

**Restriction Endonuclease****Set I****E537**

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**200 u****Lot: 12****5 000 u/ml****Store at -20°C****Recognition Sequence:**

5'... ASST↓\* ...3'  
3'...↑TSSA ...5'

**Source:** An *E.coli* strain that carries the cloned Set I gene from *Streptomyces werraensis* 37

**Supplied in:**

10 mM Tris-HCl (pH 7.6); 100 mM NaCl;  
0,1 mM EDTA; 50% glycerol.

**Reaction Conditions:**

1×SEBuffer Y

Incubate at **55°C**.

Warranty period for the enzyme storage at -20°C is one year from the date of the last assay indicated on the enzyme vial.

**1×SEBuffer Y**

33 mM Tris-Ac (pH 7.9 @ 25°C) 66 mM KAc  
10 mM MgAc 1 mM DTT

**Unit Definition:** One unit is defined as the amount of enzyme required to cleave 1 pmol of the double-stranded oligonucleotide with the following structure  
5'-CGAGTTTAT**AGCT**GGGCCCAAC-3'  
3'-GCTCAAATAT**CGA**CCCGGGTTG-5'  
in 1 hour at 55 °C in a total reaction volume of 20 µl.

**Quality Control Assays****Ligation:** After 5-fold overdigestion with

Set I, approximately 50% of DNA fragments can be

ligated with T4 DNA Ligase and recut.

**\*SetI cleaves a canonical site and several other sites with a weaker activity.**

**In the case of long incubation with SetI DNA can be digested to small oligos.**

Note: The information about substrate specificity of Set I you can find on the web-site:

[http://science.sibenzyme.com/article8\\_article\\_52\\_1.p.html](http://science.sibenzyme.com/article8_article_52_1.p.html)

**Oligonucleotide Assay:**

No detectable degradation of a single- and double-stranded oligonucleotide was observed after incubation with 5 units of enzyme for 3 hours.

**Enzyme Properties****Activity in SEBuffers:**

SEBuffer B 25-50%  
SEBuffer G 25-50%  
SEBuffer O 75-100%  
SEBuffer W 75-100%  
SEBuffer Y **100%**  
SEBuffer ROSE 100%

When using a buffer other than the optimal (supplied) SEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

**Heat Inactivation:**

**Yes** (80°C for 20 minutes)

**Reagents Supplied with Enzyme:**

10×SEBuffer Y.

**CERTIFICATE OF ANALYSIS**