Microcystin (N-Me)-LR

**Product ID** M3410
**CAS No.** 1865776-22-2

**Description**
Microcystin LR is a cyclic heptapeptide initially produced by species of cyanobacteria *Microcystis*. Microcystin LR exhibits cytotoxic, pro-oxidative, and carcinogenic properties. Microcystin LR is particularly toxic to the liver, increasing cytochrome c release and expression of Bax and caspases 3, 8, and 9; microcystin LR also decreases expression of Bcl-2. In testicular cells, this toxin increases expression of c-KIT and induces apoptosis, causing a decrease in tubular diameter and testes weight. This compound also induces cytoskeletal reorganization, increasing phosphorylation of VASP and tau and also increasing dissociation of tau from the cytoskeleton. In vitro, Microcystin LR inhibits protein phosphatases 1 (PP1) and 2A (PP2A) and induces oxidative damage by increasing levels of ROS and malondialdehyde and decreasing levels of glutathione and glutathione peroxidase. Microcystin LR also produces cognitive deficit in vivo, potentially through activation of glycogen synthase kinase-3β (GSK-3β). This compound also activates Nrf2 in cancer cells.

**References**

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.