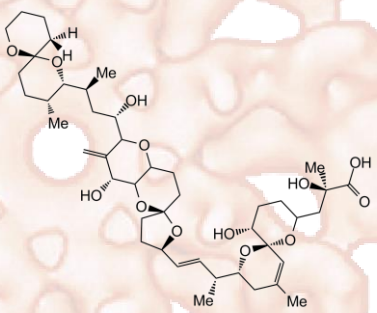
Product Data Sheet

Okadaic acid



Cat. No.:	A4540
CAS No.:	78111-17-8
Formula:	C44H68O13
M.Wt:	805.01
Synonyms:	
Target:	Chromatin/Epigenetics
Pathway:	Protein Ser/Thr Phosphatases
Storage:	Desiccate at -20°C

Solvent & Solubility

In Vitro

Soluble in DMSO

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	1.2422 mL	6.2111 mL	12.4222 mL
5 mM	0.2484 mL	1.2422 mL	2.4844 mL
10 mM	0.1242 mL	0.6211 mL	1.2422 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Protein phosphatase 1 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Rabbit lens epithelial cells, N/N1003A cells
Preparation method:	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10-100 nM, 0-24 h,
Applications:	In confluent rabbit lens epithelial cells (RLECs), okadaic acid (100 nM) within 3

		to 24 h significantly induced cell apoptosis. Also, okadaic acid induced the expression of p53 and bax, which were necessary for the apoptotic programs. In N/N1003A cells, okadaic acid (10 nM) decreased total phosphatase activity by 20% and mainly inhibited PP-2A activity, while okadaic acid (100 nM) reduced 81% total phosphatase activity and inhibited PP-1 and PP-2A activity.
In Vivo	**Animal experiment**	
	Animal models:	Adult male Wistar rats
	Dosage form:	0-10 mg/kg, 30 min, injection cannula
	Applications:	Intrastriatal infusion of okadaic acid (0.005, 0.05 and 0.5 nmol) increased CREB and Elk-1 phosphorylation and c-Fos immunoreactivity in the injected dorsal striatum in a dose-dependent manner. Okadaic acid (0.05 and 0.5 nM) increased c-fos mRNA expression in the dorsal striatum in a dose-dependent manner. Okadaic acid (0.05 and 0.5 nmol) at a survival time of 30 min significantly increased c-fos mRNA hybridization signals in the striatum in a dose-dependent manner. Okadaic acid at 0.05 nmol significantly increased pCREB and pElk-1. Okadaic acid (10 nM) inhibited PP-2A activity and okadaic acid (100 nM) inhibited both PP-2A and PP-1 activity.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Li DW, Fass U, Huizar I, et al. Okadaic acid-induced lens epithelial cell apoptosis requires inhibition of phosphatase-1 and is associated with induction of gene expression including p53 and bax. Eur J Biochem, 1998, 257(2): 351-361.

[2]. Choe ES, Parelkar NK, Kim JY, et al. The protein phosphatase 1/2A inhibitor okadaic acid increases CREB and Elk-1 phosphorylation and c-fos expression in the rat striatum in vivo. J Neurochem, 2004, 89(2): 383-390.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for

long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com