ProductInformation

RESTRICTION ENDONUCLEASE Ban II

Product No. **R 2630**

Store at 0 to -20°C

Product Summary
Recognition Sequence: 5' GpuGCPy/C ′3
Activity: 10,000 units/ml
Cutting: 100%
Ligation: >95%
Recutting: >95%
No degradation detected with >10 units for 16 hrs.
Fold over digestion: 160 (10 units x 16 hrs.)
Package Size: 1000 units

Unit Definition
One unit is the enzyme activity that completely cleaves 1 µg λ DNA in 1 hr. at 37°C in a total volume of 50 µl of Buffer SB for restriction enzymes.

Specificity
Ban II recognizes the sequence GPuGCPy/C and generates fragments with 3'-cohesive termini.[1]

Comments
Digestion Buffer SB is supplied as a 10x concentrate.

Heat inactivation information for Ban II is not available.

Ban II Storage and Dilution Buffer Composition
10 mM Tris-HCl
100 mM KCl
0.1 mM EDTA
10 mM 2-mercaptoethanol
500 µg/ml bovine serum albumin
50% (v/v) glycerol
pH 7.5

1x Digestion Buffer SB (B8781) Composition for Ban II: 100 % Digestion at 37°C.
10 mM Tris-HCl
100 mM NaCl
5 mM $MgCl_2$
1 mM 2-mercaptoethanol
pH 8.0

Quality Control Testing
Absence of unspecific endonuclease activities:
1 µg λDNA is incubated for 16 hrs. in 50 µl buffer SB with excess of Ban II.

Ligation and recutting assay
Ban II fragments, obtained by complete digestion of 1 µg λDNA, are adjusted to pH 7.5 at 20°C.The Ban II fragments are then ligated with 1.0 unit T4-DNA ligase at pH 7.5 at 4°C. A 10 µl reaction mixture, incubated for 16 hrs. at pH 7.5 at 4°C contained 1.0 unit T4- DNA ligase, 66 mM Tris-HCl, 5 mM $MgCl_2$, 1 mM ATP and 1 mM dithioerythritol.

The degree of ligation and subsequent recutting with Ban II to yield the typical pattern of λDNA-Ban II fragments is determined.

References
1. Sugaisaki, H., et al., Nucl. Acids Res., **10**, 5747 1982.

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