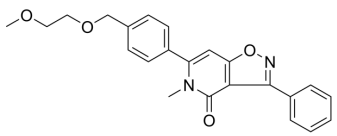
IP7e

Cat. No.:	HY-110274
CAS No.:	500164-74-9
Molecular Formula:	$C_{23}H_{22}N_2O_4$
Molecular Weight:	390.43
Target:	Nuclear Hormone Receptor 4A/NR4A
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (256.13 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5613 mL	12.8064 mL	25.6128 mL
5 mM	0.5123 mL	2.5613 mL	5.1226 mL
10 mM	0.2561 mL	1.2806 mL	2.5613 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: ≥ 2.5 mg/mL (6.40 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.40 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

IP7e is a potent, brain-penetrant and orally active Nurr1 activator with an EC_{50} value of 3.9 nM[1].

IC_{50} & Target

Nurr1/NR4A2

In Vivo

IP7e (Isoxazolo-pyridinone 7e; 10 mg/kg; oral gavage; twice a day) preventive treatment reduces the incidence and the severity of a MS murine model, i.e. experimental autoimmune encephalomyelitis (EAE). IP7e attenuates inflammation and neurodegeneration in spinal cords of EAE mice by an NF-kB pathway-dependent process[2].

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

Animal Model:	Female C57BL/6J mice (6-8 week-old) with experimental autoimmune encephalomyelitis (EAE)[2].
Dosage:	10 mg/kg
Administration:	Oral gavage; twice a day; preventive administration (before the disease onset) from 7 to 23 d.p.i. and therapeutic (after the disease onset) from 21 to 36 d.p.i.
Result:	Preventive administration delayed the onset and reduces the incidence and severity of EAE, and decreased neuroinflammatory and histopathological alterations in the spinal cord of treated EAE mice. On the contrary, the course of EAE was not influenced by the therapeutic administration.

REFERENCES

[1]. Samuel Hintermann, et al. Identification of a series of highly potent activators of the Nurr1 signaling pathway. Bioorg Med Chem Lett. 2007 Jan 1;17(1):193-6.

[2]. Francesca Montarolo, et al. Effects of isoxazolo-pyridinone 7e, a potent activator of the Nurr1 signaling pathway, on experimental autoimmune encephalomyelitis in mice. PLoS One. 2014 Sep 29;9(9):e108791.

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