Xpert Total Histone Extraction Kit

H7200

Storage

Upon recipt, Store DTT Solution at 4°C.
Store all other components at room temperature.
The Kit is stable for 6 months from date of shipment when stored peroperly.

Contents

• Product Manual	
• 10X Pre-Lysis Buffer	5ml
• Lysis Buffer	10ml
• Balance Buffer	4ml
• DTT Solution	10ul

Shipping Condition

Ship with ice pack.

Introduction

Uses: The *Xpert* Total Histone Extraction Kit is suitable for a quick preparation of total histone extracts from mammalian cells and tissue samples.

Input Amount: The minimal amount of starting materials can be as low as 10^5 cells or 1mg of tissue. For the best results, the cell number should be greater than 10^6 cells or the tissue amount should be greater than 10mg. A total of 100 standard extractions (use 10^7 cells or per 100mg of tissue per extraction) can be performed with this kit.

Yield: Yield of the total histone proteins can be up to 0.4mg per 10^7 cells or per 100mg tissue. The yield may vary depending on the cell or tissue type.

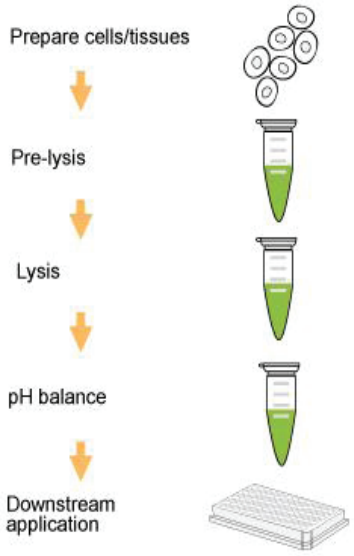
Precautions: To avoid cross-contamination, carefully pipette the sample or sol -ution into the strip wells. Use aerosol-barrier pipette tips and always change pipette tips between liquid transfers. Wear gloves throughout the entire pro -cedure. In case of contact between gloves and sample, change gloves immediately.

Brief Overview

Histones are the chief protein components of chromatin in biology. They act as spools around which DNA winds, and also play a role in gene regulation. The core histones include H2A, H2B, H3 and H4. Histones undergo posttranslational modi -fications, which alter their interaction with DNA and nuclear proteins. The H3 and H4 histones have long tail include methylation, acetylation, phosphorylation, ubiquitination, sumoylation, citrullination, and ADP-ribosylation (H2A can also be modified). Combinations of modifications are thought to constitute a code, the so-called "histone code". Histone modifications act in diverse biological pro -cesses such as gene regulation, DNA repair and chromosome condensation (mitosis). The *Xpert* Total Histone Extration Kit provides a simple and selective method for extracting histone proteins used for a variety of application, which include histone modifications such as acetylation, methylation, and sumoylation. The *Xpert* Total Histone Extraction Kit is also specifically designed to meet the requirements of histone extracts used in Xpert Histone quantification assays. The *Xpert* Total Histone Extraction Kit can be used to extract histones from mamm -alian cells and tissues. The *Xpert* Total Histone Extraction Kit has then fastest procedure available on the market, allowing completion within 60 minutes.

Principle & Procedure

The *Xpert* Total Histone Extraction Kit simply applies our proprietary histone iso -lation buffers to cells or tissues. After treatment with pre-lysis, lysis, and balance buffers, the total histones are easily extracted for immediate use or storage at proper conditions.



Schematic precedure for using the Xpert Total Histone Extraction Kit

Protocol

For best results, Please read the protocol in its entirely prior to starting your experiment.

1. For Tissues (Treated and Untreated)

a. Weigh the sample and cut the sample into small pieces (1-2mm^3) with a scalpel or scissors.

b. Transfer tissue pieces to a Dounce homogenizer.

c. Dilute 10X Pre-Lysis Buffer into 1X Pre-Lysis Buffer with distilled water at a 1:10 ratio (e.g., 1ml of 10X Pre-Lysis Buffer + 9ml of water)

d. Add the Diluted 1X Pre-Lysis Buffer at 100mg/ml, and disaggregate tissue pieces by 50-60 strokes.

e. Transfer homogenized mixture to a 15ml conical tube and centrifuge at 3,000 rpm for 5 min at 4°C. If total mixture volume is less than 2ml vial and centrifuge at 10,000 rpm or 1 min at 4°C.

1. For cells (Treated and Untreated)

a. Harvest cells and pellet the cells by centrifugation at 1,000 rpm for 5 min at 4°C.

b. Dilute 1-X Pre-Lysis Buffer into 1X Pre-Lysis with distilled water at a 1:10 ratio (e.g., 1ml of 10X Pre-Lysis Buffer + 9ml of water).

c. Re-suspend cells in the Diluted 1X Pre-Lysis Buffer at 10^7 cells/ml and Lyse cells on ice for 10 min with gentle stirring.

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