

# Clean bands. Clear results.

## GeneRuler DNA ladders are designed to deliver precision and ease of use for everyday electrophoresis

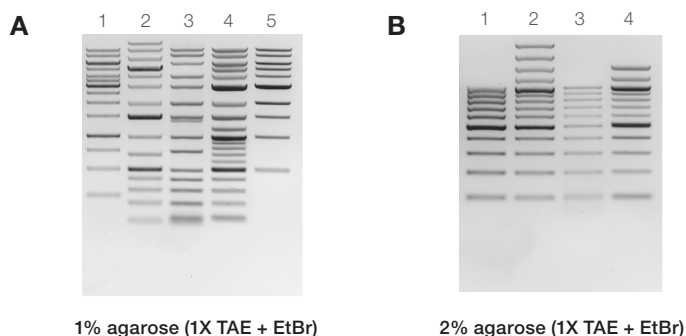
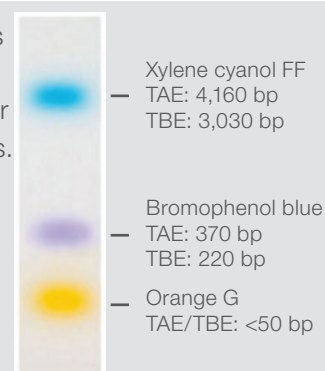
### Why use GeneRuler ladders?

Thermo Scientific™ GeneRuler™ DNA ladders are ideal for sizing and approximate quantification of a wide range of double-stranded DNA. These DNA ladders are available in fragment sizes ranging from 10 bp to 48.5 kb.

### Why choose ready-to-use ladders?

The most popular ready-to-use GeneRuler DNA ladders are conveniently premixed with Thermo Scientific™ TriTrack™ loading buffer, which contains three tracking dyes (xylene cyanol FF, bromophenol blue, and orange G) that help monitor separation of a wide range of DNA fragment sizes.

TriTrack loading buffer has three convenient tracking dyes to help easily monitor separation of DNA ladders. Moreover, these dyes do not interfere with UV visualization.



**Figure 1. GeneRuler DNA ladders provide sharp and bright reference bands, with an easy-to-remember pattern.** Amount of DNA ladder per lane was loaded according to each manufacturer's recommendation. **(A)** Lane 1: GeneRuler 1 kb DNA Ladder, ready-to-use; lane 2: GeneRuler 1 kb Plus DNA Ladder, ready-to-use; lane 3: Sigma-Aldrich DirectLoad™ Wide Range DNA Marker; lane 4: NEB Quick-Load™ 2-Log DNA Ladder (0.1–10.0 kb); lane 5: NEB Quick-Load™ 1 kb DNA Ladder. **(B)** Lane 1: GeneRuler 100 bp DNA Ladder, ready-to-use; lane 2: GeneRuler 100 bp Plus DNA Ladder, ready-to-use; lane 3: Sigma-Aldrich DirectLoad™ PCR 100 bp Low Ladder; lane 4: NEB Quick-Load™ Purple 100 bp DNA Ladder.

### Features

- More environment-friendly manufacturing without the use of organic solvents
- Conventional and ready-to-use formats
- Wide range of ladders available (1 kb, 100 bp, 50 bp, low range, and high range)
- Sharp and bright reference bands
- Supplied with loading dye for sample DNA
- Ships at ambient temperature

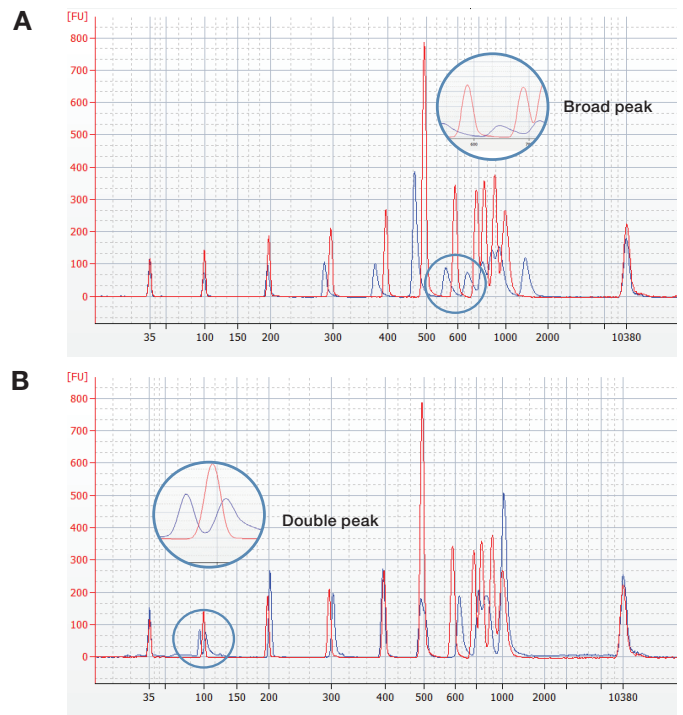
## Technical details

- Mixture of chromatography-purified individual DNA fragments
- Concentration of each DNA band is determined spectrophotometrically
- Ready-to-use DNA ladders are stable at room temperature for up to six months

## Usage and applications

GeneRuler DNA ladders are used for sizing and approximate quantification in traditional molecular biology techniques:

- DNA cloning
- PCR
- Reverse transcription



**Figure 2. GeneRuler DNA ladders can offer sharp peaks during capillary electrophoresis, for exceptional purity without additional DNA fragments or dNTPs. (A)** GeneRuler 100 bp DNA Ladder (red) and Promega 100 bp DNA Ladder (blue). **(B)** GeneRuler 100 bp DNA Ladder (red) and DirectLoad PCR 100 bp Low Ladder (blue).

## Ordering information

GeneRuler product	Quantity	Cat. No.
100 bp DNA Ladder	50 µg/5 x 50 µg	SM0241/SM0242
100 bp DNA Ladder, ready-to-use	50 µg/5 x 50 µg	SM0243/SM0244
100 bp Plus DNA Ladder	50 µg	SM0321/SM0322
100 bp Plus DNA Ladder, ready-to-use	50 µg/5 x 50 µg	SM0323/SM0324
1 kb DNA Ladder	5 x 50 µg/25 x 50 µg	SM0311/SM0312
1 kb DNA Ladder, ready-to-use	50 µg/5 x 50 µg	SM0314/SM0313
1 kb Plus DNA Ladder	5 x 50 µg/25 x 50 µg	SM1331/SM1332
1 kb Plus DNA Ladder, ready-to-use	50 µg/5 x 50 µg	SM1334/SM1333
50 bp DNA Ladder	50 µg/5 x 50 µg	SM0371/SM0372
50 bp DNA Ladder, ready-to-use	50 µg	SM0373
DNA Ladder Mix	5 x 50 µg/25 x 50 µg	SM0331/SM0332
DNA Ladder Mix, ready-to-use	50 µg/5 x 50 µg	SM0334/SM0333
Express DNA Ladder, ready-to-use	50 µg	SM1553
Ultra Low Range DNA Ladder, ready-to-use	50 µg	SM1213
Low Range DNA Ladder, ready-to-use	50 µg	SM1193
High Range DNA Ladder, ready-to-use*	50 µg	SM1353

\* This product contains bromophenol blue and xylene cyanol FF as tracking dyes. It is not available with the TriTrack buffer.

Find out more at [thermofisher.com/generuler](https://www.thermofisher.com/generuler)

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