SibEnzyme®

Sma I

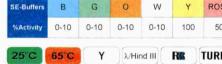
CCCTGGG Recognition Sequence: GGGTCCC

> Lot: 44 Exp: 05/19 2.000 units 20,000 u/ml

Restriction

Endonuclease

Store at -20C



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CERTIFICATE OF ANALYSIS

Description: Turbo Sma I can be used for short time (10-15 min) DNA digestion as well as for standard reaction. The reaction can be performed using optimal or universal (ROSE) Buffer. Buffer ROSE is perfect for double digestion.

Source: An E.coli strain that carries the cloned Small gene from Serratia marcescens.

10 mM Tris-HCl (pH 7.6), 50 mM NaCl, 0.1 mM EDTA, 200 µg/ml BSA, 1 mM DTT, 50% glycerol.

Reaction Conditions:

Supplied in:

1x SE-Buffer Y or 1x SE-Buffer ROSE. Incubate at 25°C

1X SE-Buffer Y (pH 7.9@ 25°C): 33 mM Tris-Ac, 66 mM KAc, 10 mM MgAc, 1 mM DTT

Heat Inactivation:

Enzyme is inactivated by incubation at 65°C for 20

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 μ g of λ DNA (Hind IIIdigest) in 1 hour at 25° C in a total reaction volume of

Quality Control Assays

reaction incubated for 1 hour.

50 µl.

Ligation: After 2-fold overdigestion with Sma I, approximately 90% of the DNA fragments can be ligated with high-activity T4 DNA Ligase and recut. In

16-Hour Incubation: A 50 µl reaction containing 1 µg

the presence of 10 % PEG ligation is better.

of DNA and 20 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a Oligonucleotide Assay: No detectable degradation of a single-stranded and double-stranded oligonucleotide

restriction endonuclease for 3 hours.

was observed after incubation with 20 units of

10x SE-Buffer Y, 10x SE-Buffer ROSE

Reagents Supplied with Enzyme:

Applications: -Fast DNA analysis

-Fast preparation of vectors for cloning -Double digestion

Turbo DNA Digestion:

Enzyme Properties:

1 µl of Turbo Sma I cuts 1 µg of DNA in 1x SE-Buffer Y or universal 1x SE-Buffer ROSE in 10-15 min (see the protocol below). Short time DNA digestion requires

hours) as well. Turbo reaction protocol:

20 µl of the reaction volume: Reaction Buffer (x10)

- 2 µl DNA (including plasmid) - 1-2 μl (up to 1 μg) or

high quality purification of DNA sample. This enzyme

can digest DNA at standard incubation time (1-16

PCR product (purified) - 2-5 µl (~0,2 µg) Sterile water - up to 20 µl + 1 ul of Turbo Restriction Endonuclease Incubate at 25°C for 10-15 min