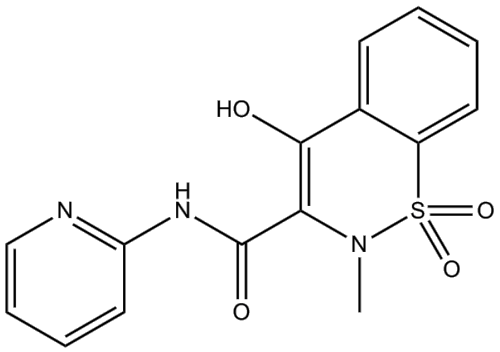
Product Data Sheet

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	≥ 16.6mg/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

Product Data Sheet

Cell experiment: Urinary bladder cancer cell lines are treated with graded concentrations of carboplatin (0.05, 0.5 and 1 μM) and Piroxicam (CP-16171) (167, 333 and 500 μM) for 72 h to assess dose-response profiles. For the combination approach, 0.05 μM of carboplatin is used with 333 μM 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

of 47, 25 μM 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 μM for human monocyte COX-1 and COX-2, respectively[1]. Piroxicam (CP-16171) (167, 333, 500 μM) decreases cell population of T24 and the 5637 cells. Piroxicam (CP-16171) (500 μM) also reduces the cell viability of T24 and 5637 cell, and is significantly effective when combined with 0.05 μM 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.
[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.