

## sn-1 acyl-lipid $\omega$ -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  $\gamma$ -linolenoyl groups attached to the sn-1 position of glycerolipids. The enzyme is an  $\omega$  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  $\omega$ -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- $\gamma$ -linolenoyl-2-acyl-[glycerolipid] + 2 reduced ferredoxin [iron-sulfur] cluster + O<sub>2</sub> + 2 H<sup>+</sup> = a 1-stearidonoyl-2-acyl-[glycerolipid] + 2 oxidized ferredoxin [iron-sulfur] cluster + 2 H<sub>2</sub>O; (2) a 1-linoleoyl-2-acyl-[glycerolipid] + 2 reduced ferredoxin [iron-sulfur] cluster + O<sub>2</sub> + 2 H<sup>+</sup> = a 1- $\alpha$ -linolenoyl-2-acyl-[glycerolipid] + 2 oxidized ferredoxin [iron-sulfur] cluster + 2 H<sub>2</sub>O

**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.