Restriction Endonuclease

SibEnzyme®

# Sfi I

Recognition Sequence: GGCCNNNN↓NGGCC
CCGGN↑NNNNCCGG

S

**E123**

1,000 units

10,000 u/ml

Lot:

Exp:

Store at -20C

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

50°C | 65°C | G | T7 | RR | BSA

For more details scen the code

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# CERTIFICATE OF ANALYSIS

Source: *An E.coli strain that carries the cloned gene Sfi I from Streptomyces fimbriatus.*

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

Reaction Conditions:
1X SE-Buffer G, BSA (100 µg/ml). Incubate at 50° C.

1X SE-Buffer G (pH 7.6 @ 25° C):
10 mM Tris-HCl 50 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 T7 DNA in 1 hour at 50° 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 10-fold overdigestion with Sfi I, >70% of the DNA fragments can be ligated and recut. In the presence of 10% PEG ligation is better.

16-Hour Incubation: A 50 µl reaction containing 1 µg of DNA and 20 Units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour.
Do not use BSA for long incubation.

Oligonucleotide Assay: No detectable degradation of a single-stranded and double-stranded oligonucleotide was observed after incubation with 10 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 G, BSA (10 mg/ml).

Blocked by overlapping Dcm methylation ($G^mCWGG$): GGCCWGGNNGGCC.

Not blocked by overlapping Dcm methylation ($G^mCWGG$): GGCCNNNNNGGCCWGG.