

## Product Description

Bsa I is a Type IIS restriction endonuclease derived from a mutant protein encoded by the Bsa I gene from recombinant *Escherichia coli* (*Bacillus stearothermophilus*). Its recognition and cleavage sequences are shown below:

5'...GGTCTC(N) ↓ ...3'

3'...CCAGAG(NNNNN) ↑ ...5'

## Components

| Components               | BR1G110-01<br>1,000 U | BR1G110-02<br>2,000 U | BR1G110-03<br>5,000 U |
|--------------------------|-----------------------|-----------------------|-----------------------|
| Bsa I (20 U/μL)          | 1×0.05 mL             | 1×0.1 mL              | 1×0.25 mL             |
| 10×Bsa I Reaction Buffer | 1×1 mL                | 1×1 mL                | 2×1 mL                |

## Unit Definition

One unit is defined as the amount of enzyme required to completely and specifically cleave 1 μg of internal control plasmid template in 1 hour at 37°C.

## Storage

Store at -20±5°C.

## Notes

1. For research use only. Not for use in clinical diagnosis.
2. Mix thoroughly before use. Avoid repeated freeze-thaw cycles.
3. The volume of restriction endonuclease added should not exceed one-tenth of the total reaction volume.
4. Scope of application: Linearization of in vitro transcription templates. Digestion of plasmids to prepare linearized DNA fragments containing poly(A/T/G/C) ends.
5. Digestion for longer than 3 h is not recommended, as prolonged incubation may lead to star activity.

## Prepare Reaction Mix

Prepare the reaction mix on ice as follows:

| Components         | Volume per Reaction | Concentration in Master Mix |
|--------------------|---------------------|-----------------------------|
| 10× Cut-Buffer     | 5 μL                | 1×                          |
| Bsa I (20 U/μL)    | 1 μL                | 0.4 U/μL                    |
| DNA Substrate      | 1 μg                | —                           |
| ddH <sub>2</sub> O | To 50 μL            | —                           |

## Reaction Programme

Incubate at 37°C for 1 h. Heat inactivation: incubate at 80°C for 20 min.