vivantis

RESTRICTION ENDONUCLEASE

Product Datasheet

*Smi*M I (*Msl* I)

5'...CAYNNNNRTG...3'
3'...GTRNNNNTAC...5'

Product No	:	RE1378
Quantity	:	100u

Lot	:	
Expiry Date	:	
Concentration	:	5u/µl
Supplied with	:	1ml of 10X Buffer V4 1ml of 10X Buffer UB 0.5ml Diluent Viva Buffer A

(BSA included in all Reaction Buffer)

Store at -20°C

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Reaction Conditions:
Buffer V4,
10mM Tris-HCl (pH 8.5 at 30°C), 10mM $MgCl_2$,
100mM KCl, and 100µg/ml BSA.
Incubate at 37°C.

Dilution: Viva Buffer A
10mM Tris-HCl (pH 7.4 at 25°C), 50mM KCl, 0.1mM EDTA,
1mM DTT, 200µg/ml BSA and 50% glycerol.

Thermal Inactivation: 65°C for 20 minutes.

Storage Buffer:
10mM Tris-HCl (pH 7.5), 250mM NaCl, 0.1mM EDTA,
7mM 2-mercaptoethanol, 200µg/ml BSA and 50% glycerol.

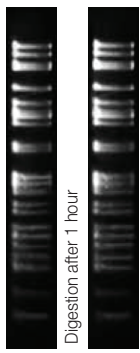
Unit Definition:
1u is defined as the amount of enzyme that is required to digest 1µg of DNA in 1 hour at 37°C in 50µl of assay buffer.

Quality Control Assays:

Ligation/ Recutting Assay:
After 5-fold overdigestion with ***Smi*M I**, more than 90% of the DNA fragments can be ligated and recut.

Overdigestion assay:
An unaltered banding pattern was observed after 1µg of DNA was digested with 10u of ***Smi*M I** for 16 hours at 37°C.

λ DNA
1.2% Agarose



Activity in Reaction Buffer				
V1	V2	V3	V4	V5
50%	75%	100%	100%	100%

Buffer UB			
0.5X	1.0X	1.5X	2.0X
50%	75%	100%	75%

* Buffer UB is provided for double digestion purpose.

NOTE:

* Total reaction volume dependent on experiment.
* The amount of enzyme to be used is very much dependent on the DNA template.
* For plasmid DNA, 5-10X more enzyme is required.

Example of Digestion Reaction

Enzyme	: 1 unit
Lambda 0.3µg/µl	: 3.33µl (1µg DNA)
10X Reaction Buffer	: 5µl
Sterile Distilled Water	: Up to 50µl