

Product Name: Ascomycin

Catalog No.: 4210

Batch No.: 1

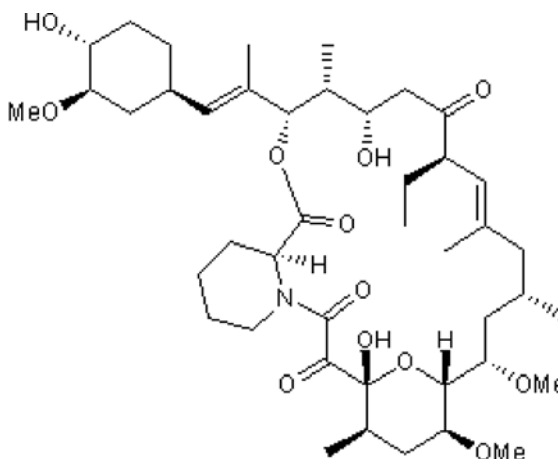
CAS Number: 104987-12-4

IUPAC Name: (3*S*,4*R*,5*S*,8*R*,9*E*,12*S*,14*S*,15*R*,16*S*,18*R*,19*R*,26*aS*)-8-Ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26*a*-hexadecahydro-5,19-dihydroxy-3-[(1*E*)-2-[(1*R*,3*R*,4*R*)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-15,19-epoxy-3*H*-pyrido[2,1-*c*][1,4]oxaazacyclotricosine-1,7,20,21(4*H*,23*H*)tetrone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₃H₆₉NO₁₂
Batch Molecular Weight: 792.01
Physical Appearance: White lyophilised solid
Solubility: DMSO to 50 mM
ethanol to 50 mM
Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.21	8.78	1.77
Found	64.91	8.64	1.75

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Description:

Analog of FK 506 (Cat. No. 3631); binds to FK 506-binding protein 12 (FKBP12) in order to inhibit calcineurin phosphatase activity (IC₅₀ = 49 nM) and activation of nuclear factor of activated T cells (NFAT). Displays antifungal and immunosuppressive activities.

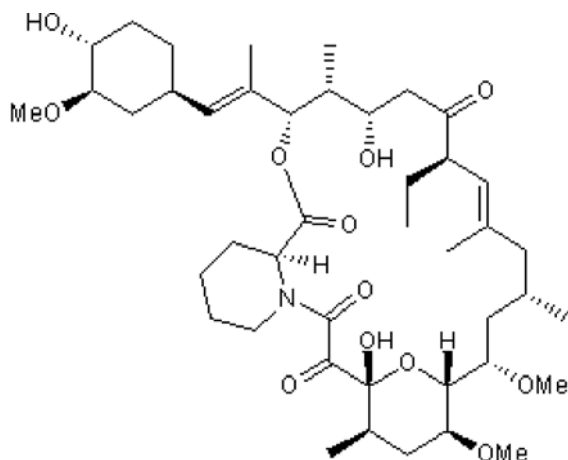
Physical and Chemical Properties:

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Batch Molecular Weight: 792.01

Physical Appearance: White lyophilised solid

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM

ethanol to 50 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Revill *et al* (2002) Genetically engineered analogs of ascomycin for nerve regeneration. *J.Pharmacol.Exp.Ther.* **302** 1278. PMID: 12183690.

Arndt *et al* (1999) Secretion of FK506/FK520 and rapamycin by *Streptomyces* inhibits the growth of competing *Saccharomyces cerevisiae* and *Cryptococcus neoformans*. *Microbiology* **145** 1989. PMID: 10463165.

Motamedi *et al* (1996) Characterization of methyltransferase and hydroxylase genes involved in the biosynthesis of the immunosuppressants FK506 and FK520. *J.Bacteriol.* **178** 5243. PMID: 8752344.

Hatanaka *et al* (1988) FR-900520 and FR-900523, novel immunosuppressants isolated from a *Streptomyces*. II. Fermentation, isolation and physicochemical and biological characteristics. *J.Antibiot (Tokyo)*. **41** 1593.

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