Creative Enzymes®

sn-1 acyl-lipid ω-3 desaturase (ferredoxin)

Cat. No. EXWM-1000

Lot. No. (See product label)

Introduction

Description	The enzyme, characterized from cyanobacteria, introduces a cis double bond at carbon 15 of linoleoyl and γ-linolenoyl groups attached to the sn-1 position of glycerolipids. The enzyme is an ω desaturase, and determines the location of the double bond by counting three carbons from the methyl end of the fatty acid. It is nonspecific with respect to the polar head group of the glycerolipid. cf. EC 1.14.19.35, sn-2 acyl-lipid ω-3 desaturase (ferredoxin).
Synonyms	desB (gene name)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.19.36
Reaction	(1) a 1-γ-linolenoyl-2-acyl-[glycerolipid] + 2 reduced ferredoxin [iron-sulfur] cluster + O2 + 2 H+ = a 1-stearidonoyl-2-acyl-[glycerolipid] + 2 oxidized ferredoxin [iron-sulfur] cluster + 2 H2O; (2) a 1-linoleoyl-2-acyl-[glycerolipid] + 2 reduced ferredoxin [iron-sulfur] cluster + O2 + 2 H+ = a 1-α-linolenoyl-2-acyl-[glycerolipid] + 2 oxidized ferredoxin [iron-sulfur] cluster + 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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.