

Geneius™ Micro gDNA Extraction Kit

GMB004 (4 Preparation Sample Kit)

GMB100 (100 Preparation Kit)

GMB300 (300 Preparation Kit)

Advantages

Small Volume Samples: blood, dried blood spots, urine, saliva

Yield: Up to 300 ng of pure genomic DNA from 6 mm dried blood spots (Whatman® FTA® Cards)

Format: gDNA spin columns

Time: 20 minutes

Elution Volume: 30-100 µl

Kit Storage: dry at room temperature (15-25°C)

Table of Contents

Introduction.....	2
Quality Control.....	2
Kit Components.....	2
Safety Measures.....	3
Quick Protocol Diagram.....	3
Whole Blood Protocol Procedure.....	4
Dried Blood Spot Protocol Procedure.....	5
Urine Protocol Procedure.....	6
Saliva Protocol Procedure.....	8
Troubleshooting.....	9
Real-Time PCR Data.....	10
Related Products.....	10

Introduction

The Geneius™ Micro gDNA Extraction Kit provides an efficient method for purifying DNA (including genomic and mitochondrial DNA) from small volumes of whole blood, dried blood spots (Whatman® FTA® Cards), urine and saliva. Proteinase K and chaotropic salt are used to lyse cells and degrade protein, allowing DNA to bind to the glass fiber matrix of the spin column. Contaminants are removed using W1 Buffer and Wash Buffer (containing ethanol) and the purified genomic DNA is eluted by a low salt Elution Buffer, TE or water. The entire procedure can be completed in as little as 20 minutes without phenol/chloroform extraction or alcohol precipitation, with an average DNA yield of 150-200 ng from 6 mm dried blood spots. Purified DNA, with approximately 20-30 kb, is suitable for use in Real-Time PCR or other enzymatic reactions.

Quality Control

The quality of the Geneius™ Micro gDNA Extraction Kit is tested on a lot-to-lot basis by isolating genomic DNA from 10 µl of whole blood. A minimum of 300 ng of purified DNA (A260/A280 ratio of 1.8-2.0) is quantified with a spectrophotometer and analyzed by electrophoresis on a 0.8% agarose gel.

Kit Components

Component	GMB004	GMB100	GMB300
S1 Buffer	3 ml	30 ml	75 ml
S2 Buffer	4 ml	30 ml	75 ml
Carrier RNA ¹ (Add Elution Buffer)	1 mg (1 ml)	1 mg (1 ml)	1 mg (1 ml)
Proteinase K ² (Add ddH ₂ O)	1 mg (0.10 ml)	11 mg x 2 (1.10 ml)	65 mg (6.50 ml)
W1 Buffer	2 ml	45 ml	130 ml
Wash Buffer ³ (Add Ethanol)	1 ml (4 ml)	25 ml (100 ml)	50 ml (200 ml)
Elution Buffer	6 ml	75 ml	75 ml x 2
GD Columns	4	100	300
2 ml Collection Tubes	8	200	600

¹Add 1 ml of Elution Buffer to Carrier RNA then vortex to ensure it is completely dissolved to obtain a working solution of 1 µg/µl. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin the mixture down. Divide the Carrier RNA solution into convenient volumes in several RNase-free 1.5 ml microcentrifuge tubes. The Carrier RNA solution should be stored at -20°C. Do not freeze and thaw the Carrier RNA solution more than 3 times.

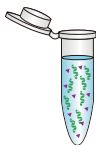
²Add ddH₂O pH7.0-8.5 (see the bottle label for volume) to Proteinase K then vortex to ensure it is completely dissolved. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin down the mixture. For extended periods, the ddH₂O and Proteinase K mixture should be stored at 4°C. Use only fresh ddH₂O as ambient CO₂ can quickly cause acidification.

³Add absolute ethanol (see the bottle label for volume) to Wash Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

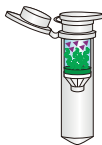


During the procedure, always wear a lab coat, disposable gloves, and protective goggles.

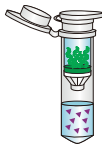
Quick Protocol Diagram



Sample preparation and cell lysis



DNA binding to membrane while contaminants remain suspended



Wash (removal of contaminants while DNA remains bound to membrane)



Elution of pure genomic DNA which is ready for subsequent reactions

Geneius™ Micro gDNA Extraction Kit Protocol

Please read the entire instruction manual prior to starting the Protocol Procedure.

IMPORTANT BEFORE USE!

