

PRODUCT INFORMATION

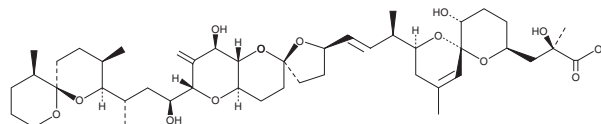


Dinophysistoxin-1

Item No. 10011497

CAS Registry No.: 81720-10-7

Formal Name: (α R,2S,5R,6R,8S)-8-[(1R,2E)-3-
[(2R,4'aR,5R,6'S,8'R,8'aS)-6'-[(1S,3S)-3-
[(2S,3R,6R,11R)-3,11-dimethyl-1,7-dioxaspiro[5.5]
undec-2-yl]-1-hydroxybutyl]octahydro-8'-
hydroxy-7'-methylenespiro[furan-2(3H),2'(3'H)-
pyrano[3,2-b]pyran]-5-yl]-1-methyl-2-propenyl]-
 α ,5-dihydroxy- α ,10-dimethyl-1,7-dioxaspiro[5.5]
undec-10-ene-2-propanoic acid



Synonyms:

DTX1, 35-methyl Okadaic Acid

MF: $C_{45}H_{70}O_{13}$

FW: 819.0

Purity: $\geq 95\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

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

Laboratory Procedures

Dinophysistoxin-1 is supplied as a solid. A stock solution may be made by dissolving the dinophysistoxin-1 in the solvent of choice, which should be purged with an inert gas. Dinophysistoxin-1 is soluble in organic solvents such as ethanol, methanol, and DMSO.

Description

Dinophysistoxin-1 is a marine toxin produced by dinoflagellates that is known to accumulate in shellfish and cause diarrhetic shellfish poisoning.¹ It inhibits serine/threonine protein phosphatases 1 (PP1) and PP2A ($IC_{50} = 0.104$ nM) and has been shown to promote cancer cell growth in tumor cell lines and animal models.^{2,3}

References

1. Fernández, D.A., Louzao, M.C., Fraga, M., *et al.* Experimental basis for the high oral toxicity of dinophysistoxin 1: A comparative study of DSP. *Toxins (Basel)* **6(1)**, 211-228 (2014).
2. Ikehara, T., Imamura, S., Yoshina, A., *et al.* PP2A inhibition assay using recombinant enzyme for rapid detection of okadaic acid and its analogs in shellfish. *Toxins (Basel)* **2(1)**, 195-204 (2010).
3. Fujiki, H., Suganuma, M., Yoshizawa, S., *et al.* Mechanisms of action of okadaic acid class tumor promoters on mouse skin. *Environ. Health Perspect.* **93**, 211-214 (1991).

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.

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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