



Contents

Catalog Number
10488085

Size
50 µg



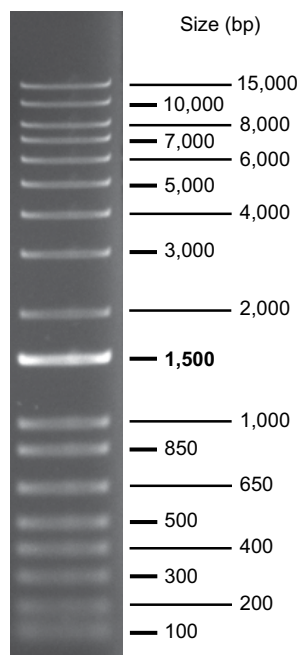
Storage

- Product is shipped at [ambient temperature](#).
- Store at room temperature or at 4°C for up to 6 months, or at -20°C for long term storage.

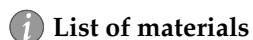


Product description

- The Invitrogen™ TrackIt™ 1Kb Plus DNA Ladder is designed for sizing and quantification of double stranded DNA on 0.7% to 1.2% agarose gels.
- The TrackIt™ 1 Kb Plus DNA Ladder consists of 18 individual chromatography-purified DNA fragments ranging in size from 100 bp to 15,000 bp.
- A reference band at 1,500 bp is included for easy orientation.
- The ladder is supplied with 6X TrackIt™ Cyan/ Orange Loading Buffer for sample DNA.



Required materials



- Visit our [product pages](#) for additional information and protocols.
- Go online to view related [DNA ladders and markers](#).
- For support, visit thermofisher.com/support.



Online resources



Important guidelines

- Do not heat the TrackIt™ 1Kb Plus DNA Ladder before loading.
- Load the same volume of DNA sample and DNA ladder.
- For quantification, adjust the concentration of the sample to equalize it approximately with the amount of DNA in the nearest band of the ladder.
- For DNA bands visualization with GelRed™ use gel staining after electrophoresis to avoid aberrant DNA migration.



Guidelines for agarose gel preparation

- Determine the required agarose concentration for your gel based on the size of DNA fragments to be separated.

Fragment size	Recommended agarose gel %	
	1X TAE	1X TBE
800–10,000	0.8	0.7
400–8,000	1.0	0.85
300–7,000	1.2	1.0

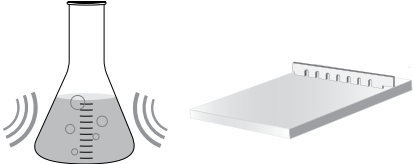
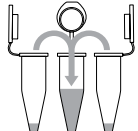
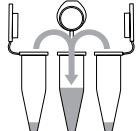


- Prepare agarose in a flask with 2-4 times the volume of the agarose solution.
- Exercise caution when handling microwaved agarose. The solution may become superheated and foam over when agitated.
- Refer to the product insert for [UltraPure™ Agarose](#) for detailed instructions on agarose preparation.

Guidelines for staining gels

Troubleshooting

Limited product warranty and disclaimer details

Prepare DNA ladders and samples for electrophoresis

Step		Action												
1		<p>Cast agarose gel</p> <ol style="list-style-type: none"> Prepare agarose solution (w/v) for the gel percentage appropriate for separating your DNA fragments. Microwave agarose solution. Cast agarose gel. 												
2		<p>Prepare DNA ladder</p> <ol style="list-style-type: none"> Thaw, mix and briefly centrifuge each component before use. Mix gently. Load the gel with 1 µL of DNA ladder per 1 mm of well width. 												
3		<p>Prepare samples</p> <ol style="list-style-type: none"> Dilute your sample with 6X TrackIt™ Cyan/Orange Loading Buffer (Cat. no. 10482028): mix 1 volume of loading dye with 5 volumes of the DNA sample. Mix gently. Load DNA ladder on gel. 												
4		<p>Perform electrophoresis</p> <ol style="list-style-type: none"> Add appropriate amount of UltraPure TAE or UltraPure TBE buffer to chamber. Set appropriate voltage and perform electrophoresis of sample. <table border="1" data-bbox="976 852 1974 1015"> <thead> <tr> <th>DNA size</th> <th>Voltage</th> <th>Buffer</th> </tr> </thead> <tbody> <tr> <td><1 kb</td> <td>5–10 V/cm</td> <td>TBE</td> </tr> <tr> <td>1–5 kb</td> <td>4–10 V/cm</td> <td>TAE or TBE</td> </tr> <tr> <td>>5 kb</td> <td>1–3 V/cm</td> <td>TAE</td> </tr> </tbody> </table>	DNA size	Voltage	Buffer	<1 kb	5–10 V/cm	TBE	1–5 kb	4–10 V/cm	TAE or TBE	>5 kb	1–3 V/cm	TAE
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>5 kb	1–3 V/cm	TAE												
5		<p>Stain agarose gel</p> <ol style="list-style-type: none"> Incubate gel in staining buffer for 30 minutes. Visualize DNA ladder and samples. <ul style="list-style-type: none"> Use UV transilluminator to detect DNA bands stained with ethidium bromide. Use blue light transilluminator to detect DNA bands stained with SYBR™ stains. 												