



LKT Laboratories, Inc.

Rapamycin

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

Product ID R0161

CAS No. 53123-88-9

Chemical Name Sirolimus

Synonym Sirolimus, Sirolimusum, Rapamune, AY-22989

Formula C₅₁H₇₉NO₁₃

Formula Wt. 914.17

Melting Point 183-185°C

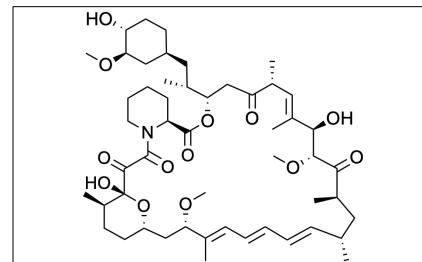
Purity ≥99%

Solubility Soluble in ether, chloroform, acetone, methanol, DMF, DMSO (20 mg/mL), and ethanol (up to 2 mM). Sparingly soluble in hexane and petr ether. Insoluble in water.

Store Temp 4°C

Ship Temp Ambient

Description Rapamycin is a macrolide initially produced by *Streptomyces* that exhibits immunosuppressive and pro-fibrotic activities. Rapamycin inhibits mTOR by binding FKBP12 and forming a complex that binds directly to mTOR; it is clinically used to prevent rejection in organ transplant patients. Rapamycin prevents IL-2-induced activation of T cells and B cells. Rapamycin also prevents IgA nephropathy, decreasing IgA deposition, inhibiting cell proliferation, and suppressing expression of α-SMA, type III collagen, PDGF, and TGF-β1. Additionally, rapamycin increases connective tissue growth factor levels in epithelial cells.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
R0161	1 mg	\$48.20
R0161	10 mg	\$147.20
R0161	25 mg	\$293.20
R0161	100 mg	\$638.60

References Jiang Z, He Q, Wezeman J, et al. A cocktail of rapamycin, acarbose, and phenylbutyrate prevents age-related cognitive decline in mice by targeting multiple pathways. *Geroscience*. 2024 Oct;46(5):4855-4868. PMID: 38755466.

Klintmalm GB, Nashan B. The Role of mTOR Inhibitors in Liver Transplantation: Reviewing the Evidence. *J Transplant*. 2014;2014:845438. PMID: 24719752.

Tian J, Wang Y, Zhou X, et al. Rapamycin slows IgA nephropathy progression in the rat. *Am J Nephrol*. 2014;39(3):218-29. PMID: 24603476.

Xu X, Wan X, Geng J, et al. Rapamycin regulates connective tissue growth factor expression of lung epithelial cells via phosphoinositide 3-kinase. *Exp Biol Med (Maywood)*. 2013 Sep;238(9):1082-94. PMID: 23986222.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.