Parecoxib

Cat. No.: HY-17474

CAS No.: 198470-84-7

Molecular Formula: $C_{19}H_{18}N_2O_4S$

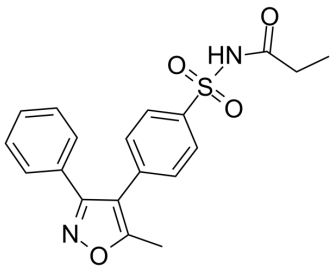
Molecular Weight: 370.42

Target: COX

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 : ≥ 50 mg/mL (134.98 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6996 mL	13.4982 mL	26.9964 mL
5 mM	0.5399 mL	2.6996 mL	5.3993 mL
10 mM	0.2700 mL	1.3498 mL	2.6996 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: ≥ 2.5 mg/mL (6.75 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Parecoxib (SC 69124) is a highly selective and orally active COX-2 inhibitor, the prodrug of Valdecoxib (HY-15762). Parecoxib Sodium is a nonsteroidal anti-inflammatory agent (NSAID) and inhibits prostaglandin (PG) synthesis. Parecoxib can be used for the relief of acute postoperative pain and symptoms of chronic inflammatory conditions such as osteoarthritis and rheumatoid arthritis in vivo[1][2].

IC_{50} & Target

COX-2

In Vitro

Parecoxib (0-200 μM; 24-48 hours) inhibits the cell proliferation of GBM cells in a dose-dependent manner in GBM cells[4].
Parecoxib (200 μM; 24-48 hours) results in a decreasee migratory ability of U343 cells than PBS-treated group[4].

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

Cell Viability Assay[4]

Cell Line:	GBM cells: U251 and U343 cells
Concentration:	0 μM, 20 μM, 50 μM, 100 μM and 200 μM
Incubation Time:	24-48 hours
Result:	Resulted in a slower BrdU incorporation rate of GBM cells including U251 and U343 cells.

In Vivo

Parecoxib (intraperitoneal injection; 2.5, 5.0 or 10 mg/kg; once a day; 21 days) does not affect locomotor activity in the elevated plus-maze test, and Parecoxib at 5 and 10 mg/kg shows higher levels of percentage of time spent in the open arms [3].

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

Animal Model:	Naive adult male ICR mice, 15 weeks old and weighing 25-35 g[3]
Dosage:	2.5, 5.0 or 10 mg/kg
Administration:	Intraperitoneal injection; 2.5, 5.0 or 10 mg/kg; once a day; 21 days
Result:	Exerted an anxiolytic-like effect in the elevated plus-maze test

CUSTOMER VALIDATION

- J Pharm Biomed Anal. 2018 May 22;158:1-7.

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REFERENCES

[1]. Jun Tang, et al. Effect of parecoxib, a novel intravenous cyclooxygenase type-2 inhibitor, on the postoperative opioid requirement and quality of pain control. Anesthesiology

[2]. J L Mateos, et al.[Selective inhibitors of cyclooxygenase-2 (COX-2), celecoxib and parecoxib: a systematic review]. Drugs Today (Barc). 2010 Feb;46 Suppl A:1-25.

[3]. Bo Wang, et al. Chronic administration of parecoxib exerts anxiolytic-like and memory enhancing effects and modulates synaptophysin expression in mice. BMC Anesthesiol. 2017 Nov 13;17(1):152.

[4]. Lin-Yong Li, et al. Parecoxib inhibits glioblastoma cell proliferation, migration and invasion by upregulating miRNA-29c. Biol Open. 2017 Mar 15;6(3):311-316.

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