Fermentas
LIFE SCIENCES

CERTIFICATE OF ANALYSIS

SdaI (SbfI)

#ER1192 1500 u

Lot: **Expiry Date:**

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

Concentration: 10 u/µl
Source: *E.coli* that carries the cloned *sdalR* gene from *Streptomyces diastaticus* Ng 7-324
Supplied with: 1 ml of 10X Buffer SdaI
1 ml of 10X Buffer Tango™

Store at -20°C

In total 3 vials. BSA included: Lot# BSA62-313P

ISO 9001 ISO 14001
www.fermentas.com

RECOMMENDATIONS

1X Buffer SdaI (for 100% SdaI digestion)
37 mM Tris-acetate (pH 7.0), 15 mM magnesium acetate, 150 mM potassium acetate, 0.1 mg/ml BSA.

Incubation temperature
37°C.

Unit Definition
One unit is defined as the amount of SdaI 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

SdaI is supplied in: 10 mM Tris-HCl (pH 7.5 at 25°C), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 0.2 mg/ml BSA and 50% glycerol.

Recommended Protocol for Digestion

- Add:

nuclease-free water	16 µl
10X Buffer SdaI	2 µl
DNA (0.5-1 µg/µl)	1 µl
SdaI	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 SdaI	2 µl
SdaI	1-2 µl*

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

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* *See* Star Activity.

Thermal Inactivation

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

ENZYME PROPERTIES

Enzyme Activity in Fermentas REase Buffers, %

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

NR – buffer is not recommended, because of high star activity.

Star Activity

An excess of SdaI (7.5 u/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: never overlaps – no effect.
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 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.

Compatible Ends

Alw21I, BseSI, Mph1103I, PstI, SduI

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
5	0	0	0	1	1	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 5-fold overdigestion with SdaI (5 u/µg lambda DNA x 1 hour) (*see* Star Activity).

Ligation/Recutting Assay

After a 5-fold overdigestion (2.5 units/µg DNA x 2 hours) with SdaI, more than 95% of the digested DNA fragments can be ligated at a 5'-termini concentration of 0.05 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 SdaI for 4 hours.

Blue/White Cloning Assay

pUC19 DNA was incubated with 10 units of SdaI for 16 hours. After religation and transformation, the background level of white colonies was 0.3%.

Quality authorized by: Laima Samaliene

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Certain countries are out of the scope of patent coverage.

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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