

The logo for 'Mole' is written in a bold, orange, sans-serif font. A registered trademark symbol (®) is located at the top right of the letter 'e'. There are three black dots scattered around the logo: one above and to the right, one below and to the left, and one to the right.

MoleStrips™ RNA Cells
Product MGK30-102-101 / MGK30-102-102

MGM-204-002

MoleStrips™ RNA Cells

Intended use

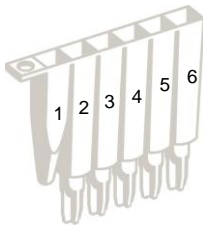
MoleStrips™ RNA Cells is used together with the GeneMole® instrument for purification of RNA from mammalian cultured cells. For research use only.

Important

Before first time use, add 0.5 ml sterile water to the tube containing glycogen. Put the cap back on and vortex thoroughly to dissolve the glycogen.

Materials supplied

Prod. No.	MGK30-102-101	MGK30-102-102
No. of preps	32	64
MoleStrips™	32	64
Lysis Buffer	12.5 ml	12.5 ml x 2
Glycogen	1	1
MoleTips	96	--
Sample tubes	32	--
Elution tubes	32	--
MoleCaps	32	--

Content of each well in the MoleStrips™ RNA Cells	
1. Empty	 <p>MoleStrip™ RNA Cells</p>
2. Magnetic Beads and binding buffer	
3. Binding Buffer	
4. Wash 1	
5. Wash 2	
6. Elution Buffer (2.5 mM Tris, pH 8.0)	

Additional material required for product MGK30-102-102

Product	Prod. No.
MoleTips	MGA10-012-003
MoleTubes (Non-sterile/Sterile)	MGA10-013-002/MGA10-014-002
MoleCaps	MGA10-015-002
Disposable Waste Bins*	MGA10-008-005

*Optional for both MGK30-102-101 and MGK30-102-102 (However, when working with RNA it is highly recommended to use disposable waste bins)

Storage

MoleStrips™ RNA Cells should be stored dry, at room temperature (15-25 °C). Store the glycogen solution at 4 °C.

Starting material

Freshly-prepared cell pellet or cell pellet stored at -80 °C or lower.

Recommended input and expected performance

The MoleStrips™ RNA Cells kit is used together with the GeneMole® instrument to purify RNA from cells. For RNA extraction, GeneMole® can process up to 8 samples in one run.

For RNA extraction with the MoleStrips™ RNA Cell Kit, two different GeneMole protocols have been developed; “RNA Cells 8” and “RNA Cells DNase”. The “RNA Cells DNase” protocol includes DNase treatment within the isolation procedure. The elution volume can be specified as 50, 100 or 200 µl. Elution in 100 µl is recommended.

The table shows recommended maximum input and expected performance with respect to obtained RNA yields for various cell pellets tested on the GeneMole® instrument.

Example of material	GeneMole® software protocol	Input	Typical conc. [ng/μl]
HeLa	RNA Cells 8	1 x 10 ⁶ cells/pellet	95-230
Hek293	RNA Cells 8	1 x 10 ⁶ cells/pellet	200-260
Ramos	RNA Cells 8	1 x 10 ⁶ cells/pellet	60-70
MDCK	RNA Cells 8	1 x 10 ⁶ cells/pellet	150-170
M1	RNA Cells 8	1 x 10 ⁶ cells/pellet	100-120
HeLa	RNA Cells DNase	1 x 10 ⁶ cells/pellet	40-160
Hek293	RNA Cells DNase	1 x 10 ⁶ cells/pellet	180-210
Ramos	RNA Cells DNase	1 x 10 ⁶ cells/pellet	30-50
MDCK	RNA Cells DNase	1 x 10 ⁶ cells/pellet	80-130
M1	RNA Cells DNase	1 x 10 ⁶ cells/pellet	65-75

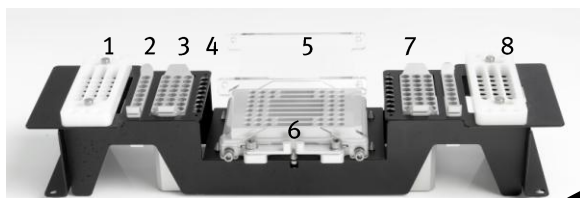
*Typical yield when eluting in 100μl. The yield will vary depending on the quality of the material, storage conditions and the homogenization technique. All the samples above were homogenized using the Precellys 24 “bead-beater” system from Bertin Technologies (1x20 sec at 5000 rpm).

