Microcystin-LF

Inhibitor of PP1 and PP2A

Microcystin-LF (MC-LF) is an analog of microcystin-LR (Prod. No. ALX-350-012) with Phe substituted in place of Arg. MC-LF is hydrophobic and more cell permeable than other microcystins. This increased cell permeability can be useful for biochemical studies in intact cells. MC-LF is more toxic than more hydrophilic analogs such as microcystin-LR (Prod. No. ALX-350-012) or microcystin-LY (Prod. No. ALX-350-148). *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.

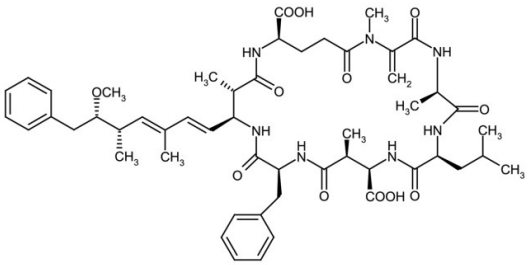
- Potent inhibitor of PP1 and PP2A
- Used in biochemical studies in intact cells
- Cited in several environment-related research articles

Citations: 37 View Online »

Ordering Information Order Online »

ALX-350-081-M001	1mg
ALX-350-081-C025	25µg
ALX-350-081-C100	100µg

Manuals, SDS & CofA View Online »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CH3
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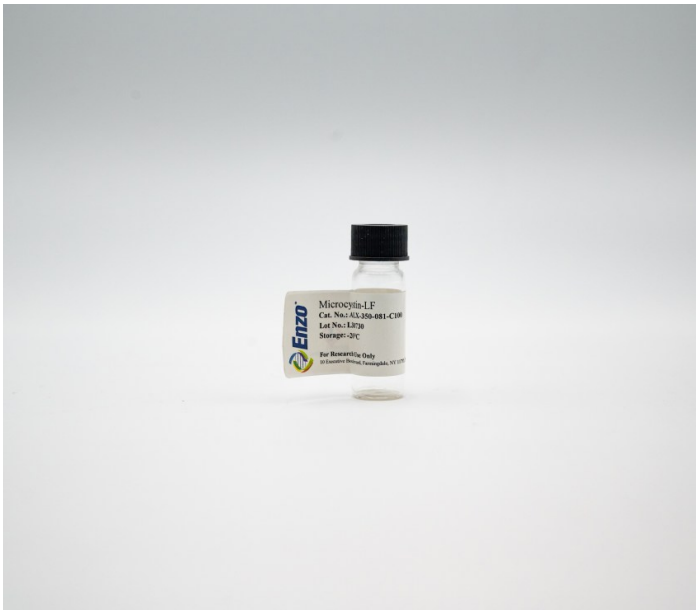
Enzo
Microcystin-LF
Cat. No.: ALX-350-081-C100
Lot No.: L8730
Storage: -20°C
For Research Use Only

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Stable in solution for at least 4 weeks when stored at -20 °C.
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-LF
Appearance	Whitish film adhered to inside of the vial.
CAS	154037-70-4
Couple Target	Serine/threonine-protein phosphatase
Couple Type	Inhibitor
Formula	$C_{52}H_{71}N_7O_{12}$
Identity	Identity determined by MS.
MW	986.2
Purity	≥95% (HPLC)
Solubility	Soluble in 100% methanol.
Source	Isolated from *Microcystis aeruginosa*.

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