

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',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
(-)-Paraherquamide, VM 29919

Synonyms:

MF: $C_{28}H_{35}N_3O_5$

FW: 493.6

Purity: $\geq 95\%$

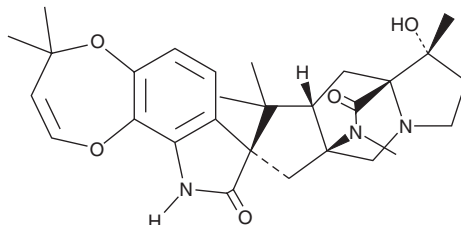
UV/Vis.: λ_{max} : 226 nm

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* ($LD_{50} = 2.5$ $\mu\text{g}/\text{ml}$) 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

- 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).
- Nauen, R., Ebbinghaus, U., and Tietjen, K. Ligands of the nicotinic acetylcholine receptor as insecticides. *Pest. Manag. Sci.* **55**(5), 608-610 (1999).
- 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).
- 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).
- 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).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM