ZYMO RESEARCH

DNA Purification Made Simple™

ZymoPURE™ II Plasmid Gigaprep Kit

Rapid purification of endotoxin-free plasmid DNA from up to 2.5 L of overnight *E. coli* culture.

Highlights

- Perform plasmid gigapreps in only 45 minutes using a simple spin-column protocol.
- Purify up to 25 mg of highly concentrated plasmid DNA directly from a spin-column.
- Eluted plasmid DNA is Endotoxin-free and Transfection-Ready.

Catalog Numbers:
D4204

Scan with your smart-phone camera to view the online protocol/video.

tech@zymoresearch.com www.zymoresearch.com Toll Free: (888) 882-9682

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Product Contents

ZymoPURE™ II Plasmid Gigaprep Kit	D4204 (5 prep)	Storage Temperature
ZymoPURE™ P1[1] (Red)	410 ml (2x)	4°C
ZymoPURE™ P2[2,3] (Blue)	410 ml (2x)	Room Temp.
ZymoPURE™ P3 (Yellow)	410 ml (2x)	Room Temp.
ZymoPURE™ Binding Buffer[3]	410 ml (2x)	Room Temp.
ZymoPURE™ Wash 1	500 ml	Room Temp.
ZymoPURE™ Wash 2 (concentrate)[4]	28 ml (8x)	Room Temp.
ZymoPURE™ Elution Buffer	30 ml	Room Temp.
Zymo-Spin™ VI-PX Columns	5 pcs	Room Temp.
600 ml Reservoir	5 pcs	Room Temp.
ZymoPURE™ Giga Filter	5 pcs	Room Temp.
EndoZero™ III Spin-Column w/15 ml Reservoir-X	5 pcs	Room Temp.
Instruction Manual	1 pc	-

[1] ZymoPURE™ P1 contains RNase A (100 µg/ml) and is stable at room temperature without loss in RNase activity, however, for long-term storage the product should be stored at 4-8° C.
[2] Caution: ZymoPURE™ P2 Buffer contains NaOH. Please use proper safety precautions.
[3] The ZymoPURE™ P2 and ZymoPURE™ Binding Buffer may have precipitated. If this occurs, dissolve the precipitate by incubating the bottles at 30-37 °C for 10-20 minutes and mix by inversion. Do not microwave!
[4] ZymoPURE™ Wash 2 included with D4204 is supplied as a concentrate and require the addition of ethanol prior to use. See Buffer Preparation (page 5) for instructions.

Specifications

- **DNA Purity** – Eluted DNA is ultra-pure, endotoxin-free, and well suited for transfection, transformation, lentivirus production, adenovirus production, AAV production, CRISPR, genome editing, *in vivo* studies, sequencing, restriction endonuclease digestion, *in vitro* transcription/translation, PCR, and other sensitive applications.
    - Typical Abs260/280 ≥ 1.8 and Abs260/230 ≥ 2.0
    - Endotoxin levels: ≤ 1 EU/µg of plasmid DNA using the Standard Protocol. Suitable for transfecting stable, primary, and sensitive cell lines.

      ≤ 0.025 EU/µg of plasmid DNA with optional EndoZero™ II Spin-Column. Suitable for in *vivo* studies.
- **Plasmid DNA Yield** – Up to 25 mg per preparation. Actual yield is dependent on the plasmid copy number, culture growth conditions, and strain of *E. coli* utilized. Typical yields from 1 Liter of overnight culture grown in LB are 4 – 8 mg for high copy number plasmids and 0.5 – 1 mg for low copy number plasmids.
- **Plasmid DNA Size** – Up to ~200 kb
- **Recovery Volume** – ≥ 3.0 ml of ZymoPURE™ Elution Buffer or DNase-free water
- **Processing Time** – ≤ 45 min
- **Required Equipment** – Vacuum/vacuum manifold and swinging-bucket centrifuge.

