

Quick Start

GenElute™-E Single Spin RNA Cleanup Kit

For elimination of inhibitors, TRIzol™ reagents, organic solvents and a wide range of impurities typically used for isolation from RNA solutions

EC800

Quick-Start Protocol

(See Standard Protocol for detailed instructions.)

Column preparation

- Vortex GenElute™-E Spin Column and place in a 2 mL tube for five minutes before continuing.
- Loosen screw cap of Spin Column.
Optional: Punch a hole in the cap with the Cap Puncher.
- Snap off bottom closure. Place Spin Column back into 2 mL tube.
- Centrifuge 1 minute at 1000 x g to collect column buffer.
- Place column in a 1.5 mL tube.

Purification of RNA

- Transfer 80 - 110 µL of sample to column.
- Centrifuge 1 minute at 1000 x g to collect RNA.
- Collected RNA is ready to use.

Intended Use

This protocol has been developed to deplete impurities like inhibitors, salts, nucleotides, TRIzol™ reagents, phenol, chloroform and other organic solvents typically used for isolation from RNA solutions.

Storage and Stability

GenElute™-E RNA Cleanup Kit should be stored at room temperature. Use the kit within 12 months of receipt.

Materials and Equipment Needed

Kit Contents

- RNA Cleanup Spin Columns ○
- 1x Tris Buffer ①

Not Supplied with Kit

- Microcentrifuge with rotor for 1.5 mL and 2 mL reaction tubes.

Important: Set centrifuge to relative centrifugal force, rcf (x g). If needed, calculate equivalent rpm by the formula:

$$\text{rpm} = 1,000 \times \sqrt{g / (1.12 \times r)},$$

where r = radius of rotor in mm
and g is the required g-force.

- Vortex device.
- Pipets for 10 µL and 200 µL scales, corresponding pipet tips.
- One reuseable reaction tube (2 mL) per sample for column preparation.
- One reaction tube (1.5 mL) per sample for collection of the purified RNA.

Preparation Before Starting

- Set the microcentrifuge to 1000 x g.

Standard Protocol

Column Preparation

1. Vortex the GenElute™-E Spin Column briefly and place into a 2 mL reaction tube for 5 minutes before continuing.
2. Loosen the screw cap of the Spin Column. Remove from the reaction tube and break off the bottom closure of the column. The screw cap must stay loosened half a turn to avoid generation of a vacuum. Place the Spin Column back into the 2 mL reaction tube.
3. Centrifuge for 1 minute at 1000 x g. Discard the 2 mL reaction tube containing the column buffer.
4. Place the prepared GenElute™-E Spin Column into a new 1.5 mL reaction tube for collection of the purified RNA and place back into the rack.

Purification of RNA

5. Transfer a maximum of 80 to 110 μ L of sample containing the RNA into the prepared GenElute™-E Spin Column as illustrated:

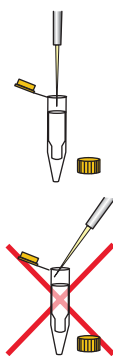
- Open cap and pipet the sample slowly (5 sec) onto the center of the resin bed of the prepared Spin Column.
- Close screw cap and loosen again half a turn.

Important: Do not re-close the screw cap of the Spin Column completely.

Note: During loading of sample, do not touch the resin bed with your pipette tip.

6. Centrifuge for 1 minute at 1000 x g. The purified RNA flows through the column into the 1.5 mL storage tube. Discard the Spin Column.

The collected RNA can be used immediately or kept at 2-8 °C or for long-term storage at -20 °C. For spectrophotometric analysis, use the 1x Tris Buffer ① supplied with the kit.



Cap Puncher Protocol (optional)

Column Preparation

1. Vortex the GenElute™-E Spin Column briefly and place into a 2 mL reaction tube.
2. Use of the Cap Puncher: Punch a hole into the column cap and lift the column together with the Cap Puncher out of the 2 mL collection tube. Snap off bottom closure of the column and detach the Cap Puncher by twisting clockwise while pulling out. Place the punched Spin Column back into the 2 mL reaction tube.
3. Centrifuge for 1 minute at 1000 x g. Discard the 2 mL reaction tube containing the column buffer.
4. Place the prepared GenElute™-E Spin Column into a new 1.5 mL reaction tube for collection of the purified RNA and place back into the rack.

Purification of RNA

5. Transfer 80 - 110 μ L of sample containing the RNA into the prepared GenElute™-E Spin Column as illustrated:

- Insert pipet tip vertically through the hole in the column cap.
- Pipet the sample slowly (5 sec) into the column.

6. Centrifuge for 1 minute at 1000 x g. The purified RNA flows through the column into the 1.5 mL storage tube. Discard the Spin Column.



The collected RNA can be used immediately or kept at 2-8 °C or for long-term storage at -20 °C. For spectrophotometric analysis, use the 1x Tris Buffer ① supplied with the kit.

Product Ordering

Purchase online at SigmaAldrich.com/products.

Description	Qty	Catalogue No.
GenElute™-E Single Spin RNA Cleanup Kit	10	EC800-10RXN
	50	EC800-50RXN
	250	EC800-250RXN
GenElute™-E Single Spin Cap Puncher	1 EA	EC9999-1EA

Precautions and Disclaimer

This product is for Research use only. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

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