Diclofenac (sodium salt)

Item No. 70680

CAS Registry No.: 15307-79-6
Formal Name: 2-[(2,6-dichlorophenyl)amino]-benzeneacetic acid, monosodium salt
Synonyms: Benfofen; Ecofenac; Voltaren
MF: C14H10Cl2NO2 • Na
FW: 318.1
Purity: ≥99%
Stability: ≥ 99% for at least 2 years

UV/Vis:
λmax: 285 nm

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

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