

## 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  $\Delta 8$  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;  $\Delta 5$ -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 + O<sub>2</sub> + 2 H<sup>+</sup> = a (5Z,8Z,11Z,14Z)-icosatetra-5,8,11,14-tetraenoyl-[glycerolipid] + 2 ferricytochrome b5 + 2 H<sub>2</sub>O; (2) an (8Z,11Z,14Z,17Z)-icosa-8,11,14,17-tetraenoyl-[glycerolipid] + 2 ferrocytochrome b5 + O<sub>2</sub> + 2 H<sup>+</sup> = a (5Z,8Z,11Z,14Z,17Z)-icosa-5,8,11,14,17-pentaenoyl-[glycerolipid] + 2 ferricytochrome b5 + 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.