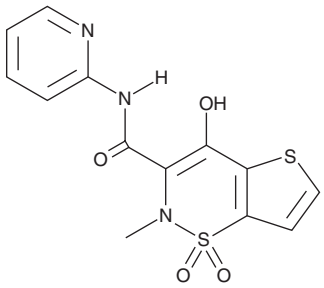
PRODUCT INFORMATION

Tenoxicam

Item No. 20304

CAS Registry No.:	59804-37-4
Formal Name:	4-hydroxy-2-methyl-N-2-pyridinyl-2H-thieno[2,3-e]-1,2-thiazine-3-carboxamide-1,1-dioxide
Synonym:	Ro 12-0068
MF:	$C_{13}H_{11}N_3O_4S_2$
FW:	337.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 222, 270, 355 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

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

Tenoxicam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tenoxicam should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Tenoxicam 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

Tenoxicam is a non-steroidal anti-inflammatory drug (NSAID) and COX-1 inhibitor (IC_{50} = 20 nM).[1,2] It is selective for COX-1 over COX-2 (IC_{50} = 322 nM). Tenoxicam inhibits platelet aggregation induced by arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) in washed isolated human platelets (IC_{50} = 0.16 µM).[3] Topical application of a nanogel formulated with tenoxicam-containing solid lipid nanoparticles (SLNs) reduces paw thickness in a rat model of carrageenan-induced paw edema.[4] Formulations containing tenoxicam have been used in the treatment of rheumatoid arthritis, osteoarthritis, and ankylosing spondylitis.

References

1. Yamada, H. Niki, Yamashita, M., *et al.* Prostaglandin E_2 production dependent upon cyclooxygenase-1 and cyclooxygenase-2 and its contradictory modulation by auranofin in rat peritoneal macrophages *J. Pharmacol. Exp. Ther.* **281(12)**, 1005-1012 (1997)
2. Engelhardt, G. Pharmacology of meloxicam, a new non-steroidal anti-inflammatory drug with an improved safety profile through preferential inhibition of COX-2. *Br. J. Rheumatol.* **35(1)**, 4-12 (1996).
3. 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).
4. Elkomy, M.H., El Menshawe, S.F., Eid, H.M., *et al.* Development of a nanogel formulation for transdermal delivery of tenoxicam: A pharmacokinetic-pharmacodynamic modeling approach for quantitative prediction of skin absorption. *Drug Dev. Ind. Pharm.* **43(4)**, 531-544 (2017).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM