ReadiPrep™ DNA Extraction Kit

Catalog number: 67100, 67101
Unit size: 50 Preps, 250 Preps

Component	Storage	Amount (Cat No. 67100)	Amount (Cat No. 67101)
Component A: ReadiPrep™ DNA Lysis Buffer	Refrigerated (2-8 °C)	1 Bottle (10 mL)	1 Bottle (50 mL)
Component B: ReadiPrep™ DNA Columns	Room temperature (10-25 °C)	50 Columns	250 Columns
Component C: ReadiPrep™ DNA Wash Buffer 1	Refrigerated (2-8 °C)	1 Bottle (8 mL)	5 Bottles (5 x 8 mL)
Component D: ReadiPrep™ DNA Wash Buffer 2	Refrigerated (2-8 °C)	1 Bottle (12 mL)	1 Bottle (60 mL)
Component E: ReadiPrep™ DNA Elution Buffer	Refrigerated (2-8 °C)	1 Bottle (10 mL)	1 Bottle (50 mL)
Component F: Proteinase K	Freeze (< -15 °C)	1 Vial (1 mL)	1 Bottle (5 mL)
Component G: Collection Tubes	Room temperature (10-25 °C)	50 Tubes	250 Tubes

OVERVIEW

ReadiPrep™ DNA Extraction Kit consists of easy-to-use components that enable high-yield and high-purity genomic DNA (gDNA) extractions from a wide variety of sample types in life science and genomic applications. It is a silica-based, microcentrifuge spin-column format kit. It can be used for cultured cells, bacteria, and tissue samples. It can be easily fit into automated DNA extraction workflows. It may be used as a standardized method for extracting high-purity and clean gDNA, free from PCR inhibitors.

PREPARATION OF WORKING SOLUTION

ReadiPrep™ DNA Wash Buffers 1 and 2 Working Solutions

1. Reconstitute ReadiPrep™ DNA Wash Buffer 1 by adding 22 mL of ethanol (96-100%), and mix well by shaking.

2. Reconstitute ReadiPrep™ DNA Wash Buffer 2 by adding 18 mL of ethanol (96-100%), and mix well by shaking.

   Note: Reconstituted ReadiPrep™ DNA Wash Buffers 1 and 2 remain stable for at least one year after adding alcohol, when stored at 2-8 °C.

SAMPLE EXPERIMENTAL PROTOCOL

Sample Protocol

1. Centrifuge an appropriate number of cells (up to 5 x 10^6) at 300 x g for 4 minutes. Then resuspend the pellet in 200 µL of PBS and add 20 µL of the Proteinase K solution (Component F) to the cells.

   Note: If using a frozen cell pellet, first allow the cells to thaw on ice. Once thawed, proceed by adding PBS.

   Note: To achieve better DNA extraction results, it is important to optimize the number of cells based on the specific cell line used.

   Note: If RNA-free genomic DNA is required, RNase A (not provided) can be added during this step. We recommend adding 4 µL of RNase A (100 mg/mL) to the mixture and incubating it for 2 minutes at room temperature.

2. Add 200 µL of ReadiPrep™ DNA Lysis Buffer (Component A) to the sample, then mix well by either vortexing or pipetting.

   Note: For improved yield, incubate the sample at 55°C for 10 minutes.

3. Add 200 µL of ethanol (96-100%, not provided) and mix thoroughly by either vortexing or pipetting until the solution is fully homogeneous.

4. Carefully transfer the mixture from *Step 3* into the ReadiPrep™ DNA column (Component B), which should be placed in a 2 mL collection tube (Component G).

5. Centrifuge at ≥6000 x g (or 8000 rpm) for 1 minute. Discard the flow through. Then place the column back into the same collection tube.

6. Add 500 µL of the reconstituted ReadiPrep™ DNA Wash Buffer 1 (Component C) to the sample. Centrifuge at ≥6000 x g (8000 rpm) for 1 minute. After centrifugation, discard the flow-through and the collection tube.

