

RNA Pure Kit

For research use only

Sample	: up to 100 µl of RNA products
Recovery	: up to 95%
Format	: spin column
Operation time	: 20 minutes
Elution volume	: 20-50 µl

Geneaid



www.geneaid.com

Introduction

The RNA Pure Kit was designed to purify or concentrate RNA products which have been previously isolated using Geneaid's Reagents (Tri-Total RNA Isolation Reagent and Tri-Plant Total RNA Isolation Reagent) or various other RNA isolation methods. The unique RNA Pure Buffer ensures easy binding of RNA to the glass fiber matrix of the spin column (1). Contaminants are removed with a Wash Buffer (containing ethanol) and the ultra pure RNA is eluted by RNase-free water or TE (RNase-free). Salts, enzymes and unincorporated nucleotides can be effectively removed from the reaction mixture without phenol extraction or alcohol precipitation. Typically, recoveries are 80-90% from RNA samples. The entire procedure can be completed in 20 minutes and the purified RNA is ready for use in RT-PCR and Northern Blotting.

Quality Control

The quality of the RNA Pure Kit is tested on a lot-to-lot basis by purifying RNA of various sizes from aqueous solutions. The purified RNA is checked by electrophoresis.

Kit Contents

Name	PR004	PR050	PR100
RNA Pure Buffer	3 ml	30 ml	80 ml
Wash Buffer* (Add Ethanol)	1 ml (4 ml)	12.5 ml (50 ml)	25 ml (100 ml)
RNase-free water	1 ml	6 ml	6 ml
PR Column	4 pcs	50 pcs	100 pcs
2 ml Collection Tube	4 pcs	50 pcs	100 pcs

Order Information

Product Name	Package Size	Cat. No.
RNA Pure Kit	50/100 preps	PR050/100
DNA Pure Kit	100/300 preps	DP100/300
G-25 Mini Column	50 preps	CG025
G-50 Mini Column	50 preps	CG050
96-Well G-50 Plate	4/10 x 96 Wells	CGP04/10

*Add absolute ethanol (see the bottle label for volume) to the Wash Buffer prior to initial use

Caution

RNA Pure Buffer contains guanidine thiocyanate which is a harmful irritant. During operation, always wear a lab coat, disposable gloves, and protective goggles.

References

(1) Vogelstein, B., and Gillespie, D. (1979) Proc. Natl. Acad. Sci. USA 76, 615

Additional requirements

microcentrifuge tubes, absolute ethanol

RNA Pure Protocol

- Add absolute ethanol to the Wash Buffer prior to initial use (see the bottle label for volume)

Step 1 Sample Prep.	<ul style="list-style-type: none"> ● Transfer up to 100 µl of RNA product to a 1.5 microcentrifuge tube. ● Add 5 volumes of RNA Pure Buffer to 1 volume of the sample and shake vigorously.
Step 2 RNA Binding	<ul style="list-style-type: none"> ● Add an equal volume of 70% ethanol (if the sample mixture is 600 µl, add 600 µl of 70% ethanol) to the sample mixture from Step 1 and shake vigorously (break up any precipitate with pipetting). ● Place a PR Column in a 2 ml Collection Tube. ● Transfer 500 µl of the ethanol-added mixture to the PR Column. ● Centrifuge at 14-16,000 x g for 1 minute. ● Discard the flow-through and transfer the remaining mixture to the same PR Column. ● 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.
Step 3 Wash	<ul style="list-style-type: none"> ● Add 600 µl of Wash Buffer (ethanol added) into the center of the PR Column. ● 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. ● Centrifuge again for 3 minutes at 14-16,000 x g to dry the column matrix.
Step 4 RNA Elution	<ul style="list-style-type: none"> ● Transfer the dried PR Column to a new 1.5 ml microcentrifuge tube. ● Add 20-50 µl of RNase-free water or TE (RNase-free) into the center of the column matrix. ● Let stand for 2 minutes or until the RNase-free water or TE (RNase-free) is completely absorbed by the matrix. ● Centrifuge for 2 minutes at 14-16,000 x g to elute the purified RNA.

Troubleshooting

Problem	Possible Reasons/Solution
Low Yield	<p>Incorrect RNA Elution Step</p> <ul style="list-style-type: none"> ● Ensure that the RNase-free water is completely absorbed after being added to the center of the PR Column. <p>Incomplete RNA Elution</p> <ul style="list-style-type: none"> ● If the RNA fragments are larger than 10 Kb, use preheated RNase-free water (60-70°C) in the Elution Step to improve the elution efficiency.
Eluted RNA does not perform well in downstream applications	<p>Residual ethanol contamination</p> <ul style="list-style-type: none"> ● Following the Wash Step, dry the PR Column with additional centrifugation at 14-16,000 x g for 5 minutes or incubate at 60°C for 5 minutes.