Amelenodor

Cat. No.: HY-141521

CAS No.: 2389235-01-0

Molecular Formula: $C_{24}H_{21}N_3O_3$

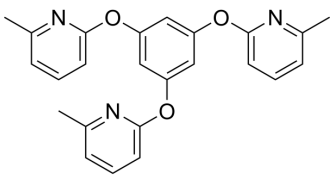
Molecular Weight: 399.44

Target: NOD-like Receptor (NLR)

Pathway: Immunology/Inflammation

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 135 mg/mL (337.97 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5035 mL	12.5175 mL	25.0350 mL
	5 mM	0.5007 mL	2.5035 mL	5.0070 mL
	10 mM	0.2504 mL	1.2518 mL	2.5035 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: ≥ 6.75 mg/mL (16.90 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 6.75 mg/mL (16.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 6.75 mg/mL (16.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NX-13 is a first-in-class, orally active and gut-restricted agent that selectively targets and activates the NLRX1 pathway to induce immunometabolic changes. NX-13 results in lower inflammation and responses in inflammatory bowel disease. NX-13 can be used for the research of crohn's disease and ulcerative colitis[1][2].

IC_{50} & Target

NLRX1[1]

In Vivo

NX-13 (0, 500, or 1000 mg/kg; oral gavage; 7 days) reduces ALP levels[2].

NX-13 (1 and 10 mg/kg; oral gavage; 0~24 hours) reaches the distal gastrointestinal tract[2].

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

Animal Model:	Sprague Dawley rats (six weeks age)[2]
Dosage:	0, 500, or 1000 mg/kg
Administration:	Oral gavage; 7 days
Result:	ALP in rats given the 1000 mg/kg dose level was lower than that in rats given 500 mg/kg.

Animal Model:	Male C57BL/6J mice (8-10 weeks age)[2]
Dosage:	1 and 10 mg/kg (Pharmacokinetics analysis)
Administration:	Oral gavage; 24 hours
Result:	Reached the distal gastrointestinal tract.

REFERENCES

[1]. Leber A, et.al. Exploratory studies with NX-13: oral toxicity and pharmacokinetics in rodents of an orally active, gut-restricted first-in-class therapeutic for IBD that targets NLRX1 [published online ahead of print, 2019 Oct 25]. Drug Chem Toxicol. 2019;1-6.

[2]. Leber A, et al. Activation of NLRX1 by NX-13 Alleviates Inflammatory Bowel Disease through Immunometabolic Mechanisms in CD4+ T Cells. J Immunol. 2019;203(12):3407-3415.

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