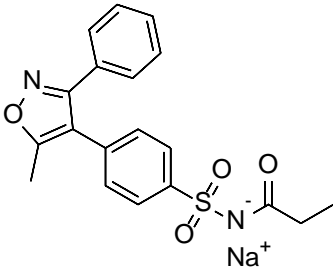


Product data sheet



MedKoo Cat#: 329414 Name: Parecoxib sodium CAS: 198470-85-8 (sodium) Chemical Formula: C ₁₉ H ₁₇ N ₂ NaO ₄ S Molecular Weight: 392.4048	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Parecoxib, also known as SC-69124A and Dynastat, is a cyclooxygenase-2 inhibitor used for the short-term treatment of postoperative pain in adults. Parecoxib is a water-soluble and injectable prodrug of valdecoxib. Parecoxib is a COX2 selective inhibitor in the same category as celecoxib (Celebrex) and rofecoxib (Vioxx). Unlike ketorolac, parecoxib has no effect on platelet function and therefore does not promote bleeding during or after surgery. In addition, ketorolac has a much higher gastrointestinal toxicity profile compared to most other nonsteroidal antiinflammatory drugs (NSAIDs) including ibuprofen and naprosyn.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	10.0	25.48
DMSO	64.33	163.95
Ethanol	3.0	7.65
PBS (pH 7.2)	5.0	12.74
Water	56.25	143.35

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.55 mL	12.74 mL	25.48 mL
5 mM	0.51 mL	2.55 mL	5.10 mL
10 mM	0.25 mL	1.27 mL	2.55 mL
50 mM	0.05 mL	0.25 mL	0.51 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Qian X, Xiong S, Chen Q, Zhang J, Xie J. Parecoxib attenuates inflammation injury in septic H9c2 cells by regulating the MAPK signaling pathway. *Exp Ther Med.* 2023 Feb 16;25(4):150. doi: 10.3892/etm.2023.11850. PMID: 36911374; PMCID: PMC9995842.
2. Li X, Zhou JX, Qu YD, Kuang X. Cyclooxygenase-2 Inhibitor Parecoxib Reduces LPS-Induced Activation of BV2 Microglia Cells. *Bull Exp Biol Med.* 2022 Dec;174(2):210-215. doi: 10.1007/s10517-023-05675-8. Epub 2023 Jan 5. PMID: 36600038.

In vivo study

1. Guo J, Yang Y. Parecoxib sodium alleviates ischemia reperfusion-induced pulmonary injury via inhibiting ERK/NF-κB and further activating the HIF-1α pathway. *Immun Inflamm Dis.* 2022 Sep;10(9):e684. doi: 10.1002/iid3.684. PMID: 36039646; PMCID: PMC9382860.

Product data sheet



2. Wang B, Jin X, Kuang X, Tian S. 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. doi: 10.1186/s12871-017-0443-y. PMID: 29132299; PMCID: PMC5684753.

7. Bioactivity

Biological target:

Parecoxib Sodium (SC 69124A) is a highly selective and orally active COX-2 inhibitor, the prodrug of Valdecoxib (HY-15762).

In vitro activity

Parecoxib-treated H9c2 cells stimulated with LPS were tested for viability using the Cell Counting Kit-8 assay. The data showed that parecoxib significantly and dose-dependently reduced the inflammatory responses of LPS-treated H9c2 cells. Parecoxib also significantly and dose-dependently increased the proliferation and inhibited the apoptosis of LPS-treated H9c2 cells. In addition, parecoxib significantly suppressed the activation of the MAPK (p38, JNK and ERK) signaling pathway.

Reference: *Exp Ther Med.* 2023 Feb 16;25(4):150. <https://pubmed.ncbi.nlm.nih.gov/36911374/>

In vivo activity

Adult male ICR mice were randomly divided into four groups: the control group and three parecoxib groups. Mice received normal saline or parecoxib (2.5, 5.0 or 10 mg/kg) intraperitoneal injection once a day for 21 days, respectively. Chronic parecoxib exerted an anxiolytic-like effect in the plus-maze test test, and enhanced memory performance in the novel object recognition and Y maze tests. Western blot analysis showed that chronic parecoxib down-regulated synaptophysin levels in the amygdala and up-regulated synaptophysin levels in the hippocampus. ELISA assay showed that chronic parecoxib inhibited PGE2 in the hippocampus but not amygdala.

Reference: *BMC Anesthesiol.* 2017 Nov 13;17(1):152. <https://pubmed.ncbi.nlm.nih.gov/29132299/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.