Restriction Endonuclease

SibEnzyme®

# Bsp19 I

Recognition Sequence:

C↓CATGG
GGTAC↑C

S

**E048**

5,000 units
20,000 u/ml

Lot:
Exp:
Store at -20°C

| 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 | BSA

For more details scen the code

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# CERTIFICATE OF ANALYSIS

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× SE-Buffer 2W, BSA (100 µg/ml). Incubate at 37°C.

1X SE-Buffer 2W(pH 8.5 @ 25° C):
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 Lambda DNA in 1 hour at 37° C in a total reaction volume of 50 µl.
To obtain 100% activity, BSA should be added to the 1x reaction mix to a final concentration of 100 µg/ml.

Quality Control Assays
Ligation:After 20-fold overdigestion with Bsp19 I, 95% of the DNA fragments can be ligated 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.
No using BSA for long incubation.

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.

Enzyme Properties:
When using a buffer other than the optimal (Supplied) SE-Buffer, it may be necessary to add more enzymes to achieve complete digestion.

Reagents Supplied with Enzyme:
10X SE Buffer 2W, BSA (10 mg/ml).

Bsp19I cuts hemi methylated site
5`-(5mC) CATGG-3`/3`-GGTACC-5`
and doesn't cut methylated sites
5`-(5mC) CATGG-3`/3`-GGTAC(5mC)-5` and
5`-(4mC) CATGG-3`/3`-GGTAC(4mC)-5`.