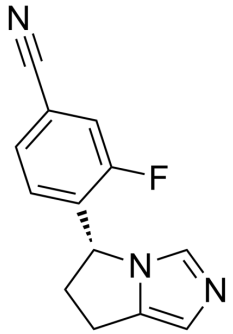
Osilodrostat



Cat. No.:	HY-16276
CAS No.:	928134-65-0
Molecular Formula:	$C_{13}H_{10}FN_3$
Molecular Weight:	227.24
Target:	Mineralocorticoid Receptor
Pathway:	Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor
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 : 250 mg/mL (1100.16 mM; Need ultrasonic)
Ethanol : 100 mg/mL (440.06 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.4006 mL	22.0032 mL	44.0063 mL
5 mM	0.8801 mL	4.4006 mL	8.8013 mL
10 mM	0.4401 mL	2.2003 mL	4.4006 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 (11.00 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
4. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
5. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution
6. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (11.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Osilodrostat (LCI699) is a potent, orally active11β-hydroxylase (CYP11B1) inhibitor with an IC_{50} value of 35 nM. Osilodrostat is a potent, orally aldosterone synthase (CYP11B2) inhibitor with IC_{50} values of 0.7 nM and 160 nM for human aldosterone synthase and rat aldosterone synthase, respectively. Osilodrostat inhibits aldosterone and corticosterone synthesis. Osilodrostat has blood pressure lowering ability. Osilodrostat can be used for research of Cushing syndrome (CS)[1][2][3].
IC_{50} & Target	IC50: 35 nM (CYP11B1), 0.7 nM (human aldosterone synthase), and 160 nM (rat aldosterone synthase)[1][2]
In Vitro	Osilodrostat (LCI699; 0.01-10 μM; HAC15 cells, 17 primary human adrenocortical cell cultures, and pituitary adenoma cells) inhibits cortisol and aldosterone. Osilodrostat results in inhibition of corticosterone, 11-deoxycortisol accumulation, and modest effects on adrenal androgens[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Osilodrostat (LCI699; 0.1-100 mg/kg; p.o.; once) inhibits aldosterone and corticosterone synthesis in Ang-II- and ACTH-stimulated Sprague Dawley rats[1]. Osilodrostat (LCI699; 3-100 mg/kg; p.o.; daily, for 52 weeks) reduces mean arterial pressure and prolongs survival in dTG rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Ang-II- and ACTH-stimulated Sprague Dawley rats[1]
Dosage:	0.1, 0.3, 1 and 3 mg/kg (Ang-II-stimulated rats) and 1, 3, 10, 30 and 100 mg/kg (ACTH-stimulated rats)
Administration:	Oral administration; once
Result:	Inhibited the increase in plasma aldosterone concentrations stimulated by Ang II or ACTH in a dose-dependent manner.

Animal Model:	dTG rats[1]
Dosage:	3, 10, 30 and 100 mg/kg
Administration:	Oral administration; daily, for 52 weeks
Result:	Increased fractional LV (systolic and diastolic) shortening, normalized LV isovolumic relaxation time to RR (IVRT/RR) ratio and myocardial cell size and reduced LV weight in a dose-dependent manner.

CUSTOMER VALIDATION

- Acta Pharm Sin B. 21 September 2021.
- BMC Med. 2021 Sep 8;19(1):204.
- J Pharmaceut Biomed. 2023 May 10.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Ménard J, et, al. Aldosterone synthase inhibition: cardiorenal protection in animal disease models and translation of hormonal effects to human subjects. J Transl Med.

2014 Dec 10;12:340.

[2]. Creemers SG, et, al. Osilodrostat Is a Potential Novel Steroidogenesis Inhibitor for the Treatment of Cushing Syndrome: An In Vitro Study. J Clin Endocrinol Metab. 2019 Aug 1;104(8):3437-3449.

[3]. Li L, et, al. Osilodrostat (LCI699), a potent 11β-hydroxylase inhibitor, administered in combination with the multireceptor-targeted somatostatin analog pasireotide: A 13-week study in rats. Toxicol Appl Pharmacol. 2015 Aug 1;286(3):224-33.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA