

Pure Plasmid Miniprep Kit

Cat. #: W0500-50 (50 reactions); W0500-200 (200 reactions)

Ship / Storage: Ship and store at room temperature. After RNase A is added, store Buffer P1 at 2 ~ 8°C, and it is stable for 6 months. Other buffers and RNase A stock solution can be stored for 12 months at room temperature.

Product Description (This product is for research use only.)

The kit is suitable for the extraction of 1-5 ml bacterial cells. Based on the traditional alkaline lysis method, the kit uses a unique silica matrix membrane adsorption technology and reagent formulation. Each column can adsorb up to 30 ug of plasmid DNA, through the effective and specific binding of plasmid DNA under high salt condition. Proteins, genomes, RNA and other impurities can be maximumly removed. The plasmid DNA extracted can be directly used for biological experiments such as cell transfection, PCR, enzyme digestion, sequencing, and ligation.

Not included in the kit: 100% ethanol.

Product Components

Components	Amount		Storage
	Cat. #: W0500-50	Cat. #: W0500-200	
Buffer P1	15 mL	60 mL	room temperature, store at 4°C if RNase A is added.
Buffer P2	15 mL	60 mL	room temperature
Buffer N3	20 mL	80 mL	room temperature
Buffer PB	10 mL	35 mL	room temperature
Buffer PW (concentrate)	6 mL	25 mL	room temperature
Buffer EB	7 mL	30 mL	room temperature
RNase A (10 mg/mL)	150 µL	600 µL	4°C
Spin Column (CM) with Collection Tube (pair)	50	200	RT or 4°C for longer time

Preparation before the experiment and important notes

1. All components can be stored in a stable, dry, room temperature (15-30°C) environment for 1 year; the column can be stored at 2-8°C for a longer time; Buffer P1 added with RNase A can be stored at 2-8°C for 6 months.
2. Before the first use, add all RNase A solution to Buffer P1, mix well and store at 2-8°C. Before use, leave it at room temperature for a period and then use after it returns to room temperature.
3. Add 100% ethanol to the Buffer PW before the first use according to the instructions on the PW bottle label.
4. If Precipitations are found in Buffer P2, Buffer N3 and Buffer before use, put them in a 37°C water bath for a few minutes, until the precipitations dissolve (do not shake Buffer P2 vigorously).
5. Be careful not to touch the Buffer P2, Buffer N3 and Buffer PB directly, and close the cap immediately after use.
6. The yield and purity of the extracted plasmid are related with the bacterial culture concentration, strain type, plasmid size, plasmid copy number and other factors.

Protocol

1. Transfer 1-5 ml overnight bacteria culture to a centrifuge tube (self-prepared). Centrifuge at 13,000 rpm (~16,200 ×g) for 30 seconds to collect the bacterial pellet. Discard the supernatant as much as possible.
2. Add 250 µl Buffer P1 (please check if RNase A was added first) to the tube with pellets. Mix thoroughly with a pipette or vortex. **Note:** If the bacteria pellet is not completely resuspended, it will affect the lysis effect, resulting in low yield and purity.
3. Add 250 µl Buffer P2 to the tube, gently invert the tube 4-6 times and mix well. The solution should become clear and viscous now. Note: Mix gently and do not vortex violently to avoid interrupting the genomic DNA, resulting in the extracted plasmid mixed with genomic DNA fragments. The time for this step should not exceed 5 minutes to avoid damage to the plasmid.
4. Add 350 µl of Buffer N3 to the tube and invert gently 8-10 times to mix well. A white flocculent precipitate should appear now. Centrifuge at 13,000 rpm for 5 minutes. **Note:** It should be mixed immediately after Buffer N3 addition, to avoid local precipitation.
5. Transfer the supernatant obtained in step 4 to a spin column DM with a collection tube. Centrifuge at 13,000 rpm for 30 seconds. Discard the waste from the collection tube and put the column back to the collection tube.
6. Add 150 µl Buffer PB to the column and centrifuge at 13,000 rpm for 30 seconds.
7. Add 400 µl Buffer PW (please check if 100% ethanol was added) to the column; Centrifuge at 13,000 rpm for 1 minute and discard the waste from the collection tube.
8. Place the column in a new collection tube and add 50-100 µl Buffer EB to the middle of the membrane; Leave at room temperature for 2 minutes, then centrifuge at 13,000 rpm for 1 minute, and the plasmid is collected into the tube. Store the plasmid at -20°C.
Note: 1) In order to increase the recovery efficiency of the plasmid, the elution can be added back to the column, leave at room temperature for 2-5 minutes, centrifuge at 13,000 rpm for 2 minutes, and the plasmid is collected into a centrifuge tube. 2) When the plasmid is a low copy number plasmid or the size of the plasmid >10 kb, Buffer EB can be preheated in a water bath at 65-70°C to increase extraction efficiency

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