Geneaid

Instruction Manual
Ver. 10.07.13
For Research Use Only

Presto™ Mini Plasmid Kit

PDH004 (4 Preparation Sample Kit)
PDH100 (100 Preparation Kit)
PDH300 (300 Preparation Kit)

Advantages

Sample: 1-7 ml of cultured bacterial cells
Yield: up to 50 µg of pure plasmid DNA
Format: plasmid spin column
Operation Time: within 15 minutes
Elution Volume: 30-100 µl
Kit Storage: dry at room temperature (15-25°C) for up to 1 year, PD1 and RNase A mixture should be stored at 2-8°C for up to 6 months

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Introduction

The Presto™ Mini Plasmid Kit was designed for rapid isolation of plasmid DNA from 1-7 ml of cultured bacterial cells. TrueBlue Lysis Buffer (an optional color indicator) is included with the kit in order to prevent common handling errors, ensuring efficient cell lysis and neutralization. A modified alkaline lysis method and RNase treatment are used to obtain clear cell lysate with minimal genomic DNA and RNA contaminants. Typical yields are 20-35 µg for high-copy number plasmid or 3-10 µg for low-copy number plasmid from 4 ml of cultured bacterial cells. DNA phenol extraction or alcohol precipitation is not required and the entire procedure can be completed within 15 minutes. The purified plasmid DNA is ready for use in restriction enzyme digestion, ligation, PCR, and sequencing reactions.

Quality Control

The quality of the Presto™ Mini Plasmid Kit is tested on a lot-to-lot basis by isolating plasmid DNA from a 4 ml overnight *E. coli* (DH5α) culture containing plasmid pBluescript (A600 > 2 U/ml). Following the purification process, a yield of more than 20 µg is obtained and the A260/A280 ratio is between 1.8-2.0. The purified plasmid DNA (1 µg) is used in *Eco*RI digestion, and analyzed by electrophoresis.

Kit Components

Component	PDH004	PDH100	PDH300
PD1 Buffer[1]	1 ml	25 ml	65 ml
PD2 Buffer[2]	1 ml	25 ml	75 ml
PD3 Buffer	1.5 ml	45 ml	100 ml
TrueBlue Lysis Buffer	10 µl	250 µl	650 µl
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	1 ml	6 ml	30 ml
RNase A (50 mg/ml)	Added	100 µl	260 µl
PDH Columns	4	100	300
2 ml Collection Tubes	4	100	300

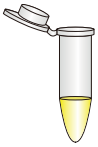
[1]For PDH100 and PDH300 add provided RNase A to PD1 Buffer then mix by shaking for a few seconds. Check the box on the bottle. PD1 and RNase A mixture should be stored at 2-8ºC for up to 6 months. For PDH004 samples, RNase A was already added to PD1.

[2]If precipitates have formed in PD2 Buffer, warm the buffer in a 37ºC water bath, followed by gentle shaking to dissolve.

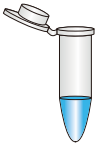
[3]Add absolute ethanol (see the bottle label for volume) to Wash Buffer then mix by shaking for a few seconds. Check the box on the bottle. Be sure and close the bottle tightly after each use to avoid ethanol evaporation.

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

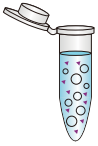
Quick Protocol Diagram



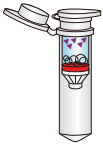
Harvest cultured bacterial cells by centrifuge to form a cell pellet, followed by resuspension



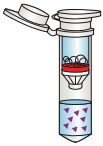
Lyse bacterial cells (optional color indicator will turn blue when lysis is successful)



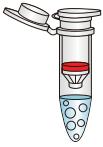
Neutralize suspension (optional color indicator will become clear when neutralization is successful)



DNA binding to red membrane while contaminants remain suspended



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



Elution of pure plasmid DNA which is ready for subsequent reactions

Presto™ Mini Plasmid Kit Protocol

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

IMPORTANT BEFORE USE!

1. For PDH100 and PDH300 add provided RNase A to PD1 Buffer then mix by shaking for a few seconds. Check the box on the bottle. PD1 and RNase A mixture should be stored at 2-8ºC for up to 6 months. For PDH004 samples, RNase A was already added to PD1.

