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Synthetic gene manual

1. Use it when you want to increase

a. Add 20ul of DW or TE buffer into delivered DNA. (Final 100~250ng /ul)

b. Prepare competent cell. (Commercial competent *E. coli* or self-made competent *E. coli*, DH5α strain is recommended)

c. Carefully transfer 1ul of plasmid DNA into the tube prepared in Step b.

d. Place the tube on ice for 20 minutes.

e. Heat-shock the cells for 60~90 seconds in a water bath at exactly 42℃.

f. Immediately place the competent cell + DNA mixture back to ice for 3 minutes.

g. Put the mixture into 10ml of LB+Ampicillin (50ug/ml~100ug/ml) culture medium.

h. Incubate for overnight at 37°C with shaking (200rpm, about 16hr) and isolate plasmid DNA using *Accuprep*® Plasmid extraction kit.

i. Restriction enzyme cut or PCR depending on the purpose and use after quantitative measurement of DNA.

1. Use it when you want to experiment

a. Add 20ul of DW or TE buffer into delivered DNA. (Final 100~250ng /ul)

b. After quantitative measurement of DNA, restriction enzyme cut or PCR depending on the purpose and use immediately.

- ▶ Delivery form is 5ug of lyophilized plasmid DNA cloned in cloning site of pUC vector. (Can be store at room temperature)
- ▶ After dissolving DNA in DW or TE buffer, it is recommended that place DNA at 4℃ for 10 minutes.
- ▶ Store at -20℃ after adding DW or TE buffer.
- ▶ Refrigeration of DNA can be a risk of degradation.