Chapter 3-II-i

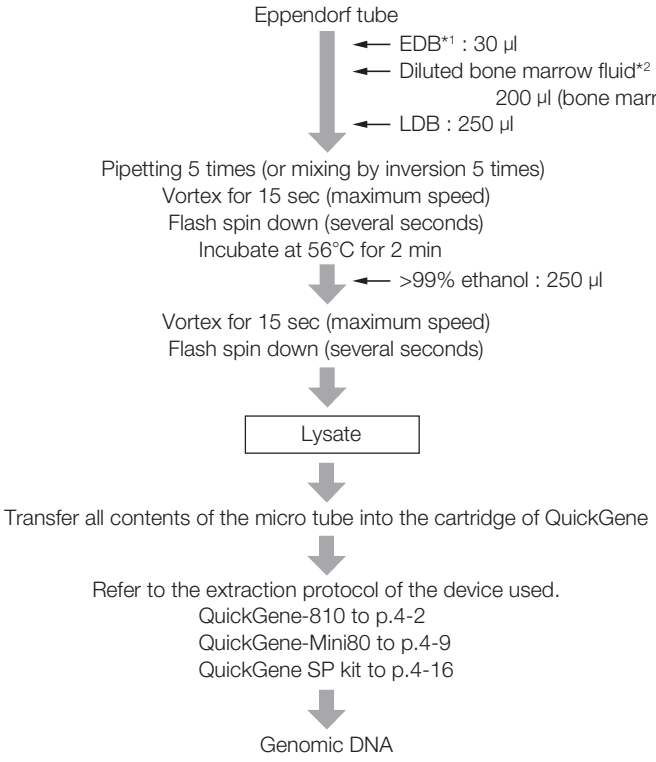
Genomic DNA Extraction from Blood of Animal

DA-a-1

QuickGene DNA whole blood kit S (DB-S)
QuickGene SP kit DNA whole blood (SP-DB)

Genomic DNA Extraction from Bone Marrow Fluid

Protocol



*1 Leave EDB for 30 min at room temperature after adding nuclease-free water and mixing, and use it after perfect dissolution.

*2 Dilute bone marrow fluid double with PBS in advance. Add 100 µl of PBS to 100 µl of bone marrow fluid, and add after mixing well.

Results

Electropherogram

No Data

The yield of genomic DNA

No Data

Protein contamination : A260/280

No Data

Chaotropic salt contamination : A260/230

No Data

Other

No Data

Common protocol is usable for the following

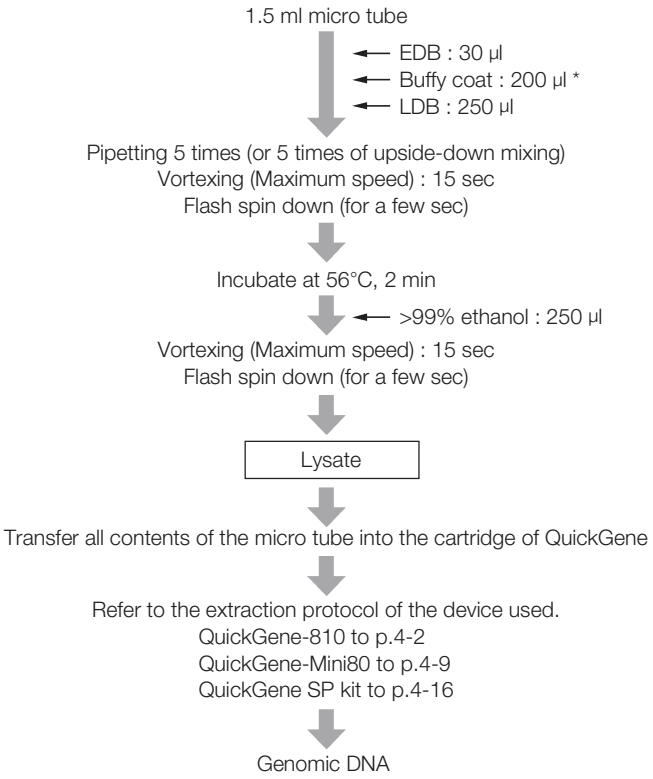
No Data

This book includes some protocol that have been performed, but not yet been approved. 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).

