



## CERTIFICATE OF ANALYSIS

# LguI (SapI)

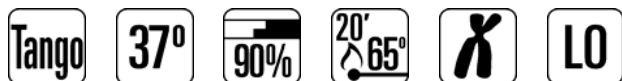
#ER1931 100 u

Lot: Expiry Date:

5'...**G C T C T T C (N)**<sub>1</sub>↓...3'  
3'...**C G A G A A G (N)**<sub>4</sub>↑...5'

Concentration: 5 u/μl  
Source: *Lysobacter gummosus* RFL1  
Supplied with: 1 ml of 10X Buffer Tango™

Store at -20°C



In total 2 vials.

BSA included: Lot# BSA62-313P

ISO 9001 | ISO 14001  
[www.fermentas.com](http://www.fermentas.com)

## RECOMMENDATIONS

**1X Buffer Tango™** (for 100% LguI digestion)

33 mM Tris-acetate (pH 7.9 at 37°C),  
10 mM magnesium acetate, 66 mM potassium acetate,  
0.1 mg/ml BSA.

**Incubation Temperature**

37°C.

**Unit Definition**

One unit is defined as the amount of LguI 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](http://www.fermentas.com/doubledigest) to choose the best buffer for your experiments.

**Storage Buffer**

LguI 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 $\mu$ l
10X Buffer Tango™	2 $\mu$ l
DNA (0.5-1 $\mu$ g/ $\mu$ l)	1 $\mu$ l
Lgul	0.5-2 $\mu$ 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 $\mu$ l (~0.1-0.5 $\mu$ g of DNA)
nuclease-free water	18 $\mu$ l
10X Buffer Tango™	2 $\mu$ l
Lgul	1-2 $\mu$ l*
- Mix gently and spin down for a few seconds.
- Incubate at 37°C for 1-16 hours\*.

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\* See Note.

## Thermal Inactivation

Lgul 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™
20-50	50-100	20-50	20-50	100	20-50

### Methylation Effects

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 0.5 units of the enzyme is required for complete digestion of 1  $\mu$ g 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  $\mu$ g of agarose-embedded lambda DNA in 16 hours.

### Number of Recognition Sites in DNA

$\lambda$	$\Phi$ X174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
10	1	1	1	1	1	0

### Note

A large excess of Lgul (10 u/ $\mu$ g DNA x 16 hours) may result in star activity.

# QUALITY CONTROL ASSAY DATA

## Overdigestion Assay


No detectable change in the specific fragmentation pattern is observed after a 120-fold overdigestion (7.5 u/μg lambda DNA x 16 hours) with Lgul.

## Ligation/Recutting Assay

After a 50-fold overdigestion (3 u/μg DNA x 17 hours) with Lgul, more than 90% of the digested DNA fragments can be ligated at a 5'-termini concentration of 0.07 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 Lgul for 4 hours.

Quality authorized by:  Laima Samaliene

### **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](http://www.fermentas.com) for Material Safety Data Sheet of the product.