



QuickGene

QuickGene Series **Application Guide**

## Plasmid DNA isolation from E. coli

**Kit** : QuickGene Plasmid kit S II

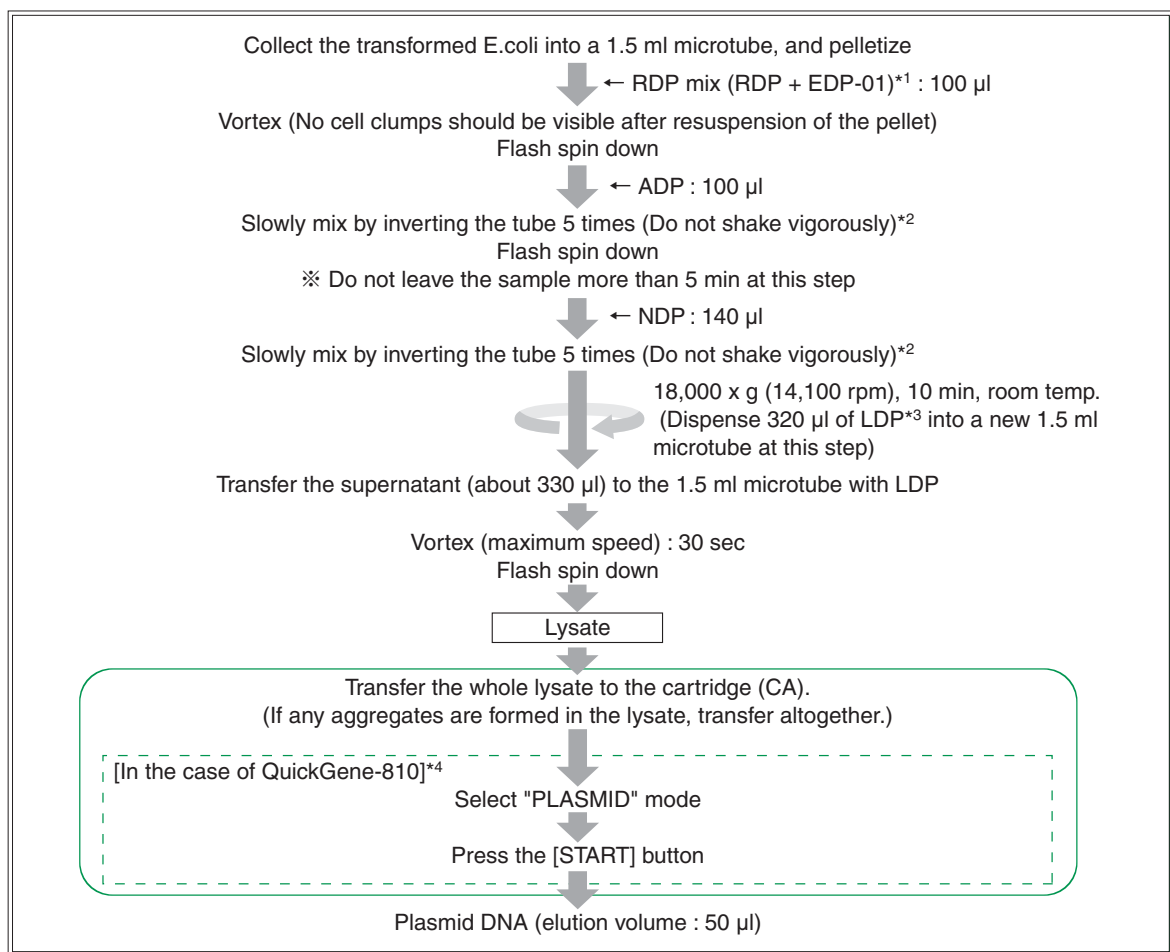
**Model** : QuickGene-810/QuickGene-Mini80

### Summary

Enables easy and rapid isolation of high purity plasmid DNA from E. coli

### ● Protocol

This protocol is used with QuickGene Plasmid kit S II and 1-2 ml over night cultures (37°C, 12-16 hr) of E.coli grown in LB medium.



\*1 : Before starting an extraction experiment, add total amounts of EDP-01 to RDP bottle, and mix well. In the case of storing RDP mix, it is recommended to preserve it under refrigeration (2-8°C) and use within 6 months.

\*2 : After addition of ADP or NDP, immediately mix by inverting the tube 5 times.

Vigorous mixing results in the copurification of much of genomic DNA. Too slow mixing causes inadequate blending of liquids, resulting in deterioration in the yield of plasmid DNA.

\*3 : Add 44 ml of >99% ethanol into the bottle and mix well by gently inverting the bottle before use.

