

## [D-Asp3]-Microcystin-LR

Cat. No.:	HY-P3090
CAS No.:	120011-66-7
Molecular Formula:	C <sub>48</sub> H <sub>72</sub> N <sub>10</sub> O <sub>12</sub>
Molecular Weight:	981.15
Target:	Keap1-Nrf2
Pathway:	NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Microcystin-[D-Asp3]-LR/Microcystin A is a cyanotoxin. Microcystin-[D-Asp3]-LR/Microcystin A can activate Nrf2 and promote oxidative stress response. Microcystin-[D-Asp3]-LR/Microcystin A can also be used in toxicology research <sup>[1][2]</sup> .
<b>In Vitro</b>	Microcystin exhibits toxicity targeting to the intestine, liver, and kidney and reproductive system. Its molecular toxicology involves covalent binding to and inhibition of protein phosphatases, oxidative stress, cell death (autophagy, apoptosis, necrosis), and cytoskeleton disruption <sup>[1]</sup> . Microcystin-[D-Asp3]-LR/Microcystin A ([D-Asp3]-LR Microcystin) (1 μM) significantly increases Nrf2 activity, thus indicating oxidative stress response induction <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Arman T, et al. Microcystin Toxicokinetics, Molecular Toxicology, and Pathophysiology in Preclinical Rodent Models and Humans. *Toxins* (Basel). 2021 Jul 29;13(8):537.
- [2]. Lundqvist J, et al. Microcystins activate nuclear factor erythroid 2-related factor 2 (Nrf2) in human liver cells in vitro - Implications for an oxidative stress induction by microcystins. *Toxicol.* 2017 Feb;126:47-50.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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