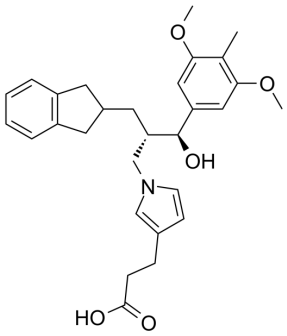
ONO-0300302

Cat. No.:	HY-115450
CAS No.:	856689-51-5
Molecular Formula:	$C_{29}H_{35}NO_5$
Molecular Weight:	477.59
Target:	LPL Receptor
Pathway:	GPCR/G Protein
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 220 mg/mL (460.65 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0938 mL	10.4692 mL	20.9385 mL
	5 mM	0.4188 mL	2.0938 mL	4.1877 mL
	10 mM	0.2094 mL	1.0469 mL	2.0938 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5.5 mg/mL (11.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5.5 mg/mL (11.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ONO-0300302 is an orally active and potent LPA1 (lysophosphatidic acid receptor 1) antagonist, with an IC_{50} of 0.086 μM. ONO-0300302 is a slow tight binding inhibitor, and its binding affinity increases with time, with K_d of 0.34 nM (37 °C, 2 h). ONO-0300302 can be used for benign prostatic hyperplasia (BPH) research[1].

IC_{50} & Target

LPA1 Receptor
0.086 μM (IC_{50})

In Vitro

ONO-0300302 shows moderate stability against rat microsomes[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

ONO-0300302 inhibits significantly an LPA (lysophosphatidic acid receptor)-induced increase of intraurethral pressure (IUP)

	in rat (3 mg/kg, p.o.) and dog (1 mg/kg, p.o.) over 12 h[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Terakado M, et al. Discovery of a Slow Tight Binding LPA1 Antagonist (ONO-0300302) for the Treatment of Benign Prostatic Hyperplasia. ACS Med Chem Lett. 2017 Nov 20;8(12):1281-1286.

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