



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

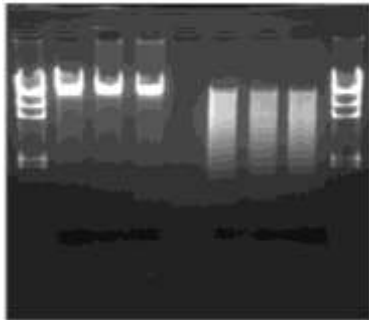
Number of HepG2 cells	Yield (μg)	A260/280
5 × 10 ⁵ cells	5.2	1.7

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

DG-2

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

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Tap the tube 5 times gently to suspend pelleted cells

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↓ ← EDT : 20 μ l

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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
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If the mixing is not enough
by vortexing, use the
tapping, pipetting or
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Results

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

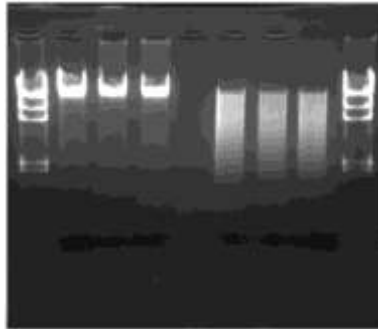
Number of Huh6 cells	Yield (μg)	A260/280
Huh6	7.6	1.8
Derived from Huh6	6.6	1.7

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

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

M : λ-*Hin* d III digest

1 : Genomic DNA from HepG2 cell line (0.5×10^6 cells)

2 : Genomic DNA from Huh6 cell line (0.5×10^6 cells)

3 : Genomic DNA derived from Huh6 cell line (0.5×10^6 cells)

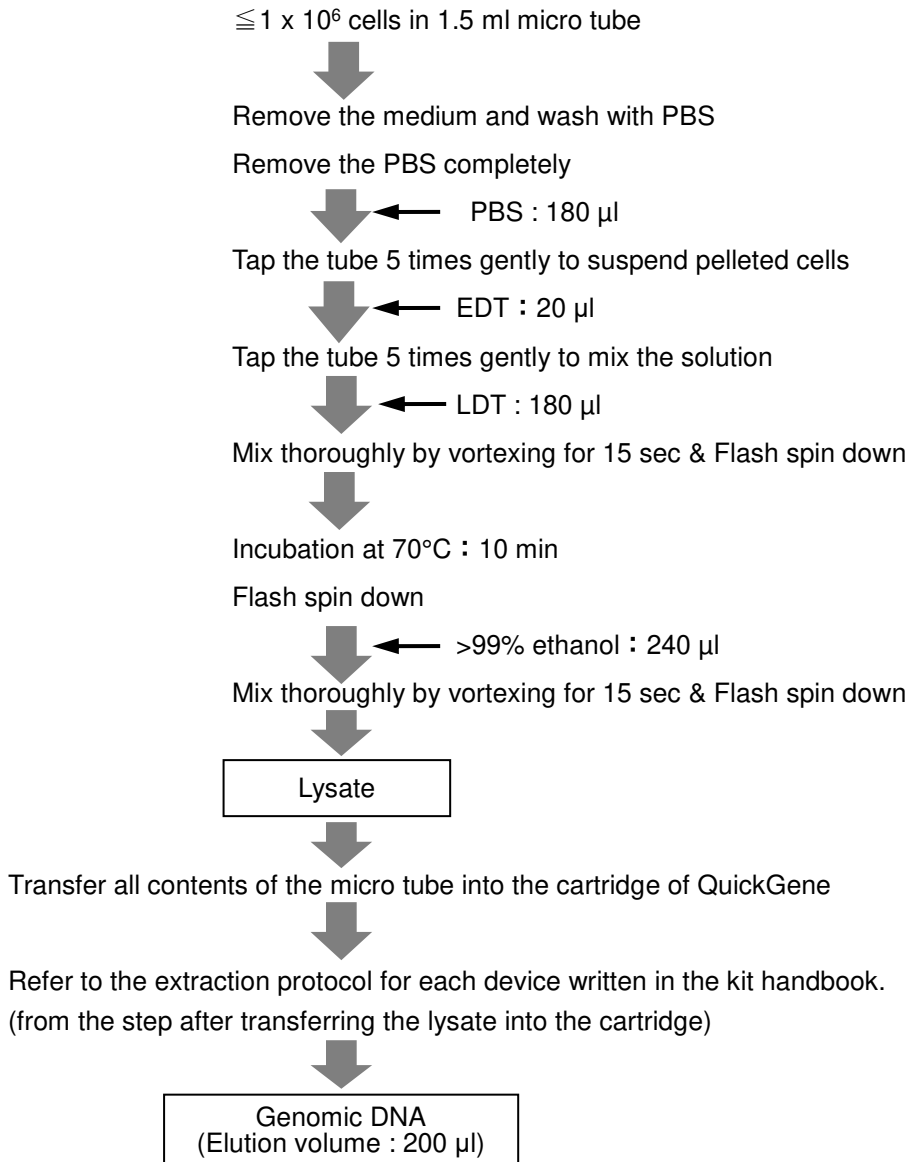
Common protocol is usable for the following

