TIANGEN®

Magnetic Serum/ Plasma DNA Kit

For purification of circulating DNA from Serum and Plasma

www.tiangen.com/en

Magnetic Serum/ Plasma DNA Kit

Cat. no. 4992412

Kit Contents

Contents	4992412 (400 µl × 96 preps)
Buffer CFL	45 ml
Buffer PD	120 ml
Buffer RW	40 ml
Buffer TBC	30 ml
Proteinase K	4 × 1 ml
MagAttract Suspension WD	3 × 1 ml
Handbook	1

Storage

This kit can be stored at room temperature (15-30°C) under dry condition for 12 months. If a precipitate has formed in Buffer, please place the buffer at 37°C for 10 min to dissolve the precipitate.

Introduction

Magnetic Serum/ Plasma DNA Kit is designed for rapid and reliable isolation of high-quality cell free DNA from serum and plasma. The unique magnetic particles technology provides high quality of DNA extraction by changing affinity of magnetic particles. The whole isolation process is safe and convenient, the extracted cell free DNA has high yield, high purity and reliable quality. This system can be easily adapted to a variety of automated platforms.

Highlights

1. This kit can be obtained by manual extraction and can be used in batch extraction of a variety of high-throughput platforms. If you need to use other automated platforms, please contact TIANGEN for the corresponding solutions.
2. The product of this kit satisfies all kinds of downstream testing experiments and NGS analysis.
3. This product is suitable for serum/ plasma samples of 0.4-5 ml.

Important notes

1. The samples should avoid repeated freezing and thawing, otherwise the extracted nucleic acid fragments will be smaller, and the extraction amount will be reduced.
2. Ensure that Buffer CFL has bene prepared with appropriate volume of isopropanol; Buffer RW has been prepared with appropriate volume of ethanol (96-100%) as indicated on the bottle and shake thoroughly.
3. The component of this kit is based on 0.4 ml sample. If samples of other volume are extracted, the reagent will be purchased separately.

Protocol

This procedure is applicable to processing 0.4 ml to 5 ml plasma samples.

Ensure that Buffer CFL has been prepared with appropriate volume of isopropanol; Buffer RW has been prepared with appropriate volume of ethanol (96-100%) as indicated on the bottle and shake thoroughly.

1. According to the sample volume, select the proper centrifuge tube and add the reagent in order.

Sample volume	Material specifications	Buffer CFL volume	Proteinase K volume	MagAttract Suspension WD volume
400 µl	1.5 ml centrifuge tube	600 µl	40 µl	30 µl
600 µl		900 µl	60 µl	
2000 µl	5 ml centrifuge tube	3000 µl	200 µl	45 µl
4000 µl	15 ml centrifuge tube	6000 µl	400 µl	90 µl

Note: This kit is based on a 0.4 ml sample. If samples of other volume are extracted, please follow the dosage in the above table.

2. Close the lid, and mix by vortex. Incubate at room temperature for 20 min, and mix for 10 sec by upside down method every 3-5 min to make magnetic beads and nucleic acids fully combined. Briefly centrifuge the centrifuge tube to remove drops from inside the lid.
3. Place the centrifuge tube to a magnetic stand for 2 min to allow magnetic beads precipitate to the tube bottom. Discard the supernatant carefully by pipet. Remove the centrifuge tube.
4. Add 750 µl Buffer PD to samples, mix for 30 sec by upside down method to make magnetic beads fully suspended. Briefly centrifuge the centrifuge tube to remove drops from inside the lid.

   Note: If there is residual magnetic bead on the centrifuge tube wall, add another 200 µl Buffer PD, and then transfer the bead slurry together to a 1.5 ml centrifuge tube.
5. Place the centrifuge tube to a magnetic stand for 1 min, allowing the magnetic beads to completely clear from the solution. Discard the supernatant carefully by pipet. Remove the centrifuge tube.
6. Add 750 µl Buffer PW **(ensure ethanol has been added)** to samples, mix for 30 sec by upside down method to make magnetic beads fully suspended. Briefly centrifuge the centrifuge tube to remove drops from inside the lid.
7. Place the centrifuge tube to a magnetic stand for 1 min, allowing the magnetic beads to completely clear from the solution. Discard the supernatant carefully by pipet. Remove the centrifuge tube.
8. Repeat Step 6 and Step 7.
9. Place the centrifuge tube on a magnetic stand, clear the solution as much as possible, and air dry for 10-15 min.

   Note: Residual ethanol may inhibit subsequent enzymatic reactions. Please ensure the residual ethanol is removed completely. However, over drying should be avoided, since over-dried DNA is difficult to dissolve.
10. Remove the centrifuge tube from the magnetic stand. Add 30-65 µl Buffer TBC to elute DNA. Mix by pipetting and incubate at 56°C for 5 min, during which invert the tube 2 times.
11. Place the microcentrifuge tube on the magnetic stand for 2 min until all the magnetic beads are cleared from the solution. Transfer the supernatant containing purified DNA to a new collection microcentrifuge tube and store at proper condition.