Creative Enzymes®

acyl-lipid (7-3)-desaturase

Cat. No. EXWM-0995

Lot. No. (See product label)

Introduction

Description	The enzymes from several algae introduce a cis double bond at the 4-position in 22-carbon polyunsaturated fatty acids that contain a Δ7 double bond. The enzyme from the fresh water alga Chlamydomonas reinhardtii acts on the 16 carbon fatty acid (7Z,10Z,13Z)-hexadeca-7,10,13-trienoate. The enzyme contains an N-terminal cytochrome b5 domain that acts as the direct electron donor to the active site of the desaturase, and does not require an external cytochrome.
Synonyms	D4Des (gene name); des1 (gene name); CrΔ4FAD (gene name); acyl-lipid 4-desaturase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.19.31
Reaction	(1) a (7Z,10Z,13Z,16Z,19Z)-docosa-7,10,13,16,19-pentaenoyl-[glycerolipid] + 2 ferrocytochrome b5 + O2 + 2 H+ = a (4Z,7Z,10Z,13Z,16Z,19Z)-docosa-4,7,10,13,16,19-hexaenoyl-[glycerolipid] + 2 ferricytochrome b5 + 2 H2O; (2) a (7Z,10Z,13Z,16Z)-docosa-7,10,13,16-tetraenoyl-[glycerolipid] + 2 ferrocytochrome b5 + O2 + 2 H+ = a (4Z,7Z,10Z,13Z,16Z)-docosa-4,7,10,13,16-pentaenoyl-[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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.