



## ACETYL-CoA SYNTHETASE from *B. subtilis* (Lot 60501)

**Recombinant**

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E-ACSBS  
(EC 6.2.1.1)

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 65,975)
- Single major band on isoelectric focusing (pI ~ 5.8)

#### 2. SPECIFIC ACTIVITY

**39 U/mg protein at pH 8.4 and 37°C; 7.6 U/mg protein at pH 7.5 and 37°C.**

**One Unit** of acetyl-CoA synthetase is defined as the amount of enzyme required to produce one  $\mu$ mole of NADH from  $\text{NAD}^+$  under the following assay conditions:

TEA buffer, pH 8.4	128 mM
MgCl <sub>2</sub>	3.2 mM
L-Malic acid	9.6 mM
NAD <sup>+</sup>	1.1 mM
ATP	2.7 mM
Coenzyme A	0.28 mM
Sodium acetate	32 mM
BSA	0.16 mg/mL
Citrate synthase	15.7 U/mL
L-Malate dehydrogenase	12 U/mL

#### 3. OTHER ACTIVITIES (as a percentage of acetyl-CoA synthetase activity)

Enzyme measured	Substrate	Activity, %
Acetyl-CoA synthetase	acetic acid	100
NADH oxidase	NADH	0.003
L-Malate dehydrogenase	oxaloacetic acid	0.13

#### 4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 8.4 and up to 37°C.

#### 5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 400 mM TEA buffer, pH 8.4 containing 0.5 mg/mL BSA, 30 mM L-Malic acid and 10 mM MgCl<sub>2</sub>. **Swirl to mix the enzyme suspension immediately prior to use.**