Restriction Endonuclease

Psr I

E131

SibEnzyme Ltd., Russia
Ph: +7 383 333 4991
Fax :+7 383 333 6853
info@sibenzyme.com
www.sibenzyme.com

100 u **Lot: 24**
1000 u/ml **Store at -20°C**

Recognition Sequence:

5'… ↓(N)$_7$GAAC(N)$_6$TAC(N)$_{12}$↓…3'
3'… ↑(N)$_{12}$CTTG(N)$_6$ATG(N)$_7$↑…5'

Sourse: ***Pseudomanas stutzeri N2***

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

Reaction Conditions:
1×SEBuffer **Y+BSA**
Incubate at **30°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 (pH 7.9 @ 25ºC)
33 mM Tris-Ac 66 mM KAc
10 mM MgAc 1 mM DTT

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 μg of T7 DNA in 1 hour at 30°C in a total reaction volume of 50 μl. Concentrated enzymes are diluted to approximately 1000 units/ml with the buffer A [10 mM Tris-HCl (pH 7.6); 50 mM KCl; 0.1 mM EDTA; 1 mM DTT; 200 μg/ml BSA; 50% glycerol] before determining their activity. To obtain 100% activity, BSA should be added to the 1× reaction mix to a final concentration of 100 μg/ml.

Quality Control Assays

Ligation: After 3-fold overdigestion with Psr I, ~70% of T7 DNA fragments can be ligated with T4 DNA Ligase and ~90% of these can be recut. In the presence of 10% PEG ligation is better.

16-Hour Incubation:

A 50 μl reaction containing 1μg of T7 DNA and 1 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour.

No using BSA for long incubation.

High enzyme concentration may result in star activity.

Oligonucleotide Assay:

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

Incubation at 37°C results in 20% activity.

Enzyme Properties

Activity in SEBuffers:

SEBuffer B	10-25%
SEBuffer G	10-25%
SEBuffer O	0%
SEBuffer W	0-10%
SEBuffer Y	**100%**
SEBuffer ROSE	30%

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

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

Reagents Supplied with Enzyme:
10×SEBuffer Y, BSA (10 mg/ml)

CERTIFICATE OF ANALYSIS