Creative Enzymes®

betaine reductase

Cat. No. EXWM-1259

Lot. No. (See product label)

Introduction

Description	The reaction is observed only in the direction of betaine reduction. The enzyme from Eubacterium acidaminophilum consists of subunits A, B and C. Subunit B contains selenocysteine and a pyruvoyl group, and is responsible for betaine binding and trimethylamine release. Subunit A, which also contains selenocysteine, is reduced by thioredoxin, and is needed to convert the carboxymethyl group into a ketene equivalent, in turn used by subunit C to produce acetyl phosphate. Only subunit B distinguishes this enzyme from EC 1.21.4.2 (glycine reductase) and EC 1.21.4.3 (sarcosine reductase).
Synonyms	acetyl-phosphate trimethylamine:thioredoxin disulfide oxidoreductase (N,N,N-trimethylglycine-forming)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.21.4.4
CAS No.	125752-87-6
Reaction	acetyl phosphate + trimethylamine + thioredoxin disulfide + H2O = betaine + phosphate + thioredoxin
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 ℃.