Cat: BP-F10-50

Lyo-Ready RNA Ladder 6000

V01

Product Description

This product is a premixed RNA molecular weight standard prepared by in vitro transcription of eight linear DNA templates followed by mixing, purification, and lyophilization. It contains eight clearly identifiable reference bands with molecular weights of 200 bp, 500 bp, 1000 bp, 1500 bp, 2000 bp, 3000 bp, 4000 bp and 6000 bp. Using known RNA fragment sizes, the RNA Ladder can assist in estimating the sizes of other RNA fragments. This product is suitable for various electrophoresis conditions, including non-denaturing gels and denaturing gels.

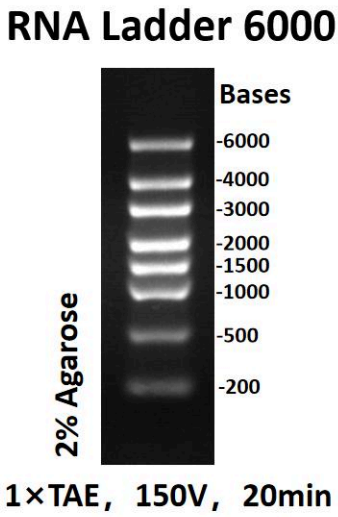
Components

Components	Cat. No.	Volume
Lyo-Ready RNA Ladder 6000	BP-AS-21(DG)	Lyophilized ×5 tubes
Ladder complex solution	BP-AS-113	100 μL
2×Loading Dye	BP-AS-22	100 μL

Storage

Store in a lyophilized state at 2-8℃, and store the reconstituted liquid at-70±10℃.

Product information



Recommended usage methods

1. Reconstitution of Lyo-Ready RNA Ladder 6000

1.1 After opening the aluminum foil bag, remove the Lyo-Ready RNA Ladder. During transportation, the lyophilization site at the tube bottom may shift; perform rapid centrifugation to the tube bottom.

1.2 Add 20 μL of Ladder Reconstitution Solution to dissolve the lyophilized powder. After complete dissolution, mix gently by vortexing, centrifuge briefly, and the ladder is ready for use.

2. TAE/TBE Agarose Gel Electrophoresis

2.1 Prepare a 2% TAE/TBE agarose gel, and add an appropriate amount of nucleic acid stain according to the recommended ratio.

2.2 Prepare the RNA samples according to the table below:

Components	Volume
RNA Ladder 6000 (after reconstitution)	2 μL
2×Loading Dye	2 μL

Mix the samples thoroughly, denature at 70℃ for 5 min, then immediately place on ice for 3 min.

3. Formaldehyde Denaturing Agarose Gel Electrophoresis

3.1 Prepare a 1% formaldehyde denaturing agarose gel.Example: Weigh 1 g of agarose powder and add to 72 mL of

deionized water, then stir. Heat until the agarose is completely melted. Add 10 mL of 10× MOPS buffer and mix well. When the agarose solution cools to approximately 60℃, add 18 mL of 37% formaldehyde (perform in a fume hood) and mix thoroughly before casting the gel.

3.2 Prepare RNA samples according to the table below:

Components	Volume
RNA Ladder 6000 (after reconstitution)	2 μL
2×Loading Dye	2 μL

Mix the samples thoroughly, denature at 70℃ for 5 min, then immediately place on ice for 3 min.

3.3 Load the denatured samples from Step 3.2 directly onto the gel for electrophoresis at 150 V for 20-30 min.

Notes

1. Before reconstitution, keep the Ladder sealed in an aluminum foil bag and store at 2-8℃ to avoid excessive environmental humidity that may affect lyophilization.
2. During transportation, freeze-drying displacement may occur. Prior to reconstitution, centrifugation for an appropriate duration is required to ensure the freeze-dried material settles at the bottom of the tube before reconstitution. After adding the reconstituted solution, wait for the freeze-dried material to dissolve and become transparent. Vigorously shake to mix thoroughly, then centrifuge until the material settles at the bottom of the tube before opening the lid for use.
3. It is recommended to prepare and use immediately. The reconstituted RNA Ladder should be stored at-70±10℃.
4. The RNA in this product is single-stranded RNA (ssRNA) obtained through in vitro transcription, primarily used as a reference standard for linear single-stranded RNA molecules.
5. It is recommended to use freshly prepared buffer solutions and freshly prepared gels, select clean electrophoresis equipment, and preferably perform operations separately from DNA electrophoresis. Residual RNase in DNA samples may affect RNA stability.
6. RNA is highly sensitive to ribonucleases. To prevent RNA degradation, wear protective gloves and use nuclease-free consumables for sample preparation. Alternatively, nuclease scavengers may be applied to the containers for treatment.
7. Vortex before use. Avoid freeze-thaw cycles.