

## Product Description

This product, Bsa I GMP-grade, is a type IIS restriction endonuclease derived from an E. coli strain carrying the Bsa I gene cloned from *Bacillus stearothermophilus*. Its recognition and cleavage sequence is as follows:

5' ...GGTCTC(N) ↓ ...3'

3' ...CGAGAG(NNNN) ↑ ...5'

## Components

Components	GMP-BP-E10-2K	GMP-BP-E10-20K	GMP-BP-E10-200K
	2 KU	20 KU	200 KU
Bsa I GMP-grade	0.1 mL	1 mL	10 mL
10×Bsa I Reaction Buffer	1 mL	5 mL	50 mL

## Storage

Store at -20±5°C

## Product Information

Product Name	Bsa I GMP-grade
Activity	20 U/μL
Unit Definition	One unit(U) is defined as the enzyme amount required to digest 1 μg of internal control template within 1 hour at 37°C.
Storage Buffer	10 mM Tris-HCl,200 mM NaCl,0.1 mM EDTA,1 mM DTT,200 μg/mL HSA,50%(v/v)Glycerol,pH7.4 at 25°C.

## Quality control

1. Solution appearance: clear and transparent, free of visible particulate matter.
2. Activity>20 U/μL.
3. Protein purity≥95%.
4. Free of exogenous DNase, RNase, exonuclease, and endonuclease activity.
5. Residual host-cell DNA: ≤100 pg/mg.
6. Residual host-cell protein: <50 ppm.
7. Heavy metals<10 ppm.
8. HBV, HCV, HIV, and mycoplasma: not detected.
9. Bacterial endotoxin: <5 EU/mL.
10. pH 7.5-8.5.

## Recommended Digestion System:

Components	Volume
10×Bsa I Reaction Buffer	5 μL
Bsa I GMP-grade	1 μL
DNA Template	1 μg
ddH <sub>2</sub> O	To 50 μL

Reaction Programme:37°C for 1h.

Inactivation:80°C for 25min .

## Application

1. Digesting plasmids to prepare linearized DNA fragments with poly(A/T/G/C) ends.
2. Digesting DNA to obtain specific sticky ends.

## Notes

1. Final restriction digest content is no more than 1/10 of total reaction volume.
2. Prepare reaction mix on ice.
3. Please thaw and mix thoroughly before use. Avoid repeated freezing and thawing.