Low Range ssRNA Ladder

1-800-632-7799
info@neb.com
www.neb.com

N0364S 024140315031

N0364S

25 gel lanes (25 µg) **Lot: 0241403**

500 µg/ml **Store at –70°C** **Exp: 3/15**

Description: The Low Range ssRNA Ladder is a set of 6 RNA molecules produced by *in vitro* transcription of a mixture of 6 linear DNA templates. The ladder sizes are: 1000, 500, 300, 150, 80 and 50 bases. The 300 base fragment is at double intensity to serve as a reference band. This ladder is suitable for use as an ssRNA size standard on denaturing polyacrylamide-urea gels, and on denaturing or native agarose gels.

Supplied in: 20 mM KOAc (pH 4.5)

Usage Recommendation: This marker was not designed for precise quantification of ssRNA mass.

Note: Store at –70°C. For short term storage (< 1 week), ladder can be stored at –20°C.

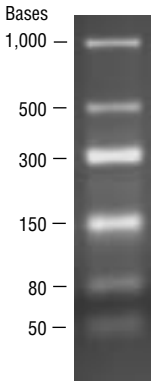
Reagents Supplied with Ladders:
RNA Loading Dye, (2X)

Denaturing vs. Native Agarose Gels: It is common practice to electrophorese RNA on a fully denaturing agarose gel, such as one containing formaldehyde (1). However, in many cases it is possible to run RNA on a native agarose gel and obtain suitable results. In fact, it has been demonstrated that treatment of RNA samples in a denaturing buffer maintains the RNA molecules in a denatured state, during electrophoresis, for at least 3 hours (2,3). The use of native agarose gels eliminates problems associated with toxic chemicals and the difficulties encountered when staining and blotting formaldehyde gels.

Sample Preparation: The Low Range ssRNA Ladder is also compatible with formaldehyde-based loading buffers.

Method:
The denatured Low Range ssRNA Ladder can be run on a 2% TBE agarose gel (native) or a 6% TBE-Urea (denatured) gel.

1. Combine 2 µl of ssRNA Ladder with 18 µl of 2X RNA Loading Dye.
2. Incubate at 90°C for 2 minutes or 70°C for 10 minutes.
3. Immediately place it on ice for 1–2 minutes.
4. Load 5 µl of the denatured ladder on gel, store the unused portion at 4°C.
5. For best results, stain gel with SYBR Gold after electrophoresis. It is also possible to stain gel with ethidium bromide, however, the visibility of the bands is less intense than that of SYBR Gold staining.



0.25 µg of Low Range ssRNA Ladder (denatured) on a 2.0% TBE agarose gel stained with ethidium bromide.

Notes on Use: Minimize repeated freeze-thaw cycles. It is best to aliquot the marker into single use portions.

To avoid ribonuclease contamination: wear gloves, use RNase-free water for gels and buffers, wash equipment with detergent and rinse thoroughly with RNase-free water.

(see other side)

CERTIFICATE OF ANALYSIS

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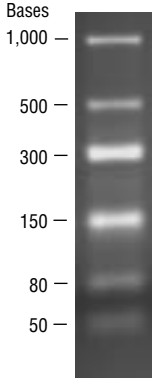

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1. Sambrook, J., Fritsch, E.F. and Maniatis, T. (1989). *Molecular Cloning*: *A Laboratory Manual*, (2nd ed.), (pp. 7.43–7.45). Cold Spring Harbor: Cold Spring Harbor Laboratory Press.
2. Liu, Y-C. and Chou, Y-C. (1990) *Biotechniques* 9, 558.
3. Sandra Cook, and Christina Marchetti, unpublished observations.
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