2. If precipitates have formed in PD2 Buffer, warm the buffer in a 37ºC water bath followed by gentle shaking to dissolve.

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

1.5 ml microcentrifuge tubes, absolute ethanol

Protocol Procedure With Color Indicator

1. Harvesting

Transfer **1.5 ml of cultured bacterial cells** (1-2 x 10^9 *E. coli* grown in LB medium) to a 1.5 ml microcentrifuge tube. Centrifuge at 14-16,000 x g for 1 minute at room temperature to form a cell pellet then discard the supernatant completely. Use a narrow pipette tip to ensure the supernatant is completely removed. Repeat the harvesting step as required for samples between 1.5-7.0 ml using the same 1.5 ml microcentrifuge tube.

NOTE: Using 2 OD600 - 6 OD600 units of bacterial culture is recommended. Do not use overgrown bacterial cultures (≤16 hours incubated in a culture tube at 37ºC with 150-180 rpm shaking). Use fresh bacterial cultures only. Solid medium and liquid medium (i.e. LB medium) should contain an antibiotic such as ampicillin.

2. Resuspension

Add **200 µl of PD1 Buffer (make sure RNase A was added)** to a new 1.5 ml microcentrifuge tube. **Add 2 µl of TrueBlue Lysis Buffer** to the same 1.5 ml microcentrifuge tube then mix by shaking gently.

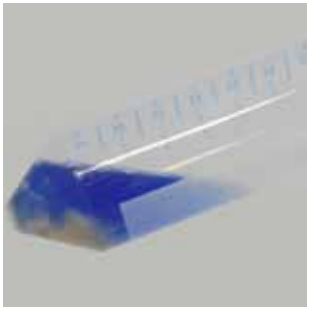
NOTE: It is normal for precipitates to form after mixing TrueBlue Lysis Buffer with PD1 Buffer.

Transfer the mixture to the 1.5 ml microcentrifuge tube containing the cell pellet. Resuspend the cell pellet completely by vortex or pipette. Continue to vortex or pipette until all traces of the cell pellet have been dissolved.

3. Cell Lysis

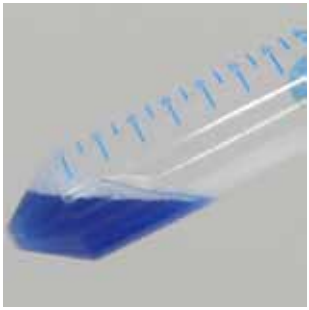
Add **200 µl of PD2 Buffer** to the resuspended sample then mix gently by inverting the tube 10 times. Close PD2 Buffer bottle immediately after use to avoid CO_2 acidification. Do not vortex to avoid shearing the genomic DNA. Let stand at room temperature for at least 2 minutes to ensure the lysate is homogeneous. Do not exceed 5 minutes.

NOTE: After adding PD2 Buffer, any precipitates will be completely dissolved and the color of the suspension will become blue. If the suspension contains colorless regions or brownish cell clumps, continue mixing until the suspension is completely blue.



Insufficient Mixing

If colorless regions or brownish cell clumps are present, continue mixing until the suspension is completely blue.



Correct Mixing

4. Neutralization

Add **300 µl of PD3 Buffer** then mix immediately by inverting the tube 10 times. Do not vortex to avoid shearing the genomic DNA. Centrifuge at 14-16,000 x g for 3 minutes at room temperature. If using >5 ml of bacterial cells, centrifuge at 16-20,000 x g for 5-8 minutes. During centrifugation, place a **PDH Column** in a 2 ml Collection Tube.

NOTE: After adding PD3 Buffer, the suspension will become colorless. If blue regions remain in the suspension, continue mixing until it becomes colorless.

Insufficient Mixing

If blue regions are present, continue mixing until the suspension is completely colorless.

Correct Mixing

5. DNA Binding

Transfer all of the supernatant to the **PDH Column**. Use a narrow pipette tip to ensure the supernatant is completely transferred without disrupting the white precipitate. Centrifuge at 14-16,000 x g for 30 seconds at room temperature then discard the flow-through. Place the **PDH Column** back in the 2 ml Collection Tube.

