



Product Information

RESTRICTION ENDONUCLEASE Scr FI

Product Number **R 7888**

Store at 0 °C to -20 °C

Product Description

Product Summary

Recognition Sequence: 5'-CC/NGG-3'

Activity: 10,000 units/ml

Cutting: 100%

Ligation: >90%

Recutting: >95%

No degradation detected with >10 units for 16 hrs.

Fold over digestion: 160 (10 units x 16 hrs.)

Package Size: 500 units

Unit Definition:

One unit is the enzyme activity that completely cleaves

1 µg λ *dcm* DNA in 1 hr. at 37 °C in a total volume of

25 µl of SB restriction enzyme buffer.

Specificity

Scr FI recognizes the sequence CC/NGG and generates fragments with overhanging ends.¹

Comments:

Digestion Buffer SB is supplied as a 10x concentrate.

Information is not available for heat inactivation of Scr FI.

Scr FI Storage and Dilution Buffer Composition

10 mM Tris-HCl

50 mM KCl

0.1 mM EDTA

1 mM Dithiothreitol

200 µg/ml Bovine Serum Albumin

50% (v/v) glycerol

pH 7.5

1x Digestion Buffer SB (B 8781) Composition for Scr FI:

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 µg λ *dcm* DNA is incubated for 16 hrs. in 25 µl of buffer SB with excess units of Scr FI.

Ligation and recutting assay

Scr FI fragments obtained by complete digestion of 1 µg λ DNA are adjusted to pH 7.5 at 20 °C. The Scr FI fragments are then ligated with 4 units T4-DNA ligase at pH 7.5 at 4°C. A 30 µl reaction mixture, incubated for 16 hrs. at 4°C, contained: 4 units T4-DNA ligase, 20 mM Tris-HCl, 1 mM MgCl₂, 10 mM dithioerythritol, 0.6 mM ATP and 15%(w/v) PEG 6000.

The degree of ligation and subsequent recutting with Scr FI to yield the typical pattern of λ-*dcm* DNA fragments is determined.

References

1. Fitzgerald, G.F., et al., Nucleic Acids Res. **10**, 8171 (1982).