Stool genomic DNA Fast Isolation Kit

(Spin-column)

A fast kit for the isolation of genomic DNA* from *soil/silt/stool

For laboratory research use only

DP4601 **50 preps**

Kit Content, Storage, and Stability

Content	Storage	50 preps
Extraction buffer	RT	50 ml
Buffer A	-20°C	750 ul
Buffer B	RT	5 ml
Buffer C	RT	25 ml
Protein Precipitation Buffer	RT	18 ml
Elution Buffer EB	RT	5 ml
Adsorption Column AC	RT	50
Purification Column AC	RT	50
Collection Tube (2 ml)	RT	50

All reagents are stable for 12 months when stored properly.

Buffer B may form precipitate in the low temperature. If necessary, incubate at 65°C water bath until it's clear, cool down to RT before use.

Please ensure the bottles of buffer tightly capped when no in use, preventing reagents evaporating, oxidation and PH changing.

Principle

In this kit, innovative extraction and lysis system allow for rapidly lysing cells and inactivating cellular nuclease. The treatment of glass beads is eliminated and the integrity of genomic DNA is guaranteed. DNA purity is greatly ensured from efficiently removing debris, contaminants and humic acid by specially treated DNA spin-column. Innovative washing solution removes trace contaminants and pure DNA is eluted in water or low ionic strength Elution Buffer. Purified DNA can be directly used in downstream applications without the need for further purification.

Features

1. Rapid, DNA isolation under 60 min
2. Compatible, suitable for various soils, stool and other types of soil
3. High purity, Purified DNA typically has an A260/A280 ratio between 1.7 and 1.9
4. Isolated DNA longer than 50Kb and can be directly used for most downstream applications, including PCR, Southern-blot, Restriction digestion reactions, etc.

Notes

Please read this section before your experiment

All the centrifugation steps can be performed at room temperature. If Buffers are precipitated (if stored under 4°C), dissolute them in 65°C water bath and cool them to the room temperature before use.

Procedure

a. Accurately weigh 0.3-0.5 g fresh sample to a new centrifuge tube, add 1ml extraction buffer and 5 µl buffer A, vortex 1-2 min, mix thoroughly and then place into 37^{o}C water bath for 10 min (mix thoroughly every 2-3 min)

b. Add 100µl buffer B, vortex 1-2min, mix thoroughly and then place into 65^{o}C water bath for 10 min (mix thoroughly every 2-3 min).

c. Centrifuge at 10,000 rpm for 10 min and harvest supernatant to a new 1.5ml centrifuge tube.

d. Add 1/3 volume protein precipitation and mix thoroughly.

e. Ice bath for 8 min, then centrifuge at 13,000rpm for 10 min and harvest supernatant.

f. Add 500 µl buffer C in the middle of purification column, stay for 1 min, centrifuge 1 min at 10,000 rpm for filtration.

g. Add the supernatant harvest from e. step into treated purification column, centrifuge 1 min at 2000 g. Harvest filter liquid (DNA contained).

h. Accuratly estimate the volume of filter liquid, add 0.6 volume isopropanol, mix thoroughly and centrifuge at 13,000 rpm for 10 min. Carefully remove upper suspension, invert the column for 2 min and air dry. Then use 30 µl eluting buffer EB to dissolve the precipitation. (If the precipitation is not clean enough, wash by 70% ethanol twice and then use the EB to dissolve it.