Microcystin-LY

Inhibitor of PP1 and PP2A

Microcystin-LY (MC-LY) is an analog of microcystin-LR (Prod. No. ALX-350-012) with Tyr substituted in place of Arg. Its toxicity is intermediate between the more toxic microcystin-LF (Prod. No. ALX-350-081) and the less toxic microcystin-LR (Prod. No. ALX-350-012).

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: 30 View Online »

- Potent inhibitor of PP1 and PP2A
- Cited in several environment-related research articles

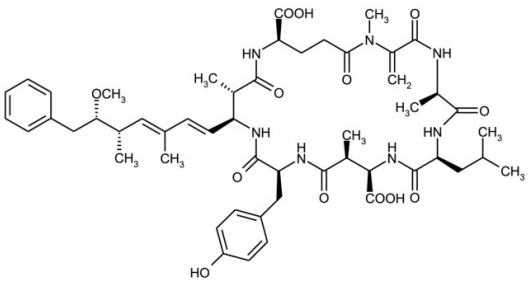
Ordering Information

Order Online »

ALX-350-148-M001	1mg
ALX-350-148-C025	25µg
ALX-350-148-C100	100µg

Manuals, SDS & CofA

View Online »


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

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-LY
Appearance	Whitish film adhered to inside of the vial.
CAS	123304-10-9
Couple Target	Serine/threonine-protein phosphatase
Couple Type	Inhibitor
Formula	$C_{52}H_{71}N_7O_{13}$
Identity	Identity determined by MS.
MW	1002.2
Purity	≥95% (HPLC)
Solubility	Soluble in 100% ethanol or methanol.
Source	Isolated from *Microcystis aeruginosa*.

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