

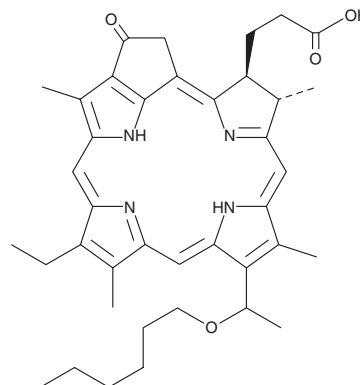
PRODUCT INFORMATION



HPPH

Item No. 20611

CAS Registry No.: 149402-51-7
Formal Name: (3S,4S)-14-ethyl-9-[1-(hexyloxy)ethyl]-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoic acid
Synonyms: Photochlor, Pyropheophorbide- α -hexyl-ether, 2-[1-hexyloxyethyl]-2-devinyl Pyropheophorbide a
MF: C₃₉H₄₈N₄O₄
FW: 636.8
Purity: ≥98% (mixture of epimers)
UV/Vis.: λ_{max} : 229, 266, 318, 407, 660 nm
Supplied as: A crystalline 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

HPPH is supplied as a crystalline solid. A stock solution may be made by dissolving the HPPH in the solvent of choice, which should be purged with an inert gas. HPPH is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of HPPH in these solvents is approximately 0.33, 3, and 10 mg/ml, respectively.

HPPH is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HPPH should first be dissolved in DMF and then diluted with the aqueous buffer of choice. HPPH has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

HPPH is a chlorin that acts as a photosensitizer in photodynamic therapy (PDT) when stimulated with light at 655 nm.¹ When administered systemically, HPPH accumulates in tumor cells and, when stimulated with light in the presence of oxygen, reactive oxygen species (ROS) are generated, leading to necrosis within the tumor. HPPH, at a dose of 0.5 mg/kg, increases survival in a nude rat model of glioma.² It works synergistically with gemcitabine (Item No. 11690) in several pancreatic cancer cell lines to induce cell death.³

References

1. Dennis, E.J., Dolman, G.J., Fukumura, D., *et al.* Photodynamic therapy for cancer. *Nature* **3**, 1-8 (2003).
2. Lobel, J., MacDonald, I.J., Ciesielski, M.J., *et al.* 2-[1-hexyloxyethyl]-2-devinyl pyropheophorbide-a (HPPH) in a nude rat glioma model: Implications for photodynamic therapy. *Lasers Surg. Med.* **29**(5), 397-405 (2001).
3. Sun, G., Anderson, M.A., Gorospe, E.C., *et al.* Synergistic effects of photodynamic therapy with HPPH and gemcitabine in pancreatic cancer cell lines. *Lasers Surg. Med.* **44**(9), 755-761 (2012).

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, 10/24/2022

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