1. Add 1 ml of Elution Buffer to Carrier RNA then vortex to ensure it is completely dissolved to obtain a working solution of 1 µg/µl. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin the mixture down. Divide the Carrier RNA solution into convenient volumes in several RNase-free 1.5 ml microcentrifuge tubes. The Carrier RNA solution should be stored at -20°C. Do not freeze and thaw the Carrier RNA solution more than 3 times.

2. Add ddH₂O pH7.0-8.5 (see the bottle label for volume) to Proteinase K then vortex to ensure it is completely dissolved. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin down the mixture. For extended periods, the ddH₂O and Proteinase K mixture should be stored at 4°C. Use only fresh ddH₂O as ambient CO₂ can quickly cause acidification.

3. Add absolute ethanol (see the bottle label for volume) to Wash Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

Additional Requirements

RNase-free 1.5 ml microcentrifuge tubes, 1.5 ml microcentrifuge tubes, single hole paper punch (dried blood spot protocol only)

Whole Blood Protocol Procedure

1. S2 Buffer Preparation

Transfer **1 µl of Carrier RNA solution and 200 µl of S2 Buffer** per sample to a RNase-free 1.5 ml microcentrifuge tube and vortex shortly to mix. The mixture is for use in the Lysis step.

2. Cell Lysis

Transfer 1-100 µl of whole blood to a 1.5 ml microcentrifuge tube. Add **S1 Buffer to a final volume of 200 µl and 20 µl of Proteinase K (make sure ddH₂O was added)** then mix by vortex. Incubate at 60°C for 5 minutes to lyse the sample. Add **200 µl of S2 Buffer (make sure Carrier RNA solution was added)** and mix by vortex. Incubate at 60°C for 5 minutes (invert the tube every 2 minutes). During incubation, transfer the required volume of Elution Buffer (200 µl/sample) to a 1.5 ml microcentrifuge tube and heat to 60°C (for Step 5 Elution).

3. DNA Binding

Add **200 µl of absolute ethanol** to the sample lysate, mix thoroughly by vortex for 10 seconds. If precipitate appears, break it up as much as possible with a pipette. Place a **GD Column** in a 2 ml Collection Tube. **Transfer all of the mixture (including any insoluble precipitate) to the GD Column.** Centrifuge at 14-16,000 x g for 1 minute. Discard the 2 ml Collection Tube containing the flow-through and place the **GD Column** in a new 2 ml Collection tube.

4. Wash

Add **400 µl of W1 Buffer** to the **GD Column**. Centrifuge at 14-16,000 x g for 30 seconds. Discard the flow-through then place the **GD Column** back in the 2 ml Collection Tube. Add **600 µl of Wash Buffer (make sure absolute ethanol was added)**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. Centrifuge again for 3 minutes at 14-16,000 x g to dry the column matrix.

5. Elution

Standard elution volume is 100 µl. If less sample is to be used, reduce the elution volume (30-100 µl) to increase DNA concentration.

Transfer the dried **GD Column** to a clean 1.5 ml microcentrifuge tube. Add **100 µl of pre-heated Elution Buffer¹**, TE Buffer² or water³ into the **CENTER** of the column matrix. Let stand for at least 3 minutes to allow Elution Buffer, TE Buffer or water to be completely absorbed. Centrifuge at 14-16,000 x g for 1 minute to elute the purified DNA.

¹Ensure that Elution Buffer (10 mM Tris-HCl, pH8.5 at 25°C) is added into the center of the GD Column matrix and is completely absorbed.

²Using TE (10 mM Tris-HCl, 1 mM EDTA, pH8.0) for elution is beneficial as EDTA preserves DNA for long term storage. However, EDTA will affect PCR and other sensitive downstream applications. Ensure that TE is added into the center of the GD Column matrix and is completely absorbed.

³If using water for elution, ensure the water pH is between 7.0 and 8.5. ddH₂O should be fresh as ambient CO₂ can quickly cause acidification. Ensure that water is added into the center of the GD Column matrix and is completely absorbed. DNA eluted in water should be stored at -20°C to avoid degradation.

Dried Blood Spot Protocol Procedure

1. S2 Buffer Preparation

Transfer **1 µl of Carrier RNA solution and 200 µl of S2 Buffer** per sample to a RNase-free 1.5 ml microcentrifuge tube and vortex shortly to mix. The mixture is for use in the Lysis step.

