## vivantis



## Reaction Conditions:

## Buffer V5,

30 mM Tris-acetate ( pH 7.9 at $30^{\circ} \mathrm{C}$ ), 10 mM Mg-acetate, 60 mM K-acetate, and $100 \mu \mathrm{~g} / \mathrm{ml}$ BSA.
Incubate at $65^{\circ} \mathrm{C}$.
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: None

## Storage Buffer:

$10 \mathrm{mM} \mathrm{KH}_{2} \mathrm{PO}_{4}$ (pH 7.2), $100 \mathrm{mM} \mathrm{NaCl}, 0.1 \mathrm{mM}$ 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 $65^{\circ} \mathrm{C}$ in $50 \mu \mathrm{l}$ of assay buffer.

## Quality Control Assays:

Ligation/ Recutting Assay:
After 10-fold overdigestion with BstH2 I, more than $90 \%$ 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 20 u of BstH 2 I for 16 hours at $65^{\circ} \mathrm{C}$.

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


| Buffer UB |  |  |  |
| :---: | :---: | :---: | :---: |
| $0.5 X$ | 1.0 X | 1.5 X | 2.0 X |
| $25 \%$ | $75 \%$ | $75 \%$ | $50 \%$ |

* Buffer UB is provided for double digestion purpose.


## NOTE:

* High enzyme concentration may result in Star Activity.
* 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.

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Example of Digestion Reaction
Enzyme : }1\mathrm{ unit
Lambda 0.3\mug/\mul:
10X Reaction Buffer : 5\mul
Sterile Distilled Water: Up to 50\mul
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## Product Use Limitation

This product is for research purposes and in vitro use only.
$\mathrm{V} i \mathrm{~V} a n t i \mathrm{~S} \mid$ www.vivantechnologies.com

