

# TseI



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R0591S 008121114111

## R0591S



75 units Lot: 0081211 Exp: 11/14  
5,000 U/ml Store at -20°C

### Recognition Site:

5'...G C W G C...3'  
3'...C G W C G...5'

Single Letter Code: W = A or T

Source: *Thermus species* (D. Clark)

New Reaction Buffer

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New Reaction Buffer

Supplied in: 500 mM KCl, 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 65°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 λ DNA in 1 hour at 65°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 DTT, 500 µg/ml BSA and 50% glycerol  
(pH 7.4 @ 25°C).

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### Quality Control Assays

**Ligation:** After 5-fold overdigestion with TseI, > 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 9 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction produced in one hour with one unit of enzyme.

**Exonuclease Activity:** Incubation of 30 units for 4 hours at 65°C in 50 µl assay buffer with 1 µg sonicated <sup>3</sup>H DNA (10<sup>5</sup> cpm/µg) released < 0.19% of the radioactivity.

### Enzyme Properties

#### Activity in NEBuffers:

NEBuffer 1 75%  
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.

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

**Heat Inactivation:** No

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

Incubation at 37°C results in 20% activity.

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CERTIFICATE OF ANALYSIS

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