Product Description

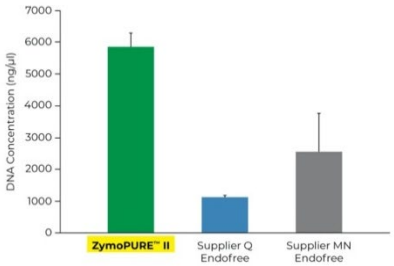
The **ZymoPURE™ II Plasmid Gigaprep Kit** features a simple spin-column based method for the purification of up to 25 mg of transfection grade plasmid DNA in less than 45 minutes. The eluted plasmid DNA is endotoxin-free and ready for immediate use in the most sensitive applications. The unique ZymoPURE™ methodology removes the need for slow gravity flow anion-exchange columns, alcohol precipitation, lengthy endotoxin removal incubations, and time-consuming centrifugation steps.

ZymoPURE™ technology uses a modified alkaline lysis method and features our patented binding chemistry and EZ-Flow™ spin-column design, which enables the highest DNA binding capacity and rapid loading of the lysate and wash buffer, resulting in the fastest purification of highly concentrated (up to 6 mg/ml) plasmid DNA directly from a spin-column. Coupling ZymoPURE™ with the innovative **EndoZero™ III Spin-Columns**, to eliminate residual endotoxins, achieves endotoxin-free plasmid DNA (≤ 0.025 EU/µg of plasmid DNA), making it suitable for transfection, recombinant virus production, lentivirus production, genome editing, *in vivo* studies, sequencing, restriction endonuclease digestion, *in vitro* transcription/translation, PCR, transformation, and other sensitive applications.

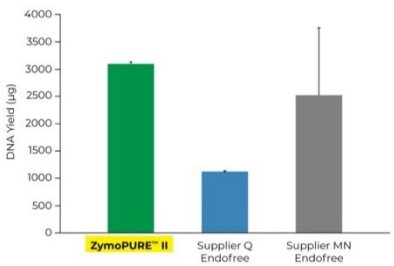
As an added convenience, the **ZymoPURE™ II Plasmid Gigaprep Kit** contains colored buffers that permit error-free visualization and identification of complete bacterial cell lysis and neutralization. Bottle top filters are also included for rapid clearing of the lysate.

Rapid Purification of Highly Concentrated Endotoxin-Free Plasmid DNA

Up to 6x More Concentrated Plasmid



Up to 3x More Plasmid DNA Yield



Yield and concentration for plasmid DNA isolated using the ZymoPURE™ II Maxiprep kit compared to two endotoxin-free kits from Supplier Q and Supplier MN. Plasmid DNA (pGL3®) was isolated from 150 ml of JM109 *E. coli* culture grown overnight following the manufacturer's suggested protocol (in duplicate). One (1) µl of eluted plasmid DNA was visualized post agarose gel electrophoresis. M, ZR 1 kb DNA Marker (Zymo Research).

Procedure Overview

Bacterial cells are resuspended in **ZymoPURE™ P1** (red).

The solution will turn dark purple and viscous following the addition of **ZymoPURE™ P2** (blue) indicating bacterial lysis is complete.

The solution will turn yellow and a precipitate will form after adding **ZymoPURE™ P3** (yellow) indicating neutralization is complete.

The neutralized lysate is loaded into the **ZymoPURE™ Giga Filter** and clarified using a vacuum.

ZymoPURE™ Binding Buffer is added to the cleared lysate and mixed thoroughly.

The mixture is loaded into the **Zymo-Spin™ VI-PX Column** using a vacuum manifold.

The **Zymo-Spin™ VI-PX Column** is washed using a vacuum manifold.

Ultra-pure plasmid DNA is eluted from the **Zymo-Spin™ VI-PX Column** using a centrifuge.

The eluted plasmid DNA is passed through the **EndoZero™ III Column** using a centrifuge.

Protocol

Buffer Preparation:

- ✓ Add 107 ml of 95 – 100% ethanol to the **28 ml ZymoPURE™ Wash 2 (Concentrate)** before use.
- ✓ The **ZymoPURE™ P2** and **ZymoPURE™ Binding Buffer** may have precipitated. If this occurs, dissolve the precipitate by incubating the bottles at 30-37 ºC for 10-20 minutes and mix by inversion. Do not microwave!

