We offer various packaging (protein concentration,activity,etc.) if necessary.

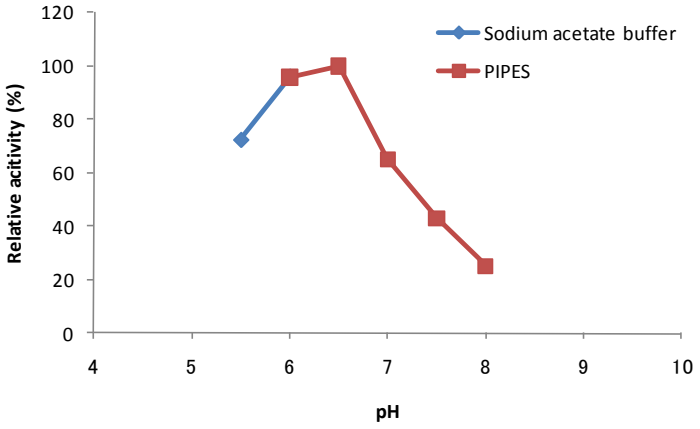
Data sheet

Enzyme	;	**Polyphosphate kinase**
Code	;	PPK-68-01
Lot #	;	1-I101
Protein conc.	;	mg/ml
Volume	;	ml
Form	;	20 mM Tris-HCl (pH 8.0)
Storage	;	-20°C
Activity	;	U/ml (@50℃, pH 6.5)
Notes	;	For research use only.

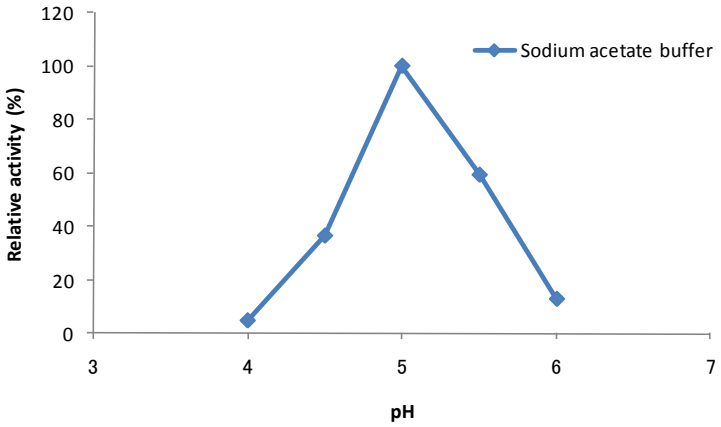
●**Activity measurement** : Reaction mix (50 mM PIPES-KOH (pH 6.5), 1 U/ml Pyruvate kinase, 1 U/ml Lactate dehydrogenase, 0.3 mM NADH, 10 mM $MgCl_2$, 10 mM KCl, 2 mM ATP, 5 mM Phosphoenolpyruvate, 2 mM Sodium hexametaphosphate and appropriate amount of the enzyme) was incubated at 50 °C and A_{340} was monitored. One unit is defined as the amount of the enzyme producing 1 μmol of ADP (using ε_{340}=6.22 mM^{-1} cm^{-1} for NADH) per 1 minute using Sodium hexametaphosphate as a substrate.

◆ Optimum pH

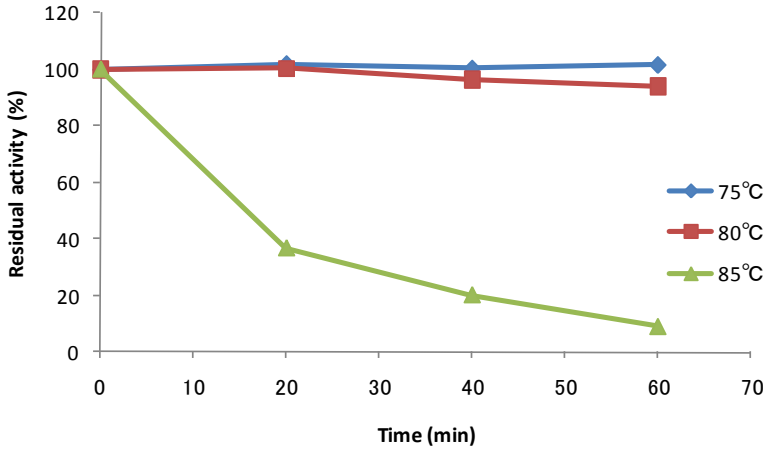
(a) Synthesis of polyphosphate (ATP → poly P)



(b) Utilization of polyphosphate (polyP → ATP)



◆ Thermostability



◆ Kinetic parameters

(a) Synthesis of polyphosphate (@50℃, pH 6.5)

K_m for sodium hexametaphosphate = 1.3 mM

K_m for ATP = 0.5 mM

k_{cat} = 35.2 s^{-1}

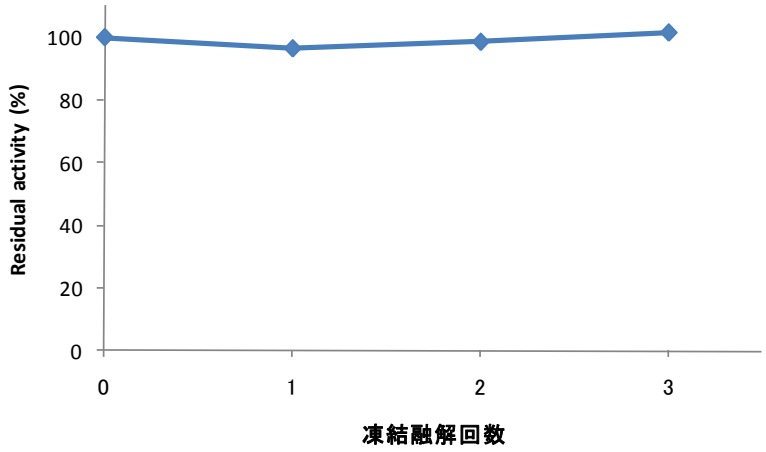
(b) Utilization of polyphosphate (@50℃, pH 5.0)

K_m for sodium hexametaphosphate = 0.23 mM

K_m for ADP = 0.12 mM

k_{cat} = 0.42 s^{-1}

◆ Freeze-Thaw Test



Freeze-Thaw (cycle)