2. Cell Lysis

Cut out a 6 mm (1/4 inch) diameter circle from a dried blood spot (Whatman® FTA® Card) with a single-hole paper punch then transfer to a 1.5 ml microcentrifuge tube. Add **200 µl of S1 Buffer and 20 µl of Proteinase K (make sure ddH₂O was added)** then mix by vortex (be sure the FTA® Card is completely immersed in the buffer). Incubate at 60°C for 30 minutes to lyse the sample. During incubation, vortex the tube every 10 minutes. Add **200 µl of S2 Buffer (make sure Carrier RNA solution was added)** then mix by vortex. Incubate at 60°C for 20 minutes. During incubation, vortex the tube every 10 minutes and transfer the required volume of Elution Buffer (200 µl/sample) to a 1.5 ml microcentrifuge tube then heat to 60°C (for Step 5 DNA Elution). After incubation, briefly centrifuge the tube and transfer the supernatant to a new 1.5 ml microcentrifuge tube.

3. DNA Binding

Add **200 µl of absolute ethanol** to the sample lysate then mix thoroughly by vortex for 10 seconds. If precipitate appears, break it up as much as possible with a pipette. Place a **GD Column** in a 2 ml Collection Tube. **Transfer all of the mixture (including any insoluble precipitate) to the GD Column.** Centrifuge at 14-16,000 x g for 1 minute. Discard the 2 ml Collection Tube containing the flow-through and place the **GD Column** in a new 2 ml Collection tube.

4. Wash

Add **400 µl of W1 Buffer** to the **GD Column**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. Add **600 µl of Wash Buffer (make sure absolute ethanol was added)**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. Centrifuge again for 3 minutes at 14-16,000 x g to dry the column matrix.

5. Elution

Standard elution volume is 100 µl. If less sample is to be used, reduce the elution volume (30-100 µl) to increase DNA concentration.

Transfer the dried **GD Column** to a clean 1.5 ml microcentrifuge tube. Add **100 µl of pre-heated Elution Buffer¹, TE Buffer² or water³** into the **CENTER** of the column matrix. Let stand for at least 3 minutes to allow Elution Buffer, TE Buffer or water to be completely absorbed. Centrifuge at 14-16,000 x g for 1 minute to elute the purified DNA.

¹Ensure that Elution Buffer (10 mM Tris-HCl, pH8.5 at 25°C) is added into the center of the GD Column matrix and is completely absorbed.

²Using TE (10 mM Tris-HCl, 1 mM EDTA, pH8.0) for elution is beneficial as EDTA preserves DNA for long term storage. However, EDTA will affect PCR and other sensitive downstream applications. Ensure that TE is added into the center of the GD Column matrix and is completely absorbed.

³If using water for elution, ensure the water pH is between 7.0 and 8.5. ddH₂O should be fresh as ambient CO₂ can quickly cause acidification. Ensure that water is added into the center of the GD Column matrix and is completely absorbed. DNA eluted in water should be stored at -20°C to avoid degradation.

Urine Protocol Procedure

1. S2 Buffer Preparation

Transfer **1 µl of Carrier RNA solution and 200 µl of S2 Buffer** per sample to a RNase-free 1.5 ml microcentrifuge tube and vortex shortly to mix. The mixture is for use in the Lysis step.

2. Sample Preparation and Cell Lysis

Transfer **1 ml of urine** to a 1.5 ml microcentrifuge tube then centrifuge at 6,000 x g for 2 minutes. Discard the supernatant then add **500 µl of Elution Buffer** to the pellet and vortex for 5 seconds.

NOTE: If using 2-10 ml of urine samples, transfer to a 15 ml centrifuge tube and centrifuge at 6,000 x g for 2 minutes. Discard the supernatant; add 500 µl of Elution Buffer then vortex for 5 seconds. Transfer the sample to a 1.5 ml microcentrifuge tube.

Centrifuge at 6,000 x g for 2 minutes, discard the supernatant. Add **200 µl of S1 Buffer and 20 µl of Proteinase K (make sure ddH₂O was added)** then mix by vortex for 10 seconds.

NOTE: To increase DNA yield from male urine samples containing sperm cells, add 20 µl of 1M DTT. If DTT (DTT001) is required, it can be purchased directly from Geneaid.

Incubate at 60°C for 30 minutes to lyse the sample. During incubation, vortex the tube every 10 minutes. Add **200 µl of S2 Buffer (make sure Carrier RNA solution was added)** then mix by vortex. Incubate at 60°C for 20 minutes. During incubation, vortex the tube every 10 minutes and transfer the required volume of Elution Buffer (200 µl/sample) to a 1.5 ml microcentrifuge tube then heat to 60°C (for Step 5 DNA Elution).

