

QuickGene QuickGene Series **Application Guide**

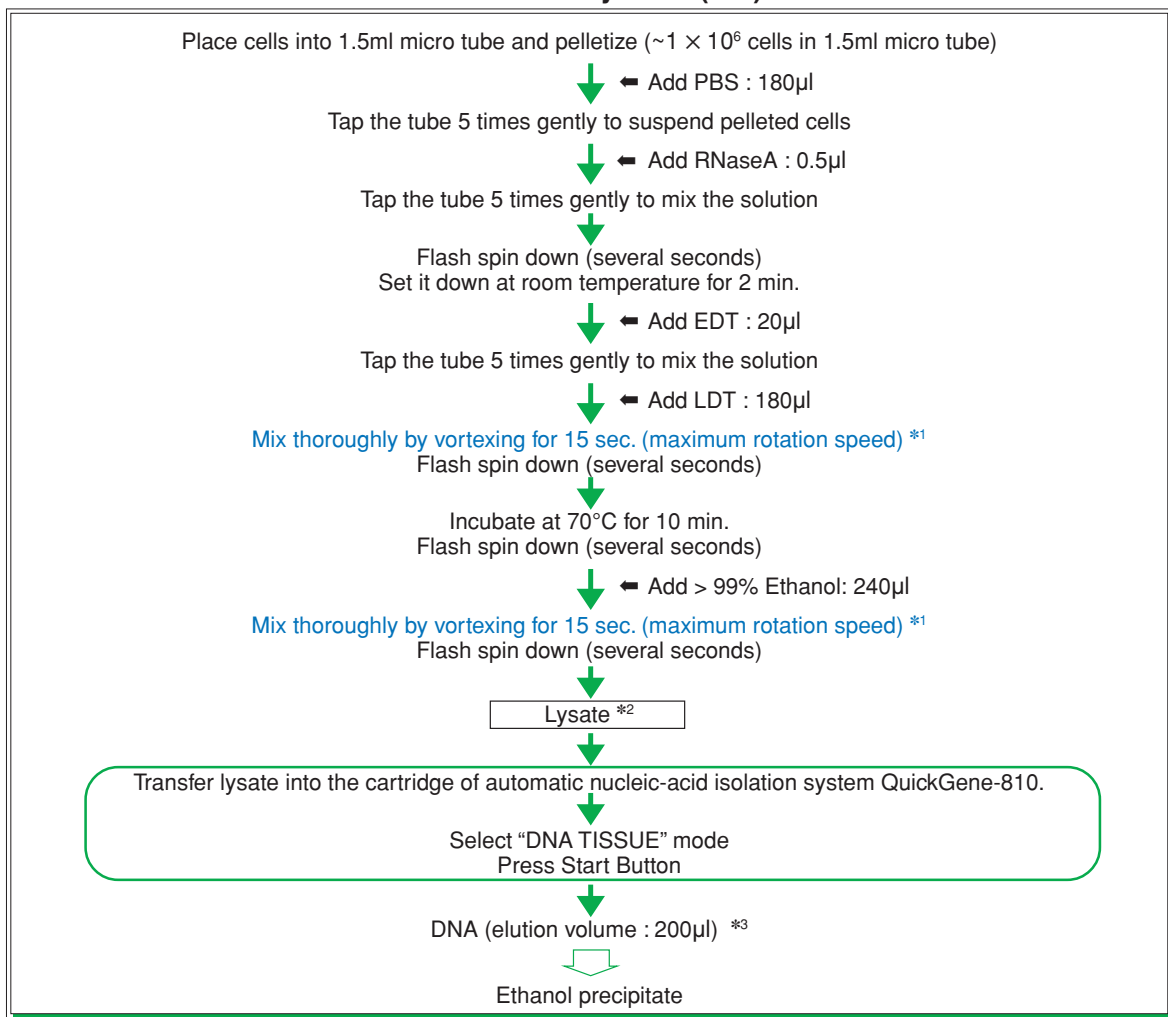
Viral DNA Isolation from Simian Immunodeficiency Virus (SIV) Infected Cells
QuickGene DNA Tissue Kit S

