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Ladders & Markers

DNA Ladders and Markers



Ladders & Markers

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DNA Ladders and Markers

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DNA Ladders and Markers

Overview

Bioneer offers a wide range of room temperature stable, ready-to-load DNA ladders as well as molecular size markers for electrophoresis. Our ladders contain bands ranging from 10 bp to 10,000 bp, and our markers have bands from 125 bp to 23,000 bp.

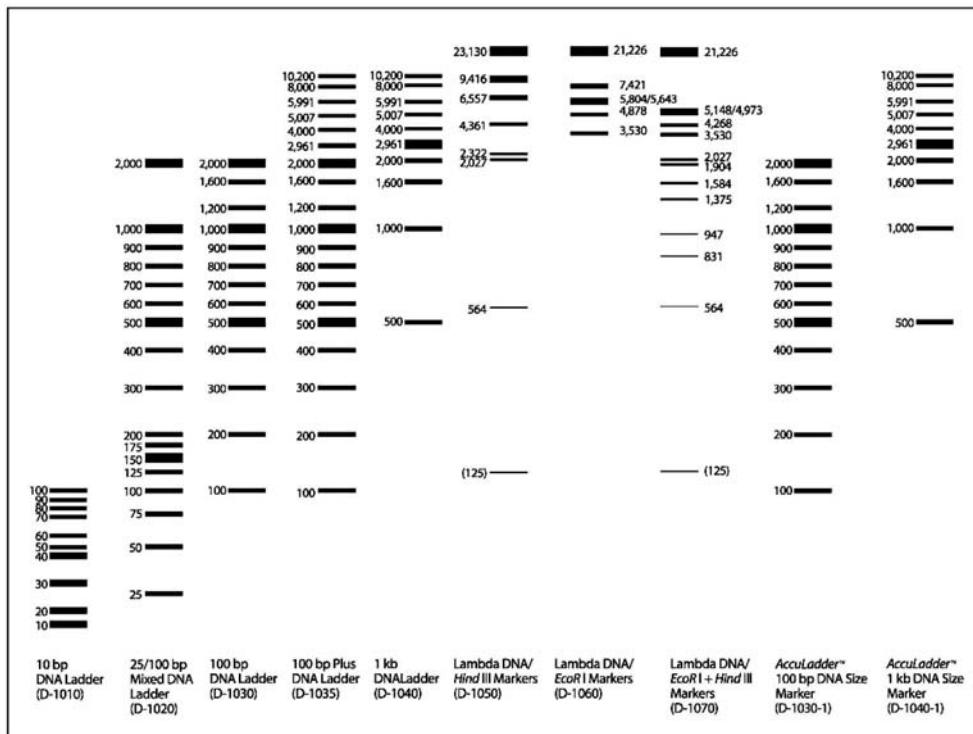
The number of fragments generated by each DNA marker, as well as the specific sizes for each of the conventional markers can be found in our selection guide, or on the specific product page.

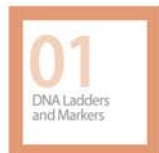
■ Features and Benefits

- Convenient: Both ladders and markers provided ready-to-load
- Robust stability: Stable over than 6 months at room temperature.
- Broad range of products available: You are sure to find one that meets your needs
- Manufactured with strict control standards: Uniform and sharp band intensities
- Competitive pricing: Great value for your research dollar

■ Selection Guide

Product Name	No. of Bands	Smallest Fragment	Largest Fragment
10 bp DNA Ladder	10	10 bp	100 bp
25/100 bp Mixed DNA Ladder	17	25 bp	2,000 bp
100 bp DNA Ladder	13	100 bp	2,000 bp
100 bp Plus DNA Ladder	19	100 bp	10,200 bp
1 kb DNA Ladder	10	500 bp	10,200 bp
Lambda DNA / <i>EcoR</i> I Marker	6	3,530 bp	21,226 bp
Lambda DNA / <i>Hind</i> III Marker	8	125 bp	23,130 bp
Lambda DNA / <i>EcoR</i> I + <i>Hind</i> III Marker	13	125 bp	21,226 bp
<i>Acculadder</i> TM 100 bp DNA size marker	13	100 bp	2,000 bp
<i>Acculadder</i> TM 1 Kb DNA size marker	10	500 bp	10,200 bp





