

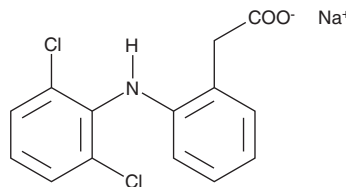
Product Information



Diclofenac (sodium salt)

Catalog No. 70680

CAS Registry No.: 15307-79-6
Formal Name: 2-[(2,6-dichlorophenyl)amino]-benzeneacetic acid, monosodium salt
Synonyms: Benfopen; Ecofenac; Voltaren
MF: C₁₄H₁₀Cl₂NO₂ • Na
FW: 318.1
Purity: ≥99%
Stability: ≥2 years at room temperature
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that diclofenac be stored as supplied at room temperature. It should be stable for at least 2 years.

Concentrated stock solutions of diclofenac can be prepared by dissolving the crystalline solid in an organic solvent such as ethanol, DMSO, or dimethyl formamide. The solubility of diclofenac in these solvents is approximately 35 mg/ml.

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 solutions of diclofenac can be prepared by dissolving the crystalline solid in the buffer of choice. The solubility of diclofenac is approximately 9 mg/ml in buffers of ionic strength ≥ 0.1 M and pH ≥ 7.2. Use the aqueous solution within 12 hours.

Diclofenac is a non-selective inhibitor of the cyclooxygenase activity of Prostaglandin H synthase (PGHS).^{1,2} Diclofenac inhibits human recombinant PGHS-1 and PGHS-2 with IC₅₀ values of 0.9 and 1.5 μM, respectively.¹ Diclofenac inhibits ovine PGHS-1 and PGHS-2 with IC₅₀ values of 60 and 220 nM, respectively.² Daily oral administration of diclofenac (3 mg/kg) significantly inhibited arthritis in rats.³ Arthritic rats exhibited no gastrointestinal ulcers after treatment with diclofenac for 21 days.³

References

1. Barnett, J., Chow, J., Ives, D., *et al.* Purification, characterization and selective inhibition of human prostaglandin G/H synthase 1 and 2 expressed in the baculovirus system. *Biochim. Biophys. Acta* **1209**, 130-139 (1994).
2. Johnson, J.L., Wimsatt, J., Buckel, S.D., *et al.* Purification and characterization of prostaglandin H synthase-2 from sheep placental cotyledons. *Arch. Biochem. Biophys.* **324**, 26-34 (1995).
3. Cuzzolin, L., Conforti, A., Donini, M., *et al.* Effects on intestinal microflora, gastrointestinal tolerability and antiinflammatory efficacy of diclofenac and nitrofenac in adjuvant arthritic rats. *Pharmacol. Res.* **29**, 89-97 (1994).

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog**.

Copyright Cayman Chemical Company, 01/20/2010

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com