Creative Enzymes®

lipoyl(octanoyl) transferase

Cat. No. EXWM-2123

Lot. No. (See product label)

Introduction

Description

This is the first committed step in the biosynthesis of lipoyl cofactor. Lipoylation is essential for the function of several key enzymes involved in oxidative metabolism, as it converts apoprotein into the biologically active holoprotein. Examples of such lipoylated proteins include pyruvate dehydrogenase (E2 domain), 2-oxoglutarate dehydrogenase (E2 domain), the branched-chain 2-oxoacid dehydrogenases and the glycine cleavage system (H protein). Lipoyl-ACP can also act as a substrate although octanoyl-ACP is likely to be the true substrate. The other enzyme involved in the biosynthesis of lipoyl cofactor is EC 2.8.1.8, lipoyl synthase. An alternative lipoylation pathway involves EC 6.3.1.20, lipoate-protein ligase, which can lipoylate apoproteins using exogenous lipoic acid (or its analogues).

Synonyms

LipB; lipoyl (octanoyl)-[acyl-carrier-protein]-protein N-lipoyltransferase; lipoyl (octanoyl)-acyl carrier protein:protein transferase; lipoate/octanoate transferase; lipoyltransferase; octanoyl-[acyl carrier protein]-protein N-octanoyltransferase; lipoyl(octanoyl)transferase; octanoyl-[acyl-carrier-protein]:protein N-octanoyltransferase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 2.3.1.181

CAS No.

392687-64-8

Reaction

an octanoyl-[acyl-carrier protein] + a protein = a protein N6-(octanoyl)lysine + 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 ℃.