

LEI-401

Chemical Properties

CAS No. : 2393840-15-6

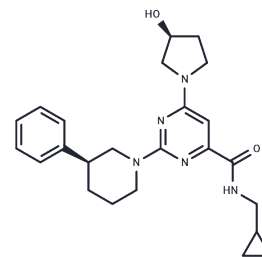
Formula: C₂₄H₃₁N₅O₂

Molecular Weight: 421.54

Store at low temperature

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	LEI-401 is a selective and potent NAPE-PLD inhibitor that crosses the blood-brain barrier (IC ₅₀ : 27 nM). LEI-401 reduces the level of n-acylethanolamines (NAEs) in the brain of free-ranging mice and modulates their emotional behaviour.
Targets(IC ₅₀)	Phospholipase
In vitro	In HEK293T cells transfected with hNAPE-PLD, LEI-401 (0.04 - 20 μM; 30 minutes) dose-dependently reduces the labeling of NAPE-PLD, with an IC ₅₀ of 0.86 μM. LEI-401 decreases the levels of NAE in Neuro-2a cells but does not reduce them in NAPE-PLD KO cells[1].
In vivo	The in vivo pharmacokinetic profile of LEI-401 was evaluated in the plasma of C57BL/6J mice following intraperitoneal (i.p., 30 mg/kg), oral (p.o., 10 mg/kg), or intravenous (i.v., 1 mg/kg) administration. The results demonstrate that LEI-401 is an active NAPE-PLD inhibitor in vivo, indicating its suitability for studying the physiological role of NAPE-PLD [1].

Solubility Information

Solubility	DMSO: 80 mg/mL (189.78 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (7.83 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. 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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3723 mL	11.8613 mL	23.7225 mL
5 mM	0.4745 mL	2.3723 mL	4.7445 mL
10 mM	0.2372 mL	1.1861 mL	2.3723 mL
50 mM	0.0474 mL	0.2372 mL	0.4745 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

Mock ED, et al. Discovery of a NAPE-PLD inhibitor that modulates emotional behavior in mice. Nat Chem Biol. 2020; 16(6):667-675.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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