

## **MB504PC16      HiPurA® Pre- filled Cartridges for Blood DNA Extraction**

### **Kit Contents**

<b>Product Code</b>	<b>Reagents provided</b>	<b>MB504PC16</b>
		<b>48 PR</b>
PF16B2	Pre-Filled Cartridges for Blood DNA Purification	48 no
LA1118B	Magnetic Tip Comb	24 no
DS1005A	Magnetic Beads	1.5 ml
DS0013	Proteinase K	1.5 ml
DS0040	Elution Buffer (ET) [ 10mM Tris-Cl, pH8.5]	7 ml
DS0192	Carrier RNA	1 mg
DS0042	Elution Solution (RNase- Free Water)	1 ml

### **Intended Use**

Recommended for isolation of DNA from human blood samples.

### **Introduction**

HiPurA® Pre- filled Cartridges 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 Cartridges 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 Cartridges 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.

## Storage

HiPurA® Pre- filled Cartridges 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)
- Cartridge holder (LA1118CH)
- Insta NX® Mag32 (LA1096)
- 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)
48	1 mg	1 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 Cartridges 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<sup>®</sup> Mag16 machine.
3. Place the Pre-filled Cartridges for Blood DNA Purification (PF16B2) into the Cartridge Holder (LA1118CH). Remove the seal from the Pre-filled Cartridges for Blood DNA Purification (PF16B2).

**NOTE: Take care while peeling off the seal. Hold the Cartridges firmly by one hand and then peel off the seal by holding it in your other hand without shaking.**

4. Add 100µl of Elution Buffer (ET) [10mM Tris-Cl, pH8.5] (DS0040) into the 6<sup>th</sup> well of the Pre-filled Cartridges for Blood DNA Purification (PF16B2).
5. Add 15µl of Proteinase K (DS0013), 300µl of the sample in 1<sup>st</sup> & 2<sup>nd</sup> well of Pre-filled Cartridges for Blood DNA Purification (PF16B2).

**NOTE: Well 1<sup>st</sup> and 2<sup>nd</sup> of the Pre-filled Cartridges for Blood DNA Purification (PF16B2) 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 15µl Magnetic beads (DS1005A) in the 1<sup>st</sup> & 2<sup>nd</sup> well of Pre-filled Cartridges for Blood DNA Purification (PF16B2). Place the Cartridges along with cartridge Holder on platform.
7. Place the Cartridge Holder (LA1118CH) along with cartridges on the platform. 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.**

8. Close the door and Click on the **RUN** option on the home screen.
9. After the run is complete, remove the cartridge holder along with cartridges from the position. Discard the Magnetic Rod Tip (LA1118B). Dispense the eluted genomic DNA from well 6 to a new HiPer<sup>®</sup> Lock Microcentrifuge Tube, 2.0ml (MBLA017) (not provided). The eluate contains genomic DNA.

**NOTE: A small amount of magnetic beads may be observed in the final eluate at the bottom of the Cartridge. 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 Cartridges for Blood DNA Extraction is tested against predetermined specifications to ensure consistent product quality.

**Safety Information**

The HiPurA® Pre- filled Cartridges 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](mailto:mb@himedialabs.com).

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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.: PIMB504PC16

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### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

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