

SfoI



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www.neb.com



R0606S 013121114111

R0606S



500 units **10,000 U/ml** **Lot: 0131211**
RECOMBINANT **Store at -20°C** **Exp: 11/14**

Recognition Site:

5'... GGC↓GCC... 3'
3'... CCG↑CGG... 5'

Source: An *E. coli* strain that carries the cloned SfoI gene from *Serratia fonticola* (R. Camp)

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

New Storage Conditions

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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 dithiothreitol
pH 7.9 @ 25°

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of λ DNA (HindIII digest) 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 dithiothreitol, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C)

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Quality Control Assays

Ligation: After 10-fold overdigestion with SfoI, > 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 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 80 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 40 units of enzyme with 1 µg of LITMUS 28 plasmid DNA for 4 hours at 37°C in 50 µl reaction buffer resulted in < 20% conversion to RF II as determined by agarose gel electrophoresis.

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Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 25%
NEBuffer 2 100%
NEBuffer 3 50%
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 1.0 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: No.

Note: SfoI is an isoschizomer of Ehel, KasI and NarI.

Blocked by some combinations of overlapping *dcm* methylation. Cleavage of mammalian genomic DNA is blocked by CpG methylation.

Companion Products:

dam/*dcm* Competent *E. coli*
#C2925H 20 transformation reactions
#C2925I 24 transformation reactions

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

CERTIFICATE OF ANALYSIS

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