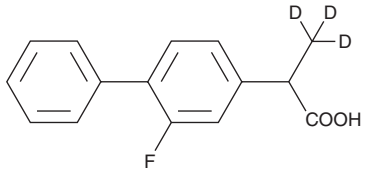
PRODUCT INFORMATION

Flurbiprofen-d_3

Item No. 25277

CAS Registry No.: 1185133-81-6
Formal Name: 2-(2-fluoro-[1,1'-biphenyl]-4-yl)propanoic-3,3,3-d_3 acid
MF: $C_{15}H_{10}D_3FO_2$
FW: 247.3
Chemical Purity: ≥98% (Flurbiprofen)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤1% d_0
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

Flurbiprofen-d_3 is intended for use as an internal standard for the quantification of flurbiprofen (Item Nos. 70250 | 10004207 | 70255) 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).

Flurbiprofen-d_3 is supplied as a solid. A stock solution may be made by dissolving the flurbiprofen-d_3 in the solvent of choice. Flurbiprofen-d_3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of flurbiprofen-d_3 in these solvents is approximately 25, 10, and 25 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 flurbiprofen-d_3 can be prepared by directly dissolving the solid in aqueous buffers. The solubility of flurbiprofen-d_3 in PBS, pH 7.2, is approximately 0.9 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Flurbiprofen is a non-selective COX inhibitor (IC_{50}s = 0.04 and 0.51 µM for COX-1 and COX-2, respectively).[1] *In vivo*, flurbiprofen (0.3-4.8 mg/kg, p.o.) reduces carrageenan-induced hind paw edema and yeast-induced fever in rats.[2] Flurbiprofen reduces plasma fibrinogen levels and arthritic score in a rat model of adjuvant-induced arthritis. It also reduces tumor weight and prostaglandin production and increases survival in a WHT-NC mouse xenograft model when administered at a dose of 5 mg/kg.[3] Formulations containing flurbiprofen have been used to manage pain and inflammation associated with arthritis.

References

1. Barnett, J., Chow, J., Ives, D., *et al. Biochim Biophys. Acta.* **1209(1)**, 130-139 (1994).
2. Glenn, E.M., Rohloff, N., Bowman, B.J., *et al. Agents Actions* **3(4)**, 210-216 (1973).
3. Bennett, A., Houghton, J., Leaper, D.J., *et al. Br. J. Pharmacol.* **63(2)**, 356P-357P (1978).

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.

WARRANTY AND LIMITATION OF REMEDY
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