

## Xyloidone

## Chemical Properties

CAS No. : 15297-92-4

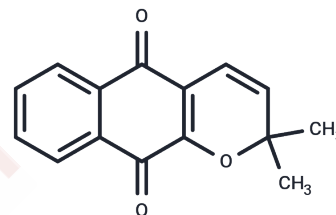
Formula: C<sub>15</sub>H<sub>12</sub>O<sub>3</sub>

Molecular Weight: 240.25

Store at low temperature

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	Xyloidone (NSC-106453) exhibits antifungal activity and completely inhibits the mycelial growth of <i>B. cinerea</i> , <i>Colletotrichum acutatum</i> Simmonds, <i>Colletotrichum gloeosporioides</i> Simmonds, <i>M. grisea</i> , and <i>Pythium ultimum</i> Trow over a range of 0.4-33.3 mg/L.
Targets(IC50)	Antifungal
In vitro	Xyloidone controls the development of rice blast, tomato late blight, wheat leaf rust, barley powdery mildew and red pepper anthracnose ( <i>Colletotrichum coccodes</i> (Wallr) S Hughes). Xyloidone is particularly effective in suppressing red pepper anthracnose by 95% at a concentration of 125 mg/L[1].
In vivo	Xyloidone inhibits vessel regeneration, interferes with vessel anastomosis, and limits plexus formation in zebrafish. Xyloidone induces vascular pruning and growth delay in orthotopic mammary tumors in mice. Xyloidone targets cell adhesion by promoting ubiquitination of the Rho-GTPase Rac1, which is frequently up-regulated in many different cancers[1].

## Solubility Information

Solubility	DMSO: Soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1623 mL	20.8117 mL	41.6233 mL
5 mM	0.8325 mL	4.1623 mL	8.3247 mL
10 mM	0.4162 mL	2.0812 mL	4.1623 mL
50 mM	0.0832 mL	0.4162 mL	0.8325 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

- Moraes DC, et al.  $\beta$ -lapachone and  $\alpha$ -nor-lapachone modulate *Candida albicans* viability and virulence factors. *J Mycol Med.* 2018 Mar 26. pii: S1156-5233(17)30379-7.
- Garkavtsev I, et al. Dehydro-alpha-lapachone, a plant product with antivasular activity. *Proc Natl Acad Sci U S A.* 2011 Jul 12;108(28):11596-601.
- Cho JY, et al. Dehydro-alpha-lapachone isolated from *Catalpa ovata* stems: activity against plant pathogenic fungi. *Pest Manag Sci.* 2006 May;62(5):414-8.
- Otten S, Rosazza JP. Microbial transformations of natural antitumor agents: conversion of lapachol to dehydro-alpha-lapachone by *Curvularia lunata*. *Appl Environ Microbiol.* 1979 Aug;38(2):311-3.

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