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

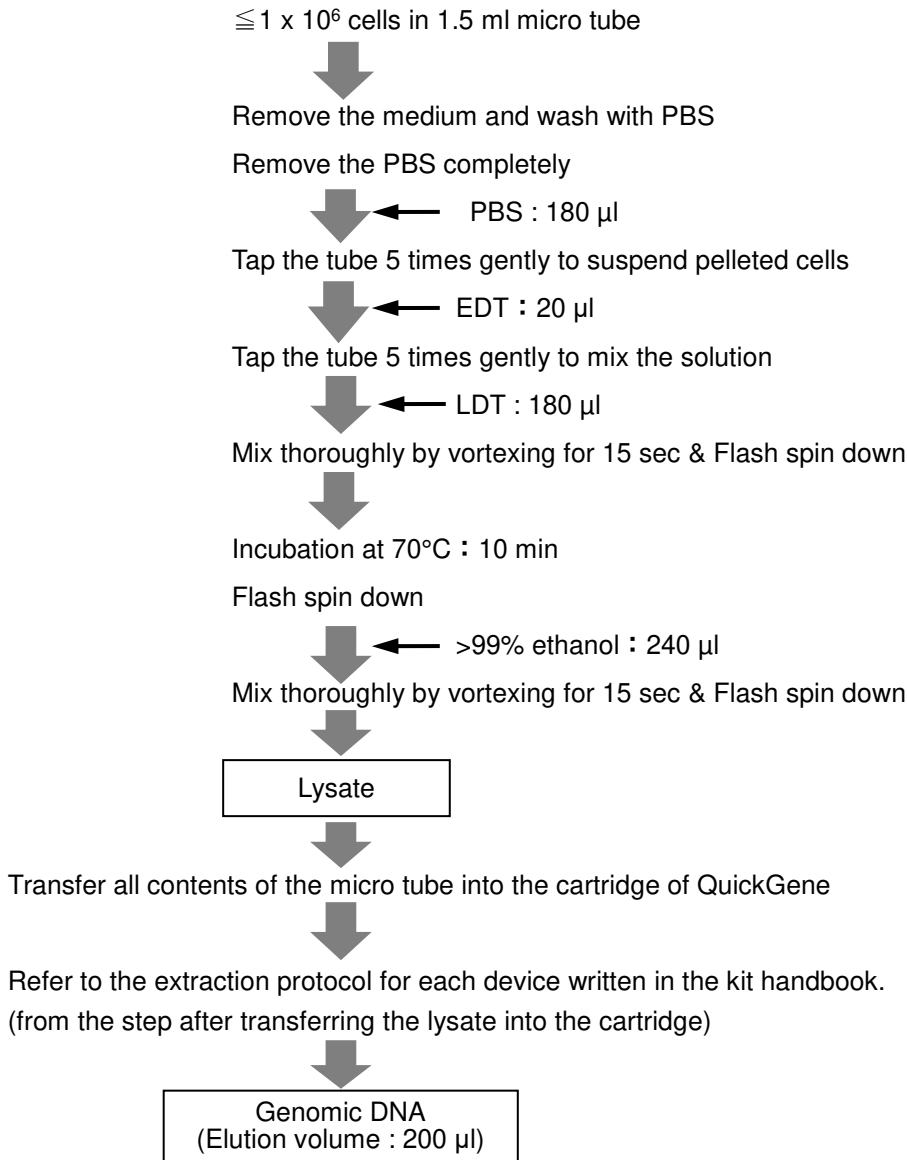
Human Cultured Cell Line, Rat Cultured PC-12 Cell

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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