Microcystin-LA

Inhibitor of PP2A and calcineurin

Microcystin-LA (MC-LA) is an analog of microcystin-LR (Prod. No. ALX-350-012) with Ala substituted in place of Arg. MC-LA inhibits protein phosphatase 2A (PP2A) and calcineurin/protein phosphatase 3 (PP3) more potently than protein phosphatase 1 (PP1). *May require a license for import, please contact us for more information.*

Cyanobacteria are photosynthetic prokaryotes mostly present in freshwater ecosystems. The increasingly frequent appearance of cyanobacteria blooms in lakes and rivers is linked to climate changes and human activities. Microcystins are a group of cyclic heptapeptide hepatotoxins produced by a number of cyanobacterial genera. The most notable of which, and namesake, is the widespread genus *Microcystis*. Structurally, all microcystins consist of the generalized structure cyclo(-D-Ala^{1}-X^{2}-D-MeAsp^{3}-Y^{4}-Adda^{5}-D-Glu^{6}-Mdha^{7}-). X and Y are variable L-amino acids, D-MeAsp is D-erythro-β-methylaspartic acid and Mdha is N-methyldehydroalanine. Adda is the cyanobacteria unique C_{20} β-amino acid 3-amino-9-methoxy-2,6,8-trimethyl-10-phenyl-deca-4,6-dienoic acid. Substitutions of the variable L-amino acids at positions 2 and 4 give rise to at least 21 known primary microcystin analogs and alterations in the other constituent amino acids result in more than 90 reported mycrocystins to date.

- Potent inhibitor of PP2A and Calcineurin
- Cited in several environment-related research articles

Citations: 29 View Online »

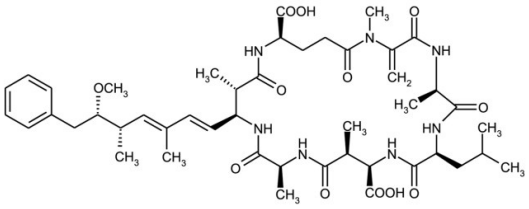
Ordering Information

Order Online »

ALX-350-096-M001	1mg
ALX-350-096-C025	25µg
ALX-350-096-C100	100µg

Manuals, SDS & CofA

View Online »


COOH
CH3
O
HN
N
NH
H3C
O
O
CH2
OCH3
H3C
O
NH
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HN
CH3
CH3
CH3
O
H
N
H
N
CH3
O
COOH
O
CH3


Enzo
Microcystin-LA
Cat. No.: ALX-350-096-M
Lot No.: L30772
Storage: -20°C
For Research Use Only

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Stock solutions are stable for up to 6 months when stored at -20°C. Unstable at pH > 7.7.
Handling	For maximum product recovery after thawing, centrifuge the vial before opening the cap.
Long Term Storage	-20°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	MC-LA
Appearance	Whitish film adhered to inside of the vial.
CAS	96180-79-9
Couple Target	Serine/threonine-protein phosphatase
Couple Type	Inhibitor
Formula	$C_{46}H_{67}N_7O_{12}$
Identity	Identity determined by MS.
MW	910.0
Purity	≥95% (HPLC)
RTECS	GT2805000
Solubility	Soluble in 100% ethanol or methanol.
Source	Isolated from *Microcystis aeruginosa*.

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