GeneRuler Low Range DNA Ladder, ready-to-use

Catalog Number SM1193

Pub. No. MAN0013037 **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.**

Contents and storage

Cat. No.	Contents	Amount	Storage
SM1193	GeneRuler Low Range DNA Ladder, ready-to-use	50 µg (for 100 applications), 0.1 µg/µL	at room temperature or at 4 °C for periods up to 24 months.*
	6X TriTrack DNA Loading Dye	1 mL	

**For longer periods store at -20 °C.*

Description

Thermo Scientific™ GeneRuler™ Low Range DNA Ladder, ready-to-use, contains a mix of 10 chromatography-purified individual DNA fragments (in base pairs): 700, 500, 400, **300**, 200, 150, **100**, 75, 50, 25. It contains two reference bands (100 and 300 bp) for easy orientation.
The Ladder is supplied in the storage and loading buffer and can be directly applied onto a gel.
It is specially designed for electrophoretic analysis of small DNA fragments on high percentage agarose (2.5-3 %) and polyacrylamide (5-10 %) 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 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.

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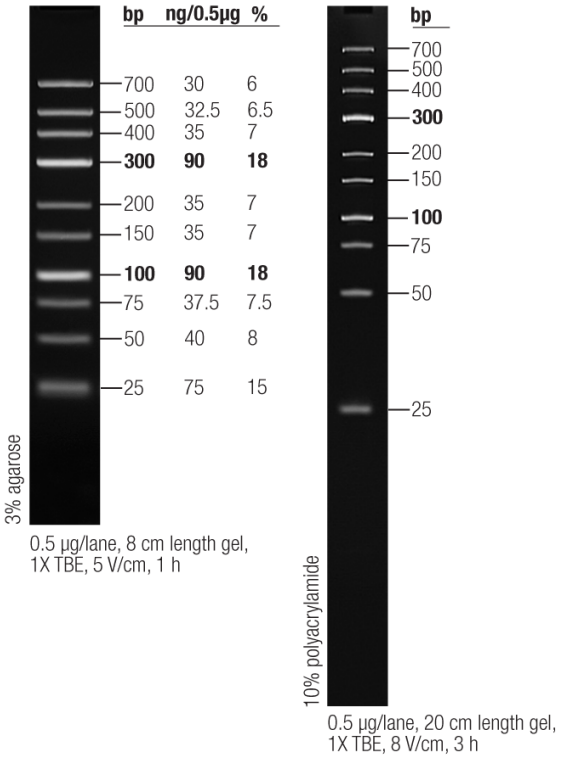

References

1. Stellwagen, N.C., Anomalous electrophoresis of deoxyribonucleic acid restriction fragments on polyacrylamide gels, Biochemistry, 22, 6186-6193, 1983.
2. Lane, D., et al., Use of gel ratardation to analyze protein – nucleic acid interactions, Microbiological Reviews, 56, 509-528, 1992.
3. Stellwagen, N.C., Conformational isomers of curved DNA molecules can be observed by polyacrylamide gel electrophoresis, Electrophoresis, 21, 2327-2334, 2000.

Revision history: Pub. No. MAN0013037

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

Limited product warranty

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