Microcystin-RR

PP2A inhibitor

Microcystin-RR (MC-RR) is an Arg-Arg analog of Microcystin-LR (Prod. No. ALX-350-012). Although MC-RR was found to be up to 10-fold less toxic than MC-LR after intra-peritoneal injection in mice, it is both hepatotoxic and carcinogenic. It is a potent inhibitor of protein phosphatase 2A (PP2A).

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: 42 View Online »

- Hepatotoxin
- Potent inhibitor of PP2A
- Cited in several water quality-related research articles

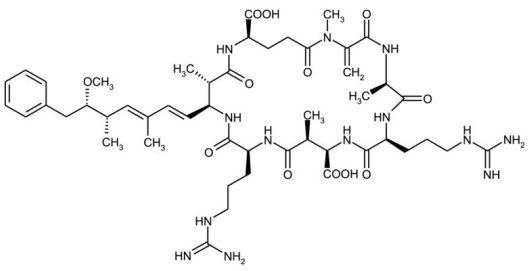
Ordering Information

Order Online »

ALX-350-043-M001	1mg
ALX-350-043-C050	50µg
ALX-350-043-C100	100µg
ALX-350-043-C250	250µg
ALX-350-043-C500	500µg

Manuals, SDS & CofA

View Online »




Microcystis-RR
Cat. No.: ALX-350-043-C050
Lot No.: L3001
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-RR
Appearance	Clear to whitish film adhered to inside of vial.
CAS	111755-37-4
Couple Target	Serine/threonine-protein phosphatase
Couple Type	Inhibitor
Formula	$C_{49}H_{75}N_{13}O_{12}$
Identity	Identity determined by MS.
MW	1038.2
Purity	≥95% (HPLC)
Solubility	Soluble in 80% aqueous methanol.
Source	Isolated from *Microcystis aeruginosa*.

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ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com