Creative Enzymes®

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

Cat. No. EXWM-2220

Lot. No. (See product label)

Introduction

Description	This enzyme is responsible for the chain-elongation step of dissociated (type II) fatty-acid biosynthesis, i.e. the addition of two C atoms to the fatty-acid chain. Escherichia coli mutants that lack this enzyme are deficient in unsaturated fatty acids. The enzyme can use fatty acyl thioesters of ACP (C2 to C16) as substrates, as well as fatty acyl thioesters of Co-A (C4 to C16). The substrate specificity is very similar to that of EC 2.3.1.179, β-ketoacyl-ACP synthase II, with the exception that the latter enzyme is far more active with palmitoleoyl-ACP (C16Δ9) as substrate, allowing the organism to regulate its fatty-acid composition with changes in temperature.
Synonyms	β-ketoacyl-ACP synthase I; β-ketoacyl synthetase; β-ketoacyl-ACP synthetase; β-ketoacyl-acyl carrier protein synthetase; β-ketoacyl-[acyl carrier protein] synthase; β-ketoacylsynthase; condensing enzyme (ambiguous); 3-ketoacyl-acyl carrier protein synthase; fatty acid condensing enzyme; acyl-malonyl(acyl-carrier-protein)-condensing enzyme; acyl-malonyl acyl carrier protein-condensing enzyme; β-ketoacyl acyl carrier protein synthase; 3-oxoacyl-[acyl-carrier-protein] synthase; 3-oxoacyl:ACP synthase I; KASI; KAS I; FabF1; FabB; acyl-[acyl-carrier-protein]:malonyl-[acyl-carrier-protein] C-acyltransferase (decarboxylating)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.3.1.41
CAS No.	9077-10-5
Reaction	an acyl-[acyl-carrier protein] + a malonyl-[acyl-carrier protein] = a 3-oxoacyl-[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 ℃.