

GeneRuler High Range DNA Ladder, ready-to-use

Catalog Number SM1353

Pub. No. MAN0013054 Rev. E.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 thermo.com/support.

Contents and storage

| Cat. No. | Contents | Amount | Storage |
|----------|---|--|--|
| SM1353 | GeneRuler High Range DNA Ladder, ready-to-use | 50 µg (for 150 applications), 0.1 µg/µL | at room temperature or at 4 °C for periods up to 6 months. For longer periods store at -20 °C. |
| | 6X DNA Loading Dye | 1 mL | |

Description

Thermo Scientific™ GeneRuler™ High Range DNA Ladder, ready-to-use, is designed for sizing and approximate quantification of high molecular weight DNA fragments on low percentage agarose gels in relatively short time. It takes only 1.5 hours to obtain complete separation of ladder's bands in 0.4 % agarose gel.

The ladder is composed of 8 purified DNA fragments (in base pairs): 48502, 24508, 20555, 17000, 15258, 13825, 12119 and 10171.

The ladder is ready-to-use – it is premixed with the 6X 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 and 10 % glycerol.

6X DNA Loading Dye

10 mM Tris-HCl (pH 7.6), 0.03 % bromophenol blue, 0.03 % xylene cyanol FF, 60 % glycerol and 60 mM EDTA.

Protocol for Loading

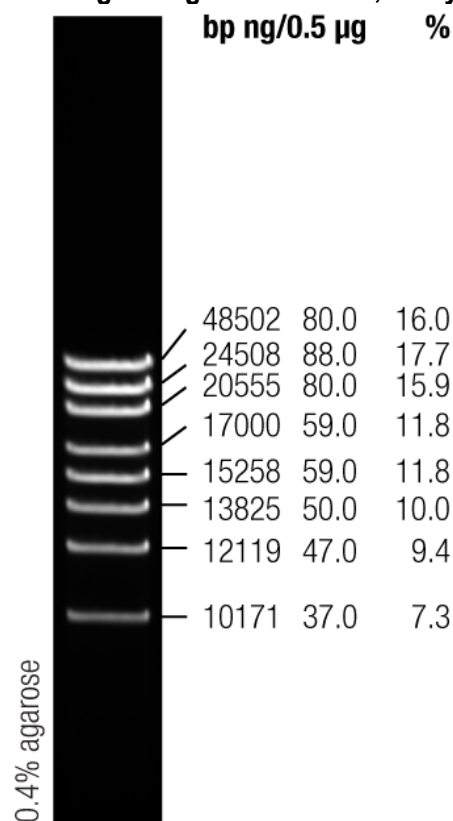
Step 1: Mix gently

Step 2: Load 0.4 µL per 1 mm of low percentage agarose gel lane. Run electrophoresis at 3 V/cm for 1.5 h. Higher voltage may result in incomplete separation of upper bands.

Recommendations

- Do not heat before loading.
- Dilute your DNA sample with the 6X DNA Loading Dye. Mix 1 volume of the dye solution with 5 volumes of the DNA sample. The dye solution (#R0611) is supplied with the ladder.
- 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.
- Use 1X TAE buffer for electrophoresis.
- For DNA bands 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 High Range DNA Ladder, ready-to-use



0.4 µg/lane, 8 cm length gel,
1X TAE, 3 V/cm, 1.5 h

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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