

BstUI



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R0518S 011120714071

R0518S



1,000 units Lot: 0111207 Exp: 7/14

10,000 U/ml Store at -20°C

Recognition Site:

5'... CGCG... 3'
3'... GCGC... 5'

Source: *Bacillus stearothermophilus* U458 (Z. Chen)

New Reaction Buffer

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Source: *Bacillus stearothermophilus* U458 (Z. Chen)

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Supplied in: 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA and 50% glycerol.

Reagents Supplied with Enzyme:
10X NEBuffer 4.

Reaction Conditions: 1X NEBuffer 4.
Incubate at 60°C.

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

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA in 1 hour at 60°C in a total reaction volume of 50 µl.

Diluent Compatibility: Diluent Buffer A
50 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA,
1 mM DTT, 200 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

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Quality Control Assays

Ligation: After 20-fold overdigestion with BstUI, approximately 50% 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, > 95% can be recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 300 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction produced in 1 hour with 1 unit of enzyme.

Exonuclease Activity: Incubation of 100 units for 4 hours at 60°C in 50 µl assay buffer with 1 µg sonicated ³H DNA (10⁵ cpm/µg) released < 0.1% radioactivity.

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Enzyme Properties

Activity in NEBuffers:
NEBuffer 1 100%
NEBuffer 2 100%
NEBuffer 3 50%
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: A minimum of 0.13 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: No

Notes: BstUI is an isoschizomer of FnuDII.

Cleavage of mammalian genomic DNA is blocked by CpG methylation.

Incubation at 37°C results in 20% activity.

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

CERTIFICATE OF ANALYSIS

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