

acyl-lipid ω -(9-4) desaturase

Cat. No. EXWM-0974

Lot. No. (See product label)

Introduction

Description

The enzyme, characterized from the green alga *Chlamydomonas reinhardtii*, is a front-end desaturase that introduces a cis double bond in ω 9 unsaturated C18 or C20 fatty acids incorporated into lipids, at a position 4 carbon atoms from the existing ω 9 bond, towards the carboxy end of the fatty acid (at the ω 13 position). When acting on 20:2 Δ (11,14) and 20:3 Δ (11,14,17) substrates it introduces the new double bond between carbons 7 and 8. The enzyme contains a cytochrome b5 domain that acts as the direct electron donor for the active site of the desaturase.

Synonyms

acyl-lipid ω -13 desaturase; acyl-lipid 7-desaturase (ambiguous)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.14.19.12

Reaction

(1) linoleoyl-[glycerolipid] + 2 ferrocytochrome b5 + O₂ + 2 H⁺ = pinolenoyl-[glycerolipid] + 2 ferricytochrome b5 + 2 H₂O; (2) α -linolenoyl-[glycerolipid] + 2 ferrocytochrome b5 + O₂ + 2 H⁺ = coniferonoyl-[glycerolipid] + 2 ferricytochrome b5 + 2 H₂O;

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.