Before Starting:

- ✓ Centrifuge up to 2.5 liters of bacterial culture at ≥ 3,400 *x g* for 20 minutes to pellet the cells (wet pellet weight of 5 – 20 g)[1]. Discard supernatant.

Plasmid DNA Purification

The following procedure should be performed at room temperature (15-30°C).

This product is compatible with any conventional vacuum-based manifold. The vacuum pump should be a single or double-staged unit capable of producing up to 400 mm Hg pressure at the vacuum manifold[2].

1. Add 150 ml of cold **ZymoPURE™ P1 (Red)** to the bacterial cell pellet and resuspend completely by vortexing or pipetting.

2. Add 150 ml of **ZymoPURE™ P2 (Blue)** and immediately mix by gently inverting the tube 6 times. Do not vortex! Let sit at room temperature for 3-5 minutes[3]. *Cells are completely lysed when the solution appears clear, purple, and viscous.*

3. Add 150 ml of **ZymoPURE™ P3 (Yellow)** and mix gently but thoroughly by inversion. Do not vortex! Invert the tube an additional 5 times after the sample turns completely yellow. *The sample will turn yellow when the neutralization is complete, and a yellowish precipitate will form.*

4. Place the **ZymoPURE™ Giga Filter** onto a 33 mm or 45 mm-neck glass bottle and load the lysate into the ZymoPURE™ Giga Filter. Ensure the ZymoPURE™ Giga Filter is resting securely on top of the glass bottle and wait 10 minutes for the precipitate to float to the top.

5. Connect the ZymoPURE™ Giga Filter to a vacuum source and turn on the vacuum[4] until approximately 375 ml of cleared lysate is recovered. Save the cleared lysate! It is critical that approximately 375 ml of lysate is recovered from the giga filter for the next step. Please refer to page 10 in the appendix regarding the adjustment of the volume of ZymoPURE™ Binding Buffer used in step 6 if the clarified lysate volume is below approximately 375 ml.

(continued on next page)

[1] A vessel with a minimum volume capacity of 500 ml is required to prepare the bacterial lysate.
[2] The lysate and wash buffers might take longer to pass through the column when less than 400 mm Hg is used.
[3] Do not allow the lysis reaction to proceed for more than 5 minutes. Excessive lysis can result in denatured plasmid DNA.
[4] Gently pressing down on the top of the **ZymoPURE™ Giga Filter** when the vacuum is applied will guarantee an airtight seal between the filter and neck of the glass bottle.

6. Add 150 ml ZymoPURE™ Binding Buffer to the cleared lysate from step 5 and mix thoroughly by inverting the capped bottle 10 times[1].

7. Securely attach the **600 ml Reservoir** to the top of the **Zymo-Spin™ VI-PX Column** and place onto a vacuum manifold.

8. With the vacuum off, add the entire mixture from step 6 into the **600 ml Reservoir/Zymo-Spin™ VI-PX Column Assembly**, and then turn on the vacuum until all of the liquid has passed completely through the column.

9. With the vacuum off, add 100 ml of **ZymoPURE™ Wash 1** to the 600 ml Reservoir. Turn on the vacuum until all of the liquid has passed completely through the column[2].

10. With the vacuum off, add 100 ml of **ZymoPURE™ Wash 2** to the 600 ml Reservoir. Turn on the vacuum until all of the liquid has passed completely through the column.

11. With the vacuum off, add 100 ml of **ZymoPURE™ Wash 2** to the 600 ml Reservoir. Turn on the vacuum and keep it on for an additional two minutes after the liquid has passed completely through the column.

12. Remove and discard the 600 ml Reservoir and place the Zymo-Spin™ VI-PX Column in a 50 ml conical tube. Centrifuge at ≥ 3,400 x *g* for 10 minutes in a swinging-bucket rotor[2] in order to remove any residual wash buffer.

13. Transfer the column into a clean 50 ml conical tube and add 3 ml of **ZymoPURE™ Elution Buffer**[3,4,5] directly to the center of the column matrix. Wait 5 minutes, and then centrifuge in a swinging-bucket rotor at ≥ 3,400 x *g* for 5 minutes.

