

## General Information

|                                           |                                                                                                                                        |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>                        | RNA                                                                                                                                    |
| <b>Kit</b>                                | miRNeasy Tissue/Cells Advanced Kit (cat. no. 217604)                                                                                   |
| <b>Sample material</b>                    | Tissues and cells                                                                                                                      |
| <b>Short protocol name</b>                | Standard                                                                                                                               |
| <b>Version</b>                            | 1                                                                                                                                      |
| <b>Full protocol name</b>                 | Purification of total RNA, including miRNA, from tissue and cells                                                                      |
| <b>Editable parameters</b>                | Elution volume: 30–100 µl in increments of 10 µl; default set to 50 µl                                                                 |
| <b>Required QIAcube software versions</b> | Firmware version FIW-50-001-J_FW_MB.hex and PLC program version FIW-50-002-G-PLC_MB.prs or higher; available at the QIAcube Web Portal |

## Shaker

|                 |                                                                                                                                                                                       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Material</b> | Up to 30 mg frozen or 15 mg stabilized easy-to-lyse tissue, or up to $1 \times 10^7$ cells disrupted in 450 µl Buffer RLT (for detailed information, see “Comments” on the next page) |
| <b>Vessel</b>   | 2 ml safe-lock microcentrifuge tube*                                                                                                                                                  |
| <b>Adapter</b>  | Shaker adapter for 2 ml microcentrifuge tubes (marked with “2”)                                                                                                                       |

\* Sample Tubes RB, 2 ml (cat. no. 990381; see [www.qiagen.com/MyQIAcube](http://www.qiagen.com/MyQIAcube)).

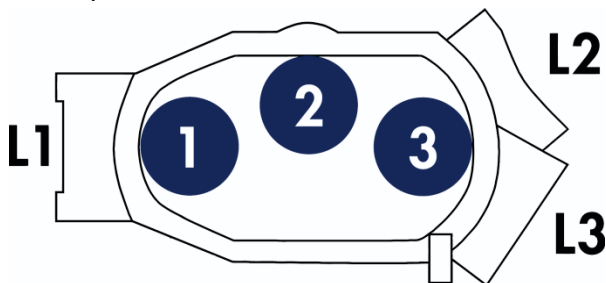
## Disposable Tips

|                                 |
|---------------------------------|
| Disposable Filter-Tips, 1000 µl |
|---------------------------------|

## Reagent Bottle Rack

|                     |           |
|---------------------|-----------|
| Rack labeling strip | Unlabeled |
|---------------------|-----------|

## Rotor Adaptor



| Position | Reagent          |
|----------|------------------|
| 1        | –                |
| 2        | Isopropanol      |
| 3        | 80% ethanol      |
| 4        | Buffer RWT       |
| 5        | Buffer RPE       |
| 6        | RNase-free water |

| Position | Labware                  | Lid position |
|----------|--------------------------|--------------|
| 1        | RNeasy® Mini spin column | L1           |
| 2        | –                        | –            |
| 3        | 1.5 ml collection tube*  | L3           |

\* Sarstedt® Micro tube 1.5 ml (cat. no. 72.690; see [www.sarstedt.com](http://www.sarstedt.com)).

#### Microcentrifuge Tube Slots

|         | Position |   |   |
|---------|----------|---|---|
|         | A        | B | C |
| Content | –        | – | – |
| Vessel  | –        | – | – |

\* Sarstedt Micro tube 1.5 ml (cat. no. 72.690; see [www.sarstedt.com](http://www.sarstedt.com)).

| Volume of reagent required for the indicated number of samples (µl) |                         |   |   |
|---------------------------------------------------------------------|-------------------------|---|---|
| Number of samples                                                   | RNase A (stock + water) | B | C |
| 2                                                                   | –                       | – | – |
| 3                                                                   | –                       | – | – |
| 4                                                                   | –                       | – | – |
| 5                                                                   | –                       | – | – |
| 6                                                                   | –                       | – | – |
| 7                                                                   | –                       | – | – |
| 8                                                                   | –                       | – | – |
| 9                                                                   | –                       | – | – |
| 10                                                                  | –                       | – | – |
| 12                                                                  | –                       | – | – |

#### Comments

##### Things to do before starting

Prepare the samples by following steps 1–7 of protocol “Purification of Total RNA, Including Small RNAs, from Animal Cells” or steps 1–8 of protocol “Purification of Total RNA, Including Small RNAs, from Animal Tissues” in the *miRNeasy Tissue/Cells Advanced Mini Kit Handbook 02/2021*.

**Cells:** Harvest a maximum of  $1 \times 10^7$  cells either as a cell pellet or lysed directly in the vessel. Add 450 µl Buffer RLT. Vortex for 30 s or homogenize.

**Tissues:** Disrupt the tissue ( $\leq 30$  mg) and homogenize the lysate in 450 µl Buffer RLT.

Add 140 µl Buffer AL and mix thoroughly. Incubate at room temperature for 3 min. Transfer the homogenized lysate to a gDNA Eliminator spin column placed in a 2 ml collection tube (supplied). Centrifuge for 30 s at  $\geq 8000 \times g$  ( $\geq 10,000$  rpm). Discard the column and save the flow-through.

Transfer the flow-through to a new 2 ml reaction vessel (not provided). Add 20 µl Buffer RPP. Close the tube cap and mix vigorously by vortexing for  $>20$  s. Incubate at room temperature for 3 min. Centrifuge at  $12,000 \times g$  for 3 min at room temperature to pellet the precipitate.

**Note:** Supernatant should be clear and colorless. Transfer supernatant (approx. 300 µl) to a new 2 ml reaction tube. This step is optional when working with cell samples.

**Note:** Kit content is calculated for manual use. When automated on the QIAcube, the sample number could be less than stated in the kit handbook or on the kit label.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at [www.qiagen.com](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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