Mivotilate

Cat. No.: HY-100242

CAS No.: 130112-42-4

Molecular Formula: $C_{12}H_{14}N_2O_3S_3$

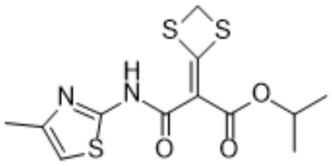
Molecular Weight: 330.45

Target: Aryl Hydrocarbon Receptor

Pathway: Immunology/Inflammation

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 : 12.5 mg/mL (37.83 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.0262 mL	15.1309 mL	30.2618 mL
5 mM	0.6052 mL	3.0262 mL	6.0524 mL
10 mM	0.3026 mL	1.5131 mL	3.0262 mL

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

BIOLOGICAL ACTIVITY

Description

Mivotilate is a nontoxic, potent activator of the aryl hydrocarbon receptor (AhR), and acts as a hepatoprotective agent.

IC_{50} & Target

Aryl hydrocarbon receptor[1]

In Vitro

Mivotilate is a nontoxic, potent activator of the aryl hydrocarbon receptor. Mivotilate (YH439) has a novel activation mode that tolerates mutation of histidine 285 to tyrosine[1]. Mivotilate induces cytochromes P4501A1/2 (CYP1A1/2) through the aryl hydrocarbon (Ah) receptor[3].

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

In Vivo

Mivotilate (YH439, 150 mg/kg, p.o.) reduces CYP2E1-mediated NDMA demethylase activity in rats, but shows no obvious effect on NADPH-dependent P450 oxidoreductase activity. Mivotilate (75-300 mg/kg) rapidly decreases immunoreactive CYP2E1 protein. Mivotilate (150 mg/kg, p.o.) inhibits the transcription of CYP2E1 in rats[2].

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

PROTOCOL

Animal Administration [2]

Male outbred Sprague-Dawley rats (weighing 100-150 g) are kept on a 12-h light-dark cycle with NIH 31 autoclavable rat die and water ad libitum. After a single oral administration of Mivotilate (75, 150, and 300 mg/kg body wt, diluted in corn oil), the animals are sacrificed at different times as indicated. Livers from control (corn oil-treated), starved (2 days) and Mivotilate-treated animals (n = 5 per group) are immediately excised, freeze-clamped, and processed further. Another group of rats (n = 3) is treated with phenobarbital (100 mg/kg/day) by intraperitoneal injection for 2 days and sacrificed 24 h after the last dose[2].

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

REFERENCES

[1]. Whelan F, et al. Amino acid substitutions in the aryl hydrocarbon receptor ligand binding domain reveal YH439 as an atypical AhR activator. Mol Pharmacol. 2010 Jun;77(6):1037-46.

[2]. Jeong KS, et al. Transcriptional inhibition of cytochrome P4502E1 by a synthetic compound, YH439. Arch Biochem Biophys. 1996 Feb 1;326(1):137-44.

[3]. Lee IJ, et al. Transcriptional induction of the cytochrome P4501A1 gene by a thiazolium compound, YH439. Mol Pharmacol. 1996 Jun;49(6):980-8.

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