MB504MPF16 HiPurA® Pre- filled Plates for Blood DNA Extraction

Kit Contents

Product Code	Reagents provided	MB504MPF16
		96 PR
PF16F1	Pre-Filled Plate for Blood DNA Purification	6 no
LA1118B	Magnetic Rod Tip	12 no
DS1005A	Magnetic Beads	3 ml
DS0013	Proteinase K	3 ml
DS0040	Elution Buffer (ET) [10mM Tris-Cl, pH8.5]	12 ml
DS0192	Carrier RNA	2 mg
DS0042	Elution Solution (RNase- Free Water)	2 ml

Intended Use

Recommended for isolation of DNA from human blood samples.

Introduction

HiPurA® Pre- filled Plates for Blood DNA Extraction provides a fast and easy method for purification of total DNA for downstream applications such as PCR, Southern blotting technique etc. HiPurA® Pre- filled Plates for Blood DNA Extraction can be used for isolation of genomic DNA from blood samples, but the performance may vary depending on the blood sample.

HiPurA® Pre- filled Plates for Blood DNA Extraction

This kit carries out efficient extraction of DNA from Fresh Blood sample. Sample is first lysed under the highly denaturing conditions provided by Lysis Solution to inactivate DNases and to ensure isolation of intact genomic DNA. The nucleic acids purification procedure comprises of three steps viz. adsorption of nucleic acids to the magnetic beads, removal of residual contaminants and elution of pure nucleic acids. The magnetic beads have a high binding capacity and high-quality nucleic acids is obtained from various species. The genomic DNA obtained is compatible with downstream applications such as restriction enzyme digestion, PCR and Southern blotting.

Elution

The yield of genomic DNA depends on the sample type and the number of cells in the sample. An elution with 200 µl of Elution Buffer (ET) will provide sufficient DNA to carry out multiple amplification reactions. Elution with volume less than 200 µl will increase the final DNA concentration, but will reduce the overall DNA yield. The eluted DNA ranges in size upto 20-30 kb, and is suitable for direct use in PCR, restriction digestion and Southern blotting applications.

ISO 9001-2015 CERTIFIED
WHO GMP CERTIFIED
ISO 13485-2016 CERTIFIED

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Storage

HiPurA® Pre- filled Plates for Blood DNA Extraction can be stored at room temperature (15-25°C) for up to 2 years without showing any reduction in performance. We advise a certain storage temperature for the reagents listed below:

- **On receipt store Carrier RNA (DS0192): at -20°C.**
- **Reconstituted Carrier RNA: -20°C in aliquots to avoid repeated freeze and thaw.**
- **On receipt store Proteinase K (DS0013): at -20°C.**
- **On receipt store Magnetic Beads (DS1005A): at 2-8°C.**

Materials needed but not provided

- 1X PBS (Product Code: ML116)
- Insta NX® Mag16 (Product Code: LA1118)
- Vortex
- Polypropylene sealing film (Product Code: PR21)
- HiPer® Lock Microcentrifuge Tube, 2.0ml (MBLA017)

General Preparation Instructions

1. **Thoroughly mix reagents**

   Examine the reagents for precipitation. If any kit reagent forms a precipitate (other than enzymes), warm at 55-65°C until the precipitate dissolves and allow cooling to room temperature (15-25°C) before use.

2. Ensure that clean & dry Nuclease-free tubes and tips are used for the procedure.

3. **Vigorously shake magnetic beads before use.**

   NOTE: Magnetic beads should form a homogenous suspension. No pellets should be observed. DNA extraction process might get affected if the solution is not homogenous.

4. **Reconstitute Carrier RNA**

Number of Preps	Carrier RNA (DS0192)	Elution Solution (RNase free water) (DS0042)
96	2 mg	2 ml

   Dissolve Carrier RNA thoroughly by pipetting. We recommend storing the reconstituted Carrier RNA at -20°C in aliquots to avoid repeated freeze and thaw.

