Active Native Bacillus stearothermophilus Acetate Kinase

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

SPECIFICATION

Product Overview	Native Acetate Kinase was purified from Bacillus stearothermophilus. EC 2.7.2.1
Species	Bacillus stearothermophilus
Source	Bacillus stearothermophilus
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 μmol 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.
Storage	stable at -20°C for at least one year.

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