Creative Enzymes®

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