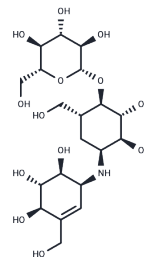


Validamycin A

Chemical Properties

CAS No. :	37248-47-8
Formula:	C ₂₀ H ₃₅ N ₁ O ₁₃
Molecular Weight:	497.49
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	Validamycin A is an antibiotic and fungicide that inhibits the alginate enzyme trehalase and thus protects crops from the fungus Rhizoctonia solani, as well as being a reversible inhibitor of tyrosinase.
Targets(IC50)	Antibiotic,Antifungal,Tyrosinase
In vitro	Validamycin A (0.1-5mg/mL, 2-day treatment) significantly inhibited the growth of Xanthomonas oryzae pv. oryzae (Xoo), with a minimum inhibitory concentration of 1mg/mL. Scanning electron microscopy revealed bubbling and morphological damage on bacterial surfaces, indicating direct antibacterial effects[1].
In vivo	In rice plant models, foliar spraying of Validamycin A (200µg/mL, once every 3 days for a total of 3 treatments) significantly reduced disease severity caused by Xoo infection, with average lesion length decreased by approximately 60%. The treatment showed effective in vivo disease control without phytotoxicity[1].

Solubility Information

Solubility	PBS (pH 7.2): 10 mg/mL (20.1 mM),Sonication is recommended. H ₂ O: 120 mg/mL (241.21 mM),Sonication is recommended. DMSO: 1 mg/mL (2.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0101 mL	10.0505 mL	20.1009 mL
5 mM	0.402 mL	2.0101 mL	4.0202 mL
10 mM	0.201 mL	1.005 mL	2.0101 mL
50 mM	0.0402 mL	0.201 mL	0.402 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

Plabutong N, et al. The Inhibitory Effect of Validamycin A on *Aspergillus flavus*. *Int J Microbiol.* 2020 Jun 27;2020: 3972415.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481