Specimen Handling and Collection

Collect whole blood in an anticoagulant tube (an EDTA tube is preferred) under sterile conditions (if to be used for future). Ensure that the blood sample is at room temperature (15-25°C) before beginning the protocol. After use, contaminated material must be sterilized by autoclaving before discarding.

NOTE: Do not collect blood in Sodium heparin because this anticoagulant inhibits downstream applications.

Types of Specimen

Clinical samples: Whole blood (an EDTA tube)

Procedure

Set up processing plates as follows:

1. Switch on the UV light for 10 minutes prior to use.
2. Select **"MB504M16"** program. Open the door of the Insta NX® Mag16 machine.
3. Remove the seal from the **Pre-filled Plate for Blood DNA Purification (PF16F1).**

   NOTE: Take care while peeling off the seal. Hold the plate firmly by one hand and then peel off the seal by holding it in your other hand without shaking the plate.
4. Add **100µl of Elution Buffer (ET) [10mM Tris-Cl, pH8.5] (DS0040)** into the **6th and 12th column of the Pre-filled Plates for Blood DNA Purification (PF16F1).**
5. Add 15µl of Proteinase K (DS0013), 300µl of the sample in **1st & 2nd column and 7th & 8th column** of Pre-filled Plates for Blood DNA Purification (PF16F1).

   NOTE: Column 1st, 2nd of the Pre-filled Plates for Blood DNA Extraction should contain same sample material. Similarly, Column 7th, 8th of the Pre-filled Plates for Blood DNA Extraction should contain same sample material. Final total volume of a single sample should be 600µl.
6. Add 10µl of Carrier RNA (DS0192) **(Refer General Preparation Instructions)** and 15 µl Magnetic beads (DS1005A) in **1st & 2nd column and 7th & 8th column** of Pre-filled Plates for Blood DNA Purification (PF16F1).
7. Place the Magnetic Rod Tip (LA1118B) by sliding onto the machine.

   NOTE: After placing the rods ensure that the rods are properly fixed on their place.

   NOTE: 16 samples can be processed in a single Pre-filled Plate for Blood DNA Purification (PF16F1).
8. Close the door and Click on the **RUN** option on the home screen.
9. After the run is complete discard the Magnetic Rod Tip (LA1118B). Remove the Pre-filled Plates for Blood DNA Purification (PF16F1) from the position. Dispense the eluted genomic DNA from column 6 and column 12 to a new HiPer® Lock Microcentrifuge Tube, 2.0ml (MBLA017) (not provided). The eluate contains pure nucleic acid.

   NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the plate. Avoid transferring these magnetic beads to your PCR reaction mixture.

Storage of the eluate with purified DNA: The eluate contains pure DNA. For short-term storage (24-48 hrs.) of the DNA, 2-8°C is recommended. For long-term storage, recommended to be stored at -20°C or lower temperature (-80°C). Avoid repeated freezing and thawing of the sample which may cause denaturing of DNA.

Warning

Not for Medicinal Use. Read the procedure carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good clinical laboratory practices while handling clinical samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Limitations

The yield of DNA depends upon the type and the volume of starting material used.

Performance and Evaluation

The yield and efficiency of purification is determined by performing Real- Time PCR.

Quality Control

Each lot of HiMedia's HiPurA® Pre- filled Plates for Blood DNA Extraction is tested against predetermined specifications to ensure consistent product quality.

Safety Information

The HiPurA® Pre- filled Plates for Blood DNA Extraction is for laboratory use only, not for drug, household or other uses. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Disposal

User must ensure safe disposal by autoclaving and/ or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed off in accordance with current laboratory techniques.

Technical Assistance

At HiMedia, we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance mail to mb@himedialabs.com.

Please refer disclaimer Overleaf.

Symbols

	Manufacturer		Do not use if package is damaged
	Catalogue number		Temperature limit
	Date of manufacture (YYYY-MM)		Consult instructions for use
	Use-by date (YYYY-MM)		
	Batch code		

Identification No.: PIMB504MPF16
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