Quick-Start Protocol

CarbonPrep Transport and Storage

Uses and Applications

- Re-purify an RNA sample to remove protein and DNA contamination.
- Store and transport an RNA sample. An RNA sample in water can be complexed to carbon using this protocol where it will be stable at room temperature for up to 28 days.

Required Materials

- Carbon beads
- One RNA pre-binding solution kit, which comes with RNA pre-binding solution (RPS) and RPS wash buffer.
- 1.25 ml of wash buffer per sample. You may substitute this for 70% ethanol and 30% TE buffer.
- Molecular biology grade ethanol and RNase free water.
- Your sample should consist of RNA suspended in water or another aqueous liquid. This protocol will not work if the RNA is bound inside of cells or other biological matrices.

Further Information

- Safety Data Sheets: See product page.
- Technical assistance: support@magnetics.life

Before Starting

- Add ethanol to bottles which require it. The amount to add is listed on the bottle. After adding ethanol, mark the bottle in the space provided on the label.

Procedure

1) This procedure assumes 100 ul of RNA solution. For other starting volumes see the table below. Add 25 µL of RNA pre-binding solution (RPS) and incubate for 7 min.
2) Add 75 µL carbon-beads to the above solution, mix and incubate for 2 min. It is not necessary to remove the storage buffer that the beads are shipped in. You should see the beads clumping or floccules forming this is the RNA binding to the carbon-beads.
3) Flick or mix the above solution and add 200 ul of 100% ethanol and mix well by pipetting up and down.
4) Place on magnetic stand for 90 secs and then remove supernatant.
5) Wash using 750 ul RPS wash buffer and place on a magnetic stand for 30 secs and then remove supernatant.

If you wish to store the RNA for shipping:

Add 500 µl of wash buffer and seal the tube. RNA is stable in this state to 28 days without detectable degradation. Continue below when you wish to recover and use the RNA.

For RNA purification or to recover stored RNA:

6) Wash using 500 ul of wash buffer and transfer the suspension to a fresh Eppendorf tube and place on a magnetic stand for 30 secs and then remove supernatant.
7) Wash using 500 ul of wash buffer and transfer the suspension to a fresh Eppendorf tube and place on a magnetic stand for 30 secs and then remove supernatant.
8) Dry the beads for 10 mins (dry them in hood to expedite the drying)
9) After drying add 50 ul of elution buffer (RNase free water) and heat samples for 5 min at 65 degree.
10) After heating, mix/flick samples and perform centrifugation steps at 10,000 g for 2 min to separate beads from RNA elute.
11) After centrifugation step, place tube on magnetic stand and collect the clear liquid which contains pure RNA.

Reagent Volume Quick Reference

	Sample	RPS	Carbon Beads	Ethanol	RPSWB	WB	Elution
Example*	100 µL	25 µL	75 µL	200 µL	750 µL	500/500 µL	30-100 µL
Ratio**	1	0.25	0.75	2	750 µL	500/500 µL	30-100 µL

***The above protocol uses 100 µL of aqueous RNA as an example.**
****Use 75 µL of carbon-beads if 5 to 20 µg of RNA is used as input.**