



9. Genomic DNA Extraction from Cultured Cell

DG-1

Genomic DNA Extraction from Cultured HepG2 Cell of Human

Protocol

$\leq 1 \times 10^6$ cells in 1.5 ml micro tube

Remove the medium and wash with PBS

Remove the PBS completely

← PBS : 180 μ l

Tap the tube 5 times gently to suspend pelleted cells

← <Option> RNaseA treatment *1

← EDT : 20 μ l

Tap the tube 5 times gently to mix the solution

← LDT : 180 μ l

Mix thoroughly by vortexing for 15 sec *2

Flash spin down

Incubate at 70°C, 10 min

Flash spin down

← >99% ethanol : 240 μ l

Mix thoroughly by vortexing for 15 sec *2

Flash spin down

Lysate

Transfer all contents of the micro tube into the cartridge of QuickGene

Refer to the extraction protocol for each device written in the kit handbook.
(from the step after transferring the lysate into the cartridge)

Genomic DNA
(Elution volume : 200 μ l)

*1 RNaseA : 20 μ l
Tap the tube 5 times gently to mix the solution
Flash spin down
Set it down at room temperature for 2 min

*2 Mix completely by vortexing at the maximum speed.
If the mixing is not enough by vortexing, use the tapping, pipetting or inverting.

Results

The yield of genomic DNA / Protein contamination : A260/280

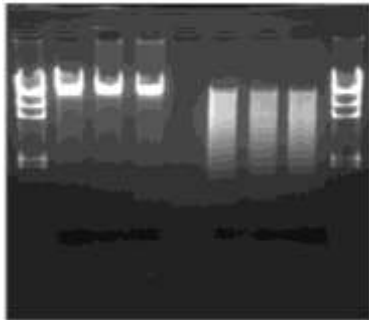
Number of HepG2 cells	Yield (µg)	A260/280
5 × 10 ⁵ cells	5.2	1.7

Other

Restriction Enzyme Digestion

AGE of *Hin* d III restriction enzyme digestion fragments of genomic DNA extracted from several cell lines using QuickGene isolation system and reagents

without digestion *Hin* d III digestion
M 1 2 3 1 2 3 M



1 µg DNA / lane

Isolated genomic DNA with QuickGene-810 (automatic nucleic acid isolation system) and QuickGene DNA tissue kit S, had been digested with *Hin* d III successfully.

M : λ-*Hin* d III digest

1 : Genomic DNA from HepG2 cell line (0.5 × 10⁶ cells)

2 : Genomic DNA from Huh6 cell line (0.5 × 10⁶ cells)

3 : Genomic DNA derived from Huh6 cell line (0.5 × 10⁶ cells)

Common protocol is usable for the following

Rat Cultured PC-12 Cell, Mouse Cultured ES Cells

Genomic DNA Extraction from Cultured HepG2 Cell of Human

Protocol

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↓

Genomic DNA
(Elution volume : 200 μ l)

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Results

The yield of genomic DNA / Protein contamination : A260/280

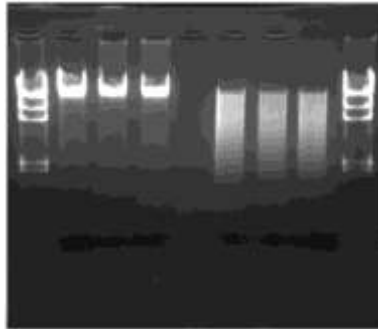
Number of Huh6 cells	Yield (µg)	A260/280
Huh6	7.6	1.8
Derived from Huh6	6.6	1.7