QuickGene DNA whole blood kit S (DB-S)
QuickGene SP kit DNA whole blood (SP-DB)

Genomic DNA Extraction from Buffy Coat

Protocol



*1 Cell number of 3×10^6 were suspended by PBS/200 µl

Results

Electropherogram

No Data

The yield of genomic DNA

No Data

Protein contamination : A260/280

No Data

Chaotropic salt contamination : A260/230

No Data

Other

No Data

Common protocol is usable for the following

No Data

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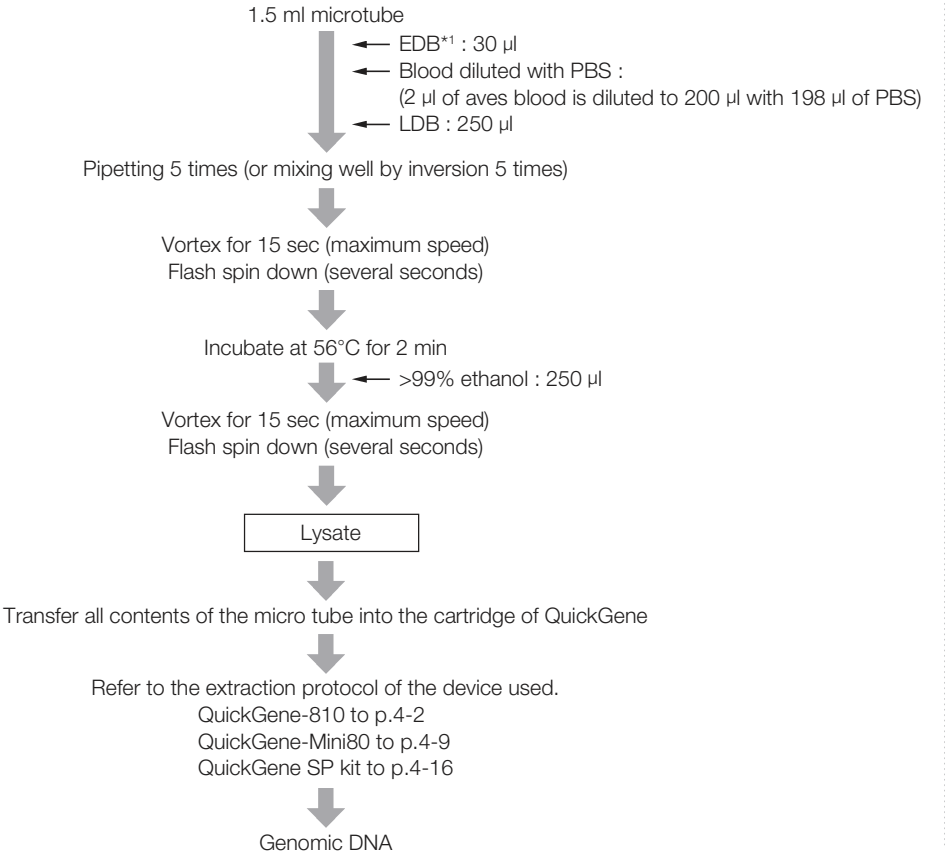
DA-a-3

QuickGene DNA whole blood kit S (DB-S)
QuickGene SP kit DNA whole blood (SP-DB)

Genomic DNA Extraction from Whole Blood of Aves

Protocol



*1 Leave EDB for 30 min at room temperature after adding nuclease-free water and mixing, and use it after perfect dissolution.

