

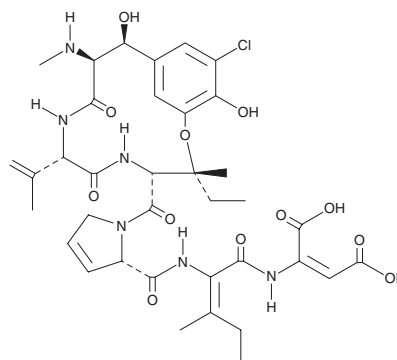
PRODUCT INFORMATION



Phomopsin A

Item No. 19448

CAS Registry No.: 64925-80-0
Formal Name: (2E)-(βS)-3-chloro-β,5-dihydroxy-N-methyl-L-tyrosyl-3,4-didehydro-L-valyl-3-hydroxy-L-isoleucyl-3,4-didehydro-L-prolyl-(2E)-2,3-didehydroisoleucyl-2,3-didehydro-aspartic acid, cyclic (1⁵→3)-ether
Synonym: NSC 381839
MF: C₃₆H₄₅ClN₆O₁₂
FW: 789.2
Purity: ≥85%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

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

Description

Phomopsins are a family of mycotoxins produced by the fungus *D. toxica*, which predominantly infects lupines. Ingestion of lupines infected with *D. toxica* causes lupinosis, a degenerative disorder that can result in acute liver damage, brain damage, and death.¹ Phomopsin A is a cyclic hexapeptide mycotoxin that binds β-tubulin in a vinca domain, overlapping with the site targeted by vinblastine (Item No. 11762) and other tubulin inhibitors.^{2,3} It binds β-tubulin from higher organisms but not α-tubulin or fungal mycelial tubulin.^{4,5} Phomopsin A blocks microtubule growth, modulates the dynamics of microtubules, and interferes with mitosis.⁵

References

1. Cowley, r., Luckett, D.J., Ash, G.J., *et al. Breed Sci.* **64(1)**, 83-89 (2014).
2. Hamel, E. *Pharmacol. Ther.* **55(1)**, 31-51 (1992).
3. Cormier, A., Marchand, M., Ravelli, R.B.G., *et al. EMBO Rep.* **9(11)**, 1101-1106 (2008).
4. Li, Y., Kobayashi, H., Hashimoto, Y., *et al. Biochem. Biophys. Res. Commun.* **187(2)**, 722-729 (1992).
5. Mitra, A. and Sept, D. *Biochemistry* **43(44)**, 13955-13962 (2004).

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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