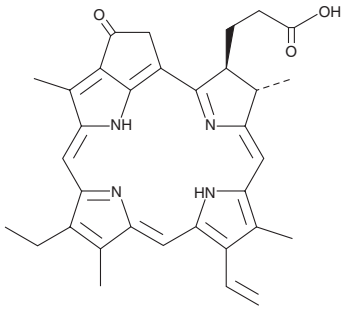
PRODUCT INFORMATION

Pyropheophorbide *a*

Item No. 21371

CAS Registry No.:	24533-72-0
Formal Name:	9-ethenyl-14-ethyl-4S,8,13,18-tetramethyl-20-oxo-3S-phorbinepropanoic acid
MF:	$C_{33}H_{34}N_4O_3$
FW:	534.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 209, 226, 273, 324, 409, 507, 539, 609, 666 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Natural/Source unknown



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

Laboratory Procedures

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

Pyropheophorbide *a* is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pyropheophorbide *a* should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pyropheophorbide *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

Pyropheophorbide *a* is a photosensitizer and degradant of chlorophyll *a* (Item No. 33399) that has been found in *O. ficus indica* and has anticancer and antiviral activities.[1-3] It induces cytotoxicity in SKOV3 ovarian cancer and KB papilloma cells when combined with photodynamic therapy (PDT; IC_{50}s = 14.5 and 1.2 µM, respectively).[1] Pyropheophorbide *a* also inhibits the replication of herpes simplex virus 2 (HSV-2) and influenza A virus in Vero and MDCK cells, respectively (IC_{50}s = 0.016 and 0.33 µg/ml, respectively).[2]

Reference

1. Stamati, I., Kuimova, M.K., Lion, M., *et al.* Novel photosensitisers derived from pyropheophorbide-*a*: Uptake by cells and photodynamic efficiency *in vitro*. *Photochem. Photobiol. Sci.* **9(7)**, 1033-1041 (2010).
2. Bouslama, L., Hayashi, K., Lee, J.-B., *et al.* Potent virucidal effect of pheophorbide a and pyropheophorbide a on enveloped viruses. *J. Nat. Med.* **65(1)**, 229-233 (2011).
3. Doi, M., Inage, T., and Shioi, Y. Chlorophyll degradation in a *Chlamydomonas reinhardtii* mutant: An accumulation of pyropheophorbide *a* by anaerobiosis. *Plant Cell Physiol.* **42(5)**, 469-474 (2001).

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