

lipoate-protein ligase

Cat. No. EXWM-5723

Lot. No. (See product label)

Introduction

Description

Requires Mg²⁺. This enzyme participates in lipoate salvage, and is responsible for lipoylation in the presence of exogenous lipoic acid. The enzyme attaches lipoic acid to the lipoyl domains of certain key enzymes involved in oxidative metabolism, including pyruvate dehydrogenase (E2 domain), 2-oxoglutarate dehydrogenase (E2 domain), the branched-chain 2-oxoacid dehydrogenases and the glycine cleavage system (H protein). Lipoylation is essential for the function of these enzymes. The enzyme can also use octanoate instead of lipoate.

Synonyms

lplA (gene name); lplJ (gene name); lipoate protein ligase; lipoate-protein ligase A; LPL; LPL-B

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 6.3.1.20

CAS No.

144114-18-1

Reaction

ATP + (R)-lipoate + a [lipoyl-carrier protein]-L-lysine = a [lipoyl-carrier protein]-N6-(lipoyl)lysine + AMP + diphosphate (overall reaction); (1a) ATP + (R)-lipoate = lipoyl-AMP + diphosphate; (1b) lipoyl-AMP + a [lipoyl-carrier protein]-L-lysine = a [lipoyl-carrier protein]-N6-(lipoyl)lysine + AMP

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 °C for short term. For long term storage, store it at -20 °C~-80 °C.