Creative Enzymes®

β-ketoacyl-[acyl-carrier-protein] synthase II

Cat. No. EXWM-2120

Lot. No. (See product label)

Introduction

Description	Involved in the dissociated (or type II) fatty acid biosynthesis system that occurs in plants and bacteria. While the substrate specificity of this enzyme is very similar to that of EC 2.3.1.41, β-ketoacyl-ACP synthase I, it differs in that palmitoleoyl-ACP is not a good substrate of EC 2.3.1.41 but is an excellent substrate of this enzyme. The fatty-acid composition of Escherichia coli changes as a function of growth temperature, with the proportion of unsaturated fatty acids increasing with lower growth temperature. This enzyme controls the temperature-dependent regulation of fatty-acid composition, with mutants lacking this acivity being deficient in the elongation of palmitoleate to cis-vaccenate at low temperatures.
Synonyms	KASII; KAS II; FabF; 3-oxoacyl-acyl carrier protein synthase I; β-ketoacyl-ACP synthase II; (Z)-hexadec-11-enoyl-[acyl-carrier-protein]:malonyl-[acyl-carrier-protein] C-acyltransferase (decarboxylating)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.3.1.179
CAS No.	1048648-42-5
Reaction	a (Z)-hexadec-11-enoyl-[acyl-carrier protein] + a malonyl-[acyl-carrier protein] = a (Z)-3-oxooctadec-13-enoyl-[acyl-carrier protein] + CO2 + an [acyl-carrier protein]
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 ℃.