LKT Laboratories, Inc.

Okadaic Acid

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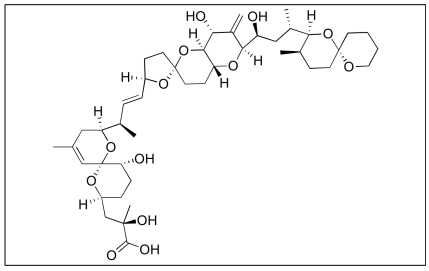
Product Information

Product ID O4101
CAS No. 78111-17-8
Chemical Name 9,10-Deepithio-9,10-didehydroacanthifolicin

Synonym Halochondrine A



Formula $C_{44}H_{68}O_{13}$
Formula Wt. 805.00
Melting Point 171-175°C
Purity ≥98%
Solubility Soluble in DMSO, ethanol, or methanol.

Bulk quanitites available upon request

Product ID	Size
O4101	100 µg
O4101	1 mg

Store Temp -20°C
Ship Temp Ambient

Description Okadaic acid is a diarrhetic shellfish toxin initially produced by dinoflagellates and sea sponges; it exhibits neurotoxic and anticancer activities. Okadaic acid inhibits protein phosphatases 1 and 2A (PP1, PP2A). In animal models of Alzheimer's disease, okadaic acid increases phosphorylation of tau protein. In adipocytes, this compound stimulates lipolysis by increasing phosphorylation of perilipin A and B. In T cell leukemia cells, okadaic acid induces G1 phase cell cycle arrest, decreases expression of cyclin D2, CDK4, CDK6, Bcl-2, Bcl-xl, and XIAP, increases expression of p21 and p27, activates caspases, and inhibits cell growth.

References

Kamat PK, Rai S, Swarnkar S, et al. Molecular and Cellular Mechanism of Okadaic Acid (OKA)-Induced Neurotoxicity: A Novel Tool for Alzheimer's Disease Therapeutic Application. Mol Neurobiol. 2014 Apr 8. [Epub ahead of print]. PMID: 24710687.

Chang NC, Lin AC, Hsu CC, et al. Okadaic Acid, a Bioactive Fatty Acid from Halichondria okadai, Stimulates Lipolysis in Rat Adipocytes: The Pivotal Role of Perilipin Translocation. Evid Based Complement Alternat Med. 2013;2013:545739. PMID: 24319476.

Mori N, Ishikawa C, Uchihara JN, et al. Protein phosphatase 2A as a potential target for treatment of adult T cell leukemia. Curr Cancer Drug Targets. 2013 Oct;13(8):829-42. PMID: 24015987.