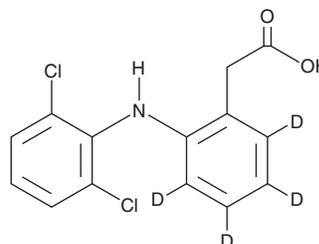


PRODUCT INFORMATION



Diclofenac-d₄ Item No. 19072

CAS Registry No.: 153466-65-0
Formal Name: 6-[(2,6-dichlorophenyl)amino]-benzene-2,3,4,5-d₄-acetic acid
MF: C₁₄H₇D₄Cl₂NO₂
FW: 300.2
Chemical Purity: ≥99% (Diclofenac)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Diclofenac-d₄ is intended for use as an internal standard for the quantification of diclofenac (Item Nos. 70680 | 22983) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Diclofenac-d₄ is supplied as a solid. A stock solution may be made by dissolving the diclofenac-d₄ in the solvent of choice, which should be purged with an inert gas. Diclofenac-d₄ is soluble in organic solvents such as ethanol and DMSO. The solubility of diclofenac-d₄ in these solvents is approximately 30 mg/ml.

Description

Diclofenac-d₄ is intended for use as an internal standard for the quantification of diclofenac (Item Nos. 70680 | 22983) by GC- or LC-MS. Diclofenac is a non-steroidal anti-inflammatory drug (NSAID) and COX inhibitor (IC₅₀s = 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 (IC₅₀s = 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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3. Lobo, S., Li, H., Farhan, N., et al. *Drug Dev. Ind. Pharm.* **40**(3), 425-432 (2014).
4. Santos, J., Moreira, V., Campos, M.L., et al. *Int. J. Mol. Sci.* **13**(11), 15305-15320 (2012).
5. Kothari, H.V., Lee, W.H., and Ku, E.C. *Biochim. Biophys. Acta* **921**(3), 502-511 (1987).
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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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