

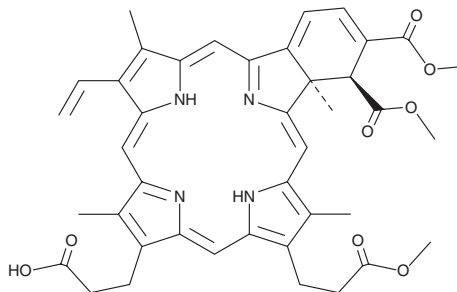
# PRODUCT INFORMATION



## Verteporfin

Item No. 17334

**CAS Registry No.:** 129497-78-5  
**Formal Name:** (4R,4aS)-rel-18-ethenyl-4,4a-dihydro-3,4-3,4-bis(methoxycarbonyl)-4a,8,14,19-tetramethyl-24H,26H-benzo[b]porphine-9,13-dipropanoic acid, monomethyl ester  
**Synonyms:** BPD-MA, CL 318,952  
**MF:** C<sub>41</sub>H<sub>42</sub>N<sub>4</sub>O<sub>8</sub>  
**FW:** 718.8  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 214, 345, 435, 566, 682 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

Verteporfin is supplied as a crystalline solid. A stock solution may be made by dissolving the verteporfin in the solvent of choice, which should be purged with an inert gas. Verteporfin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of verteporfin in these solvents is approximately 50 and 3 mg/ml, respectively.

Verteporfin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, verteporfin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Verteporfin has a solubility of approximately 0.1 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

Verteporfin is a photosensitizer used during photodynamic therapy to eliminate abnormal blood vessels in the eye that are associated with conditions such as macular degeneration. It accumulates in these abnormal blood vessels and, when activated by nonthermal red light with a wavelength of 693 nm in the presence of oxygen, produces a highly reactive short-lived singlet oxygen and other reactive oxygen radicals, generating local damage to the endothelium and vessel occlusion.<sup>1</sup> Verteporfin can also inhibit autophagosome formation by directly targeting and modifying p62, a scaffold and adaptor protein that binds both polyubiquitinated proteins destined for degradation and LC3 on autophagosomal membranes.<sup>2</sup>

### References

- Schmidt-Erfurth, U. and Hasan, T. Mechanisms of action of photodynamic therapy with verteporfin for the treatment of age-related macular degeneration. *Surv. Ophthalmol.* **45(3)**, 195-214 (2000).
- Donohue, E., Balgi, A.D., Komatsu, M., *et al.* Induction of covalently crosslinked p62 oligomers with reduced binding to polyubiquitinated proteins by the autophagy inhibitor verteporfin. *PLoS One* **9(12)**, 1-30 (2014).

#### 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.

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