

Certificate of Analysis

Lambda DNA/EcoRI + HindIII Markers:

Part No.	Size
G173A	100µg

Description: Lambda DNA/EcoRI + HindIII Markers are prepared by digesting Lambda DNA to completion with EcoRI and HindIII. After digestion, the enzymes are heat-inactivated. The DNA fragments are then ethanol-precipitated and resuspended in storage buffer. The 13 DNA fragments range in size from 125 to 21,226 base pairs.

Concentration: 0.5mg/ml.

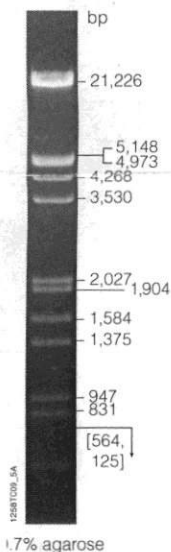
Storage Buffer: Lambda DNA/EcoRI + HindIII Markers are supplied in 10mM Tris-HCl, 10mM NaCl and 1mM EDTA. Final pH 7.5.

Storage Conditions: Store at -20°C. Avoid multiple freeze-thaw cycles and exposure to frequent temperature changes. See the expiration date on the product 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 21,226 and 3,530bp bands decrease or disappear. 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 every 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/EcoRI + HindIII 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/EcoRI + HindIII 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/EcoRI + HindIII 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.

Signed by:

R. Wheeler
R. Wheeler, Quality Assurance

Lambda DNA/EcoRI + HindIII Markers

REF G1731

LOT 0000285802

-30°C

2022-01-06

Conc: 500µg/ml
100µg

Dispensed Lot#: 0000247430

For Laboratory Use

Country of Origin: USA

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711-5399 USA



ADG1731 00002858021



Promega Corporation

2800 Woods Hollow Road	
Madison, WI 53711-5399 USA	
Telephone	608-274-4330
Toll Free	800-356-9526
Fax	608-277-2516
Internet	www.promega.com

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