

AleI



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R0634S 01012081408

R0634S

500 units 10,000 U/ml Lot: 0101208

RECOMBINANT Store at -70°C Exp: 8/14

Recognition Site:

5'... CACNN[▼]NGTG... 3'
3'... GTGNN[▲]NNCAC... 5'

Source: An *E. coli* strain that carries the cloned AleI gene *Aureobacterium liquefaciens* (S.K. Degtyarev)

More Units, Now Recombinant

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Supplied in: 300 mM NaCl, 20 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA and 50% glycerol.

Reagents Supplied with Enzyme:
10X NEBuffer 4.

Reaction Conditions: 1X NEBuffer 4.
Incubate at 37°C.

1X NEBuffer 4:

50 mM potassium acetate
20 mM Tris acetate
10 mM magnesium acetate
1 mM DTT
pH 7.9 @ 25°C

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA in 1 hour at 37°C in a total reaction volume of 50 µl.

Diluent Compatibility: Diluent Buffer A
50 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA,
1 mM dithiothreitol, 200 µg/ml BSA and
50% glycerol (pH 7.4 @ 25°C)

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Quality Control Assays

Ligation: After 10-fold overdigestion with AleI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1–2 µM) at 16°C. Of these ligated fragments, > 95% can be recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 240 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.

Exonuclease Activity: Incubation of 120 units of enzyme with 1 µg sonicated [³H] DNA (10⁵ cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.1% radioactivity.

Endonuclease Activity: Incubation of 60 units of enzyme with 1 µg pBR322 DNA for 4 hours at 37°C in 50 µl reaction buffer resulted in < 10% conversion to RF II.

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Enzyme Properties

Activity in NEBuffers:
NEBuffer 1 10%
NEBuffer 2 25%
NEBuffer 3 10%
NEBuffer 4 **100%**

When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

Survival in a Reaction: Intermediate activity. Suitable for extended digestion, but < 8 hours.

Heat Inactivation: 65°C for 20 minutes.

Note: AleI is an isoschizomer of OIiI.

Cleavage of mammalian genomic DNA is impaired by some combinations of overlapping CpG methylation.

Storage at -70°C is recommended for periods longer than 30 days.

CERTIFICATE OF ANALYSIS

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