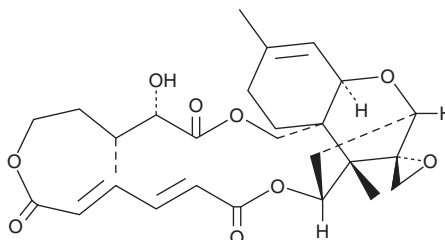


PRODUCT INFORMATION



Verrucarin A Item No. 29652

CAS Registry No.: 3148-09-2
Synonyms: Muconomycin A, NSC 126728,
NSC 200736
MF: $C_{27}H_{34}O_9$
FW: 502.6
Purity: $\geq 70\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Fungus/*Myrothecium* sp.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Verrucarin A is supplied as a solid. A stock solution may be made by dissolving the verrucarin A in the solvent of choice, which should be purged with an inert gas. Verrucarin A is soluble in ethanol, methanol, dichloromethane, and DMSO.

Description

Verrucarin A is a macrocyclic trichothecene that has been found in *M. verrucaria* and has diverse biological activities.¹⁻⁴ It induces apoptosis and production of reactive oxygen species (ROS) in MDA-MB-231 and T47D breast cancer cells when used at concentrations ranging from 100 to 500 ng/ml.¹ Verrucarin A enhances LPS-induced secretion of IL-1 β and IL-18 in macrophages derived from peripheral blood mononuclear cells (PBMCs).² It inhibits the growth of the multidrug-resistant *P. falciparum* strain K1 (EC₅₀ = 0.9 ng/ml).³ Verrucarin A is active against *M. incognita* root-knot nematodes (MIC = 1.88 $\mu\text{g/ml}$).⁴

References

1. Palanivel, K., Kanimozhi, V., Kadalmani, B., *et al.* Verrucarin A, a protein synthesis inhibitor, induces growth inhibition and apoptosis in breast cancer cell lines MDA-MB-231 and T47D. *Biotechnol. Lett.* **35**(9), 1395-1403 (2013).
2. Kankkunen, P., Rintahaka, J., Aalto, A., *et al.* Trichothecene mycotoxins activate inflammatory response in human macrophages. *J. Immunol.* **182**(10), 6418-6425 (2009).
3. Isaka, M., Punya, J., Lertwerawat, Y., *et al.* Antimalarial activity of macrocyclic trichothecenes isolated from the fungus *Myrothecium verrucaria*. *J. Nat. Prod.* **62**(2), 329-331 (1999).
4. Nguyen, L.T.T., Jang, J.Y., Kim, T.Y., *et al.* Nematicidal activity of verrucarin A and roridin A isolated from *Myrothecium verrucaria* against *Meloidogyne incognita*. *Pestic. Biochem. Physiol.* **148**, 133-143 (2018).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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