



## **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  $\mu$ l

Tap the tube 5 times gently to suspend pelleted cells

↓ ← <Option> RNaseA treatment \*1

↓ ← EDT : 20  $\mu$ l

Tap the tube 5 times gently to mix the solution

↓ ← LDT : 180  $\mu$ l

Mix thoroughly by vortexing for 15 sec \*2

Flash spin down

↓

Incubate at 70°C, 10 min

Flash spin down

↓ ← >99% ethanol : 240  $\mu$ 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  $\mu$ l)

\*1 RNaseA : 20  $\mu$ 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

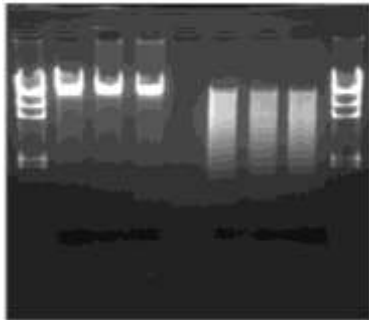
Number of HepG2 cells	Yield (µg)	A260/280
5 × 10 <sup>5</sup> cells	5.2	1.7

### 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 × 10<sup>6</sup> cells )

2 : Genomic DNA from Huh6 cell line (0.5 × 10<sup>6</sup> cells )

3 : Genomic DNA derived from Huh6 cell line (0.5 × 10<sup>6</sup> 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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Lysate

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↓

Genomic DNA  
(Elution volume : 200  $\mu$ l)

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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

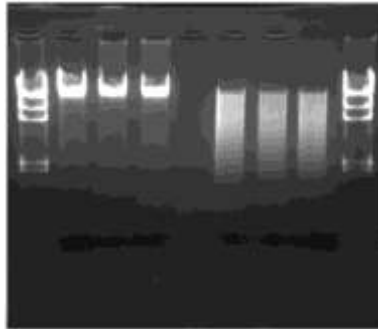
Number of Huh6 cells	Yield (µg)	A260/280
Huh6	7.6	1.8
Derived from Huh6	6.6	1.7

### 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 :  $\lambda$ -*Hin* d III digest

1 : Genomic DNA from HepG2 cell line ( $0.5 \times 10^6$  cells)

2 : Genomic DNA from Huh6 cell line ( $0.5 \times 10^6$  cells)

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

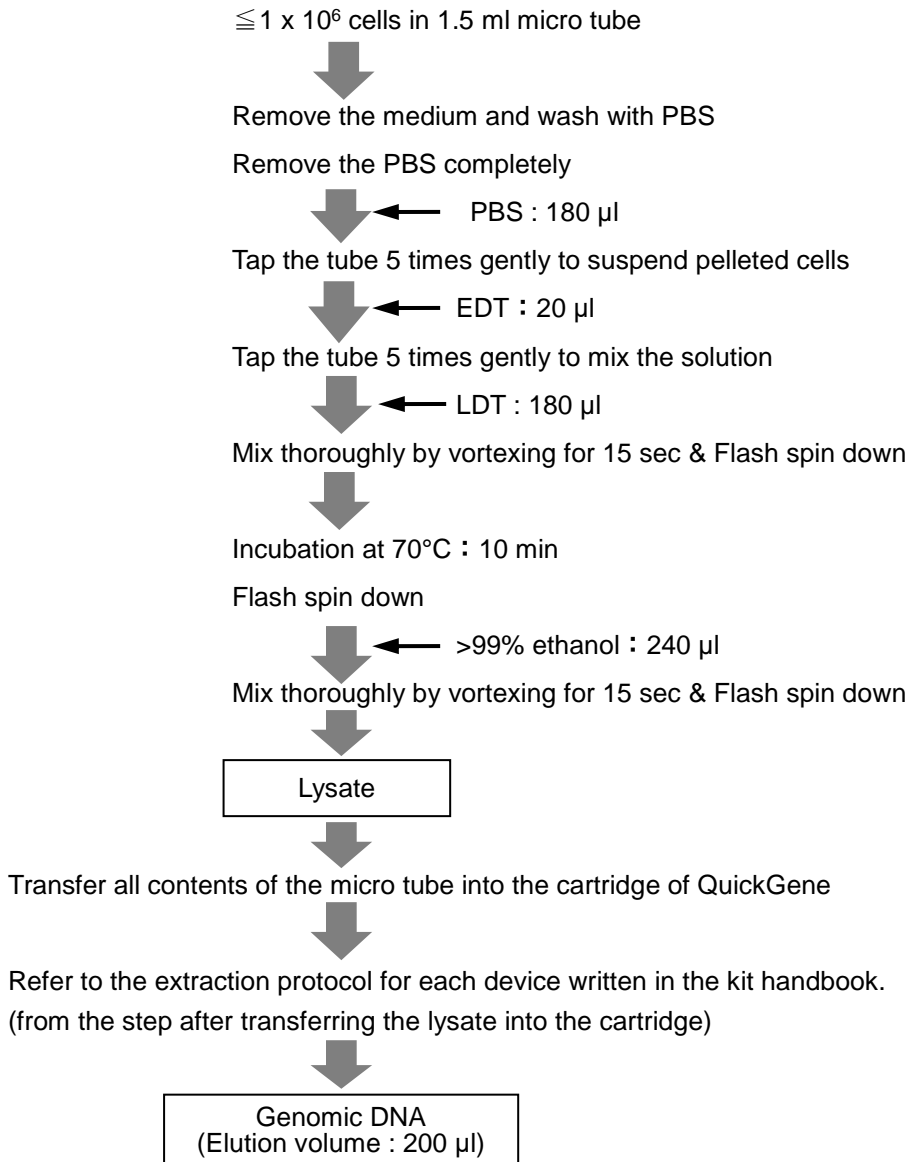
### Common protocol is usable for the following

