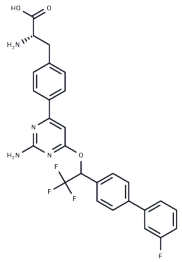
Data Sheet (Cat.No.T15778)

TargetMol

LP-533401

Chemical Properties



CAS No. : 945976-43-2

Formula: C27H22F4N4O3

Molecular Weight: 526.48

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	LP-533401 is an inhibitor of Tryptophan hydroxylase 1. It is used for regulates serotonin production in the gut.
Targets(IC50)	Hydroxylase
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].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8994 mL	9.497 mL	18.9941 mL
5 mM	0.3799 mL	1.8994 mL	3.7988 mL
10 mM	0.1899 mL	0.9497 mL	1.8994 mL
50 mM	0.038 mL	0.1899 mL	0.3799 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.

Reference

Yadav, V.K., et al. Inhibition of gut-derived serotonin synthesis: A potential bone anabolic treatment. Nat. Med. 16 (3), 308-312 (2010).
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.
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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