14. *Optional:* For removal of residual endotoxins[6,7], ensure the connection between the 15 ml Reservoir-X and EndoZero™ III Spin-Column is finger tight. Place the assembly into a clean 50 ml conical tube and add the entire eluate from Step 13 into the **15 ml Reservoir-X/EndoZero™ III Spin-Column Assembly**, wait 2 minutes, and then centrifuge at 3,400-5,000 *x g* for 10 minutes in a centrifuge. Store the eluted plasmid DNA at ≤ -20°C.

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[1] The sample can become hazy/slightly cloudy after this step if a lot of plasmid DNA is present in the lysate.
[2] Due to the design of the **Zymo-Spin™ VI-PX Column**, special care needs to be taken when positioning the column in the bucket of the rotor to ensure there is sufficient clearance between the rotor arms and the top of the column.
[2] The matrix bed inside the column will potentially become a Pinkish/Purple color after this step depending on the amount of plasmid DNA that was loaded onto the column. This is normal and not an issue as long as the binding capacity of the spin-column is not exceeded.
[3] The **ZymoPURE™ Elution Buffer** contains 10 mM Tris-HCl, pH 8.5, 0.1 mM EDTA. If required, pure water can also be used to elute the DNA.
[4] The DNA yield can be increased by pre-warming the **ZymoPURE™ Elution Buffer** to 50 ºC and/or increasing the incubation period up to 10 minutes prior to centrifugation. For high plasmid DNA loads, more plasmid DNA can generally be recovered from the column by performing a second elution.
[5] For plasmid preparations with expected yields of 5 mg or greater, use 5 ml or more of ZymoPURE™ Elution Buffer to elute the plasmid DNA.
[6] This optional step will reduce endotoxin levels from ≤ 1 EU/µg of plasmid DNA to ≤ 0.025 EU/µg of plasmid DNA.
[7] Due to the **EndoZero™ III Spin-Column** chemistry, some plasmid DNA will be lost during this step. The percent of plasmid DNA loss will be dependent on the amount of plasmid DNA that is going through the spin-column. The plasmid DNA loss is generally not significant for moderate and high-copy number plasmids. However, it can be significant for-low copy number plasmids or lower yielding preps.

Appendices

Gram-Positive Bacteria Protocol

It is possible to isolate plasmid DNA from Gram-Positive species with the ZymoPURE™ II Gigaprep Kit. However, the cell walls of the bacteria must be digested with a lytic enzyme prior to alkaline lysis. The protocol below is for Gram-Positive strains that are sensitive to the lytic enzyme Lysozyme.

Plasmid DNA Purification

The following procedure should be performed at room temperature (15-30°C).

1. Add 150 ml of cold **ZymoPURE™ P1 (Red)** containing lysozyme[1] at a final concentration of 1 mg/ml to the bacterial cell pellet and resuspend completely by vortexing or pipetting. Incubate the resuspended cell pellet at 37°C for 15-60 minutes[2].

2. Add 150 ml of **ZymoPURE™ P2 (Blue)** and immediately mix by gently inverting the tube 6 times. Do not vortex! Let sit at room temperature for 2-3 minutes[3]. *Cells are completely lysed when the solution appears clear, purple, and viscous.*

3. Add 150 ml of **ZymoPURE™ P3 (Yellow)** and mix gently but thoroughly by inversion. Do not vortex! Invert the tube an additional 5 times after the sample turns completely yellow. *The sample will turn yellow when the neutralization is complete, and a yellowish precipitate will form.*

4. Place the **ZymoPURE™ Giga Filter** onto a 33 mm or 45 mm-neck glass bottle and load the lysate into the ZymoPURE™ Giga Filter. Ensure the ZymoPURE™ Giga Filter is resting securely on top of the glass bottle and wait 10 minutes for the precipitate to float to the top.

