

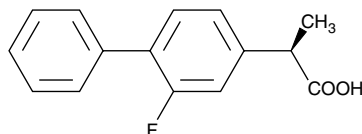
Product Information



(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: C₁₅H₁₃FO₂
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

For a list of related products please visit: www.caymanchem.com/catalog/70255

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.

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.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 06/19/2012

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com