6. Wash

For Improved Downstream Sequencing Reactions

Add **400 µl of W1 Buffer** into the **PDH Column**. Centrifuge at 14-16,000 x g for 30 seconds. Discard the flow-through then place the **PDH Column** back in the 2 ml Collection Tube. Proceed with Wash Buffer addition.

NOTE: W1 Buffer is essential for efficient sequencing reactions by removing nuclease contamination and should be added prior to Wash Buffer addition. If you are not performing sequencing reactions, W1 Buffer is not required. Proceed directly to Wash Buffer addition.

For Standard Plasmid DNA Purification

Add **600 µl of Wash Buffer (make sure absolute ethanol was added)** into the **PDH Column**. Centrifuge at 14-16,000 x g for 30 seconds at room temperature. Discard the flow through then place the **PDH Column** back in the 2 ml Collection Tube. Centrifuge at 14-16,000 x g for 3 minutes at room temperature to dry the column matrix. Transfer the dried **PDH Column** to a new 1.5 ml microcentrifuge tube.

NOTE: Perform Wash Buffer steps twice for salt sensitive downstream applications.

7. Elution

Add **50 µl of Elution Buffer**[1], TE[2] or water[3] into the **CENTER** of the column matrix. Let stand for at least 2 minutes to allow Elution Buffer, TE or water to be completely absorbed. Centrifuge at 14-16,000 x g for 2 minutes at room temperature to elute the purified DNA.

[1]If a higher DNA concentration is required, use 30 µl of Elution Buffer (10 mM Tris-HCl, pH8.5) then repeat the Elution step by adding the same 30 µl of Elution Buffer (which now contains the eluted DNA) to the center of the column matrix again. If maximum DNA yield is required, use 100 µl of Elution Buffer (DNA concentration will be diluted). Ensure that Elution Buffer is added into the center of the PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated Elution Buffer (60~70ºC).

[2]Using 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 PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated TE (60~70ºC).

[3]If using water for elution, ensure the water pH is ≥8.0. ddH_2O should be fresh as ambient CO_2 can quickly cause acidification. Ensure that water is added into the center of the PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated water (60~70ºC).

IMPORTANT BEFORE USE!

1. For PDH100 and PDH300 add provided RNase A to PD1 Buffer then mix by shaking for a few seconds. Check the box on the bottle. PD1 and RNase A mixture should be stored at 4ºC for up to 6 months. For PDH004 samples, RNase A was already added to PD1.

2. If precipitates have formed in PD2 Buffer, warm the buffer in a 37ºC water bath followed by gentle shaking to dissolve.

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

1.5 ml microcentrifuge tubes, absolute ethanol

Protocol Procedure Without Color Indicator

1. Harvesting

Transfer **1.5 ml of cultured bacterial cells** (1-2 x 10^9 *E. coli* grown in LB medium) to a 1.5 ml microcentrifuge tube. Centrifuge at 14-16,000 x g for 1 minute at room temperature to form a cell pellet then discard the supernatant completely. Use a narrow pipette tip to ensure the supernatant is completely removed. Repeat the harvesting step as required for samples between 1.5-7.0 ml using the same 1.5 ml microcentrifuge tube.

NOTE: Using 2 OD600 - 6 OD600 units of bacterial culture is recommended. Do not use overgrown bacterial cultures (≤16 hours incubated in a culture tube at 37ºC with 150-180 rpm shaking). Use fresh bacterial cultures only. Solid medium and liquid medium (i.e. LB medium) should contain an antibiotic such as ampicillin.

2. Resuspension

Add **200 µl of PD1 Buffer (make sure RNase A was added)** to the 1.5 ml microcentrifuge tube containing the cell pellet. Resuspend the cell pellet completely by vortex or pipette. Continue to vortex or pipette until all traces of the cell pellet have been dissolved.

3. Cell Lysis

Add **200 µl of PD2 Buffer** to the resuspended sample then mix gently by inverting the tube 10 times. Close PD2 Buffer bottle immediately after use to avoid CO_2 acidification. Do not vortex to avoid shearing the genomic DNA. Let stand at room temperature for at least 2 minutes to ensure the lysate is homogeneous. Do not exceed 5 minutes.

