

Product: Polyphosphate Kinase (PPK), recombinant
Catalog #: 12-4303
Amount: 50 IU

DESCRIPTION: Recombinant Polyphosphate Kinase (rPPK)
PPK catalyzes the reversible transfer of phosphate between polyphosphate and ATP. The phosphorylation occurs without release of the polymer from the enzyme prior to termination of the reaction.
PPK purified ca 10 fold. Free of all polyphosphate Glucokinase activity

SOURCE: *Propionibacterium shermania*

MOLECULAR WEIGHT: 83 kDa (native)

PURITY: > 90%, as determined by: reducing and non-reducing SDS-PAGE stained Coomassie blue gel and RP-HPLC

UNIT DEFINITION: One IU of PPK is defined as that amount of enzyme required to convert 1 μ mol of ADP to ATP per minute at pH 7.4 and 30°C, in phosphate buffer using polyphosphate as phosphate donor. (The reaction is reversible)
Required cofactor: Mg⁺⁺

BIOLOGICAL ACTIVITY: 1-3 U/mg

APPLICATION: The PPK reaction provides an inexpensive means of recycling ATP consumed in enzymatic phosphorylation reactions. This has potential for use in enzymatic oligosaccharide synthesis, Which requires phosphorylates sugar intermediates.

FORM: Purified, in polyphosphate and phosphate buffer

STORAGE: -20°C (aliquot), avoid freezing and thawing cycles

REFERENCE:

J. Bacteriol (2005, Nov), **187** (22): 7687-95
Mol. Microbial (2005, Aug): **57** (3): 751-61
EMBO Rep (2005,Jul): **6** (7):681-7
J. Bacteriol (2005, May): **187** (9): 3088-99
FEMS Microbiol. Lett (2005, Feb 1): **243** (1): 45-50

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