

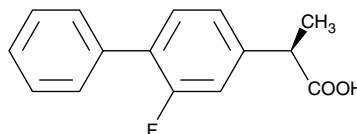
Product Information



(R)-Flurbiprofen

Item No. 70255

CAS Registry No.:	51543-40-9
Formal Name:	(R)-(-)-2-fluoro- α -methyl-4-biphenylacetic acid
Synonyms:	E-7869, Flurizan, Tarenflurbil
MF:	C ₁₅ H ₁₃ FO ₂
FW:	244.3
Purity:	≥99%
Stability:	≥2 year at room temperature
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max} : 247 nm



Laboratory Procedures

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

(R)-Flurbiprofen is supplied as a crystalline solid. A stock solution may be made by dissolving the (R)-flurbiprofen in an organic solvent purged with an inert gas. (R)-Flurbiprofen is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (R)-flurbiprofen in these solvents is approximately 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 (R)-flurbiprofen can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of (R)-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.

(R)-Flurbiprofen is a member of the 2-aryl propionic acid group of nonsteroidal anti-inflammatory drugs (NSAIDs). Only a small amount (<5%) of (R)-enantiomer is converted to the (S)-enantiomer in rats and humans; therefore, the biological effects are specific to each enantiomer.¹ Although inactive as an inhibitor of cyclooxygenase (COX), this enantiomer reduces inflammation through inhibition of NF- κ B and AP-1 activation.² (R)-Flurbiprofen has also been shown to suppress prostate tumor cells by inducing p75^{NTR} protein expression.³ (R)-Flurbiprofen inhibits the enzyme γ -secretase thereby preventing the formation of the amyloid β peptide (A β 42) from amyloid β precursor protein (APP).⁴ Before being dropped as a drug candidate, (R)-flurbiprofen advanced to Phase III clinical trials, the first drug candidate to advance to late stage trials for the treatment of mild Alzheimer's disease.

References

1. 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).
2. Tegeder, I., Niederberger, E., Israr, E., *et al.* Inhibition of NF- κ B and AP-1 activation by R- and S-flurbiprofen. *FASEB J.* **15**, 595-597 (2001).
3. Quann, E.J., Khwaja, F., Zavitz, K.H., *et al.* The aryl propionic acid R-flurbiprofen selectively induces p75^{NTR}-dependent decreased survival of prostate tumor cells. *Cancer Res* **67**(7), 3254-3262 (2007).
4. Kukar, T.L., Ladd, T.B., Bann, M.A., *et al.* Substrate-targeting γ -secretase modulators. *Nature* **453**, 925-929 (2008).

Related Products

(\pm)-Flurbiprofen - Item No. 70250 • Indomethacin - Item No. 70270 • (\pm)-Ibuprofen - Item No. 70280 • Ketorolac (tromethamine salt) - Item No. 70690
• (S)-Flurbiprofen - Item No. 10004207

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC 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 *via* email to your institution.

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