PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells]

(Ver. 3.0), Column type

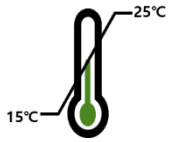
Kit Contents

PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells]			
Cat. No.	**GCBL50** (50preps)	**GCBL100** (100preps)	**GCBL200** (200preps)
RBL	55ml	110ml	220ml
NGD1	15ml	30ml	60ml
NPS	15ml	30ml	60ml
EB	5ml	10ml	20ml
WB	11ml (Add ethanol 44ml)	22ml (Add ethanol 88ml)	44ml (Add ethanol 176ml)
MaxBinder™ Solution	5ml	10ml	20ml
RNase A (50mg/ml)	0.15ml (dry)	0.15ml (dry) x 2ea	0.15ml (dry) x 4ea
Proteinase K (10mg/ml)	0.5ml (dry)	0.5ml (dry) x 2ea	0.5ml (dry) x 4ea
Column Set (with cap, 50ea/**Blue Box**)	1box	2box	4box
Instruction for Use	1ea	1ea	1ea

Description

PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells] is designed for rapid and pure isolation of total DNA from whole blood or cultured animal cells. The spin column based method completely removes PCR inhibitors such as divalent cations and proteins resulting in a high purity preparation of genomic DNA. There is no use of phenol or chloroform, handling is safe and does not produce any harmful waste. DNA purified with this kit is suitable for a variety of applications, including PCR amplification, digestion with restriction endonucleases and membrane hybridizations.

Storage



Room temperature

Shelf life

12 months

NanoHelix Co., Ltd.

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Quality control assay data

Functional analysis

PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal Cells] was tested for the isolation of genomic DNA from human blood.

Quality authorized by Yountaek Go

Protocol

Important things to do before starting

- Before using **WB**, add **absolute ethanol** according to the bottle label to obtain a working solution. You may use 80% ethanol, instead of WB. Ethanol does not supplied in this kit.
- Add **0.5ml** of distilled water to the provided **Proteinase K** tube for making **10mg/ml** concentration, and then store at -20℃.
- Add **0.15ml** of distilled water to the provided **RNase A** tube for making **50mg/ml** concentration, and then store at -20℃.

1. Sample Preparation

< Blood sample - RBC removal >

- Mix 200µl (1 volume) of whole blood with 1ml (5 volumes) of **RBL** in a microtube.
- Incubate for 10 min on ice. Mix by vortexing briefly 2-3 times during incubation.
- Centrifuge for 10 min at 12,000 rpm to pellet the white blood cells, and then completely discard the supernatant. **Follow step "Cell Lysis".**

< Cultured Animal Cells >

Cells grown in a monolayer

- Detach cells by standard trypsinization method or cell scraper.
- Transfer an appropriate amount (1 ~ 5 x 10^6 cells) to a 1.5ml microcentrifuge tube.
- Harvest cells by centrifugation for 5 min at 300 x g (~3,000 rpm) and completely discard the supernatant. **Follow step "Cell Lysis".**

Cells grown in suspension

- Transfer an appropriate amount (1 ~ 5 x 10^6 cells) to a 1.5ml microcentrifuge tube.
- Harvest cells by centrifugation for 5 min at 300 x g (~3,000 rpm) and completely discard the supernatant. **Follow step "Cell Lysis".**

2. Cell Lysis

1) Add **300µl of NGD1 and 2µl of RNase A (50mg/ml)** to the cell pellet. Vortex vigorously for 30-60 sec.
2) Add **8µl of Proteinase K (10mg/ml)** and mix by pipetting.
   Incubate at 60℃ for 10 min, and then cool the tube on ice for 5 min.

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3) Add **300µl of NPS**. Vortex briefly.
4) Place the tube on ice for 5 min, and centrifuge for 5 min at 12,000 rpm.
5) Transfer **600µl of the supernatant** into a clean 1.5ml tube.
6) Add **200µl of absolute ethanol** and vortex vigorously.

3. Column Activation [Optional]

※ These steps are required for the best yield.

1) Place a Spin Column into a 2ml collection tube.
2) Add **100µl of MaxBinder™ Solution** into the Spin Column.
3) Centrifuge at 12,000 rpm for 30 sec and immediately proceed to next step.
   You need not discard the flow-through from the collection tube.

4. Loading

1) Pipet 400µl of the mixture from step 1 (Cell Lysis) into a spin column sitting in a 2ml collection tube.
2) Centrifuge for 30 sec at 12,000 rpm. Discard the flow-through.
3) Pipet the remains of the mixture into the spin column.
4) Centrifuge for 30 sec at 12,000 rpm. Discard the flow-through.

5. Washing

1) Add **500µl of WB (80% ethanol)** into the spin column.
2) Centrifuge for 30 sec at 12,000 rpm. Discard the flow-through.
   ※ Repeat this step for high-purity DNA preparation.
3) Centrifuge at 12,000 rpm for 2 min to remove residual ethanol.

6. Elution

1) Discard the 2ml collection tube and carefully place the spin column in a clean 1.5ml tube.
2) Add **40-50µl of EB or distilled water** into the center of the column.
3) Centrifuge at 12,000 rpm for 2 min. Discard the spin column.
   Store the eluted DNA at 4℃ or -20℃.

Products

Cat. No.	Products	Size
GCBL50	PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells] (Ver. 3.0), Column type	50preps
GCBL100	PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells] (Ver. 3.0), Column type	100preps
GCBL200	PureHelix™ *Genomic* DNA Prep Kit [Blood, Animal cells] (Ver. 3.0), Column type	200preps

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