Microcystin-LW

Inhibitor of PP1 and PP2A

Microcystin-LW (MC-LW) is an analog of microcystin-LR (Prod. No. ALX-350-012) with Trp substituted in place of Arg. MC-LW is hydrophobic and more cell permeable than other microcystins. This increased cell permeability can be useful for biochemical studies in intact cells. MC-LW has a characteristically different absorption spectrum compared to other microcystins, making it a useful reference compound for HPLC analysis. The Trp confers an absorption maximum at 222nm, whereas most microcystins have a characteristic maximum at 239nm. *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.

Citations: 34 View Online »

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

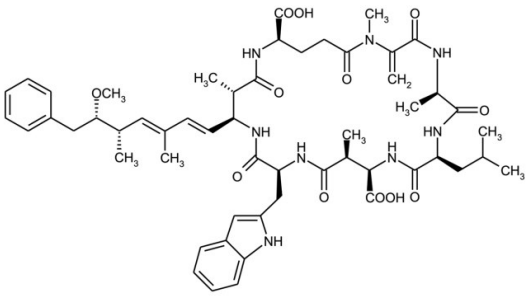
Ordering Information

Order Online »

ALX-350-080-M001	1mg
ALX-350-080-C025	25µg
ALX-350-080-C100	100µg

Manuals, SDS & CofA

View Online »


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


Enzo
Microcystin-LW
Cat. No.:ALX-350-080-C025
Lot No.:L30727
Storage:-20°C
For Research Use Only

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
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-LW
Appearance	Whitish film adhered to inside of the vial.
CAS	157622-02-1
Couple Target	Serine/threonine-protein phosphatase
Couple Type	Inhibitor
Formula	$C_{54}H_{72}N_8O_{12}$
Identity	Identity determined by MS.
MW	1025.2
Purity	≥95% (HPLC)
Solubility	Soluble in 100% methanol.
Source	Isolated from *Microcystis aeruginosa*.

Last modified: May 29, 2024

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