Creative Enzymes®

betaine-aldehyde dehydrogenase

Cat. No. EXWM-1182

Lot. No. (See product label)

Introduction

Description	In many bacteria, plants and animals, the osmoprotectant betaine is synthesized in two steps: (1) choline to betaine aldehyde and (2) betaine aldehyde to betaine. This enzyme is involved in the second step and appears to be the same in plants, animals and bacteria. In contrast, different enzymes are involved in the first reaction. In plants, this reaction is catalysed by EC 1.14.15.7 (choline monooxygenase), whereas in animals and many bacteria it is catalysed by either membrane-bound EC 1.1.99.1 (choline dehydrogenase) or soluble EC 1.1.3.17 (choline oxidase). In some bacteria, betaine is synthesized from glycine through the actions of EC 2.1.1.156 (glycine/sarcosine N-methyltransferase) and EC 2.1.1.157 (sarcosine/dimethylglycine N-methyltransferase).
Synonyms	betaine aldehyde oxidase; BADH; betaine aldehyde dehydrogenase; BetB

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.2.1.8
CAS No.	9028-90-4
Reaction	betaine aldehyde + NAD+ + H2O = betaine + NADH + 2 H+
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 ℃.