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ProductInformation

Okadaic acid
from *Prorocentrum sp.*

Product Number **O 9381**
Storage Temperature –20 °C

Product Description

Okadaic acid is extracted from unialgal cultures of a dinoflagellate, *Prorocentrum sp*.[1,2] It is a specific inhibitor of eukaryotic protein phosphatases (PP), which remove phosphate from serine and threonine residues.[3] Okadaic acid is also a tumor promoter and smooth muscle stimulant.

Okadaic acid has applications in cell extracts and other *in vitro* systems, as a powerful tool to inhibit, identify, and quantitate PP1 and PP2A. It is useful in searching for physiological phosphatase substrates and studying the functions of PP1 and PP2A. In intact cells, okadaic acid is used to identify and study cellular processes regulated by phosphorylation. The hydrophobic backbone of this polyether fatty acid allows cell entry.

After purification, a solution of okadaic acid is dispensed to the bottom of actinic glass vials in approximately 0.1 ml aliquots. The solvent is then evaporated under inert atmosphere. Okadaic acid (Product No. O 9381) remains as a barely visible film of powder at the bottom of the vials.

This product was tested for biological performance with L929, murine cell line.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

For cell culture use, okadaic acid can be recovered from the vial as follows:

1. Using a micropipetter deliver 50 µl of ethanol to the bottom of the vial. Carefully rotate the vial in an upright position to moisten the bottom area.
2. Sonicate for 1 minute.
3. Add 450 µl of liquid culture medium.
4. Remove all material from the vial and place into a glass culture tube or other glass vessel of choice.
5. Rinse vial with 500 µl of medium using a micropipetter and add to culture tube.
6. Depending on the package size, a 25 µg/ml or 100 µg/ml solution is obtained.

Other adequate solvents and diluents can be used to accommodate your specific application.

Storage/Stability

Okadaic acid is stable in dry powder form when stored desiccated at –20 °C.

References

1. Murakami, Y., et al., Bull. Jpn. Soc. Sci. Fish, **48**, 69 (1982).
2. Murata, M., et al., Bull. Jpn. Soc. Sci. Fish, **48**, 549, (1982).
3. Cohen, P., et al., Trends Biochem. Sci., **15**, 98, (1990).

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