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PrimeMag Blood DNA Extraction Kit

(KIT-9240)

Sample Types

- Whole Blood
- Buffy Coat
- Dried Blood Spot
- Cultured Cells
- Buccal Swab
- Saliva

PrimeMag Blood DNA Extraction Kit

For Research Use Only. Not for use in Diagnostic Procedures.

Product No: KIT-9240

The **PrimeMag Blood DNA Extraction Kit** provides a rapid and reliable solution for the isolation of high-quality genomic DNA from a broad range of biological samples, including fresh or frozen anticoagulated whole blood, buffy coat, dried blood spots (DBS), cultured cells, buccal swabs, and saliva. Whole blood collected in EDTA, citrate, or heparin tubes is compatible with the kit.

The kit employs advanced magnetic bead-based purification technology with optimized proprietary buffers to enable efficient DNA binding, washing, and elution in approximately 30 minutes. The streamlined workflow eliminates the need for phenol/chloroform extraction and alcohol precipitation, delivering consistent DNA recovery with minimal handling.

Purified genomic DNA is suitable for a wide range of downstream molecular applications, including PCR, qPCR, genotyping, restriction enzyme (RE) digestion, Southern blotting, Sanger DNA sequencing, Next-Generation Sequencing (NGS), and other DNA-based analyses.

Kit Contents

No	Product	KIT-9240-10 10 preps	KIT-9240-96 96 preps	Storage
1	PLB Lysis Buffer	3 mL	30 mL	Room temperature (21 °C – 25 °C)
2	BD2 Buffer	2 mL	15 mL	
3	WBA Buffer	9 mL	40 mL x 2 bottles	
4	Elution Buffer	1.5 mL	12.5 mL	
5	Proteinase K	10 mg	50 mg	– 20 °C
6	Proteinase K Buffer	0.5 mL	2.5 mL	
7	PrimeMag Beads A	0.4 mL	1.2 mL x 3 tubes	4 °C

Storage

This kit will be delivered at room temperature (21 °C – 25 °C). Upon receipt, store the kit components according to the storage temperatures indicated on the product label.

Product Specification

	KIT-9240
Sample Input	50 – 200 µL
Sample size	Refer **Table 1**
Yield	
Elution	50 – 100 µL
Duration	33 minutes
Packaging Size	10 preps and 96 preps

Table 1. Recommended Sample Sizes and Expected DNA Yields for Each Optimized Protocol.

Protocol	Sample Type	Sample size	Expected Yield	Page
A	Whole blood	200 µL	2 to 8 µg	5 – 6
B	Buffy coat	50 µL 200 µL	Up to 8 µg Up to 30 µg	7 – 8
C	Dried blood spot	Two punches/cuttings from the dried blood spot (15 – 30 mm^2 each)	0.1 to 0.3 µg	9 – 10
D	Cultured cells	1 × 10^6 cells	Up to 20 µg	11 – 13
E	Buccal swab	One swab head	Up to 2 µg	14 – 15
F	Saliva	200 µL	Up to 6 µg	16 - 17

Materials Supplied by Users

- Centrifuge with speed of 12,000 x g (Microfuge 16, Beckman Coulter)
- Thermomixer with temperature settings of 65 °C and shake at 1,000 rpm (HM100-Pro Thermo Mix, DLAB) or water bath for heating at 65 °C
- Magnetic Rack (KIT-MAG16A, 1st BASE)
- Vortex mixer with moderate speed set to setting 5 and low speed set to setting 1 (Vortex-Genie 2, Scientific Industries)
- 2 mL and 1.5 mL microcentrifuge tubes
- Isopropanol (IPA)
- Undenatured absolute ethanol (≥ 99.5%)
- Refer Table 2 for additional buffers and reagents required for different sample types

Table 2. Additional Buffers and Reagents (Not Provided) Required for Different Sample Types.

Protocol	Sample Type	Buffers and Reagents
A	Whole blood	▪ RNAse A, 100 mg/mL
B	Buffy coat	▪ RNAse A, 100 mg/mL
C	Dried blood spot	▪ RNAse A, 100 mg/mL
D	Cultured cells	▪ RNAse A, 100 mg/mL ▪ Diluent Solution
E	Buccal swab	▪ RNAse A, 100 mg/mL ▪ 1X Phosphate Buffered Saline (PBS)
F	Saliva	▪ RNAse A, 100 mg/mL ▪ 1X Phosphate Buffered Saline (PBS)

Precautions for Users

- ✓ PLB Lysis Buffer contains irritants. Handle with care and avoid contact with skin. In case of contact, wash skin with a copious amount of water; seek medical attention.
- ✓ Always wear a lab coat, disposable gloves and surgical mask.

Before Start

- ✓ It is highly recommended to read through the whole manual prior to starting, especially for first-time users.

Protocol

Preparation

I. Set thermomixer or water bath to 65 °C.

II. Proteinase K Solution preparation:
Add indicated volume of **Proteinase K Buffer** to dissolve **Proteinase K**.

P/No	Proteinase K Buffer to be added
KIT-9240-10	500 µL
KIT-9240-96	2.5 mL

After reconstitution, store at – 20 °C.

III. Add **absolute ethanol (≥ 99.5%)** to **WBA Buffer** as following

P/No	WBA Buffer	Ethanol to be added
KIT-9240-10	9 mL	13.5 mL
KIT-9240-96	40 mL (each bottle)	60 mL (each bottle)

IV. Freshly prepare **80% ethanol** based on the number of preps required:

No of prep	Components	Volume	Total Volume
1	Absolute ethanol (> 99.5%)	640 µL	800 µL
	Nuclease-free water	160 µL	

V. Vortex the magnetic beads (**PrimeMag Beads A**) prior to use.

A. Whole Blood

Sample	1. Transfer **200 µL whole blood** into a new 2 mL tube.
Lysis	2. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 3. **[Optional]** If RNA-free DNA is required, add **4 µL of RNase A** (100 mg/mL). 4. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 5. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	6. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 7. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 8. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 9. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Washing	10. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 11. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 12. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed.

Washing	13. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 14. Repeat step 10 – 13. 15. Add **800 µL 80% ethanol** into the sample tube. 16. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 17. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 18. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Drying	19. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	20. Remove sample tube from the magnetic rack. Add **100 µL Elution Buffer** into the sample tube. 21. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 22. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 23. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

B. Buffy Coat

Sample	1. Transfer **50 µL buffy coat** into a new 2 mL tube.
Lysis	2. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 3. **[Optional]** If RNA-free DNA is required, add **4 µL of RNase A** (100 mg/mL). 4. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 5. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	6. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 7. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 8. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 9. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Washing	10. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 11. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 12. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed.

Washing	13. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 14. Repeat step 10 – 13. 15. Add **800 µL 80% ethanol** into the sample tube. 16. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 17. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 18. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Drying	19. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	20. Remove sample tube from the magnetic rack. Add **100 µL Elution Buffer** into the sample tube. 21. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 22. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 23. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

C. Dried Blood Spot

Sample	1. Cut or punch out **two dried blood spot** pieces (15 – 30 mm² each) and transfer them into a new 2 mL tube.
Lysis	2. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 3. **[Optional]** If RNA-free DNA is required, add **4 µL of RNase A** (100 mg/mL). 4. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 5. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	6. Briefly centrifuge the sample tube and carefully transfer the **supernatant (~200 µL)** to a new 2 mL tube. Discard the tube containing the dried blood spot pieces. 7. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 8. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 9. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 10. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.

Washing	11. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 12. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 13. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 14. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 15. Repeat step 11 – 14. 16. Add **800 µL 80% ethanol** into the sample tube. 17. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 18. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 19. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Drying	20. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	21. Remove sample tube from the magnetic rack. Add **50 µL Elution Buffer** into the sample tube. 22. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 23. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 24. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

D. Cultured Cells

Sample	1. Prepare **cultured cell pellet** (up to 1 x 10^6 cultured cells) in a new 2 mL tube.
Lysis	2. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 3. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 4. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	5. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 6. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 7. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 8. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Washing	9. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 10. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 11. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 12. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.

RNase treatment	13. Add **200 µL Diluent Solution** (not provided) and **4 µL RNase** A (100 mg/mL) into the sample tube. Vortex briefly to mix. 14. Incubate at room temperature for 10 minutes.
Re-binding	15. Add **360 µL Isopropanol (IPA)** and **120 µL BD2 Buffer** sequentially to the sample tube. ***Note:*** *A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 16. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 17. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 18. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Washing	19. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 20. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 21. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 22. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 23. Add **800 µL 80% ethanol** into the sample tube. 24. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 25. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 26. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.

Drying	27. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	28. Remove sample tube from the magnetic rack. Add **100 µL Elution Buffer** into the sample tube. 29. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 30. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 31. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

E. Buccal Swab

Sample	1. Firmly scrape the inner cheek several times using buccal swab. ***Note:*** *Do not consume any food or drink 30 minutes prior to sample collection.* 2. Cut and transfer **one swab head** to a new 2 mL tube. 3. Add **300 µL 1x PBS buffer** (not provided) and vortex for 1 minute.
Lysis	4. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 5. **[Optional]** If RNA-free DNA is required, add **4 µL of RNase A** (100 mg/mL). 6. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 7. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	8. Briefly centrifuge the sample tube and carefully transfer the **supernatant (~500 µL)** to a new 2 mL tube. Discard the tube containing the buccal swab head. 9. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 10. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 11. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 12. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.

Washing	13. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 14. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 15. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 16. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 17. Repeat step 13 – 16. 18. Add **800 µL 80% ethanol** into the sample tube. 19. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 20. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 21. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Drying	22. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	23. Remove sample tube from the magnetic rack. Add **50 µL Elution Buffer** into the sample tube. 24. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 25. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 26. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

F. Saliva

Sample	1. Transfer **200 µL saliva** into a new 2 mL tube. ***Note:*** *Do not consume any food or drink 30 minutes prior to saliva collection.* 2. Add **800 µL 1X PBS buffer** (not provided) and vortex briefly to mix. Centrifuge at 12,000 x g for 5 minutes. 3. Remove and discard the supernatant by pipetting.
Lysis	4. Add **20 µL Proteinase K** and **200 µL PLB Lysis Buffer** into the sample tube. 5. **[Optional]** If RNA-free DNA is required, add **4 µL of RNase A** (100 mg/mL). 6. Vortex the sample for 10 seconds. Briefly centrifuge the tube. 7. Incubate at 65 °C for 10 minutes in a thermomixer at 1,000 rpm or in a water bath. If using a water bath, invert the tube 5 times, every 3 minutes during incubation.
Binding	8. Add **360 µL Isopropanol (IPA)**, **120 µL BD2 Buffer** and **30 µL PrimeMag Beads A** sequentially to the sample tube. ***Note:*** *Vortex the PrimeMag Beads A for 30 seconds before use to ensure they remain fully suspended. A fresh premix of Isopropanol and BD2 Buffer can be prepared if required and must be used within 1 hour of preparation.* 9. Vortex the mixture at moderate speed for 3 minutes and incubate at room temperature for 2 minutes. Briefly centrifuge the tube. 10. Place the tube on the magnetic rack for 2 minutes, or until the **PrimeMag Beads A** have fully pelleted. 11. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.

