Product Information

DNA Ladders in TE Buffer

Product List

Cat. No.	Product	Unit Size
31080	1 kb DNA Ladder	500 uL
31081	100 bp DNA Ladder	500 uL

Storage and Handling

Store at -20°C for long term storage, or 4°C for short term storage. Product is stable for at least 24 months from date of receipt when stored at -20°C, and at least 6 months from date of receipt when stored at 4°C.

Product Description

These DNA ladders are supplied at 100 ng/uL in TE Buffer (10 mM Tris pH 7.5, 1 mM EDTA). DNA loading buffer is not provided, but is available separately (see Related Products).

The 1 kb DNA Ladder is suitable for sizing linear double-stranded DNA fragments from 250 bp to 10 kb. The 1 kb and 3 kb bands have increased intensity to provide internal orientation (Figure 1). When 100 ng of 1 kb ladder is loaded, the reference bands will contain ~16 ng of DNA per band, while the other bands will contain ~6 ng of DNA per band.

The 100 bp DNA Ladder is suitable for sizing linear double-stranded DNA fragments from 100 bp to 1500 bp. The 500 bp band has increased intensity to provide internal orientation (Figure 1). When 100 ng of 100 bp ladder is loaded, the reference band will contain ~23 ng of DNA, while the other bands will contain ~7.7 ng of DNA per band.

Approximate amounts of DNA per band per 100 ng ladder are given for reference only and are not intended for quantification of unknown DNA samples.

Biotium also offers Ready-to-Use DNA Ladders (Related Products) that are supplied pre-diluted in DNA loading buffer at an optimal concentration for use with Biotium's GelRed® and GelGreen® agarose gel stains. Also see our GelRed® Prestain Plus DNA Loading Dye for one-step loading and staining of DNA samples.

Experimental Protocol

For agarose gel electrophoresis, add 6X DNA loading buffer of your choice (not provided) to the ladder at a ratio of 1 uL of 6X loading buffer per 5 uL of ladder so that the final loading buffer concentration is 1X. DNA ladders can be premixed with 6X DNA loading buffer and stored at 20°C or 4°C.

Typical ladder loading amounts are 100-200 ng of DNA ladder per 5 mm mini-gel lane for GelRed® or GelGreen® detection, or 500 ng per lane for ethidium bromide detection. Optimal loading amount may vary depending on application or detection method. To dilute DNA ladder, we recommend using TE Buffer.

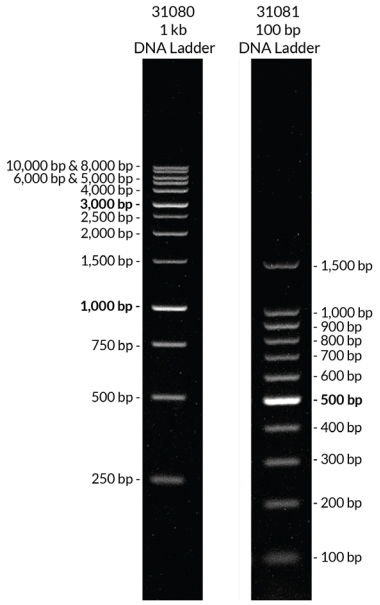

Figure 1. 1 kb DNA Ladder in TE Buffer (Cat. No. 31080) and 100 bp DNA Ladder in TE Buffer (Cat. No. 31081) separated on a 1% agarose/1X TBE GelRed® precast gel, 100 ng per lane.

Related Products

Cat. No.	Product
E90005	Gel-Bright™ Laser Diode Gel Illuminator
31022	Ready-to-Use 1 kb DNA Ladder
31032	Ready-to-Use 100 bp DNA Ladder
41011	GelRed® Prestain Plus 6X DNA Loading Dye
41003	GelRed® Nucleic Acid Gel Stain, 10,000X in Water
41005	GelGreen® Nucleic Acid Gel Stain, 10,000X in Water
41039	Go-Go™ Fast DNA Gel Running Buffer, 50X
41006	TBE Buffer, 5X
99962-1	6X DNA Loading Buffer (Blue)
99859-1	6X DNA Loading Buffer (Orange)
41028	Agarose LE, Ultra-Pure Molecular Biology Grade
41029	GelRed® Agarose LE
41030	GelGreen® Agarose LE
41032	EMBER500™ RNA Prestain Loading Dye
41020	DNAzure® Blue Nucleic Acid Gel Stain, 100X
41008	PAGE GelRed® Nucleic Acid Gel Stain, 10,000X in Water

Please visit our website at www.biotium.com for information on our other molecular biology products, including our safer and more sensitive GelRed® and GelGreen® nucleic acid gel stains, EvaGreen® Dye-based PCR master mixes, DNA and RNA quantitation kits, and more.