NEUROMICS

Genomic DNA Extraction & Purification Magnetic Beads Kit **Data Sheet**

Catalog Number:	EP10012 **Size:** 100 Test
Kit Components Included:	• Si-Mag magnetic beads 1.5 mL • Proteinase K solution 2 mL • Blood Cells Lysis solution 20 mL • Wash solution 2X, 38 mL (Add 38 mL of Isopropanol before use to get 1X sol.) • Elution Buffer 20 mL
Materials needed but not provided with the kit:	• 80% Ethanol in water • Si-Mag Magnet or other magnetic racks compatible with vials used • Isopropanol (ACS grade)
Storage:	Magnetic beads & proteinase K solution should be stored at 2-8°C but other kit reagents need to be stored at room temperature. Lysis solution may turn cloudy if store in the cold room and to clear it up place the bottle into a water bath at 37°C.

Application Notes

Introduction:

This kit is suitable for the extraction of DNA from fresh or frozen whole blood treated with anticoagulant. The special Red Blood Cell lysis solution can efficiently extract DNA from the blood cells. The purified DNA has a typical ratio of the OD260/280 between 1.7 to 1.9, and the recovered DNA size can be up to 60 kb. The resulting product can be used directly as a template for PCR, hybridization, etc. The kit will work with a 48 well round bottom plate if a special magnetic frame is used. The kit can also be used with a variety of automatic nucleic acid extraction instruments or workstation.

Precautions:

- Wear protective gloves, clothing, eye, and face protection. Wash hands thoroughly after handling.
- Avoid freeze/thaw cycles and centrifugation which could damage the beads.
- Proteinase K solution should be stored at 4°C.
- Bring frozen samples to room temperature before extraction.
- Vortex samples for about 10 seconds before adding magnetic beads.
- Vortex beads for about 10 seconds and mix them well with DNA containing material to ensure best performance.
- Elute DNA from the beads completely.

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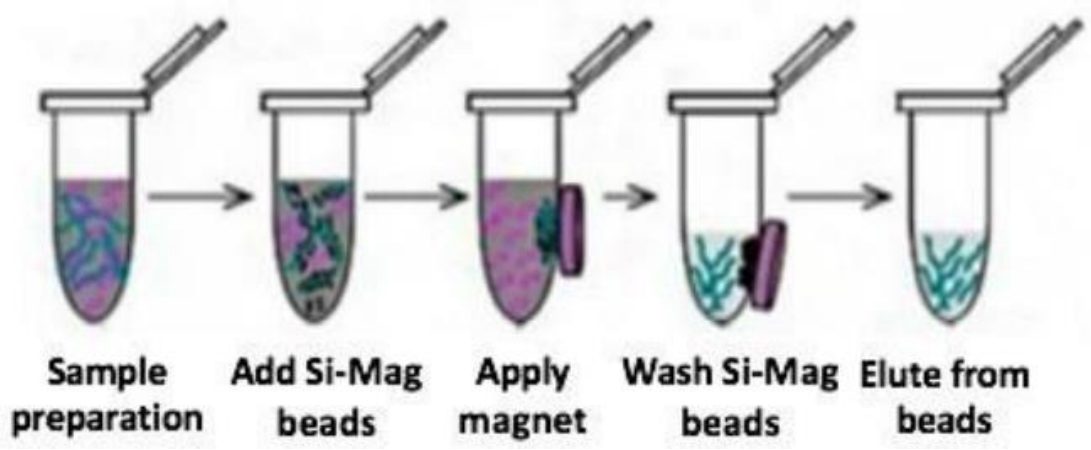
Principle of Assay:



Procedure for Purification of Genomic DNA from Blood:

1. **Preparation of sample**. Add **200 uL** of blood sample (or diluted with elution solution to make 200ul volume), **200 uL** of Blood lysis solution, and **20 uL** of Proteinase K solution into a clean Eppendorf tube. Incubate for 15 min at 58°C and vortex the mixture for 30 seconds every 3 min. during the incubation. Cool to room temperature and proceed to next step.
2. **Add 15 uL** of magnetic beads to the tube with sample.
3. **Add 300 uL** of isopropanol to the tube with sample.
4. **Mix well**, shake and incubate for 5-10 min at room temperature. Place Eppendorf tube onto the Si- Mag magnet rack for 20 seconds. Make sure the beads are collected at the bottom of the tube.
5. **Remove** supernatant by holding the magnet rack upside down or by pipetting.
6. **Wash** the beads with **700 uL** of wash solution. Apply magnet for 20 second then remove supernatant as in Step 5.
7. **Wash** the beads with **700 uL** of 80% Ethanol. Apply magnet and remove supernatant as in Step 5.
8. **Dry** the beads at 55°C for 3-4 min, leaving the tube open. Do not over-dry the beads.
9. **Elute** DNA from beads with **50-100 ul** of elution buffer; incubate at 60°C for 2 min and then vortex at full speed for 30 seconds. Wait for 8 min after the incubation and vortex again for 30 seconds.
10. **Remove** beads by using magnet rack, pipette DNA out and transfer to a clean tube.
11. **Store** purified DNA at -20°C for long-term storage.

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