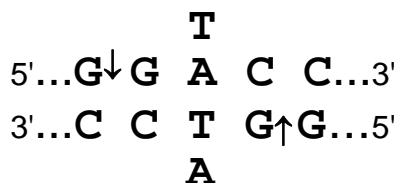


CERTIFICATE OF ANALYSIS

Eco47I (AvaII)

#ER0311 800 u

Lot: Expiry Date:



Concentration: 10 u/μl
 Source: *E.coli* that carries the cloned *eco47IR* gene from *E.coli* RFL47
 Supplied with: 1 ml of 10X Buffer R
 1 ml of 10X Buffer Tango™

Store at -20°C



In total 3 vials.

BSA included: Lot# BSA62-313P

RECOMMENDATIONS

1X Buffer R (for 100% Eco47I digestion)

10 mM Tris-HCl (pH 8.5), 10 mM MgCl₂, 100 mM KCl, 0.1 mg/ml BSA.

Incubation temperature

37°C.

Unit Definition

One unit is defined as the amount of Eco47I 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 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

Eco47I 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 R | 2 μ l |
| DNA (0.5-1 μ g/ μ l) | 1 μ l |
| Eco47I | 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 R | 2 μ l |
| Eco47I | 1-2 μ l |
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours.

Thermal Inactivation

Eco47I is inactivated by incubation at 65°C for 20 min.

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

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

Methylation Effects on Digestion

Dam: never overlaps – no effect.
Dcm: may overlap – blocked.
CpG: may overlap – blocked.
EcoKI: never overlaps – no effect.
EcoBI: never overlaps – no effect.

Stability during Prolonged Incubation

A minimum of 0.3 units of the enzyme is required for complete digestion of 1 μ g of lambda DNA in 16 hours at 37°C.

Compatible Ends

Cfr13I, CpoI, Psp5II, SanDI

Number of Recognition Sites in DNA

| λ | Φ X174 | pBR322 | pUC57 | pUC18/19 | pTZ19R/U | M13mp18/19 |
|-----------|-------------|--------|-------|----------|----------|------------|
| 35 | 1 | 8 | 2 | 2 | 2 | 1 |

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 Eco47I (10 u/μg lambda DNA x 16 hours).

Ligation/Recutting Assay

After a 50-fold overdigestion (3 u/μg DNA x 17 hours) with Eco47I, more than 95% of the digested DNA fragments can be ligated at a 5'-termini concentration of 0.5 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 Eco47I 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.