Protocol

1. Switch on the GeneMole® instrument. Wait until the power indicator turns green (this may take 2 min).
2. Open the GeneMole® door and lift out the work tray.
3. Resuspend the **MoleStrips™** content by turning the strips upside-down 3 times. Open the jig handles (ref. 6 in Figure 1) and place the black adapter plate with the **MoleStrips™** in the jig. Fasten the **MoleStrips™** in the jig by closing the jig handles.

Important: Please make sure the black adapter plate is positioned between the jig and the **MoleStrips™** and ensure the **MoleStrips™** are pressed all the way down into position before locking the **MoleStrips™**.

4. Using Figure 1 as a reference load the worktray with tips, elution tubes and **MoleStrips™** according to the number of samples to be processed. Please note that tips, tubes and strips are loaded on the left hand side of the tray.



← Positioning holes indicate front of tray

Figure 1: Loading of the worktray for RNA extraction:

1: pipette tips, 2: elution tubes, 3: empty waste bin, 4: sample tubes, 5: adapter plate and **MoleStrips™**
6: jig handles. For DNase treatment: 7: Tubes with DNase, 8: pipette tips.

5. **Preparation of sample:**

Step	Tissue sample
Optional DNase step	Load sample tubes containing DNase mix (200μl) on right hand side of tray, in position 7 in Figure 1 (Further description on DNase mix, see table below). Also load tips on the right side of the tray, in position 8 in figure 1 (3 tips per sample).
A) Lysis	Add 375 μl lysis buffer to the cell pellet, mix 10 times using a pipette
B) Homogenization	Homogenize the sample thoroughly. Homogenization with a “bead-beater” (like e.g. the Precellys 24 from Bertin Technologies).
C) Centrifugation	Centrifuge the lysate 1 min at 10000 rpm and proceed to step 6 below.

6. Transfer 350 μl of the lysates to GeneMole® sample tubes and add up to 5 μl of glycogen solution to each sample. Place the tubes in the worktray according to Figure 1.

7. Place the worktray back into the GeneMole® and ensure it is correctly aligned by using the positioning pins located at the base of the instrument. Fit the pins into the holes located in each front corner of the worktray. Close the GeneMole® door.
8. Use the touch screen to select “Run a Protocol” from the GeneMole Menu. The Run Preparation screen will appear.
9. Select the protocol “RNA Cells 8” (for DNase protocols: “RNA Cells DNase”) from the dropdown menu and confirm your choice by pressing “Accept”. Specify the elution volume by activating the relevant window on the run preparation screen. Use the up and down buttons for scrolling.
10. Choose “Next”. The Run Preparation screen will appear. Verify correct loading of the worktray by pressing “OK”.
11. Start protocol run by pressing “Start”.
Note: The blinking green light located below the touch screen indicates that GeneMole® is carrying out a protocol run.
12. The touch screen will display “Run Completed” and the instrument will generate a sound signal when the run is completed. Upon completion of a run, open the GeneMole® door and collect the elution tubes containing the purified RNA. Discard the used tips and tubes.

DNase treatment

DNase treatment may be necessary for certain RNA applications that are sensitive to small amounts of DNA such as real-time PCR applications. With the RNA Cells kit you have the option to run a DNase step during the isolation of RNA to remove DNA. We recommend using 30U DNase per isolation in a 200µl volume (see table below). Use the protocol “RNA Cells DNase”. Manual DNase treatment of the RNA eluate after isolation with the “RNA Cells 8” protocol can also be performed.

Material	For one isolation
Nuclease-free water	Varies
Reaction buffer	1X
DNase	20U - 30U
Total volume	200 µl

Cleaning procedures

Perform cleaning procedures if necessary after a GeneMole® run. It is recommended to clean relevant instrument parts with RNase AWAY wipes between runs when performing RNA extractions. For more detailed cleaning and maintaining instructions please refer to the GeneMole® User Manual.

Safety information

When working with chemicals always wear protective gear. For more information, please consult the appropriate material safety data sheets. MSDS is available upon request.

Product warranty and satisfaction guarantee

Mole Genetics guarantees the performance of all products in the manner described in our product literature. The purchaser must determine the suitability of the product for its particular use. Product warranty limits Mole Genetics liability only to the cost of the product.

For further information about GeneMole® and available applications see www.molegenetics.com and www.molecookbook.com

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