Blood gDNA Mini Prep Kit (Beads)

(BW-MGD2311)

BEIWO Blood gDNA Mini Prep Kit (Beads) is designed to isolate high-quality genomic DNA from blood. It combines optimized lysis conditions and high-performance magnetic beads to provide a fast and convenient blood DNA isolation method. Purified DNA can be directly used for downstream applications such as PCR, qPCR, and next-generation sequencing (NGS). MGD2311-A32 is compatible with BEIWO BW Express 16, Allsheng Auto-Pure 32A; MGD2311-A96 is compatible with Hamilton, Beckman Biomek, Tecan, Thermo KingFisher, Allsheng Auto-Pure 96 and other similar nucleic acid purification systems.

KIT CONTENTS

Catalog#	BW-MGD2311-A00	BW-MGD2311-A32-32		BW-MGD2311-A32		BW-MGD2311-A96	
	Manual operation	Well position		Well position		Plate position	
Preps	50 T	1Tx32		1x32T		1x96T	
Lysis Buffer	33mL	Well 1	600 µL	Column 1/7	600 µL	Plate 2	600 µL
MgPure Beads	0.55mL	Well 2	800 µL	Column 2/8	800 µL	Plate 5	800 µL
Wash Buffer 1	33mL	Well 3	600 µL	Column 3/9	600 µL	Plate 3	600 µL
Wash Buffer 2	65mL	Well 4	600 µL	Column 4/10	600 µL	Plate 4	600 µL
Wash Buffer 2	-	Well 5	600 ul	Column 5/11	600 ul	Plate 7	600 ul
Elution Buffer	6mL	Well 6	100 µL	Column 6/12	100 µL	Plate 8	100 µL
Proteinase K	1.1mL		700 uL		700 uL		2x1 mL
Tip Comb	-		8		4		1

*BW-MGD2311-A32 and BW-MGD2311-A32-32 are 8 strip tip comb, BW-MGD2311-A96 is a 96-well Tip Comb.

STORAGE

The Proteinase K should be stored at 2~8°C. Other reagents can be stored at room temperature (4~28°C). They can be stored for at least 12 months without showing any significant reduction in performance, capacity, or quality of separation.

BEFORE STARTING

- Operate in an environment with the appropriate biosafety laboratory level (e.g BSL-2 or higher level) and wear appropriate personal protective equipment (e.g. gowns, gloves, goggles) when working with clinical specimens.
- Lysis Buffer contains chaotropic salts, which may form reactive compounds when combines with bleach. Do not add bleach or acidic solutions directly to the preparation waste.
- Ultraviolet disinfection of the Purification Instrument prior to use is recommended.
- Materials not supplied: 1.5 mL RNase-free centrifuge tube.
- Materials not supplied: Metal rack（Cat No. BW-CB137）,it can be reused.
- When processing bird blood samples, aspirate 5 to 10 uL samples and dilute with PBS buffer to 200 μL.

SAFETY INFORMATION

- ✓ When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets.
- ✓ The product should be used in strict accordance with the instructions. If it is not used in accordance with the regulations, it may cause pollution to the environment.
- ✓ Products are disposable, do not reuse, and the used product should be placed in the designated position in time.
- ✓ Exceeding the expiration date of this product, the performance of the product may be reduced, so it should be used within the expiration date.
- ✓ This kit can only be used for in vitro experiments, and not for clinical, therapeutic and in vivo experiments in animals. If it is not used in accordance with the regulations, the company will not be responsible for the consequences arising therefrom.

EXTRACTION PURIFICATION PROCEDURE

Manual operation (BW-MGD2311-A00)

1. Add 600 μL **Lysis buffer**, 20μL **proteinase K** and 200 μL sample into a new 1.5mL centrifuge tube (not supplied). Vortex to mix, incubate at 50℃ for 15-20 min, vortex 2 to 3 times during incubation.
2. Add 10 μL **MgPure Beads** into the 1.5mL tube votex for 30~60 s, incubate 3~5 min, vortex 2 to 3 times during incubation.

Note: The MgPure Beads should be vortex to ensure full suspension before use.

