

# GeneRuler 100 bp DNA Ladder

Catalog Number SM0241, SM0242

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**WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

## Contents and storage

Cat. No.	Contents	Amount	Storage
SM0241	GeneRuler 100 bp DNA Ladder	50 µg (for 100 applications), 0.5 µg/µL	-25 °C to -15 °C
	6X TriTrack DNA Loading Dye	1 mL	
SM0242	GeneRuler 100 bp DNA Ladder	250 (5 x 50) µg (for 500 applications), 0.5 µg/µL	
	6X TriTrack DNA Loading Dye	2 x 1 mL	

## Description

Thermo Scientific™ GeneRuler™ 100 bp DNA Ladder is designed for sizing and approximate quantification of wide range double-stranded DNA on agarose and polyacrylamide gels. The ladder is composed of ten chromatography-purified individual DNA fragments (in base pairs): 1000, 900, 800, 700, 600, **500**, 400, 300, 200, 100. It contains one reference band (500 bp) for easy orientation.

The ladder is dissolved in TE buffer.

## Storage Buffer

10 mM Tris-HCl (pH 7.6), 1 mM EDTA.

## 6X TriTrack DNA Loading Dye

10 mM Tris-HCl (pH 7.6), 0.03 % bromophenol blue, 0.03 % xylene cyanol FF, 0.15 % orange G, 60 % glycerol and 60 mM EDTA.

## Protocol for Loading

Loading mixture for the 5 mm gel lane\*:

Components	Gels	
	Agarose	Polyacrylamide
DNA ladder (0.5-1 µg)	1-2 µL	1-2 µL
6X TriTrack DNA Loading Dye	1 µL	0.5 µL
Deionized water	4-3 µL	1.5-0.5 µL
	<b>6 µL</b>	<b>3 µL</b>

**Step 1:** Mix gently

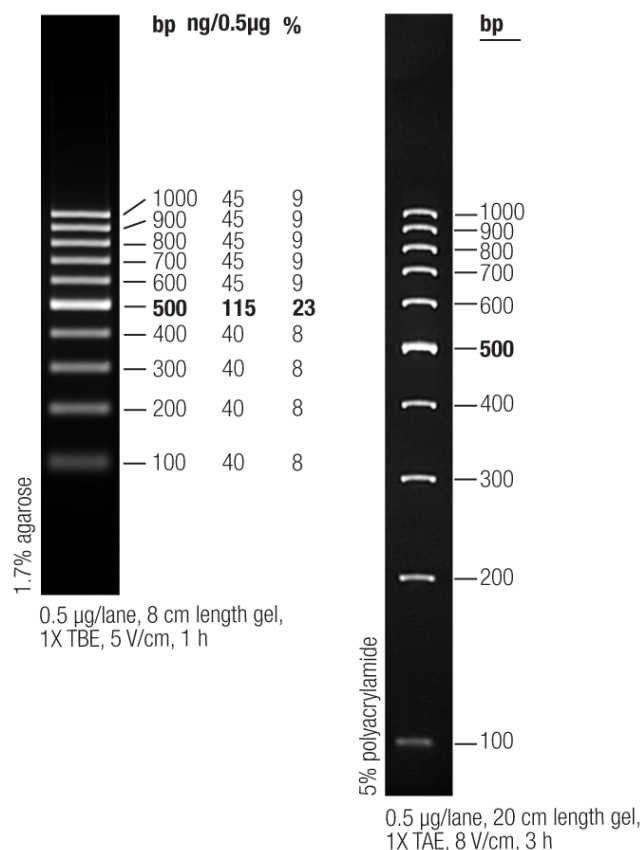
**Step 2:** Load on the gel

\*For gels with other lane widths, the components of the mixture should be scaled either up or down. Use 0.2-0.4 µL (0.1-0.2 µg) of DNA ladder per 1 mm of lane.

## Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X TriTrack DNA Loading Dye (#R1161, supplied with the ladder): mix 1 volume of the dye solution with 5 volumes of the DNA sample;
- Load the same volumes of the DNA sample and the 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 band visualization with SYBR<sup>TM</sup> Green and other intercalating dyes, do not add the dyes into the sample, use gel staining after electrophoresis or include dyes into agarose gel to avoid aberrant DNA migration.
- **Important note:** For DNA bands visualization with GelRed<sup>TM</sup> use gel staining after electrophoresis to avoid aberrant DNA migration.

## GeneRuler 100 bp DNA Ladder



## Limited product warranty

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