# RESTRICTION ENDONUCLEASE Alw 44I

Product No. **R 6634**

Store at 0 to –20 °C

## ProductInformation

### Product Summary
Recognition Sequence: 5'G/TGCAC'3
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:1,000 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 25 µl of Buffer SA for restriction enzymes. 1 µg pBR322 is completely cleaved by 10 units of Alw 44 I.

### Specificity
Alw 44 I recognizes the sequence G/TGCAC and generates fragments with 5'-cohesive termini.[1]
Alw 44 I is an isoschizomer to Sno I.

### Comments
Digestion Buffer SA is supplied as a 10x concentrate.

1-50 units of Alw 44 I can be heat inactivated after incubation at 65 °C for 15 min.

### Alw 44 I 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 8.3

### 1x Digestion Buffer SA (B 7531) Composition for Alw 44 I: 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 50 µl buffer SA with excess of Alw 44 I.

### Ligation and recutting assay
Alw 44I fragments, obtained by complete digestion of 1 µg λDNA, are adjusted to pH 7.5 at 20 °C. The Alw 44I fragments are then ligated with 0.7 unit T4-DNA ligase at pH 7.5 at 4 °C. A 10 µl reaction volume, incubated for 16 hrs. at 4 °C, contained 0.7 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 Alw 44 I to yield the typical pattern of λ-Alw 44 I fragments is determined.

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

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