Cat No. 33-U72

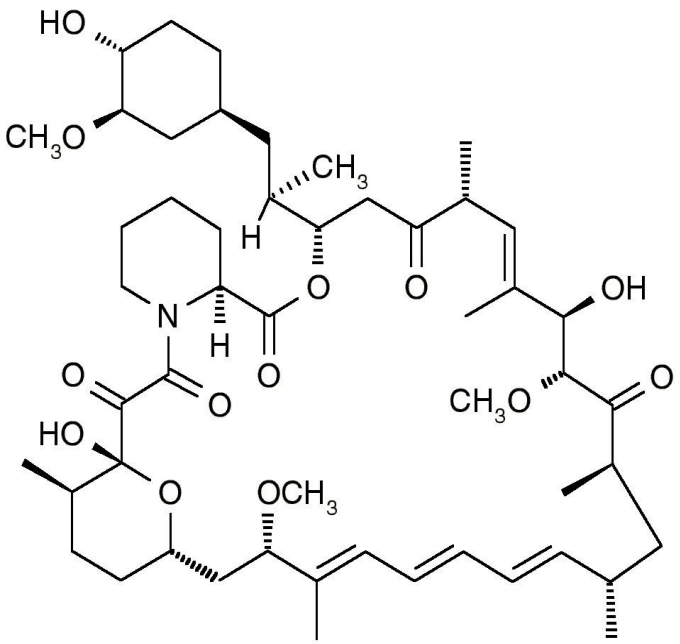
Rapamycin

5 mg

For research purposes only

Rapamycin is a macrocyclic triene antibiotic that binds to the cytosolic protein FK-binding protein 12 (FKBP12) and inhibits mTOR pathway by directly binding to the mTOR Complex1 (mTORC1). It is a potent immunosuppressant and has shown anticancer activity. Rapamycin It has a variety of uses both *in vitro* and *in vivo* and has been used to prevent organ rejection after transplantation.

TECHNICAL INFORMATION



Other Names: AY-22989, LCP-Siro, RAPA, Rapamune, Sirolimus, SILA 9268A

Chemical Formula: $C_{51}H_{79}NO_{13}$

CAS Number: 53123-88-9

Molecular Weight: 914.17

Purity: >98%

Appearance: a crystalline solid

Solubility: DMSO

STORAGE AND HANDLING

Storage: Store at 4°C and protected from light. Following reconstitution, store aliquots at -20°C.

Stability: Stock solutions stable at -20°C for up to 2 years.

Shipping Conditions: Shipped at room temperature.

PRODUCT USE

Soluble in DMSO at 50 mg/ml. If precipitate is observed, vortex for 5 minutes. For most cells, the maximum tolerance to DMSO is less than 0.5%.

REFERENCES

1. Corradetti et al. (2006) Upstream of the mammalian target of rapamycin: do all roads pass through mTOR? Oncogene. 25(48):6347-60.
2. Foster et al. (2010) Mammalian target of rapamycin (mTOR): conducting the cellular signaling symphony. J Biol Chem. 285(19):14071-7.
3. Ma et al. (2010) Mammalian target of rapamycin regulates murine and human cell differentiation through STAT3/p63/Jagged/Notch cascade. J Clin Invest. 120 (1):103-14.
4. Malagelada et al. (2010) Rapamycin protects against neuron death in in vitro and in vivo models of Parkinson's disease. J Neurosci. 30(3):1166-75.