AluI







R0137S



Lot: 0751208

RECOMBINANT Store at -20°C Exp: 8/14

10.000 U/ml

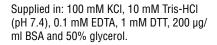
Recognition Site:

1.000 units

5′... A G C T ... 3′ 3′... T C G A ... 5′

Source: An *E. coli* strain that carries the cloned Alul gene from *Arthrobacter luteus* (ATCC 21606)

New Reaction Buffer



Reagents Supplied with Enzyme: 10X NFBuffer 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 B 300 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C)

Quality Control Assays

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

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 100 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 100 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.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 100% NEBuffer 2 100% NEBuffer 3 75% 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: 40 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

Note: Not sensitive to *dam*, *dcm* or mammalian CpG methylation.

= Time-Saver™ Qualified (See www.neb.com for details). Licensed under U.S. Patent No. 5,334,526

CERTIFICATE OF ANALYSIS

AluI



1-800-632-7799 info@neb.com www.neb.com



R0137S

MEB 4 37° Yes

Lot: 0751208

RECOMBINANT Store at -20°C Exp: 8/14

10.000 U/ml

Recognition Site:

1.000 units

5′... A G C T ... 3′ 3′... T C G A ... 5′

Source: An *E. coli* strain that carries the cloned Alul gene from *Arthrobacter luteus* (ATCC 21606)

(pH 7.4), 0.1 mM EDTA, 1 mM DTT, 200 μg/ ml BSA and 50% glycerol. Reagents Supplied with Enzyme:

Supplied in: 100 mM KCl. 10 mM Tris-HCl

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 μ g of λ DNA in 1 hour at 37°C in a total reaction volume of 50 μ l.

Diluent Compatibility: Diluent Buffer B 300 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C)

Quality Control Assays

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

16-Hour Incubation: A 50 μ l reaction containing 1 μ g of DNA and 100 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 100 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.

Enzyme Properties

Activity in NEBuffers: NEBuffer 1 100%

NEBuffer 2 100% NEBuffer 3 75% 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: 40 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

Note: Not sensitive to *dam*, *dcm* or mammalian CpG methylation.

= Time-Saver™ Qualified (See www.neb.com for details). Licensed under U.S. Patent No. 5,334,526

New Reaction Buffer