

## Active Native *Bacillus stearothermophilus* Acetate Kinase

Cat. No. AK-14B Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Native Acetate Kinase was purified from <i>Bacillus stearothermophilus</i> . EC 2.7.2.1
<b>Species</b>	<i>Bacillus stearothermophilus</i>
<b>Source</b>	<i>Bacillus stearothermophilus</i>
<b>Description</b>	In molecular biology, acetate kinase (EC 2.7.2.1), which is predominantly found in micro-organisms, facilitates the production of acetyl-CoA by phosphorylating acetate in the presence of ATP and a divalent cation. The enzyme is important in the process of glycolysis, enzyme levels being increased in the presence of excess glucose. The growth of a bacterial mutant lacking acetate kinase has been shown to be inhibited by glucose, suggesting that the enzyme is involved in excretion of excess carbohydrate. A related enzyme, butyrate kinase, facilitates the formation of butyryl-CoA by phosphorylating butyrate in the presence of ATP to form butyryl phosphate.
<b>Form</b>	Lyophilized
<b>Bio-activity</b>	more than 1,100 U/mg protein
<b>Molecular Mass</b>	Molecular weight : ca. 160,000 Subunit molecular weight : ca. 40,000
<b>Unit Definition</b>	One unit of activity is defined as the amount of AK that forms 1 $\mu$ mol of ADP per minute at 30°C.
<b>Applications</b>	The enzyme is useful for determination of acetate or for ATP regeneration system.

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<b>Stability</b>	No detectable decrease in activity up to 65°C.
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<b>Storage</b>	stable at -20°C for at least one year.
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