

# Alkaline Phosphatase

(*Escherichia coli*)

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**Bacterial phosphatase catalyzes the hydrolysis of phosphate esters, including those present in nucleic acids and nucleotides.**

Cat. No.	Size
E1026-01	30 units
E1026-02	150 units

### Unit Definition:

One unit is the amount of enzyme required to hydrolyze 1  $\mu$ mol of p-nitrophenylphosphate in 1 min at 37°C in a buffer of 1 M diethanolamine, 10 mM p-nitrophenylphosphate, 0.25 mM MgCl<sub>2</sub> (pH 9.8).

### Storage Conditions:

Store at -20°C

### Description:

- More thermal stable than Calf Intestine Alkaline Phosphatase (CIAP, CIP).
- Optimal incubation temperature is approximately 60°C, however the enzyme remains active from 20°C to 80°C.
- Resistant to chemical changes and active over a broad range of buffer conditions.
- Can be used to remove 5'-phosphates from DNA or RNA prior to 5'-end labeling (1).
- Works to remove 5'-phosphates from linearized vector molecules to prevent self-ligation of the vector during cloning procedures (1).
- Ideal for diagnostic immunoassays and immunodetection of proteins and nucleic acids following blotting experiments (1).

### Storage Buffer:

20 mM Tris-HCl (pH 7.0 at 22°C), 5 mM potassium phosphate, 100 mM KCl, 0.1 mM MgCl<sub>2</sub>, 0.1 mM ZnCl<sub>2</sub> and stabilizers.

### Quality Control:

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

### References:

1. Sambrook, J. et al. (1989) *Molecular cloning: A laboratory Manual, second edition, pp. 1.56, 5.72 Cold Spring Harbor, New York.*