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 »

Ordering Information

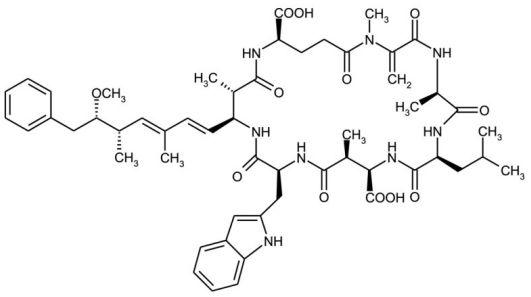
Order Online »

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

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

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
H
N
O
O
O
COOH
O
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*.

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