Applications:
- Removing 5' phosphates from DNA, RNA, rNTPs and dNTPs
- Preparation of templates for 5' end labeling
- Prevention of recircularization of cloning vectors
- Dephosphorylation of serine, threonine and tyrosine residues in proteins

Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 8.2), 1 mM MgCl₂, 0.1 mM ZnCl₂ and 50% glycerol.

Reagents Supplied with Enzyme: 1X NEBuffer 3.

Reaction Conditions: 1X NEBuffer 3.
CIP is also active in NEBuffers 2 or 4 as well as the NEBuffer for EcoRI.
Incubate at 37°C.

1. Suspend DNA in 1X NEBuffer (0.5 µg/10 µl).
2. Incubate for 60 minutes at 37°C.
3. Purify DNA by gel purification, spin-column purification or phenol extraction.

Quality Controls Assays

Exonuclease Activity: Incubation of 50 units of CIP with 1 µg mixture of sonicated single and double-stranded [³²P]DNA, in a reaction volume of 1 ml in 1 minute at 37°C.

RNase Activity: Incubation of 50 units of CIP with 1 µg RNA Transcript for 4 hours at 37°C resulted in < 5% conversion to RF II.

Physical Purity: Purified to > 95% homogeneity as determined by SDS-PAGE analysis using Coomassie Blue detection.

References:

Molecular Weight: 69 kDa

Endonuclease Activity: Incubation of 50 units of CIP with 1 µg of dX174 RF I DNA for 4 hours at 37°C in 50 µl reaction buffer resulted in < 5% conversion to RF II.

RNase Activity: Incubation of 50 units of CIP with 1 µg RNA Transcript for 4 hours at 37°C resulted in the same banding pattern as a sample with no enzyme.

Physical Purity: Purified to > 95% homogeneity as determined by SDS-PAGE analysis using Coomassie Blue detection.

Heat Inactivation: No

References: