

GeneRuler 1 kb Plus DNA Ladder

Catalog Number SM1331, SM1332

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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.

Contents and storage

Cat. No.	Contents	Amount	Storage
SM1331	GeneRuler 1 kb Plus 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	
SM1332	GeneRuler 1 kb Plus DNA Ladder	1250 (25 x 50) µg (for 2500 applications), 0.5 µg/µL	-25 °C to -15 °C
	6X TriTrack DNA Loading Dye	10 x 1 mL	

Description

Thermo Scientific™ GeneRuler™ 1 kb Plus DNA Ladder 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 dissolved in TE buffer.

Storage Buffer (TE 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

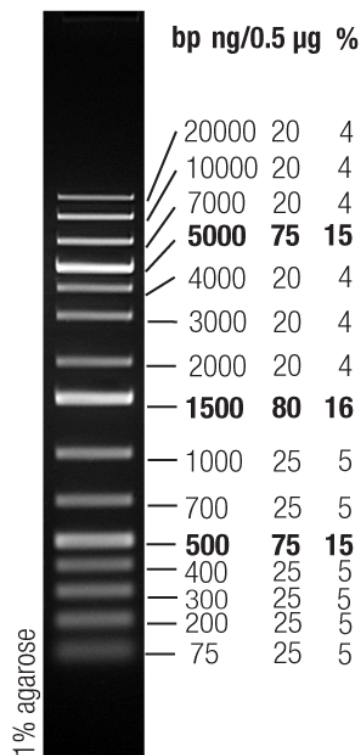
Step 2: Load on the gel

*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 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



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.

Limited product warranty

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

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