

BsrI



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



R0527S 011120514051

R0527S



1,000 units Lot: 0111205 Exp: 5/14

5,000 U/ml Store at -20°C

Recognition Site:

5'...ACTGGN▼...3'
3'...TGAC▲CN...5'

Source: *Bacillus stearothermophilus* (C. Polisson)

Supplied in: 400 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA and 50% glycerol.

2X More Units

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Reagents Supplied with Enzyme:

10X NEBuffer 3.

Reaction Conditions:

1X NEBuffer 3.

Incubate at 65°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 µg of φX174 RF I DNA in 1 hour at 65°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).

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Quality Control Assays

Ligation: After 10-fold overdigestion with BsrI, > 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, > 95% can be recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of φX174 RF I DNA and 50 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.

Exonuclease Activity: Incubation of 100 units of enzyme with 1 µg sonicated ³H DNA (10⁵ cpm/µg) for 4 hours at 65°C in 50 µl reaction buffer released < 0.2% radioactivity.

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Enzyme Properties

Activity in NEBuffers:

NEBuffer 1	0%
NEBuffer 2	50%
NEBuffer 3	100%
NEBuffer 4	10%

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 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: 80°C for 20 minutes.

Note: Incubation at 37°C results in 20% activity.

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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