

Product Information

OKADAIC ACID

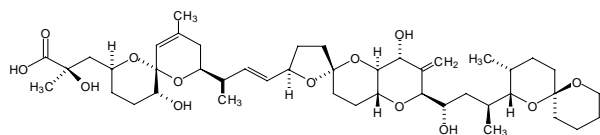
Product Number **O4511** and **O1506**

Storage Temperature -20°C

Cas #: 78111-17-8

Synonyms: 9,10-deepithio-9, 10-didehydroacanthifolicin

Product Description



Appearance: O1506 - White, photosensitive powder
O4511 - Translucent, photosensitive film

Molecular Formula: C₄₄H₆₈O₁₃

Formula Weight: 805.0

Melting Point: 164-166°C

Purity by HPLC: O4511 minimum of 90%
O1506 minimum of 80%

O4511 is purified from *Prorocentrum concavum*.

O1506 is purified from *Halichondria* (black sponge).

This dinoflagellate toxin is an ionophore-like polyether derivative of a 38 carbon fatty acid that readily enters cells. It is a known inhibitor of type 1 and 2A protein phosphatases^{1,2} and a known tumor promotor.^{3,4}

Okadaic Acid has been used to study various cellular processes such as the cell cycle⁵⁻⁹ and apoptosis^{10,11} including microtubule organization and tau phosphorylation^{12,13}. This phosphatase inhibitor has also played a role in the study of nitric oxide metabolism¹⁴ and calcium signaling.^{15,16} In addition, okadaic acid has been shown to activate transcription of the Cox-2 gene¹⁷, disrupt golgi¹⁸ arrest transport in the rough endoplasmic reticulum,¹⁹ and affect neurotransmitter release.²⁰

Precautions and Disclaimer

This product is a suspected tumor promotor. Please consult the Material Safety Data Sheet for handling recommendations before working with this material. Protect from exposure to light.

Preparation Instructions

Okadaic Acid is soluble in DMSO, ethanol or methanol. It is insoluble in water. It is soluble to at least 1 mg/ml.

Storage/Stability

As a solid, the material should have a shelf life of at least one year from the date of delivery if stored tightly sealed at -20°C, protected from light. Solutions stored frozen at -20°C or below, protected from light, should be stable for 1 to 2 months.

References

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