



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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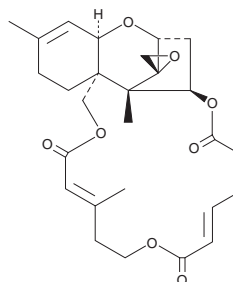
# PRODUCT INFORMATION



## Verrucarin J

Item No. 40815

**CAS Registry No.:** 4643-58-7  
**Formal Name:** (2'E)-2',3'-didehydro-2'-deoxy-verrucarin A  
**Synonym:** Muconomycin B  
**MF:** C<sub>27</sub>H<sub>32</sub>O<sub>8</sub>  
**FW:** 484.5  
**Purity:** ≥70%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Fungus/*Myrothecium gramineum*



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

### Laboratory Procedures

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

### Description

Verrucarin J is a macrocyclic trichothecene that has been found in *A. verrucaria* and has fungicidal and anticancer activities.<sup>1-3</sup> It is active against a variety of plant pathogenic fungi, including *B. cinerea*, *C. coccoodes*, *F. oxysporum*, and *M. oryzae* (MICs = 12.5, 6.3, 50, and 12.5 µg/ml, respectively).<sup>1</sup> Verrucarin J reduces viability of A549 and NCI H1793 human non-small cell lung cancer (NSCLC) cells (IC<sub>50</sub>s = 10 and 20 nM, respectively) and induces apoptosis in A549 cells when used at concentrations ranging from 10 to 50 nM.<sup>2</sup> It reduces the expression of the cancer stem cell genes encoding ALDH1, LGR5, Oct4, and prominin-1, also known as CD133, as well as the Wnt signaling genes encoding Wnt1, β-catenin, Tcf4, and Notch1 in A549 cells. Verrucarin J also reduces the viability, invasion, and migration of HCT116 human colorectal cancer cells overexpressing Akt (Akt/HCT116 cells).<sup>3</sup> It reduces tumor growth in an Akt/HCT116 mouse xenograft model when administered at a dose of 0.5 mg/kg.

### References

1. Nguyen, M.V., Han, J.W., Kim, H., *et al.* Curvicollide D, a new modified γ-lactone from the culture broth of *Albifimbria verrucaria* and its antifungal activity against plant pathogenic fungi. *J. Antibiot. (Tokyo)* **75(9)**, 514-518 (2022).
2. Udoh, K., Parte, S., Carter, K., *et al.* Targeting of lung cancer stem cell self-renewal pathway by a small molecule verrucarin J. *Stem Cell Rev. Rep.* **15(4)**, 601-611 (2019).
3. Pal, D., Tyagi, A., Chandrasekaran, B., *et al.* Suppression of Notch1 and AKT mediated epithelial to mesenchymal transition by verrucarin J in metastatic colon cancer. *Cell Death Dis.* **9(8)**, 798 (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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