MBRE002 **BamH I**

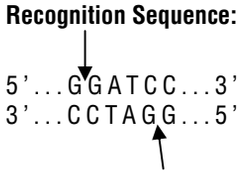
Components

Reagents provided	MBRE002			
	250 Units	500 Units	1000 Units	5000 Units
BamH I	12.5 µl	25 µl	50 µl	250 µl
10X HiBuffer DB	100 µl	200 µl	400 µl	2 ml
Diluent E Buffer	50 µl	100 µl	200 µl	1 ml

NOTE: BSA included in all Reaction Buffer

Source: A E.coli strain that carries the BamH I gene from *Bacillus amyloliquefaciens*

Recognition Sequence:



Concentration: 20 U/µl

Unit Definition:
1 u is defined as the amount of enzyme that is required to digest 1µg of DNA in 1 hour at 37^{0}C in 50 µl of assay buffer.

Enzyme	Optimum reaction temperature (^{0}C)	Thermal Inactivation (^{0}C)	% activity of Buffers				
			H1	H2	H3	H4	H5
BamH I	37	65	75	75	50	75	75

Reaction Buffer:

10X HiBuffer DB:
25mM Tris –acetate (pH 7.6 at 30°C), 10 mM Mg-acetate, 100 mM K-acetate, 7mM 2-mercaptoethanol, 50 µg /ml BSA.
NOTE: Incubate at 37^{0}C

Storage Buffer:
10mM Tris -HCl (pH 7.6), 50 mM NaCl, 0.1 mM EDTA, 200 µg/ml BSA, 1 mM DTT, 50% Glycerol. Store at -20^{0}C

Quality Control Assays:
Ligation / Recutting Assay:
After 40 -fold over digestion with BamH I, more than 90% of the DNA fragments can be ligated and recut.

Over digestion assay:
An unaltered banding pattern was observed after 1µg of DNA was digested with 40U of BamH I for 16 hours at 37^{0}C.

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Example of Digestion Reaction:

- Enzyme concentration : 1 Unit
- Lambda DNA (0.3 µg /µl) : 3.33 µl (1 µg DNA)
- 10X HiBuffer DB : 5 µl
- Nuclease free water : upto 50 µl

Note:

- Total reaction volume is dependent on the experiment
- The amount of enzyme to be used is dependent on the DNA template
- For plasmid DNA, 5-10X more enzyme is required
- High enzyme concentration may result in **Star activity**

Storage conditions: BamH I should be stored at -20°C.

MBRE002_/0611 MBRE002-02