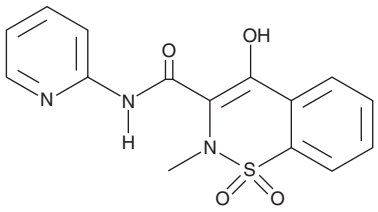
PRODUCT INFORMATION

Piroxicam

Item No. 13368

CAS Registry No.:	36322-90-4
Formal Name:	4-hydroxy-2-methyl-N-2-pyridinyl-2H-1,2-benzothiazine-3-carboxamide-1,1-dioxide
Synonym:	NSC 666076
MF:	$C_{15}H_{13}N_3O_4S$
FW:	331.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 206, 240, 330 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Piroxicam is supplied as a crystalline solid. A stock solution may be made by dissolving the piroxicam in the solvent of choice, which should be purged with an inert gas. Piroxicam is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of piroxicam in these solvents is approximately 20 mg/ml.

Piroxicam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, piroxicam should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Piroxicam has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Piroxicam is a COX inhibitor and non-steroidal anti-inflammatory drug (NSAID) with anti-inflammatory and analgesic properties.[1,2] It inhibits production of thromboxane B_2 (TXB_2; Item No. 19030) from arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) in HEL human erythroleukemic cells (IC_{50} = 0.45 µM), which endogenously express COX-1, as well as inhibits LPS-induced formation of prostaglandin $F_{1\alpha}$ ($PGF_{1\alpha}$; Item No. 15010) from arachidonic acid in Mono-Mac-6 cells (IC_{50} = 0.77 µM), which endogenously express COX-2.[2] Lornoxicam reduces LPS-induced production of nitric oxide and IL-6 in cell-based assays with IC_{50} values of 240 and ~470 µM, respectively. It reduces carrageenan-induced paw edema in rats when administered at doses of 1, 2.5, and 5 mg/kg.[3] Formulations containing piroxicam have been used in the treatment of pain and inflammation associated with osteoarthritis and rheumatoid arthritis.

References

1. Pairet, M., van Ryn, J., Schierok, H., *et al.* Differential inhibition of cyclooxygenases-1 and -2 by meloxicam and its 4'-isomer. *Inflamm. Res.* **47(6)**, 270-276 (1998).
2. Berg, J., Fellier, H., Christoph, T., *et al.* The analgesic NSAID lornoxicam inhibits cyclooxygenase (COX)-1/-2, inducible nitric oxide synthase (iNOS), and the formation of interleukin (IL)-6 *in vitro*. *Inflamm. Res.* **48(7)**, 369-379 (1999).
3. Buritova, J., Honore, P., Chapman, V., *et al.* Carrageenan oedema and spinal Fos-LI neurones are reduced by piroxicam in the rat. *Neuroreport* **6(10)**, 1385-1388 (1995).

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