

## Pheophytin a

## Chemical Properties

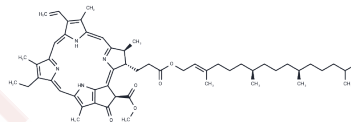
CAS No. : 603-17-8

Formula: C<sub>55</sub>H<sub>74</sub>N<sub>4</sub>O<sub>5</sub>

Molecular Weight: 871.20

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Pheophytin a is a derivative formed when chlorophyll a loses its central Mg <sup>2+</sup> ion under acidic conditions or through enzymatic action. It retains the porphyrin ring structure and possesses certain light-absorbing properties. It is commonly used to study electron transfer processes in photosynthesis, particularly as a model molecule for electron acceptors and reaction intermediates in photosystem II. As a photosensitizer, demagnesium chlorophyll a can generate reactive oxygen species through photodynamic therapy upon activation by red light at 660 nm, inducing apoptosis and necrosis in cancer cells.
Targets(IC50)	ERK,HCV Protease,Reactive Oxygen Species,STAT,COX,PGE Synthase

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1478 mL	5.7392 mL	11.4784 mL
5 mM	0.2296 mL	1.1478 mL	2.2957 mL
10 mM	0.1148 mL	0.5739 mL	1.1478 mL
50 mM	0.023 mL	0.1148 mL	0.2296 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Lin CY, et al. Pheophytin a inhibits inflammation via suppression of LPS-induced nitric oxide synthase-2, prostaglandin E2, and interleukin-1 $\beta$  of macrophages. *Int J Mol Sci.* 2014;15(12):22819-22834. Published 2014 Dec 9.
- Mohammed HA, et al. Formulation of Ethyl Cellulose Microparticles Incorporated Pheophytin A Isolated from *Suaeda vermiculata* for Antioxidant and Cytotoxic Activities. *Molecules.* 2019 Apr 17;24(8):1501.
- Ina A, et al. Pheophytin a, a low molecular weight compound found in the marine brown alga *Sargassum fulvellum*, promotes the differentiation of PC12 cells. *Int J Dev Neurosci.* 2007;25(1):63-68.
- Okai Y, et al. Potent anti-inflammatory activity of pheophytin a derived from edible green alga, *Enteromorpha prolifera* (Sujiao-nori). *Int J Immunopharmacol.* 1997;19(6):355-358.
- Wang SY, et al. Bioactivity-guided screening identifies pheophytin a as a potent anti-hepatitis C virus compound from *Lonicera hypoglauca* Miq. *Biochem Biophys Res Commun.* 2009;385(2):230-235.

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