

# PRODUCT INFORMATION

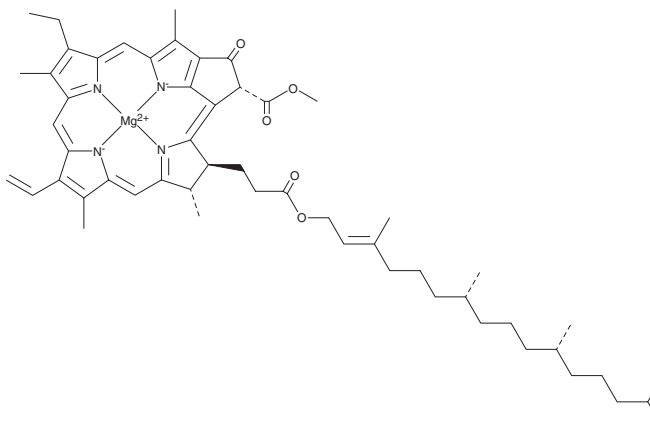


## Chlorophyll *a*

Item No. 33399

**CAS Registry No.:** 479-61-8  
**Formal Name:** (SP-4-2)-[(2E,7R,11R)-3,7,11,15-tetramethyl-2-hexadecenyl (3S,4S,21R)-9-ethenyl-14-ethyl-21-(methoxycarbonyl)-4,8,13,18-tetramethyl-20-oxo-3-phorbinepropanoato(2-)-κN<sup>23</sup>,κN<sup>24</sup>,κN<sup>25</sup>,κN<sup>26</sup>]-magnesium

**MF:** C<sub>55</sub>H<sub>72</sub>MgN<sub>4</sub>O<sub>5</sub>  
**FW:** 893.5  
**Purity:** ≥60%  
**UV/Vis.:** λ<sub>max</sub>: 338, 432, 665 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Bacterium/Spirulina



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

### Laboratory Procedures

Chlorophyll *a* is supplied as a solid. A stock solution may be made by dissolving the chlorophyll *a* in the solvent of choice, which should be purged with an inert gas. Chlorophyll *a* is soluble in organic solvents such as ethanol and acetone.

### Description

Chlorophyll *a* is a pigment found in all oxygenic photosynthetic organisms that converts visible light to chemical energy.<sup>1</sup> It is located in chloroplasts within the thylakoid membrane and is a component of the light-harvesting complex and reaction center of photosystems I and II, where it has roles in both photon absorption and conversion to chemical energy.<sup>1,2</sup> Chlorophyll *a* fluorescence (ChlF) has commonly been used to monitor leaf photosynthetic performance in response to abiotic stressors, such as drought, nutrient deficiency, or herbicides, in agricultural, horticultural, and agrochemical industries.<sup>3</sup> It displays absorption maxima at 430 and 662 nm.<sup>1</sup>

### References

1. Björn, L.O., Papageorgiou, G.C., Blankenship, R.E., *et al.* A viewpoint: Why chlorophyll *a*? *Photosynth. Res.* **99**(2), 85-98 (2009).
2. Porcar-Castell, A., Tyystjärvi, E., Atherton, J., *et al.* Linking chlorophyll *a* fluorescence to photosynthesis for remote sensing applications: Mechanisms and challenges. *J. Exp. Bot.* **65**(15), 4065-4095 (2014).
3. Baker, N.R. and Rosenqvist, E. Applications of chlorophyll fluorescence can improve crop production strategies: An examination of future possibilities. *J. Exp. Bot.* **55**(403), 1607-1621 (2004).

#### 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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