



 200 units
 5,000 U/ml
 Lot: 0041209

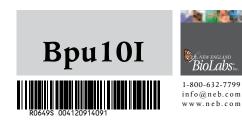
 RECOMBINANT
 Store at -20°C
 Exp: 9/14

Recognition Site:

5′... C C^VT N A G C ... 3′ 3′... G G A N T_AC G ... 5′

Source: Two *E. coli* strains that carry the cloned subunits of Bpu10I from *Bacillus pumilus10* (S.K. Degtyarev)

Supplied in: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4 @ 25°C), 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol.



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Supplied in: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4 @ 25°C), 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol. **Reagents Supplied with Enzyme:** 10X NEBuffer 3

Reaction Conditions: 1X NEBuffer 3 Incubate at 37°C.

1X NEBuffer 3: 100 mM NaCl

50 mM Tris-HCl 10 mM MgCl₂ 1 mM dithiothreitol pH 7.9 @ 25°C

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 μ g of λ DNA in 1 hour at 37°C in a total reaction volume of 50 μ l.

Diluent Compatibility: Diluent Buffer B 300 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol (pH 7.5 @ 25°C).

Quality Control Assays

Ligation : After 10-fold overdigestion with Bpu10I, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1-2 μ M) at 16°C. Of these ligated fragments, approximately 50% can be recut.

16-Hour Incubation: A 50 μ I reaction containing 1 μ g of λ DNA and 5 units of enzyme incubated for 16 hours at 37°C resulted in a DNA pattern free of detectable nuclease degradation as determined by gel electrophoresis.

Exonuclease Activity: Incubation of a 50 µl reaction containing 25 units of Bpu10l with 1 µg of a mixture of single and double-stranded [3 H] *E.coli* DNA (200,000 cpm/µg) for 4 hours at 37°C released < 0.1% of the total radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1	10%
NEBuffer 2	25%
NEBuffer 3	100%
NEBuffer 4	25%

When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

Survival in a Reaction: Intermediate activity. Suitable for extended digestion, but < 8 hours.

Heat Inactivation: 80°C for 20 minutes.

Note: Conditions of low ionic strength, high enzyme concentration, glycerol concentration > 5% or pH > 8.0 may result in star activity.

Not sensitive to *dam*, *dcm*, or CpG methylation.

CERTIFICATE OF ANALYSIS

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