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ProductInformation

RESTRICTION ENDONUCLEASE Stul

Product No. R 8013 Store at 0 to -20 °C

Product Summary

Recognition Sequence: 5'-AGG/CCT-3' Activity: 10,000 units/ml Cutting: 100% Ligation: >90% Recutting: >95% No degradation detected with >20 units for 16 hrs. Fold over digestion: 320 (20 units x 16 hrs.) Package Size: 1,000 units

Unit Definition

One unit is the enzyme activity that completely cleaves 1 μ g λ DNA in 1 hr. at 37 °C in a total volume of 25 μ l of SB restriction enzyme buffer.

Specificity

Stu I recognizes the sequence AGG/CCT and generates fragments with blunt ends.¹ Stu I is inhibited at AGG/^mC^mCT by the presence of 5'-methylcytosine.

Comments:

Digestion Buffer SB is supplied as a 10x concentrate.

Information is not available for heat inactivation of Stu I.

Stu I Storage and Dilution Buffer Composition

20 mM Tris-HCl 100 mM NaCl 0.1 mM EDTA 10 mM 2-mercaptoethanol 0.01% Triton[®]X-100 50% (v/v) glycerol pH 7.5

1x Digestion Buffer SB (B 8781) Composition for Stu I: 100% Digestion at 37 °C.

10 mM Tris-HCl 100 mM NaCl 5 mM MgCl₂ 1 mM 2-mercaptoethanol pH 8.0

Quality Control Testing

Absence of non-specific endonuclease activities: 1 μ g λ DNA is incubated for 16 hours in 50 μ l of buffer SB with excess >20 units of Stu I.

Ligation and recutting assay: Stul fragments,

obtained by complete digestion of $1\mu g \lambda DNA$, adjusted to pH 7.5 at 20 °C. The Stu I fragments are then ligated with 2.0 units T4-DNA ligase at room temperature at pH 7.5. A 10 μ l reaction mixture, incubated for 16 hours at pH 7.5 at room temperature, contained 2.0 units T4-DNA ligase, 66 mM Tris-HCI, 5 mM MgCl₂, 1 mM dithioerythritol and 1 mM ATP.

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

References

1. Shimolsu, H., et al., Gene, **11**, 219 (1980)

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