Other

Restriction Enzyme Digestion

AGE of *Hin* d III restriction enzyme digestion fragments of genomic DNA extracted from several cell lines using QuickGene isolation system and reagents

without digestion *Hin* d III digestion
M 1 2 3 1 2 3 M



1 µg DNA / lane

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M : λ-*Hin* d III digest

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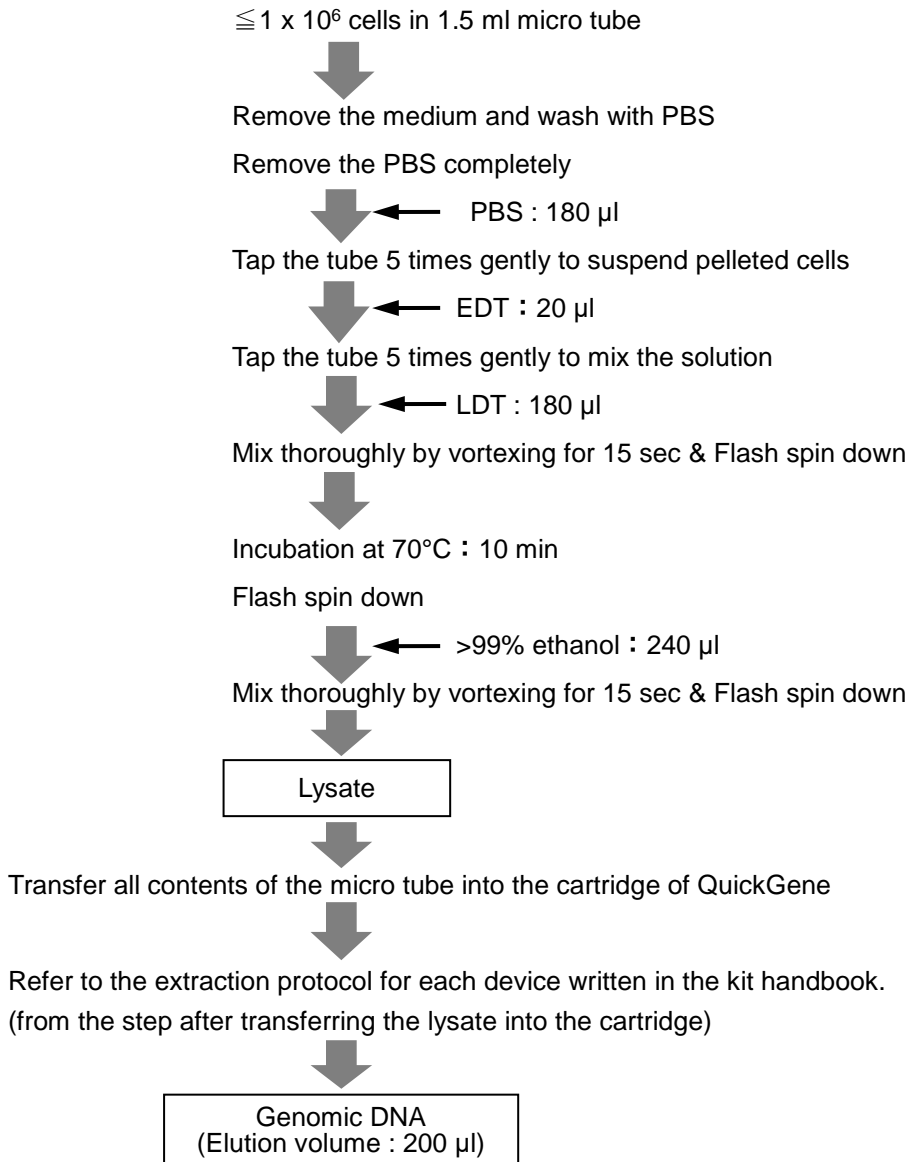
Common protocol is usable for the following

