

## Certificate of Analysis

### $\phi$ X174 DNA/HaeIII Markers:

Part No.                      Size  
G176A                         50 $\mu$ g

**Source:**  $\phi$ X174 DNA/HaeIII Markers are prepared by digesting  $\phi$ X174 DNA to completion with HaeIII, extracting with phenol and precipitating with ethanol. The eleven fragments range in size from 72 to 1,353 base pairs.

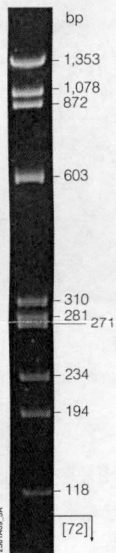
**Storage Buffer:**  $\phi$ X174 DNA/HaeIII Markers are supplied in 10mM Tris-HCl (pH 7.4), 1mM EDTA.

**Concentration:** 1.0mg/ml.

**Storage Conditions:** Store at  $-20^{\circ}\text{C}$ . See the expiration date on the product label.

**Usage Note:** Concentration gradients may form in frozen products and should be dispersed upon thawing. Mix well prior to use.

**Blue/Orange 6X Loading Dye (G190A):** The Blue/Orange 6X Loading Dye supplied with these markers has a composition of 15% Ficoll<sup>®</sup> 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 (1).



## Quality Control Assays

**Accurate Sizing:** One half microgram of  $\phi$ X174 DNA/HaeIII Markers is mixed with 1X TE buffer and subjected to electrophoresis in a single lane on a 8% polyacrylamide gel. The  $\phi$ X174 DNA/HaeIII Markers must show the expected pattern when compared with a previous lot.

**Nuclease Assay:** To test for nuclease contamination, one half microgram of  $\phi$ X174 DNA/HaeIII Markers is incubated in 1X restriction enzyme buffer for 16 hours at  $37^{\circ}\text{C}$ . Following incubation, the marker is subjected to electrophoresis on a 1% agarose gel to verify 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, Quality Assurance

## phiX174 DNA/HaeIII Markers

REF G1761

LOT 0000315734

$-30^{\circ}\text{C}$  to  $-10^{\circ}\text{C}$

2021-11-11

Conc: 1 $\mu$ g/ $\mu$ l  
50 $\mu$ g

Dispensed Lot#: 0000307950

For Laboratory Use

Country of Origin USA

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



ADG1761 00003157342

PEEL  
HERE



# Promega

### 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

### PRODUCT USE LIMITATIONS, WARRANTY, DISCLAIMER

Promega manufactures products for a number of intended uses. Please refer to the product label for the intended use statements for specific products. Promega products contain chemicals which may be harmful if misused. Due care should be exercised with all Promega products to prevent direct human contact.

Each Promega product is shipped with documentation stating specifications and other technical information. Promega products are warranted to meet or exceed the stated specifications. Promega's sole obligation and the customer's sole remedy is limited to replacement of products free of charge in the event products fail to perform as warranted. Promega makes no other warranty of any kind whatsoever, and SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES OF ANY KIND OR NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, AS TO THE SUITABILITY, PRODUCTIVITY, DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, CONDITION, OR ANY OTHER MATTER WITH RESPECT TO PROMEGA PRODUCTS. In no event shall Promega be liable for claims for any other damages, whether direct, incidental, foreseeable, consequential, or special (including but not limited to loss of use, revenue or profit), whether based upon warranty, contract, tort (including negligence) or strict liability arising in connection with the sale or the failure of Promega products to perform in accordance with the stated specifications.

© 1996, 1998, 2001, 2005, 2009, 2016 Promega Corporation. All Rights Reserved.

Ficoll is a registered trademark of GE Healthcare Biosciences.

All specifications are subject to change without prior notice.

Product claims are subject to change. Please contact Promega Technical Services or access the Promega online catalog for the most up-to-date information on Promega products.

Part# 9PIG176  
Printed in USA. Revised 10/16.