3. DNA Binding

Add **200 µl of absolute ethanol** to the sample lysate, mix thoroughly by vortex for 10 seconds. If precipitate appears, break it up as much as possible with a pipette. Place a **GD Column** in a 2 ml Collection Tube. **Transfer all of the mixture (including any insoluble precipitate) to the GD Column.** Centrifuge at 14-16,000 x g for 1 minute. Discard the 2 ml Collection Tube containing the flow-through and place the **GD Column** in a new 2 ml collection tube.

4. Wash

Add **400 µl of W1 Buffer** to the **GD Column**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. **Add 600 µl of Wash Buffer (make sure absolute ethanol was added)**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. Centrifuge again for 3 minutes at 14-16,000 x g to dry the column matrix.

5. Elution

Standard elution volume is 100 µl. If less sample is to be used, reduce the elution volume (30-100 µl) to increase DNA concentration.

Transfer the dried **GD Column** to a clean 1.5 ml microcentrifuge tube. Add **100 µl of pre-heated Elution Buffer¹, TE Buffer² or water³** into the **CENTER** of the column matrix. Let stand for at least 3 minutes to allow Elution Buffer, TE Buffer or water to be completely absorbed. Centrifuge at 14-16,000 x g for 1 minute to elute the purified DNA.

¹Ensure that Elution Buffer (10 mM Tris-HCl, pH8.5 at 25°C) is added into the center of the GD Column matrix and is completely absorbed.

²Using TE (10 mM Tris-HCl, 1 mM EDTA, pH8.0) for elution is beneficial as EDTA preserves DNA for long term storage. However, EDTA will affect PCR and other sensitive downstream applications. Ensure that TE is added into the center of the GD Column matrix and is completely absorbed.

³If using water for elution, ensure the water pH is between 7.0 and 8.5. ddH₂O should be fresh as ambient CO₂ can quickly cause acidification. Ensure that water is added into the center of the GD Column matrix and is completely absorbed. DNA eluted in water should be stored at -20°C to avoid degradation.

Saliva Protocol Procedure

1. S2 Buffer Preparation

Transfer **1 µl of Carrier RNA solution and 200 µl of S2 Buffer** per sample to a RNase-free 1.5 ml microcentrifuge tube and vortex shortly to mix. The mixture is for use in the Lysis step.

2. Cell Lysis

Transfer **1-100 µl of saliva** into a 1.5 ml microcentrifuge tube. Add **S1 buffer to a final volume of 200 µl and 20 µl Proteinase K**. Add **200 µl of S2 Buffer (make sure Carrier RNA solution was added)** then mix by vortex. Incubate the tube at 60°C for 10 minutes (vortex the tube every 3 minutes). During incubation, transfer the required volume of Elution Buffer (200 µl/sample) to a 1.5 ml microcentrifuge tube and heat to 60°C (for Step 5 Elution).

3. DNA Binding

Add **200 µl of absolute ethanol** to the sample lysate, mix thoroughly by vortex for 10 seconds. If precipitate appears, break it up as much as possible with a pipette. Place a **GD Column** in a 2 ml Collection Tube. **Transfer all of the mixture (including any insoluble precipitate) to the GD Column**. Centrifuge at 14-16,000 x g for 1 minute. Discard the 2 ml Collection Tube containing the flow-through and place the **GD Column** in a new 2 ml Collection tube.

4. Wash

Add **400 µl of W1 Buffer** to the **GD Column**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. **Add 600 µl of Wash Buffer (make sure absolute ethanol was added)**. Centrifuge at 14-16,000 x g for 30 seconds then discard the flow-through. Place the **GD Column** back in the 2 ml Collection Tube. Centrifuge again for 3 minutes at 14-16,000 x g to dry the column matrix.

5. Elution

Standard elution volume is 100 µl. If less sample is to be used, reduce the elution volume (30-100 µl) to increase DNA concentration.

Transfer the dried **GD Column** to a clean 1.5 ml microcentrifuge tube. Add **100 µl of pre-heated Elution Buffer¹, TE Buffer² or water³** into the **CENTER** of the column matrix. Let stand for at least 3 minutes to allow Elution Buffer, TE Buffer or water to be completely absorbed. Centrifuge at 14-16,000 x g for 1 minute to elute the purified DNA.

¹Ensure that Elution Buffer (10 mM Tris-HCl, pH8.5 at 25°C) is added into the center of the GD Column matrix and is completely absorbed.

²Using TE (10 mM Tris-HCl, 1 mM EDTA, pH8.0) for elution is beneficial as EDTA preserves DNA for long term storage. However, EDTA will affect PCR and other sensitive downstream applications. Ensure that TE is added into the center of the GD Column matrix and is completely absorbed.

³If using water for elution, ensure the water pH is between 7.0 and 8.5. ddH₂O should be fresh as ambient CO₂ can quickly cause acidification. Ensure that water is added into the center of the GD Column matrix and is completely absorbed. DNA eluted in water should be stored at -20°C to avoid degradation.

Troubleshooting



Low Yield

Incomplete buffer preparation.

1. Add 1 ml of Elution Buffer to Carrier RNA then vortex to ensure Carrier RNA is completely dissolved to obtain a working solution of 1 $\mu\text{g}/\mu\text{l}$. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin the mixture down. Divide the Carrier RNA solution into convenient volumes in several RNase-free 1.5 ml microcentrifuge tubes. Carrier RNA solution should be stored at -20°C . Do not freeze and thaw the Carrier RNA Solution more than 3 times.

2. Add ddH_2O pH7.0-8.5 (see the bottle label for volume) to Proteinase K then vortex to ensure Proteinase K is completely dissolved. Check the box on the bottle. Once it is dissolved completely, centrifuge for a few seconds to spin down the mixture. For extended periods, the ddH_2O and Proteinase K mixture should be stored at 4°C . Use only fresh ddH_2O as ambient CO_2 can quickly cause acidification.

3. Add absolute ethanol (see the bottle label for volume) to Wash Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

Incorrect lysis.

Ensure dried blood spot sample is completely immersed in the buffer. Be sure Carrier RNA solution was added to S2 Buffer. To increase DNA yield, add 20 μl of 1M DTT to male urine samples which contain sperm cells.

Incorrect DNA elution step.

Ensure that Elution Buffer, TE or water is added into the **CENTER** of the GD Column matrix and is completely absorbed. Use pre-heated Elution Buffer, TE, or water ($60\sim 70^{\circ}\text{C}$). If using water for elution, ensure the water pH is between 7.0 and 8.5. ddH_2O should be fresh as ambient CO_2 can quickly cause acidification.

Eluted DNA Does Not Perform Well In Downstream Applications

Residual ethanol contamination.

Following the wash step, dry the GD Column with additional centrifugation at 14-16,000 x g for 5 minutes to ensure the GD Column membrane is completely dry.

The Geneius™ Micro gDNA Extraction Kit Real-Time PCR Data

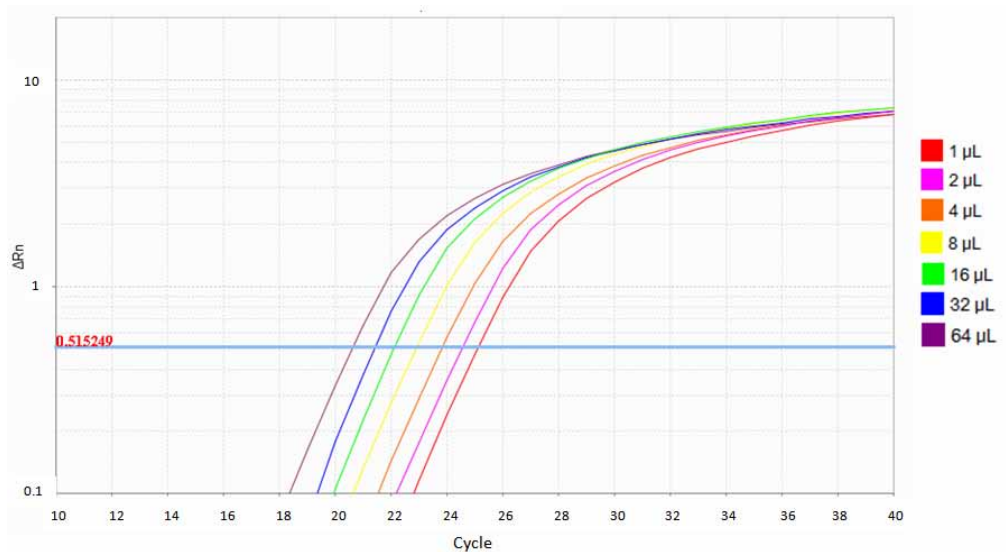


Figure 1. DNA was purified from blood samples (1–64 μL) using the Geneius™ Micro gDNA Extraction Kit. DNA was eluted in 30 μL of Elution Buffer followed by a Real-time PCR assay performed with a 3 μL aliquot as template, primers (designed to amplify the ACTB gene), and Fast SYBR Green PCR Master Mix using the StepOnePlus™ Real-Time PCR system (Applied Biosystems). The results confirm the efficiency of DNA extraction from as low as 1 μL blood samples.

