

Certificate of Analysis

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Product Name: Flurbiprofen

CAS Number: 5104-49-4

IUPAC Name: 2-Fluoro- α -methyl-[1,1'-biphenyl]-4-acetic acid

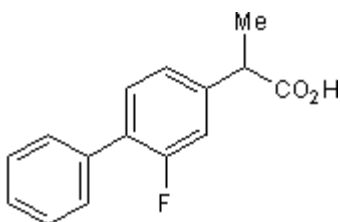
Catalog No.: 1769

EC Number: 225-827-6

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₃FO₂
Batch Molecular Weight: 244.26
Physical Appearance: White solid
Solubility: 1eq. NaOH to 25 mM
ethanol to 50 mM
DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.48 (Dichloromethane:Methanol [10:1])
Melting Point: At 117°C
HPLC: Shows >99.5% purity
¹H NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	73.76	5.36	
Found	73.47	5.58	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent inhibitor of cyclooxygenase (IC₅₀ values are 0.1 and 0.4 μ M for inhibition of human COX-1 and COX-2 respectively). Analgesic, anti-inflammatory and antipyretic *in vivo*. Inhibits tumor cell growth *in vitro* and *in vivo*. Regulates prostate stem cell antigen through activation of Akt kinase. Also inhibits fibroblast proliferation *in vitro*.

Physical and Chemical Properties:

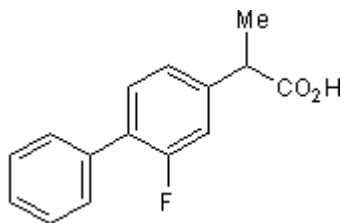
Batch Molecular Formula: C₁₅H₁₃FO₂

Batch Molecular Weight: 244.26

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Glenn *et al* (1973) The pharmacology of 2-(2-fluoro-4-biphenyl)propionic acid (flurbiprofen). A potent non-steroidal anti-inflammatory drug. *Agents Actions* **3** 210. PMID: 4776365.

Gierse *et al* (1995) Expression and selective inhibition of the constitutive and inducible forms of human cyclo-oxygenase. *Biochem.J.* **305** 479. PMID: 7832763.

Hoferova *et al* (2002) The effect of nonsteroidal antiinflammatory drugs ibuprofen, flurbiprofen, and diclofenac on *in vitro* and *in vivo* growth of mouse fibrosarcoma. *Cancer Invest.* **20** 490. PMID: 12094544.

Zemskova *et al* (2006) Gene expression profiling in R-flurbiprofen-treated prostate cancer: R-Flurbiprofen regulates prostate stem cell antigen through activation of AKT kinase. *Biochem.Pharmacol.* **72** 1257. PMID: 16949054.

Storage: Store at RT

Solubility & Usage Info:

1eq. NaOH to 25 mM
ethanol to 50 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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