

CERTIFICATE OF ANALYSIS

Eam1105I (AhdI)

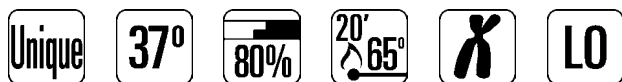
#ER0242 5000 u

Lot: Expiry Date:

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

Concentration: 10 u/μl
Source: *Enterobacter amnigenus* RFL1105
Supplied with: 2 x 1 ml of 10X Buffer Eam1105I
 1 ml of 10X Buffer Tango™

Store at -20°C



In total 4 vials.

BSA included: Lot# BSA62-313P

RECOMMENDATIONS

1X Buffer Eam1105I (for 100% Eam1105I digestion)
10 mM Tris-HCl (pH 7.5), 5 mM MgCl₂, 100 mM NaCl,
0.1 mg/ml BSA.

Incubation temperature

37°C.

Unit Definition

One unit is defined as the amount of Eam1105I 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), 10 mM magnesium acetate, 66 mM potassium acetate, 0.1 mg/ml BSA.

Storage Buffer

Eam1105I 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 µl
10X Buffer Eam1105I	2 µl
DNA (0.5-1 µg/µl)	1 µl
Eam1105I	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 Eam1105I	2 µl
Eam1105I	1-2 µl*
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours*.

* See Note.

Thermal Inactivation

Eam1105I is inactivated by incubation at 65°C for 20 min.

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

Eam1105I	B	G	O	R	Tango™	2X Tango™
100	20-50	50-100	0-20	0-20	50-100	20-50

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: 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.

Digestion of Agarose-embedded DNA

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

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
9	1	1	1	1	1	0

Note

A excess of enzyme (10 u/µg DNA x 16 hours) may result in star activity.

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 an 80-fold overdigestion with Eam1105I (5 u/μg lambda DNA x 16 hours).

Ligation/Recutting Assay

After a 16-fold overdigestion (1u/μg pUC19 DNA x 16 hours) with Eam1105I, more than 80% of the digested pUC19 DNA fragments can be ligated in a reaction mixture containing 20-40 u of T4 DNA ligase/1 μg of fragments and 10% PEG at a 5'-termini concentration of 1.8 μM. More than 90% 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 Eam1105I 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.