MS-PPOH

Cat. No.: HY-114759

CAS No.: 206052-02-0

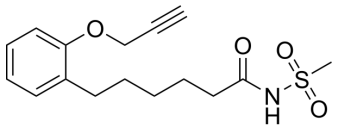
Molecular Formula: $C_{16}H_{21}NO_4S$

Molecular Weight: 323.41

Target: Cytochrome P450

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (618.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0921 mL	15.4603 mL	30.9205 mL
	5 mM	0.6184 mL	3.0921 mL	6.1841 mL
	10 mM	0.3092 mL	1.5460 mL	3.0921 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: ≥ 5 mg/mL (15.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (15.46 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (15.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MS-PPOH is a potent and selective cytochrome P450 (CYP) epoxygenase inhibitor[1]. MS-PPOH inhibits CYP2C8 and CYP2C9 with IC_{50}s of 15 and 11 μM, respectively[2]. MS-PPOH is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

CYP2

In Vitro

MS-PPOH blocks cellular EET synthesis. MS-PPOH inhibits tonic (basal) cell invasion and migration and reduces the 11,12-EET (1.0 μM)-induced cell motility[1].

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

Cell Viability Assay[1]

Cell Line:	PC-3 cells
Concentration:	2.0 and 10.0 μM
Incubation Time:	24 hours
Result:	Inhibited tonic (basal) cell invasion and migration.

In Vivo

MS-PPOH (20 mg/kg/day, i.v.) for 6 days significantly reduced renal levels of epoxyeicosatrienoic acids (EETs) in Dahl salt-resistant rats on 2% NaCl drinking solution[3].

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

Animal Model:	Six-week-old male stroke-prone spontaneously hypertensive rats (SHRSP)[3]
Dosage:	20 mg/kg/day
Administration:	Intravenously
Result:	Treatment had negligible effects on systolic blood pressure (SBP) in saline-drinking SHRSP after 1 week, 160 vs. 167 mmHg, or 2 weeks of treatment, 171 vs. 175 mmHg, for vehicle vs. MS-PPOH, respectively.

REFERENCES

[1]. Kasem Nithipatikom, et al. Inhibition of carcinoma cell motility by epoxyeicosatrienoic acid (EET) antagonists. Cancer Sci. 2010 Dec;101(12):2629-36.

[2]. Jun Yang, et al. Cytochrome P450 2C24: Expression, Tissue Distribution, High-Throughput Assay, and Pharmacological Inhibition. Acta Pharm Sin B. 2012 Apr;2(2):137-145.

[3]. Jing Li, et al. Pharmacological manipulation of arachidonic acid-epoxygenase results in divergent effects on renal damage. Front Pharmacol. 2014 Aug 15;5:187.

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