



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



R3150S 002120914091



**R3150S**

**500 units      20,000 U/ml      Lot: 0021209**

**RECOMBINANT    Store at -20°C    Exp: 9/14**

#### Recognition Site:

5'...CGAT<sup>▼</sup>CG...3'  
3'...GCTAG<sup>▲</sup>C...5'

**Note:** PvuI-HF has the same specificity as PvuI, but it has been engineered for reduced star activity.

**Source:** An *E. coli* strain that carries the cloned and modified PvuI gene from *Proteus vulgaris* (ATCC 13315)

Supplied in: 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 500 µg/ml BSA and 50% glycerol.

**Reagents Supplied with Enzyme:**  
10X NEBuffer 4, 100X BSA.

**Reaction Conditions:** 1X NEBuffer 4, supplemented with 100 µg/ml BSA. 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°C

**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pXba 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 (pH 7.4), 0.1 mM EDTA, 1 mM DTT, 500 µg/ml BSA and 50% glycerol.

#### Quality Control Assays

**Ligation:** After 20-fold overdigestion with PvuI-HF, > 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 200 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.

**Endonuclease Activity:** Incubate 200 units of enzyme with 1 µg of φX174 RF I DNA for 4 hours at 37°C resulted in < 10% conversion to RF II as determined by agarose gel electrophoresis.

**Exonuclease Activity:** Incubation of 200 units of enzyme 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.

#### Enzyme Properties

**Activity in NEBuffers:**  
NEBuffer 1    25%  
NEBuffer 2    100%  
NEBuffer 3    100%  
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 0.13 unit is required to digest 1 µg of substrate DNA in 16 hours.

**Heat Inactivation:** No


**Plasmid Cleavage:** Number of units required to cleave 1 µg of supercoiled plasmid DNA in one hour: LITMUS = 2 units, pBR322 = 1 unit, pUC19 = 2 units.

(see other side)


CERTIFICATE OF ANALYSIS



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CERTIFICATE OF ANALYSIS

**Notes:** Cleavage of mammalian genomic DNA is blocked by CpG methylation.

New icons (see [www.neb.com](http://www.neb.com) for details)

 = Time-Saver™ Qualified

 = indicates that the enzyme has been engineered


 = indicates that the enzyme has reduced star activity


Covered under U.S. Publication No. 2009-0029376.


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