

PRODUCT INFORMATION

BsuRI (HaeIII)

#ER0151 3000 U

Lot: ____ Expiry Date: __

5'...G G↓C C...3'

3'...C C↑G G...5'

Concentration: 10 U/μL
Source: *Bacillus subtilis* R
Supplied with: 2x1 mL of 10X Buffer R
 1 mL of 10X Buffer Tango

Store at -20°C



In total 4 vials.

BSA included

www.thermoscientific.com/onebio

RECOMMENDATIONS

1X Buffer R (for 100% BsuRI digestion)

10 mM Tris-HCl (pH 8.5), 10 mM MgCl₂, 100 mM KCl,
0.1 mg/mL BSA.

Incubate at 37°C.

Unit Definition

One unit is defined as the amount of BsuRI required to digest 1 μg lambda DNA in 1 hour at 37°C in 50 μL of recommended reaction buffer.

Dilution

Dilute with Dilution Buffer (#B19): 10 mM Tris-HCl (pH 7.4 at 25°C), 100 mM KCl, 1 mM EDTA, 1 mM DTT, 0.2 mg/mL BSA and 50% glycerol.

Double Digests

Thermo Scientific Tango Buffer is provided to simplify buffer selection for double digests. 98% of Thermo Scientific restriction enzymes are active in a 1X or 2X concentration of Tango™ Buffer. Please refer to www.thermoscientific.com/doubledigest to choose the best buffer for your experiments.

1X Tango Buffer: 33 mM Tris-acetate (pH 7.9 at 37°C), 10 mM magnesium acetate, 66 mM potassium acetate, 0.1 mg/mL BSA.

Rev.10

Storage Buffer

BsuRI is supplied in: 10 mM Tris-HCl (pH 7.5 at 25°C), 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.2 mg/mL BSA and 50% glycerol.

Recommended Protocol for Digestion

- Add:

| | |
|------------------------------|---------------|
| nuclease-free water | 16 μ L |
| 10X Buffer R | 2 μ L |
| DNA (0.5-1 μ g/ μ L) | 1 μ L |
| BsuRI | 0.5-2 μ L |
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours.

The digestion reaction may be scaled either up or down.

Recommended Protocol for Digestion of PCR Products Directly after Amplification

- Add:

| | |
|----------------------|--------------------------------------|
| PCR reaction mixture | 10 μ L (~0.1-0.5 μ g of DNA) |
| nuclease-free water | 18 μ L |
| 10X Buffer R | 2 μ L |
| BsuRI | 1-2 μ L |
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours.

Thermal Inactivation

BsuRI is inactivated by incubation at 80°C for 20 min.

ENZYME PROPERTIES

Enzyme Activity in Thermo Scientific REase Buffers, %

| B | G | O | R | Tango | 2X Tango |
|-------|-------|--------|-----|--------|----------|
| 20-50 | 20-50 | 50-100 | 100 | 50-100 | 100 |

Methylation Effects on Digestion

Dam: never overlaps – no effect.
Dcm: may overlap – no effect.
CpG: may overlap – no effect.
EcoKI: never overlaps – no effect.
EcoBI: never overlaps – no effect.

Stability during Prolonged Incubation

A minimum of 0.1 units of the enzyme is required for complete digestion of 1 μ g of lambda DNA in 16 hours at 37°C.

Number of Recognition Sites in DNA

| λ | Φ X174 | pBR322 | pUC57 | pUC18/19 | pTZ19R/U | M13mp18/19 |
|-----------|-------------|--------|-------|----------|----------|------------|
| 149 | 11 | 22 | 13 | 11 | 12 | 15 |

For **CERTIFICATE OF ANALYSIS** see back page

CERTIFICATE OF ANALYSIS

Overdigestion Assay

No detectable change in the specific fragmentation pattern is observed after a 160-fold overdigestion with BsuRI (10 U/ μ g lambda DNA \times 16 hours).

Ligation and Recleavage (L/R) Assay

The ligation and recleavage assay was replaced with LO test after validating experiments showed LO test ability to trace nuclease and phosphatase activities with sensitivity that is higher than L/R by a factor of 100.

Labeled Oligonucleotide (LO) Assay

No detectable degradation of single-stranded or double-stranded labeled oligonucleotides occurred during incubation with 10 units of BsuRI for 4 hours.

Quality authorized by:



Jurgita Zilinskiene

PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively *for research purposes and in vitro use only*. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Please refer to www.thermoscientific.com/onebio for Material Safety Data Sheet of the product.

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