

## ***RNAhold®***

Cat.No.: EH101

Storage: at room temperature for one year

### Description

*RNAhold®* is an aqueous, nontoxic tissue preservation solution. It can inactivate RNase and keep RNA intact by permeating cells and tissues. Cells and tissues can be stored at this solution for one week at room temperature without RNA degradation. It can be used for RNA preservation with bacteria, cells and most fresh animal tissues.

- Immediate RNase inactivation.
- Sample can be stored at room temperature for 1 week, 2-8°C for 1 month, -20°C or -80°C for long term storage.
- Ideal for field sample collection.

### Procedure

#### Amount of PBS needed

Sample type	Sample amount	Amount of PBS
Animal cells	$\leq 5 \times 10^6$	50-100 $\mu$ l
White blood cells	$\leq 5 \times 10^6$	50-100 $\mu$ l
Bacterial cells	$\leq 1 \times 10^9$	50-100 $\mu$ l

### I. Sample preparation

If any precipitation of *RNAhold®* solution is seen, heat it to 37°C and agitate to redissolve it.

#### 1. Fresh tissue sample

- (1) The amount of *RNAhold®*: The ratio of tissue sample to *RNAhold®* is 1:5-10. For example, use 0.5-1 ml *RNAhold®* for 0.1 g tissue samples, and immerse sample completely into *RNAhold®*.
- (2) Quickly cut up large samples into small pieces (<0.5 cm) in any single dimension, and immerse it into *RNAhold®*.  
(Small organs such as mouse liver, kidney and spleen can be stored in *RNAhold®* solution directly).

#### 2. Animal cells and bacteria

- (1) Centrifuge the suspension of cells or bacteria at 1,500×g at 2-8°C for 5 minutes, discard the supernatant.
- (2) Wash the pellets with ice-cold PBS.
- (3) Resuspend the pellets with volume of ice-cold PBS suggested in the above table.
- (4) Add 5-10 volumes of *RNAhold®* solution and mix thoroughly.

#### 3. White blood cells in whole blood

- (1) Separate the white blood cells from the red blood cells and sera.
- (2) Wash pellets with ice-cold PBS.
- (3) Resuspend the pellets with volume of ice-cold PBS suggested in the above table.
- (4) Add 5-10 volumes *RNAhold®* solution and mix thoroughly.

### II. Sample storage

1. Samples in *RNAhold®* solution can be stored at 2-8°C for at least one month, at room temperature for one week, or at 37 °C for one day.
2. Long-term storage at -20 °C: incubate the samples in *RNAhold®* solution overnight at 2-8°C to allow thorough penetration of the tissue, then transfer to -20°C.
3. Long-term storage at -80°C: incubate the samples in *RNAhold®* solution overnight at 2-8°C to allow thorough penetration of the tissue. Centrifuge at maximum speed (> 12,000×g), remove the solution then transfer to -80°C.



### III. RNA isolation

1. For tissue samples, retrieve tissue from *RNAhold*<sup>®</sup> solution with sterile forceps to start RNA isolation.
2. For cell samples, samples storage at 2-8°C, -20°C and room temperature, centrifuge and remove solution prior to extraction; storage at -80°C can be extracted without centrifugation.

#### Note

Tissues stored in *RNAhold*<sup>®</sup> solution can be frozen and thawed at least 20 times without significantly affecting the yield or the integrity of the recoverable RNA.

**For research use only, not for clinical diagnosis.**

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