

# HpyCH4V



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R0620S 004120814081

## R0620S



100 units 5,000 U/ml Lot: 0041208

RECOMBINANT Store at -20°C Exp: 8/14

### Recognition Site:

5'... T G C A ... 3'  
3'... A C G T ... 5'

**Source:** An *E. coli* strain that carries the cloned HpyCH4V gene from *Helicobacter pylori* CH4 (S. A. Thompson)

New Diluent Buffer

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New Diluent Buffer

Supplied in: 100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 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 dithiothreitol  
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 7.4 @ 25°C).

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### Quality Control Assays

**Ligation:** After 10-fold overdigestion, with Hpy-CH4V, > 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 50 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 < 0.2% radioactivity.

### Enzyme Properties

#### Activity in NEBuffers:

NEBuffer 1 50%  
NEBuffer 2 50%  
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.

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

**Heat Inactivation:** 10 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

**Note:** CviRI is an isoschizomer of HpyCH4V.

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

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

U.S. Patent No. 6,133,009



CERTIFICATE OF ANALYSIS

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