

# BtsIMutI



1-800-632-7799  
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R0664S 001120814081

## R0664S



100 units 1,000 U/ml Lot: 0011208

RECOMBINANT Store at -20°C Exp: 8/14

### Recognition Site:

5'...CAGTGNN...3'  
3'...GTCACNN...5'

**Source:** An *E. coli* strain that carries the cloned and modified BtsI gene from *Bacillus thermoglucosidasius*

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

**Reagents Supplied with Enzyme:**  
10X NEBuffer 4, 100X BSA.

**Reaction Conditions:** 1X NEBuffer 4, supplemented with 100 µg/ml BSA.  
**Incubate at 55°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 pUC19 DNA in 1 hour at 55°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 5-fold overdigestion with BtsIMutI, 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 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 5 units of enzyme with 1 µg sonicated <sup>3</sup>H DNA (10<sup>5</sup> cpm/µg) for 4 hours at 55°C in 50 µl reaction buffer released < 0.5% radioactivity.

### Enzyme Properties

#### Activity in NEBuffers:

NEBuffer 1 100%  
NEBuffer 2 50%  
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:** A minimum of 0.5 unit is required to digest 1 µg of substrate DNA in 16 hours.

**Heat Inactivation:** 80°C for 20 minutes.

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

CERTIFICATE OF ANALYSIS

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