

## Okadaic Acid

**O-3452** okadaic acid \*500 µg/mL solution in DMSO\*

**O-7457** okadaic acid, sodium salt

### Quick Facts

#### Storage upon receipt:

- -20°C
- Desiccate
- Protect from air

#### Molecular weight:

- Free acid = 805
- Sodium salt = 827

**Notes:** The free acid is provided in DMSO; the sodium salt form is soluble in water.

lism has made it useful for investigating regulatory mechanisms in eukaryotes.<sup>2-4</sup> We offer okadaic acid as the free acid (O-3452) and as the sodium salt (O-7457), which is reported to be more stable than the free acid during storage.

### Storage and Handling

Molecular Probes' okadaic acid, derived from Black Sponge (*Halichondria okadai*), is shipped in 25 µg units. The free acid (O-3452) is supplied as 50 µL of a 500 µg/mL solution in anhydrous DMSO and should be stored frozen at -20°C. The sodium salt (O-7457) is supplied as a lyophilized solid and should be stored frozen at -20°C. Allow products to warm to room temperature before opening the vials. Once the vials have been opened, both the DMSO solution and the solid should be stored under nitrogen or argon gas. When stored properly, okadaic acid should be stable for at least one year. Experimental concentrations of okadaic acid vary with the application; nanomolar to micromolar solutions of okadaic acid are typically used. The molecular weight of okadaic acid is 805, while that of the sodium salt is 827.

### Warning

Okadaic acid is a toxin and potential tumor promoter; its effects in humans are unknown. Okadaic acid also enhances the effect of many carcinogenic substances. Avoid skin exposure and inhalation of powders.

### Introduction

Okadaic acid (C<sub>44</sub>H<sub>68</sub>O<sub>13</sub>) is a polyether derivative of a 38-carbon fatty acid extracted from marine dinoflagellates. This toxin, which induces diarrhetic seafood poisoning, has been shown to be a potent tumor promoter. Okadaic acid penetrates intact cells and strongly inhibits serine and threonine phosphatases, resulting in hyperphosphorylation of numerous cellular proteins.<sup>1</sup> Unlike the phorbol esters, okadaic acid does not influence the activity of protein kinase C.<sup>1</sup> The ability of okadaic acid to mimic the effects of insulin on carbohydrate and lipid metabo-

### References

1. Proc Natl Acad Sci USA 85, 1768 (1988); 2. Nature 337, 78 (1989); 3. J Biol Chem 265, 16571 (1990); 4. Trends Biochem Sci 15, 98 (1990).

### Product List

Current prices may be obtained from our Web site or from our Customer Service Department.

Cat #	Product Name	Unit Size
O-3452	okadaic acid *500 µg/mL solution in DMSO*	50 µL
O-7457	okadaic acid, sodium salt	25 µg

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## Contact Information

Further information on Molecular Probes' products, including product bibliographies, is available from your local distributor or directly from Molecular Probes. Customers in Europe, Africa and the Middle East should contact our office in Leiden, the Netherlands. All others should contact our Technical Assistance Department in Eugene, Oregon.

Please visit our Web site — [www.probes.com](http://www.probes.com) — for the most up-to-date information

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