

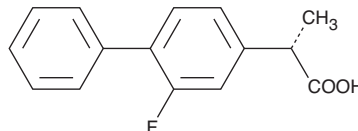
Product Information



(S)-Flurbiprofen

Catalog No. 10004207

CAS Registry No.: 51543-39-6
Formal Name: (S)-(+)-2-fluoro- α -methyl-4-biphenylacetic acid
MF: C₁₅H₁₃FO₂
FW: 244.3
Purity: \geq 99%
Stability: \geq 2 years at room temperature
Supplied as: A crystalline solid
UV/Vis.: λ_{max} : 247 nm



Laboratory Procedures

For long term storage, we suggest that (S)-flurbiprofen be stored as supplied at room temperature. It should be stable for at least two years.

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

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 (S)-flurbiprofen can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of (S)-flurbiprofen in PBS (pH 7.2) is at least 0.9 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Non-steroidal anti-inflammatory drugs (NSAIDs) are potent inhibitors of both COX-1 and COX-2 in humans, but are frequently supplied as racemates.¹ Such is the case for the common 2-aryl propionic acid drug flurbiprofen, sold under the trade name Ansaid. In the 2-aryl propionic acid NSAID family, cyclooxygenase inhibition resides primarily in the (S)-enantiomer. In guinea pig whole blood, the IC₅₀ value of (S)-flurbiprofen is about 0.5 μ M for both COX-1 and COX-2.² Only a small amount (<5%) of the (S)-enantiomer is converted to the (R)-enantiomer in rats and humans; therefore, the biological effects are specific to each enantiomer.³

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**, 130-139 (1994).
2. Carabaza, A., Cabre, F., Rotllan, E., *et al.* Stereoselective inhibition of inducible cyclooxygenase by chiral nonsteroidal antiinflammatory drugs. *J. Clin. Pharmacol.* **36**, 505-512 (1996).
3. Brune, K., Beck, W.S., Geisslinger, G., *et al.* Aspirin-like drugs may block pain independently of prostaglandin synthesis inhibition. *Experientia* **47**, 257-261 (1991).

Related Products

(\pm)-Flurbiprofen - Cat. No. 70250 • (R)-Flurbiprofen - Cat. No. 70255 • Indomethacin - Cat. No. 70270 • (\pm)-Ibuprofen - Cat. No. 70280 • Ketorolac (tromethamine salt) - Cat. No. 70690

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

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