

BstP I

(BstE II, EcoO65 I)

G | G T N A C C
C C A N T G | G

Code No. 1025A **Size:** **2,000 U**
Conc.: **10 U/μl**

Supplied Reagents:
10X H Buffer **1 ml**
10X Loading Buffer **1 ml**

Storage Buffer: 10 mM Tris-HCl, pH 7.5
100 mM KCl
0.1 mM EDTA
1 mM DTT
0.15% Triton X-100
0.01% BSA
50% Glycerol

Storage: -20°C

Source: *Bacillus stearothermophilus*

General Reaction Mixture:
BstP I 1 μl
10X H Buffer 2 μl
Substrate DNA ≤ 1 μg
Sterile purified water up to 20 μl

Reaction Temperature: 60°C

Unit definition:

One unit is defined as the amount of this enzyme required to digest completely 1 μg of λ DNA in 50 μl of the reaction mixture at 60°C for 1 hr.

Quality Control Data:

Please see the Certificate of Analysis (CoA) for each lot. You can download the CoA on Takara Bio website.

Relative Activity in Takara Bio's Universal Buffers:

| Universal Buffer | L | M | H | K | T (+BSA) |
|-----------------------|-------|------|------------|-------|----------|
| Relative Activity (%) | (<20) | (60) | 100 | (100) | (100) |

(): Weak star activity is detected.

Ionic Effect on Activity in Basal Buffer:

| | | | | | | | |
|-----------|----|----|----|----|------------|-----|-----|
| Salt (mM) | 0 | 20 | 50 | 80 | 100 | 150 | 200 |
| NaCl (%) | 20 | 30 | 60 | 70 | 100 | 50 | 20 |
| KCl (%) | 20 | 20 | 60 | 70 | 100 | 50 | 10 |

Composition of Basal Buffer:

50 mM Tris-HCl, pH 8.0
7 mM MgCl₂
100 mM NaCl
7 mM 2-mercaptoethanol

Number of Cleavage Sites in DNA:

| | | SV | φX | pBR | pUC | pUC | M13 | Col |
|----|-----|----|-----|-----|-----|-----|------|-----|
| λ | Ad2 | 40 | 174 | 322 | 19 | 119 | mp18 | E1 |
| 13 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

Effect of DNA Methylation:

Enzyme activity is not affected by CG methylase.

Star activity:

Unrelated site may often be cut in the presence of high concentration of glycerol, and at low ionic strength.

Compositions of Universal Buffer (Stored at -20°C):

| | | | |
|----------|--------------------------|------------|--------------------------|
| 1. 10X L | 100 mM Tris-HCl, pH7.5 | 4. 10X K | 200 mM Tris-HCl, pH8.5 |
| | 100 mM MgCl ₂ | | 100 mM MgCl ₂ |
| | 10 mM Dithiothreitol | | 10 mM Dithiothreitol |
| 2. 10X M | 100 mM Tris-HCl, pH7.5 | | 1,000 mM KCl |
| | 100 mM MgCl ₂ | 5. 10X T | 330 mM Tris-Ac, pH7.9 |
| | 10 mM Dithiothreitol | (BSA-free) | 100 mM Mg-Ac |
| | 500 mM NaCl | | 5 mM Dithiothreitol |
| 3. 10X H | 500 mM Tris-HCl, pH7.5 | | 660 mM K-Ac |
| | 100 mM MgCl ₂ | | 6. 0.1% BSA |
| | 10 mM Dithiothreitol | | 7. 0.1% Triton X-100 |
| | 1,000 mM NaCl | | |

Compositions of 10X Loading Buffer (Stored at RT after used):

0.9% SDS
50% Glycerol
0.05% Bromophenol Blue

Add >1/10 volume of 10X Loading Buffer to stop enzyme reaction and apply on agarose gel electrophoresis. SDS may precipitate during the storage at room temperature. In case precipitates generated, dissolve in warm bath before use.

Note

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