

SUPPLEMENTARY PROTOCOL

Ver 1.0

KIT-9240

PrimeMag Blood DNA Extraction Kit

A supplementary protocol is an additional guide provided alongside the main protocol to assist users in applying the product to special or less common sample types, workflows, or conditions. It expands the usability of the main kit by offering validated methods for alternative applications while maintaining performance and quality standards. The support protocol does not replace the main protocol, but serves as supplementary guidance.





List of Supplementary Protocol for KIT-9240

1. **Optional Equipment:** Thermomixer
Sample Type: Whole Blood



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Sample type: Whole Blood

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 equivalent)
- 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 microcentrifuge tubes
- 1.5 mL microcentrifuge tubes
- Isopropanol (IPA)
- Absolute ethanol ($\geq 99.5\%$)



Protocol

Preparation

- I. Set thermomixer 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.



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 to 1, 500 rpm.
Binding	6. Add 360 μL Isopropanol (IPA), 120 μL BD2 Buffer and 30 μL PrimeMag Beads A sequentially to the sample tube. <i>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.</i> 7. Shake the mixture in a thermomixer at 1, 000 to 1, 500 rpm for 5 minutes at room temperature. 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 μ L WBA Buffer** (ethanol added) into the sample tube.
11. Shake the mixture in a thermomixer at 1, 000 to 1, 500 rpm for 1 minute at room temperature. 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.
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 μ L 80% ethanol** into the sample tube.
16. Shake the mixture in a thermomixer at 1, 000 to 1, 500 rpm for 1 minute at room temperature. 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.
19. Air-dry the **PrimeMag Beads A** on 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 μ L Elution Buffer** into the sample tube.
21. Shake the mixture in a thermomixer at 1,000 to 1,500 rpm for 5 minutes at room temperature.
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.*



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	For 16 tubes processing.

Additional Buffers and Reagents Ordering Information

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



Document Revision History

Revision	Date of Revision	Description of Change
1.0	28-Sept-26	1. Initial Release

