

Okadaic Acid (7E1): sc-101359

BACKGROUND

Bivalves represent a class of aquatic dwelling mollusks that have two-part shells and include clams, scallops, oysters and mussels. Okadaic Acid (OA) is a fat soluble toxin that can accumulate in bivalves and, if ingested, may cause diarrhetic shellfish poisoning (DSP), an affliction that is characterized by incapacitating diarrhea, nausea, vomiting, abdominal cramps and chills. Specifically, Okadaic Acid functions as a phosphatase inhibitor that prevents intestinal cellular phosphorylation, thus rendering cells extremely permeable to water and causing severe dehydration. Okadaic Acid may also increase the expression of nerve growth factor (NGF), thereby protecting cells from apoptosis and promoting abnormal cell growth, possibly leading to oncogenesis.

REFERENCES

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- Ahn, K.H., Kim, Y.S., Kim, S.Y., Huh, Y., Park, C. and Jeong, J.W. 2009. Okadaic Acid protects human neuroblastoma SH-SY5Y cells from 1-methyl-4-phenylpyridinium ion-induced apoptosis. *Neurosci. Lett.* 449: 93-97.

SOURCE

Okadaic Acid (7E1) is a mouse monoclonal antibody raised against Okadaic Acid.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with 0.1% gelatin.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Okadaic Acid (7E1) is recommended for detection of Okadaic Acid by solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

SELECT PRODUCT CITATIONS

- Desmet, C., Blum, L.J. and Marquette, C.A. 2012. High-throughput multiplexed competitive immunoassay for pollutants sensing in water. *Anal. Chem.* 84: 10267-10276.
- Desmet, C., Blum, L.J. and Marquette, C.A. 2013. Multiplex microarray ELISA versus classical ELISA, a comparison study of pollutant sensing for environmental analysis. *Environ. Sci. Process Impacts* 15: 1876-1882.
- Weller, M.G. 2013. Immunoassays and biosensors for the detection of cyanobacterial toxins in water. *Sensors* 13: 15085-15112.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures