

PRODUCT INFORMATION



Okadaic Acid

Item No. 10011490

CAS Registry No.: 78111-17-8

Formal Name: (6R)- α R,5R-dihydroxy- α ,10-dimethyl-8S-[(2E)-1R-methyl-3-[(2R,4'aR,8'aS)-octahydro-8'R-hydroxy-6'S-[1S-hydroxy-3S-[(6S)-3R-methyl-1,7-dioxaspiro[5.5]undec-2S-yl]butyl]-7'-methylenespiro[furan-2(3H),2'(3'H)-pyrano[3,2-b]pyran]-5R-yl]-2S-propen-1-yl]-1,7-dioxaspiro[5.5]undec-10-ene-2S-propanoic acid

Synonyms: Acanthifolicin, 35-demethyl DTX1, NSC 677083, OA

MF: C₄₄H₆₈O₁₃

FW: 805.0

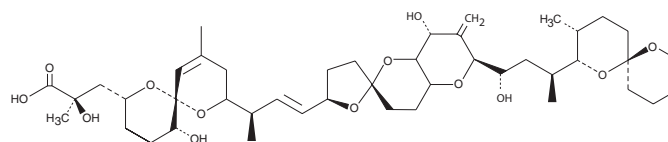
Purity: \geq 95%

Supplied as: A solution in ethanol

Storage: -20°C

Stability: \geq 2 years

Item Origin: Alga/*Prorocentrum lima*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Okadaic acid is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol and DMSO purged with an inert gas can be used.

Description

Okadaic acid is a marine sponge toxin which potently inhibits certain serine/threonine protein phosphatases. This cell permeable inhibitor targets the multiple isoforms of PP1 (IC₅₀ = 10-50 nM), both isoforms of PP2A (IC₅₀ = 0.5 nM) and PP3 (IC₅₀ = 4 nM).¹⁻³ It is a very weak inhibitor of PP2B (IC₅₀ > 2 μ M) and does not inhibit PP2C or other phosphatases.^{1,3} Presumably through these actions, okadaic acid is a potent carcinogen and induces tau phosphorylation.^{4,5} In sponge, okadaic acid plays a role in defense, inducing apoptosis in symbiotic or parasitic annelids.⁶

References

1. Bialojan, C. and Takai, A. *Biochem. J.* **256**(1), 283-290 (1988).
2. Gupta, V., Ogawa, A.K., Du, X., et al. *J. Med. Chem.* **40**(2), 3199-3206 (1997).
3. McCluskey, A., Sim, A.T.R., and Sakoff, J.A. *J. Med. Chem.* **45**(6), 1151-1175 (2002).
4. Suganuma, M., Fujiki, H., Suguri, H., et al. *Proc. Natl. Acad. Sci. USA* **85**(6), 1768-1771 (1988).
5. Zhang, Z. and Simpkins, J.W. *Brain Res.* **1345**, 176-181 (2010).
6. Schröder, H.C., Breter, H.J., Fattorusso, E., et al. *Appl. Environ. Microbiol.* **72**(7), 4907-4916 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 03/26/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM