

GeneRuler 1 kb DNA Ladder

Catalog Number SM0311, SM0312

Pub. No. MAN0013004 Rev. D.00



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
SM0311	GeneRuler 1 kb DNA Ladder	250 (5 x 50) µg (for 500 applications), 0.5 µg/µL	-25 °C to -15 °C
	6X TriTrack DNA Loading Dye	2 x 1 mL	
SM0312	GeneRuler 1 kb DNA Ladder	1250 (25 x 50) µg (for 2500 applications), 0.5 µg/µL	
	6X TriTrack DNA Loading Dye	10 x 1 mL	

Description

Thermo Scientific™ GeneRuler™ 1 kb DNA Ladder is designed for sizing and approximate quantification of wide range double-stranded DNA on agarose gel. The ladder is composed of fourteen chromatography-purified individual DNA fragments (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 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 agarose gel lane*:

DNA ladder	1 µL
6X TriTrack DNA Loading Dye	1 µL
Deionized water	4 µL
	6 µL

Step 1: Mix gently

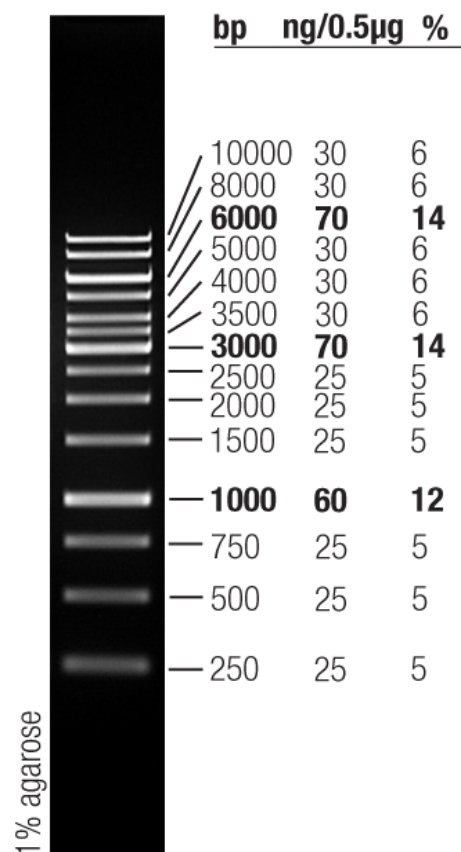
Step 2: Load on the gel

*For gels with other lane widths, the components of the mixture should be scaled either up or down. Use 0.2 µL (0.1 µg) of 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[™] 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 DNA Ladder



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

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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

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