Related DNA Extraction Products

Plasmid DNA Purification		
Product	Package Size	Catalogue Number
Presto™ Mini Plasmid Kit	100/300 preps	PDH100/300
Presto™ Endotoxin Free Mini Plasmid Kit	100 preps	PEH100
Presto™ Midi Plasmid Kit	25 preps	PIF025
Presto™ Midi Plasmid Kit (Endotoxin Free)	25 preps	PIFE25
Large Plasmid DNA Extraction Kit	100/300 preps	PDL100/300
Midiprep Spin Column Plasmid Kit	25 preps	PA025
Geneaid™ Midi Plasmid Kit	25 preps	PI025
Geneaid™ Midi Plasmid Kit (Endotoxin Free)	25 preps	PIE25
Presto™ Plasmid DNA Concentration Kit	250/500/1000 preps	PC0250/500/1000
Geneaid™ Maxi Plasmid Kit	10/25 preps	PM010/25
Geneaid™ Maxi Plasmid Kit (Endotoxin Free)	10/25 preps	PME10/25
Presto™ 96 Well Plasmid Kit	4/10 x 96 preps	96PDV04/10, 96PDC04/10

Related DNA/RNA Extraction Products

Post Reaction DNA Purification		
Product	Package Size	Catalogue Number
GenepHlow™ Gel Extraction Kit	100/300 preps	DFG100/300
GenepHlow™ PCR Cleanup Kit	100/300 preps	DFC100/300
GenepHlow™ Gel/PCR Kit	100/300 preps	DFH100/300
GenepHlow™ DNA Cleanup Midi Kit	100/300 preps	DFI100/300
GenepHlow™ DNA Cleanup Maxi Kit	10/25 preps	DFM010/025
Small DNA Fragments Extraction Kit	100/300 preps	DF101/301
Large DNA Fragments Extraction Kit	100/300 preps	DFL100/300
Presto™ 96 Well PCR Cleanup Kit	4/10 x 96 preps	96DFH04/10
Presto™ 96 Well Gel Extraction Kit	4/10 x 96 preps	96DFG04/10
G-25 Gel Filtration Desalting Column	50 rxns	CG025
G-50 Gel Filtration Dye Terminator Removal Column	50 rxns	CG050
96-Well G-50 Gel Filtration Plate	4/10 x 96 rxns	CGP04/10
Genomic DNA Extraction		
Product	Package Size	Catalogue Number
Genomic DNA Mini Kit (Blood/Cultured Cell)	100/300 preps	GB100/300
Genomic DNA Maxi Kit (Blood/Cultured Cell)	10/25 preps	GDM010/25
Genomic DNA Mini Kit (Tissue)	50/100/300 preps	GT050/100/300
gSYNC™ DNA Extraction Kit	50/100/300 preps	GS050/100/300
Genomic DNA Mini Kit (Plant)	100 preps	GP100
Genomic DNA Maxi Kit (Plant)	10/25 preps	GPM010/25
GENEzol™ DNA Reagent Plant	100/200 rxns	GR100/200
Presto™ Mini gDNA Yeast Kit	100/300 preps	GBYB100/300
Presto™ Mini gDNA Bacteria Kit	100/300 preps	GBB100/101/300/301
Geneius™ Micro DNA Extraction Kit	100/300 preps	GMB100/300
Presto™ Buccal Swab gDNA Extraction Kit	100/300 preps	GSK100/300
Presto™ 96 Well Blood Genomic DNA Extraction Kit	4/10 x 96 preps	96GBP04/10
Presto™ 96 Well Plant Genomic DNA Extraction Kit	4/10 x 96 preps	96GPP04/10
DNA RNA Purification		
Product	Package Size	Catalogue Number
Presto™ DNA/RNA Extraction Kit	50/100 preps	DR050/100
Presto™ DNA/RNA/Protein Extraction Kit	50/100 preps	DRP050/100

For additional product information please visit www.geneaid.com. Thank you!



Geneaid

www.geneaid.com



CERTIFICATE NO. QAIC/TW/50077