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Saliva DNA collection And Extraction kit

Product Number: DNK3901

Shipping and Storage

1. When the Buffer CL is at low temperature, precipitation and precipitation may occur. It can be re dissolved by taking a water bath at 37 ℃ for a few minutes, restoring clarity and transparency, and then cooled to room temperature before use.
2. To avoid the volatilization, oxidation, and pH changes of reagents exposed to air for a long time, each solution should be covered tightly in a timely manner after use.

Components

Component	Storage	DNK3901 10preps	DNK3902 50preps
Buffer PS	RT	2ml×10	2ml×50
Buffer CL	RT	10ml	50ml
Buffer IP	RT	17ml	85ml
Buffer DD	RT	10ml	20ml
5ml collection tube	RT	10	50

Description

The traditional collection of human genomic DNA samples often requires blood collection and extraction of whole blood genomic DNA. This method has several obvious drawbacks: it requires certain blood collection equipment and personnel with medical knowledge to complete it: the pain of blood collection causes rejection and refusal of sampling; Invasive collection increases the likelihood of infection; Blood samples must be transported and stored at low temperatures after collection. This reagent kit can provide a painless and non-invasive method, allowing patients to obtain high-quality and large quantities of samples without enduring the pain of blood drawing and the risk of infection. The test subjects have low rejection, and DNA samples can be easily obtained by both infants and the elderly. The collection process is very simple. The subject spits saliva into the Buffer PS and mixes it well to complete the collection process. After mixing, it can be transported and stored at room temperature for up to a year without spoilage. Can save on transportation, storage of refrigeration equipment, and electricity costs. The collected saliva can be extracted from DNA through a few simple steps. The average yield of extracted DNA is 110μg/2mL saliva.

Features

1. The non-invasive sampling method eliminates the pain of blood sampling, reduces the risk of contamination, and increases the convenience of sampling, allowing the examinee to take samples themselves.
2. Only 2ml of saliva sample is needed to obtain approximately 110μg of DNA (with significant differences in yield among individuals).
3. The sampled sample can be stably stored at room temperature for more than one year.

Application

Collect, store, transport, and purify DNA from saliva samples.

Steps for collecting saliva samples

1. Rinse your mouth with clean water 1-2 times, then spit it out.
2. After rinsing your mouth, wait for at least 5 minutes before collecting saliva. During this time, do not eat or drink any beverages.
3. Spit saliva (not phlegm from the throat) into a 5ml collection tube until the 2ml mark is reached. (Do not spit sputum into the

collection tube. If the saliva is insufficient, do mouth and tongue movements to promote secretion. A small amount of foam floating on the upper layer of saliva is not included in the 2ml saliva collection volume, and the collection process must be completed within 30 minutes.)

4. Pour 2ml of equal volume Buffer PS into a 5ml saliva collection tube, thoroughly invert and mix, then tighten the lid.

Steps for salivary DNA extraction

(For example, 2ml saliva volume can be scaled up or down in proportion to the amount of saliva extracted each time):

Cell lysis

1. Place the Buffer PS/saliva mixture in a 50°C water bath for at least 1 hour or a 50°C air incubator for at least 2 hours.
2. Transfer 4ml of mixture (2ml of saliva and 2ml of Buffer PS) to a 15ml or 50ml centrifuge tube.
3. Add 1ml of Buffer CL and 10ul of RNaseA solution (10mg/ml). After high-speed vortex oscillation for 10 seconds, let it sit at room temperature for 10 minutes.

Impurity precipitation

4. Add 1.7ml of Buffer IP to the above cracking mixture.
5. High speed vortex oscillation for 25 seconds, thoroughly mix Buffer IP and cracking mixture.
6. Centrifuge 2500×g for 5 minutes. The precipitated impurities and proteins will form a dense precipitate cluster at the bottom of the tube. If the protein precipitation is not too dense, it can be left on ice for 5 minutes and then repeat step 6.

DNA precipitation

7. Carefully transfer the supernatant (containing DNA) into a new 15 ml or 50 ml centrifuge tube. Be careful not to touch the sediment at the bottom of the tube. Add 5ml of isopropanol. (When the saliva DNA content is low, adding 40μl Glycogen 20mg/ml may increase some yield)
8. Gently invert and mix 50 times.
9. Centrifuge at 2000×g for 3 minutes, at which point white DNA precipitates can generally be seen at the bottom of the tube.
10. Discard the supernatant, invert it and gently tap on absorbent paper a few times to absorb as much as possible. Add 5ml of 70% ethanol and invert several times to rinse the DNA precipitate.
11. Centrifuge at 2000×g for 1 minute, carefully pour out the supernatant (the precipitate is very loose, be careful not to pour out the DNA precipitate).
12. After inverting, gently tap on the absorbent paper a few times to control the residual ethanol. You can also use the nozzle to carefully remove the residual ethanol around the bottom sediment and the wall of the tube. Let the sediment air dry for a few minutes (do not dry too much, and do not leave residual ethanol).

DNA dissolution hydration

13. Add 250μl-400μl Buffer DD rehydrates and dissolves DNA precipitation, gently flicks the tube wall and mixes well.
14. It can be incubated at 65℃ for 30-60 minutes (no more than one hour), and then left at room temperature or 4℃ overnight to rehydrate DNA, with occasional light tapping of the tube wall to help rehydrate DNA.
15. DNA can be stored at 2-8 ℃, and if it needs to be stored for a long time, it can be stored at -20℃ or -80℃.