

# GeneRuler 1 kb DNA Ladder, ready-to-use

Catalog Number SM0313, SM0314

Pub. No. MAN0013007 Rev. E00



**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
SM0313	GeneRuler 1 kb DNA Ladder, ready-to-use	250 (5 x 50) µg (for 500 applications), 0.1 µg/µL	at room temperature or at 4 °C for periods up to 24 months.*
	6X TriTrack DNA Loading Dye	2 x 1 mL	
SM0314	GeneRuler 1 kb DNA Ladder, ready-to-use	50 µg (for 100 applications), 0.1 µg/µL	
	6X TriTrack DNA Loading Dye	1 mL	

\*For longer periods store at -20 °C.

## Description

Thermo Scientific™ GeneRuler™ 1kb DNA Ladder, ready-to-use, is designed for sizing and approximate quantification of wide range double-stranded DNA fragments on agarose gel. The ladder is composed of fourteen chromatography-purified individual DNA (in base pairs): 10000, 8000, **6000**, 5000, 4000, 3500, **3000**, 2500, 2000, 1500, **1000**, 750, 500, 250. It contains three reference bands (6000, 3000 and 1000 bp) for easy orientation. The ladder is ready to use – it is premixed with 6X TriTrack DNA Loading Dye for direct loading on gel.

## Storage and Loading Buffer

10 mM Tris-HCl (pH 7.6), 10 mM EDTA, 0.005 % bromophenol blue, 0.005 % xylene cyanol FF, 0.025 % orange G and 10 % glycerol.

## 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

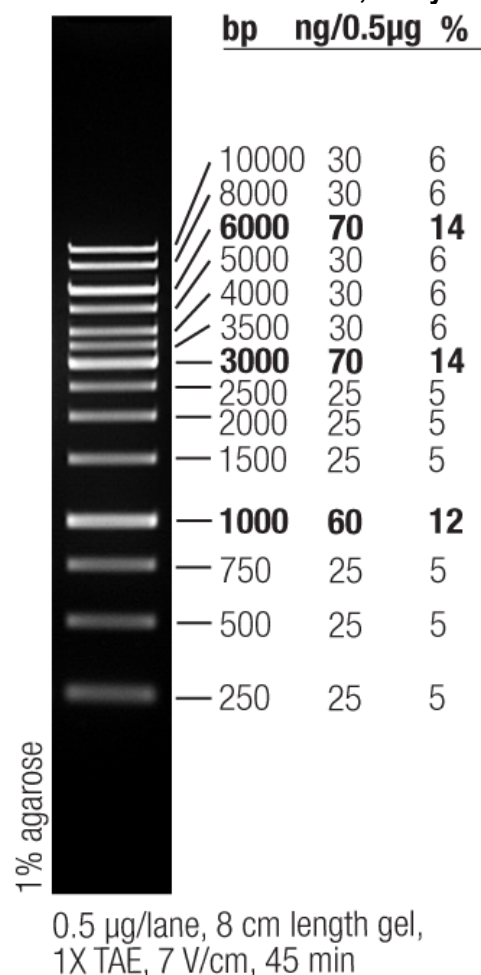
**Step 1:** Mix gently

**Step 2:** Load 1 µL per 1 mm gel 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>™</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>™</sup> use gel staining after electrophoresis to avoid aberrant DNA migration.

## GeneRuler 1 kb DNA Ladder, ready-to-use



Revision history: Pub. No. MAN0013007

Revision	Date	Description
E00	2025-04-08	Extended storage at room temperature to 24 months

## Limited product warranty

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For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](http://thermofisher.com/symbols-definition).

The information in this guide is subject to change without notice.

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