

CERTIFICATE OF ANALYSIS

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: 2 x 1 ml of 10X Buffer R
 1 ml of 10X Buffer Tango™

Store at -20°C



In total 4 vials.

BSA included: Lot# BSA62-313P

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, 0.2mg/ml BSA and 50% glycerol.

Double Digests

Tango™ Buffer is provided to simplify buffer selection for double digests. 98% of Fermentas restriction enzymes are active in a 1X or 2X concentration of Tango™ Buffer. Please refer to the Fermentas Catalog or go to www.fermentas.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.

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 µl
10X Buffer R	2 µl
DNA (0.5-1 µg/µl)	1 µl
BsuRI	0.5-2 µl
- 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 µl (~0.1-0.5 µg of DNA)
nuclease-free water	18 µl
10X Buffer R	2 µl
BsuRI	1-2 µl
- 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 Fermentas 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 µg of lambda DNA in 16 hours at 37°C.

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
149	11	22	13	11	12	15

For **QUALITY CONTROL ASSAY DATA** see back page

QUALITY CONTROL ASSAY DATA

Overdigestion Assay


No detectable change in the specific fragmentation pattern is observed after a 320-fold overdigestion with BsuRI (20 u/μg lambda DNA x 16 hours).

Ligation/Recutting Assay

After a 50-fold overdigestion (3 u/μg DNA x 17 hours) with BsuRI, more than 95% of the digested DNA fragments can be ligated at a 5'-termini concentration of 1.5 μM. More than 95% of these sites can be recut.

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:  Laima Samaliene

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.fermentas.com for Material Safety Data Sheet of the product.