






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

R0642S 047121114111

R0642S



**500 units      10,000 U/ml      Lot: 0471211**

**RECOMBINANT   Store at -20°C   Exp: 11/14**

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**Recognition Site:**

5'...CCTGCA<sup>▼</sup>GG...3'  
3'...GGACGTCC...5'

**Source:** An *E. coli* strain that carries the cloned SbfI gene from *Streptomyces* species Bf-61 (S.K. Degtyarev)

**Also Available In  
High Fidelity (HF™) Format**






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Supplied in: 50 mM NaCl, 10 mM Tris-HCl (pH 7.5), 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 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 7.5 @ 25°C)

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### Quality Control Assays

**Ligation:** After 10-fold overdigestion with SbfI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase at 16°C. Of these ligated fragments, > 95% can be recut.

**16-Hour Incubation:** A 50 µl reaction containing 1 µg of λ DNA and 15 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 SbfI with 1 µg sonicated [<sup>3</sup>H] DNA (10<sup>5</sup> cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.1% radioactivity.

**Endonuclease Activity:** Incubation of 15 units of SbfI 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	75%
NEBuffer 2	50%
NEBuffer 3	0%
NEBuffer 4	<b>100%</b>

**Survival in a Reaction:** A minimum of 0.50 unit is required to digest 1 µg of substrate DNA in 16 hours.

**Heat Inactivation:** 65°C for 20 minutes.


**Notes:** SbfI is an isoschizomer of Sse8387I.

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

Conditions of low ionic strength, high enzyme concentration, glycerol concentration > 5% or pH > 8.0 may result in star activity.

### Companion Products Sold Separately:

SbfI-HF™	
#R3642S	500 Units
#R3642L	2,500 Units

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

CERTIFICATE OF ANALYSIS

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