Microcystin-LR monoclonal antibody (MC10E7)

With a direct competitive enzyme-linked immunosorbent assay (ELISA) using antibody MC10E7, IC_{50} values for microcystin-LR of 0.06µg/l have been obtained. The provisional guideline value proposed by the WHO is 1 µg/l for drinking water. The detection limit for microcystin-LR is 0.006 µg/l. All microcystin variants containing an arginine at position 4 show similar IC_{50} values and detection limits, whereas other microcystins, such as microcystin-LA are not recognized. The affinity constant for MC10E7 was determined to be at least $7x10^{10}$ l/mol.The antibody was tested for its robustness against interferences (humic acids, pH, salt content, surfactants or organic solvents) and was found to be very stable. Microcystin-LR spiked water samples in the concentration range between 0.01 and 0.1µg/l were measured and a mean recovery of 99.9±16.4% was found. The antibody is well suited for the sensitive analysis of microcystins in drinking as well as surface water. *May require a license for import, please contact us for more information.*

Microcystins are extremely toxic compounds produced by cyanobacteria (blue-green algae), belonging to species of *Microcystis, Oscillatoria, Anabaena* and *Nostoc*. The contamination of drinking water or water of recreational areas can cause severe health problems to exposed humans and animals. Microcystins possess a cyclic heptapeptide structure of the general composition cyclo(-D-Ala-L-X-D-*erythro*-β-methylisoAsp-L-Y-Adda-D-iso-Glu-N-methyldehydroAla), where Adda is the unusual C20 aa 3-amino-9-methoxy-2,6,8-trimethyl-10-phenyldeca-4,6-dienoic acid and X and Y are variable L-aa.

This antibody is covered by our Worry-Free Guarantee.

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Ordering Information

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ALX-804-320-C200	200µg

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	Storage at 4°C will decrease antibody activity and must be avoided.
Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20°C.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	ELISA, IHC (PS), WB
Application Notes	Microcystin concentrations can be measured in the range of ~0.006µg/l to 0.3µg/l. The ELISA sensitivity is about 1’000 times higher compared to UV detection.
Clone	MC10E7
Formulation	Lyophilized.
Host	Mouse
Immunogen	Microcystin-LR linked via N-methyl-dehydroalanine to cationized ovalbumin.
Isotype	IgG1
Purity Detail	Protein G-affinity purified.
Recommendation Dilutions/Conditions	ELISA (1:10,000-1:100,000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Reconstitution	Reconstitute with 200µl PBS containing sodium azide.
Species Reactivity	Species independent
Specificity	Recognizes all 4-Arg microcystins.

Worry-free Guarantee

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Last modified: May 29, 2024

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