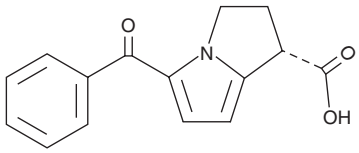
PRODUCT INFORMATION

(S)-Ketorolac

Item No. 11348

CAS Registry No.:	66635-92-5
Formal Name:	(1S)-5-benzoyl-2,3-dihydro-1H-pyrrolizine-1-carboxylic acid
Synonym:	(–)-Ketorolac
MF:	$C_{15}H_{13}NO_3$
FW:	255.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 245, 312 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

(S)-Ketorolac is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-ketorolac in the solvent of choice, which should be purged with an inert gas. (S)-Ketorolac is soluble in the organic solvent ethanol at a concentration of approximately 1 mg/ml. (S)-Ketorolac is slightly soluble in chloroform and methanol.

Description

(S)-Ketorolac is a non-selective COX inhibitor and non-steroidal anti-inflammatory drug (NSAID; IC_{50}s = 0.1 and 2.7 µM for COX-1 and COX-2, respectively).[1] (S)-Ketorolac is approximately twice as potent as the racemic mixture (Item No. 9001148) and 60 times more potent than (R)-ketorolac in a rat pain assay.[2] (S)-Ketorolac is cleared from rat kidney and liver more quickly than (R)-ketorolac.[3] Formulations containing ketorolac have been used to manage postoperative pain as well as an ophthalmic solution to treat ocular pain and inflammation.[4]

References

1. Handley, D.A., Cervoni, P., McCray, J.E., *et al.* Preclinical enantioselective pharmacology of (R)- and (S)- ketorolac. *J. Clin. Pharmacol.* **38**, 25S-35S (1998).
2. Guzmán, A., Yuste, F., Toscano, R.A., *et al.* Absolute configuration of (-)-5-benzoyl-1,2-dihydro-3H-pyrrolo[1,2-alpha]pyrrole-1-carboxylic acid, the active enantiomer of ketorolac. *J. Med. Chem.* **29(4)**, 589-591 (1986).
3. Dubey, S.K., Anand, A., and Saha, R.N. Enantioselective tissue distribution of ketorolac and its enantiomers in rats. *Drug Res. (Stuttg.)* **65(8)**, 428-431 (2015).
4. Gordon, S.M., Brahim, J.S., Rowan, J., *et al.* Pharmacodynamics and drug action. Peripheral prostanoid levels and nonsteroidal anti-inflammatory drug analgesia: Replicate clinical trials in a tissue injury model. *Clin. Pharmacol. Ther.* **72(2)**, 175-183 (2002).

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