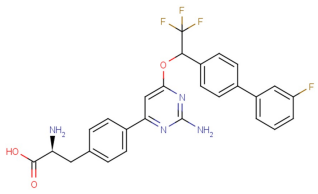
Data Sheet (Cat.No.T15778)

TargetMol
A DRUG SCREENING EXPERT

LP-533401

Chemical Properties



CAS No.:	945976-43-2
Formula:	C27H22F4N4O3
Molecular Weight:	526.48
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	LP-533401 is an inhibitor of Tryptophan hydroxylase 1. It is used for regulates serotonin production in the gut.
Targets(IC_{50})	Tryptophan hydroxylase: None
In vitro	At a dose of 1 μM, LP-533401 fully suppresses serotonin production in Tph1–expressing cells [1].
In vivo	Mice treated repeatedly with LP-533401 (30–250 mg/kg per day) exhibit marked 5-HT content reductions in the gut, lungs, and blood, but not in the brain. Adult, healthy mice treated with the Tph-1 inhibitor LP-533401 display a 30% decrease in circulating serotonin levels, with a consequent 30% increase in osteoblast numbers. Pharmacokinetic studies in rodents show that the LP-533401 level in the brain is negligible following oral administration, indicating that it is virtually unable to cross the blood-brain barrier[1]. Lung and gut 5-HT contents decrease by 50%, after a single LP533401 dose (250 mg/kg), whereas blood 5-HT levels remain unchanged, suggesting gut and lung 5-HT synthesis[2]. Administration of LP533401 to mice injected with EL4 cells inhibits the decrement in osteoblast numbers and trabecular bone volume prolongs survial, and decreases leukemic infiltration[3].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.899 mL	9.497 mL	18.994 mL
5 mM	0.38 mL	1.899 mL	3.799 mL
10 mM	0.19 mL	0.95 mL	1.899 mL
50 mM	0.038 mL	0.19 mL	0.38 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Yadav, V.K., et al. Inhibition of gut-derived serotonin synthesis: A potential bone anabolic treatment. Nat. Med. 16(3), 308-312 (2010).
2. Abid S, et al. Inhibition of gut- and lung-derived serotonin attenuates pulmonary hypertension in mice. Am J Physiol Lung Cell Mol Physiol. 2012 Sep 15;303(6):L500-8.
3. Krevvata M, et al. Inhibition of leukemia cell engraftment and disease progression in mice by osteoblasts. Blood. 2014 Oct 30;124(18):2834-46.

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