LY310762

Cat. No.: HY-13527

CAS No.: 192927-92-7

Molecular Formula: $C_{24}H_{28}ClFN_2O_2$

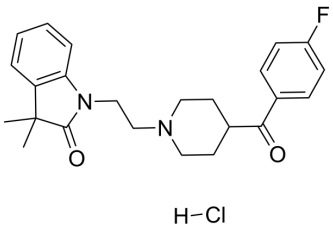
Molecular Weight: 430.94

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 18.33 mg/mL (42.53 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3205 mL	11.6025 mL	23.2051 mL
	5 mM	0.4641 mL	2.3205 mL	4.6410 mL
	10 mM	0.2321 mL	1.1603 mL	2.3205 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.83 mg/mL (4.25 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.83 mg/mL (4.25 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.83 mg/mL (4.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LY310762 is a selective 5-HT_{1D} receptor antagonist (K_i=249 nM) with a weak affinity for 5-HT_{1B} receptor. LY310762 effectively abolishes the renal vasodilatory effects of 5-HTSumatriptan (HY-B0121B)-induced decrease in excitatory postsynaptic potential (EPSC) amplitude[1][2][3].

IC_{50} & Target

5-HT_{1D} Receptor
249 nM (Ki)

In Vitro

LY310762 (0.01-1 μM) shows potentiation of potassium-induced [^{3}H]5-HT outflow from guinea pig cortical slices with an EC_{50} value of 31 nM[1].

LY310762 (10 μM) significantly but not completely blocks the extent of sumatriptan-induced decrease in EPSCs (excitatory postsynaptic potential)[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

LY310762 (10 mg/kg; i.p.; single) significantly increases the extracellular 5-HT concentration produced by Fluoxetine (selective serotonin re-uptake inhibitor) in vivo[1].

LY310762 (1 mg/kg; i.v.; single) abolishes 5-HT vasodilator effects in phenylephrine-infusion rats model[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Dunkin Hartley guinea pigs (female; 350-400 g, Harlan)[1].
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection; single
Result:	Produced a further significant enhancement in the 5-HT response to fluoxetine.

Animal Model:	Male Wistar rats (270-330 g; phenylephrine-infusion rats model)[2].
Dosage:	1 mg/kg
Administration:	Intravenous injection; single
Result:	Completely abolished 5-HT vasodilator effects.

CUSTOMER VALIDATION

- Authorea. September 19, 2022.

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REFERENCES

[1]. Pullar IA, et al. The role of the 5-HT1D receptor as a presynaptic autoreceptor in the guinea pig. Eur J Pharmacol. 2004 Jun 16;493(1-3):85-93.

[2]. García-Pedraza JÁ, et al. Pharmacological evidence that 5-HT1D activation induces renal vasodilation by NO pathway in rats. Clin Exp Pharmacol Physiol. 2015 Jun;42(6):640-7.

[3]. Choi IS, Cho JH, An CH, Jung JK, Hur YK, Choi JK, Jang IS. 5-HT(1B) receptors inhibit glutamate release from primary afferent terminals in rat medullary dorsal horn neurons. Br J Pharmacol. 2012 Sep;167(2):356-67.

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