Creative Enzymes®

holo-[acyl-carrier-protein] synthase

Cat. No. EXWM-3345

Lot. No. (See product label)

Introduction

Description Requires Mg2+. All polyketide synthases, fatty-acid synthases and non-ribosomal peptide synthases require post-translational modification of their constituent acyl-carrier-protein (ACP) domains to become catalytically active. The inactive apo-proteins are converted into their active holo-forms by transfer of the 4'-phosphopantetheinyl moiety of CoA to the sidechain hydroxy group of a conserved serine residue in each ACP domain. The enzyme from human can activate both the ACP domain of the human cytosolic multifunctional fatty acid synthase and that associated with human mitochondria as well as peptidyl-carrier and acyl-carrier-proteins from prokaryotes. Removal of the 4-phosphopantetheinyl moiety from holo-ACP is carried out by EC 3.1.4.14, [acyl-carrier-protein] phosphodiesterase.

Synonyms acyl carrier protein holoprotein (holo-ACP) synthetase; holo-ACP synthetase; coenzyme A:fatty acid synthetase apoenzyme 4'-phosphopantetheine transferase; holosynthase; acyl carrier protein synthetase; holo-ACP synthase; PPTase; AcpS; ACPS; acyl carrier protein synthase; P-pant transferase; CoA:apo-[acyl-carrier-protein] pantetheinephosphotransferase; CoA-[4'-phosphopantetheine]:apo-[acyl-carrier-protein] 4'-pantetheinephosphotransferase

Product Information

Form Liquid or lyophilized powder

EC Number EC 2.7.8.7

CAS No. 37278-30-1

Reaction CoA-[4'-phosphopantetheine] + apo-[acyl-carrier protein] = adenosine 3',5'-bisphosphate + holo-[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 ℃.