7. Place the ReadiPrep™ DNA column into a new 2 mL collection tube (Component G). Add 500 µL of the reconstituted ReadiPrep™ DNA Wash Buffer 2 (Component D) to the column, then centrifuge at ≥20,000 x g (14,000 rpm) or higher for 3 minutes. Discard the flow-through.

8. **Optional:** Place the column back into the centrifuge and spin it at ≥ 20,000 x g (14,000 rpm) for 1 minute. This extra step ensures any remaining ethanol is completely removed. Be careful to keep the tip of the column from touching the collection tube to prevent ethanol contamination.

9. Place the ReadiPrep™ DNA column into a clean 1.5 mL or 2 mL microcentrifuge tube (not provided) and add 200 µL of ReadiPrep™ DNA Elution Buffer (Component E) to the column. Allow it to incubate at room temperature for 1 minute. Then, centrifuge at a minimum of ≥6000 x g (8000 rpm) for 1 minute. Collect the eluted sample and discard the column.

   Note: An additional elution step using 100 µL of elution buffer can be performed to increase the overall yield.

EXAMPLE DATA ANALYSIS AND FIGURES

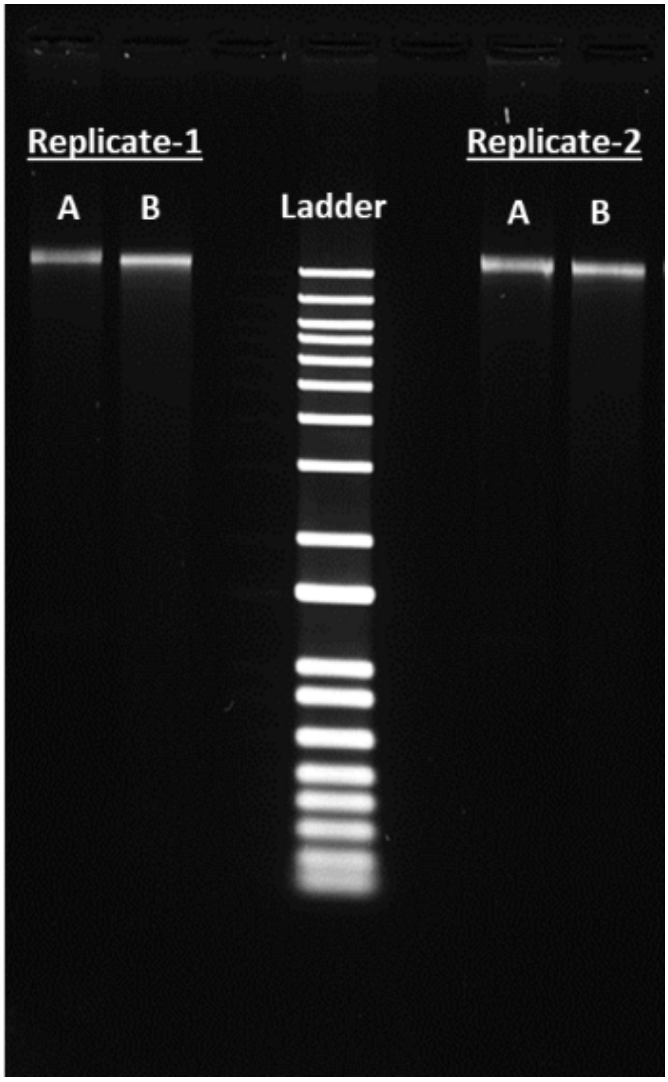

Figure 1. Genomic DNA from HeLa cells was extracted using either Vendor A's kit (labeled as A in the image above) or AAT's ReadiPrep™ DNA Extraction Kit (labeled as B in the image above). A total of 100 ng of DNA was loaded onto a 1% agarose gel and stained with Gelite™ Safe DNA Gel Stain (AAT, cat# 17704). The presence of sharp bands indicates high-quality genomic DNA.

DISCLAIMER

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