5. Connect the ZymoPURE™ Giga Filter to a vacuum source and turn on the vacuum[4] until approximately 375 ml of cleared lysate is recovered. Save the cleared lysate! It is critical that approximately 375 ml of lysate is recovered from the giga filter for the next step. Please refer to page 10 in the appendix regarding the adjustment of the volume of ZymoPURE™ Binding Buffer used in step 6 if the clarified lysate volume is below approximately 375 ml.

   To continue processing the lysate, proceed to step 6 on page 6.

[1] Lytic enzymes other than lysozyme will require optimization and validation in the **ZymoPURE™ P1** buffer prior to use.
[2] Incubation times will vary depending on the culture volume, cell density, and age of cells. Harvesting the cells at early log phase is recommended for optimal cell wall digestion.
[3] Do not allow the lysis reaction to proceed for more than 3 minutes. Excessive lysis can result in denatured plasmid DNA.
[4] Gently pressing down on the top of the **ZymoPURE™ Giga Filter** when the vacuum is applied will guarantee an airtight seal between the filter and neck of the glass bottle.

Adjusting Volume of Binding Buffer

The ratio of lysate to binding buffer is critical for optimal plasmid DNA binding to the spin-column. Therefore, it is important that approximately 375 ml of cleared lysate is recovered from the ZymoPURE™ Giga Filter during step 5 of the protocol. If the clarified lysate volume is below approximately 375 ml, please adjust the volume of ZymoPURE™ Binding Buffer used in step 6 of the protocol. This can be accomplished by multiplying the volume of recovered lysate by 0.4. Please see the example and table below for reference.

Example: For 350 ml of cleared lysate, you will add 140 ml of ZymoPURE™ Binding Buffer to the cleared lysate instead of 150 ml in step 6 of the protocol (350 ml x 0.4 = 140 ml).

Optimal Volume of ZymoPURE™ Binding Buffer for Various Volumes of Lysate

Approximate Neutralized Lysate Volume	Volume of ZymoPURE Binding Buffer to Add
375 ml	150 ml
360 ml	144 ml
350 ml	140 ml
340 ml	136 ml
325 ml	130 ml
300 ml	120 ml

Growing Overnight Culture

The plasmid purification protocol has been optimized for Luria-Bertani (LB) media. Enriched culture medias such as Terrific Broth or Super Broth can result in reduced performance and column clogging depending on the cell density and plasmid DNA copy number. Therefore, it might be necessary to reduce the volume of culture being processed when working with enriched culture media.

For overnight culture volumes greater than 10 ml, we recommend using a starter culture for optimal growth. This is accomplished by inoculating 10 ml or less of LB with the appropriate antibiotic using a colony on a plate or glycerol stock and shaking at 37°C for 8 hours. After 8 hours, prepare the larger overnight culture by diluting the starter culture 1:500 to 1:1000 with LB containing the appropriate antibiotic.

The size of the culture vessel is also critical for proper aeration of the overnight culture. The optimal culture volume to air volume ratio is 1:5 or less (Example: Use a 250 ml flask for 50 ml of culture). For best aeration, use baffled culture flasks and a vented or gas-permeable seal on the culture vessel and shake at 200 – 300 rpm.

Troubleshooting

Problem	Possible Causes and Suggested Solutions
Low DNA Yield	**Poor aeration of culture.** The optimal culture volume to air volume ratio is 1:5 or less. For best aeration, use baffled culture flasks and a vented or gas-permeable seal on the culture vessel and shake at 200 – 300 rpm. **The culture was overgrown, undergrown, contaminated, or antibiotics were omitted from the growth medium.** Use a fresh culture for optimal performance. An OD_{600} of 0.2-0.35 is the optimal optical density of a tenfold dilution of the culture. **Too much culture used.** Lysis and neutralization will be incomplete and the ZymoPURE™ Giga Filter may clog during filtration. More culture does not always equal more plasmid. Incomplete lysis and neutralization are two of the most common causes of failed plasmid preps and both are caused by too much culture being used. **Incomplete lysis:** After addition of ZymoPURE™ P2, the solution should change from opaque pink to a clear viscous purple, indicating complete lysis. Different *E. coli* strains often require different growth conditions and may vary in their susceptibility to alkaline lysis. **Incomplete neutralization:** The solution should not be viscous following neutralization and the yellowish precipitate should appear fluffy and readily float to the surface. Make sure the neutralization is complete prior to centrifugation. Invert the tube an additional 3-4 times after the sample turns yellow following the addition of ZymoPURE™ P3. **ZymoPURE™ P2 and/or ZymoPURE™ Binding Buffer may have precipitated during shipping.** To completely resuspend the buffers, incubate the bottles at 30-37ºC for 10 minutes and mix by inversion. DO NOT MICROWAVE. **ZymoPURE™ Wash 2:** Ensure that the correct volume of ethanol was added to the ZymoPURE™ Wash 2 prior to use. Also, ensure that the bottle cap is screwed on tightly after each use to prevent evaporation of the ethanol.

