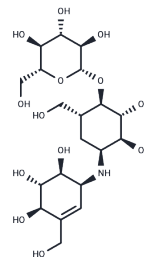


## Validamycin A

## Chemical Properties

CAS No. :	37248-47-8
Formula:	C <sub>20</sub> H <sub>35</sub> N <sub>1</sub> O <sub>13</sub>
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 <i>Rhizoctonia solani</i> , 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 <i>Xanthomonas oryzae</i> pv. <i>oryzae</i> (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 <sub>2</sub> 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

---

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
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