

2.5 kb Molecular Ruler

Catalog Number 170-8205

Contents 1 vial 2.5 kb Molecular Ruler, 400 μ l supplied in TE (10 mM Tris-HCl, 1 mM EDTA, pH 8).

Quantity DNA sufficient for 100 lanes when used at 4 μ l per lane.

Concentration 100 μ g/ml.

Shipping The 2.5 kb Molecular Ruler is shipped at room temperature.

Size 14 bands, in exact 2.5 kb increments from 2.5 kb to 35 kb. A 9.8 kb band has been added as a reference. This band will comigrate with the 10 kb band on most gel percentages.

Storage The 2.5 kb Molecular Ruler should be stored at 4 °C.

Shelf life The 2.5 kb Molecular Ruler is stable for 1 year when stored at 4 °C.

Use The 2.5 kb Molecular Ruler standard can be resolved in agarose gels of up to 1%.

Typically, 4 μ l of the DNA standard should be loaded into each lane. This translates into approximately 400 ng of DNA per lane. It is necessary to add loading buffer to the standard prior to loading to ensure correct results. Adjustments may be made to the loading volume for different well sizes and desired band intensity.

For best results: Load the smallest practical amount of sample DNA to yield the sharpest bands and most accurate results.

Use only sterile solutions, pipet tips, and tubes.

The DNA fragments in this product possess *Eco*RI-compatible cohesive ends..

It is necessary to add loading buffer to the sample prior to loading to ensure correct results. Any conventional sample loading buffer should work well. For your convenience we offer the following recipe:

10X Sample Loading Buffer*

20% Ficoll 400

0.1M Na₂EDTA, pH 8.0

1% SDS

0.25% Bromphenol Blue

0.25% Xylene Cyanole

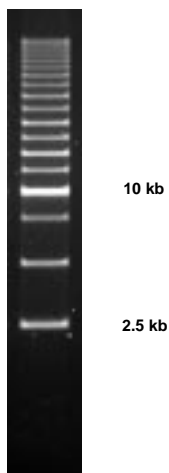


Fig. 1. 4 μ l of standard was diluted to 10 μ l in sample loading buffer and TE and loaded onto a 1% Pulsed Field Certified agarose (catalog number 162-0137) gel. The gel was run in 0.5X TBE buffer. The separation was conducted by Field Inversion Gel Electrophoresis.

The conditions were:

| | | |
|---------------------|---------------------|--------------|
| Forward Parameters: | Initial Switch Time | 0.05 seconds |
| | Final Switch Time | 0.7 seconds |
| | Voltage Gradient | 9V/cm |

| | | |
|---------------------|---------------------|--------------|
| Reverse Parameters: | Initial Switch Time | 0.05 seconds |
| | Final Switch Time | 0.7 seconds |
| | Voltage Gradient | 6V/cm |

Ramping Factor: Linear

Run Time: 15 hours

The gel was stained in 300 ml of 0.5 μ g/ml EtBr for 30 minutes with gentle shaking and destained in dH₂O for 30 minutes.

* Ausubel, F. M. *et al* , Current Protocols in Molecular Biology, Wiley Interscience Publishing, (1995), sec. 2.5.1.