

Thermophilic Pyrophosphatase

(*Thermus aquaticus*)

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Thermostable pyrophosphatase, hydrolyzing inorganic pyrophosphate into phosphate.

Cat. No.	Size
E1267-01	50 u
E1267-02	250 u

Unit Definition:

One unit will liberate 1 nmol of inorganic orthophosphate per 10 min at pH 7.5 at 65°C.

Storage Conditions:

Store at -20°C

Description:

- Hydrolyzes pyrophosphate, a common product of biosynthetic reactions (1).
- Maintains the forward direction of reactions generating pyrophosphate.
- Improves PCR amplification of problematic or long templates.
- Used as an enzyme label for ELISA (2).

Storage Buffer:

20 mM Tris-HCl (pH 7.5 at 22°C), 50 mM NaCl, 1 mM dithiothreitol, 1 mM EDTA and 50% (v/v) glycerol.

Assay Conditions:

40 mM Tris-HCl (pH 7.5 at 22°C), 40 mM potassium acetate, 40 mM imidazole, 1 mM sodium pyrophosphate and 2.5 mM MgCl₂. Incubation is at 65°C for 10 min in a reaction volume of 100 µl.

Quality Control:

All preparations are assayed for contaminating endonuclease, exonuclease and nonspecific RNase and single- and double-stranded DNase activities.

References:

1. Baykov, A. A., Kasho, V.N. and Avaeva, S.M. (1988) *Anal. Biochem.* 171, 271-276.
2. Jerhoeven, J.A. (1986) *J. Bacteriol.* 168, 318-321.
3. Richter, O. M. and Schafer, G. (1992) *Eur. J. Biochem.* 209, 343-349.