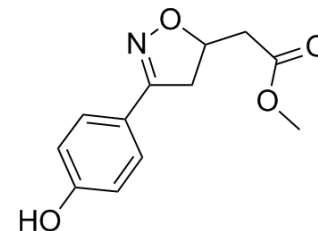


ISO-1

Cat. No.:	HY-16692		
CAS No.:	478336-92-4		
Molecular Formula:	C ₁₂ H ₁₃ NO ₄		
Molecular Weight:	235.24		
Target:	Others		
Pathway:	Others		
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 : 50 mg/mL (212.55 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	1 mg	5 mg	10 mg
	1 mM	4.2510 mL	21.2549 mL	42.5098 mL
5 mM	0.8502 mL	4.2510 mL	8.5020 mL	
10 mM	0.4251 mL	2.1255 mL	4.2510 mL	

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

In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
Solubility: ≥ 2.5 mg/mL (10.63 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
Solubility: ≥ 2.5 mg/mL (10.63 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**
Solubility: ≥ 2.5 mg/mL (10.63 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ISO-1 is a macrophage migration inhibitory factor (MIF) antagonist with an IC₅₀ of 7 μM.

IC₅₀ & Target

IC₅₀: 7μM (MIF)^[1]

In Vitro

ISO-1 (0.1-20 μM; 16 hours) has a slight inhibitory effect on Cox-2 secretion without the addition of recombinant MIF [1].

Western Blot Analysis^[1]

Cell Line:	RAW 264.7 macrophage cells
Concentration:	0.1µM□1µM□10µM□20µM
Incubation Time:	16 hours
Result:	Suppressed Cox-2 secretion.

In Vivo

ISO-1 (injected intraperitoneally; 3.5-35 mg/kg; twice daily; 2 weeks) improves the survival rate from lethal endotoxemia and shows the anti-inflammatory effect^[2].
ISO-1 (intraperitoneal injection; 35 mg/kg; twice daily; 3 days) causes a significant reduction in average implant size and decreases Flk1 expression in implants^[3].

Animal Model:	C57Bl/6 MIF ^{+/+} and MIF ^{-/-} mice ^[2]
Dosage:	3.5-35 mg/kg
Administration:	Injected intraperitoneally; 3.5-35 mg/kg; twice a day ; 2 weeks
Result:	Was protective against lethal sepsis.

Animal Model:	Female C57BL/6-Tg(ACTB-EGFP)1Osb/J mice ^[3]
Dosage:	35 mg/kg
Administration:	Intraperitoneal injection; 35 mg/kg; twice daily; 3 days
Result:	Reduced average endometriotic implant size.

CUSTOMER VALIDATION

- **J Neuroinflammation**. 2018 Oct 19;15(1):291.
- **Mol Med Rep**. 2019 Jul 9.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Lubetsky JB, et al. The tautomerase active site of macrophage migration inhibitory factor is a potential target for discovery of novel anti-inflammatory agents. *J Biol Chem*. 2002 Jul 12;277(28):24976-82.

[2]. Al-Abed Y, et al. ISO-1 binding to the tautomerase active site of MIF inhibits its pro-inflammatory activity and increases survival in severe sepsis. *J Biol Chem*. 2005 Nov 4;280(44):36541-4.

[3]. Nothnick WB, et al. Inhibition of macrophage migration inhibitory factor reduces endometriotic implant size in mice with experimentally induced disease. *J Endometr*. 2011 Sep 30;3(3):135-142.

Caution: Product has not been fully validated for medical applications. For research use only.

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