Features

- Simultaneously extracts DNA from 8 sets of Lysate in only 13 minutes
- Sophisticated genomic DNA isolation system without centrifugation
- Safety operation without using hazardous solvent such as phenol
- High purity DNA isolation, uncontaminated protein and chaotropic salt

Protocol

● **DNA Isolation from Simian Immunodeficiency Virus (SIV) infected cells**



*1 : Mix completely by vortexing at the maximum speed.
If the mixing is not enough by vortexing, use tapping, pipetting or inverting.
*2 : Transfer the lysate into the cartridge within 30min.
*3 : This elution volume is initial value of "DNA TISSUE" mode.

Results : DNA isolation from SIV infected cells

4×10^6 CEM \times 174 cells were infected with SIV (p27, corresponds to 279 ng). The cells were harvested after 1.5, 3, 6, and 24 hours culture.

DNA was isolated from SIV infected cells by using QuickGene-810 system (QuickGene-810 and QuickGene DNA tissue kit S), and spin column as a comparison method.

● The yield of DNA (μ g) (example of DNA isolation from SIV infected cells)

Time after infection (h)	1.5		3		6		24	
Virus	mock	SIV	mock	SIV	mock	SIV	mock	SIV
Cell number	1×10^6	1×10^6	1×10^6	8×10^5	1×10^6	9.2×10^5	1×10^6	1×10^6
QuickGene-810	7.6	7.9	3.0	8.0	4.5	8.0	8.2	7.4
Spin column	3.8	4.3	3.0	2.5	5.4	5.5	4.7	3.4

QuickGene-810 and QuickGene DNA tissue kit S enables to isolate larger amount of DNA from SIV-infected cells than using the spin column method.

● The purity of DNA (determination of protein contamination) : $A_{260/280}$

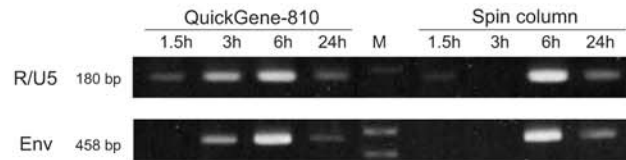
Time after infection (h)	1.5		3		6		24	
Virus	mock	SIV	mock	SIV	mock	SIV	mock	SIV
QuickGene-810	1.81	1.80	1.79	1.75	1.80	1.80	1.80	1.82
Spin column	1.85	1.85	1.8	1.81	1.79	1.77	1.81	1.82

$A_{260/280}$: The ratio indicates the quality of nucleic acid from protein contamination ($A_{260/280} > 1.8$). (Protein contamination decreases the ratio)

QuickGene-810 and QuickGene DNA tissue kit S enables to isolate same purity of DNA as spin column.

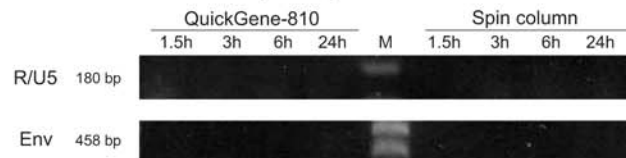
● AGE of PCR fragments of DNA

■ SIV infected cells



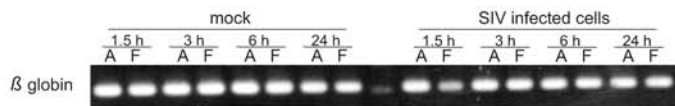
PCR was performed with 1 mg of DNA isolated from SIV-infected cells using the QuickGene-810 system and spin column.

■ Noninfected cells (mock)



The electrophoretic band of PCR amplified products of DNA isolated 1.5 hours and 3 hours after infection by using QuickGene-810 system could be detected.

M: marker(ladder)



F: QuickGene-810
A: Spin column



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