

BspDI



1-800-632-7799
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R0557S 011120714071

R0557S



2,000 units 10,000 U/ml Lot: 0111207

RECOMBINANT Store at -20°C Exp: 7/14

Recognition Site:

5'... A T C G A T ... 3'
3'... T A G C T A ... 5'

Source: An *E. coli* strain that carries the cloned BspDI gene from *Bacillus* species (H. Kong)

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.

**More Units, Higher Concentration
Same Price**

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 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)

Quality Control Assays

Ligation: After 20-fold overdigestion with BspDI, > 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 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 30 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.

Endonuclease Contamination: Incubation of 50 units of enzyme with 1 µg φX174 RF I DNA for 4 hours at 37°C in a 50 µl reaction buffer resulted in < 20% conversion to RF II.

Enzyme Properties

Activity in NEBuffers:
NEBuffer 1 25%
NEBuffer 2 75%
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: Intermediate activity. Suitable for extended digestion, but < 8 hours.

Heat Inactivation: 65°C for 20 minutes

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

Notes: BspDI is an isoschizomer of ClaI.
Blocked by overlapping *dam* methylation.

Cleavage of mammalian genomic DNA is blocked by CpG methylation.

Companion Products:

dam-/dcm- Competent *E. coli*

#C2925H 20 transformation reactions
#C2925I 24 transformation reactions

CERTIFICATE OF ANALYSIS

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