10 bp DNA Ladder



■ Description

10 bp DNA Ladder is designed for determining the size of double stranded DNA from 10 to 100 bp. The ladder consists of 10 double stranded DNA fragments ranging in size from 10 to 100 bp in 10 bp size increments. The DNA marker fragments at 40 bp bands are two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 522 ng/ul
- Recommended loading: 1.5~2.0 μ l/ 5 mm lane width, 4~5% Agarose gel
- Size Range (bp): 10~100
- Number of Bands: 10
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 5% Ficoll, 0.012% Bromophenol Blue, 0.01% Xylene Cyanol, 0.08% Orange G
- Storage: -20 $^{\circ}$ C

■ Ordering information

Cat. No.	Product Description
D-1010	10 bp DNA Ladder, 100 ul (522 ng/ul)

■ Experimental Data

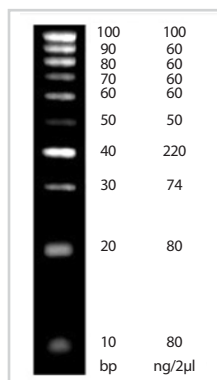


Figure 1. 4.0% TBE agarose gel stained with ethidium bromide.

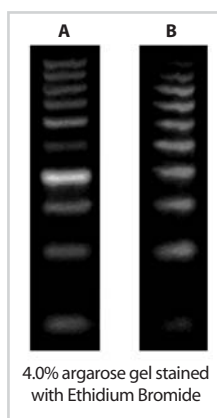


Figure 2. Bioneer's 10 bp DNA ladder shows distinguishable and high resolution band than company P's 10 bp ladder (Gel running time: 60 min).

Lane A: bioneer 10 bp DNA Ladder (cat No. D-1010)

Lane B: Company P 10 bp ladder

Bioneer's 10 bp DNA ladder shows distinguishable and high resolution band than company P 10 bp ladder (Gel running time: 60 min).



25/100 bp Mixed DNA Ladder



■ Description

25/100 bp Mixed DNA Ladder is designed for determining the size of double stranded DNA from 25 to 2,000 bp. The ladder consists of 17 double stranded DNA fragments ranging in size from 25 to 200 bp in 25 bp size increments from 200 to 1,000 bp in 100 bp increments, and an additional fragment of 2,000 bp. The DNA marker fragments at 150, 500, 1,000 and 2,000 bp bands are two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 150 ng/μl
- Recommended loading: 2.0 μl / 5 mm lane width, 2.5% TBE agarose gel
- Typical count of loading: 125 (for 5 mm lane width)
- Range of MW size (bp): 25 - 2,000
- Number of Bands: 17
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005 % Xylene Cyanol
- Storage : -20°C

■ Ordering information

Cat. No.	Product Description
D-1020	25/100 bp Mixed DNA Ladder 25-2,000 bp, 250 μl (150 ng/μl)
D-1021	25/100 bp mixed DNA Ladder, 25-2,000 bp, 1,250 μl (150 ng/μl)

■ Experimental Data

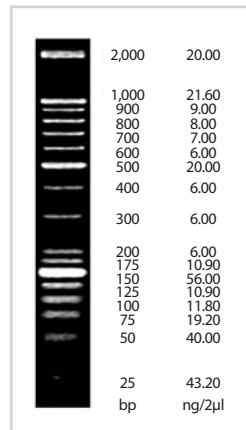


Figure 1. 2.5% TBE agarose gel stained with Ethidium Bromide.

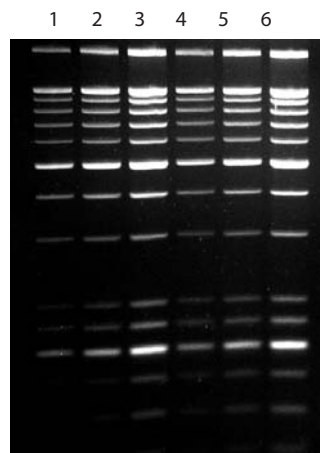
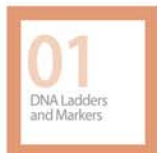


Figure 2. Nuclease Activity Test

Lane 1, 2, 3, 4: 25/100 bp Mixed DNA Ladder was stored at 4°C for 16 hours and volume loaded at 2 ul, 3 ul, 5 ul.

Lane 5, 6, 7, 8: 25/100 bp Mixed DNA Ladder was stored at 37°C for 16 hours and volume loaded at 2 ul, 3 ul, 5 ul.

