FUJIFILM

Life Science

Nucleic Acid Isolation System

QuickGene-810

QuickGene

DNA and RNA extraction with a revolutionary 80µm membrane film

QuickGene-810 rapidly extracts DNA/RNA from varied samples with high quality and high yield.
An automated system with extraction kits for reliable results.

Compact Design

Small and self-contained QuickGene-810 takes up minimal space on the lab bench.

Easy and Reliable

Intelligent QuickGene-810 handles samples automatically and extracts DNA or RNA.

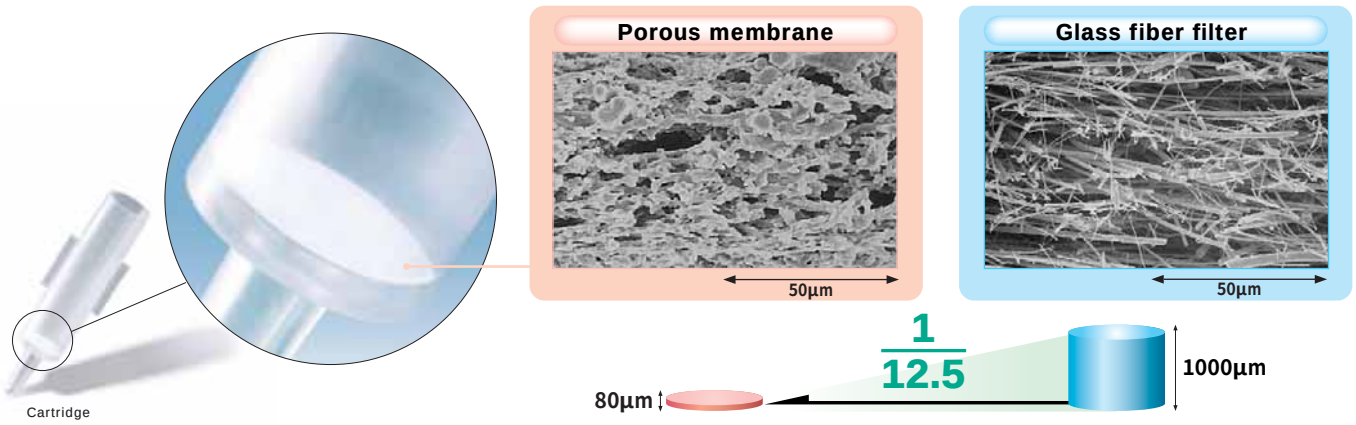
Rapid Processing

FUJIFILM's patented porous membrane makes it possible to extract DNA from eight sets of whole blood samples simultaneously in only six minutes.

Sample Extraction Kits

FUJIFILM provides several kits for extracting DNA from whole blood and tissue samples and RNA from cultured cells, tissue samples and blood cells.

FUJIFILM's revolutionary porous membrane (Scanning electron microscope photos)



The system uses a porous, highly adsorptive membrane developed through application of FUJIFILM's advanced polymer membrane production technology. It is only 80µm thick, making it incomparably thinner than conventional glass fibers. QuickGene-810's ultra thin membrane alleviates the risk of contamination from residue in the membrane.

