RNA Century™-Plus Markers

Store below –70°C.

Catalog # (P/N):	AM7145
Amount:	50 µg
Concentration:	1 mg/mL
Storage Conditions:	Store below –70°C. Avoid multiple freeze-thaw cycles. The product may be stored short-term at –20°C.
Storage Buffer:	0.1 mM EDTA

USER INFORMATION

Product Description:

RNA Century™-Plus Markers are a set of 7 RNA transcripts, 100, 200, 300, 400, 500, 750, and 1000 bases in length. They are useful as RNA size markers in denaturing gel electrophoresis. They can be visualized by ethidium bromide staining or by end-labeling and autoradiography (see Figure 1).

Handling Instructions:

RNA is very sensitive to degradation by exogenous ribonucleases introduced during handling. Wear gloves when handling this product. Use RNase-free reagents, tubes, and barrier pipette tips.

Thawing Instructions
Thaw just to completion at 37°C, vortex for a few seconds when fully thawed, and place on ice. Aliquot the RNA, if necessary, to minimize freeze-thaw cycles (≤5).

Applications:

RNA Century-Plus Markers are intended for use as size markers for denaturing gel electrophoresis.

For Denaturing Acrylamide Gels
Mix 1–2 µL of the markers with an equal volume of Gel Loading Buffer II (95% formamide, 0.025% SDS, 0.025% Bromophenol Blue, 0.025% Xylene Cyanol, 18 mM EDTA; P/N AM8546G). Vortex briefly, centrifuge briefly, heat to 95°C for 5 min to denature any secondary structure, and load directly (while still hot) on the gel.

For Denaturing 2% Agarose Gels
Mix 1–2 µL of the markers with 3 volumes of NorthernMax® Formaldehyde Load Dye (P/N AM8552), incubate for 15 min at 65°C, centrifuge briefly, and place on ice before loading.

These markers can be visualized either by ethidium bromide staining and UV fluorescence or end-labeling and autoradiography. End-labeling can be performed using polynucleotide kinase and [γ-^{32}P]ATP in either a forward (after dephosphorylation) or an exchange reaction.

Ethidium Bromide Staining
The markers may be visualized by several methods.

A. Add ethidium bromide to the sample at 10–50 µg/mL final concentration before loading.

B. Incorporate ethidium bromide into the gel ***or*** running buffer at 0.5 µg/mL.

C. Stain post-electrophoresis using 0.5 µg/mL ethidium bromide in gel running buffer (e.g., 1 µL of 10 mg/mL ethidium in 20 mL of buffer).

Note: For methods B or C, destain for 5–10 min in buffer without ethidium bromide.

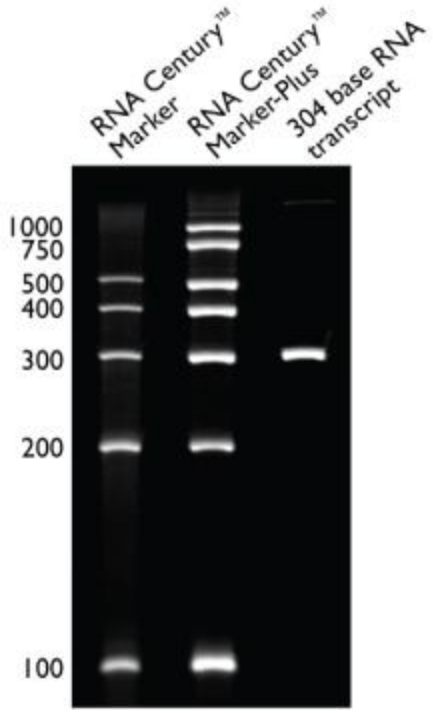

Figure 1: Two µg of RNA Century™ Markers and RNA Century™ Markers-Plus along with an RNA transcript were electrophoresed on an 8M Urea, 5% PAGE gel and stained with ethidium bromide.

QUALITY CONTROL

Functional Testing:

1 µL and 2 µL of RNA Century-Plus Markers yields 7 distinct bands after electrophoresis on a 5% denaturing acrylamide gel, followed by ethidium bromide staining.

The markers remain intact when incubated at 37°C overnight.

OTHER INFORMATION

Material Safety Data Sheets:

Material Safety Data Sheets (MSDSs) can be printed or downloaded from product-specific links on our website at the following address: www.ambion.com/techlib/msds. Alternatively, e-mail your request to MSDS_Inquiry_CCRM@appliedbiosystems.com. Specify the catalog or part number(s) of the product(s), and we will e-mail the associated MSDSs unless you specify a preference for fax delivery. For customers without access to the internet or fax, our technical service department can fulfill MSDS requests placed by telephone or postal mail. (Requests for postal delivery require 1–2 weeks for processing.)

Warranty and Liability:

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