3. After the 1.5mL tube is immediately separated and no liquid remains on the tube wall is ensured, the 1.5mL tube is placed on the magnetic stand for 2 min or until the MgPure Beads are completely absorbed, and all supernatants are carefully absorbed and discarded with a pipette.
4. Add 600 μL **Wash Buffer 1** into the 1.5mL tube, blow with pipette 5-10 times, place the 1.5mL tube on the magnetic rack for 2 min or until the MgPure Beads are completely absorbed, and carefully absorb and discard all supernatant with pipette.
5. Add 600 μL **Wash Buffer 2** into the 1.5mL tube, blow with pipette 5-10 times, place the 1.5mL tube on the magnetic rack for 2 min or until the MgPure Beads are completely absorbed, and carefully absorb and discard all supernatant with pipette.
6. Repeat step 5.
7. The 1.5mL tube was placed on the magnetic rack and left open to dry for 5 min.
8. Add 100 μL **Elution Buffer** into the 1.5mL tube, blow and mix with pipette, and incubate at 55°C for 5 min. After the 1.5mL tube is transient, the 1.5mL tube is placed on the magnetic rack for 2 min or until the magnetic bead is completely absorbed, and all supernatant is transferred to the new centrifuge tube with a pipette. The obtained nucleic acid solution was stored at -20°C for a long time

Nucleic acid extractor （BEIWO BW Express 16 or an Allsheng Auto-Pure 32A）（BW-MGD2311-A32-32）

1. Take out a pre-loaded 6-well strip and gently shake it (if necessary), let the reagent or magnetic beads assemble at the bottom of the well.
2. Place the 6-well strip into Metal rack for the automated extractor in the correct orientation according to its shape; remove the sealing film carefully and avoid violent shaking to prevent spilling of liquid.
3. Aspirate **200~250 uL** samples and **20 uL proteinase K** into the deep wells in Well 1.

4. Put the Strip in an Allsheng Auto-Pure 32A Nucleic Acid Purification System.
5. Install two 8-strip Tip Combs for each Rack.
6. Run the program described in Table 1.
7. After the program is completed, take out the 6-well strip and transfer the eluate to a new sterile tube of choice for final storage.

Table 1. Recommended program for Auto-Pure 32A Nucleic Acid Purification System

Step	Name	Well	Mix time (min)	Magnet time(sec)	Wait time (min)	Vol. (μL)	Mix speed (1-10)	Temp. (℃)	Mix pos (0-100%)	Mix amp (1-100%)	Magnet pos (0-100%)	Magnet speed (1-10)
1	Lysis	1	10	0	0	800	9	100	0	80	0	1
2	Beads	2	0.3	10	0	400	8	OFF	0	80	0	1
3	Binding	1	2	40	0	800	9	OFF	0	80	0	1
4	Wash1	3	2	10	0	600	10	OFF	0	80	0	1
5	Wash2	4	1	10	0	600	10	OFF	0	80	0	1
6	Wash3	5	1	10	1	600	10	OFF	0	80	0	1
7	Elute	6	8	60	0	400	10	85	0	100	0	1
8	Drop	4	0.5	0	0	800	7	OFF	0	80	0	1

Note: Set 'Heating synchronization', 'Cool Fan Disabled', 'Cooling synchronization', and 'Drying Fan Disabled'

Nucleic acid extractor（BEIWO BW Express 16 or an Allsheng Auto-Pure 32A）(BW-MGD2311-A32)

1. If necessary, gently shake the pre-loaded 96-well plate to let the reagent or magnetic beads assemble at the bottom of the plate.
2. Carefully remove the sealing foil of the 96-well plate, aspirate**200~250 μL sample** and **20 μL proteinase K** into the deep well in **Column 1/7**.
3. Put the plate in a BEIWO BW Express 16 or an Allsheng Auto-Pure 32A Nucleic Acid Purification System.
4. Install two 8-strip Tip Combs for each plate.
5. Run the program described in Table 2.
6. After the program is completed, take out the 96-well plate and transfer the eluate into new sterile tube of choice for final storage.

