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HighPrep™ RNA Elite

INSTRUCTIONS FOR USE

Catalog Number:
RC-90001, RC-90005, RC-90050, RC-90250, RC-90500

Revision v1.0

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For descriptions of symbols on product labels or product documents, go to **https://www.magbiogenomics.com/.**

The customer is responsible for compliance with regulatory requirements that pertain to their procedures and uses of the kit.

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1 Product information

Intended use

HighPrep™ RNA Elite uses a magnetic bead-based chemistry for the purification and concentration of RNA or cDNA after enzymatic reactions.

Product information

HighPrep™ RNA Elite (Cat. No. RC-90001, RC-90005, RC-90050, RC-90250, and RC-90500) uses a simple 3 steps procedure: Bind-Wash-Elute. The RNA Elite process consists of a selective binding of RNA to the HighPrep™ RNA Elite particles, followed by the removal of unincorporated dyes, nucleotides, salts, primers, non-targeted amplicons, and other contaminants. RNA amplicons and fragments are selectively bound to the magnetic beads' particles; and highly purified RNA is eluted with low salt elution buffer or water which can be used directly for downstream applications. HighPrep™ RNA Elite is designed for both manual and fully automated purification of sequencing products.

Contents and storage of the Kit

Product Catalog Number	Description	Number of Reactions	Storage Conditions
RC-90005	HighPrep™ RNA Elite - 5 mL	278	2-8°C DO NOT FREEZE
RC-90050	HighPrep™ RNA Elite - 50 mL	2,778	
RC-90250	HighPrep™ RNA Elite - 250 mL	13,890	
RC-90500	HighPrep™ RNA Elite - 500 mL	27,780	

Number of reactions is based on typical 10 µL reaction volume.
Volume of HighPrep™ RNA Elite reagent per reaction = 1.8x (Reaction Volume)

Required materials not supplied

The following materials are needed but not supplied with the kit:

Item	Source
80% Ethanol, RNase free (Use Freshly prepared 80% ethanol)	Any vendor of choice
Reagent grade water, RNase free, TRIS-HCl pH 8.0, or TE buffer	Any vendor of choice
RNase inhibiting surfactant solutions or 70% ethanol	Any vendor of choice
3% hydrogen peroxide	Any vendor of choice
DEPC treated water	Any vendor of choice
Magnetic stand or plate (manual DNA recovery)	www.magbiogenomics.com
Automated platforms for magnetic bead purification (Automated DNA recovery)	Compatible with most platforms but the customer must validate the protocol
96 well cycling plate or 384 well cycling plate or 1.5 mL-2 mL Tubes (for sample processing)	www.nrsbiologics.com or thermofisher.com
Laboratory mixer, vortex, or equivalent	Any laboratory vortex that can mix the beads efficiently
Single and multichannel adjustable pipettors (1.00 µL to1000 µL)	Any accurate pipette that has been calibrated
Cold block or ice	Any vendor of choice
Sterile aerosol barrier (filtered) pipette tips (DNase and RNase Free)	Any vendor of choice
Polypropylene reservoirs	Any vendor of choice

2 HighPrep™ RNA Elite - 96 Well or 1.5 - 2 mL Tube Format

***Bring HighPrep™ RNA Elite to room temperature for at least 30 mins before use**

1. Shake the HighPrep™ RNA Elite reagent thoroughly to fully resuspend the magnetic beads.

2. Transfer RNA reaction to appropriate 96-well plate.

   For 50 µL reaction, adjust volume using sterile water.

3. Add HighPrep RNA™ Elite reagent volume according to the RNA reaction.
   See table below to determine appropriate volume.

Reaction Volume (µL)	HighPrep RNA Elite Volume at 1.8X (µL) *
10	18
14	25
20	36

* Formula used to calculate the volume of HighPrep™ RNA Elite reagent needed for RNA reaction:
HighPrep™ RNA Elite reagent volume per reaction = 1.8 X PCR reaction volume.

4. Mix thoroughly the HighPrep™ RNA Elite reagent and sample by pipetting up and down 6-8 times.

5. Incubate the mixture for 5 minutes at room temperature.

6. Place the sample plate/tube on the 96 magnetic separation device for 3 minutes or until the solution clears. Beads will pull to the side of the well.

7. With the sample plate/tube still on the magnet, remove and discard the supernatant by pipetting.

   Note: Do not disturb the attracted beads while aspirating the supernatant.

8. With the sample plate on the magnet, add 200 µL of 80% ethanol to each well and incubate for 30 seconds at room temperature.

9. With the plate still on the magnet, remove and discard the supernatant by pipetting.

10. Repeat steps 8 - 9 for a total of two 80% ethanol washes.

11. Dry the beads by incubating the plate for 10 minutes at room temperature with the plate still on the magnetic separation device.

    Note: It is critical to completely remove all traces of alcohol but take caution in not over drying the beads as this will reduce the yield.

12. Remove the sample plate from the magnetic separation device. Add 40 µL of elution buffer (reagent grade water, TRIS-HCl pH 8.0 or TE buffer) to each well and pipette up and down 10 times to mix. Prewarming the elution buffer to 55°C can increase the yield.

13. Incubate for 2 minutes at room temperature.

14. Place the sample plate back on the magnetic separation device and wait 3 minutes or until the magnetic beads clear from the solution.

15. Transfer the eluate (cleared supernatant) to a new plate for storage or for subsequent applications.

2 HighPrep™ RNA Elite - 384 Well or 1.5 - 2 mL Tube Format

***Bring HighPrep RNA Elite to room temperature for at least 30 mins before use**

1. Shake the HighPrep™ RNA Elite reagent thoroughly to fully resuspend the magnetic beads.

2. Transfer RNA reaction to appropriate 384-well plate.

   For 50 µL reaction, adjust volume using sterile water.

3. Add HighPrep™ RNA Elite reagent volume according to the PCR reaction.

   See table below to determine appropriate volume.

Reaction Volume (µl)	HighPrep RNA Elite Volume at 1.8X (µl) *
5	9
7	12.6
10	18

* Formula used to calculate the volume of HighPrep™ RNA Elite reagent needed for RNA reaction:
HighPrep™ RNA Elite reagent volume per reaction = 1.8 X PCR reaction volume.

4. Mix thoroughly the HighPrep™ RNA Elite reagent and sample by pipetting up and down 6-8 times.

5. Incubate the mixture for 5 minutes at room temperature.

6. Place the sample plate on the 384 magnetic separation device for 2 minutes, or until the solution clears. Beads will pull to the side of the well.

7. With the sample plate still on the magnet, remove and discard the supernatant by pipetting.

   Note: Do not disturb the attracted beads while aspirating the supernatant.

8. With the plate on the magnet, add 30 µL of 80% ethanol to each well and incubate for 30 seconds at room temperature.

9. With the plate still on the magnet, remove and discard the supernatant by pipetting.

10. Repeat steps 8 - 9 for a total of two 80% ethanol washes.

11. Dry the beads by incubating for 3-5 minutes at room temperature with the plate still on the magnetic separation device.

    Note: It is critical to completely remove all traces of alcohol but take caution in not over drying beads as this will reduce the yield.

12. Remove the sample plate from the magnetic separation device. Add 30 µL of elution buffer (reagent grade water, TRIS-HCl pH 8.0 or TE buffer) to each well and pipette up and down 10 times to mix. Prewarming the elution buffer to 55°C can increase the yield.

13. Incubate at room temperature for 2 minutes.

14. Place the sample plate back on the magnetic separation device and wait 2 minutes or until the magnetic beads clear from the solution.

15. Transfer the eluate (cleared supernatant) to a new plate for storage or for subsequent applications.

Safety and Warning Information

Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). MSDS can be downloaded from the “Product Resource” tab when viewing the product kit**.**
Download MSDS at www.magbiogenomics.com
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Warning and Precautions

- This kit has not been FDA cleared or approved for diagnostic use in the United States of America.
- Care should be taken to avoid contamination by adequately controlling sample preparation, handling, and processing.
- Dispose of unused kit reagents and human specimens according to local, state, and federal regulations.
- Specimens may be infectious. Follow Universal Precautions when handling specimens.