

Product Data Sheet

Product Name: Ketorolac

Cat. No.: GC15179

Chemical Properties

Cas. No. 74103-06-3

Chemical Name 5-benzoyl-2,3-dihydro-1H-pyrrolizine-1-carboxylic acid

SMILES C1CN2C(=CC=C2C(=O)C3=CC=CC=C3)C1C(=O)O

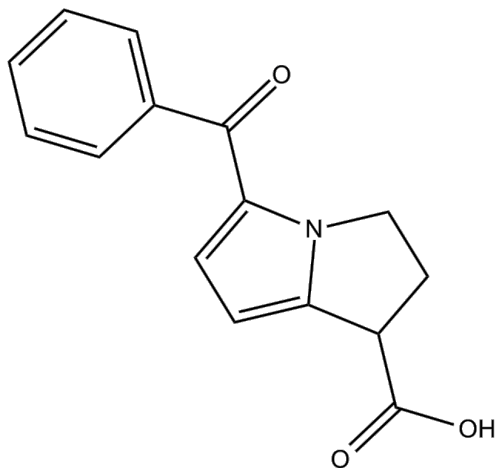
Formula $C_{15}H_{13}NO_3$ M.Wt 255.27

Solubility $\geq 12.76\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



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

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Protocol

Animal experiment: Rats[2] Treated rats receive oral doses of 1 mL aqueous solution of paracetamol (80 mg/kg/rat/day), Ketorolac (4 mg/kg/day) or etoricoxib (10 mg/kg/day) administered by gavage from the day of surgery until death, 2 weeks later. Control rats receive tap water (1 mL/day by gavage). The animals are housed under climate-controlled environment (12 h light/12 h dark, 20-24°C) with free access to standard laboratory chow and tap water[2].

References:

- [1]. Waterbury LD, et al. Comparison of cyclooxygenase inhibitory activity and ocular anti-inflammatory effects of ketorolac tromethamine and bromfenac sodium. *Curr Med Res Opin.* 2006 Jun;22(6):1133-40.
- [2]. Fracon RN, et al. Treatment with paracetamol, ketorolac or etoricoxib did not hinder alveolar bone healing: a histometric study in rats. *J Appl Oral Sci.* 2010 Dec;18(6):630-4.
- [3]. Hsieh YC, et al. Intrathecal ketorolac pretreatment reduced spinal cord ischemic injury in rats. *Anesth Analg.* 2005 Apr;100(4):1134-9.

Background

Ketorolac is a non-steroidal anti-inflammatory agent, acting as a nonselective COX inhibitor, with IC50s of 20 nM for COX-1 and 120 nM for COX-2.

Ketorolac is a non-steroidal anti-inflammatory agent, acting as a nonselective COX inhibitor, with IC50s of 20 nM for COX-1 and 120 nM for COX-2[1].

Ketorolac tromethamine (0.4%) causes nearly complete inhibition on LPS endotoxin-induced increases in FITC-dextran in the anterior chamber, and increases in aqueous PGE2 concentrations in the aqueous humor in rabbits[1]. Ketorolac (30 mg/kg, i.v.) rapidly reverses hyperalgesia in rats. Ketorolac also reduces carrageenan-induced hyperalgesia and paw PG production, and causes reduction in PGE2 levels in rats[1]. Ketorolac (4 mg/kg/day, p.o.) has no detrimental effect in the volume fraction of bone trabeculae formed inside the alveolar socket in rats[2]. Ketorolac (60 µg/10 µL) reduces the histological changes such as ischemic cell death, including cytoplasmic eosinophilia

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with disintegration of cytoarchitecture and nuclear pyknosis in rats. Ketorolac also effectively reduces neuronal death and improves hindlimb motor function, and the long-term survival is similar to that in the control group[3].

References:

- [1]. Waterbury LD, et al. Comparison of cyclooxygenase inhibitory activity and ocular anti-inflammatory effects of ketorolac tromethamine and bromfenac sodium. *Curr Med Res Opin.* 2006 Jun;22(6):1133-40.
- [2]. Fracon RN, et al. Treatment with paracetamol, ketorolac or etoricoxib did not hinder alveolar bone healing: a histometric study in rats. *J Appl Oral Sci.* 2010 Dec;18(6):630-4.
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