TGuide Smart Magnetic Tissue DNA Kit

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TGuide Smart Magnetic Tissue DNA Kit

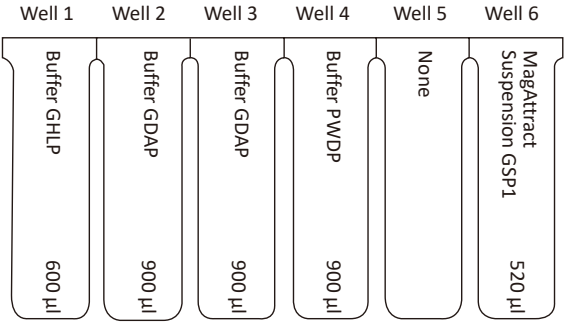
Cat. no. 4993547

Kit Contents

Contents		4993547 (48 preps)
4993540	Buffer GHA	30 ml
	Tissue DNA Reagents	48
	Proteinase K	1 ml
	RNase A (100 mg/ml)	200 µl
	Buffer TB	15 ml
4993546	TGuide Smart Tip Comb	12 pcs

Note: 4993546 is shipped and packaged separately

Tissue DNA reagent composition



Storage condition

The kit can be stored under dry conditions at room temperature (15-30°C) for 12 months. If the solution precipitates, it can be preheated in a water bath at 37°C for 10 min to dissolve the precipitation, without affecting the effect.

Product

This kit adopts unique magnetic beads and a unique buffer system to separate and purify high-quality genomic DNA from various animal tissues. The uniquely embedded magnetic beads have a strong affinity for nucleic acid under certain conditions. When the conditions are changed, the magnetic beads can release the adsorbed nucleic acid, to rapidly separate and purify the nucleic acid.

It can be used to perfectly fit with TGuide S16 Nucleic Acid Extractor. Through adsorption, transfer and release of magnetic beads by the special magnetic bar, magnetic beads and nucleic acid can be transferred, to improve the degree of automation. The whole process is safe and convenient, and the extracted genomic DNA fragments are large, with high purity, stable and reliable quality.

The DNA purified with this kit is suitable for a range of routine procedures, including digestion, PCR, library construction, Southern hybridization, and other experiments.

Features

Simple and fast: Ultra-pure genomic DNA can be obtained by running TGuide S16 for 50 minutes.

Wide use: It is applicable to all kinds of animal tissues.

Ultra-pure: The obtained DNA has high purity and can be directly used in PCR, digestion, hybridization and other molecular biological experiments.

Operational steps

1. Pre-packaged single reagent

1.1 Take out a pre-packaged single sample reagent strip and mix it upside down several times to re-suspend the magnetic beads; Gently shake the reagent and magnetic beads to concentrate at the bottom of the orifice plate. Before use, remove sealing film carefully to avoid the orifice plate from vibrating and liquid spatter.

1.2 Add appropriate volume (60-100 µl) of buffer TB to the 5th well of single sample reagent strip.

2. Sample processing

Add 10-50 mg tissue to 400 µl buffer GHA and 20 µl Proteinase K, for homogenization and mixing (ground with liquid nitrogen or homogenizer), and centrifugation at 12 000 rpm for 1 min to remove impurities.

1) For samples with sufficient homogenization, the digestion time at 65°C can

be cut.

2) It is suggested to fully digest samples with visible tissue masses at 65°C for 30 min;

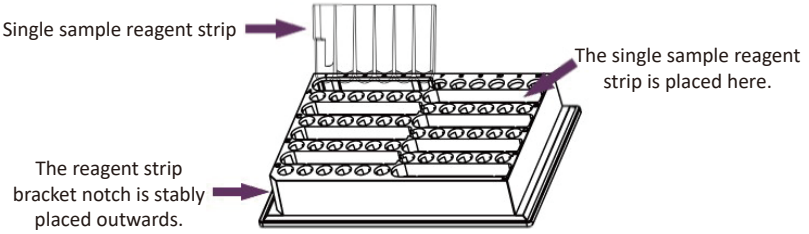
3) The rat tail samples should be digested overnight at 56°C.

Note: To remove RNA, add 4 µl RNaseA (100 mg/ mL) solution, shake it for 15 sec, and place it at room temperature for 5 min.

3. Operation steps of TGuide S16 Nucleic Acid Extractor

3.1 Add 300 µl solution after processing above sample in the 1st well of the single sample reagent strip. Put a single reagent on the reagent tank bracket of TGuide S16 Nucleic Acid Extractor.

3.2 Place the reagent tank bracket on the base of the 96-hole plate of the TGuide S16 Nucleic Acid Extractor. Insert the Tip Comb into the slot of the Tip Comb to ensure that they are well connected and firmed.



3.3 If you use the TGuide S16 Nucleic Acid Extractor, select the corresponding program DP602 file on the on-board screen, click the icon in the lower right corner of the screen, or click the "RUN" button at the bottom of the screen to start the experiment.

The extraction process of S16 provided for DP602 is shown in the following table:

Step	Hole site	Step name	Mix time (min)	Mix speed	Dry time (min)	Volume (μl)	Temp. (°C)	Segments	Every time(s)	Magneti-zation time(s)	Cycle	Magnet speed (mm/s)
1	1	Lysis	2	8	0	900	--	1	0	0	0	--
2	6	Collect beads	0.5	8	0	500	--	5	3	0	2	2.5
3	1	Bind	10	8	0	900	--	5	4	0	2	2.5
4	2	Wash 1	5	7	0	900	--	5	3	0	2	2.5
5	3	Wash 2	5	7	0	900	--	5	3	0	2	2.5
6	4	Wash 3	5	7	5	900	--	5	3	0	2	2.5
7	5	Elution	10	7	0	100	75	5	5	0	2	2.5
8	6	Discard	0.5	5	0	500	--	1	0	0	0	--

3.4 At the end of the automated extraction process, attract the DNA out of the 5th well of the single sample reagent strip and store it under appropriate conditions.

Detection of DNA concentration and purity

The size of the obtained genomic DNA fragment is affected by the sample storage time and shear force during operation. The concentration and purity of the obtained DNA fragments can be detected by agarose gel electrophoresis and UV spectrophotometer.

Ideally, the DNA should be absorbed at most at OD_{260}, where an OD_{260} value of 1 corresponds to approximately 50 μg/ ml double stranded DNA and 40 μg/ ml single stranded DNA.

The OD_{260}/OD_{280} ratio should be 1.7-1.9. The value will be lower if the eluting buffer is not used and deionized water is used. This is because pH and existing ion can affect the light absorption value, but it doesn't indicate low purity.