Fermentas
LIFE SCIENCES

CERTIFICATE OF ANALYSIS

HpyF3I (DdeI)

#ER1881 500u

Lot: **Expiry Date:**

5'...C↓T N A G...3'
3'...G A N T↑C...5'

Concentration: 10units/µl
Source: *E.coli* that carries the cloned *hpyF3IR* gene from *Helicobacter pylori* RFL3
Supplied with: 1ml of 10X Buffer Tango™

Store at –20°C

In total 2 vials. BSA included: Lot# BSA62-313P

ISO 9001 ISO 14001
www.fermentas.com

RECOMMENDATIONS

1X Buffer Tango™ (for 100% HpyF3I digestion)
33mM Tris-acetate (pH 7.9), 10mM magnesium acetate, 66mM potassium acetate, 0.1mg/ml BSA.

Incubation temperature
37°C.

Unit Definition
One unit is defined as the amount of HpyF3I required to digest 1µg of lambda DNA in 1 hour at 37°C in 50µl of recommended reaction buffer.

Dilution
Dilute with Dilution Buffer (#B19): 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM EDTA, 1mM 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.

Storage Buffer
HpyF3I is supplied in: 10mM Tris-HCl (pH 7.4 at 25°C), 100mM KCl, 1mM EDTA, 1mM DTT, 0.2mg/ml BSA and 50% glycerol.

Recommended Protocol for Digestion

- Add:

nuclease-free water	16µl
10X Buffer Tango™	2µl
DNA (0.5-1µg/µl)	1µl
HpyF3I	0.5-2µl

- 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	10µl	(~0.1-0.5µg of DNA)
nuclease-free water	18µl	
10X Buffer Tango™	2µl	
HpyF3I	1-2µl	

- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours.

Thermal Inactivation

HpyF3I is inactivated by incubation at 65°C for 20min.

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

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

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: may overlap –effect not determined.

Stability during Prolonged Incubation

A minimum of 0.2 units of the enzyme is required for complete digestion of 1µg of lambda DNA in 16 hours at 37°C.

Compatible Ends

BbvCI, Bpu10I, Bpu1102I, Eco81I.

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
104	14	8	6	6	4	29

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 160-fold overdigestion with HpyF3I (10u/µg lambda DNA x 16 hours).

Ligation/Recutting Assay

After a 50-fold overdigestion (3u/µg DNA x 17 hours) with HpyF3I more than 95% of the digested DNA fragments can be ligated at a 5'-termini concentration of 1µM. 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 HpyF3I 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.

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