JZL195

Cat. No.: HY-15250

CAS No.: 1210004-12-8

Molecular Formula: $C_{24}H_{23}N_3O_5$

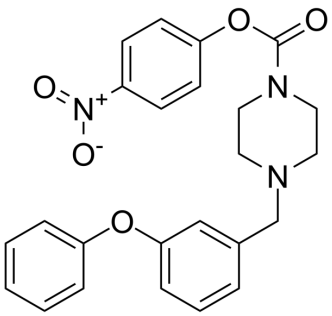
Molecular Weight: 433.46

Target: FAAH; MAGL; Autophagy

Pathway: Metabolic Enzyme/Protease; Neuronal Signaling; Autophagy

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (115.35 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3070 mL	11.5351 mL	23.0702 mL
	5 mM	0.4614 mL	2.3070 mL	4.6140 mL
	10 mM	0.2307 mL	1.1535 mL	2.3070 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.77 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

JZL195 is a selective and efficacious dual fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL) inhibitor with IC_{50}s of 2 and 4 nM, respectively[1].

IC_{50} & Target

IC50: 2 nM (FAAH), 4 nM (MAGL)[1]

In Vitro

JZL195 produces near-complete blockade of FP-Rh labeling of both mouse brain FAAH and MAGL at concentrations as low as 100 nM (IC_{50} values of 13 and 19 nM, respectively)[1].

JZL195 inhibits rat and human FAAH and MAGL enzymes with IC_{50} values in the range of ≈10-100 nM based on competitive ABPP assays[1].

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

In Vivo

JZL195 (20 mg/kg; i.p.) produces an antinociceptive response in the tail immersion assay[1].

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

Animal Model:	Male C57BL/6J mice[1]
Dosage:	20 mg/kg
Administration:	Intraperitoneal injection
Result:	Produced a much greater antinociceptive response in the tail immersion assay compared with inhibitors of either FAAH or MAGL alone.

CUSTOMER VALIDATION

- Cell Death Differ. 2022 Sep 14.
- Int J Mol Sci. 2024 Jan 10, 25(2), 858.
- Int J Mol Sci. 2023 Jun 30, 24(13), 10942.

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REFERENCES

[1]. Long JZ, et al. Dual blockade of FAAH and MAGL identifies behavioral processes regulated by endocannabinoid crosstalk in vivo. Proc Natl Acad Sci U S A. 2009 Dec 1;106(48):20270-5.

[2]. Anderson WB, et al. Actions of the dual FAAH/MAGL inhibitor JZL195 in a murine inflammatory pain model. Neuropharmacology. 2014 Jun;81:224-30.

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