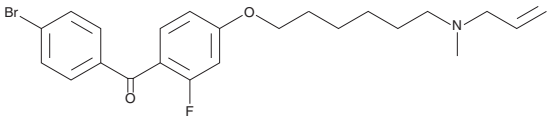
PRODUCT INFORMATION

Ro 48-8071

Item No. 10006415

CAS Registry No.: 161582-11-2
Formal Name: (4-bromophenyl)[2-fluoro-4-[[6-(methyl-2-propenylamino)hexyl]oxy]phenyl]-methanone
MF: $C_{23}H_{27}BrFNO_2$
FW: 448.4
Purity: ≥95%
UV/Vis.: λ_{max}: 203, 267 nm
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Ro 48-8071 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of Ro 48-8071 in these solvents is approximately 30 mg/ml.

Ro 48-8071 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of Ro 48-8071 should be diluted with the aqueous buffer of choice. Ro 48-8071 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Oxidosqualene cyclase (OSC) is a microsomal enzyme that catalyzes the cyclization of monooxidosqualene to lanosterol in the cholesterol synthetic pathway.[1,2] Ro 48-8071 is an inhibitor of OSC that has low-density lipoprotein (LDL) cholesterol lowering activity similar to the 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) inhibitor simvastatin.[3] It inhibits OSC from human liver microsomes and HepG2 cells with IC_{50} values of approximately 6.5 nM and 1.5 nM, respectively.[3] Ro 48-8071 lowered LDL cholesterol ~40% in hamsters at a dose of 150 µg/kg without affecting high-density lipoprotein levels and with no sign of liver toxicity.[3] Ro 48-8071 increases cytochrome P3A mRNA and protein levels in primary rat and murine hepatocyte cultures with a maximal effect at 30 µM.[4]

References

1. Vance, D.E. Cholesterol and related derivatives, Chapter 23, *in* Biochemistry. Zubay, G., editor, 2nd ed., Macmillan Publishing Company, New York, 725-748 (1988).
2. Thoma, R., Schulz-Gasch, T., D'Arcy, B., *et al.* Insight into steroid scaffold formation from the structure of human oxidosqualene cyclase. *Nature* **432**, 118-122 (2004).
3. Morand, O.H., Aebi, J.D., Dehmlow, H., *et al.* Ro 48-8071, a new 2,3-oxidosqualene:lanosterol cyclase inhibitor lowering plasma cholesterol in hamsters, squirrel monkeys, and minipigs: Comparison to simvastatin. *J. Lipid Res.* **38**, 373-390 (1997).
4. Shenoy, S.D., Spencer, T.A., Mercer-Haines, N.A., *et al.* Induction of CYP3A by 2,3-Oxidosqualene:Lanosterol cyclase inhibitors is mediated by an endogenouse squalene metabolite in primary cultured rat hepatocytes. *Mol. Pharmacol.* **65**, 1302-1312 (2004).

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