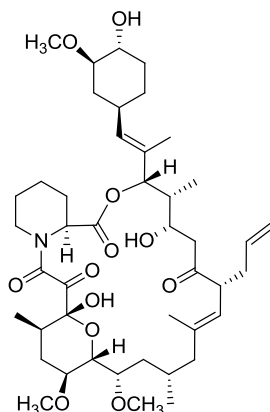


Tacrolimus

Code No.: **BIA-T1184**

Pack sizes: **25 mg, 100 mg**



Synonyms : Fujimycin, FK506, FR900506, Tskubaenolide

Specifications

CAS #	: 104987-11-3
Molecular Formula	: C ₄₄ H ₆₉ NO ₁₂
Molecular Weight	: 804.0
Source	: <i>Streptomyces hygroscopicus</i>
Appearance	: White solid
Purity	: >99% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.

Application Notes

Tacrolimus (fujimycin) was discovered as a potent inhibitor of IL2 production in a targeted search for novel immunosuppressants. Tacrolimus acts by blocking T cell proliferation in vitro by inhibiting the generation of several lymphokines, notably the original target IL-2. Tacrolimus inhibits the activity of FK-506 binding protein, Ca²⁺-dependent phosphatase and calcineurin, and activates NF-κB through phosphorylation and degradation of IκBα.

References

1. FK-506, a novel immunosuppressant isolated from a Streptomyces. I. Fermentation, isolation, and physico-chemical and biological characteristics. Kino T. et al., J. Antibiot. 1987, 40, 1249.
2. Cyclosporin A and FK506: molecular mechanisms of immunosuppression and probes for transplantation biology. Bierer B.E. et al., Curr. Opin. Immunol. 1993, 5, 763.
3. Immunosuppressant FK506 activates NF-κB through the proteasome-mediated degradation of IκBα. Requirement for IκBα n-terminal phosphorylation but not ubiquitination sites. Zhang Y. et al., J. Biol. Chem. 1999, 274, 34657.