3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

RESTRICTION ENDONUCLEASE Ava II

Product No. **R 6004**
Store at 0 °C to –20 °C

Product Summary
Recognition Sequence: 5'G/G(AT)CC3'
Activity: 5,000 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: 100 units

Unit Definition
One unit is the enzyme activity that completely cleaves 1 µg λDNA in 1 hr. at 37 °C in a total volume of 25 µl of Buffer SA for restriction endonucleases.

Specificity
Ava II recognizes the sequence G/G(AT)CC and generates fragments with 5'cohesive ends.[1] Ava II is inhibited by overlapping dcm-methylation and by the presence of a 5'-methylcytosine or 5'-hydroxy-methylcytosine at either C nucleoside.

Comments
Digestion Buffer SA is supplied as a 10x concentrate. Heat inactivation information is not available for Ava II.

Ava II Storage and Dilution Buffer Composition
20 mM Tris-HCl
100 mM NaCl
0.1 mM EDTA
10 mM 2-mercaptoethanol
0.01%(v/v) Triton X-100
50% (v/v) glycerol
pH 8.0

Quality Control Testing

1x Digestion Buffer SA (B 7531) Composition for Ava II: 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

Absence of unspecific endonuclease activities:
1 µg λDNA is incubated for 16 hrs. in 50 µl buffer SA with excess of Ava II.

Ligation and Recutting Assay
Ava II fragments, obtained by complete digestion of 1 µg λDNA, are adjusted to pH 7.5 at 2 0 °C. The Ava II fragments are then ligated with 0.1 unit T4-DNA ligase at pH 7.5 at 20 °C. A 10 µl reaction mixture, incubated for 16 hours at 20 °C, contained 0.1 unit T4-DNA ligase, 66 mM Tris-HCl, 5 mM MgCl2, 1 mM ATP and 1 mM dithioerythritol.

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

References
1. Murray, K., et al., Biochem. J., **159**, 317 (1976).

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