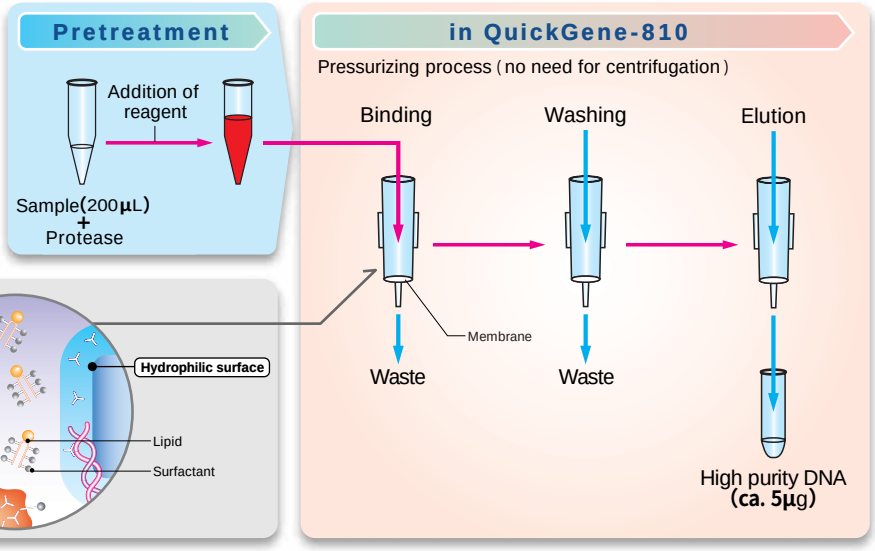
Easy RNA extraction

Problematic RNA extraction can also be fully automated with QuickGene-810. RNA is much more unstable than DNA, and ribonuclease in the atmosphere or from the operator during the extraction process has sometimes resulted in its degradation. But there is no risk at all of contamination when you use QuickGene-810 because the extraction process occurs automatically in a sealed, enclosed space.

High purity and high yield without centrifugation

Three pressurizing stages — binding, washing and elution — occur automatically in the unit. Because of the outstanding adsorptive and desorptive properties of the membrane, high-purity nucleic acid can be obtained easily at low pressure without any complex processes such as centrifugation.

■ Extraction of DNA from whole blood



■ Adsorption of nucleic acids

Owing to their hydrophilic properties, nucleic acids get adsorbed onto the membrane, while proteins and lipids, which are comparatively hydrophobic, tend to seep out of the membrane.

Processing time (8 samples)

DNA Extraction

SAMPLE	TIME
WHOLE BLOOD	6 min
TISSUE	13 min

PLASMID DNA Extraction

SAMPLE	TIME
PLASMID	6 min

RNA Extraction

SAMPLE	TIME
TISSUE	15 min
CULTURED CELL (adherent / floating)	17 min
CULTURED CELL (6/10cm dish)	11 min
BLOOD CELL	20 min

High purity

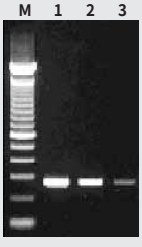
There are almost no impurities in extracted genomic DNA and total RNA. The absence of impurities such as proteins and chaotropic salts means that the extracted products can be used directly in PCR and RT-PCR.

	Purity
DNA	$A_{260/280} > 1.7$
RNA	$A_{260/280} > 1.8$

PCR of extracted DNA

PCR performed with genomic DNA extracted from 200µL of whole blood while targeting p53 exon6.

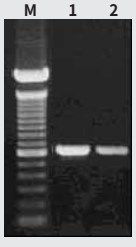
M:100bp ladder
1:Genomic DNA 10ng/µL
2:Genomic DNA 1ng/µL
3:Genomic DNA 0.1ng/µL



RT-PCR of extracted RNA

RT-PCR performed with total RNA extracted from HL60 cells of 1×10^6 while targeting β-actin mRNA.

M:100bp ladder
1:total RNA 100pg/µL
2:total RNA 10pg/µL

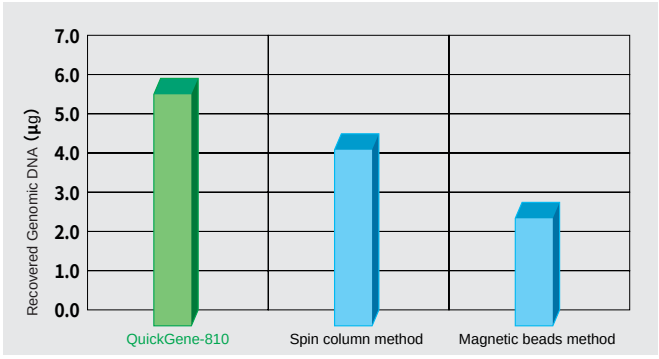


High yield

High yields of genomic DNA can be extracted from whole blood and total RNA from cultured cells without any need to use hazardous organic solvents.

