

Microcystin-LR

产品编号: D10064

CAS: 101043-37-2

保存条件: Store at -20°C stable for at least 12 months.

产品介绍: 基本信息:

CAS: 101043-37-2

分子式: C₄₉H₇₄N₁₀O₁₂

分子量: 995.17

纯度: ≥95%

外观/性状: 固体薄膜

溶解性: 溶于甲醇, DMSO

敏感性: 易吸潮

产品简介:

从淡水蓝藻铜绿微囊藻中分离出的环七肽毒素。蛋白磷酸酶1 (pp1) 和蛋白磷酸酶2a (pp2a) 的有效抑制剂。不像秋葵酸, 微囊藻毒素lr对PP1 (IC₅₀=1.7 nM) 和PP2A (IC₅₀=40 pM) 均有效。以两步反应机制与磷酸酶反应, 包括催化亚单位的快速结合和失活, 以及较慢的共价相互作用。对蛋白激酶无影响, 有助于降低蛋白激酶检测中污染磷酸酶活性的影响。微囊藻毒素lr, 铜绿微囊藻溶于DMSO中也可用。

产品用途:

微囊藻毒素-lr, 铜绿微囊藻是一种有效的蛋白磷酸酶1 (pp1) 和蛋白磷酸酶2a (pp2a) 抑制剂。
primary target IC₅₀: 1.7 nM and 40 pM against PP1 and PP2A, respectively

体外研究:

Microcystins are toxic molecules produced by cyanobacterial blooms due to water eutrophication. Microcystin-LR proves to be a potent inhibitor of type 1 (IC₅₀=1.7 nM) and type 2A (IC₅₀= 0.04 nM) protein phosphatases. Microcystin-LR inhibits the activity of both type 1 and type 2A phosphatases >10-fold more potently than okadaic acid under the same conditions. Type 2A protein phosphatases in dilute mammalian cell extracts are found to be completely inhibited by 0.5 nM microcystin-LR while type 1 protein phosphatases are only slightly affected at this concentration.