4. Neutralization

Add **300 µl of PD3 Buffer** then mix immediately by inverting the tube 10 times. Do not vortex to avoid shearing the genomic DNA. Centrifuge at 14-16,000 x g for 3 minutes at room temperature. If using >5 ml of bacterial cells, centrifuge at 16-20,000 x g for 5-8 minutes. During centrifugation, place a **PDH Column** in a 2 ml Collection Tube.

5. DNA Binding

Transfer all of the supernatant to the **PDH Column**. Use a narrow pipette tip to ensure the supernatant is completely transferred without disrupting the white precipitate. Centrifuge at 14-16,000 x g for 30 seconds at room temperature then discard the flow-through. Place the **PDH Column** back in the 2 ml Collection Tube.

6. Wash

For Improved Downstream Sequencing Reactions

Add **400 µl of W1 Buffer** into the **PDH Column**. Centrifuge at 14-16,000 x g for 30 seconds. Discard the flow-through then place the **PDH Column** back in the 2 ml Collection Tube. Proceed with Wash Buffer addition.

NOTE: W1 Buffer is essential for efficient sequencing reactions by removing nuclease contamination and should be added prior to Wash Buffer addition. If you are not performing sequencing reactions, W1 Buffer is not required. Proceed directly to Wash Buffer addition.

For Standard Plasmid DNA Purification

Add **600 µl of Wash Buffer (make sure absolute ethanol was added)** into the **PDH Column**. Centrifuge at 14-16,000 x g for 30 seconds at room temperature. Discard the flow through then place the **PDH Column** back in the 2 ml Collection Tube. Centrifuge at 14-16,000 x g for 3 minutes at room temperature to dry the column matrix. Transfer the dried **PDH Column** to a new 1.5 ml microcentrifuge tube.

NOTE: Perform Wash Buffer steps twice for salt sensitive downstream applications.

7. Elution

Add **50 µl of Elution Buffer**[1], TE[2] or water[3] into the **CENTER** of the column matrix. Let stand for at least 2 minutes to allow Elution Buffer, TE or water to be completely absorbed. Centrifuge at 14-16,000 x g for 2 minutes at room temperature to elute the purified DNA.

[1]If a higher DNA concentration is required, use 30 µl of Elution Buffer (10 mM Tris-HCl, pH8.5) then repeat the Elution step by adding the same 30 µl of Elution Buffer (which now contains the eluted DNA) to the center of the column matrix again. If maximum DNA yield is required, use 100 µl of Elution Buffer (DNA concentration will be diluted). Ensure that Elution Buffer is added into the center of the PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated Elution Buffer (60~70ºC).

[2]Using 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 PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated TE (60~70ºC).

[3]If using water for elution, ensure the water pH is ≥8.0. ddH_2O should be fresh as ambient CO_2 can quickly cause acidification. Ensure that water is added into the center of the PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated water (60~70ºC).

Troubleshooting

Low Yield

Incomplete buffer preparation.

For PDH100 and PDH300 add provided RNase A to PD1 Buffer then mix by shaking for a few seconds. Check the box on the bottle then store at 2-8ºC for up to 6 months. For PDH004, RNase A was already added to PD1. If precipitates have formed in PD2 Buffer, warm in a 37ºC water bath followed by gentle shaking to dissolve. 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.

Incomplete cell culture preparation.

We recommend using a single freshly isolated *E. coli* colony to inoculate into 1-10 ml of LB medium. Solid and liquid medium should contain antibiotics. Do not use overgrown bacterial cultures (≤16 hours incubated in a culture tube at 37ºC with 150-180 rpm shaking).

Culture growth medium was not removed completely.

Following centrifugation in the harvesting step, use a narrow pipette tip to ensure the supernatant is completely removed.

Cell pellet was not resuspended completely.

Resuspend the cell pellet completely by vortex or pipette. Continue to vortex or pipette until all traces of the cell pellet have been dissolved.

Bacterial cells were not lysed completely.

