

chlorophyllide-a oxygenase

Cat. No. EXWM-0723

Lot. No. (See product label)

Introduction

Description

Chlorophyll b is required for the assembly of stable light-harvesting complexes (LHCs) in the chloroplast of green algae, cyanobacteria and plants. Contains a mononuclear iron centre. The enzyme catalyses two successive hydroxylations at the 7-methyl group of chlorophyllide a. The second step yields the aldehyde hydrate, which loses H₂O spontaneously to form chlorophyllide b. Chlorophyll a and protochlorophyllide a are not substrates.

Synonyms

chlorophyllide a oxygenase; chlorophyll-b synthase; CAO

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.14.13.122

CAS No.

216503-73-0

Reaction

chlorophyllide a + 2 O₂ + 2 NADPH + 2 H⁺ = chlorophyllide b + 3 H₂O + 2NADP⁺ (overall reaction); (1a) chlorophyllide a + O₂ + NADPH + H⁺ = 71-hydroxychlorophyllide a + H₂O + NADP⁺; (1b) 71-hydroxychlorophyllide a + O₂ + NADPH + H⁺ = chlorophyllide b + 2 H₂O + NADP⁺

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.