

BsmB I, ADCF

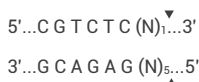
1 Contents

| Component | HY-KE7052-500U | HY-KE7052-2000U |
|----------------------------------|----------------|--------------------|
| BsmB I, ADCF (10 U/ μ L) | 500U | 2000U |
| 10 \times BsmB I Buffer (ADCF) | 1.25 mL | 1.25 mL \times 4 |

2 Introduction

BsmB I, ADCF is a restriction enzyme for rapid DNA digestion, including plasmid, genomic DNA as well as PCR products. This product is animal derived component free, and has good redundancy of enzyme activity, which can easily cope with excessive substrate or difficult template enzyme cutting. Isoschizomers: Esp3 I, BstGZ53 I, Esp16 I, Esp23 I.

Cleavage site



3 General Protocol

1. Digestion of DNA

1.1 Combine the following reaction components on ice in the order indicated:

| | |
|----------------------------------|---------------|
| ddH ₂ O | to 50 μ L |
| 10 \times BsmB I Buffer (ADCF) | 5 μ L |
| DNA | 1 μ g |
| BsmB I, ADCF | 5-10 U |
| Total | 50 μ L |

Note: DNA should be free of contaminants such as phenol, chloroform, alcohol, EDTA, detergents or excessive salts.

1.2 Mix gently and spin down.

1.3 In general, we recommend 5–10 U of enzyme per μ g plasmid DNA or PCR product, and 10–20 U for genomic DNA in a 15-60 min digest at 37°C.

1.4 (Optional) Inactivate the enzyme by heating for 20 min at 80°C. Or remove enzyme by using a spin column or phenol/chloroform extraction.

2. Scaling down DNA Digestion Reaction

| | | |
|----------------------------------|---------------|---------------|
| DNA | 0.1 μ g | 0.5 μ g |
| BsmB I, ADCF | 1 U | 5 U |
| 10 \times BsmB I Buffer (ADCF) | 1 μ L | 2.5 μ L |
| ddH ₂ O | to 10 μ L | to 25 μ L |
| Total | 10 μ L | 25 μ L |

Note: 10 μ L reaction mix should not be incubated for longer than 1 hour to avoid evaporation.

4 Unit Definition

One unit is defined as the amount of BsmB I, ADCF required to digest 1 µg of λDNA in 1 hour at 37°C in a total reaction volume of 50 µL.

5 Number of Recognition Sites in DNA

| λDNA | ΦX174 | pBR322 | pUC57 | pUC18/19 | SV40 | M13mp18/19 | Adeno2 |
|------|-------|--------|-------|----------|------|------------|--------|
| 14 | 0 | 1 | 2 | 2 | 0 | 1 | 21 |

6 Methylation Effects on Digestion

| Dam | Dcm | CpG | EcoKI | EcoBI |
|-----------|-----------|---------|-----------|-----------|
| no effect | no effect | blocked | no effect | no effect |

7 Storage

-20°C, 2 years.

8 Precautions

1. Enzyme volume should not exceed 10% of the total reaction volume to prevent star activity due to excess glycerol.
2. Additives in the restriction enzyme storage buffer (e.g., glycerol, salt) as well as contaminants found in the substrate solution (e.g., salt, EDTA, or alcohol) can be problematic in smaller reaction volumes.
3. This product is for R&D use only, not for drug, household, or other uses.
4. For your safety and health, please wear a lab coat and disposable gloves to operate.