

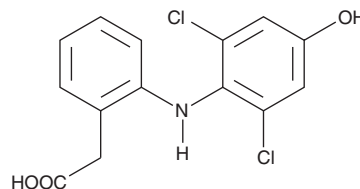
# PRODUCT INFORMATION



## 4-hydroxy Diclofenac

Item No. 10008518

**CAS Registry No.:** 64118-84-9  
**Formal Name:** 2-[(2,6-dichloro-4'-hydroxyphenyl) amino]-benzeneacetic acid  
**MF:** C<sub>14</sub>H<sub>11</sub>Cl<sub>2</sub>NO<sub>3</sub>  
**FW:** 312.2  
**Purity:** ≥97%  
**UV/Vis.:** λ<sub>max</sub>: 271 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

4-hydroxy Diclofenac is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-hydroxy diclofenac in the solvent of choice. 4-hydroxy Diclofenac is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4-hydroxy diclofenac in these solvents is approximately 30 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 aqueous solutions of 4-hydroxy diclofenac can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4-hydroxy diclofenac in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

4-hydroxy Diclofenac is a CYP2C9 metabolite of the NSAID diclofenac (Item No. 70680).<sup>1-3</sup> By inhibiting COX and subsequently suppressing PGE<sub>2</sub> synthesis, it demonstrates anti-inflammatory and analgesic properties.<sup>4</sup>

### References

1. Shimamoto, J., Ieiri, I., Urae, A., *et al.* Lack of differences in diclofenac (a substrate for CYP2C9) pharmacokinetics in healthy volunteers with respect to the single CYP2C9\*3 allele. *Eur. J. Clin. Pharmacol.* **56**, 65-68 (2000).
2. Sawchuk, R.J., Maloney, J.A., Cartier, L.L., *et al.* Analysis of diclofenac and four of its metabolites in human urine by HPLC. *Pharmacol. Res.* **12**, 756-762 (1995).
3. Godbillon, J., Gauron, S., and Metayer, J.P. High-performance liquid chromatographic determination of diclofenac and its monohydroxylated metabolites in biological fluids. *J. Chromatogr.* **27**, 151-159 (1985).
4. Yamakazi, R., Kawai, S., Matsumoto, T., *et al.* Hydrolytic activity is essential for aceclofenac to inhibit cyclooxygenase in rheumatoid synovial cells. *J. Pharmacol. Exp. Ther.* **289**(2), 676-681 (1999).

#### 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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