

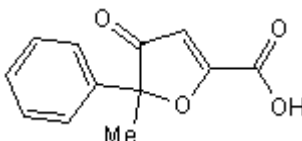
Certificate of Analysis

Product Name: Acifran
CAS Number: 72420-38-3
IUPAC Name: 4,5-Dihydro-5-methyl-4-oxo-5-phenyl-2-furancarboxylic acid

Catalog No.: 1762 **Batch No.:** 3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{12}H_{10}O_4 \cdot \frac{1}{4}H_2O$
Batch Molecular Weight: 222.71
Physical Appearance: Off-white solid
Solubility: ethanol to 100 mM
 DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: $R_f = 0.15$ (Ethyl acetate:Acetic acid [95:5])
HPLC: Shows >99.4% purity
 1H NMR: Consistent with structure
 Mass Spectrum: Consistent with structure
 Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.72	4.75	
Found	64.37	4.7	

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

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Description:

Hypolipidemic agent. Exhibits higher potency than nicotinic acid and clofibrate. Full and potent agonist at the human orphan GPCR HM74A/GPR109A and GPR109B (EC₅₀ values are 1.3 and 4.2 μM respectively). Reduces serum triglycerides and circulating LDL-cholesterol in vivo, without affecting liver weight or liver enzymes.

Physical and Chemical Properties:

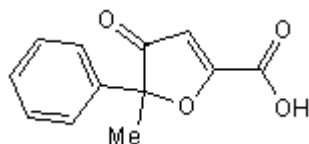
Batch Molecular Formula: C₁₂H₁₀O₄·¼H₂O

Batch Molecular Weight: 222.71

Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 100 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.

References:

Cayen et al (1982) Evaluation of the lipid-lowering activity of AY-25,712 in rats. *Atherosclerosis* **45** 267. PMID: 6818976.

Jirkovsky and Cayen (1982) Hypolipidemic 4,5-dihydro-4-oxo-5,5-disubstituted-2-furancarboxylic acids. *J.Med.Chem.* **25** 1154. PMID: 7143351.

Wise et al (2003) Molecular identification of high and low affinity receptors for nicotinic acid. *J.Biol.Chem.* **278** 9869. PMID: 12522134.

Jung et al (2007) Analogues of acifran: agonists of the high and low affinity niacin receptors, GPR109a and GPR109b. *J.Med.Chem.* **50** 1445. PMID: 17358052.

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