## vivantis

RESTRICTION ENDONUCLEASE


Expiry Date
Concentration : $30 \mathrm{u} / \mu \mathrm{l}$
Supplied with : 1 ml of 10X Buffer V1
1 ml of 10X Buffer UB
0.5 ml Diluent Viva Buffer A

Store at $-20^{\circ} \mathrm{C} \quad$ (BSA included in all Reaction Buffer) Storage at $-70^{\circ} \mathrm{C}$ is recommended for periods longer than 30 days
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## Reaction Conditions:

Buffer V1,
10 mM Tris- HCl ( pH 7.5 at $30^{\circ} \mathrm{C}$ ), 10 mM MgCl , and
$100 \mu \mathrm{~g} / \mathrm{ml}$ BSA.
Incubate at $37^{\circ} \mathrm{C}$.
Dilution: Viva Buffer A
10 mM Tris- $\mathrm{HCl}\left(\mathrm{pH} 7.4\right.$ at $25^{\circ} \mathrm{C}$ ), $50 \mathrm{mM} \mathrm{KCl}, 0.1 \mathrm{mM}$ EDTA, 1 mM DTT, $200 \mu \mathrm{~g} / \mathrm{ml}$ BSA and $50 \%$ glycerol.

Thermal Inactivation: $65^{\circ} \mathrm{C}$ for 20 minutes

## Storage Buffer:

10mM Tris-HCl (pH 7.5), 50mM KCl, 0.1 mM EDTA,
7 mM 2-mercaptoethanol, $200 \mu \mathrm{~g} / \mathrm{ml}$ BSA and $50 \%$ glycerol.

## Unit Definition:

1 u is defined as the amount of enzyme that is required to digest $1 \mu \mathrm{~g}$ of DNA in 1 hour at $37^{\circ} \mathrm{C}$ in $50 \mu$ of assay buffer.

## Quality Control Assays:

Ligation/ Recutting Assay:
After 30-fold overdigestion with PspC I, 90\% of the DNA fragments can be ligated and recut.

Overdigestion assay:
An unaltered banding pattern was observed after $1 \mu \mathrm{~g}$ of DNA was digested with 60u of PspC I for 16 hours at $37^{\circ} \mathrm{C}$.

| Activity in Reaction Buffer |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| V1 | V2 | V3 | V4 | V5 |
| $100 \%$ | $75 \%$ | $25 \%$ | $50 \%$ | $100 \%$ |

Buffer UB

| 0.5 X | 1.0 X | 1.5 X | 2.0 X |
| :--- | :--- | :--- | :--- |

$100 \% \quad 50 \% \quad 50 \% \quad 10 \%$ * 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 $0.3 \mu \mathrm{~g} / \mu \mathrm{l}$ | $: 3.33 \mu \mathrm{l}(1 \mu \mathrm{~g} \mathrm{DNA})$ |
| $10 X$ Reaction Buffer | $: 5 \mu \mathrm{l}$ |
| Sterile Distilled Water | $:$ Up to $50 \mu \mathrm{l}$ |

Product Use Limitation
This product is for research purposes and in vitro use only.

