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TrackIt™ 50 bp DNA Ladder

Cat. no. 10488-043 **Size** 0.1 µg/µL; 100 applications **Store at 15°C to 30°C**

Doc. Part no. 10488043.pps **Pub. no.** MAN0000839 **Rev.** 2.0

Description

The TrackIt™ 50 bp DNA Ladder is suitable for sizing double-stranded DNA fragments from 50–800 bp. The ladder is prepared from a plasmid containing repeats of a 50 bp DNA fragment.

The TrackIt™ 50 bp DNA Ladder is formulated with unique tracking dyes, Xylene Cyanol FF (XCFF) and Orange G, that allow you to visually track DNA migration during electrophoresis and also indicate when maximum resolution is achieved. The tracking dyes do not obscure the visualization of DNA bands in the ladder because the dyes run outside the limits of most DNA bands in the ladder.

The important features of the ladder are:

- Consists of 16 fragments in 50 bp increments ranging in the size from 50–800 bp and an additional band at 2652 bp
- 350 bp reference band is ~2-fold brighter than other bands for easy determination of band size
- Formulated with unique tracking dyes, XCFF and Orange G
- Designed for use with E-Gel® agarose gels and TBE/TAE agarose gels
- Supplied in a ready-to-load format
- Visualized with ethidium bromide or SYBR® Green staining

Specifications

Storage Buffer:	10 mM Tris-HCl, pH 7.5; 10 mM EDTA, pH 8.0; 0.06% XCFF; 0.4% Orange G; 5% glycerol

Directions

The TrackIt™ 50 bp DNA Ladder is supplied in a ready-to-load format. *You do not need to heat the ladder prior to loading.*

Note: The TrackIt™ 50 bp DNA Ladder is not recommended for use with polyacrylamide gels and it is not designed for quantitation.

1. Vortex the ladder gently to ensure that the solution is homogenous.
2. Load the ladder using the loading volumes listed below to obtain the best results:

   TAE or TBE agarose gel (2%)

   Load 5 µL TrackIt™ 50 bp DNA Ladder per 5-mm lane width on a TAE or TBE agarose gel.

   2% E-Gel® agarose gel

   Mix 2 µL TrackIt™ 50 bp DNA Ladder with 18 µL deionized water and load 20 µL of the diluted ladder in the well of a single-comb E-Gel® agarose gel. Loading undiluted TrackIt™ DNA Ladder on an E-Gel® agarose gel results in loss of resolution.
3. Load your DNA samples.

   We recommend using the TrackIt™ Cyan/Orange Loading Buffer to prepare your DNA samples. The TrackIt™ Loading Buffers contain the same 2 tracking dyes as the TrackIt™ DNA Ladders that allow you to visually track DNA migration during electrophoresis without obscuring any DNA bands.

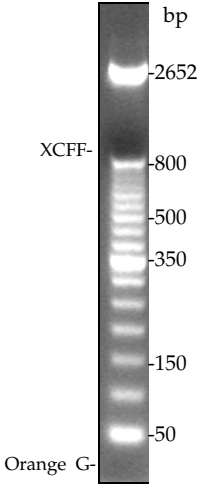
   Note: If you are using TrackIt™ Cyan/Orange Loading Buffer to prepare samples for E-Gel® agarose gels, dilute this buffer 60-fold (refer to the manual supplied with the loading buffer).
4. After electrophoresis, stain the DNA ladder with ethidium bromide or SYBR® Green I Nucleic Acid Gel Stain.

   Note: There is no need to stain E-Gel® agarose gels because the gels contain ethidium bromide.
5. Visualize the DNA bands on a UV transilluminator. An example of the ladder analyzed on an E-Gel® agarose gel is shown on the following page.

Example

The TrackIt™ 50 bp DNA Ladder (2 µL) was mixed with 18 µL deionized water and 20 µL of the diluted ladder was analyzed on a 2% E-Gel® agarose gel. The gel was visualized and imaged on a UV transilluminator equipped with a camera. The migration of tracking dyes is indicated in the figure below.

Note: For more details on the migration of XCFF and Orange G in different percentage agarose gels, contact Technical Support.



Additional Products

Product	Amount	Catalog no.
E-Gel® 2%, 18 Pak	18 gels	G5018-02
UltraPure™ Agarose	100 g	15510-019
UltraPure™ Low Melting Point Agarose	50 g	15517-014
UltraPure™ 10 mg/mL Ethidium Bromide	10 mL	15585-011
TrackIt™ Cyan/Orange Loading Buffer	3 × 0.5 mL	10482-028
SYBR® Green I Nucleic Acid Gel Stain	500 µL	18068-015

Certificate of Analysis

The Certificate of Analysis provides detailed quality control and product qualification information for each product. Certificates of Analysis are available on our website. Go to **www.lifetechnologies.com/support** and search for the Certificate of Analysis by product lot number, which is printed on the box.

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