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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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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: $C_{35}H_{36}N_4O_5$

FW: 592.7

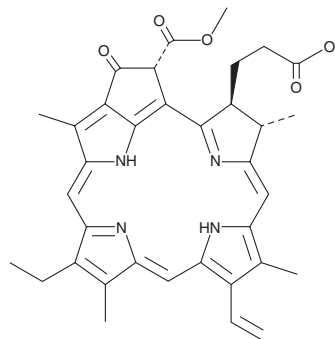
Purity: $\geq 90\%$ (mixture of diastereomers)

UV/Vis.: λ_{max} : 225, 275, 331, 409, 537, 609, 666 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



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. Pheophorbide a is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. 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 IC_{50} value of 2.8 $\mu\text{g/ml}$ 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 $\mu\text{g/ml}$.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. Baudalet, 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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