Creative Enzymes®

acyl-lipid (8-3)-desaturase

Cat. No. EXWM-0994

Lot. No. (See product label)

Introduction

Description	The enzyme, which has been characterized from multiple organisms including the moss Physcomitrella patens, the marine microalga Rebecca salina, and the filamentous fungus Mortierella alpina, introduces a cis double bond at the 5-position in 20-carbon polyunsaturated fatty acids incorporated in a glycerolipid that contain a Δ8 double bond. The enzyme contains a 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	acyl-lipid 5-desaturase; Δ5-fatty-acid desaturase; DES5 (gene name); D5des (gene name); FADS1

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.19.30
Reaction	(1) an (8Z,11Z,14Z)-icosa-8,11,14-trienoyl-[glycerolipid] + 2 ferrocytochrome b5 + O2 + 2 H+ = a (5Z,8Z,11Z,14Z)-icosatetra-5,8,11,14-tetraenoyl-[glycerolipid] + 2 ferricytochrome b5 + 2 H2O; (2) an (8Z,11Z,14Z,17Z)-icosa-8,11,14,17-tetraenoyl-[glycerolipid] + 2 ferrocytochrome b5 + O2 + 2 H+ = a (5Z,8Z,11Z,14Z,17Z)-icosa-5,8,11,14,17-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 ℃.