Restriction Endonuclease

SibEnzyme®

# Bsp19 I

Recognition Sequence:

C↓CATGG
GGTAC↑C

S

**E047T**

1,000 units
20,000 u/ml

Lot: 49
Exp: 05/19
Store at -20C

| SE-Buffers | B | G | O | W | Y | ROSE |
|---|---|---|---|---|---|---|
| %Activity | 0-10 | 10-25 | 50-75 | 75-100 | 10-25 | 5 |

37°C | 65°C | 2W | λ | TURBO

For more details scan the code

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## CERTIFICATE OF ANALYSIS

Description: Turbo Bsp19I can be used for short time (5-10 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: *Bacillus species 19*

Supplied in: 10 mM Tris-HCl (pH 7.5), 50 mM KCl, 0.1 mM EDTA, 7 mM 2-mercaptoethanol, 200 µg/ml BSA, 50% glycerol.

Reaction Conditions:
1 x SE-Buffer 2W or 1 x SE-Buffer ROSE.
Incubate at 37°C.

1 x SE-Buffer 2W (pH 8.5@ 25°):
20 mM Tris-HCl 200 mM NaCl
10 mM $MgCl_2$ 1 mM DTT

Heat Inactivation:
Enzyme is inactivated by incubation at 65°C for 20 minutes.

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 20-fold overdigestion with Bsp19 I, 95% of the DNA fragments can be ligated with T4 DNA Ligase and recut.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 40 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-stranded and double-stranded oligonucleotide was observed after incubation with 20 units of restriction endonuclease for 3 hours.

Reagents Supplied with Enzyme:
10 x SE-Buffer 2W, 10 x SE-Buffer ROSE

**Turbo DNA Digestion:**
Applications:
-Fast DNA analysis
-Fast preparation of vectors for cloning
-Double digestion
Enzyme Properties:
1 µl of Turbo Bsp19I cuts 1 µg of DNA in 1 x SE-Buffer 2W or universal 1 x SE-Buffer ROSE in 5-10 min (see the protocol below). Short time DNA digestion requires high quality purification of DNA sample. This enzyme can digest DNA at standard incubation time (1-16 hours) as well.

Turbo reaction protocol:
20 µl of the reaction volume:
Reaction Buffer (x10) - 2 µl
Plasmid DNA - 1-2 µl (up to 1 µg) or
PCR product - 5-10 µl (~0,2 µg)
Sterile water - up to 20 µl
+ 1 µl of Turbo Restriction Endonuclease
Incubate at 37°C for 5-10 min.