

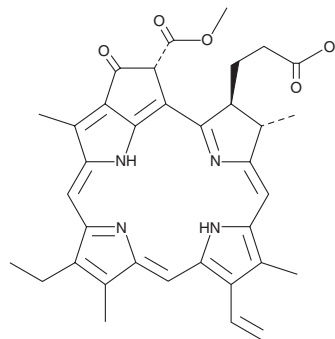
PRODUCT INFORMATION



Pheophorbide a

Item No. 16072

CAS Registry No.: 15664-29-6
Formal Name: 9-ethenyl-14-ethyl-21R-(methoxycarbonyl)-4S,8,13,18-tetramethyl-20-oxo-3S-phorbinepropanoic acid
Synonym: 2-Deacetyl-2-vinylbacteriopheophorbide
MF: C₃₅H₃₆N₄O₅
FW: 592.7
Purity: ≥90% (mixture of diastereomers)
UV/Vis.: λ_{max}: 225, 275, 331, 409, 537, 609, 666 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

Pheophorbide a is supplied as a crystalline solid. A stock solution may be made by dissolving the pheophorbide a in the solvent of choice, which should be purged with an inert gas. Pheophorbide a is soluble in organic solvents such as DMSO and dimethyl formamide, The solubility of pheophorbide a in these solvents is approximately 1 mg/ml.

Pheophorbide a is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pheophorbide a should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pheophorbide a has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Pheophorbide a is a product of chlorophyll breakdown that has been used as a photosensitizer in photodynamic therapy for the treatment of cancer.¹ It has been reported to inhibit U87MG cells with an IC₅₀ value of 2.8 µg/ml and demonstrates cytostatic activity specifically against glioblastoma cells without affecting normal cells.² It also displays antiproliferative activity against melanoma, breast, and lung cancer cells *in vitro* at 100 µg/ml.³

References

1. Cui, B.C., Yoon, I., Li, J.Z., *et al.* Synthesis and characterization of novel purpurinimides as photosensitizers for photodynamic therapy. *Int. J. Mol. Sci.* **15(5)**, 8091-8105 (2014).
2. Cho, M., Park, G.-M., Kim, S.-N., *et al.* Glioblastoma-specific anticancer activity of pheophorbide a from the edible red seaweed *Grateloupia elliptica*. *J. Microbiol. Biotechnol.* **24(3)**, 346-353 (2014).
3. Baudelet, P.-H., Gagez, A.-L., Bérard, J.-B., *et al.* Antiproliferative activity of *Cyanophora paradoxa* pigments in melanoma, breast and lung cancer cells. *Mar. Drugs* **11(11)**, 4390-4406 (2013).

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