Creative Enzymes®

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

*Cat. No. EXWM-2120*

*Lot. No.* (See product label)

## Introduction

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| **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

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| **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

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| **Storage** | Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃. |