RNA Cleanup Kit

For research use only

Catalogue Numbers	Quantity
PR050	50 rxns
PR100	100 rxns

Geneaid

CERTIFICATE NO. QAIC/TW/50077
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-chlorofom 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 (15-25ºC)
	30 ml	PR050		
	60 ml	PR100		
Wash Buffer[1] (Add Ethanol)	1 ml (4 ml)	PR004	room temperature	dry at room temperature (15-25ºC)
	12.5 ml (50 ml)	PR050		
	25 ml (100 ml)	PR100		
RNase-free Water	1 ml	PR004	room temperature	dry at room temperature (15-25ºC)
	6 ml	PR050		
	6 ml	PR100		
PR Columns	4 pcs	PR004	room temperature	dry at room temperature (15-25ºC)
	50 pcs	PR050		
	100 pcs	PR100		
2 ml Collection Tubes	4 pcs	PR004	room temperature	dry at room temperature (15-25ºC)
	50 pcs	PR050		
	100 pcs	PR100		

[1]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	RBP04/10
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	PR050/100

For additional product information, please visit www.geneaid.com. Thank you!