

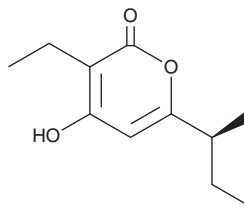
# PRODUCT INFORMATION



## Germicidin A

Item No. 19971

**Formal Name:** (S)-6-(sec-butyl)-3-ethyl-4-hydroxy-2H-pyran-2-one  
**MF:** C<sub>11</sub>H<sub>16</sub>O<sub>3</sub>  
**FW:** 196.2  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Bacterium/*Streptomyces* sp.



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

### Laboratory Procedures

Germicidin A is supplied as a solid. A stock solution may be made by dissolving the germicidin A in the solvent of choice. Germicidin A is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide, which should be purged with an inert gas.

### Description

Germicidin A is a pyranone originally derived from *S. viridochromogenes* that acts as a reversible, autoregulative inhibitor of spore germination and hyphal elongation in the genus *Streptomyces* at concentrations as low as 200 pM.<sup>1,2</sup> During germination, spores of *Streptomyces* excrete germicidin A along with other germicidin homologs, which inhibit germination of its own arthrospores.<sup>1,2</sup> At higher concentrations, germicidin A can inhibit the porcine Na<sup>+</sup>/K<sup>+</sup>-activated ATPase (ID<sub>50</sub> = 100 μM) and prevent the germination of the cress *L. sativum*.<sup>1</sup>

### References

1. Petersen, F. and Zähler, H. Germicidin, an autoregulative germination inhibitor of *Streptomyces viridochromogenes* NRRL B-1551. *J. Antibiot. (Tokyo)* **46(7)**, 1126-1138 (1993).
2. Aoki, Y., Matsumoto, D., Kawaide, H., et al. Physiological role of germicidins in spore germination and hyphal elongation in *Streptomyces coelicolor* A3(2). *J. Antibiot. (Tokyo)* **64(9)**, 607-611 (2016).

#### 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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