Using 2 OD600 - 6 OD600 units of bacterial culture is recommended.

When using TrueBlue Lysis Buffer: Following PD2 Buffer addition, the color of the suspension will become blue. If the suspension contains colorless regions or brownish cell clumps, continue mixing until the suspension is completely blue.

Do not vortex to avoid shearing the genomic DNA.

Bacterial cells were not neutralized completely.

When using TrueBlue Lysis Buffer: Following PD3 Buffer addition, the suspension will become colorless. If blue regions remain in the suspension, continue mixing until it becomes colorless. Do not vortex to avoid shearing the genomic DNA.

Incorrect DNA Elution step.

Ensure that Elution Buffer, TE or water is added into the center of the PDH Column matrix and is completely absorbed. If plasmid DNA are larger than 10 kb, use pre-heated Elution Buffer, TE, or water (60~70ºC). If using water for elution, ensure the water pH is ≥8.0. ddH_2O should be fresh as ambient CO_2 can quickly cause acidification.

No yield of plasmid DNA.

Increase volume of low-copy number plasmid to 5-7 ml. We recommend using a single freshly isolated *E. coli* colony to inoculate into 1-10 ml of LB medium. Solid and liquid medium should contain antibiotics. Do not use overgrown bacterial cultures. Use fresh cultures only.

Eluted DNA Does Not Perform Well In Downstream Applications

Residual ethanol contamination.

Following the Wash Step, dry the PDH Column with additional centrifugation at 14-16,000 x g for 5 minutes.

Residual salt contamination.

Perform the Wash Step twice for salt sensitive downstream applications.

RNA contamination.

Add provided RNase A to PD1 Buffer then mix by shaking for a few seconds. Check the box on the bottle then store at 2-8ºC for up to 6 months. After adding PD2 Buffer to the sample mixture, mix gently by inverting the tube 10 times then let stand at room temperature for 2-5 minutes.

Genomic DNA contamination.

Do not use overgrown bacterial cultures. Use only fresh cultures as they will contain less genomic DNA than old cultures. During PD2 and PD3 Buffer addition, mix gently to prevent genomic DNA shearing.

Bacterial cells were not neutralized completely.

When using TrueBlue Lysis Buffer: Following PD3 Buffer addition, the suspension will become colorless. If blue regions remain in the suspension, continue mixing until it becomes colorless.

Do not vortex to avoid shearing the genomic DNA.

Nuclease contamination.

Following the DNA Binding step, add 400 µl of W1 Buffer into the PDH Column. Centrifuge the PDH Column at 14-16,000 x g for 30 seconds at room temperature then proceed with Wash Buffer addition.

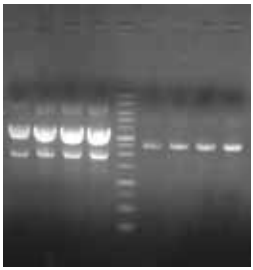
Presto™ Mini Plasmid Kit Functional Test Data

Plasmid DNA Yield Based on Cell Culture Volume and *E. coli* Strain

E. coli Strain	Host Strain Cell Culture Volume (OD600 = 4.0)			
	1.5 ml	3 ml	5 ml	7 ml
DH5α	13-15 µg	27-29 µg	36-38 µg	40-42 µg
TOP10	10-12 µg	18-20 µg	25-27 µg	27-29 µg
BL21(DE3)	7-9 µg	13-15 µg	17-19 µg	20-22 µg

Table 1. Plasmid DNA was extracted using the Presto™ Mini Plasmid Kit. 10 µl aliquats of a 100 µl eluate of purified super coiled plasmid DNA from 1.5, 3, 5 and 7 ml overnight *E. coli* DH5α, TOP10 and BL21(DE3) cultures, containing a 3 kb plasmid pBluescript (OD600 = 4 U/ml) were analyzed by spectrophotometer.