Washing	12. Add **800 µL WBA Buffer** (ethanol added) into the sample tube. 13. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 14. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 15. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant. 16. Repeat step 12 – 15. 17. Add **800 µL 80% ethanol** into the sample tube. 18. Vortex at moderate speed for 1 minute and briefly centrifuge the tube. 19. Place the tube on the magnetic rack for 1 minute or until the **PrimeMag Beads A** separation has been completed. 20. Carefully remove the supernatant by pipetting, taking care not to disturb the bead pellet. Discard the supernatant.
Drying	21. Air-dry the **PrimeMag Beads A** on the magnetic rack at room temperature for 5 to 10 minutes. ***Note:*** *DO NOT over-dry the beads. Over-drying may reduce DNA recovery.*
Elution	22. Remove sample tube from the magnetic rack. Add **100 µL Elution Buffer** into the sample tube. 23. Vortex at the lowest speed for 3 minutes and incubate at room temperature for 2 minutes. 24. Place the tube on the magnetic rack for 2 minutes or until the **PrimeMag Beads A** separation has been completed. 25. Transfer the **supernatant** with purified DNA to a new 1.5 mL tube. ***Note:*** *Carefully transfer the supernatant without carrying over the magnetic beads.*

Troubleshooting Guidelines

Problems	Possible Reason	Recommended Action
Low DNA yield	Incomplete lysis	Ensure that the sample is thoroughly mixed with Proteinase K and PLB Lysis Buffer and incubated at 65 °C for 10 minutes. Extend the lysis time if required. If using a 1.5 ml tube, increase thermomixer speed to 1,500 rpm.
	Partial or complete loss of Proteinase K activity	Use a fresh Proteinase K solution. Prepare multiple aliquots of Proteinase K solution for storage to avoid repeated freeze–thaw cycles.
	Incomplete binding to magnetic beads	Ensure that the required volumes of binding buffer, isopropanol, and beads are added according to the protocol. Mix the lysate thoroughly with binding buffer and beads by shaking or vortexing.
	Over-drying of beads	Do not allow the beads to dry for more than 10 minutes, as over-drying may result in reduced elution efficiency.
	Inefficient DNA elution	Follow the recommended elution conditions and ensure that the magnetic beads are fully immersed in Elution Buffer during the elution step.
Poor DNA quality	Insufficient starting material	Use the recommended sample volume as specified in the protocol.
	RNA contamination	Include an RNase treatment step if RNA removal is required. Add 4 µL of RNase A Solution (100 mg/mL stock concentration).
	Residual buffer carryover	Ensure that residual buffer is completely removed by pipetting after each step.
	Residual ethanol carryover	Ensure that the beads are sufficiently air-dried to remove residual ethanol. Extend the drying time if necessary, while monitoring the bead condition to prevent over-drying.
Bead carryover	Insufficient magnetic separation time	Increase the magnetic separation time until the beads are completely collected on the magnet before transferring the supernatant.
	Eluted DNA is too viscous	Increase the Elution Buffer volume or reduce the amount of starting material used.

Please contact us at https://base-asia.com/contact/ for more information.

Product Ordering Information

Product Number	Product Description	Remarks
KIT-9240-10	PrimeMag Blood DNA Extraction Kit, 10 preps	Sufficient for 10 preps.
KIT-9240-96	PrimeMag Blood DNA Extraction Kit, 96 preps	Sufficient for 96 preps.
KIT-MAG16A	1st BASE Magnetic Rack (1.5ml/2.0ml), for 16 tubes	For 16 tubes processing.

Additional Buffers and Reagents Ordering Information

Protocol	Product Number	Product Description	Remarks
A. Whole blood B. Buffy coat C. Dried blood spot	(Optional) K.RGT-9110-1ml	RNase A Solution, 100mg/mL, 1mL	Sufficient for 250 preps
D. Cultured cells	K.RGT-9110-1ml	RNase A Solution, 100mg/mL, 1mL	Sufficient for 250 preps
	K.RGT-9105-50ml	Diluent Solution, 50ml	Sufficient for 250 preps
E. Buccal swab F. Saliva	(Optional) K.RGT-9110-1ml	RNase A Solution, 100mg/mL, 1mL	Sufficient for 250 preps
	BUF-2041-1x500ml	1X Phosphate Buffered Saline (PBS), Biotechnology Grade, 500ml	Sufficient for 450 preps