Biotium
Glowing Products for Science™

3159 Corporate Place
Hayward, CA 94545
www.biotium.com

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Product Information

1 kb DNA Ladder in TE Buffer
100 bp DNA Ladder in TE Buffer

Components

Cat. No.	Product	Unit Size	Components
31039	1 kb DNA Ladder in TE Buffer	300 uL (30 ug)	31039A 1 kb DNA ladder, 100 ng/uL in 10 mM Tris pH 7.5, 1 mM EDTA 99962 6X Loading Buffer (1.5 mL)
31040	100 bp DNA Ladder in TE Buffer	300 uL (30 ug)	31040A 1 100 bp DNA ladder, 100 ng/uL in 10 mM Tris pH 7.5, 1 mM EDTA 99962 6X Loading Buffer (1.5 mL)

Storage
Store at 4°C for 6 months or at -20°C for 24 months.

Product Description
The 1 kb DNA Ladder is suitable for sizing linear double-stranded DNA fragments from 250 bp to 10 kb. The 1 kb, 3 kb, and 6 kb bands contain more DNA to provide internal orientation.

The 100 bp DNA Ladder is suitable for sizing linear double-stranded DNA fragments from 100 bp to 1000 bp. The 500 bp band contains more DNA to provide internal orientation.

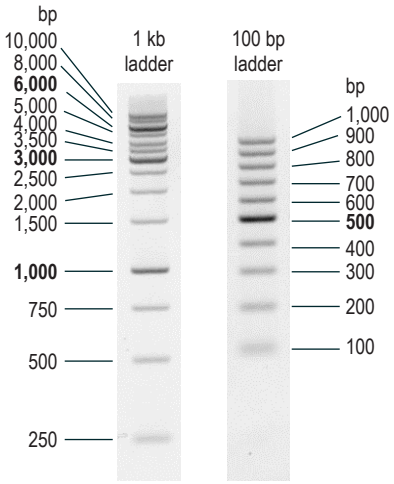
The ladders are composed of chromatography-purified DNA fragments dissolved in TE buffer. Fragment sizes in base pairs (bp) and approximate amounts of DNA per band per uL (100 ng) ladder are shown in Figure 1.

The loading buffer provided contains density agents and two blue electrophoresis tracking dyes that run at approximately 1.5 kb and 200 bp in a 1% agarose gel.

Biotium also offers Ready-to-Use 1 kb DNA Ladder (catalog no. 31022) and Ready-to-Use 100 bp DNA Ladder (catalog no. 31032). Ready-to-Use DNA Ladders are supplied pre-diluted in 1X loading buffer at the optimal concentration for loading on agarose gels containing Biotium's GelRed™ or GelGreen™ Nucleic Acid Gel Stains (see related products). Please note that the Ready-to-Use Ladders contain a different assortment of band sizes than the DNA Ladders in TE Buffer (product details can be found at www.biotium.com).

Protocol

For agarose gel electrophoresis, add 6X loading buffer to the ladder at a ratio of 1 uL per 5 uL (final loading buffer concentration is 1X). Load 100-200 ng of DNA ladder per 5 mm lane. The 6X loading buffer can also be used to prepare your other DNA samples for electrophoresis.



ng/100 ng 1 kb ladder

bp	ng
10,000	6
8,000	6
6,000	14
5,000	6
4,000	6
3,500	6
3,000	14
2,500	5
2,000	5
1,500	5
1,000	12
750	5
500	5
250	5

ng/100 ng 100 bp ladder

bp	ng
1,000	9
900	9
800	9
700	9
600	9
500	23
400	8
300	8
200	8
100	8

Figure 1. 200 ng of 1 kb DNA Ladder or 100 bp DNA Ladder were run on 1% agarose/TBE gels containing 1X GelRed Nucleic Acid Gel Stain in 1X TBE at 5 V/cm for 90 minutes. Gels were imaged using a UVP GelDoc-It imaging system with ethidium bromide filter (inverted black and white images are shown). Fragment sizes in base pairs (bp) are shown next to each band, and approximate mass per band per uL (100 ng) ladder is listed in the tables at right.

Related Products

Catalog number	Product Description
31022	Ready-to-Use 1 kb DNA Ladder
31032	Ready-to-Use 100 bp DNA Ladder
41001	GelRed™ Nucleic Acid Gel Stain, 3X in water
41003	GelRed™ Nucleic Acid Gel Stain, 10,000X in water
41005	GelGreen™ Nucleic Acid Gel Stain, 10,000X in water
41009	6X GelRed Prestain Buffer with Blue Tracking Dyes
41010	6X GelRed Prestain Buffer with Orange Tracking Dye
41007	PAGE GelGreen Nucleic Acid Gel Stain, 10,000X in water
41008	PAGE GelRed Nucleic Acid Gel Stain, 10,000X in water
41013	PAGE GelGreen Nucleic Acid Gel Stain, 1X in water
41014	PAGE GelRed Nucleic Acid Gel Stain, 1X in water
41006	TBE, 5X
22007	Activated Charcoal Decontamination Bags
31000	EvaGreen® dye, 20X in water
31003	Fast EvaGreen® qPCR Master Mix (200 rxn)
31020	Fast Plus EvaGreen® qPCR Master Mix (200 rxn)
31006	AccuBlue™ High Sensitivity dsDNA Quantitation Kit
31007	AccuBlue™ Broad Range dsDNA Quantitation Kit
31028	AccuClear™ Ultra High Sensitivity dsDNA Quantitation Kit

Please visit our website at www.biotium.com for information on our life science research products, including environmentally friendly EvaGreen® qPCR master mixes, DNA quantitation kits, fluorescent CF™dye antibody conjugates and reactive dyes, apoptosis reagents, fluorescent probes, and kits for cell biology research.