Plasmid DNA Yield Based on Copy-Number



Copy Number	Host Strain Cell Culture Volume (OD600 = 4.0)			
	1.5 ml	3 ml	5 ml	7 ml
High-Copy (pBluescript)	13-15 µg	27-29 µg	36-38 µg	40-42 µg
Low-Copy (pBR322)	4-6 µg	8-10 µg	12-14 µg	18-20 µg

Table 2. Yield of purified plasmid DNA (100 µl eluate) from 1.5, 3, 5 and 7 ml of cultured bacterial cells including high-copy number plasmid pBluescript and low-copy number plasmid pBR322.

Figure 1. Plasmid DNA was extracted using the Presto™ Mini Plasmid Kit. 5 µl aliquats of a 100 µl eluate of purified super coiled plasmid DNA from 1.5, 3, 5 and 7 ml overnight *E. coli* (DH5α) culture, containing a 3 kb plasmid pBluescript and pBR322 (OD600 = 4 U/ml) were used in *Eco*RI digestion and analyzed by electrophoresis on a 0.8% agarose gel.

M = Geneaid 1 Kb DNA Ladder
Lane 1: 1.5 ml bacterial culture containing pBluescript
Lane 2: 3 ml bacterial culture containing pBluescript
Lane 3: 5 ml bacterial culture containing pBluescript
Lane 4: 7 ml bacterial culture containing pBluescript
Lane 5: 1.5 ml bacterial culture containing pBR322
Lane 6: 3 ml bacterial culture containing pBR322
Lane 7: 5 ml bacterial culture containing pBR322
Lane 8: 7 ml bacterial culture containing pBR322

Presto™ Mini Plasmid Kit Functional Test Data

Plasmid DNA Yield Based on DNA Size

5 ml of DH5α Cell Culture (OD600 = 4.0)	
DNA Size	DNA Yield
3.0 kb	36-38 µg
5.7 kb	36-38 µg
7.7 kb	36-38 µg
13 kb (Low-Copy Number)	13-15 µg

Table 3. Yield of 3.0, 5.7, 7.7 and 13 kb purified plasmid DNA (100 µl eluate) from 5 ml of DH5α cultured bacterial cells.

Sequencing Data

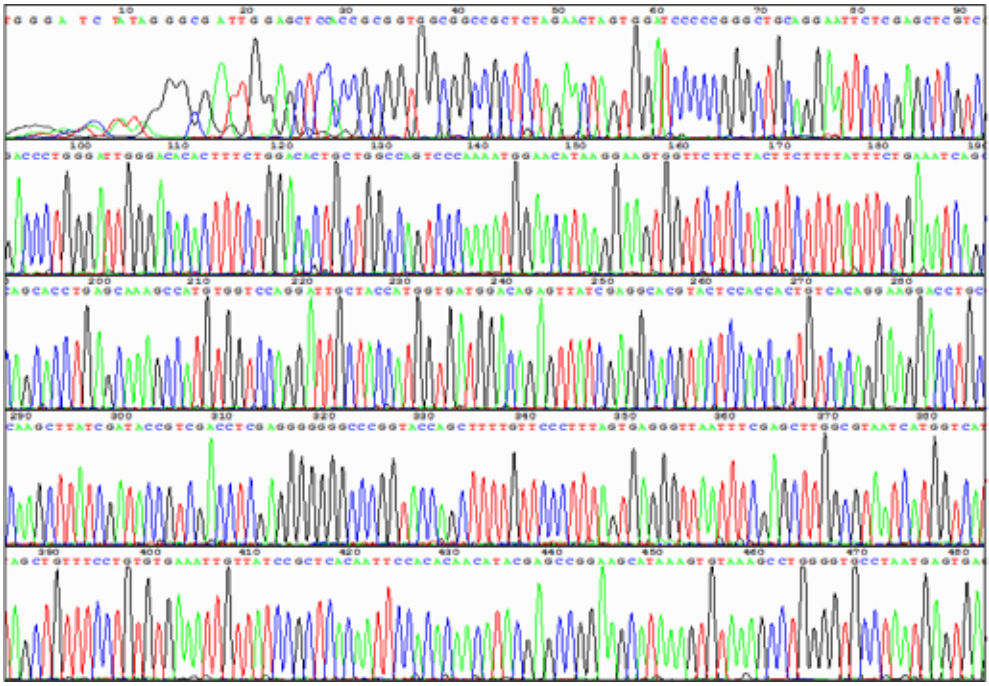


Figure 2. Sequencing data of (pBluescript) plasmid DNA purified using the Presto™ Mini Plasmid Kit.

