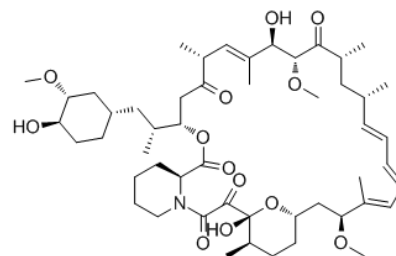


**Product Name** : Rapamycin  
**Cat. No.** : PC-42464  
**CAS No.** : 53123-88-9  
**Molecular Formula** : C<sub>51</sub>H<sub>79</sub>NO<sub>13</sub>  
**Molecular Weight** : 914.1719  
**Target** : mTOR  
**Solubility** : DMSO: ≥ 28 mg/mL



## Biological Activity

Rapamycin (Sirolimus) is a macrolide compound that has potent immunosuppressive and antiproliferative properties by inhibiting **mTOR** (IC<sub>50</sub>=0.1 nM), induces autophagy.

Rapamycin interacts with FKBP prolyl isomerase 1A (**FKBP12**) to form a complex that binds to and inhibits the kinase activity of mTORC1.

Rapamycin is originally isolated from *S. hygroscopicus*, inhibits growth of Rh1 and Rh30 rhabdomyosarcoma cells in serum-free medium, with IC<sub>50</sub> values of 0.1 and 0.5 ng/ml, respectively.

Rapamycin also induces autophagy in a variety of cell types.

Formulations containing rapamycin have been used as immunosuppressive agents in the prevention of organ transplant rejection.

## References

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Dumont FJ, et al. *J Immunol.* 1990 Jan 1;144(1):251-8.

Dumont FJ, et al. *J Immunol.* 1990 Feb 15;144(4):1418-24.

Edwards SR, et al. *J Biol Chem.* 2007 May 4;282(18):13395-401.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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