Rat Cultured PC-12 Cell, Mouse Cultured ES Cells

DG-3

Genomic DNA Extraction from Cultured ES Cell of Mouse

Protocol



Results

The yield of genomic DNA

Number of ES cells	Yield (μg)
1 × 10 ⁵ cells	about 1.0

Common protocol is usable for the following

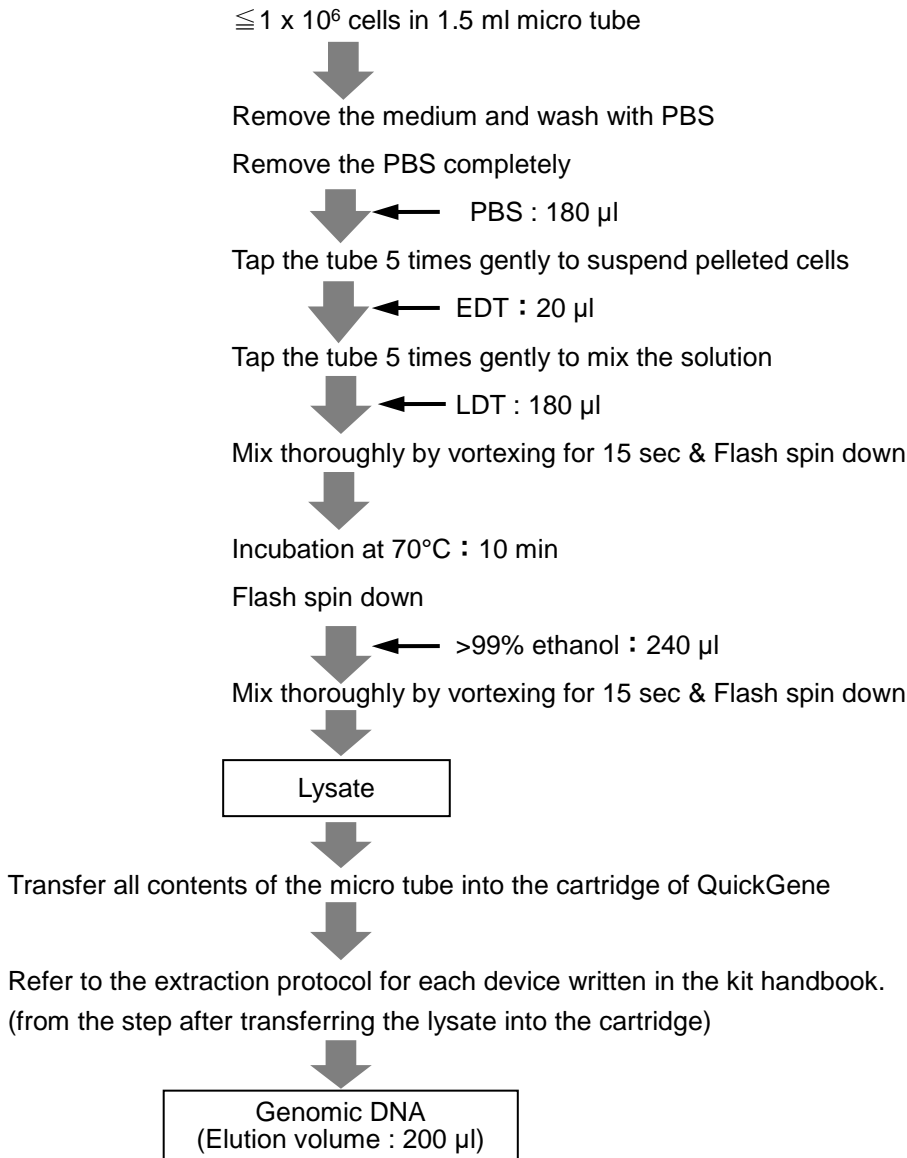
Human Cultured Cell Line, Rat Cultured PC-12 Cell

Depending on sample and storage conditions, nucleic acid may not be extractable.
Therefore, we cannot guarantee accurate data.
The extracted nucleic acid contains unintended acid (ex: when extracting DNA, RNA is also extracted).

DG-4

Genomic DNA Extraction from Cultured PC-2 Cell of Rat

Protocol



Results

The yield of genomic DNA / Protein contamination : A260/280

Number of PC-12 cells	Yield (μg)	A260/280
1 × 10 ⁶ cells	about 15.0	1.45

Common protocol is usable for the following

Human Cultured Cell Line, Mouse Cultured ES Cells

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