Problem	Possible Causes and Suggested Solutions
Low DNA Yield	**Less than approximately 375 ml of neutralized lysate was used for the binding step.** The ratio of binding buffer to lysate is critical for optimal plasmid DNA binding to the spin-column. Plasmid DNA yield will be reduced if less than approximately 375 ml is recovered from the Giga filter. Please refer to page 10 in the appendix if less then approximately 375 ml of lysate is recovered from the Giga filter. **Incorrect column washing:** Using less wash volume than stated to in the protocol, skipping a wash step, or performing the wash steps out of order can result in reduced plasmid DNA yields. **Incomplete elution:** For large size plasmids (> 10 kb), add ZymoPURE™ Elution Buffer and incubate the column for 5-10 minutes before centrifugation. Also, pre-warm the ZymoPURE™ Elution Buffer to 50 ºC prior to elution. **Low copy-number plasmid:** Increase the overnight culture processing volume up to 2.5 liters.
Low DNA Quality	**Incomplete neutralization:** Incomplete neutralization generates poor quality supernatant. Ensure that neutralization is complete by inverting the sample an additional 5 times after the sample turns yellow following the addition of ZymoPURE™ P3. **Insufficient centrifugation:** Make sure that all centrifugation steps are performed at the indicated speed and time. If a lower centrifuge speed is used, then extend the centrifugation time to compensate.
Genomic DNA in Eluate	**Improper handling:** Sample was vortexed or handled too roughly. Genomic DNA contamination is usually caused by excessive mechanical shearing during the lysis and neutralization steps. Also, incomplete lysis or neutralization may contribute to genomic DNA contamination in your eluate. **Overgrown culture:** Overgrown or old cultures may contain more genomic DNA contamination than fresh cultures.

Problem	Possible Causes and Suggested Solutions
RNA in Eluate	**ZymoPURE P1:** Ensure that ZymoPURE™ P1 has been stored at 4°C. RNase A can be purchased separately if necessary. **Too much culture used.** Using more than the recommended culture volume or using enriched culture media can cause incomplete lysis and the RNase A being overwhelmed by too many cells. Reduce the volume of culture being processed or switch to LB media. **Incorrect Ratio of Lysate to Binding Buffer:** Mixing too little ZymoPURE Binding Buffer with the lysate will result in degraded RNA also binding to the spin-column. Ensure the correct volume of ZymoPURE Binding Buffer is used.
Pinkish/Purple Eluate	**Incorrect Column Washing:** Using less wash volume than stated to in the protocol, skipping a wash step, or performing the wash steps out of order can result in recovering an eluate with a pinkish/purple color. **Exceeded Binding Capacity of Spin-Column:** Using more than the recommended culture volume or using enriched culture media when preparing high-copy number plasmids might result in incomplete washing of the column and recovering an eluate with a pinkish/purple color. Reduce the volume of culture being processed or switch to LB media.
Column Clogs	**Exceeded Binding Capacity of Spin-Column:** Using more than the recommended culture volume or using enriched culture media when preparing high-copy number plasmids can reduce column flow and potentially completely clog the spin-column. Reduce the volume of culture being processed or switch to LB media. **Lysate Debris is loaded onto the Spin-Column:** The lysate recovered from the ZymoPURE™ Giga Filter should be free of debris. Prior to adding the ZymoPURE™ Binding Buffer to the lysate, centrifuge the lysate for 10 minutes at ≥ 3,400 *x g* and collect the supernatant if a lot of visible debris is present in the lysate recovered from the ZymoPURE™ Giga Filter.

