Fermentas
LIFE SCIENCES

For customer convenience
REase buffer names were simplified.
No changes in buffer composition

CERTIFICATE OF ANALYSIS

Bsp143II (HaeII)

#ER0791 1000u

Lot: **Quality guaranteed:**

5'...**Pu G C G C↓Py**...3'
3'...**Py↑C G C G Pu**...5'

Concentration: 10 units/µl
Source: *E.coli* that carries the cloned *bsp143IIR* gene from *Bacillus species* RFL143
Supplied with: 1ml of 10X Buffer Tango™

Store at –20°C

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BSA included:
Lot# BSA62-313P

In total 2 vials.

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ISO 9001 ISO 14001
www.fermentas.com

RECOMMENDED CONDITIONS

Buffer Tango™

33mM Tris-acetate (pH7.9), 10mM magnesium acetate, 66mM potassium acetate, 0.1mg/ml BSA.

Incubate at 37°C.

Unit Definition

One unit is defined as the amount of enzyme required to digest 1µg of lambda DNA in 1 hour at 37°C in 50µl of assay buffer.

Dilution

For short-term storage (3-4 weeks) – dilute with *Diluent Buffer* (#B19): 10mM Tris-HCl (pH7.4 at 25°C), 100mM KCl, 1mM EDTA, 1mM DTT, 0.2mg/ml BSA and 50% glycerol.
For longer periods – the *Storage Buffer* should be used.

Double Digests

Tango™ Buffer is provided to simplify buffer selection for double digests. 98% of Fermentas Restriction Endonucleases (REases) work well in a 1X or 2X concentration of the Tango™ Buffer. Please refer to Fermentas Catalog or www.fermentas.com/doubledigest to choose the best buffer for the two REases in your digest.

Storage Buffer

10mM Tris-HCl (pH7.5 at 25°C), 250mM KCl, 1mM DTT, 0.1mM EDTA, 0.15% Triton X-100, 0.2mg/ml BSA and 50% glycerol.

QUALITY CONTROL ASSAY DATA

Overdigestion Assay

No detectable change in the specific fragmentation pattern is observed after 5-fold overdigestion (5u/µg lambda DNA x 1 hour) with Bsp143II (see *Star Activity*).

Ligation/Recutting Assay

After 5-fold overdigestion (5u/µg DNA x 1 hour) with Bsp143II, more than 95% of the DNA fragments can be ligated at a 5'-termini concentration of 0.5µM. More than 95% of these can be recut.

Labeled Oligonucleotide (LO) Assay

No detectable degradation of a single-stranded and double-stranded labeled oligonucleotide was observed after incubation with 10 units of restriction endonuclease 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.fermentas.com for Material Safety Data Sheet of the product.

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

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

* Star activity appears at 10-fold overdigestion (10units x 1hour).

Star Activity

An excess of enzyme (7.5 units/µg DNA x 1 hour) may result in star activity.

Methylation Effects

Dam: never overlaps – no effect.
Dcm: may overlap – no effect.
CpG: completely overlaps – blocked.
EcoKI: never overlaps – no effect.
EcoBI: may overlap – effect not determined.

Stability during Prolonged Incubation

A minimum of 0.5 units of enzyme is required for complete digestion of 1µg of lambda DNA in 16 hours at 37°C.

Thermal Inactivation

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

Digestion of Agarose-embedded DNA

A minimum of 5 units of enzyme is required for complete digestion of 1µg of agarose-embedded lambda DNA in 16 hours.

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
48	8	11	3	3	4	6


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