

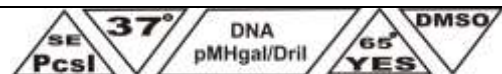
Methyl-directed DNA  
Endonuclease

**Pcs I**

**E505**



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**50 u** **Lot: 3**  
**1000 u/ml** **Store at -20°C**

**Recognition Sequence:**

5'- (5mC)GNNNNN↓NN(5mC)G- 3'  
3'- G(5mC)NN↑NNNNNG(5mC)- 5'

**Source: *Paracoccus carotinifaciens* 3K**

**The enzyme cleaves only C5-methylated DNA  
and does not cut unmodified DNA.**

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

**Supplied in:**

10 mM Tris-HCl (pH 7.5); 200 mM NaCl; 0,1 mM EDTA; 100 µg/ml BSA;  
7 mM 2-mercaptoethanol; 50% glycerol.

**Reaction Conditions:**

1×SEBuffer PcsI

Incubate at **37°C**.

1×SEBuffer PcsI (pH 8.3 @ 25°C)

10 mM Tris-HCl 20 mM NaCl  
3 mM MgCl<sub>2</sub> 1 mM DTT

**Unit Definition:**

One unit is defined as the amount of enzyme required to digest a unique site  
5'-A(5mC)GNNNNNNN(5mC)GT-3' in 1 µg of DNA pMHgal/Dril in 1 hour at  
37°C in a total reaction volume of 50 µl.

**DNA pMHgal/Dril** is a linearized plasmid pMHgal, which included a genes  
of DNA-methyltransferases M1.Hgal (recognition sequence 5'-GCGTC-3')  
and M2.Hgal (5'-GACGC-3') and contains a unique PcsI canonical site:  
5'-W(5mC)GNNNNNNN(5mC)GW-3'/3'-WG(5 m C)NNNNNNNG(5mC)W-5'.

The enzyme activity depends on number and position of methylated  
nucleotides in the recognition sequence.

**Optimal recognition site (100% activity):**

5'-W(5mC)GNNNNNNN(5mC)GW-3'/ 3'-WG(5mC)NNNNNNNG(5mC)W-5'

**Quality Control Assays**

**16-Hour Incubation:** No detectable degradation of 1 µg of λ DNA was  
observed after incubation with 1 units of enzyme for 16 hours at 37°C

**Oligonucleotide Assay:**

No detectable degradation of a single- and double-stranded oligonucleotide  
was observed after incubation with 1 units of enzyme for 3 hours.

**Enzyme Properties**

**Activity in SEBuffers:**

SEBuffer B 50-75%

SEBuffer G 25-50%

SEBuffer O 0%

SEBuffer W 10-25%

SEBuffer Y 50-75%

SEBuffer ROSE 20%

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

**Reagents Supplied with Enzyme:** 10×SEBuffer PcsI

**Heat Inactivation: Yes** (65°C for 20 minutes)

**CERTIFICATE OF ANALYSIS**