Creative Enzymes®

very-long-chain 3-oxoacyl-CoA synthase

Cat. No. EXWM-2142

Lot. No. (See product label)

Introduction

Description	This is the first component of the elongase, a microsomal protein complex responsible for extending palmitoyl-CoA and stearoyl-CoA (and modified forms thereof) to very-long-chain acyl CoAs. Multiple forms exist with differing preferences for the substrate, and thus the specific form expressed determines the local composition of very-long-chain fatty acids. For example, the FAE1 form from the plant Arabidopsis thaliana accepts only 16 and 18 carbon substrates, with oleoyl-CoA (18:1) being the preferred substrate, while CER6 from the same plant prefers substrates with chain length of C22 to C32. cf. EC 1.1.1.330, very-long-chain 3-oxoacyl-CoA reductase, EC 4.2.1.134, very-long-chain (3R)-3-hydroxyacyl-[acyl-carrier protein] dehydratase, and EC 1.3.1.93, very-long-chain enoyl-CoA reductase
Synonyms	very-long-chain 3-ketoacyl-CoA synthase; very-long-chain β-ketoacyl-CoA synthase; condensing enzyme (ambiguous); CUT1 (gene name); CER6 (gene name); FAE1 (gene name); KCS (gene name); ELO (gene name)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.3.1.199
Reaction	a very-long-chain acyl-CoA + malonyl-CoA = a very-long-chain 3-oxoacyl-CoA + CO2 + coenzyme A
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 ℃.