Thermo SCIENTIFIC

PRODUCT INFORMATION

SduI (Bsp1286I)

#ER0651 500 U

Lot: ___ **Expiry Date: _**

5'...**G D G C H↓C**...3'
3'...**C↑H C G D G**...5'

Concentration: 10 U/µL
Source: *Streptococcus durans* RFL3
Supplied with: 1 mL of 10X Buffer SduI

Store at -20°C

Unique 37° 20' 65° LO

BSA included

www.thermoscientific.com/onebio

RECOMMENDATIONS

1X Buffer SduI (for 100% SduI digestion)
10 mM Tris-HCl (pH 7.2), 3 mM $MgCl_2$, 150 mM NaCl, 0.1 mg/mL BSA.

Incubation temperature
37°C.

Unit Definition
One unit is defined as the amount of SduI 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.

Storage Buffer
SduI is supplied in: 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.

Rev.10

Recommended Protocol for Digestion

- Add:

nuclease-free water	16 µL
10X Buffer SduI	2 µL
DNA (0.5-1 µg/µL)	1 µL
SduI	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 SduI	2 µL
SduI	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* Overdigestion Assay.

Thermal Inactivation

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

ENZYME PROPERTIES

Enzyme Activity in Thermo Scientific REase Buffers, %

SduI	B	G	O	R	Tango	2X Tango
100	NR	50-100**	20-100	0-20	NR	NR

**Star activity appears at a greater than 5-fold overdigestion (5 U × 1h).
NR – buffer is not recommended, because of high star activity.

Methylation Effects on Digestion

Dam: never overlaps – no effect.
Dcm: may overlap – no effect.
CpG: may overlap – no effect.
EcoKI: may overlap – effect not determined.
EcoBI: may overlap – effect not determined.

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.

Compatible Ends

Alw21I, ApaI, BseSI, Eco24I, Mph1103I, PstI, SacI, SdaI.

Number of Recognition Sites in DNA

λ	ΦX174	pBR322	pUC57	pUC18/19	pTZ19R/U	M13mp18/19
38	3	10	6	5	5	5

For **CERTIFICATE OF ANALYSIS** *see* back page

CERTIFICATE OF ANALYSIS

Overdigestion Assay

No detectable change in the specific fragmentation pattern is observed after an 80-fold overdigestion with SduI (5 U/µg lambda DNA × 16 hours).

Ligation and Recleavage (L/R) Assay

The ligation and recleavage assay was replaced with LO test after validating experiments showed LO test ability to trace nuclease and phosphatase activities with sensitivity that is higher than L/R by a factor of 100.

Labeled Oligonucleotide (LO) Assay

No detectable degradation of single-stranded or double-stranded labeled oligonucleotides occurred during incubation with 10 units of SduI 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.thermoscientific.com/onebio for Material Safety Data Sheet of the product.