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ProductInformation

RESTRICTION ENDONUCLEASE Bss HII

Product no. **R 2634**
Store 0 °C to –20 °C

Product Summary
Recognition Sequence: 5'G/CGCGC3'
Activity: 10,000 units/ml
Cutting: 100%
Ligation: >95%
Recutting: >95%
No degradation detected with >20 units for 16 hrs.
Fold over digestion: 320 (20 units x 16 hrs.)
Package Size: 200 units

Unit Definition
One unit is the enzyme activity that completely cleaves 1 µg λDNA in 1 hr. at 50 °C in a total volume of 25µl of Buffer SA for restriction endonucleases.

Specificity
Bss HII recognizes the sequence G/CGCGC and generates fragments with 5′-overhanging ends.[1] Bss HII generates compatible to ends to Mlu I blunt ends. Bss HII is inhibited by 5′-methyl- cytosine in the sequence G/^{m}CG^{m}CGC. Yeast DNA, which is rich in A and T sequences, is cleaved by Bss HII to produce 30 kb fragments. Mammalian genomic DNA is cleaved by Bss HII to produce 100 kb fragments because of reduced CG content.

Comments
Digestion Buffer SA is supplied as a 10x concentrate. Heat inactivation information is not available for Bss HII.

Bss HII Storage and Dilution Buffer Composition
10 mM Tris-HCl
50mM KCl
0.1 mM EDTA
1 mM dithiothreitol (DTT)
500 µg/ml bovine serum albumin
50% (v/v) glycerol
pH 7.4

1x Digestion Buffer SA (B 7531) Composition for Bss HII: 100% Digestion at 37 °C.
33 mM Tris-acetate
66 mM Potassium-acetate
10 mM Magnesium acetate
0.5 mM dithiothreitol (DTT)
pH 7.9

Quality Control Testing
Absence of unspecific endonuclease activities:
1 µg λDNA is incubated for 16 hrs. in 25 µl buffer SA with excess of Bss HII.

Ligation and Recutting Assay
Bss HII fragments, obtained by complete digestion of 1 µg λDNA, are adjusted to pH 7.5 at 25 °C. The Bss HII fragments are then ligated with 1.0 unit T4-DNA ligase at 4 °C at pH 7.5. A 10 µl reaction mixture, incubated for
16 hrs. at 4 °C contained: 1.0 unit T4-DNA ligase, 66 mM Tris-HCl, 5 mM $MgCl_2$, 1 mM dithioerythritol and 1 mM ATP.

The degree of ligation and subsequent recutting with Bss HII to yield the typical pattern of λ x Bss HII fragments is determined.

References
1. Kessler, C., et. al., Gene, **92**, 1 (1990).

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