After running 2.5% TBE agarose gel was stained with Ethidium Bromide.



100 bp DNA Ladder



■ Description

100 bp DNA Ladder was designed to determine the size of double stranded DNA fragments from 100 to 2,000 bp. The 100 bp DNA Ladder consists of 13 double stranded molecular weight markers ranging in sizes from 100 to 1,000 bp in 100 bp increments, and additional fragments of 1,200, 1,600, 2,000 bp. The 500, 1,000 and 2,000 bp bands are two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 135 ng/µl
- Recommended loading: 2.0 µl / 5 mm lane width, 2.0% TAE agarose gel
- Typical Number of lanes: 125 (5 mm lane width)
- Size Range (bp): 100 - 2,000
- Number of Bands: 13
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20 °C

■ Experimental Data

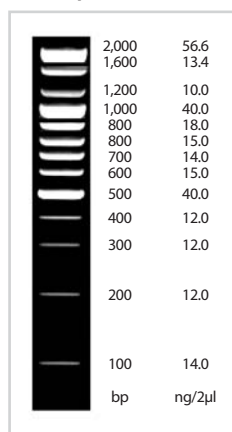


Figure 1. 2.0% TAE agarose gel stained with Ethidium Bromide.

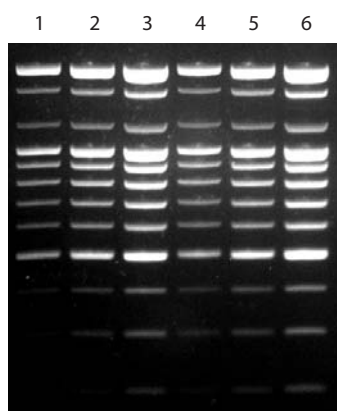


Figure 2. Nuclease Activity Test.

Lane 1, 2, 3: 100 bp DNA Ladder was stored at 4°C for 16 hours and volume loaded at 2 µl, 3 µl, and 5 µl.

Lane 4, 5, 6: 100 bp DNA Ladder was stored at 37°C for 16 hours and volume loaded at 2 µl, 3 µl, and 5 µl.

After running 2.0% TBE agarose gel was stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1030	100 bp DNA Ladder, 100 - 2,000 bp, 250 µl (135 ng/µl)
D-1031	100 bp DNA Ladder, 100 - 2,000 bp, 1,250 µl (135 ng/µl)

100 bp Plus DNA Ladder



■ Description

100 bp Plus DNA Ladder was designed to determine the size of double stranded DNA fragments from 100 to 10,200 bp. The 100 bp Plus DNA Ladder consists of 19 double stranded molecular weight markers, ranging in size from 100 to 1,000 bp in 100 bp increments, and additional fragments of 1,200, 1,600, 2,000, 2,961, 4,000, 5,007, 5,991, 8,000, 10,200 bp. The 200, 1,000 and 2,000 bp bands are two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 80.7 ng/µl
- Recommended loading: 4.0 µl / 5 mm lane width, 1.0% TBE agarose gel
- Typical Number of lanes: 125 (5 mm lane width)
- Size Range (bp): 100 - 10,200
- Number of Bands: 19
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20°C

■ Experimental Data

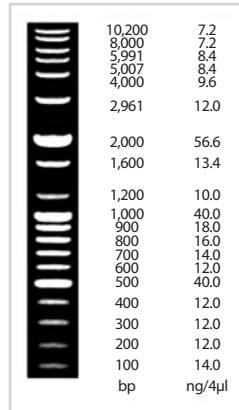


Figure 1. 1.0% TBE agarose gel stained with Ethidium Bromide.

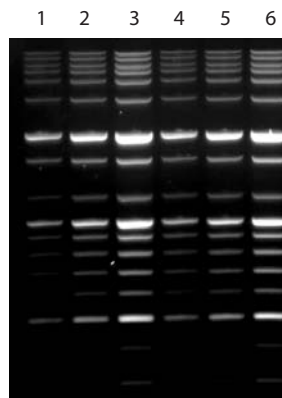


Figure 2. Nuclease Activity Test.

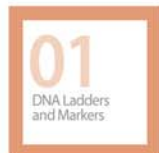
Lane 1, 2, 3: 100 bp DNA Ladder was stored at 4°C for 16 hours and volume loaded at 2 µl, 3 µl, and 5 µl.

