

# Acetyl-CoA synthetase (EC 6.2.1.1), *Bacillus subtilis*

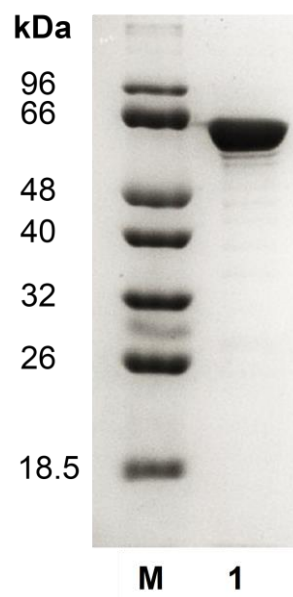
Catalogue number	Presentation
AE00081	250 U (1 mL)

## Description

Recombinant acetyl-CoA synthetase (EC 6.2.1.1) is purified from a modified *E. coli* strain. Acetyl-CoA synthetase is an enzyme involved in metabolism of carbon sugars. It is classified in the ligase class of enzymes, meaning that it catalyzes the formation of a new chemical bond between two large molecules. The NZYtech enzyme is provided in 3.2 M ammonium sulphate. Swirl to mix the enzyme suspension immediately prior to use.

## Purity

Acetyl-CoA synthetase has been determined to be >95% pure, according to sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE) followed by Coomassie blue staining (Figure 1).



**Figure 1.** SDS-PAGE analysis of *B. subtilis* acetyl-CoA synthetase. Electrophoresis was performed using a 10% polyacrylamide gel. Lane M, molecular weight marker; Lane 1, purified acetyl-CoA synthetase from *E. coli* K12 (65 kDa)..

## Storage temperature

Acetyl-CoA synthetase should be stored at 2 °C to 8 °C.

## Temperature and pH optimum

The optimum pH and temperature are 8.4 and 37 °C, respectively.

## Activity

250 U/mL

## Unit Definition

One unit is defined as the amount of enzyme required to produce one  $\mu\text{mol}$  of NADH from  $\text{NAD}^+$  in a reaction mixture containing 128 mM TEA buffer (pH 8.4), 3.2 mM  $\text{MgCl}_2$ , 9.6 mM L-malic acid, 1.1 mM  $\text{NAD}^+$ , 2.7 mM ATP, 0.8 mM CoA, 32 mM sodium acetate, 0.16 mg/ml BSA, 15.7 U/ml citrate synthase and 12 U/ml L-malate dehydrogenase.

## Substrate specificity

Under the reaction conditions specified the enzyme might present a minor NADH oxidase and L-malate dehydrogenase activity.

For life science research only. Not for use in diagnostic procedures.