Related DNA/RNA Extraction Products

Plasmid DNA Purification		
Product	Package Size	Catalogue Number
Presto™ Mini Plasmid Kit	100/300 preps	PDH100/300
Presto™ Midi Plasmid Kit	25 preps	PIF025
Presto™ Midi Plasmid Kit (Endotoxin Free)	25 preps	PIFE25
High-Speed Plasmid Mini Kit (10-50 Kb)	100/300 preps	PDL100/300
High-Speed Plasmid Advance Kit (50-100 ml)	25 preps	PA025
Geneaid Plasmid Midi Kit	25 preps	PI025
Geneaid Plasmid Midi Kit (Endotoxin Free)	25 preps	PIE25
Geneaid Plasmid Maxi Kit	10/25 preps	PM010/25
Geneaid Plasmid Maxi Kit (Endotoxin Free)	10/25 preps	PME10/25
96-Well Plasmid Kit	4/10 x 96 preps	PDA04/10
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
Gel/PCR DNA Fragments Extraction Kit	100/300 preps	DF100/300
Gel/PCR DNA Fragments Extraction Maxi Kit	10/25 preps	DM010/025
Small DNA Fragments Extraction Kit	100/300 preps	DF101/301
Presto™ Max Gel/PCR Kit (Large DNA Fragments)	100/300 preps	DFL100/300
96-Well Gel/PCR DNA Extraction Kit	4/10 x 96 preps	DFP04/10
DNA Pure Kit	100/300 preps	DP100/300
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 and Purification		
Product	Package Size	Catalogue Number
Genomic DNA Mini Kit (Blood/Cultured Cell)	100/300 preps	GB100/300
Genomic DNA Midi Kit (Blood/Cultured Cell)	25 preps	GDI25
Genomic DNA Maxi Kit (Blood/Cultured Cell)	10/25 preps	GDM10/25
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	GPM10/25
Geneaid™ DNA Isolation Kit (Blood)	100/1,000 rxns	GEB100/01K
Geneaid™ DNA Isolation Kit (Bacteria)	100/1,000 rxns	GEE100/01K
Geneaid™ DNA Isolation Kit (Tissue)	100/1,000 rxns	GET100/01K
Geneaid™ DNA Isolation Kit (Cultured Cell)	100/1,000 rxns	GEC100/01K
GENEzol™ DNA Reagent Plant	100/200 rxns	GR100/200
Presto™ Mini gDNA Yeast Kit	100/300 preps	GBY100/300
Presto™ Mini gDNA Bacteria Kit	100/300 preps	GBB100/300
Geneius™ Micro DNA Extraction Kit	100/300 preps	GMB100/300
Presto™ Buccal Swab gDNA Extraction Kit	100/300 preps	GSK100/300

