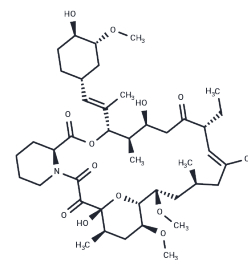


Ascomycin

Chemical Properties

CAS No. :	104987-12-4
Formula:	C43H69NO12
Molecular Weight:	792.01
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Ascomycin (Immunomycin)(Immunomycin, FR-900520, FK520) is an ethyl analog of tacrolimus (FK506) with strong immunosuppressant properties.
Targets(IC50)	Antibiotic,Parasite,Antifungal,FKBP,Phosphatase
In vitro	Intramuscular injection of 3.2 mg/kg Ascomycin significantly prolonged the survival rate of rats with skin transplants. When administered into the rat hippocampus, Ascomycin at concentrations of 50 or 100 μ M exhibited anticonvulsant effects against seizures induced by pentylenetetrazol.
In vivo	Ascomycin inhibits calcineurin by forming an FKBP12-FK520-calcineurin complex, with an IC50 of 49 nM. Additionally, FK520 accelerates neural regeneration and promotes neurite outgrowth. Ascomycin exhibits antimalarial effects by inhibiting the molecular chaperone activity of a bifunctional protein. Moreover, ascomycin suppresses the in vitro immune response of mixed lymphocytes in mice, with an IC50 of 0.55 nM.

Solubility Information

Solubility	DMSO: 250 mg/mL (315.65 mM),Sonication is recommended. Ethanol: 39.6 mg/mL (50 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (12.63 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (12.63 mM),Suspension. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2626 mL	6.3131 mL	12.6261 mL
5 mM	0.2525 mL	1.2626 mL	2.5252 mL
10 mM	0.1263 mL	0.6313 mL	1.2626 mL
50 mM	0.0253 mL	0.1263 mL	0.2525 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hatanaka H, et al. J Antibiot (Tokyo). 1988, 41(11), 1592-1601.

Revill WP, et al. J Pharmacol Exp Ther. 2002, 302(3), 1278-1285.

Monaghan P, et al. J Infect Dis. 2005, 191(8), 1342-1349.

Vázquez-López A, et al. Pharmacol Biochem Behav. 2006 Jul;84(3):511-6.

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