

acyl-CoA (8-3)-desaturase

Cat. No. EXWM-1009

Lot. No. (See product label)

Introduction

Description The enzyme introduces a cis double bond at carbon 5 of acyl-CoAs that contain a double bond at position 8. The enzymes from algae, mosses, mammals and the protozoan *Leishmania major* catalyse the desaturation of dihomo- γ -linoleate [(8Z,11Z,14Z)-icosa-8,11,14-trienoate] and (8Z,11Z,14Z,17Z)-icosa-8,11,14,17-tetraenoate to generate arachidonate and (5Z,8Z,11Z,14Z,17Z)-icosa-5,8,11,14,17-pentaenoate, respectively. The enzyme contains a cytochrome b5 domain that acts as the direct electron donor to the desaturase active site and does not require an external cytochrome. cf. EC 1.14.19.37, acyl-CoA 5-desaturase.

Synonyms FADS1 (gene name); acyl-CoA 5-desaturase (methylene-interrupted)

Product Information

Form Liquid or lyophilized powder

EC Number EC 1.14.19.44

Reaction (1) (8Z,11Z,14Z)-icosa-8,11,14-trienoyl-CoA + 2 ferrocyclochrome b5 + O₂ + 2 H⁺ = arachidonoyl-CoA + 2 ferricytochrome b5 + 2 H₂O; (2) (8Z,11Z,14Z,17Z)-icosa-8,11,14,17-tetraenoyl-CoA + 2 ferrocyclochrome b5 + O₂ + 2 H⁺ = (5Z,8Z,11Z,14Z,17Z)-icosa-5,8,11,14,17-pentaenoyl-CoA + 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 °C for short term. For long term storage, store it at -20 °C~-80 °C.