

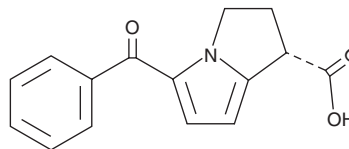
PRODUCT INFORMATION



(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: C₁₅H₁₃NO₃
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; IC₅₀s = 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-α]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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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