

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

Catalog Number SM1333, SM1334

Pub. No. MAN0013050 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](http://thermofisher.com/support).

## Contents and storage

Cat. No.	Contents	Amount	Storage
SM1333	GeneRuler 1 kb Plus 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	
SM1334	GeneRuler 1 kb Plus 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™ 1 kb Plus DNA Ladder, ready-to-use, is designed for sizing and quantification of DNA fragments in agarose gels. The ladder is composed of fifteen chromatography-purified individual DNA fragments (in base pairs): 20000, 10000, 7000, **5000**, 4000, 3000, 2000, **1500**, 1000, 700, **500**, 400, 300, 200, 75. It contains three reference bands (5000, 1500 and 500 bp) for easy orientation.

The Ladder is ready to use – it is premixed with 6X TriTrack DNA Loading Dye for direct loading on gels.

## 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

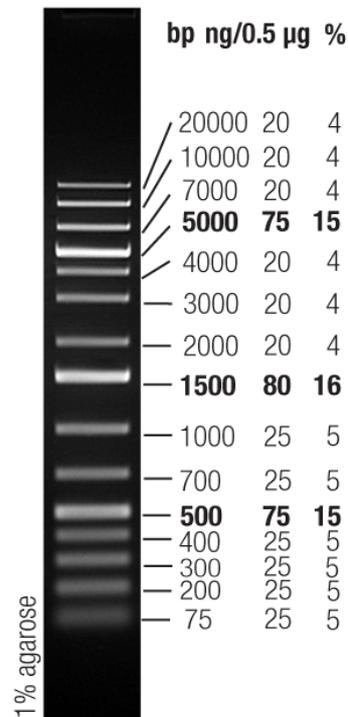
**Step 1:** Mix gently

**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 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™ 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™ use gel staining after electrophoresis to avoid aberrant DNA migration.

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



0.5 µg/lane, 8 cm length gel,  
1X TAE, 7 V/cm, 45 min

**Note.** Formation of diffused bands of small DNA fragments is a feature of agarose gel electrophoresis.

Revision history: Pub. No. MAN0013050

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

## Limited product warranty

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