

PRODUCT INFORMATION

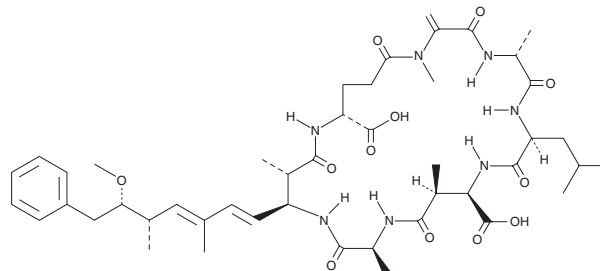


Microcystin-LA

Item No. 10007187

CAS Registry No.: 96180-79-9
Formal Name: cyclo[2,3-didehydro-N-methylalanyl-D-alanyl-L-leucyl-(3S)-3-methyl-D-β-aspartyl-L-alanyl-(2S,3S,4E,6E,8S,9S)-3-amino-9-methoxy-2,6,8-trimethyl-10-phenyl-4,6-decadienoyl-D-γ-glutamyl]
Synonyms: Cyanoginosin-LA, MC-LA, Toxin BE4 (*M. aeruginosa*)

MF: C₄₆H₆₇N₇O₁₂
FW: 910.1
Purity: ≥95%
Supplied as: A clear film
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Microcystin-LA is supplied as a clear film. A stock solution may be made by dissolving the microcystin-LA in the solvent of choice, which should be purged with an inert gas. Microcystin-LA is soluble in organic solvents such as ethanol and methanol.

Description

Microcystin-LA is a cyanotoxin and an inhibitor of protein phosphatase 1C (PP1C) and PP2A (IC₅₀ = 0.3 nM for both).¹ *In vivo*, microcystin-LA (7 mg/kg) induces moribundity and increases liver-to-body weight ratios and serum levels of alanine transaminase (ALT), aspartate aminotransferase (AST), and glutamate dehydrogenase (GDH), markers of hepatotoxicity, in mice.² Microcystin-LA has been found in freshwater with cyanobacterial blooms.³

References

1. Aggen, J.B., Humphrey, J.M., Gauss, C.-M., *et al.* The design, synthesis, and biological evaluation of analogues of the serine-threonine protein phosphatase 1 and 2A selective inhibitor microcystin LA: Rational modifications imparting PP1 selectivity. *Bioorg. Med. Chem.* **7**(3), 543-564 (1999).
2. Chernoff, N., Hill, D., Lang, J., *et al.* Dose-response study of microcystin congeners MCLA, MCLR, MCLY, MCRR, and MCYR administered orally to mice. *Toxins (Basel)* **13**(2), 86 (2021).
3. Skafi, M., Vo Duy, S., Munoz, G., *et al.* Occurrence of microcystins, anabaenopeptins and other cyanotoxins in fish from a freshwater wildlife reserve impacted by harmful cyanobacterial blooms. *Toxicon* **194**, 44-52 (2021).

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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