\*4 : In the case of QuickGene-Mini80, please refer to the Kit Handbook for details.

\* Perform extraction within 30 min after lysate preparation.

## Results : Extraction of Plasmid DNA from transformed E. coli

Plasmid DNA was extracted from 1 ml over-night culture of transformed E. coli in LB medium using QuickGene system (QuickGene and QuickGene Plasmid kit S II ).

E. coli : DH5  $\alpha$  ( $1 \times 10^9$ )

Vector : pBlueScript II

Insert : GAPDH about 1 Kb

### ● The yield and purity of plasmid DNA

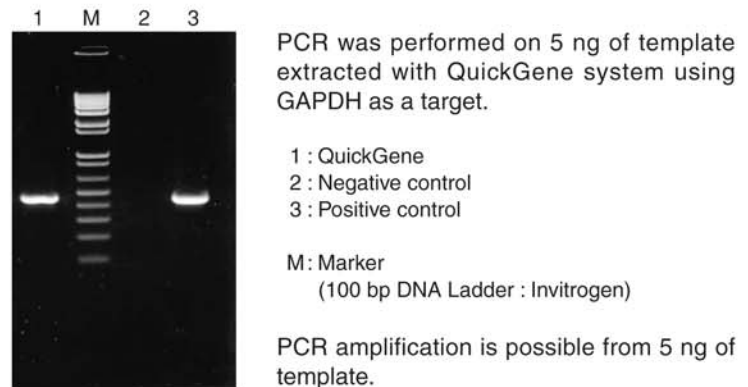
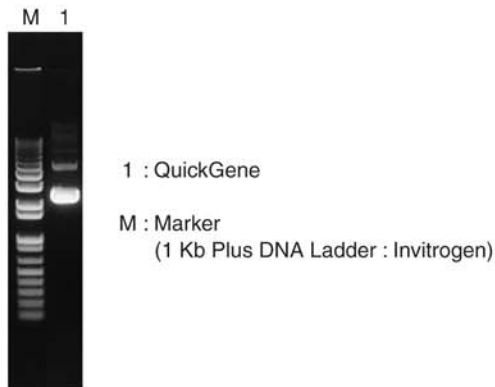
Kit	Yield	A <sub>260/280</sub>	A <sub>260/230</sub>
QuickGene	21.4 $\mu$ g	1.99	2.49

A<sub>260/280</sub> : The ratio indicates the purity of nucleic acid from protein contamination (A<sub>260/280</sub> >1.7).  
(Protein contamination decreases the ratio.)

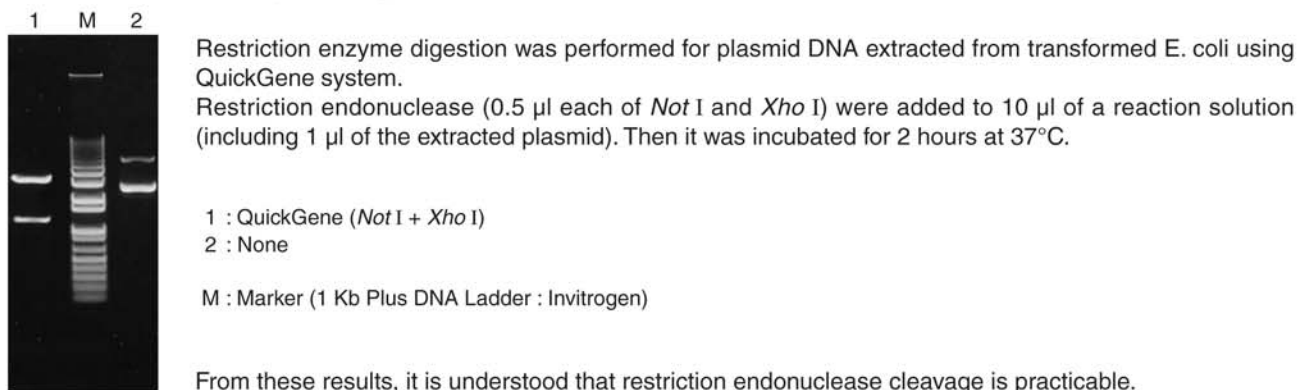
A<sub>260/230</sub> : The ratio indicates the purity of nucleic acid from chaotropic salt (guanidium salt) contamination.  
(Guanidium salt contamination decreases the ratio.)

The use of QuickGene system enables the high-yield and high-purity extraction of plasmid DNA from transformed E. coli.

### ● Electrophoresis of plasmid DNA ● PCR



### ● Restriction enzyme digestion with *Not* I and *Xho* I



#### \* Trademark and exclusion item

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# FUJIFILM



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