill JC, Cooper SJ. MDL 72832, a selective 5-HT_{1A} receptor ligand, stereospecifically increases food intake. *Eur J Pharmacol*, 1988, 151(2): 329-332.
- [3]. Millan MJ, Rivet JM, Canton H, et al. Induction of hypothermia as a model of 5-hydroxytryptamine_{1A} receptor-mediated activity in the rat: a pharmacological characterization of the actions of novel agonists and antagonists. *J Pharmacol Exp Ther*, 1993, 264(3): 1364-1376.

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