Table 2. Recommended program for Auto-Pure 32A Nucleic Acid Purification System

Step	Name	Well	Mix time (min)	Magnet time(sec)	Wait time (min)	Vol. (μL)	Mix speed (1-10)	Temp. (℃)	Mix pos (0-100%)	Mix amp (1-100%)	Magnet pos (0-100%)	Magnet speed (1-10)
1	Lysis	1	10	0	0	800	9	100	0	80	0	1
2	Beads	2	0.3	10	0	400	8	OFF	0	80	0	1
3	Binding	1	2	40	0	800	9	OFF	0	80	0	1
4	Wash1	3	2	10	0	600	10	OFF	0	80	0	1
5	Wash2	4	1	10	0	600	10	OFF	0	80	0	1
6	Wash3	5	1	10	1	600	10	OFF	0	80	0	1
7	Elute	6	8	60	0	400	10	85	0	100	0	1
8	Drop	4	0.5	0	0	800	7	OFF	0	80	0	1

Note: Set 'Heating synchronization', 'Cool Fan Disabled', 'Cooling synchronization', and 'Drying Fan Disabled'

Nucleic acid extractor（Allsheng Auto-Pure 96A） (BW-MGD2311-A96)

1. Take out the 96-well plates required for single batch gDNA extraction. Gently shake the plates if necessary to let the reagent or magnetic beads assemble at the bottom of the plates.
2. Carefully remove the sealing foil of the 96-well plate named Lysis Buffer A, aspirate **200~250 μL sample** and **20 μL proteinase K** into the deep well.
3. Put the Lysis Buffer plate on position 2 of the Allsheng Auto-Pure 96 instrument.
4. Carefully remove the sealing foil of the 96-well plate named MgPure Beads, put a 96-Well Tip Comb into the plate, and put them on position 5 of the Auto-Pure 96 instrument together.
5. Carefully remove the sealing foils of other 96-well plates and put them on the corresponding positions according to the position specified in the KIT CONTENTS table as well as marked on the plate labels.
6. Run the program described in Table 3.
7. After the program is completed, take out the 96-well plate and transfer the eluate into new sterile tube of choice for final storage.

Table3. Recommended program for Auto-Pure 96 Nucleic Acid Purification System

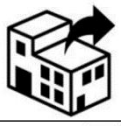
Step	Name	Plate	Mix Time (min)	Mix Amp (%)	Wait Time (min)	Vol. (μL)	Mix Speed (1-10)	Temp. (℃)	Seg-ments (0-5)	1st Seg. time (s)	2nd Seg. time (s)	3rd Seg. time (s)	Cycle times (1-10)	Mag. speed (1-10)
1	Load	5	-	-	-	-	-	-	-	-	-	-	-	-
2	Lysis	2	10	80	0	800	7	100	0	-	-	-	-	-
3	Beads	5	0.3	80	0	400	5	OFF	1	10	-	-	1	1
4	Binding	2	2	80	0	800	7	OFF	1	30	-	-	1	1
5	Wash1	3	2	80	0	600	10	OFF	1	1	-	-	1	1
6	Wash2	4	1	80	0	600	10	OFF	1	1	-	-	1	1
7	Wash3	7	1	80	1	600	10	OFF	1	1	-	-	1	1
8	Elute1	8	2	100	0	400	10	85	0	-	-	-	-	-
9	Elute2	8	6	100	0	150	4	85	1	20	-	-	1	1
10	Unload	4	-	-	-	-	-	-	-	-	-	-	-	-

Note: Set 'Heating synchronization', 'Cool Fan Disabled', 'Cooling synchronization', and 'Drying Fan Disabled'

LIMITED USE AND WARRANTY

This product is warranted to perform as described in its labeling and in BEIWO's literature when used in accordance with instructions. No other warranties of any kind, express or implied, including, without limitation, implied warranties of merchantability or fitness for a particular purpose, are provided by BEIWO. BEIWO's sole obligation and purchaser's exclusive remedy for breach of this warranty shall be, at the option of BEIWO, to replace the products, BEIWO shall have no liability for any direct, indirect, consequential, or incidental damage arising out of the use, the results of use, or the inability to use it product. For technical support or learn more product information, please contact us at 400-115-2855 or visit our website at www.beiwobiomedical.com

Labels, Packing Logo Design

Symbol	Introductions	Symbol	Introductions
LOT	Batch Code		Consult instructions for use
IVD	For in vitro diagnostic device use		Manufacture Date
	Manufacturer Name Address	EC REP	Name and Address of European Union Representative
CE	CE Symbol		Used-by date
REF	Catalogue Number		Importer
	Distributor	UDI	Unique Device Identification
CC	Country of Manufacture	#	Model Number
	Do not reuse" are "single use, "Use only once		

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