

PRODUCT INFORMATION

BfmI (SfcI)

#ER1161 200 U

Lot: ____ **Expiry Date:** __

5'...C↓T R Y A G...3'

3'...G A Y R T↑C...5'

Concentration: 10 U/μL

Source: *Bacillus firmus* S8-336

Supplied with: 1 mL of 10X Buffer Tango

Store at -20°C



BSA included

www.thermoscientific.com/onebio

RECOMMENDATIONS

1X Thermo Scientific Tango Buffer (for 100% BfmI digestion)

33 mM Tris-acetate (pH 7.9), 10 mM magnesium acetate, 66 mM potassium acetate, 0.1 mg/mL BSA.

Incubation temperature

37°C.

Unit Definition

One unit is defined as the amount of BfmI required to digest 1 μg of 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

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

Storage Buffer

BfmI is supplied in: 10 mM Tris-HCl (pH 7.4 at 25°C), 100 mM KCl, 1 mM DTT, 1 mM EDTA, 0.2 mg/mL BSA and 50% glycerol.

Recommended Protocol for Digestion

- Add:

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

* See Overdigestion Assay.

Thermal Inactivation

Bfml is inactivated by incubation at 65°C for 20 min.

ENZYME PROPERTIES

Enzyme Activity in Thermo Scientific REase Buffers, %

| B | G | O | R | Tango | 2X Tango |
|------|--------|------|------|-------|----------|
| 0-20 | 50-100 | 0-20 | 0-20 | 100 | 20-50 |

Methylation Effects on Digestion

Dam: never overlaps – no effect.

Dcm: never overlaps – no effect.

CpG: never overlaps – no effect.

EcoKI: never overlaps – no effect.

EcoBI: never overlaps – no effect.

Stability during Prolonged Incubation

A minimum of 1.0 unit of the enzyme is required for complete digestion of 1 μ g of lambda DNA in 16 hours at 37°C.

Compatible Ends

C↓TGCAG - Alw44I

Number of Recognition Sites in DNA

| λ | Φ X174 | pBR322 | pUC57 | pUC18/19 | pTZ19R/U | M13mp18/19 |
|-----------|-------------|--------|-------|----------|----------|------------|
| 38 | 6 | 4 | 4 | 4 | 6 | 7 |

For **CERTIFICATE OF ANALYSIS** see back page

CERTIFICATE OF ANALYSIS

Overdigestion Assay

No detectable change in the specific fragmentation pattern is observed after a 80-fold overdigestion with Bfml (5 U/ μ g lambda DNA x 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 Bfml 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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