





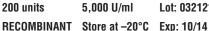


R0178S

200 units







Lot: 0321210

Recognition Site:

5′...GCNGC...3′ 3′... C G N C G ... 5′

Source: An *E. coli* strain that carries the cloned Fnu 4HI gene from Fusobacterium nucleatum 4H (M. Smith)

Supplied in: 50 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 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 ug 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).

Quality Control Assays

Ligation: After 20-fold overdigestion with Fnu 4HI, < 5% 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 50 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 approximately 10 units of enzyme with 1 µg sonicated ³H DNA (10⁵ cpm/µg) for 4 hours at 37°C in 50 ul reaction buffer released < 0.1% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 10% NEBuffer 2 25% NEBuffer 3 25% 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: A minimum of 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: 30 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

Notes: Fnu 4HI produces DNA fragments that have a single-base 5' extension which are more difficult to ligate than blunt-ended fragments.

Cleavage of mammalian genomic DNA is blocked by overlapping CpG methylation.

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

CERTIFICATE OF ANALYSIS

Fnu4HI



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

R0178S

RR C





200 units 5,000 U/ml RECOMBINANT Store at -20°C Exp: 10/14

Lot: 0321210

Recognition Site:

5′...GCNGC...3′ 3'... CGN,CG...5'

Source: An *E. coli* strain that carries the cloned Fnu 4HI gene from Fusobacterium nucleatum 4H (M. Smith)

Supplied in: 50 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 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 ug 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).

Quality Control Assays

Ligation: After 20-fold overdigestion with Fnu 4HI. < 5% 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 50 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 approximately 10 units of enzyme with 1 µg sonicated ³H DNA (10⁵ cpm/µg) for 4 hours at 37°C in 50 ul reaction buffer released < 0.1% radioactivity.

Enzyme Properties

Activity in NEBuffers: NEBuffer 1 10%

NEBuffer 2 25% NEBuffer 3 25%

NEBuffer 4

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

100%

Survival in a Reaction: A minimum of 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: 30 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

Notes: Fnu 4HI produces DNA fragments that have a single-base 5' extension which are more difficult to ligate than blunt-ended fragments.

Cleavage of mammalian genomic DNA is blocked by overlapping CpG methylation.

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