

BsaXI



1-800-632-7799
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R0609S 01512114111

R0609S



100 units **Lot: 0151211** **Exp: 11/14**
2,000 U/ml **Store at -20°C**

Recognition Site:

5'...₉(N) A C (N)₅ C T C C (N)₁₀... 3'
3'...₂(N) T G (N)₅ G A G G (N)₇... 5'

Source: *Bacillus stearothermophilus* 25B
(Z. Chen)

Supplied in: 500 mM NaCl, 10 mM Tris-HCl
(pH 7.6), 0.1 mM EDTA, 1 mM DTT,
0.1% Triton X-100 and 50% glycerol.

Reagents Supplied with Enzyme:

10X NEBuffer 4.

Reaction Conditions:

1X NEBuffer 4.

Incubate at 37°C.

1X NEBuffer 4:

50 mM potassium acetate
20 mM Tris-acetate
10 mM magnesium acetate
1 mM DTT
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 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 DTT, 500 µg/ml BSA and 50% glycerol.
(pH 7.4 @ 25°C)

Quality Control Assays

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 2 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 (see note).

Exonuclease Activity: Incubation of 20 units of enzyme with 1 µg sonicated ³H DNA (10⁵ cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.1% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 75%
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: Intermediate activity.
Suitable for extended digestion, but < 8 hours.

Heat Inactivation: No

Plasmid Cleavage: Number of units required to cleave 1 µg of supercoiled plasmid DNA in one hour: 2 units.

Notes: Addition of greater than 2 units of BsaXI in a 16 hour incubation is not recommended due to DNA binding.

BsaXI cleaves DNA substrates twice to excise its recognition site generating a 27 base-pair fragments with 3-base 3' overhangs.

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

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

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