PRODUCT INFORMATION

Thermo Scientific GeneRuler High Range DNA Ladder

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Components	#SM1351	#SM1352
GeneRuler™ High Range DNA Ladder, 0.5 µg/µL	50 µg (for 150 applications)	250 (5 x 50) µg (for 800 applications)
6X DNA Loading Dye	1 mL	2 × 1 mL

Store at -25°C to -15°C

www.thermofisher.com

For Research Use Only. Not for use in diagnostic procedures.

Description

Thermo Scientific™ GeneRuler™ High Range DNA Ladder 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 individual DNA fragments (in base pairs): 48502, 24508, 20555, 17000, 15258, 13825, 12119, 10171.

The ladder is dissolved in TE buffer and should be premixed with the supplied 6X DNA Loading Dye prior to loading on the gel.

Storage Buffer (TE buffer)

10 mM Tris-HCl (pH 7.6) and 1 mM EDTA.

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

Loading mixture for the 8 mm agarose gel lane*:

DNA ladder	0.6 µL
6X DNA Loading Dye	3 µL
Deionized water	14.4 µL
	18µL

Step 1: Mix gently

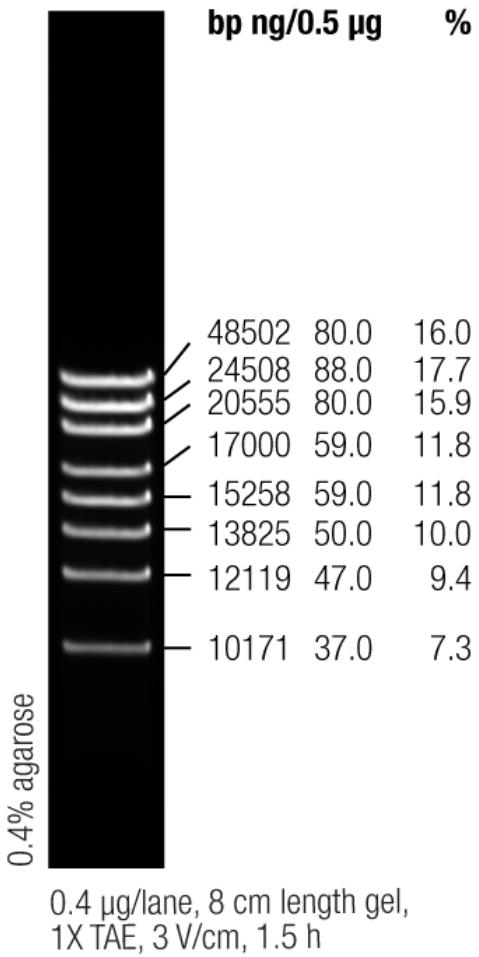
Step 2: Load on the low percentage agarose gel. Run electrophoresis at 3 V/cm for 1.5 h. Higher voltage may result in incomplete separation of upper bands.

*For gels with other lane widths, the components of the mixture should be scaled either up or down. Use 0.08 µL (0.04 µg) of DNA ladder per 1 mm of lane width.

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 (#R0611) is supplied with the ladder.
- 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.
- Use 1X TAE buffer for electrophoresis.
- 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 High Range DNA Ladder



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