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ProductInformation

RESTRICTION ENDONUCLEASE Swa I

Product Number **R 1885**
Store at 0°C to -20°C

Product Description
Product Summary
Recognition Sequence: 5'ATTT/AAAT 3'
Activity: 10,000 units/ml
Cutting: 100%
Ligation: >95%
Recutting: >95%
No degradation detected with >50 units for 16 hrs.
Fold over digestion: 800 (50 units x 16 hrs.)
Package Size: 250 units

Unit Definition:
One unit is the enzyme activity that completely cleaves 1 µg Ad2- DNA x Ssp I in 1 hr. at 25 °C in a total volume of 25 µl of SH restriction enzyme buffer.

Specificity
Swa I recognizes the sequence ATTT/AAAT and generates fragments with blunt ends.

Comments:
E coli genomic DNA embedded in agarose is completely digested with 20 units Swa I in 4 hours at 25°C in digestion buffer SH containing 100 µg/ml bovine serum albumin.
Digestion Buffer SH is supplied as a 10× concentrate.
1-100 units of Swa I is not heat inactivated during incubation at 65 °C for 15 minutes.

Swa I Storage and Dilution Buffer Composition
20 mM Tris-HCl
500 mM NaCl
0.1 mM EDTA
10 mM 2-mercaptoethanol
50% (v/v) glycerol
pH 8.0

1× Digestion Buffer SH (B 3657) Composition for Swa I: 100% Digestion at 37 °C.
50 mM Tris-HCl
100 mM NaCl
10 mM $MgCl_2$
0.5 mM dithioerythritol (DTE)
pH 7.5

Quality Control Testing
Absence of non-specific endonuclease activities:
1 µg Ad2-DNA x Ssp I is incubated for 16 hrs. in 25 µl of buffer SH with excess units of Swa I.

Ligation and recutting assay
Swa I fragments obtained by complete digestion of 1 µg Ad2-DNA are adjusted to pH 7.5 at 25 °C. Swa I and Ssp I fragments are then ligated with 0.3 units T4-DNA ligase at pH 7.5 at 4 °C. A 10 µl reaction mixture, incubated for 16 hrs. at 4 °C, contained: 0.3 unitsT4-DNA ligase, 66 mM Tris-HCl, 5 mM $MgCl_2$, 1 mM dithioerythritol, 1 mM ATP and 15%(w/v) PEG 6000.

The degree of ligation and subsequent recutting with Swa I + Ssp I to yield the typical pattern of Ad2 x Swa I + Ssp I fragments is determined.

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