Results

Electropherogram

No Data

The yield of genomic DNA

No Data

Protein contamination : A260/280

No Data

Chaotropic salt contamination : A260/230

No Data

Other

No Data

Common protocol is usable for the following

No Data

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KURABO

Genomic DNA Extraction from Whole Blood of Human

Protocol

1.5 ml micro tube
← a. EDB solution : 30 µl *1
← b. Whole blood : 200 µl *1*2
← c. LDB : 250 µl *1*3
Mix by pipetting 5 times
Mix thoroughly by vortexing for 15 sec *4
Flash spin down
Incubate at 56°C for 2 min
← >99% ethanol : 250 µl
Mix thoroughly by vortexing for 15 sec *4
Flash spin down
Lysate
Transfer all contents of the micro tube into the cartridge of QuickGene
Refer to the extraction protocol of the device used.
QuickGene-810 to p.4-2
QuickGene-Mini80 to p.4-9
QuickGene SP kit to p.4-16
Genomic DNA (Elution volume : 200 µl)

*1 Must follow the steps a, b, and c.

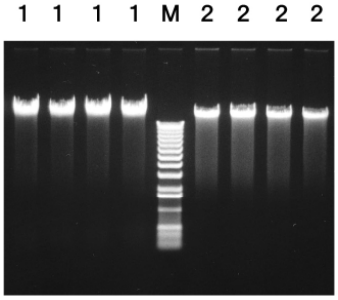
*2 Recommend to use the whole blood collected in EDTA-2Na or EDTA-2K.

*3 Proceed the step C immediately after adding whole blood.

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

Results

Electropherogram



M : 1k bp ladder
1 : QuickGene
2 : A company (spin method)

The yield of genomic DNA (Sample: 200µl of human whole blood)

(µg)	Average	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
QuickGene	5.9	7.2	5.3	5.9	5.5	5.5
A company (spin method)	4.5	6.3	4.4	5.2	3.2	3.6

Protein contamination : A260/280

	Average	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
QuickGene	1.94	1.91	1.94	1.96	1.91	1.96
A company (spin method)	1.84	1.86	1.82	1.80	1.87	1.86

Chaotropic salt contamination : A260/230

	Average	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
QuickGene	1.61	1.76	1.69	1.43	1.76	1.42
A company (spin method)	1.12	1.21	0.89	1.07	1.24	1.21

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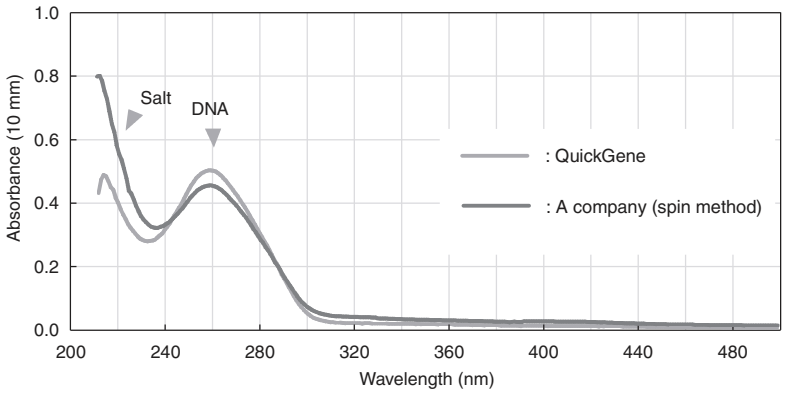
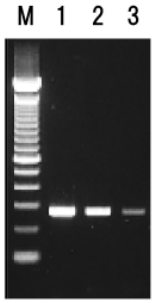


Hemoglobin contamination : A400

	Average	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
QuickGene	0.036	0.023	0.032	0.070	0.031	0.025
A company (spin method)	0.054	0.076	0.040	0.085	0.026	0.043

Other

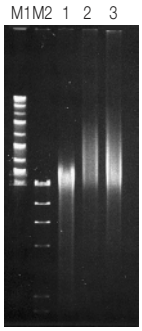
• PCR



Serial dilution of isolated genomic DNA was used for PCR template to amplify p53 exon6 gene.
PCR amplification was performed successfully by using 0.1ng/µl genomic DNA.

