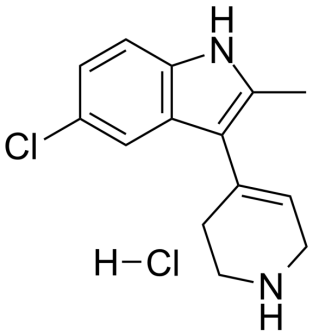
EMD386088

Cat. No.:	HY-103130
CAS No.:	1171123-46-8
Molecular Formula:	$C_{14}H_{16}Cl_2N_2$
Molecular Weight:	283.2
Target:	5-HT Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	-20°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 : 100 mg/mL (353.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5311 mL	17.6554 mL	35.3107 mL
	5 mM	0.7062 mL	3.5311 mL	7.0621 mL
	10 mM	0.3531 mL	1.7655 mL	3.5311 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: ≥ 2.5 mg/mL (8.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

EMD386088 is a potent serotonin 6 receptor (5-HT6R) agonist. EMD386088 induces cell death. EMD386088 regulates the activity of ERK1/2. EMD386088 has the potential for the research of alzheimer's disease (AD) and schizophrenia[1][2][3].

IC_{50} & Target

5-HT_6 Receptor

In Vitro

EMD386088 (1, 10, 60 μM; 0-18 h) induces cell death in a dose- and time- dependent manner[1].
EMD386088 (1, 10, 60 μM) regulates the activity of ERK1/2 in a 5-HT6R-dependent and 5-HT6R–independent manner[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HEK/HA-5-HT6R, native HEK293 cells
Concentration:	1, 10, 60 μM

Incubation Time:	0-18 h
Result:	Induced cell death in HEK293 cells stably expressing HA-5-HT6R (HEK/HA-5-HT6R) and in native HEK293 cells in a dose- and time- dependent manner.

Western Blot Analysis[1]

Cell Line:	HEK/HA-5-HT6R, native HEK293 cells
Concentration:	1, 10, 60 μM
Incubation Time:	0-18 h
Result:	Led to the activation of ERK1/2 at 0-30 μM, retarded ERK1/2 activation at a high dose of 60 μM in HEK/HA-5-HT6R cells.

In Vivo

EMD386088 (1, 5, 10 mg/kg) impairs both short-term memory (STM) and long-term memory (LTM) at 5 mg/kg, but produces no significant effects at 10 mg/kg in male Wistar rats[2].
EMD386088 (0, 2, 4 mg/kg) significantly impairs spontaneous alternation performancein at 2 mg/kg, but the high dose of 4 mg/kg dose not reach significance in C57BL/6J mice[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yun HM, et al. 5-HT6 receptor ligands, EMD386088 and SB258585, differentially regulate 5-HT6 receptor-independent events. Toxicol In Vitro. 2011 Dec;25(8):2035-40.

[2]. Meneses A, et al. The effects of the 5-HT(6) receptor agonist EMD and the 5-HT(7) receptor agonist AS19 on memory formation. Behav Brain Res. 2008 Dec 16;195(1):112-9.

[3]. Amodeo DA, et al. 5-HT6 receptor agonist EMD386088 impairs behavioral flexibility and working memory. Behav Brain Res. 2018 Sep 3;349:8-15.

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