Restriction Endonuclease

Zra I

E463

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200 u **Lot: 18**
10 000 u/ml **Store at -20°C**

Recognition Sequence:

5'…GAC↓GTC …3'
3'…CTG↑CAG …5'

Sourse: *E.coli* strain that carries the cloned Zra I gene from *Zoogloea ramigera 11*

Supplied in:
10 mM Tris-HCl (pH 7.4); 50 mM NaCl;
0,1 mM EDTA; 200 μg/ml BSA;
1 mM DTT; 50% glycerol.

Reaction Conditions:
1×SEBuffer **B**.
Incubate at **37°C**.

1×SEBuffer B
10 mM Tris-HCl (pH 7.6 @ 25°C) 10 mM $MgCl_2$
1 mM DTT

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.

Quality Control Assays

Ligation: After 10-fold overdigestion with Zra I,approximately 90% of λ DNA fragments can be ligated with T4 DNA Ligase and recut.
In the presence of 10% PEG ligation is better.

16-Hour Incubation:
A 50 μl reaction containing 1μg of λ DNA and 10 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour.

Oligonucleotide Assay:
No detectable degradation of a single- and double-stranded oligonucleotide was observed after incubation with 10 units of enzyme for 3 hours.

Enzyme Properties

Activity in SEBuffers:
SEBuffer B **100%**
SEBuffer G 50-75%
SEBuffer O 25-50%
SEBuffer W 25-50%
SEBuffer Y 75-100%
SEBuffer ROSE 100%

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

Zra I is a neoschizomer of Aat II.

Heat Inactivation:
Yes (80°C for 20 minutes)

Reagents Supplied with Enzyme:
10×SEBuffer B

Notes: High enzyme concentration may result in star activity. The minimum number of units that resulted in complete digestion of 1 ug of substrate DNA in 16 hours is 0,5. ZraI cleaves linear plasmid DNA at a rate 1,5-2 times higher than supercoiled plasmid DNA.

CERTIFICATE OF ANALYSIS