Related DNA/RNA Extraction Products

RNA Extraction and Purification		
Product	Package Size	Catalogue Number
Total RNA Mini Kit (Blood/Cultured Cell)	50/100/300 preps	RB050/100/300
Total RNA Mini Kit (Tissue)	50/100/300 preps	RT050/100/300
Total RNA Mini Kit (Plant)	50/100/300 preps	RP050/100/300
Presto™ Mini RNA Bacteria Kit	50/100/300 preps	RBB050/100/300
Presto™ Mini RNA Yeast Kit	50/100/300 preps	RBY050/100/300
96-Well Total RNA Extraction Kit	4/10 x 96 preps	RBP04/10
miRNA Isolation Kit	50 preps	RMI050/100
GENEzol™ Reagent	50/100/200 rxns	GZR050/100/200
GENEzol™ TriRNA Bacteria Kit	50/100 rxns	GZB050/100
GENEzol™ TriRNA Pure Kit	50/100/200 preps	GZX050/100/200
TriRNA Pure Kit	50/100/200 preps	TRP050/100/200
RNA Pure Kit	50/100 preps	PR050/100
Virus DNA/RNA Purification		
Product	Package Size	Catalogue Number
Viral Nucleic Acid Extraction Kit II	50/100/300 preps	VR050/100/300
Viral Nucleic Acid Extraction Kit III	50/100/300 preps	VI050/100/300
96-Well Viral DNA/RNA Extraction Kit	4/10 x 96 preps	VNP04/10
Cloning		
Product	Package Size	Catalogue Number
Elite™ TA Cloning Kit	20 rxns	TA020
Elite™ TA Cloning Vector	20 rxns	TV020
Elite™ T4 DNA Ligase	300 U	TL100
Elite™ Competent Cells (XL1-Blue)	>5 x 10^7, 100 µl x 10, 80	CX571, CX578
Elite™ Competent Cells (XL1-Blue)	>2 x 10^8, 100 µl x 10, 80	CX281, CX288
Elite™ Competent Cells (XL1-Blue)	>5 x 10^8, 100 µl x 10, 80	CX581, CX588
Elite™ Competent Cells (DH5α)	>1 x 10^8, 100 µl x 10, 80	CD181, CD188
Elite™ Competent Cells (DH5α)	>3 x 10^8, 100 µl x 10, 80	CD381, CD388
Elite™ Competent Cells (DH5α)	>1 x 10^9, 100 µl x 10, 80	CD191, CD198
Elite™ Competent Cells BL21(DE3)	>2 x 10^7, 100 µl x 10, 80	CB271, CB278
Elite™ Competent Cells (JM109)	>5 x 10^7, 100 µl x 10, 80	CJ571, CJ578
Elite™ Competent Cells (JM109)	>1 x 10^8, 100 µl x 10, 80	CJ181, CJ188
DNA Ladders and Markers		
Product	Package Size	Catalogue Number
100 bp DNA Ladder	50 µg, 500 µl	DL004
1 Kb DNA Ladder	50 µg, 500 µl	DL005
100 bp DNA Marker	50 µg, 500 µl	DL006
1 Kb DNA Marker	50 µg, 500 µl	DL007
100 bp + 50 bp DNA Marker	50 µg, 500 µl	DL008
Loading Dye (6X)	10/100 ml	LD010/100

Related DNA/RNA Extraction Products

PCR		
Product	Package Size	Catalogue Number
Ultra-Pure Taq DNA Polymerase	500 U	UT050
Taq DNA Polymerase	500/2,500 U	TQ050/250
HiFi Taq DNA Polymerase	500 U	HT050
Ultra-Pure Taq PCR Master Mix	200/400 rxns	UTM200/400
Ultra-Pure Taq PCR Master Mix with Dye	100 rxns	TQMD100
dNTP Solution	10 mM each, 200 µl	DN200
dNTP Solution	25 mM each, 1 ml	DN1100
dNTP Set	100 mM 1 ml x 4	DN4400
dCTP	100 mM, 1 ml	DC1000
dATP	100 mM, 1 ml	DA1000
dGTP	100 mM, 1 ml	DG1000
dTTP	100 mM, 1 ml	DT1000
Enzymes		
Product	Package Size	Catalogue Number
Proteinase K	11/100 mg	PK000011/100
RNase A (50 mg/ml)	50/130/200/1500 µl	RA500050/130/200/1500
RNase A (10 mg/ml)	550/1000 µl	RA100550/1000
RNase A	100/250/550/1000 mg	RA0100/250/500/1000
Lysozyme	20/420/1220 mg	LY020/420/1220
Protein		
Product	Package Size	Catalogue Number
Prestained Protein Ladder V	500 µl	PL005
Protein Loading Dye (5X)	2 ml	PLD001
Dithiothreitol (DTT)	500 µl	DTT001
Reverse Protein Stain Kit	50/500 ml	PS050/500
Laboratory Equipment		
Product	Package Size	Catalogue Number
Micropestle	50 pcs/pkg	MP050
Microtube Rack	1 rack	A4MR080
PCR Sample Rack	1 rack	A4PR096
96-Well PCR Plate	5 plates/pkg	PN034
2 ml Collection Plate	1 plate	A4PD020
96-Well Vacuum Manifold	1 set	VZF01

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

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