



UltraClean™ Blood DNA Isolation Kit (Non-Spin)

Catalog # 12000-100
100 Preps (300 µl each)

Instruction Manual

Introduction

Use this kit for isolating genomic DNA from 300µl of whole blood. This kit yields DNA ready for any* application.

*This kit is for research purposes only. Not for diagnostic use.

Precautions

Please wear gloves when using this product. Avoid all skin contact with reagents in this kit. In case of contact wash thoroughly with water. Do not ingest. See Material Safety Data Sheets for emergency procedures in case of accidental ingestion or contact. All MSDS information is available upon request (760-929-9911) or on our web site at www.mobio.com. Reagents labeled flammable should be kept away from open flames and fire.

This kit is for research purposes only. Not for diagnostic use.

Equipment required:

Microcentrifuge (13,000 x g)
65°C water bath,
Pipet (volumes required 1.5 µl - 900 µl), vortex

Kit Contents: Sufficient reagents and tubes for 100 preps of 300µl blood samples.

<u>Component</u>	<u>Amount</u>	<u>Description</u>
RNase A	165µl	25 mg/ml RNase A
Solution G1	99 ml	Ammonium Chloride Solution
Solution G2	33 ml	Detergent Solution
Solution G3	11 ml	Ammonium Acetate
100 % Isopropanol	33 ml	100% Isopropanol
70% Ethanol:	30 ml	70% Ethanol in DNA Free Water
Solution G4	11ml	Tris in DNA Free Water.
2.0 ml tubes	200	Microcentrifuge tubes.

Kit Storage

Store RNase at 4°C. Store all other components at room temperature.

Version 12152005

Technical information: Toll free 1-800-606-6246, or 1-760-929-9911 email: technical@mobio.com



Protocol

Please wear gloves at all times

1. **Add 300µl of whole blood to 900µl of Solution G1.**
2. Invert twice and incubate 5 minutes at room temperature.
3. Invert two times during incubation.
4. Centrifuge for 30 seconds at 13,000xg. Remove supernatant with narrow pipet tip and discard without disturbing white pellet. (About 20µl of supernatant will remain.)
5. Bump vortex to **resuspend pellet completely.**
6. Check **Solution G2.** If precipitated, heat to 55° - 65°C for 5 minutes to dissolve. **Add 300µl of Solution G2.**
7. Pipet up and down to lyse the cells (If cell clumps are still visible incubate at 37°C until no clumps are visible).
8. **Add 1.5µl of RNase A,** invert 5 times and vortex on low speed for 5 seconds.
9. **Add 100µl of Solution G3.**
10. Immediately vortex on high for 15 seconds.
11. Centrifuge 3 minutes at 13,000xg.
12. Remove clear supernatant and transfer to a clean 2.0 ml tube.
13. **Add 300µl of 100% Isopropanol.**
14. Invert 15 times and incubate at room temperature for 3 min.
15. Centrifuge 1 minute at 13,000xg.
16. **Carefully** pour off supernatant without disturbing pellet, and drain on a paper towel or absorbent material.
17. **Add 300µl of 70% Ethanol.**
18. Invert tube 5 times to wash.
19. Centrifuge 30 seconds at 13,000xg.
20. **Carefully** pour off supernatant without disturbing pellet, and drain on a paper towel or absorbent material.
21. Centrifuge for 30 seconds, and remove residual supernatant with narrow pipet tip **without disturbing pellet.**
22. **Add 100µl of Solution G4.**
23. Heat in 65°C water bath tapping tube occasionally, until pellet has resuspended (should take no longer than 30-40min).
24. Genomic DNA in tube is now ready to use for any application.

Thank you for choosing the UltraClean™ Blood DNA Isolation Kit.



Hints and Troubleshooting Guide

Concentrating the DNA

Normally the final volume will be 100 μ l. If this is too dilute for your purposes, you may resuspend the pellet in desired volume of **Solution G4**. The smaller the volume the longer it may take to re-hydrate.

Amount to process

300 μ l of Whole blood (or Bone Marrow).

No protein pellet

Sample was not cooled to room temperature before adding **solution G3**. Ice the sample for 3 more minutes and centrifuge for 3 minutes. Pellet should be very visible. Another cause is **solution G3** was not thoroughly mixed when adding to sample. Always mix completely by vortexing for 15 sec.

