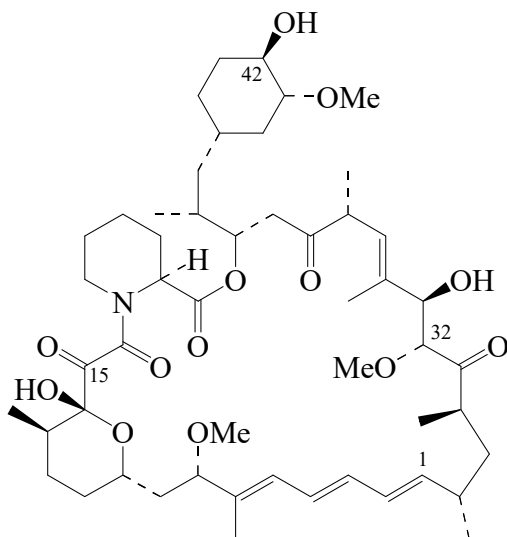




>>Entry Name: Rapamycin

Synonym(s): Sirolimus, BAN, INN. Antibiotic AY 22989. AY 22989. Antibiotic SIIA 9268A. SIIA 9268A



CAS Registry Number: 53123-88-9

Related CAS Registry Numbers(s): 85537-35-5

Molecular Formula: C₅₁H₇₉NO₁₃

Molecular Weight: 914.184

Accurate Mass: 913.555144

Percentage Composition: C 67.01%; H 8.71%; N 1.53%; O 22.75%

Biological Source: Prod. by *Streptomyces hygroscopicus*

Use/Importance: Antifungal agent. Possesses antineoplastic and immunosuppressant props.

Physical Description: Cryst. (Et₂O)

Development Status: Marketed drug. Approved by FDA (1999)

Melting Point: Mp 183-185°

Optical Rotation: [α]_D²⁵ -58.2 (MeOH)

Solubility: BERDY SOL: Sol. MeOH, Et₂O; fairly sol. hexane; poorly sol. H₂O

Calculated Log P Data: Log P 6.17 (uncertain value) (calc)

UV: [neutral] $\lambda_{\max}$ 267 (ϵ 37900); 277 (ϵ 46900); 288 (ϵ 38100) (95% EtOH) (Derep) [neutral] $\lambda_{\max}$ 266 (); 278 (); 288 () (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 267 (E1%/1cm 417); 277 (E1%/1cm 541); 288 (E1%/1cm 416) (EtOH) (Berdy)

Hazard & Toxicity: LD₅₀ (mus, orl) 2500 mg/kg ; BERDY HAZD : LD₅₀ (mus, ipr) 597 mg/kg , LD₅₀ (mus, orl) 3000 mg/kg

Sigma: R0395

>>Derivative: 42-O-(2-Hydroxyethyl)

Synonym(s): Everolimus, INN. SDZ-RAD

CAS Registry Number: 159351-69-6

Molecular Formula: C₅₃H₈₃NO₁₄

Molecular Weight: 958.237

Accurate Mass: 957.581359

Percentage Composition: C 66.43%; H 8.73%; N 1.46%; O 23.38%

Biological Use/Importance: Immunosuppressant

>>Derivative: 7-O-De-Me

Synonym(s): 7-O-Demethylrapamycin. CJ 12263. Antibiotic CJ 12263

CAS Registry Number: 151519-50-5

Molecular Formula: C₅₀H₇₇NO₁₃

Molecular Weight: 900.157

Accurate Mass: 899.539494

Percentage Composition: C 66.72%; H 8.62%; N 1.56%; O 23.11%

Biological Source: Prod. by *Streptomyces hygroscopicus*

Physical Description: Powder

UV: [neutral] $\lambda_{\max}$ 267 (); 277 (); 288 () (MeOH)