MBRE018 **Bgl II**

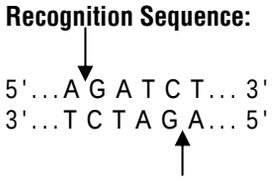
Components

Reagents provided	MBRE018			
	250 Units	500 Units	1000 Units	5000 Units
Bgl II	8.5 µl	17 µl	34 µl	166 µl
10X HiBuffer H4	25 µl	50 µl	0.1 ml	0.5 ml
10X HiBuffer DB	25 µl	50 µl	0.1 ml	0.5 ml
Diluent E Buffer	25 µl	50 µl	0.1 ml	0.5 ml

NOTE: BSA included in all Reaction Buffer

Source: A *E.coli* strain that carries the Bgl II gene from *Bacillus globigii*

Recognition Sequence:



Concentration: 30 U/µl

Unit Definition:

1 u is defined as the amount of enzyme that is required to digest 1□g of DNA in 1 hour at 37^{0}C in 50 □l of assay buffer.

Enzyme	Optimum reaction temperature (^{0}C)	Thermal Inactivation (^{0}C)	% activity of Buffers				
			H1	H2	H3	H4	H5
Bgl II	37	None	75	75	75	100	75

Reaction Buffer:

10X HiBuffer H4
10mM Tris-HCl (pH 8.5 at 30^{0}C), 10mM $MgCl_2$, 100mM KCl, and 100 µg/ml BSA.
Note: Incubate at 37^{0}C.

Storage Buffer:
10mM Tris-HCl (pH 7.5), 300mM NaCl, 0.1mM EDTA, 7mM 2-mercaptoethanol, 200µg/ml BSA and 50% glycerol. Store at –20^{o}C .
NOTE: 10X HiBuffer DB is provided for double digestion.

Quality Control Assays:

Ligation / Recutting Assay:
After 30-fold over digestion with Bgl II, more than 90% of the DNA fragments can be ligated and recut.

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Over digestion Assay:
An unaltered banding pattern was observed after 1μg of DNA was digested with 60U of Bgl II for 16 hours at 37^{O}C.

Example of Digestion conditions:

- Enzyme concentration : 1 Unit
- Lambda 0.3 mg/ml : 3.33 μl (1 μg DNA)
- 10X Reaction Buffer H4 : 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: Bgl II should be stored at -20°C.