Lane 4, 5, 6: 100 bp DNA Ladder was stored at 37°C for 16 hours and volume loaded at 2 µl, 3 µl, and 5 µl.

After running 1.0% TBE agarose gel was stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1035	100 bp DNA Ladder, 100 - 10,200 bp, 500 µl (80.7 ng/µl)
D-1036	100 bp DNA Ladder, 100 - 10,200 bp, 2,500 µl (80.7 ng/µl)



1 kb DNA Ladder



■ Description

1 kb DNA Ladder is designed for determining the size of double stranded DNA ranging between 500 to 10,000 bp. The 1 kb Ladder consists of DNA fragments 0.5, 1.0, 1.6, 2.0, 3 (2.961), 4, 5 (5.007), 6 (5.991), 8 and 10 (10.2) kb. The 2.961 kb band is approximately two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 130 ng/µL
- Recommended loading: 2.0 µl / 5 mm lane width, 1.0% TAE agarose gel
- Typical Number of lanes: 250 (5 mm lane width)
- Size Range (bp): 500 - 10,200
- Number of Bands: 10
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20 °C

■ Experimental Data

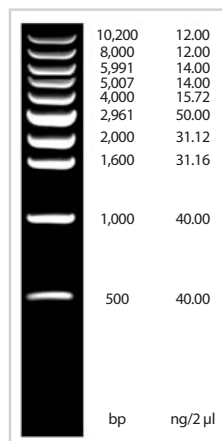


Figure 1. 1.0 % TAE agarose gel stained with Ethidium Bromide.

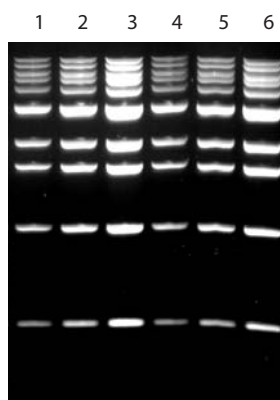


Figure 2. Nuclease Activity Test.

Lane 1, 2, 3: 1 kb DNA Ladder was stored at 4°C for 16 hours and volume loaded 2 µl, 3 µl, and 5 µl.
Lane 4, 5, 6: 1 kb DNA Ladder was stored at 37°C for 16 hours and volume loaded at 2 µl, 3 µl, and 5 µl.
After running 1.0% TAE agarose gel was stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1040	1 kb DNA Ladder, 500 - 10,200 bp, 500 µl (130 ng/µl)
D-1041	1 kb DNA Ladder, 500 - 10,200 bp, 2,500 µl (500 µl × 5)

Lambda DNA/*EcoR* I Marker



■ Description

Lambda DNA/*EcoR* I Marker is created by digesting lambda DNA with the restriction enzyme *EcoR* I. The resulting DNA ladder is purified and buffer & dye are added. So the DNA marker is ready to load. Lambda DNA/*EcoR* I Marker consist of 6 double stranded lambda DNA fragments ranging in size from 3,530 to 21,226 bp.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA marker can be applied directly onto an agarose gel.

The cohesive ends (indicated by an * in the right picture above) of the 12 nt cos site of bacteriophage lambda may anneal and form an additional band. These fragments can be separated by heating at 60 - 65 °C for 5 minutes and then cooling on ice for 3 minutes.

■ Specifications

- Concentration: 200 ng/μL
- Recommended loading: 2 μl / 5 mm lane width, 0.7% TAE agarose gel
- Typical Number of lanes: 250 (5 mm lane width)
- Size Range (bp): 3,530 - 21,226
- Number of Bands: 6
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20 °C

■ Experimental Data

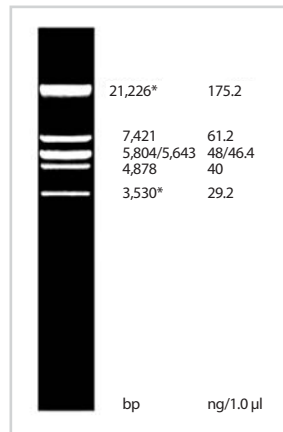
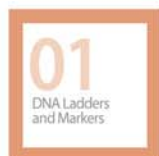


Figure 1. 0.7% TAE agarose gel stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1060	Lambda DNA/ <i>EcoR</i> I Marker, 3,530- 21,226 bp, 500 ul (0.2 ug/ul)
D-1061	Lambda DNA/ <i>EcoR</i> I Marker, 3,530- 21,226 bp, 2,500 ul (0.2 ug/ul)



