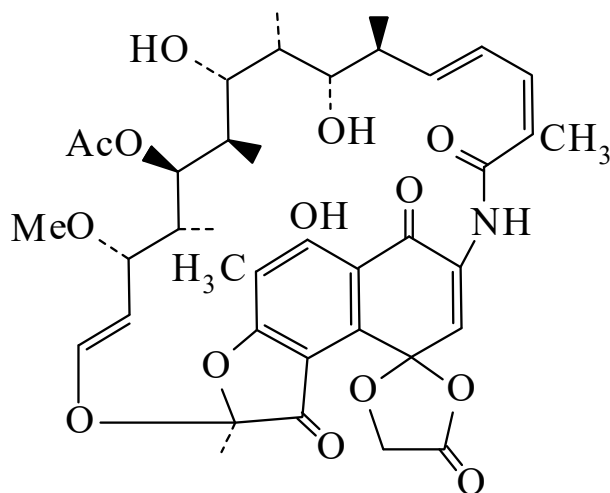




>>Entry Name: Rifamycin O

Synonym(s): 4-*O*-(Carboxymethyl)-1-deoxy-1,4-dihydro-4-hydroxy-1-oxorifamycin γ -lactone, 9Cl



CAS Registry Number: 14487-05-9

Molecular Formula: $C_{39}H_{47}NO_{14}$

Molecular Weight: 753.799

Accurate Mass: 753.299659

Percentage Composition: C 62.14%; H 6.28%; N 1.86%; O 29.72%

Biological Source: Isol. from *Actinomadura crenea rifamycinii*, *Streptomyces mediterranei* and *Streptomyces tolypophorus*

Use/Importance: Active against gram-positive bacteria, primarily mycobacteria

Physical Description: Pale-yellow cryst. (MeOH)

Melting Point: Mp 300° (160 dec., 180-185°)

Optical Rotation: $[\alpha]_D^{20} +71.5$ (c, 1 in dioxan)

Solubility: BERDY SOL: Sol. bases, Me_2CO , THF; fairly sol. MeOH, EtOAc, EtOH; poorly sol. H_2O , hexane, acids, Et_2O

UV: [acid] λ_{max} (no shifts reported) (Derep) [base] λ_{max} (solvent not reported) (Derep) [neutral] λ_{max} 222 (ϵ 27500); 273 (ϵ 33100); 370 (ϵ 4520) (MeOH) (Derep) [neutral] λ_{max} 226 (E1%/1cm 365); 273 (E1%/1cm 440); 370 (E1%/1cm 60) (MeOH) (Berdy) [neutral] λ_{max} 222 (E1%/1cm 613); 273 (E1%/1cm 440); 370 (E1%/1cm 60) (EtOH) (Berdy)

Other Data: Redn. $\rightarrow$ Rifamycin B [KZN71-F](#). Weak acid, slowly sol. alkalis $\rightarrow$ red-violet col.

Hazard & Toxicity: BERDY HAZD : LD₅₀ (mus, ipr) 1000 mg/kg , LD₅₀ (mus, scu) 3000 mg/kg , LD₅₀ (mus, ivn) 1800 mg/kg

References:

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Zerilli, L.F. *et al.*, *Biomed. Mass Spectrom.*, 1975, **2**, 307, (*ms*)

Dzegilenko, N.B. *et al.*, *Antibiotiki (Moscow)*, 1977, **22**, 206, (*purifn*)

Seong, B.L. *et al.*, *Chem. Lett.*, 1982, 627, (*synth*)

Bacchi, A. *et al.*, *J. Med. Chem.*, 1998, **41**, 2319-2332, (*cryst struct, pmr, ir*)

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