

Active Native *Bacillus stearothermophilus* Acetate Kinase

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

SPECIFICATION

Product Overview	Native Acetate Kinase was purified from <i>Bacillus stearothermophilus</i> . EC 2.7.2.1
Species	<i>Bacillus stearothermophilus</i>
Source	<i>Bacillus stearothermophilus</i>
Description	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.
Form	Lyophilized
Bio-activity	more than 1,100 U/mg protein
Molecular Mass	Molecular weight : ca. 160,000 Subunit molecular weight : ca. 40,000
Unit Definition	One unit of activity is defined as the amount of AK that forms 1 μ mol of ADP per minute at 30°C.
Applications	The enzyme is useful for determination of acetate or for ATP regeneration system.

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