Lambda DNA/*Hind* III Marker



■ Description

Lambda DNA/*Hind* III DNA Marker is generated by digesting lambda DNA with restriction enzyme *Hind* III. The resulting DNA Ladder is then purified, and buffer & dye are added. So the marker is ready to load. Lambda DNA/*Hind* III Marker consist of 8 double stranded Lambda DNA fragments ranging in size from 125 to 21,226 bp, making it an ideal molecular weight marker for daily use.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA marker can be applied directly onto an agarose gel.

The cohesive ends (indicated by an * in the right picture above) of the 12 nt cos site of bacteriophage lambda may anneal and form an additional band. These fragments can be separated by heating at 60 - 65°C for 5 minutes and then cooling on ice for 3 minutes.

■ Specifications

- Concentration: 0.2 ng/μL
- Recommended loading: 2 μl / 5 mm lane width, 0.7% TAE agarose gel
- Typical Number of lanes: 250 (5 mm lane width)
- Size Range (bp): 125 - 23,130
- Number of Bands: 8
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20°C

■ Experimental Data

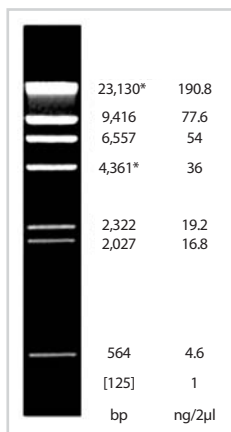


Figure 1. 0.7% TAE agarose gel stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1050	Lambda DNA / <i>Hind</i> III Marker, 125 - 23,130 bp, 500 ul (0.2 ug/ul)
D-1051	Lambda DNA / <i>Hind</i> III Marker, 125 - 23,130 bp, 2,500 ul (0.2 ug/ul)

Lambda DNA/*EcoR* I + *Hind* III Marker



■ Description

Lambda DNA/*EcoR* I + *Hind* III DNA Marker is generated by digesting lambda DNA with two restriction enzymes *EcoR* I and *Hind* III. The resulting DNA Ladder is purified, and buffer & dye are added. So the marker is ready to load. Lambda DNA/*EcoR* I + *Hind* III Marker consist of 13 double stranded Lambda DNA fragments ranging in size from 125 to 21,226 bp, making it an ideal molecular weight marker for daily use.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA marker can be applied directly onto an agarose gel.

The cohesive ends (indicated by an * in the right picture) of the 12 nt cos site of bacteriophage lambda may anneal and form an additional band. These fragments can be separated by heating at 60 - 65°C for 5 minutes and then cooling on ice for 3 minutes.

■ Specifications

- Concentration: 200 ng/μL
- Recommended loading: 2.5 μl / 5 mm lane width, 0.7% TAE agarose gel
- Typical Number of lanes: 250 (5 mm lane width)
- Size Range (bp): 125 - 21,226
- Number of Bands: 13
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20°C

■ Experimental Data

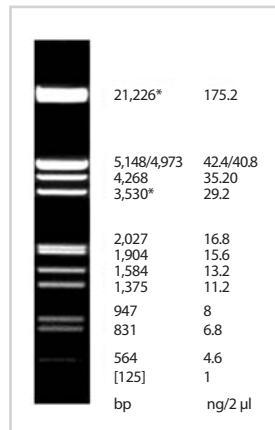
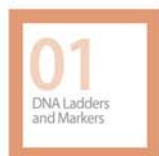


Figure 1. 0.7% TAE agarose gel stained with Ethidium Bromide.

■ Ordering information

Cat. No.	Product Description
D-1070	Lambda DNA / <i>Hind</i> III Marker, 125 - 21,226 bp, 500 ul (0.2 ug/ul)
D-1071	Lambda DNA / <i>Hind</i> III Marker, 125 - 21,226 bp, 2,500 ul (0.2 ug/ul)