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

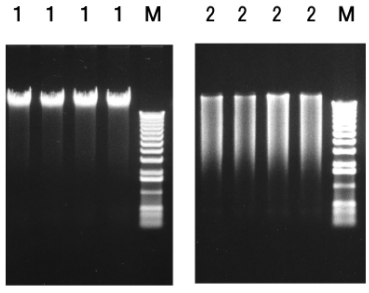
• Pulsed-field electropherogram



The use of QuickGene-810 (automatic nucleic-acid isolation system) and QuickGene DNA whole blood kit S enables the isolation of long genomic DNA same as manual method using phenol / chloroform.

M1 : MidRange PFG Marker Ⅱ
M2 : *Hin*d Ⅲ digest
1 : Comparison method using spin column (<~70kb)
2 : Using QuickGene isolation system and reagents (<~140kb)
3 : Manual method using phenol / chloroform (<~140kb)

• Restriction Enzyme Digestion



The eluted genomic DNA sample had been digested with EcoR Ⅰ.
The success of enzyme digestion is shown by the comparison of lane1 and 2.

M : 1k bp ladder
1 : Before digestion
2 : After digestion using EcoR Ⅰ

Common protocol is usable for the following

Canine Whole Blood

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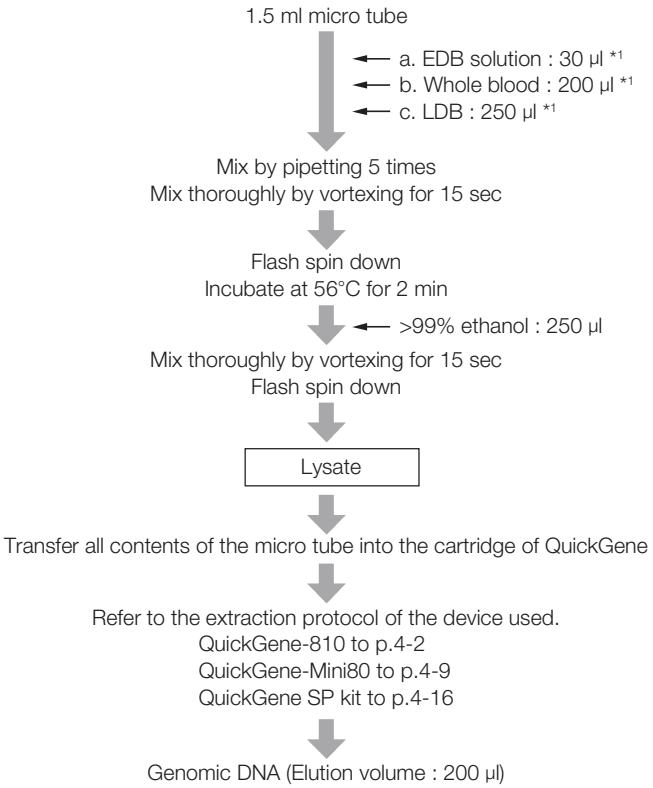
Genomic DNA Isolation from Whole Blood of Canine

Protocol



*1 a to c exactly.
Do not add LDB directly after addition of EDB.

Results

Electropherogram

No Data

The yield of genomic DNA

amount of whole blood	Yield(µg)
200 µl	2.52

Protein contamination : A260/280

amount of whole blood	A260/280
200 µl	1.68

Chaotropic salt contamination : A260/230

amount of whole blood	A260/230
200 µl	0.61

Other

No Data

Common protocol is usable for the following

Human Whole Blood

This book includes some protocol that have been performed, but not yet been approved. Depending on sample and storage conditions, nucleic acid may not be extractable. Therefore, we cannot guarantee accurate data.
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