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Product Information

***Bst*E II**
from *Bacillus stearothermophilus* ET

Catalog Number **R4253**
Storage Temperature –20 °C

CAS RN 93229-61-9
EC 3.1.21.4
Synonym: Restriction Endonuclease *Bst*E II

Product Description
*Bst*E II recognizes the sequence 5′-G/GTNACC-3′ and generates fragments with 5′-cohesive termini.[1] Of the over 3,000 known restriction endonucleases, very few produce extensions of more than 4 bases.

It is not sensitive to *dam, dcm*, or mammalian CpG methylation.

*Bst*E II incubation at 37 °C results in 10–15% activity.

Due to potential for star activity it is recommended extended incubations be done at 37 °C. Other conditions which may result in star activity include: low ionic strength, high enzyme concentration, glycerol concentration >5%, or pH >8.0.

*Bst*E II Storage Buffer: 10 mM Tris-HCl, 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 50% (v/v) glycerol, and 200 µg/ml BSA, pH 7.4.

Activity: 10,000 units/mL

Unit Definition: One unit is the enzyme activity that completely cleaves 1 µg of λDNA in 1 hour at 60 °C in the 1× Reaction Buffer in a total volume of 50 µL.

Supplied with 10× Reaction Buffer: 100 mm Tris-HCl, pH 7.4 at 25 °C, 50 mM $MgCl_2$, 1 M KCl, 10 mM DTT, 1% Triton™ X-100, and 1 mg/mL BSA.

Non-specific endonuclease activity: A 50 µL reaction (*Bst*E II Storage Buffer) containing 1 µg of λDNA 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.

Ligation: After 40-fold overdigestion with *Bst*E II, >95% of the DNA fragments can be ligated and recut with this enzyme.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

References
1. Lautenberger, I.A. et al., Gene, **12**, 171 (1980).

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