



## Okadaic Acid

## Data Sheet

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<b>Catalog Number:</b>	MC11072	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	Protein phosphatase inhibitor	<b>CAS #:</b>	78111-17-8
<b>Research Categories:</b>	Cell death, cancer	<b>Chemical Name:</b>	Isolated from marine dinoflagellates
<b>Solubility:</b>	Soluble in DMSO (up to 40 mg/ml) or in Ethanol (up to 5 mg/ml).	<b>Molecular Formula:</b>	C44H68O13
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	805.00
<b>Format:</b>	Lyophilized	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	-20°C		

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### Application Notes

**Description/Data:**

A naturally occurring polyether marine toxin. Potent and selective inhibitor of protein phosphatases inhibiting PP2A completely at 1 nM and PP1 at higher concentrations, while PP2C is not inhibited [1]. It is an extremely useful tool for studying cellular protein phosphorylation [2]. Induces apoptosis in a variety of cell types [3]. Activates atypical protein kinase isotypes and induces insulin-like effects in adipocytes [4].

**Caution: SKIN IRRITANT, TUMOR PROMOTOR. Avoid contact.**

**References:**

- 1) Cohen et al. (1990), Okadaic acid: a new probe for the study of cellular regulation; *Trends Biochem. Sci.*, 15 98
- 2) Hardie et al. (1991), Use of okadaic acid to inhibit protein phosphatases in intact cells; *Clin. Methods Enzymol.*, 201 469
- 3) Haneji et al. (2013), Okadaic acid activates the PKR pathway and induces apoptosis through PKR stimulation in MG63 osteoblast-like cells; *J. Oncol.*, 42 1904
- 4) Standaert et al. (1999), Okadaic acid activates atypical protein kinase C (zeta/lambda) In rats and 3T3/L1 adipocytes. An apparent requirement for activation of Glut4 translocation and glucose transport; *J. Biol. Chem.*, 274 14074

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