2.5 kb Molecular Ruler

Catalog Number 170-8205

Contents	1 vial 2.5 kb Molecular Ruler, 400 µl supplied in TE (10 mM Tris-HCl, 1 mM EDTA, pH 8).
Quantity	DNA sufficient for 100 lanes when used at 4 µl per lane.
Concentration	100 µg/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 µl 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 Na_2EDTA, pH 8.0
1% SDS
0.25% Bromphenol Blue
0.25% Xylene Cyanole

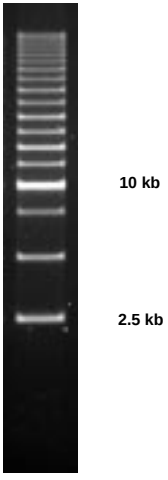

Fig. 1. 4 µl of standard was diluted to 10 µl in sample loading buffer and TE and loaded onto a 1% Pulsed Field Certified agarose (catalog number 162-0137) gel. The gel was run in 0.5X TBE buffer. The separation was conducted by Field Inversion Gel Electrophoresis.

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 µg/ml EtBr for 30 minutes with gentle shaking and destained in dH_2O for 30 minutes.

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