

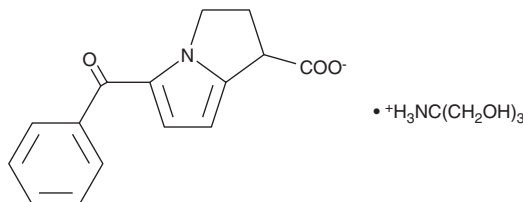
# PRODUCT INFORMATION



## Ketorolac (tromethamine salt)

Item No. 70690

**CAS Registry No.:** 74103-07-4  
**Formal Name:** (±)-5-benzoyl-2,3-dihydro-1H-pyrrolizine-1-carboxylic acid, tris(hydroxymethyl)aminomethane salt  
**Synonym:** Toradol  
**MF:** C<sub>15</sub>H<sub>12</sub>NO<sub>3</sub> • C<sub>4</sub>H<sub>12</sub>NO<sub>3</sub>  
**FW:** 376.4  
**Purity:** ≥99%  
**UV/Vis.:** λ<sub>max</sub>: 243, 317 nm  
**Supplied as:** A crystalline solid  
**Storage:** Room temperature  
**Stability:** ≥4 years



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

### Laboratory Procedures

Ketorolac (tromethamine salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the ketorolac (tromethamine salt) in the solvent of choice. Ketorolac (tromethamine salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ketorolac (tromethamine salt) in these solvents is approximately 7 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ketorolac (tromethamine salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ketorolac (tromethamine salt) in PBS, pH 7.2, is approximately 26 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Ketorolac is a non-steroidal anti-inflammatory drug (NSAID) and a non-selective COX inhibitor (IC<sub>50</sub> = 20 nM for both COX-1 and COX-2).<sup>1</sup> It prevents increases in paw swelling, increases paw withdrawal latency in a hot-plate test, and decreases prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) levels in paw tissue in a mouse model of carrageenan-induced inflammation when administered at a dose of 30 mg/kg. Ketorolac is a racemic mixture containing the active (S)-ketorolac (Item No. 11348) and inactive (R)-ketorolac enantiomers. Formulations containing ketorolac have been used to manage postoperative pain and as ophthalmic solutions to treat ocular pain and inflammation.

### Reference

1. Zhang, Y., Shaffer, A., Portanova, J., *et al.* Inhibition of cyclooxygenase-2 rapidly reverses inflammatory hyperalgesia and prostaglandin E<sub>2</sub> production. *J. Pharmacol. Exp. Ther.* **283**(3), 1069-1075 (1997).

#### 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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