

## acyl-CoA 6-desaturase

Cat. No. EXWM-0993

Lot. No. (See product label)

### Introduction

**Description** An iron protein. The enzyme introduces a cis double bond at carbon 6 of acyl-CoAs. It is a front-end desaturase, introducing the new double bond between a pre-existing double bond and the carboxyl-end of the fatty acid. The human enzyme has a broad substrate range. It also acts on palmitoyl-CoA, generating sapienoyl-CoA, and on (9Z,12Z,15Z,18Z,21Z)-tetracos-9,12,15,18,21-pentaenoyl-CoA, converting it to (6Z,9Z,12Z,15Z,18Z,21Z)-tetracos-6,9,12,15,18,21-hexaenoyl-CoA as part of a pathway that produces docosahexaenoate. The enzyme contains a cytochrome b5 domain that is assumed to act in vivo as the electron donor to the active site of the desaturase.

**Synonyms** Δ6-desaturase; Δ6-fatty acyl-CoA desaturase; Δ6-acyl CoA desaturase; fatty acid Δ6-desaturase; fatty acid 6-desaturase; linoleate desaturase; linoleic desaturase; linoleic acid desaturase; linoleoyl CoA desaturase; linoleoyl-coenzyme A desaturase; long-chain fatty acid Δ6-desaturase; linoleoyl-CoA,hydrogen-donor:oxygen oxidoreductase; linoleoyl-CoA desaturase; FADS2 (gene name)

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.14.19.3

**CAS No.** 9082-66-0

**Reaction** (1) linoleoyl-CoA + 2 ferrocytochrome b5 + O<sub>2</sub> + 2 H<sup>+</sup> = γ-linolenoyl-CoA + 2 ferricytochrome b5 + 2 H<sub>2</sub>O; (2) α-linolenoyl-CoA + 2 ferrocytochrome b5 + O<sub>2</sub> + 2 H<sup>+</sup> = stearidonoyl-CoA + 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.