

## Product Contents

### Lambda DNA/*EcoR* I Markers:

Part No.	Size
G172A	100µg

**Description:** Lambda DNA/*EcoR* I Markers are prepared by digesting Lambda DNA to completion with *EcoR* I followed by heat-inactivation of the enzyme. The DNA fragments are then ethanol-precipitated and resuspended in storage buffer. The six DNA fragments range in size from 3,530 to 21,226 base pairs.

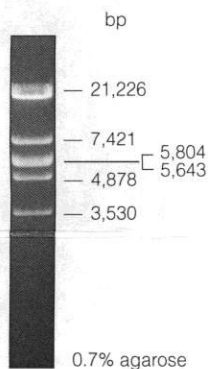
**Concentration:** 0.5mg/ml.

**Storage Buffer:** Lambda DNA/*EcoR* I Markers are supplied in 10mM Tris-HCl (pH 7.5), 10mM NaCl and 1mM EDTA.

**Storage Conditions:** See the Product Information Label for storage recommendations. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. See the expiration date on the Product Information Label.

- Usage Notes:**
1. Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.
  2. Due to the reannealing of cohesive ends, an extra band may appear above the 21,226bp fragment while the 3,530bp band disappears. To avoid this annealing, heat the marker at 65°C for 10 minutes in the presence of 1X restriction enzyme buffer, and then immediately chill on ice for 5 minutes before loading onto a gel.

**Blue/Orange 6X Loading Dye (G190A):** The Blue/Orange 6X Loading Dye supplied with these Markers has a composition of 15% Ficoll® 400, 0.03% Bromophenol Blue, 0.03% Xylene Cyanol FF, 0.4% Orange G, 10mM Tris-HCl (pH 7.5) and 50mM EDTA. This dye is used for loading DNA samples into gel electrophoresis wells and tracking migration during electrophoresis. Recommended usage is one part loading dye for five parts DNA solution. The Xylene Cyanol FF migrates at approximately 4kb, Bromophenol Blue at approximately 300bp and Orange G at approximately 50bp in 0.5% to 1.4% agarose gels in 0.5X TBE buffer (1).



## Quality Control Assays

**Accurate Sizing:** One microgram of the Lambda DNA/*EcoR* I Marker is mixed with 1X restriction enzyme buffer and Blue/Orange 6X Loading Dye and subjected to electrophoresis in a single lane on a 0.7% agarose gel with TAE 1X buffer. The Lambda DNA/*EcoR* I Marker must show the expected pattern when compared with a previous lot.

**Nuclease Assay:** To test for nuclease contamination, one microgram of the Lambda DNA/*EcoR* I Marker is incubated in 50µl of 1X restriction enzyme buffer for 16 hours at 37°C. Following incubation, the marker is subjected to electrophoresis and visualized on an ethidium bromide-stained agarose gel to confirm the absence of visible degradation.

## Reference

1. Sambrook, J., Fritsch, E.F. and Maniatis, T. (1989) *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

### Lambda DNA/*EcoR* I Markers

REF G1721

LOT 0000239957

-30°C

-10°C

2021-01-24

Conc: 0.5mg/ml  
100µg

Dispensed Lot#: 0000221434

For Laboratory Use

Country of Origin: USA

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ADG1721 00002399570

PEEL  
HERE



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