

CERTIFICATE OF ANALYSIS

XapI (ApoI)

#ER1381 500u

Lot: Expiry Date:

5'...Pu↓A A T T Py...3'

3'...Py T T A A↑Pu...5'

Concentration: 10 units/μl
Source: *Xanthomonas ampelina* Slo 51-021
Supplied with: 1ml of 10X Buffer Tango™

Store at -20°C



In total 2 vials.

BSA included: Lot# BSA62-313P

RECOMMENDATIONS

1X Buffer Tango™ (for 100% XapI 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 XapI 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

XapI 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
XapI	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
XapI	1-2µl*
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours*.

* See Star Activity.

Thermal Inactivation

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

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

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

Star Activity

An excess of XapI (20u/µg DNA x 1 hour) may result in star activity.

Methylation Effects on Digestion

Dam: never overlaps – no effect.

Dcm: never overlaps – no effect.

CpG: may overlap – no effect.

EcoKI: never overlaps – no effect.

EcoBI: may overlap – effect not determined.

Stability during Prolonged Incubation

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

Digestion of Agarose-embedded DNA

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

Compatible Ends

EcoRI, MnlI, TspI

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
58	7	1	1	1	3	11

QUALITY CONTROL ASSAY DATA

Overdigestion Assay

No detectable change in the specific fragmentation pattern is observed after a 15-fold overdigestion with XapI (15u/μg lambda DNA x 1 hour) (see Star Activity).

Ligation/Recutting Assay

After a 10-fold overdigestion (5u/μg DNA x 2 hours) with XapI more than 95% of the digested DNA fragments can be ligated at a 5'-termini concentration of 0.2μM. 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 XapI for 4 hours.

Blue/White Cloning Assay

pUC57 was incubated with 10 units of XapI for 1 hour. After religation and transformation, the background level of white colonies was 0.2%.

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.