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 <sup>5</sup> cells	about 1.0

#### Common protocol is usable for the following

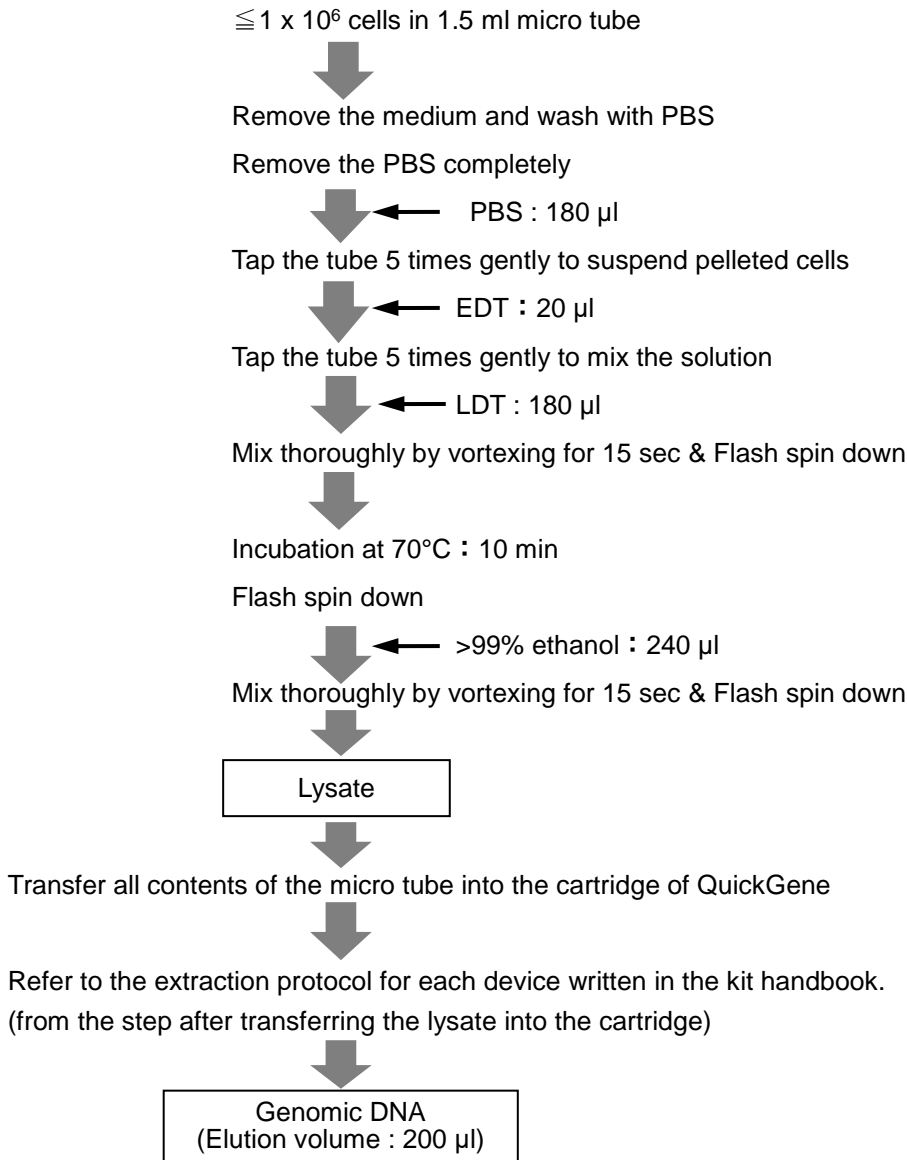
Human Cultured Cell Line, Rat Cultured PC-12 Cell

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 <sup>6</sup> 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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