Ordering Information

Product Description	Catalog No.	Size
ZymoPURE™ II Plasmid Gigaprep Kit	D4204	5 Preps.

Individual Kit Components	Catalog No.	Amount
ZymoPURE™ P1 (Red)	D4200-1-150 D4200-1-210 D4200-1-410	150 ml 210 ml 410 ml
ZymoPURE™ P2 (Blue)	D4200-2-150 D4200-2-210 D4200-2-410	150 ml 210 ml 410 ml
ZymoPURE™ P3 (Yellow)	D4200-3-150 D4200-3-210 D4200-3-410	150 ml 210 ml 410 ml
ZymoPURE™ Binding Buffer	D4200-4-150 D4200-4-210 D4200-4-410	150 ml 210 ml 410 ml
ZymoPURE™ Wash 1	D4200-5-500	500 ml
ZymoPURE™ Wash 2 (Concentrate)	D4200-6-28	28 ml
ZymoPURE™ Elution Buffer	D4200-7-6 D4200-7-12 D4200-7-30	6 ml 12 ml 30 ml
Zymo-Spin™ VI-PX Column	C1080-5	5
600 ml Reservoir	C1033-5	5
ZymoPURE™ Giga Filter	C1038-1	1
EndoZero™ III Spin-Column w/15 ml Reservoir-X	C1096-5	5

Complete Your Cloning Workflow

✓ **Transfection-grade plasmid DNA from a miniprep**

ZymoPURE™ Plasmid Miniprep	Size	Catalog No.
ZymoPURE™ Plasmid Miniprep Kit	10 Preps. 50 Preps. 100 Preps. 400 Preps. 800 Preps.	D4208T D4309 D4210 D4211 D4212
ZymoPURE™ 96 Plasmid Miniprep Kit	2 x 96 Preps. 4 x 96 Preps.	D4214 D4215

✓ **18 Minute Endotoxin-Free Midi & Maxipreps**

ZymoPURE™ II Plasmid Prep Kits	Size	Catalog No.
ZymoPURE™ II Plasmid Midiprep Kit	25 Preps. 50 Preps.	D4200 D4201
ZymoPURE™ II Plasmid Maxiprep Kit	10 Preps. 20 Preps.	D4202 D4203
ZymoPURE™ II Plasmid Gigaprep Kit	5 Preps.	D4204

✓ **Simple 20 second High Efficiency Transformations**

Mix & Go! Competent Cells	Size	Catalog No.
DH5α	10 x 100 µl aliquots 96 x 50 µl aliquots 96 x 50 µl aliquots PCR Plate	T3007 T3009 T3010
JM109	10 x 100 µl aliquots 96 x 50 µl aliquots	T3019 T3020
Zymo10B	10 x 100 µl aliquots 96 x 50 µl aliquots	T3003 T3005
HB101	10 x 100 µl aliquots 96 x 50 µl aliquots	T3011 T3013
TG1	10 x 100 µl aliquots	T3017

✓ **Recover ultra-pure highly concentrated DNA from PCR & other sources**

DNA Clean & Concentrator™	Size	Catalog No.
DNA Clean & Concentrator™-5	50 Preps. 200 Preps.	D4003 D4004
ZR-96 DNA Clean-Up Kit™	2 x 96 Preps. 4 x 96 Preps.	D4017 D4018

✓ **Rapid extraction of ultra-pure DNA from agarose gels**

Zymoclean Gel DNA Recovery™	Size	Catalog No.
Zymoclean™ Gel DNA Recovery Kit	50 Preps. 200 Preps.	D4001 D4002

Notes

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Notes

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Integrity of kit components is guaranteed for up to one year from date of purchase.
Reagents are routinely tested on a lot-to-lot basis to ensure they provide the highest performance and reliability.

This product is for research use only and should only be used by trained professionals. It is not for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility.

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