Diflapolin

Cat. No.: HY-128171

CAS No.: 724453-98-9

Molecular Formula: $C_{22}H_{17}Cl_2N_3O_2S$

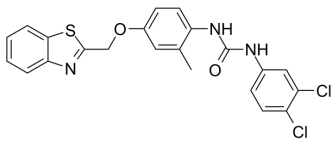
Molecular Weight: 458.36

Target: FLAP; Epoxide Hydrolase

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 83.33 mg/mL (181.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1817 mL	10.9085 mL	21.8169 mL
	5 mM	0.4363 mL	2.1817 mL	4.3634 mL
	10 mM	0.2182 mL	1.0908 mL	2.1817 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: 2.08 mg/mL (4.54 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Diflapolin is a highly active dual 5-lipoxygenase-activating protein (FLAP)/soluble epoxide hydrolase (sEH) inhibitor with marked anti-inflammatory efficacy and high target selectivity. Diflapolin inhibits 5-LOX product formation in intact human monocytes and neutrophils with IC_{50}s of 30 and 170 nM, respectively, and suppressed the activity of isolated sEH (IC_{50}=20 nM)[1].

In Vivo

Diflapolin (1-10 mg/kg; i.p.; 30 min before zymosan injection) exhibits potent anti-inflammatory properties in in-vivo experiments[1].

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

Animal Model:	Male CD-1 mice (zymosan-induced peritonitis mouse model)[1]
Dosage:	1, 3 and 10 mg/kg
Administration:	I.p.; 30 min before zymosan injection
Result:	Induced a significant reduction of LTC4 and LTB4 peritoneal levels, starting from the dose of 1 mg/kg and comparable to the effect of MK886.

CUSTOMER VALIDATION

- J Pharm Sci. 29 October 2021.

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REFERENCES

[1]. Garscha U, et al. Pharmacological profile and efficiency in vivo of diflapolin, the first dual inhibitor of 5-lipoxygenase-activating protein and soluble epoxide hydrolase. Sci Rep. 2017;7(1):9398. Published 2017 Aug 24.

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