

RNA Safeguard Reagent BSC54M1



Description :

RNA safeguard is an aqueous, non-toxic tissue storage reagent that rapidly permeates tissue to stabilize and protect cellular RNA in situ in unfrozen specimens. Tissue pieces are harvested and immediately submerged in RNA safeguard for storage without jeopardizing the basic structure of tissue cell and the quality or quantity of RNA. RNA safeguard eliminates the need to immediately process tissue specimens or to freeze samples in liquid nitrogen or dry ice for later processing.

RNA safeguard preserves RNA in tissues for up to 1 day at 37 °C, 1 week at 25 °C, and 1 month or more at 4 °C. Tissues can also be stored at -20 °C or at -80 °C long-term.

RNA safeguard has been extensively tested on tissues from several vertebrate species, including brain, heart, kidney, liver, skeletal muscle, etc, at the same time tissue with all kinds of pathological damage can do as well. RNA safeguard is also effective for tissue culture cells and white blood cells. RNA safeguard is compatible with most RNA isolation methods, including TRI Reagent.

Storage and Stability

Store RNA safeguard at room temperature for at least 2 years. If a precipitate develops in the RNA safeguard, warm the solution to 37 °C and agitate to redissolve it.

Procedure

Use RNA safeguard with fresh tissue only. Do not freeze tissue before immersion in RNA safeguard .

A. Preparation of Tissue Samples

1. Animal Tissue :Cut tissue samples to a maximum thickness in any one dimension of 0.5 cm (e.g. 0.5 cm x 1 cm x 1 cm), place the fresh tissue in 5 volumes of RNA safeguard (eg, 100mg tissue in at least 500 μ l RNA safeguard reagent) , and store as indicated for the desired temperature in part B below. Small organs such as rat liver, kidney and spleen can be stored in RNA safeguard whole.
2. Tissue Culture cell: Pellet cells according to standard laboratory protocols. Wash the cells with PBS or an equivalent buffer to remove the culture medium. Resuspend the cells in a small volume of PBS so that the RNA safeguard can penetrate the cells more easily. After resuspending the cells, add 5 to 10 equivalent volumes of RNA safeguard to the cell suspension. No further rinsing of the cell pellet is necessary.

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3. White Blood Cells: White blood cells can be effectively preserved in RNAsafeguard .if they are separated from the red blood cells and serum and treated as tissue culture cells. The red blood cell lysis buffer is recommended (Product Code BSA06M1, Hangzhou bioer S&T Co.LTD)

B. Storage of Samples in RNAsafeguard

1. Storage at -80°C is recommended for long-term storage. Incubate samples at 4°C overnight, then remove them from RNAsafeguard before storage at -80°C to prevent the formation of salt crystals. Samples can subsequently be thawed at room temperature and refrozen without affecting the amount or the integrity of the recoverable RNA.
2. Storage at -20°C is recommended for long-term storage. Incubate samples at 4°C overnight, then transfer to -20°C . Crystals may form in the storage buffer; which will not affect subsequent RNA isolation. If crystals are a concern, remove the RNAsafeguard prior to storing the samples at -20°C . Samples can subsequently be thawed at room temperature and refrozen without affecting the amount or the integrity of the recoverable RNA.
3. Storage at 4°C is recommended for up to 1 month without any experimental evidence of RNA degradation.
4. Storage at ambient temperature RNA isolated from samples stored at 25°C for one week is intact. RNA from samples stored at 25°C for two weeks appears slightly degraded, but still of sufficient quality for nuclease protection assay or RT-PCR analysis.
5. RNA isolated from samples stored at 37°C is intact after a 24-hour incubation, but is partially degraded after a 3 day incubation.

C. RNA Isolation from Material in RNAsafeguard.

Tissue sample: Tissues that have been stored in RNAsafeguard should be removed from the storage solution with sterile forceps, and smash the tissue into pieces in liquid nitrogen or dry ice and then RNA may be extracted from cells stored in RNAsafeguard using a one-step disruption/extraction solution (BIOZOL, Product Code BSC51M1, Hangzhou bioer S&T Co.LTD). This can be done by adding ten volumes of the one-step solution to the cell mixture, (SimplyP Total RNA Extraction kit, Product Code BSC52M2, Hangzhou bioer S&T Co.LTD)) and proceeding normally.

Cell sample: Cultured cell or white cell in RNAsafeguard can be harvested with low centrifugation, The RNA extraction method is as same as tissue.