Creative Enzymes®

3-methyl-2-oxobutanoate dehydrogenase (2-methylpropanoyl-transferring)

Cat. No. EXWM-1219

Lot. No. (See product label)

Introduction

Description	Contains thiamine diphosphate. It acts not only on 3-methyl-2-oxobutanaoate, but also on 4-methyl-2-oxopentanoate and (S)-3-methyl-2-oxopentanoate, so that it acts on the 2-oxo acids that derive from the action of transaminases on valine, leucine and isoleucine. It is a component of the multienzyme 3-methyl-2-oxobutanoate dehydrogenase complex in which multiple copies of it are bound to a core of molecules of EC 2.3.1.168, dihydrolipoyllysine-residue (2-methylpropanoyl)transferase, which also binds multiple copies of EC 1.8.1.4, dihydrolipoyl dehydrogenase. It does not act on free lipoamide or lipoyllysine, but only on the lipoyllysine residue in EC 2.3.1.168.
Synonyms	2-oxoisocaproate dehydrogenase; 2-oxoisovalerate (lipoate) dehydrogenase; 3-methyl-2-oxobutanoate dehydrogenase (lipoamide); 3-methyl-2-oxobutanoate:lipoamide oxidoreductase (decarboxylating and acceptor-2-methylpropanoylating); α-keto-α-methylvalerate dehydrogenase; α-ketoisocaproate dehydrogenase; α-ketoisocaproic dehydrogenase; α-ketoisocaproic-α-keto-α-methylvaleric dehydrogenase; α-ketoisovalerate dehydrogenase; α-oxoisocaproate dehydrogenase; BCKDH; BCOAD; branched chain keto acid dehydrogenase; branched-chain (-2-oxoacid) dehydrogenase (BCD); branched-chain 2-keto acid dehydrogenase; branched-chain 2-oxo acid dehydrogenase; branched-chain α-keto acid dehydrogenase; branched-chain α-oxo acid dehydrogenase; branched-chain keto acid dehydrogenase; branched-chain ketoacid dehydrogenase; dehydrogenase, 2-oxoisovalerate (lipoate); dehydrogenase, branched chain α-keto acid

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.2.4.4
CAS No.	9082-72-8
Reaction	3-methyl-2-oxobutanoate + [dihydrolipoyllysine-residue (2-methylpropanoyl)transferase] lipoyllysine = [dihydrolipoyllysine-residue (2-methylpropanoyl)transferase] S-(2-methylpropanoyl)dihydrolipoyllysine + CO2
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 ℃.