

Product Data Sheet

Product Name: Piroxicam

Cat. No.: GC16790

Chemical Properties

Cas. No. 36322-90-4

Chemical Name 4-hydroxy-2-methyl-1,1-dioxo-N-pyridin-2-yl-1λ6,2-benzothiazine-3-carboxamide

SMILES CN1C(=C(C2=CC=CC=C2S1(=O)=O)O)C(=O)NC3=CC=CC=N3

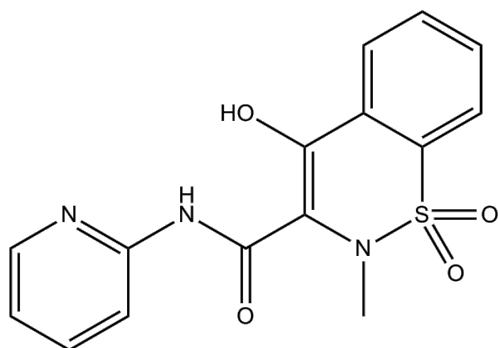
Formula $C_{15}H_{13}N_3O_4S$ M.Wt 331.35

Solubility $\geq 16.6\text{mg/mL}$ in DMSO Storage Store at 2-8°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



Protocol

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

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Cell experiment: Urinary bladder cancer cell lines are treated with graded concentrations of carboplatin (0.05, 0.5 and 1 μ M) and Piroxicam (CP-16171) (167, 333 and 500 μ M) for 72 h to assess dose-response profiles. For the combination approach, 0.05 μ M of carboplatin is used with 333 μ M Piroxicam. Both drugs are freshly prepared before each experiment. An untreated control group (cells not exposed to carboplatin and Piroxicam) is used for all assays[3].

Animal experiment: Dogs[2] Dogs undergo tumor staging, including thoracic and abdominal radiography, cystography, ultrasonography, and cystoscopy (with collection of tissue samples) before treatment and after 4 weeks of Piroxicam (CP-16171) (0.3 mg/kg qd 24-h p. o.) treatment. Dogs receive no other cancer treatment during the 4 weeks of Piroxicam (CP-16171) treatment. Tissue samples are immediately frozen in liquid nitrogen for PGE2 analysis or fixed in 10% neutral buffered formalin for immunohistochemical examination. Urine is also collected before and after Piroxicam treatment, aliquoted, and then stored at -80°C until analyzed[2].

References:

- [1]. Kato M, et al. Cyclooxygenase-1 and cyclooxygenase-2 selectivity of non-steroidal anti-inflammatory drugs: investigation using human peripheral monocytes. J Pharm Pharmacol. 2001 Dec;53(12):1679-85.
- [2]. Mohammed SI, et al. Effects of the cyclooxygenase inhibitor, piroxicam, on tumor response, apoptosis, and angiogenesis in a canine model of human invasive urinary bladder cancer. Cancer Res. 2002 Jan 15;62(2):356-8.
- [3]. Silva J, et al. Synergistic Effect of Carboplatin and Piroxicam on Two Bladder Cancer Cell Lines. Anticancer Res. 2017 Apr;37(4):1737-1745.

Background

Piroxicam (CP-16171) is a non-steroidal anti-inflammatory drugs, acts as a COX inhibitor, with IC50s

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of 47, 25 μ M for human monocyte COX-1 and COX-2, respectively.

Piroxicam (CP-16171) is a non-steroidal anti-inflammatory drugs, acts as a COX inhibitor, with IC50s of 47, 25 μ M for human monocyte COX-1 and COX-2, respectively[1]. Piroxicam (CP-16171) (167, 333, 500 μ M) decreases cell population of T24 and the 5637 cells. Piroxicam (CP-16171) (500 μ M) also reduces the cell viability of T24 and 5637 cell, and is significantly effective when combined with 0.05 μ M carboplatin. The combination also inhibits Ki-67 expression in booth cells[3].

Piroxicam (CP-16171) (0.3 mg/kg qd 24-h p.o.) reduces tumor volume in 12 of 18 dogs, and such and effect is via induction of apoptosis and reduction in urine basic fibroblast growth factor concentration[2].

References:

- [1]. Kato M, et al. Cyclooxygenase-1 and cyclooxygenase-2 selectivity of non-steroidal anti-inflammatory drugs: investigation using human peripheral monocytes. J Pharm Pharmacol. 2001 Dec;53(12):1679-85.
- [2]. Mohammed SI, et al. Effects of the cyclooxygenase inhibitor, piroxicam, on tumor response, apoptosis, and angiogenesis in a canine model of human invasive urinary bladder cancer. Cancer Res. 2002 Jan 15;62(2):356-8.
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