

Product Name: Fluticasone propionate

Catalog No.: 2007

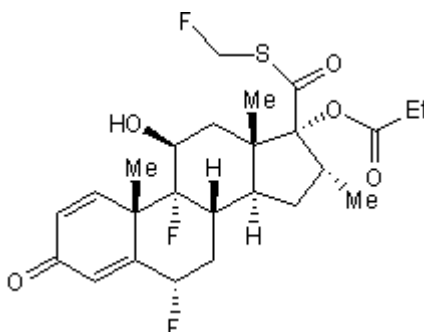
Batch No.: 2

CAS Number: 80474-14-2

IUPAC Name: (6 α ,11 β ,16 α ,17 α)-6,9-Difluoro-11-hydroxy-16-methyl-3-oxo-17-(1-oxopropoxy)androsta-1,4-diene-17-carbothioic acid fluoromethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₅H₃₁F₃O₅S
Batch Molecular Weight: 500.57
Physical Appearance: white solid
Solubility: DMSO to 50 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = +30.8 (Concentration = 0.5, Solvent = DCM)
Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 59.99 | 6.25 | |
| Found | 59.64 | 6.22 | |

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

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Description:

High affinity, selective glucocorticoid receptor agonist (K_d = 0.5 nM). Potently stimulates glucocorticoid receptor-mediated transactivation of gene expression and enhances human eosinophil apoptosis (EC_{50} = 3.7 nM) *in vitro*. Inhibits mast cell accumulation in nasal mucosa following topical administration. Lipophilic anti-inflammatory agent with low oral bioavailability. Also potentiates K_v1 channels (EC_{50} = 37 nM).

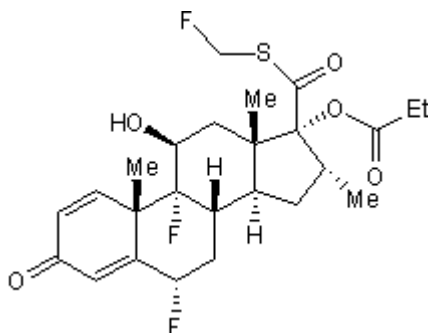
Physical and Chemical Properties:

Batch Molecular Formula: $C_{25}H_{31}F_3O_5S$

Batch Molecular Weight: 500.57

Physical Appearance: white solid

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 50 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.

References:

Johnson (1995) The anti-inflammatory profile of fluticasone propionate. *Allergy* **50** 11. PMID: 7604948.

Smith and Kreutner (1998) *In vitro* glucocorticoid receptor binding and transcriptional activation by topically active glucocorticoids. *Arzneim.-Forsch.* **48** 956.

Zhang et al (2000) Enhancement of human eosinophil apoptosis by fluticasone propionate, budesonide, and beclomethasone. *Eur.J.Pharmacol.* **406** 325. PMID: 11040338.

Pan et al (2012) Potentiation of the K_v1 family K^+ channel by cortisone analogues. *ACS Chem.Biol.* **7** 1641. PMID: 22803826.

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