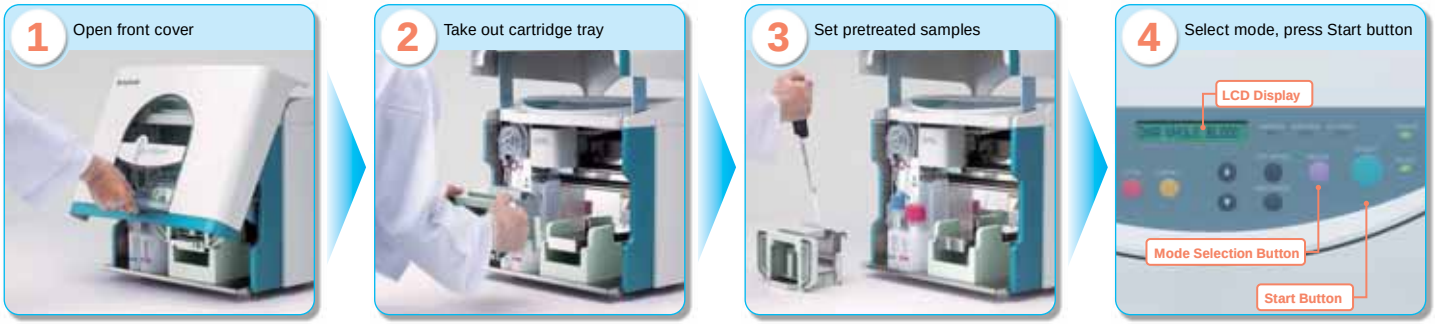
■ DNA extraction yield compared with competitors

Yield of genomic DNA extracted from 200µL of whole blood (average of ten specimens).



Simple operation and automated processes reduce risk of contamination

There is no need to set complex extraction conditions. Automation ensures that extraction does not fail because of contamination.



The specific set of extraction kits supports various samples

QuickGene Extraction kits are optimized for QuickGene system to extract DNA and RNA in the shortest time and with the highest quality. Appropriate kit selectable depending on sample.

Extraction kits			Extraction example
QuickGene DNA whole blood kit S	for 96 samples	Reference code DB-S	ca.5 µg / Whole blood 200 µl
QuickGene DNA tissue kit S	for 96 samples	Reference code DT-S	ca.4 µg / 5mg BALB/c Mouse tail
QuickGene Plasmid kit S II	for 96 samples	Reference code PL-S2	ca.12.5 µg / 1ml culture DH5 α
QuickGene RNA tissue kit S II	for 96 samples	Reference code RT-S2	ca.100 µg / 30mg Mouse liver
QuickGene RNA cultured cell kit S	for 96 samples	Reference code RC-S	ca.10 µg / 1×10^{6}cell HL60 cell
QuickGene RNA cultured cell HC kit S	for 96 samples	Reference code RC-S2	90〜150 µg / 10cm dish cultured HEK293 cell
QuickGene RNA blood cell kit S	for 96 samples	Reference code RB-S	ca.4.5 µg / 1×10^{7}cell Leukocytes

Specifications

Overview
- Automated stages : Sample binding, washing and elution
- Throughput : 1 to 8 samples per run
- Display : LCD (16 characters × 1 line)

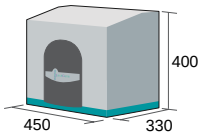
*Research use only

Operating conditions
- Supply voltage : 100V-240V
- Power supply frequency : 50/60Hz
- Operating conditions : Temperature : 15-30℃
  Humidity : 30-80% (non-condensing)
- Power consumption : 65W

Extraction modes
- DNA WHOLE BLOOD
- DNA TISSUE
- PLASMID
- RNA TISSUE
- RNA TISSUE PLUS
- RNA CELL
- RNA CELL PLUS
- RNA BLOOD

Extraction kits
- QuickGene DNA whole blood kit S (for 96 samples)
- QuickGene DNA tissue kit S (for 96 samples)
- QuickGene Plasmid kit S II (for 96 samples)
- QuickGene RNA tissue kit S II (for 96 samples)
- QuickGene RNA cultured cell kit S (for 96 samples)
- QuickGene RNA cultured cell HC kit S (for 96 sampless)
- QuickGene RNA blood cell kit S (for 96 samples)

Physical specifications
- Dimensions : 450 (W) × 330 (D) × 400 (H)mm
- Weight : 21kg



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