

# BseRI



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R0581S 023120814081

## R0581S



**200 units** Lot: 0231208 Exp: 8/14  
**4,000 U/ml** Store at **-20°C**

### Recognition Site:

5' . . . G A G G A G (N)<sub>10</sub> ▼ . . . 3'  
3' . . . C T C C T C (N)<sub>8</sub> ▲ . . . 5'

**Source:** An *E. coli* strain that carries the cloned BseRI gene from *Bacillus* species R (CAMB 2669)

**New Reaction Buffer**

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**Source:** An *E. coli* strain that carries the cloned BseRI gene from *Bacillus* species R (CAMB 2669)

**New Reaction Buffer**

Supplied in: 50 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA 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 A  
50 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA,  
1 mM dithiothreitol, 200 µg/ml BSA and  
50% glycerol (pH 7.4 @ 25°C)

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### Quality Control Assays

**Ligation:** After 10-fold overdigestion with BseRI, > 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, approximately 75% can be recut.

**16-Hour Incubation:** A 50 µl reaction containing 1 µg of DNA and 10 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 50 units of enzyme with 1 µg sonicated [<sup>3</sup>H]-DNA (10<sup>5</sup> cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.2% radioactivity.

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### Enzyme Properties

#### Activity in NEBuffers

NEBuffer 1	100%
NEBuffer 2	100%
NEBuffer 3	75%
NEBuffer 4	<b>100%</b>

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.

**Notes:** Overdigestion of > 10 units of BseRI per µg of DNA and incubation times > 2 hours are not recommended.

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

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

U.S. Patent No. 6,593,122

CERTIFICATE OF ANALYSIS

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CERTIFICATE OF ANALYSIS