

Acil



1-800-632-7799
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R0551S 029120814081

R0551S



200 units 10,000 U/ml Lot: 0291208

RECOMBINANT Store at -20°C Exp: 8/14

Recognition Site:

5'... CCGC... 3'
3'... GGCG... 5'

Source: An *E. coli* strain that carries the cloned Acil gene from *Arthrobacter citreus* (C. Polisson)

Now Recombinant

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Supplied in: 100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA and 50% glycerol.

Reagents Supplied with Enzyme:
10X NEBuffer 3.

Reaction Conditions: 1X NEBuffer 3.
Incubate at 37°C.

1X NEBuffer 3:
100 mM NaCl
50 mM Tris-HCl
10 mM MgCl₂
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 DTT, 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 Acil, > 95% of the DNA fragments can be ligated, approximately 50% can be recut with Acil due to the non-palindromic recognition site of Acil. The remaining ligation products form HpaII/MspI sites.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 40 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 60 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.

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Enzyme Properties

Activity in NEBuffers:
NEBuffer 1 25%
NEBuffer 2 50%
NEBuffer 3 100%
NEBuffer 4 50%

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: Not recommended for digest over 1 hour.

Heat Inactivation: 65°C for 20 minutes.

Notes: Acil has a non-palindromic recognition site.

Cleavage of mammalian genomic DNA is blocked by CpG methylation.

= Time-Saver™ Qualified (See www.neb.com for details).

CERTIFICATE OF ANALYSIS

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