Pioneer Research Anahita Company
No.157
Danesh street
Technology Park Pardis
Tehran/ Iran

DATA SHEET
Versions: 01
Revision date: 29/11/2023

1. Identification

Product name: RNA extraction kit

Reactions: 100 rxns

Cat. No.: PRA- RDNK

2. Description

RNA Discharge from Biological Samples:

To discharge RNA from biological samples, the process involves the removal of waste samples, followed by complete homogenization and subsequent cell lysis. Initial separation of stool waste occurs in the first step. Utilizing Lysozyme enzymes and necessary buffers for all cells, including gram-negative and positive bacteria, ensures complete lysis and lightening of the sample. The RNA attaches to filters by passing through columns containing Silica. After treatment with RNAse/RNase-Free water, the RNA sample is effectively separated from the filter.

3. Kit Contents

Component	Cat. no	Quantity
Lysis buffer A	PRA- DNK	2 vial of 25 ml
Lyse buffer B	PRA- DNC	1 vial of 20 ml
Lyse buffer D	PRA-PS	1 vial of 20 ml
Homogenizing Buffer	PRA- HBt	1 vial 25 ml
Precipitation Buffer	PRA-PS	30 ml
Washing buffer	PRA-DW	2 vials of 25 ml
DNase free distilled water	PRA-F-Column	1 vial of 10 ml
Microtube 2 CC	PRA-Column	100 units

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4. Storage specifications

The components of the RNA extraction kit from stool can be conveniently stored at room temperature.

5. Applications

Molecular Biology Applications:

- qPCR/RT-PCR
- RNA sequencing
- Transcriptomics
- rRNA depletion
- RNA structure/function studies
- RNA cloning
- In vitro translation
- Microarray analysis
- Northern blotting

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6. Assay Procedure

RNA Extraction Steps:

1. Add 500 µl of lysis buffer A to a DNase/RNase free microtube.

2. Add the appropriate amount of the sample (e.g., 200 µls of blood or 200 µl of tissue lysate solution) to the microtube and mix vigorously for 15 seconds on the vortex. Incubate at room temperature for 10 minutes, vortexing the samples every 5 minutes.

3. Add 200 µL of Lysis Buffer B to the microtube and mix vigorously for 5 seconds.

4. Add 200 µL of Lysis Buffer D to the microtube and mix vigorously for 5 seconds.

5. Centrifuge the microtube at 12,000-14,000 RPM for 5 minutes and transfer the supernatant to another DNase/RNase free microtube.

6. Add 300 µl of cold precipitating buffer to the new microtube and mix gently by hand.

7. Centrifuge the microtube at 12,000-14,000 RPM for 5 minutes and drain the supernatant completely.

8. Add 500 µl of washing buffer to the microtube and mix gently by hand.

9. Centrifuge the microtube at 12,000-14,000 RPM for 5 minutes, drain the supernatant completely, and dry the remaining washing solution in the microtube by inverting it on a paper towel.

10. Add 50 µl of DNase/RNase free distilled water and incubate for 2 minutes at room temperature. Note: Ensure that the temperature of distilled water is around 55 degrees Celsius to better isolate RNAs.

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7. Safety

The solutions used in the kit have oxidizing and acidic properties. Avoid direct contact with skin and eyes. In case of contact with the mentioned tissues, wash with plenty of water and seek medical attention at the nearest medical center.

8. Quality Certifications

The mentioned product has been approved for marketing in the Islamic Republic of Iran.

9. Further information

This product is developed, designed, and sold exclusively for research purposes. The product has not been tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

10. Other Kits

Other RNA Extraction Kits and DNA:
All the following DNA extraction kits are available in all three formats: column, sedimentary, and magnet nanoparticles:
1. DNA extraction kits from blood and tissue by column
2. DNA extraction kits from gram-positive and negative bacteria
3. DNA extraction kit from mycobacterium
4. DNA extraction kit from Fungi
5. DNA extraction kit from virus
6. DNA extraction kit from HPV virus
7. DNA extraction kits from plant tissue

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RNA Extraction Kits:
All the following RNA extraction kits are available in both column and sedimentary methods:

1. RNA extraction kits from blood and tissue
2. RNA extraction kits from gram-positive and negative bacteria
3. RNA extraction kit from mycobacterium
4. RNA extraction kit from Fungi
5. RNA extraction kit from the virus
6. RNA extraction kits from plant tissue

NOTE

All products have been produced by Karmania Pars Gene company in Iran.