



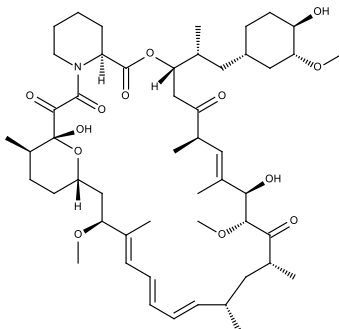
Catalog # 10-1104

Rapamycin

CAS# 53123-88-9

Sirolimus

Lot # X101047



Clinically useful immunosuppressant. Inhibits the response to interleukin-2 blocking activation of T- and B-cells.¹ Rapamycin forms a complex with cytosolic FK-binding protein 12 (FKB12) that binds to mTOR Complex1(mTORC1) inhibiting the mammalian target of rapamycin (mTOR).² Also binds to mTORC2 leading to decreased glucose tolerance and insensitivity to insulin.³ Induces autophagy.⁴

- 1) Kay, *et al.* (1991) *Inhibition of T and B lymphocyte proliferation by rapamycin*. Immunology **72** 544
- 2) Mita, *et al.*, (2003) *The molecular target of rapamycin (mTOR) as a therapeutic target against cancer* Cancer Biol. Ther. 2(4 Suppl 1), S169
- 3) Lamming, *et al.* (2012). Rapamycin-induced insulin resistance is mediated by mTORC2 loss and uncoupled from longevity. Science **335** 1638
- 4) Sarkar *et al.* (2009), *Rapamycin and mTOR-independent autophagy inducers ameliorate toxicity of polyglutamine-expanded huntingtin and related proteinopathies* Cell Death and Differentiation **16**, 46

PHYSICAL DATA

Molecular Weight:	914.17
Molecular Formula:	C ₅₁ H ₇₉ NO ₁₃
Purity:	>98%
	NMR: (Conforms)
Solubility:	DMSO (up to 40 mg/ml); ethanol (up to 90mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Protect from exposure to moisture. Solutions in DMSO and ethanol may be stored at -20°C for up to 2 months.

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