Quick-Start Protocol April 2016

AllPrep DNA/RNA Mini Kit, Part 1

The AllPrep DNA/RNA Mini Kit (cat. no. 80204) should be stored dry at room temperature (15–25°C) and is stable for at least 9 months under these conditions if not otherwise stated on label.

The AllPrep DNA/RNA Mini Kit purifies genomic DNA and total RNA simultaneously from a single sample. Lysate from homogenized cells or tissue is first passed through an AllPrep DNA spin column to isolate DNA, then through an RNeasy® spin column to isolate RNA.

Further information

- *AllPrep DNA/RNA Mini Handbook*: **www.qiagen.com/HB-0575**
- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Notes before starting

- If purifying RNA from cell lines rich in RNases, or from tissue, add either 10 µl β-mercaptoethanol (β-ME), or 20 µl 2 M dithiothreitol (DTT),* to 1 ml Buffer RLT Plus before use. Buffer RLT Plus containing β-ME or DTT can be stored at room temperature for up to 1 month.*
- Add 4 volumes of ethanol (96–100%) to Buffer RPE for a working solution.
- Foaming can be reduced by adding Reagent DX (cat. no. 19088) at a final concentration of 0.5% (v/v) before disruption and homogenization.

* This option not included in handbook; handbook to be updated.

Sample disruption and homogenization of cells or tissue

1. **Cells**: Harvest a maximum of 1 x 10^7 cells, either as a cell pellet or by direct lysis in the cell-culture dish (up to 10 cm diameter). Add a suitable volume of Buffer RLT Plus and homogenize (see Table 1).

Tissues: Do not use more than 30 mg tissue. Disrupt the tissue and homogenize the lysate in the appropriate volume of Buffer RLT Plus (see Table 1). Centrifuge the lysate for 3 min at maximum speed. Carefully remove the supernatant by pipetting.

2. Transfer the homogenized lysate to an AllPrep DNA spin column placed in a 2 ml collection tube (supplied). Close the lid gently, and centrifuge for 30 s at ≥8000 x *g* (≥10,000 rpm).
3. Use the flow-through for RNA purification. (See "Total RNA purification" in *Quick-Start Protocol AllPrep DNA/RNA Mini Kit, Part 2*.)
4. Place the AllPrep DNA spin column in a new 2 ml collection tube (supplied). Store at room temperature (15–25°C) or at 4°C for later DNA purification. (See "Genomic DNA purification" in *Quick-Start Protocol AllPrep DNA/RNA Mini Kit, Part 2*.)

   Note: Do not store the column at room temperature (15–25°C), or 4°C, for long periods. Do not freeze the column.

Table 1. Volumes of Buffer RLT Plus for sample disruption and homogenization

Sample	Amount	Dish	Buffer RLT Plus*	Disruption† and homogenization
Animal cells	<5 x 10^6	<6 cm	350 µl	Add Buffer RLT, vortex (≤1 x 10^5 cells); or use QIAshredder, TissueRuptor® or needle and syringe
	≤1 x 10^7	6–10 cm	600 µl	
Animal tissues	<20 mg	–	350 µl	TissueLyser LT; TissueLyser II; TissueRuptor; or mortar and pestle followed by QIAshredder or needle and syringe
	≤30 mg	–	600 µl	

* Use 600 µl Buffer RLT Plus for tissues stabilized in RNA*later*®, or for difficult-to-lyse tissues.

† For optimal DNA yields, thorough homogenization is required (e.g., by TissueRuptor, TissueLyser LT or TissueLyser II).

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