

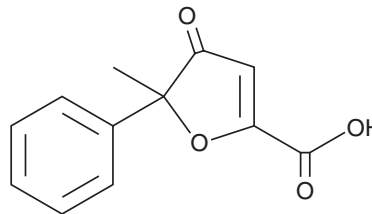
PRODUCT INFORMATION



Acifran

Item No. 34556

CAS Registry No.: 72420-38-3
Formal Name: 4,5-dihydro-5-methyl-4-oxo-5-phenyl-2-furancarboxylic acid
Synonym: (±)-Acifran
MF: C₁₂H₁₀O₄
FW: 218.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acifran is supplied as a solid. A stock solution may be made by dissolving the acifran in the solvent of choice, which should be purged with an inert gas. Acifran is soluble in organic solvents such as ethanol and DMSO. The solubility of acifran in these solvents is approximately 100 mM.

Description

Acifran is a niacin receptor agonist.^{1,2} It binds to hydroxycarboxylic acid receptor 2 (HCA₂), known previously as G protein-coupled receptor 109A (GPR109A) and niacin receptor 1, with an IC₅₀ value of 1.12 μM, as well as induces ERK1/2 phosphorylation in CHO-K1 cells expressing HCA₂ or HCA₃, also known as GPR109B and niacin receptor 2, when used at concentrations ranging from 0.01 to 10 μM. Acifran (1 mg/kg) reduces serum triglyceride and LDL levels and increases the ratio of HDL to total cholesterol in hyperlipidemic rats.³ It also reduces serum triglyceride levels in a rat model of diabetes induced by streptozotocin (STZ; Item No. 13104).

References

1. Wise, A., Foord, S.M., Fraser, N.J., *et al.* Molecular identification of high and low affinity receptors for nicotinic acid. *J. Biol. Chem.* **278**(11), 9869-9874 (2003).
2. Mahboubi, K., Witman-Jones, T., Adamus, J.E., *et al.* Triglyceride modulation by acifran analogs: Activity towards the niacin high and low affinity G protein-coupled receptors HM74A and HM74. *Biochem. Biophys. Res. Commun.* **340**(2), 482-490 (2006).
3. Cayen, M.N., Kallai-Sanfacon, M.A., Dubuc, J., *et al.* Evaluation of the lipid-lowering activity of AY-25,712 in rats. *Atherosclerosis* **45**(3), 267-279 (1982).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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