

# RNA Cleanup Kit

*For research use only*

## Catalogue Numbers

PR050  
PR100

## Quantity

50 rxns  
100 rxns

**Geneaid**



ISO 9001:2008 QMS

## Introduction

The RNA Cleanup Kit uses a simple and efficient spin column procedure to purify Total RNA stored in RNase-free water, elution buffer or TE Buffer following extraction using acid-guanidinium-phenol-chloroform based methods such as TRIzol® Reagent and Geneaid's GENEzol™ Reagent. Contaminants such as RNases, DNA and residual phenol are effectively removed using a simple 4 step procedure. The high-quality, total RNA is eluted in RNase-free Water or TE (RNase-free) and is ready for use in a variety of sensitive downstream applications.

## Quality Control

The RNA Cleanup Kit is tested on a lot-to-lot basis according to Geneaid's ISO-certified quality management system. Following RNA purification using the RNA Cleanup Kit, 10 µl from a 50 µl eluate of purified RNA is analyzed by electrophoresis on a 0.8% agarose gel.

## Advantages

- Purify up to 50 µg of total RNA within 10 minutes
- Recovery: up to 80% of high quality RNA (A260/A280 = 1.9-2.0)
- Elution volume: 20-50 µl
- Compatibility: purify RNA stored in RNase-free water, elution buffer or TE Buffer following extraction using GENEzol™, TRI-Reagent®, TRIzol®, RNAzol® and QIAzol® etc.

## Applications

RT-PCR, Northern Blotting, Primer Extension, mRNA Selection, cDNA Synthesis, RNase Protection Assay

## Caution

During operation, always wear a lab coat, disposable gloves, protective goggles and (anti-fog) procedure mask. Disposable/non-disposable glassware, plasticware and automatic pipettes should be sterile (RNase-free) and used only for RNA procedures.

## Additional Requirements

absolute ethanol, 1.5 ml microcentrifuge tubes (RNase-free)

## Components and Storage

Item	Volume	Product	Shipping	Storage
RNA Pure Buffer	3 ml	PR004	room temperature	dry at room temperature (15-25°C)
	30 ml	PR050		
	60 ml	PR100		
Wash Buffer <sup>1</sup> (Add Ethanol)	1 ml (4 ml)	PR004	room temperature	dry at room temperature (15-25°C)
	12.5 ml (50 ml)	PR050		
	25 ml (100 ml)	PR100		
RNase-free Water	1 ml	PR004	room temperature	dry at room temperature (15-25°C)
	6 ml	PR050		
	6 ml	PR100		
PR Columns	4 pcs	PR004	room temperature	dry at room temperature (15-25°C)
	50 pcs	PR050		
	100 pcs	PR100		
2 ml Collection Tubes	4 pcs	PR004	room temperature	dry at room temperature (15-25°C)
	50 pcs	PR050		
	100 pcs	PR100		

<sup>1</sup>Add absolute ethanol (see the bottle label for volume) to Wash Buffer prior to initial use

## RNA Cleanup Kit Protocol Procedure

Please read the entire instruction manual prior to starting the Protocol Procedure.

### 1. Sample Preparation

1. Add **up to 100 µl of RNA product (in RNase-free water, elution buffer, TE)** to a 1.5 ml microcentrifuge tube (RNase-free).
2. Add **5 volumes of RNA Pure Buffer to 1 volume of the sample** then shake vigorously.

### 2. RNA Binding

1. Add an **equal volume of 70% ethanol (if the sample mixture is 600 µl, add 600 µl of 70% ethanol)** to the sample mixture.
2. Shake the mixture vigorously and break up any precipitate with a pipette.
3. Place a **PR Column** in a **2 ml Collection Tube** then transfer **500 µl of the ethanol-added mixture to the PR Column**.
4. Centrifuge at 14-16,000 x g for 1 minute. Discard the flow-through and transfer the remaining mixture to the same **PR Column**.
5. Centrifuge at 14-16,000 x g for 1 minute. Discard the flow-through and place the **PR Column** back in the **2 ml Collection Tube**.

### 3. RNA Wash

1. Add **600 µl of Wash Buffer (make sure ethanol was added)** to the **CENTER** of the **PR Column**.
2. Centrifuge at 14-16,000 x g for 30 seconds. Discard the flow-through and place the **PR Column** back in the **2 ml Collection Tube**.
3. Centrifuge at 14-16,000 x g for 3 minutes to dry the column matrix.

### 4. RNA Elution

1. Place the dried **PR Column** in a clean 1.5 ml microcentrifuge tube (RNase-free).
2. Add **20-50 µl of RNase-free Water** or TE (RNase-free) to the **CENTER** of the column matrix.
3. Let stand for 2 minutes or until the **RNase-free Water** or TE (RNase-free) is absorbed completely by the matrix.
4. Centrifuge at 14-16,000 x g for 2 minutes to elute the purified RNA.

## Troubleshooting

Problem	Cause	Solution
Low Yield	A. Incorrect RNA elution	A. Make sure RNase-free Water is added to the center of the PR Column and is absorbed completely.
Degraded RNA	A. Incorrect sample storage temperature	A. Extracted RNA should be stored at -70°C.
Low RNA A260/A280	A. Incomplete wash step	A. Wash the PR Column with ethanol added Wash Buffer 2 times.
Eluted RNA does not perform well in downstream applications	A. Residual ethanol contamination	A. Following the wash step, dry the PR Column with additional centrifugation at 14-16,000 x g for 5 minutes.

## Related RNA Extraction Products

RNA Extraction and Purification		
Product	Package Size	Catalogue Number
Total RNA Mini Kit (Blood/Cultured Cell)	50/100/300 preps	RB050/100/300
Total RNA Maxi Kit (Blood/Cultured Cell)	10/25 preps	RBM10/25
Total RNA Mini Kit (Tissue)	50/100/300 preps	RT050/100/300
Total RNA Maxi Kit (Tissue)	10/25 preps	RTM10/25
Total RNA Mini Kit (Plant)	50/100/300 preps	RP050/100/300
Total RNA Maxi Kit (Plant)	10/25 preps	RPM10/25
Presto™ Mini RNA Bacteria Kit	50/100/300 preps	RBB050/100/300
Presto™ Mini RNA Yeast Kit	50/100/300 preps	RBY050/100/300
96-Well Total RNA Extraction Kit	4/10 x 96 preps	RBPO4/10
miRNA Isolation Kit	50/100 preps	RMI050/100
GENEzol™ Reagent	50/100/200 rxns	GZR050/100/200
GENEzol™ TriRNA Bacteria Kit	50/100 rxns	GZB050/100
GENEzol™ TriRNA Pure Kit	50/100/200 rxns	GZX050/100/200
TriRNA Pure Kit	50/100/200 rxns	TRP050/100/200
RNA Cleanup Kit	50/100 rxns	PRO50/100

For additional product information, please visit [www.geneaid.com](http://www.geneaid.com). Thank you!