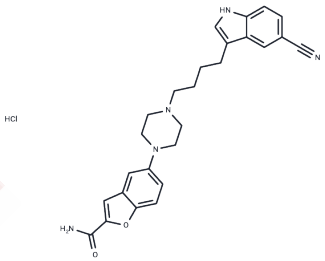
Data Sheet (Cat.No.T6232)

TargetMol

Vilazodone Hydrochloride

Chemical Properties



CAS No. : 163521-08-2

Formula: C26H27N5O2·HCl

Molecular Weight: 477.99

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Vilazodone Hydrochloride (EMD 68843) , a partial agonist of 5-HT1A receptors and specific serotonin reuptake inhibitor (SSRI), is utilized in treating of the major depressive disorder.
Targets(IC50)	5-HT Receptor,Serotonin Transporter
In vitro	Vilazodone demonstrates an IC50 of 0.2 nM at the human 5-HT1A receptor and 0.5 nM for the SERT. Vilazodone displays high affinity (pKi ≥ 9.3) for human recombinant and rat, guinea pig, mouse, and marmoset native tissue 5-HT1A receptors. [1]
In vivo	Vilazodone selectively enhances serotonergic output in the prefrontal cortex of rats. Vilazodone demonstrates anxiolytic efficacy through Behavioral evaluations in the ultrasonic vocalization model of anxiety in rats. Vilazodone also shows efficacy but at a single dose only in the forced swim test (a putative model of depression). [1] Vilazodone (1-10 mg/kg p.o.) dose-dependently displaces in vivo [3H]DASB (N,N-dimethyl-2-(2-amino-4-cyanophenylthio)benzylamine) binding from rat cortex and hippocampus, indicating that vilazodone occupies 5-HT transporters in vivo. Vilazodone (10 mg/kg p. o.) is demonstrated to cause a 2-fold increase in extracellular 5-HT but no change in noradrenaline or dopamine levels in frontal cortex of freely moving rats. [2] Vilazodone affects stress potentiation of startle at doses above 5 mg/kg in rats. Vilazodone increases stress elevation of startle at 10 mg/kg in rats. Vilazodone (20 and 40 mg/kg) blocked stress potentiation of startle in rats. Vilazodone increases stress elevation of startle at all doses in rats. [3] vilazodone has no effect on 5-HT efflux at 100 nM but significantly decreases 5-HT efflux at 1 mM in the guinea-pig dorsal raphe nucleus. Vilazodone significantly increases the re-uptake half life for 5-HT in the guinea-pig dorsal raphe nucleus. [4]

Solubility Information

Solubility	DMSO: 83.33 mg/mL (174.33 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 8.33 mg/mL (17.43 mM),Solution. 10% DMSO+90% Saline: < 8.33 mg/mL (17.43 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0921 mL	10.4605 mL	20.9209 mL
5 mM	0.4184 mL	2.0921 mL	4.1842 mL
10 mM	0.2092 mL	1.046 mL	2.0921 mL
50 mM	0.0418 mL	0.2092 mL	0.4184 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dawson LA, et al. CNS Neurosci Ther, 2009, 15(2), 107-117.
Hughes ZA, et al. Eur J Pharmacol, 2005, 510(1-2), 49-57.
Adamec R, et al. Eur J Pharmacol, 2004, 504(1-2), 65-77.