

Product Data Sheet

Product Name: Atranorin
Cat. No.: GC46893

Chemical Properties

Cas. No. 479-20-9

SMILES CC1=CC(OC(C2=C(O)C(C=O)=C(O)C=C2C)=O)=C(C)C(O)=C1C(OC)=O

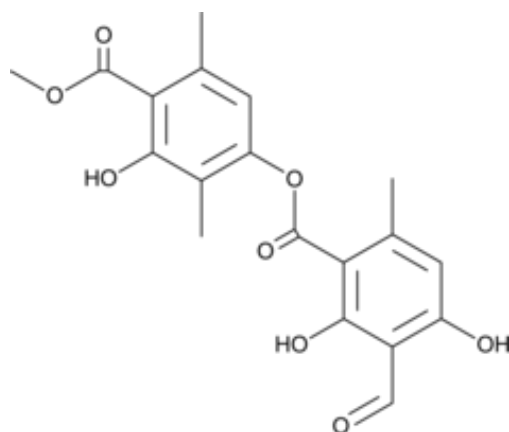
Formula C₁₉H₁₈O₈ M.Wt 374.3

Solubility Chloroform: soluble, DMSO: soluble Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Atranorin is a depside lichen metabolite that has been found in *S. alpinum* and has diverse biological activities.^{1,2,3,4} It is active against the bacteria *B. cereus*, *B. subtilis*, *S. aureus*, *S. faecalis*, *P. vulgaris*, *L. monocytogenes*, and *A. hydrophila* (MICs = 1.67, 0.38, 26.7, 13.4, 3.34, 9.83, and 1.67 mM, respectively), the fungi *C. albicans* and *C. glabrata* (MIC = 26.7 mM for both), as well as the mycobacterium *M. aurum* (MIC = 250 µg/ml).^{1,2} Atranorin is cytotoxic to A270, HL-60, and Jurkat cancer cells (IC₅₀s = 197.9, 93.5, and 181.6 µM, respectively) but not HeLa, MCF-7, SK-BR-3, or HT-29 cancer cells (IC₅₀s = >200 µM).³ It inhibits acetic acid-induced writhing in mice when

Caution: Product has not been fully validated for medical applications. For research use only.

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administered orally at doses of 200 and 400 mg/kg.⁴ Atranorin (200 and 400 mg/kg, p.o.) also reduces paw licking and biting in the second, but not first, phase of the formalin test when administered 30 minutes prior to formalin in mice.

1. IngÓlfsdÓttir, K., Chung, G.A., SkÚlason, V.G., et al. Antimycobacterial activity of lichen metabolites in vitro. Eur. J. Pharm. Sci. 6(2)141-144 (1998)
2. Yilmaz, M., TÚrk, A.O., Tay, T., et al. The antimicrobial activity of extracts of the lichen Cladonia foliacea and its (-)-usnic acid, atranorin, and fumarprotocetraric acid constituents. Z. Naturforsch. C. J. Biosci. 59(3-4)249-254 (2004)
3. Ba?korovÁ, M., Ba?kor, M., Mikeš, J., et al. Variable responses of different human cancer cells to the lichen compounds parietin, atranorin, usnic acid and gyrophoric acid. Toxicol. In Vitro 25(1)37-44 (2011)
4. Melo, M.G.D., AraÚjo, A.A.S., Rocha, C.P.L., et al. Purification, physicochemical properties, thermal analysis and antinociceptive effect of atranorin extracted from Cladonia kalbii. Biol. Pharm. Bull. 31(10)1977-1980 (2008)

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