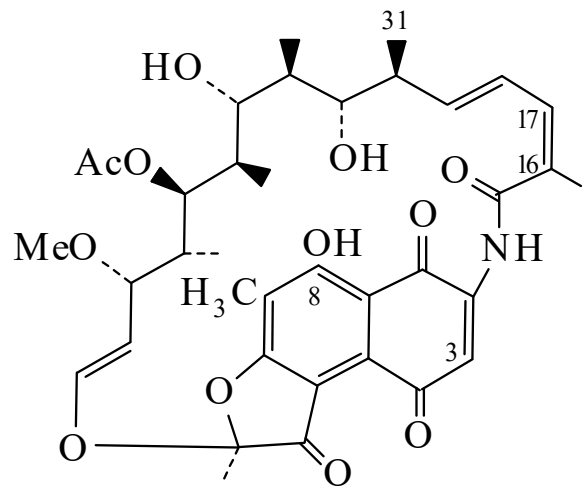
>>**Entry Name: Rifamycin S**
Synonym(s): 1,4-Dideoxy-1,4-dihydro-1,4-dioxorifamycin, 9Cl



CAS Registry Number: 13553-79-2

Molecular Formula: $C_{37}H_{45}NO_{12}$
Molecular Weight: 695.762
Accurate Mass: 695.294179
Percentage Composition: C 63.87%; H 6.52%; N 2.01%; O 27.59%

Biological Source: Semisynthetic
Use/Importance: Antibacterial agent
Physical Description: Yellow-orange cryst. (MeOH)
Melting Point: Mp 179-181 dec.°
Optical Rotation: $[\alpha]_D^{20}$+476 (c, 0.1 in MeOH)
Solubility: BERDY SOL: Sol. MeOH, C_6H_6; fairly sol. H_2O, hexane
UV: [acid] λ_{max} 217 (ε 30900); 220 (ε 32300); 240 (sh) (ε 25400); 276 (ε 27100); 280 (ε 22900); 300 (sh) (ε 12900); 334 (ε 7900); 340 (ε 8155); 390 (ε 4900); 405 (ε 5855) (MeOH/pH 1) (Derep) [base] λ_{max} 226 (ε 31500); 260 (ε 21700); 316 (ε 30400); 440 (sh) (ε 2800); 525 (ε 4500) (MeOH/pH 10) (Derep) [neutral] λ_{max} 317 (ε 29700); 525 (ε 4300) (pH 7.3 phosphate buffer) (Derep) [neutral] λ_{max} 226 (ε 29800); 265 (ε 20400); 312 (ε 23600); 532 (ε 423) (MeOH) (Berdy) [acid] λ_{max} 279 (E1%/1cm 319); 340 (E1%/1cm 117); 407 (E1%/1cm 84) (HCl) (Berdy) [base] λ_{max} 317 (E1%/1cm 426); 525 (E1%/1cm 62) (pH 7.5 buffer) (Berdy) [acid] λ_{max} 217 (ε 30900); 276 (ε 27100); 334 (ε 7900); 390 (ε 4900) (MeOH-HCl) (Berdy) [base] λ_{max} 226 (ε 31500); 260 (ε 21700); 316 (ε 31400); 525 (ε 4500) (MeOH-NAOH) (Berdy)
Other Data: Redn. → Rifamycin SV BDT62-O
Hazard & Toxicity: BERDY HAZD : LD_{50} (mus, ivn) 122 mg/kg , LD_{50} (mus, ipr) 158 mg/kg

>>**Derivative:** 8-Deoxy
Synonym(s): 8-Deoxyrifamycin S

CAS Registry Number: 75352-22-6

Molecular Formula: $C_{37}H_{45}NO_{11}$
Molecular Weight: 679.763
Accurate Mass: 679.299264
Percentage Composition: C 65.38%; H 6.67%; N 2.06%; O 25.89%
Biological Source: Isol. from *Nocardia mediterranei*

>>**Derivative:** 8-Deoxy, 3-hydroxy
Synonym(s): 8-Deoxy-3-hydroxyrifamycin S

CAS Registry Number: 75352-23-7

Molecular Formula: $C_{37}H_{45}NO_{12}$
Molecular Weight: 695.762
Accurate Mass: 695.294179
Percentage Composition: C 63.87%; H 6.52%; N 2.01%; O 27.59%
Biological Source: From *Nocardia mediterranei*