

GeneRuler 100 bp Plus DNA Ladder

Catalog Number SM0321, SM0322

Pub. No. MAN0013008 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.

Contents and storage

Cat. No.	Contents	Amount	Storage
SM0321	GeneRuler 100 bp Plus DNA Ladder	50 µg (for 100 applications), 0.5 µg/µL	-25 °C to -15 °C
	6X TriTrack DNA Loading Dye	1 mL	
SM0322	GeneRuler 100 bp Plus 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 Plus 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 fourteen chromatography-purified individual DNA fragments (in base pairs): 3000, 2000, 1500, 1200, **1000**, 900, 800, 700, 600, **500**, 400, 300, 200, 100. It contains two reference bands (1000 and 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
	6 µL	3 µL

Step 1: Mix gently

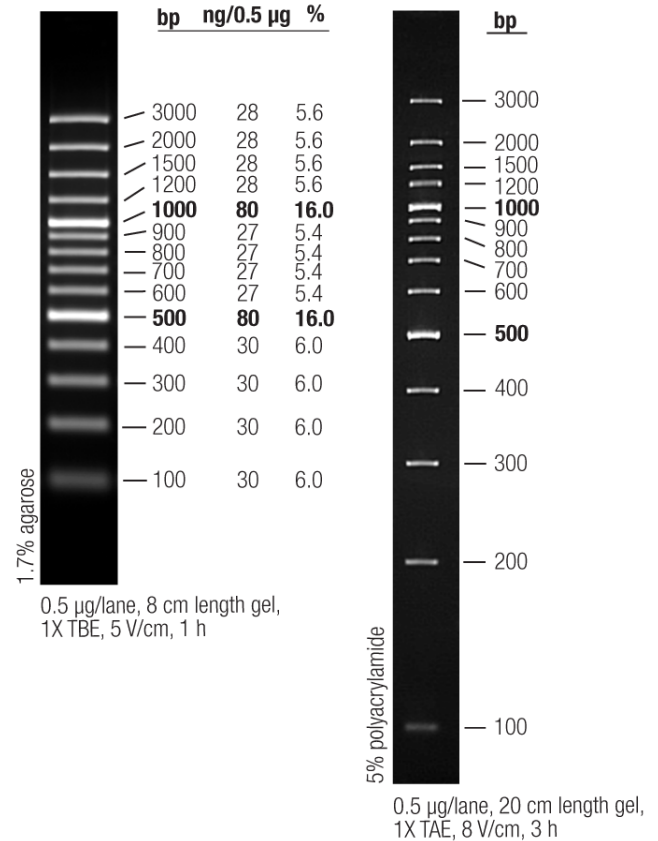
Step 2: Load on the gel

*For gels with other lane widths, the components of the mixture should be scaled either up or down. Use 0.2-0.4 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™ 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 100 bp Plus DNA Ladder



Limited product warranty

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