

# **mRNex® BspQI GMP-grade (10 U/μL)**

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**Cat. no. LD102002**

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## Product Information

|                             |                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------|
| <b>Product</b>              | mRNex® BspQI GMP-grade (10 U/μL)                                                                  |
| <b>Catalog No.</b>          | LD102002                                                                                          |
| <b>Size</b>                 | 50 μL/250 μL/1 mL/10 mL                                                                           |
| <b>Recognition Sequence</b> | 5'-GCTCTTCN1/N4-3'                                                                                |
| <b>Storage Conditions</b>   | 20 mM Tris-HCl, 0.5 M KCl, 0.1 mM EDTA, 1mM DTT, 0.1% Triton X-100, 50% Glycerol                  |
| <b>Shipping and Storage</b> | The product is shipped with dry ice and can be stored at -15°C ~ -25°C for one year.              |
| <b>Source</b>               | Recombinant E. coli with BspQI gene                                                               |
| <b>Reaction Temperature</b> | 50°C                                                                                              |
| <b>Unit Definition</b>      | 1 unit: The amount of enzyme required to digest 1 μg of λDNA within 1 h at 50°C in a 50 μL system |

## 2. Product Description

This product is a type II restriction endonuclease derived from the recombinant protein encoded by the BspQI gene in Bacillus sphaericus expressed by E.coli. Its recognition sequence is 5'-GCTCTTCN1/N4-3'. Use to digest plasmids to prepare poly (A/T/G/C) -terminated linearized DNA fragments to obtain specific cohesive ends.

This product is produced in accordance with GMP process requirements and provided in a liquid form.

## 3. Contents

| Name                      | Enzyme Unit/Size |        |       |       |
|---------------------------|------------------|--------|-------|-------|
|                           | 500 U            | 2500 U | 10 KU | 100KU |
| BspQI GMP-grade (10 U/μL) | 50 μL            | 250 μL | 1 mL  | 10 mL |

## 4. Applications

- 1.Digest the plasmid to prepare a linearized DNA fragment at the end of Poly (A/T/C/G);
- 2.Digestion of DNA to obtain specific sticky ends.

## 5. Experimental methods

## 50 µL reaction system

This step is suitable for linearization of 1 µg DNA ( $\geq 100$  nt) and can be scaled up according to experimental needs.

5.1. Add the following components in sequence:

| Components                    | Volume      |
|-------------------------------|-------------|
| Plasmid DNA                   | 1-2 µg      |
| 10 × Digestion Buffer 3       | 5.0 µL      |
| BspQI (10 U/µL)               | 1.0 µL      |
| RNase-free ddH <sub>2</sub> O | Up to 50 µL |

Note: 10× Digestion Buffer 3: 500mM Tris-HCl, 1M NaCl, 100mM MgCl<sub>2</sub>, 1mg/mL OsrHSA, pH7.9 at 25°C

5.2. Incubate at 50°C for 1 h;

5.3. DNA linearization is complete, and subsequent experiments can be performed.

## 6. Notes

6.1. The volume of restriction endonuclease added should not exceed 1/10 of the reaction volume;

6.2. For your safety and health, please wear personal protective equipment (PPE), such as laboratory coats and disposable gloves, when operating with this product.