# **BmtI**













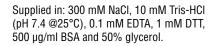
300 units 10,000 U/ml Lot: 0021209 RECOMBINANT Store at -20°C Exp: 9/14

**Recognition Site:** 

5′... G C T A G<sup>▼</sup>C ... 3′ 3′... C₄G A T C G ... 5′

**Source:** An *E. coli* strain that carries the cloned Bmtl gene from Bacillus megaterium S2 (S.K. Degtyarev)

**More Units** 



**Reagents Supplied with Enzyme:** 10X NEBuffer 2

**Reaction Conditions:** 1X NEBuffer 2

Incubate at 37°C.

1X NEBuffer 2: 50 mM NaCl 10 mM Tris-HCI 10 mM MgCl 1 mM dithiothreitol pH 7.9 @ 25°C

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 ug of pXba 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**

**Ligation:** After 10-fold overdigestion with Bmtl. > 95% of the DNA fragments can be ligated with T4 DNA Ligase at 16°C. Of these ligated fragments, > 95% can be recut.

16-Hour Incubation: A 50 µl reaction containing 1 ug of DNA and 100 units of enzyme incubated for 16 hours resulted in no degradation of the DNA bands due to nonspecific nucleases. However, fragments produced by noncanonical cleavage due to star activity may be observed with 10 units of enzyme in similar conditions.

**Exonuclease Activity:** Incubation of a 50 ul reaction containing 50 units of Bmtl with 1 µg of a mixture of single and double-stranded [3H] E.coli DNA (200,000 cpm/µg) for 4 hours at 37°C released < 0.1% of the total radioactivity.

## **Enzyme Properties**

**Activity in NEBuffers:** 

NEBuffer 1 25% NEBuffer 2 100% NFBuffer 3 25% NEBuffer 4 50%

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: 65°C for 20 minutes.

Note: Bmtl is an neoschizomer of Nhel.

Not sensitive to dam, dcm or mammalian CpG methylation.

Conditions of high enzyme concentration, glycerol concentration > 5% or pH > 8.0 may result in star activity.

CERTIFICATE OF ANALYSIS

# **BmtI**



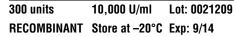
1-800-632-7799 info@neb.com www.neb.com











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