TIANGEN®

Magnetic Swab DNA Kit

www.tiangen.com/en

This product is for scientific research use only. Do not use in medicine, clinical treatment, food or cosmetics.

Magnetic Swab DNA Kit

Cat.no. 4992410/4992411

Kit Contents

Contents	4992410 (50 preps)	4992411 (200 preps)
Buffer GHA	50 ml	200 ml
Buffer GHC	20 ml	80 ml
Buffer PD	120 ml	2 × 240 ml
Buffer PWD	20 ml	40 ml
Proteinase K	500 µl	2 × 1 ml
MagAttract Suspension G	500 µl	2 × 1 ml
Buffer TB	15 ml	30 ml
Handbook	1	1

Optional reagents and tools

Sample Preservation Buffer; Magnetic Stand

Storage

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

Introduction

The kit adopts magnetic beads with unique separation function and a unique buffer system, and can separate and purify high-quality genomic DNA from various oral samples such as oral swabs, throat swabs, mouthwash, etc. The unique embedded magnetic beads have strong affinity for nucleic acid under certain conditions, and when the conditions change, the magnetic beads will release adsorbed nucleic acid, thus achieving the purpose of fast separation and purification of nucleic acid. The whole process is safe and convenient. The extracted genomic DNA fragments are large, with high purity, stable and reliable quality. The method is especially suitable for automatic extraction of high-throughput workstations.

The DNA purified by the kit can be suitable for various conventional operations, including enzyme digestion, PCR, library construction, Southern blot and other experiments.

Features

1. The kit can meet the requirements of manual extraction as well as batch extraction on various high-throughput platforms.
2. It is suitable for oral swabs, throat swabs, mouthwash and other oral samples.
3. The DNA purified by the kit can be suitable for various conventional operations, including enzyme digestion, PCR, library construction, Southern blot and other experiments.

Notes **Please read these notes before using this kit.**

1. Avoid repeated freezing and thawing of the sample, otherwise the extracted nucleic acid fragments will be smaller and the extraction amount will be reduced.
2. If there is precipitation in Buffer GHC, it can be redissolved at room temperature and used after shaking.
3. If the sample cannot be extracted in time, it can be stored in the oral swab preservation solution, where long-term preservation will not affect the extraction effect.
4. The manual extraction of this product can be matched with a splicing Magnetic Stand.
5. For the high-throuphput extraction, please contact TIANGEN for the corresponding solutions.

Protocol

Please add isopropanol to Buffer GHC and 96-100% ethanol to Buffer PWD as indicated on the bottle tag before use.

1. **Sample treatment:**

   1) Oral swab sample

   Transfer the swab wiped in the mouth to a 2 ml centrifuge tube, and add 500 µl of Buffer GHA. Add 10 µl Proteinase K solution, vortex for 10 sec and mix well, place at 65°C for 15-30 min, vortex and mix well several times every 10 min. Take out 300 µl for subsequent experiments.

   2) Throat swab sample

   Transfer the swab wiped in pharynx to a 5 ml centrifuge tube, add 1-2 ml of Buffer GHA, and mix it by inverting up and down. Before extraction, take out 300 µl of sample, add 10 µl of Proteinase K, vortex for 10 sec and mix evenly, place at 65°C for 30 min, vortex and mix evenly several times every 10 min.

   3) Saliva sample

   Take out saliva samples as required, add equal volume of Buffer GHA, and mix them by inverting up and down. Before extraction, take out 300 µl of sample, add 10 µl of Proteinase K, vortex for 10 sec and mix evenly, place at 65°C for 30 min, vortex and mix evenly several times every 10 min.

   Note: If the sample has been stored in the sample storage solution of other manufacturers, add 1/2 volume of Buffer GHA and 10 µl Proteinase K solution of the sample, vortex for 10 sec, mix well, place at 65°C for 15-30 min, and take out 300-350 µl for subsequent experiments. When taking throat swab samples and saliva samples, if the Buffer GHA is insufficient, please purchase separately.

2. Add 600 µl Buffer GHC **(ensure that isopropanol has been added before use)** to each tube , pipette to mix or shake to mix evenly.
3. Add 10 µl of MagAttract Suspension G to each tube, and pipette to mix or shake to mix evenly for 12 min.

   Note: In order to ensure complete resuspension of magnetic beads, please vortex the beads to mix evenly before use.
4. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec, carefully remove the liquid when the magnetic beads are completely attached.

5. Remove the centrifuge tube from the magnetic stand, add 900 µl of Buffer PD, pipette to mix or shake to mix evenly for 3 min.
6. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec, carefully remove the liquid when the magnetic beads are completely attached.
7. Remove the centrifuge tube from the magnetic stand, add 900 µl of Buffer PD, pipette to mix or shake to mix evenly for 3 min.
8. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec, carefully remove the liquid when the magnetic beads are completely attached.
9. Remove the centrifuge tube from the magnetic stand, add 900 µl of Buffer PWD **(ensure that ethanol has been added before use)**, pipette to mix or shake to mix evenly for 3 min.
10. Place the centrifuge tube on a magnetic stand and let it stand for 30 sec, carefully remove the liquid when the magnetic beads are completely attached.
11. Place the centrifuge tube on a magnetic stand and air dry at room temperature for 10-15 min.

    Note: The ethanol residue will inhibit the subsequent enzyme reaction, so make sure the ethanol volatilizes completely when drying. But don't over-dry the beads as it will be difficult to elute DNA.
12. Remove the centrifuge tube from the magnetic stand, add 50-100 µl Buffer TB, pipette to mix or shake to mix evenly, place it at 56°C, incubate for 10 min, and mix evenly by inverting up and down for 3 times or shake evenly during the period.
13. Place the centrifuge tube on a magnetic stand and let it stand for 2 min. When the magnetic beads are completely attached, carefully transfer the DNA solution to the collection tube and store it under appropriate conditions.