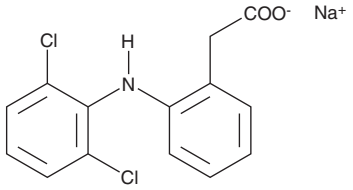
PRODUCT INFORMATION

Diclofenac (sodium salt)

Item No. 70680

CAS Registry No.: 15307-79-6
Formal Name: 2-[(2,6-dichlorophenyl)amino]-benzeneacetic acid, monosodium salt
MF: $C_{14}H_{10}Cl_2NO_2 \bullet Na$
FW: 318.1
Purity: ≥99%
UV/Vis.: λ_{max}: 285 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

Diclofenac (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the diclofenac (sodium salt) in the solvent of choice, which should be purged with an inert gas. Diclofenac (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of diclofenac (sodium salt) in these solvents is approximately 35, 40, and 50 mg/ml, respectively.

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 diclofenac (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of diclofenac (sodium salt) in PBS (pH 7.2) is approximately 9 mg/ml We do not recommend storing the aqueous solution for more than one day.

Description

Diclofenac is a non-steroidal anti-inflammatory drug (NSAID) and COX inhibitor (IC_{50}s = 0.9-2.7 and 1.5-20 µM, for human COX-1 and COX-2, respectively).[1,2] It is also an active metabolite of diclofenac methyl ester (Item No. 22218) and diclofenac amide (Item No. 21969).[3,4] Diclofenac inhibits release of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) induced by A23187 (Item No. 11016) in isolated rat peritoneal neutrophils and macrophages (IC_{50}s = 60 and 10 µM, respectively).[5] Transdermal administration of diclofenac inhibits carrageenan-induced paw edema in rats.[6] Formulations containing diclofenac have been used in the treatment of pain associated with osteoarthritis, rheumatoid arthritis, and ankylosing spondylitis.

References

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5. Kothari, H.V., Lee, W.H., and Ku, E.C. *Biochim. Biophys. Acta* **921(3)**, 502-511 (1987).
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