

BpuEI



1-800-632-7799
info@neb.com
www.neb.com



R0633S 006121113111

R0633S



300 units Lot: 0061211 Exp: 11/13
5,000 U/ml Store at -20°C

Recognition Site:

5'... CTTGAG (N)₁₆... 3'
3'... GAACTC (N)₁₄... 5'

Source: An *E. coli* strain that carries the cloned BpuEI gene from *Bacillus pumilus* 2187a (C. Nkenfou)

**Now Recombinant
More Units, Higher Concentration**

Supplied in: 300 mM NaCl, 10 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM dithiothreitol, 500 µg/ml BSA and 50% glycerol.

Note: -80°C is recommended for storage longer than 6 months.

Reagents Supplied with Enzyme: 10X NEBuffer 4, 400X S-adenosylmethionine (32 mM).

Reaction Conditions: 1X NEBuffer 4, supplemented with 80 µM S-adenosylmethionine. Incubate at 37°C.

1X NEBuffer 4:
50 mM potassium acetate
20 mM Tris-acetate
10 mM magnesium acetate
1 mM dithiothreitol
pH 7.9 @ 25°C

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

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

Diluent Compatibility: Diluent Buffer B
300 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM dithiothreitol, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

Quality Control Assays

Ligation: After 2-fold overdigestion with BpuEI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1-2 µM) at 16°C. Of these ligated fragments, < 5% can be recut. However, > 95% can be recut if 80 µM SAM is replaced with 10 µM Sinefungin.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 10 units of enzyme incubated for 16 hours showed no degradation of DNA fragments.

Exonuclease Activity: Incubation of 5 units of enzyme with 1 µg sonicated [³H] DNA (10⁵ cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.5% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 50%
NEBuffer 2 100%
NEBuffer 3 10%
NEBuffer 4 **100%**

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: Not recommended for digest over 1 hour.

Heat Inactivation: 65°C for 20 minutes.

Notes: Storage at -80°C is recommended for longer than 6 months.

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

= Time-Saver™ Qualified (See www.neb.com for details).

CERTIFICATE OF ANALYSIS

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