DNA pellet was difficult to resuspend

This is caused if the DNA was over-dried or was not mixed occasionally during 65°C incubation time. To solve this, heat for 1 hr at 65°C and leave sample overnight at room temperature.

Low recovery yield

There could be many causes to this. One is the sample contained few white blood cells. Another cause could be the white blood cell pellet was not completely resuspended. You must thoroughly resuspend pellet in step 5. If the samples were stored improperly or for too long of a period, this will effect the size and yield of DNA recovered. Always use fresh samples. You must be very careful in steps 16 and 20. The pellet is not very stable and can be lost.



Other quality products available from MO BIO Laboratories, Inc.

<u>Kit description</u>	<u>Cat. number</u>
Plasmid Prep Kits	
6 minute Mini Plasmid Prep Kit (100 preps)	12300-100
6 minute Mini Plasmid Prep Kit (250 preps)	12300-250
25-50 ml Plasmid Prep Kit (20 preps)	12700-20
25-50 ml Plasmid Prep Kit (50 preps)	12700-50
250-500 ml Plasmid Prep Kit (10 preps)	12600-10
250-500 ml Plasmid Prep Kit (20 preps)	12600-20
Endotoxin-Free Plasmid Prep Kits	
Endotoxin-free Mini Prep Kit (100 preps)	12311-100
Endotoxin-free Midi Prep Kit (10 preps)	12711-10
Endotoxin-free Maxi Prep Kit (10 preps)	12611-10
DNA Purification Kits	
Agarose Gel DNA Purification Kit (300 preps)	12100-300
Agarose Gel-Spin DNA Purification (100 preps)	12400-100
Agarose Gel-Spin DNA Purification (250 preps)	12400-250
PCR Clean-Up Kit (100 preps)	12500-100
PCR Clean-Up Kit (250 preps)	12500-250
DNA Isolation Kits	
DNA Blood Isolation Kit (100 preps)	12000-100
DNA BloodSpin Kit (50 preps)	12200-50
DNA BloodSpin Kit (250 preps)	12200-250
Mega BloodSpin Kit (10 preps)	12210-10
Soil DNA Isolation Kit (50 preps)	12800-50
Soil DNA Isolation Kit (100 preps)	12800-100
Soil DNA Mega Prep Kit (10 preps)	12900-10
Fecal DNA Isolation Kit (50 preps)	12811-50
Fecal DNA Isolation Kit (100 preps)	12811-100
Microbial DNA Isolation Kit (50 preps)	12224-50
Microbial DNA Isolation Kit (250 preps)	12224-250
Plant DNA Isolation Kit (50 preps)	13000-50
Plant DNA Isolation Kit (250 preps)	13000-250
Tissue DNA Isolation Kit (50 preps)	12334-50
Tissue DNA Isolation Kit (250 preps)	12334-250
Water DNA Isolation Kit (10 preps)	14800-10
Water DNA Isolation Kit (25 preps)	14800-25
Forensic DNA Kit- Single prep format (10 preps)	14000-10
Forensic DNA Kit- Single prep format (20 preps)	14000-20
RNA Isolation Kits	
Tissue RNA Isolation Kit (50 preps)	15000-50
Tissue RNA Isolation Kit (250 preps)	15000-250
Plant RNA Isolation Kit (20 preps)	13300-20
Plant RNA Isolation Kit (50 preps)	13300-50
Microbial RNA Isolation Kit (50 preps)	15800-50
Microbial RNA Isolation Kit (250 preps)	15800-250
Growth Media	
TB DRY (1 kg) Terrific Broth powder	12105-1
LB (1 kg) LB powder (Miller)	12106-1
LB Agar (1 kg) LB Agar Powder (Miller)	12107-1

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Contact Information

Phone MO BIO Laboratories, Inc. Toll Free 800-606-6246, or 760-929-9911

Email: technical@mobio.com

Fax: 760-929-0109

Mail: MO BIO Laboratories, Inc, 2746 Loker Ave West, Carlsbad, CA 92010

Ordering Information

Direct: Phone MO BIO Laboratories, Inc. Toll Free 800-606-6246, or 760-929-9911

Email: orders@mobio.com

Fax: 760-929-0109

Mail: MO BIO Laboratories, Inc, 2746 Loker Ave West, Carlsbad, CA 92010

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