

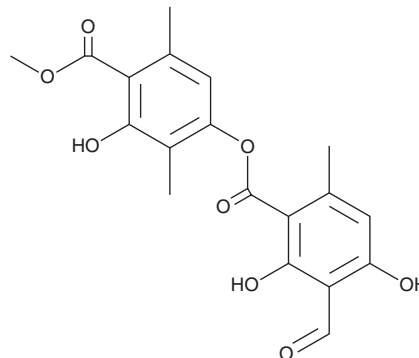
PRODUCT INFORMATION



Atranorin

Item No. 28106

CAS Registry No.: 479-20-9
Formal Name: 3-formyl-2,4-dihydroxy-6-methyl-benzoic acid, 3-hydroxy-4-(methoxycarbonyl)-2,5-dimethylphenyl ester
Synonyms: NSC 87512, NSC 249980, NSC 685591
MF: C₁₉H₁₈O₈
FW: 374.3
Purity: ≥95%
UV/Vis.: λ_{max}: 251 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Litchi chinensis*



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

Laboratory Procedures

Atranorin is supplied as a crystalline solid. A stock solution may be made by dissolving the atranorin in the solvent of choice, which should be purged with an inert gas. Atranorin is soluble in organic solvents such as chloroform and DMSO.

Description

Atranorin is a depside lichen metabolite that has been found in *S. alpinum* and has diverse biological activities.¹⁻⁴ 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 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.

References

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2. Yilmaz, M., Türk, 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. Bačkorová, M., Bačkor, 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).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM