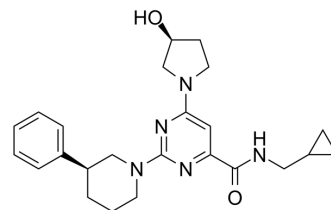


## LEI-401

<b>Cat. No.:</b>	HY-131181		
<b>CAS No.:</b>	2393840-15-6		
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>31</sub> N <sub>5</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	421.54		
<b>Target:</b>	Phospholipase		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (237.23 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	2.3723 mL	11.8613 mL	23.7225 mL
	<b>5 mM</b>	0.4745 mL	2.3723 mL	4.7445 mL
	<b>10 mM</b>	0.2372 mL	1.1861 mL	2.3723 mL
Please refer to the solubility information to select the appropriate solvent.				
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.93 mM); Clear solution			

### BIOLOGICAL ACTIVITY

<b>Description</b>	LEI-401 is a first-in-class, selective, and CNS-active NAPE-PLD (N-acylphosphatidylethanolamine phospholipase D) inhibitor, with an IC <sub>50</sub> of 27 nM. LEI-401 modulates emotional behavior in mice <sup>[1]</sup> .
<b>In Vitro</b>	LEI-401 reduced a broad range of NAEs including anandamide in neuronal cells in a NAPE-PLD-dependent manner. LEI-401 (0.04–20 μM; 30 minutes) dose-dependently reduces the labeling of NAPE-PLD with an IC <sub>50</sub> of 0.86 μM in hNAPE-PLD-transfected HEK293T cells. LEI-401 reduces NAE levels in Neuro-2a cells, but not in NAPE-PLD KO cells <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	LEI-401 (30 mg/kg; i.p.) diminishes fear extinction in mice <sup>[1]</sup> . LEI-401 also activates HPA axis signaling <sup>[1]</sup> . LEI-401 (10 mg/kg; p.o.) treatment shows the t <sub>1/2</sub> , C <sub>max</sub> , t <sub>max</sub> , AUC <sub>last</sub> , and F values of 2.5 hours, 1370 ng/mL, 2 hours, 6760 h*ng/mL, and 25%, respectively <sup>[1]</sup> .

LEI-401 (30 mg/kg; i.p.) treatment show the  $C_{max}$ ,  $t_{max}$ ,  $AUC_{last}$ , and F values of 10300 ng/mL, 1 hour, 38600 h\*ng/mL, and 48%, respectively<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male 7–12-week-old C57BL/6J mice <sup>[1]</sup>
Dosage:	30 mg/kg
Administration:	I.p.
Result:	Produced a significant increase in freezing as compared to vehicle.

Animal Model:	C57BL/6J mice <sup>[1]</sup>
Dosage:	10 mg/kg
Administration:	P.o. (Pharmacokinetic Analysis)
Result:	The $t_{1/2}$ , $C_{max}$ , $t_{max}$ , $AUC_{last}$ , and F values were 2.5 hours, 1370 ng/mL, 2 hours, 6760 h*ng/mL, and 25%, respectively.

## CUSTOMER VALIDATION

- Neuron. 2021 Aug 4;109(15):2398-2403.e4.

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## REFERENCES

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

**Caution: Product has not been fully validated for medical applications. For research use only.**

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