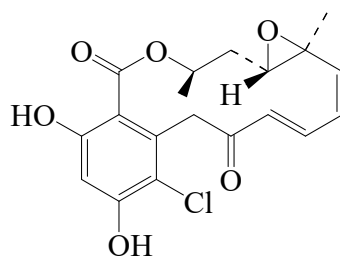




>>Entry Name: Radicicol

Synonym(s): 8-Chloro-1*a*,14,15,15*a*-tetrahydro-9,11-dihydroxy-14-methyl-6*H*-oxireno[*e*][2]benzoxacyclotetradecin-6,12(7*H*)-dione, 9Cl. Monorden



Absolute
Configuration

CAS Registry Number: 12772-57-5

Related CAS Registry Numbers(s): 11021-61-7

Molecular Formula: C₁₈H₁₇ClO₆

Molecular Weight: 364.781

Accurate Mass: 364.071367

Percentage Composition: C 59.27%; H 4.70%; Cl 9.72%; O 26.32%

Biological Source: Metab. of *Nectria radicola*, *Monosporium* spp., *Penicillium luteoorantium* and *Monocillium nordinii*

Biological Use/Importance: Antineoplastic antibiotic and antifungal agent. Angiogenesis inhibitor. Protein kinase inhibitor. Shows antimalarial activity

Physical Description: Prisms (Et₂O)

Melting Point: Mp 195°

Optical Rotation: [α]_D²⁰ +216 (c, 1 in CHCl₃)

UV: [acid] $\lambda_{\max}$ (no shifts reported) (Derep) [base] $\lambda_{\max}$ 254 (ϵ 22600); 274 (ϵ 22600); 319 (ϵ 15000) (EtOH/NaOH) (Derep) [neutral] $\lambda_{\max}$ 265 (ϵ 13200); 272 (ϵ 13100); 315 (ϵ 2800) (EtOH) (Derep)

Hazard & Toxicity: LD₅₀ (mus, ivn) 175 mg/kg

>>Derivative: Di-Ac

Physical Description: Cryst.

Melting Point: Mp 189-190°

>>Derivative: Di-Me ether

CAS Registry Number: 75207-16-8

Molecular Formula: C₂₀H₂₁ClO₆

Molecular Weight: 392.835

Percentage Composition: C 61.15%; H 5.39%; Cl 9.02%; O 24.44%

Biological Use/Importance: Shows antineoplastic and nematocidal props.

Melting Point: Mp 186-187°

Optical Rotation: [α]_D -58 (c, 1 in CHCl₃)

Other Data: Other dialkyl ethers show similar props.

References:

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Nozawa, K. *et al.*, *J. Nat. Prod.*, 1979, **42**, 374
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U.S. Pat., 1980, *WR Grace*, 4 228 079; *CA*, **94**, 121499u, (*derivs*)
Kwon, H.J. *et al.*, *Cancer Res.*, 1992, **52**, 6926, (*pharmacol*)
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Chanmugam, P. *et al.*, *J. Biol. Chem.*, 1995, **270**, 5418, (*pharmacol*)
Tanaka, Y. *et al.*, *J. Antibiot.*, 1998, **51**, 153-160; 1999, **52**, 880-888, (*activity*)