AccuLadder 100 bp DNA Size Marker



■ Description

AccuLadder™ 100 bp DNA size marker was designed to determine the size of double stranded DNA fragments from 100 to 2,000 bp. *AccuLadder* is sharper and brighter than our standard 100bp ladder. The *AccuLadder* 100 bp DNA size marker consists of 13 double stranded molecular weight markers ranging in sizes from 100 to 1,000 bp in 100 bp increments, and additional fragments of 1,200, 1,600, 2,000 bp. The 500, 1,000 and 2,000 bp bands are two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 54 ng/μl
- Recommended loading: 4.0~5.0 μl / 5 mm lane width, 2.0% TBE agarose gel
- Typical Number of lanes: 126~157 (5 mm lane width)
- Size range (bp): 100 - 2,000
- Number of bands: 13
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20 °C

■ Experimental Data

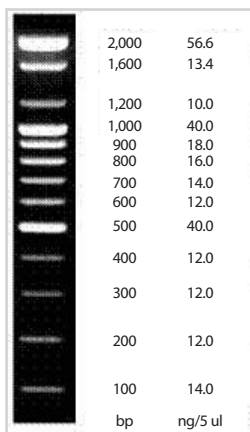


Figure 1. 2.0% TBE agarose gel stained with Ethidium Bromide.

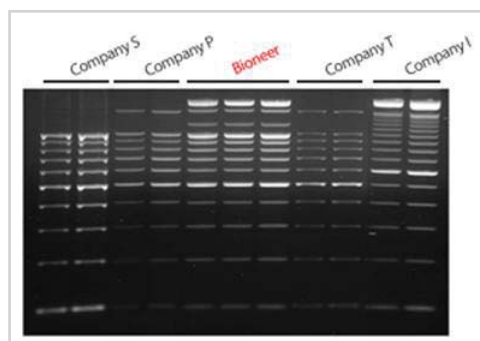


Figure 2. Nuclease Activity Test

■ Ordering information

Cat. No.	Product Description
D-1030-1	<i>AccuLadder™</i> 100 bp 630 μL (54 ng/ul)

AccuLadder 1 Kb DNA Size Marker



■ Description

AccuLadder[™] 1Kb DNA size marker was designed to determine the size of double stranded DNA ranging between 500 to 10,200 bp. *AccuLadder* is sharper and brighter than our standard 1Kb ladder. The *AccuLadder* 1 kb DNA size marker consists of DNA fragments 0.5, 1.0, 1.6, 2.0, 3 (2.961), 4, 5 (5.007), 6 (5.991), 8 and 10 (10.2) kb. The 2.961 kb band is approximately two or three times brighter for easy identification.

■ Features and Benefits

- Ready to load: convenient
- Easy-to-Identify reference bands: Easy-to-read results

Note: The DNA ladder can be applied directly onto an agarose gel. There is no need to heat before loading. Repeated freezing and thawing should be avoided.

■ Specifications

- Concentration: 65 ng/ul
- Recommended loading: 4.0~5.0 ul / 5 mm lane width, 1.0% TAE agarose gel
- Typical Number of lanes: 200~250 (5 mm lane width)
- Size range (bp): 500 - 10,200
- Number of bands: 10
- Supplied in: 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 2.5% Ficoll, 0.005% Bromphenol Blue, 0.005% Xylene Cyanol
- Storage: -20°C

■ Experimental Data

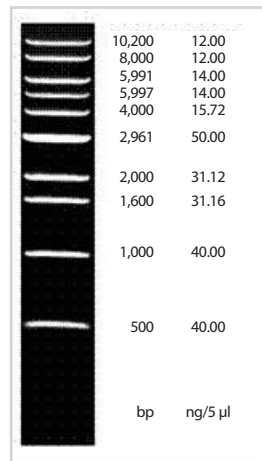


Figure 1. 1.0% TAE agarose gel stained with Ethidium Bromide.

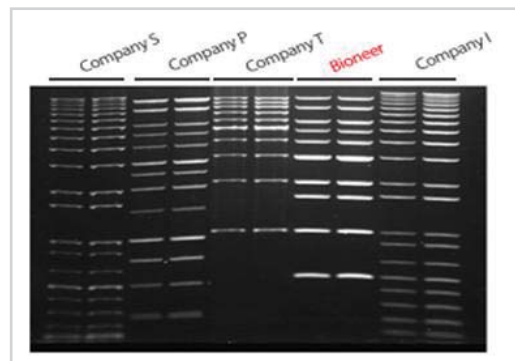


Figure 2. Nuclease Activity Test

■ Ordering information

Cat. No.	Product Description
D-1040-1	<i>AccuLadder</i> [™] 1 Kb 1000 μL (65 ng/ul)

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