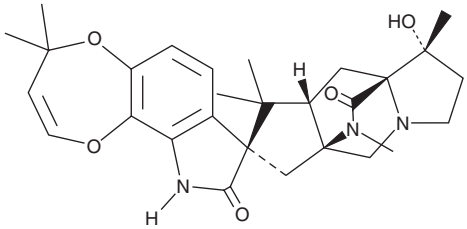
# PRODUCT INFORMATION

## Paraherquamide A

*Item No. 26685*

**CAS Registry No.:** 77392-58-6
**Formal Name:** (1'R,5'aS,7'R,8'aS,9'aR)-2',3',8'a,9'-tetrahydro-1'-hydroxy-1',4,4,8',8',11'-hexamethyl-spiro[4H,8H-[1,4]dioxepino[2,3-g]indole-8,7'(8'H)-[5H,6H-5a,9a](iminomethano)[1H]cyclopent[f]indolizine]-9,10'(10H)-dione
**Synonyms:** (–)-Paraherquamide, VM 29919
**MF:** $C_{28}H_{35}N_3O_5$
**FW:** 493.6
**Purity:** ≥95%
**UV/Vis.:** $\lambda_{max}$: 226 nm
**Supplied as:** A powder
**Storage:** -20°C
**Stability:** ≥4 years
**Item Origin:** Fungus/*Penicillium simplicissimum*




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

### Laboratory Procedures

Paraherquamide A is supplied as a powder. A stock solution may be made by dissolving the paraherquamide A in the solvent of choice, which should be purged with an inert gas. Paraherquamide A is soluble in ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Paraherquamide A is a mycotoxin anthelmintic originally isolated from *P. paraherquei*.[1] It binds to acetylcholine receptors ($IC_{50}$ = 0.5 nM for head homogenates of *M. domestica*) and acts as an antagonist.[1,2] Paraherquamide A is toxic to *C. elegans* ($LD_{50}$ = 2.5 µg/ml) and effective against *T. colubriformis* infection in gerbils when used at doses ranging from 0.39 to 200 mg/kg.[3,4] It is toxic to mice ($LD_{50}$ = 14.9 mg/kg).[5]

### References


1. Robertson, A.P., Clark, C.L., Burns, T.A., *et al*. Paraherquamide and 2-deoxy-paraherquamide distinguish cholinergic receptor subtypes in *Ascaris* muscle. *J. Pharmacol. Exp. Ther.* **302(3),** 853-860 (2002).
2. Nauen, R., Ebbinghaus, U., and Tietjen, K. Ligands of the nicotinic acetylcholine receptor as insecticides. *Pest. Manag. Sci.* **55(5),** 608-610 (1999).
3. Ondeyka, J.G., Goegelman, R.T., Schaeffer, J.M., *et al.* Novel antinematodal and antiparasitic agents from *Penicillium charlesii*. *J. Antibiot. (Tokyo)* **43(11),** 1375-1379 (1990).
4. Ostlind, D.A., Mickle, W.G., Ewanciw, D.V., *et al.* Efficacy of paraherquamide against immature *Trichostrongylus colubriformis* in the gerbil (*Meriones unguiculatus*). *Res. Vet. Sci.* **48(2),** 260-261 (1990).
5. Shoop, W.L., Haines, H.W., Eary, C.H., *et al*. Acute toxicity of paraherquamide and its potential as an anthelmintic. *Am. J. Vet. Res.* **53(11),** 2032-2034 (1992).





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