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RNA stabilization reagent

Cat. No. St-100

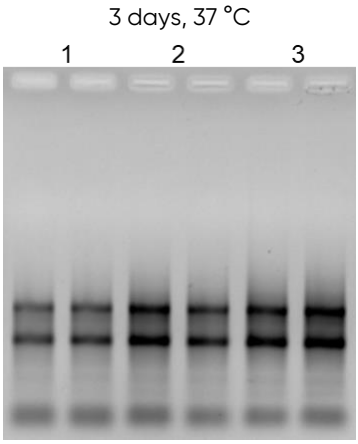
Important!

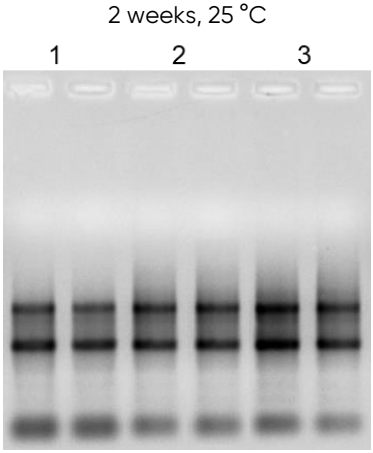
We are constantly improving the protocol for the kit. Please use the protocol provided with the product.
Updated March 2022

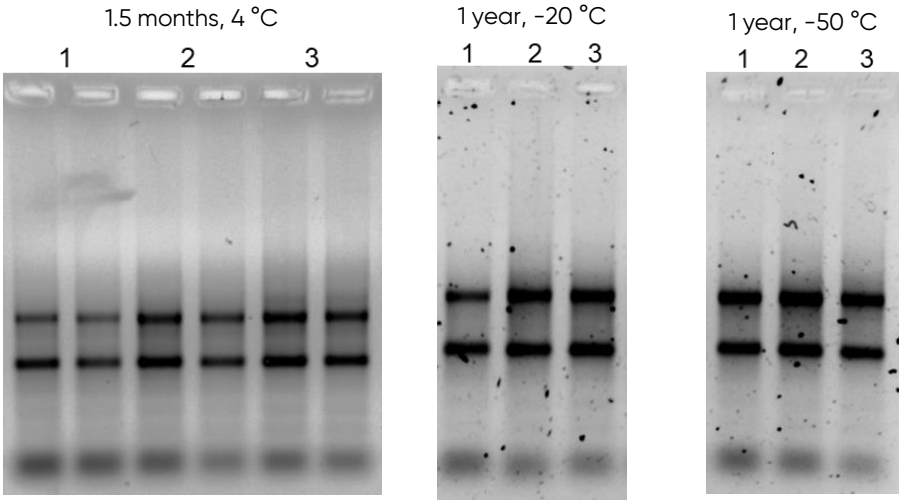
Description

The reagent is intended to ensure the integrity of RNA in tissues and cells. Samples (tissue fragments or cell pellets) are immediately placed in RNA stabilization reagent. The reagent permeates tissues and cells, ensuring the integrity of RNA. The samples are stored in RNA stabilization reagent for at least 1 day at 37 °C, 1 week at 25 °C, 1 month at 2-8 °C, 1 year at -20 - -50 °C without a noticeable decrease in RNA quality.

The gel electrophoresis data (see below) show RNA samples isolated from mouse tissues that were stored in an RNA stabilization reagent at 37 °C (3 days), 25 °C (2 weeks), 4 °C (1.5 months), -20 °C (1 year), and -50 °C (1 year). 1 - heart, 2 - kidneys, 3 – liver.







Safety Information

CAUTION! When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. You must follow the rules of general and personal safety when working with the kit.

Protocol

Tissues

1) Cut a fresh, unfrozen tissue sample into small pieces no thicker than 0.5 cm.

Note: Larger samples are saturated with the reagent much slower, so RNA inside the sample may degrade. Small organs such as mouse kidneys can be stored without cutting in the reagent solution.

2) Add at least 10 volumes of RNA stabilization solution to the sample. The reagent must completely cover the sample.

Note: It is recommended to weigh the sample before adding the stabilization reagent. Add at least 10 µl of stabilization solution to 1 mg of tissue.

3) Incubate the sample for 12-24 h at 2-8 °C if it is planned to store the sample at -20 ° C or at a lower temperature. If it is expected to store the sample at 2-37 °C it is necessary to place the sample in the desired conditions.

4) It is recommended to place samples at -20 °C or -70 °C for long-term storage.

Note: Samples may not freeze at -20 °C.

Cells

1) Precipitate the cells by centrifugation, according to the protocol used by your laboratory. For example, centrifuge at 1000 rcf for 3 min for animal cells or at 10000 rcf for 1 min for bacterial cells.

Note: Do not wash the cells for better preserving of RNA integrity.

2) Add at least 10 volumes of RNA stabilization solution to the sample.
3) Incubate the sample for 12-24 h at 2-8 °C.
4) It is recommended to place the samples at -20 °C or -70 °C for long-term storage.

Note: Samples may not freeze at -20 °C.

Isolation of RNA from samples stored in RNA stabilization solution. Tissues

Thaw the frozen tissues at 15-25 °C. Transfer the tissues into a clean 1.5-2 ml microcentrifuge tube add suitable lysis buffer for tissues. Isolate RNA according to manufacture protocol.

Isolation of RNA from samples stored in RNA stabilization solution. Tissues

Add suitable of lysis buffer for cultural cells no less than 3 volumes. Isolate RNA according to manufacture protocol. RNA isolation kit (RU-50, RU-250) is suitable for RNA isolation from cultural cells.

Storage

All components of the kit can be stored at 2-25 °C for up to 12 months. A precipitate may form if the reagent is stored at 2-8 °C This does not affect the quality of the reagent

Shipping

All components of the kit are shipped at room temperature.