

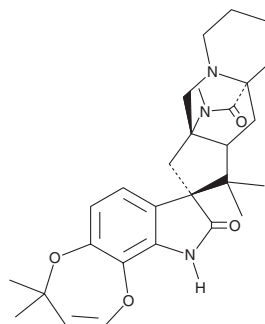
# PRODUCT INFORMATION



## Marcfortine A

Item No. 23486

**CAS Registry No.:** 75731-43-0  
**Formal Name:** (2'R,3'aS,9'aS,10'aS)-6',7',8',9',10',10'a-hexahydro-1',1',4,4,12'-pentamethyl-spiro[4H,8H-[1,4]dioxepino[2,3-g]indole-8,2'(3'H)-[1H,4H-3a,9a](iminomethano)cyclopenta[b]quinolizine]-9,11'(10H)-dione  
**Synonym:** NSC 324645  
**MF:** C<sub>28</sub>H<sub>35</sub>N<sub>3</sub>O<sub>4</sub>  
**FW:** 477.6  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Fungus/*Penicillium* sp.



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

### Laboratory Procedures

Marcfortine A is supplied as a solid. A stock solution may be made by dissolving the marcfortine A in the solvent of choice, which should be purged with an inert gas. Marcfortine A is soluble in the organic solvent methanol.

### Description

Marcfortine A is an indole alkaloid originally isolated from *P. roqueforti*.<sup>1</sup> It has nematocidal activity against the parasitic nematode *H. contortus* (LD<sub>99</sub> = 0.06 µg/ml) and inhibits motility of adult worms (EC<sub>50</sub> = 2 µM).<sup>2,3</sup> Marcfortine A eliminates *H. contortus*, *T. colubriformis*, and *O. ostertagi* from experimentally infected jirds (ED<sub>95</sub>s = 0.33, 0.11, and 2.5 mg/animal, respectively).<sup>3</sup> It dose-dependently inhibits nicotine-induced calcium mobilization in SH-SY5Y and TE-671 cells expressing α<sub>3</sub> subunit-containing human nicotinic acetylcholine receptors (nAChRs) and muscle-type nAChRs, respectively.<sup>4</sup>

### References

1. Polonsky, J., Merrien, M.-A., Prangé, T., *et al.* Isolation and structure (X-ray analysis) of marcfortine A, a new alkaloid from *Penicillium roqueforti*. *J.C.S. Chem. Comm.* **0(13)**, 601-602 (1980).
2. Capon, R.J., Skene, C., Stewart, M., *et al.* Aspergillicins A-E: Five novel depsipeptides from the marine-derived fungus *Aspergillus carneus*. *Org. Biomol. Chem.* **1(11)**, 1856-1862 (2003).
3. Johnson, S.S., Coscarelli, E.M., Davis, J.P., *et al.* Interrelationships among physicochemical properties, absorption and anthelmintic activities of 2-desoxoparaherquamide and selected analogs. *J. Vet. Pharmacol. Ther.* **27(3)**, 169-181 (2004).
4. Zinser, E.W., Wolf, M.L., Alexander-Bowman, S.J., *et al.* Anthelmintic paraherquamides are cholinergic antagonists in gastrointestinal nematodes and mammals. *J. Vet. Pharmacol. Ther.* **25(4)**, 241-250 (2002).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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