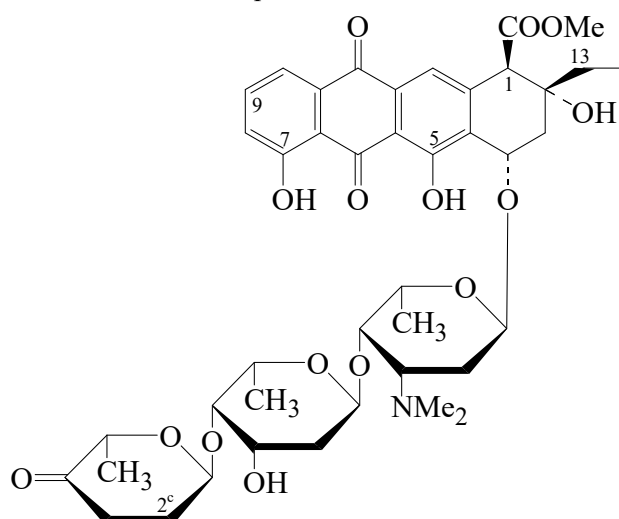




>>Entry Name: Aclacinomycin A

Synonym(s): Aclarubicin, BAN, INN, USAN. Aclacin. Aclacinon. Aclacur. Aclaplastin. MA 144A. NSC 208734. Antibiotic MA 144A₁



CAS Registry Number: 57576-44-0

Molecular Formula: C₄₂H₅₃NO₁₅

Molecular Weight: 811.878

Accurate Mass: 811.341524

Percentage Composition: C 62.14%; H 6.58%; N 1.73%; O 29.56%

General Statement: Anthracycline antibiotic

Biological Source: Isol. from *Streptomyces galilaeus*

Biological Use/Importance: Antineoplastic agent used to treat malignant blood disorders. Shows anti-HIV activity

Physical Description: Yellow powder

Melting Point: Mp 129-135 dec.°

Optical Rotation: $[\alpha]_D^{24} +29$ (c, 1 in CHCl₃)

Solubility: BERDY SOL: Sol. CHCl₃, EtOAc; fairly sol. MeOH, C₆H₆, acids, Py, Me₂CO, EtOH, dioxan; poorly sol. Et₂O, hexane, H₂O

Calculated Log P Data: Log P 0.98 (uncertain value) (calc)

UV: [acid] $\lambda_{\max}$ 230 (ϵ 46900); 258 (ϵ 26700); 290 (ϵ 11400); 434 (ϵ 13300) (MeOH/HCl) (Derep) [base] $\lambda_{\max}$ 240 (ϵ 55000); 288 (ϵ 18800); 314 (ϵ 12700); 523 (ϵ 13800) (MeOH/NaOH) (Derep) [neutral] $\lambda_{\max}$ 230 (ϵ 43800); 258 (ϵ 24400); 290 (ϵ 10400); 434 (ϵ 11900) (MeOH) (Derep) [neutral] $\lambda_{\max}$ 228 (E1%/1cm 480); 256 (E1%/1cm 260); 292 (E1%/1cm 100); 432 (E1%/1cm 130) (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 229 (E1%/1cm 540); 258 (E1%/1cm 325); 433 (E1%/1cm 160) (EtOH) (Berdy) [acid] $\lambda_{\max}$ 228 (E1%/1cm 490); 256 (E1%/1cm 280); 295 (E1%/1cm 115); 430 (E1%/1cm 138) (MeOH-HCl) (Berdy)

Hazard & Toxicity: Cardiotoxic effects and bone-marrow depression reported when used therapeutically. Eye irritant. LD₅₀ (mus, orl) approx. 30 mg/kg. LD₅₀ (mus, ipr) approx. 16 mg/kg. Exp. reprod. effects ; BERDY HAZD : LD₅₀ (mus, ipr) 22.6 mg/kg , LD₅₀ (mus, ivn) 33.7 mg/kg

Sigma: A8959

>>Derivative: N-De-Me

Synonym(s): Aclacinomycin L. MA 144L1. Antibiotic MA 144L1. N-Demethylaclacinomycin A

CAS Registry Number: 64431-58-9

Molecular Formula: C₄₁H₅₁NO₁₅

Molecular Weight: 797.852

Accurate Mass: 797.325874

Percentage Composition: C 61.72%; H 6.44%; N 1.76%; O 30.08%

Biological Source: Prod. by *Streptomyces galilaeus*

Biological Use/Importance: Antitumour and antibacterial agent

Physical Description: Yellow powder

Melting Point: Mp 134-136°

UV: [neutral] $\lambda_{\max}$ 230 (); 259 (); 290 (); 433 () (MeOH)

>>Derivative: 5-Me ether

CAS Registry Number: 76264-92-1

Molecular Formula: C₄₃H₅₅NO₁₅

Molecular Weight: 825.905

Accurate Mass: 825.357174

Percentage Composition: C 62.53%; H 6.71%; N 1.70%; O 29.06%

Source/Synthesis: Semisynthetic

Biological Use/Importance: Shows reduced tox.

Melting Point: Mp 144-146°