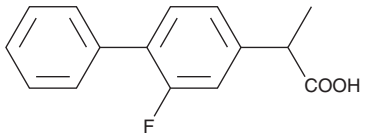
PRODUCT INFORMATION

(±)-Flurbiprofen

Item No. 70250

CAS Registry No.:	5104-49-4
Formal Name:	(±)-2-fluoro-α-methyl-[1,1'-biphenyl]-4-acetic acid
Synonym:	Ansaid
MF:	$C_{15}H_{13}FO_2$
FW:	244.3
Purity:	≥99%
UV/Vis.:	λ_{max}: 247 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

(±)-Flurbiprofen is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-flurbiprofen in the solvent of choice. (±)-Flurbiprofen is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (±)-flurbiprofen in ethanol and DMF is approximately 25 mg/ml, and approximately 10 mg/ml in DMSO.

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 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (±)-flurbiprofen 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.* Purification, characterization and selective inhibition of human prostaglandin G/H synthase 1 and 2 expressed in the baculovirus system. *Biochim Biophys. Acta.* **1209(1)**, 130-139 (1994).
2. Glenn, E.M., Rohloff, N., Bowman, B.J., **et al.** The pharmacology of 2-(2-fluoro-4-biphenylyl)propionic acid (flurbiprofen). A potent non-steroidal anti-inflammatory drug. *Agents Actions* **3(4)**, 210-216 (1973).
3. Bennett, A., Houghton, J., Leaper, D.J., *et al.* Tumour growth and response to treatment: Beneficial effect of the prostaglandin synthesis inhibitor flurbiprofen [proceedings]. *Br. J. Pharmacol.* **63(2)**, 356P-357P (1978).

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