“MagQu” Blood gDNA extraction kit

REF KT-GDE-001B-MQ1

For *In Vitro* Diagnostic & Professional Use

Product description:

“MagQu” blood gDNA extraction kit is used for the purification of genomic DNA (total nucleic acids) from blood samples by manual method. The purified nucleic acids are suitable for downstream applications such as Real-Time PCR, PCR and other molecular experiments.

Reagents:

Item	**Cat. No.**
“MagQu” blood gDNA extraction kit ……1 box (96 tests)	KT-GDE-001B-MQ1

Storage:

Please keep the Proteinase K at -20°C. Except for Proteinase K, please keep the kit at room temperature. The validity is warranted for one year.

Statement of Warnings:

BIOHAZARD

All products or objects that come in contact with human body fluids should be handled, before and after cleaning, as if capable of transmitting infectious diseases. Wear facial protection, gloves, and protective clothing.

1. Do not freeze.
2. Please keep away from events with strong magnetism.
3. Do not use reagents beyond the expiration date printed on the kit.
4. Mix Magnetic beads thoroughly before use.

Contents:

This kit contains reagents for 96 reactions with standard volume input.

Item	Volume (ml)	Storage
Lysis buffer	40	Room temperature
Proteinase K	1 tube X 2	-20°C (Dissolve each tube in 1ml of PBS before use.)
Magnetic beads	1	Room temperature
Wash buffer 1 (Add isopropanol)	36 (24)	Room temperature
Wash buffer 2 (Add ethanol)	36 (84)	Room temperature
Elution buffer	10	Room temperature

Preparation of buffers for use:

1. Add 24 ml isopropanol to Wash Buffer 1 and mix well. Check the box on the bottle and cap.
2. Add 84 ml absolute ethanol to Wash Buffer 2 and mix well. Check the box on the bottle and cap.
3. Mix Magnetic beads thoroughly before use.

Required materials not supplied:

Procedure	Item
Manual operation	● Orbital shaker ● Hot plate ● Magnetic pins / rods / stand (MDF-08) ● Nuclease-Free water ● Eppendorf ● Pipetman & Tip ● Isopropanol ● Ethanol
Automated Machine	● Automatic magnetic separation system ● 96 deep well plate ● Pipetman & Tip

Manual nucleic acid purification protocol:

1. Add 400 µl of Lysis Buffer and 20 µl of proteinase K into the eppendorf.
2. Lysis step: Transfer 400 µl of blood into eppendorf. Incubate at 60°C for 10 mins.
3. Binding step: Add 450 µl isopropanol and 3 µl of Magnetic Beads into the eppendorf and shake on shaker for 10 mins.
4. Use magnetic pins / rods / stand to capture the Magnetic Beads for 5 mins, then discard the supernatant.
5. Wash step1: Add 600 µl wash buffer 1 into the eppendorf. Shake on shaker for 1 min.
6. Use magnetic pins / rods / stand to capture the Magnetic Beads for 1 min, then discard the supernatant.
7. Wash step2: Add 600 µl wash buffer 2 into the eppendorf. Shake on shaker for 1 min.
8. Use magnetic pins / rods / stand to capture the Magnetic Beads for 1 min, then discard the supernatant.
9. Wash step 3: Add 600 µl wash buffer 2 into the eppendorf. Shake on shaker for 1 min.
10. Use magnetic pins / rods / stand to capture the Magnetic Beads for 1 min, then discard the supernatant.
11. Dry out the magnetic beads for 5 mins, and preheat the elution buffer to 56°C.
12. Elution step: Add 100 µl Elution buffer into the eppendorf, mix 5 mins.
13. Use magnetic pins / rods / stand to capture the magnetic beads at least for 2 mins.
14. Transfer the elute from eppendorf to a new eppendorf for final storage (-20 or -80°C).

Automated nucleic acid purification protocol:

1. Before operating, please follow the manual provided by the instrument manufacturer to set the parameters of the instrument.

Instrument settings:

Step	Item	Mix (Minutes)	Collect (Minutes)	Rod	Total volume (µl)	Temperature (°C)	Air Dry (Minutes)	Pause (Minutes)	Add
1	Lysis buffer +PK	10	0	Off	820	60	0	0	-
2	Lysis buffer +PK	0	0	Off	820	NA	0	1	Isopropanol & Beads
3	Lysis buffer +PK	10	0	Off	1280	NA	0	0	-

4	Lysis buffer +PK	0	2	On	1280	NA	0	0	-
5	Wash buffer 1	1	0	Off	600	NA	0	0	-
6	Wash buffer 1	0	1	On	600	NA	0	0	-
7	Wash buffer 2	1	0	Off	600	NA	0	0	-
8	Wash buffer 2	0	1	On	600	NA	0	0	-
9	Wash buffer 2	1	0	Off	600	NA	0	0	-
10	Wash buffer 2	0	1	On	600	NA	5	0	-
11	Elution buffer	5	0	Off	100	56	0	0	
12	Elution buffer	0	2	On	100	56	0	0	

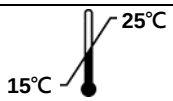
2. Enter the default program to warm up the instrument.
3. Transfer 400 µl sample into the column of Lysis buffer.
4. Start the program.
5. After the program is complete, remove the kit from the instrument carefully.
6. Transfer the elute from the column of Elution buffer to a clean eppendorf for final storage (-20 or -80°C).

Results:

KT-GDE-001B-MQ1

Time	28 min			
Sample	Whole blood 100 µl	Whole blood 200 µl	Whole blood 300 µl	Whole blood 400 µl
Yield (Manual)	6.2 µg	10.8 µg	13.5 µg	15.8 µg
Yield (Auto) Fresh blood	3.5-4.0 µg 260/280 > 1.8 260/230 > 1.3	6.5-7.0 µg 260/280 > 1.8 260/230 > 1.6	8.0-10.0 µg 260/280 > 1.8 260/230 > 1.8	9.5-14.0 µg 260/280 > 1.8 260/230 > 1.9
Yield (Auto) Frozen blood	3.5-4.0 µg 260/280 > 1.8 260/230 > 1.2	6.5-7.0 µg 260/280 > 1.8 260/230 > 1.9	8.0-10.0 µg 260/280 > 1.8 260/230 > 1.9	10.0-15.0 µg 260/280 > 1.8 260/230 > 2.0

Glossary/symbol definition:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Caution, refer to accompanying documents		Consult instructions for use.
LOT	Batch code		Temperature limitation
REF	Catalogue number,	EC REP	Authorized representative in the EU/EC.
CONT	Content	IVD	In Vitro diagnostic medical device
	Use by Expressed as: CCYY-MM-DD		Manufacturer
	Biological risk		Do not use if package damaged

 **Manufacturer:**

MagQu Co., Ltd.
3F., No.7 and No. 12, Ln. 538, Zhongzhen Rd., Xindian Dist., New Taipei City, Taiwan, R.O.C.
Tel: +886-2-8667-1897 Fax: +886-2-8667-1809
E-mail: info@magqu.com Website : www.magqu.com

Rev. Mar-25-2021