SAMPLE PREPARATION

Aurum™ Plasmid Mini Kit

- Supports any downstream research with >99% plasmid DNA purity
- Requires <15 min from cell culture to purified plasmid DNA
- Isolates plasmid DNA using either a centrifuge or a vacuum manifold

Exceptional Purity, High Throughput

Plasmid DNA purification is a central method in worldwide genomics research. The Aurum plasmid mini kit supports your genomics research with high-purity results delivered in a quick 15 min protocol. The kit can be used in centrifuge and vacuum formats, and each mini column binds >20 µg of exceptionally pure (>99%) plasmid DNA.

Aurum mini columns use a silica-membrane binding matrix. Purified plasmid DNA is suitable for the most demanding downstream research applications, such as automated fluorescent sequencing, ligation and transformation, restriction digestion, subcloning, transfection, and PCR.

Versatile, High-Performance Options

The Aurum plasmid mini column, with its unique luer end design, can be used in both vacuum and spin formats. Sample purifications with the Aurum vacuum manifold offer the convenience of minimal centrifugation, a simple protocol, and reproducible results. In the spin format, samples are quickly purified via centrifugation in 10–12 min, while the vacuum format requires even less time. In either format, the isolated plasmid DNA is exceptionally pure and ready for immediate use.

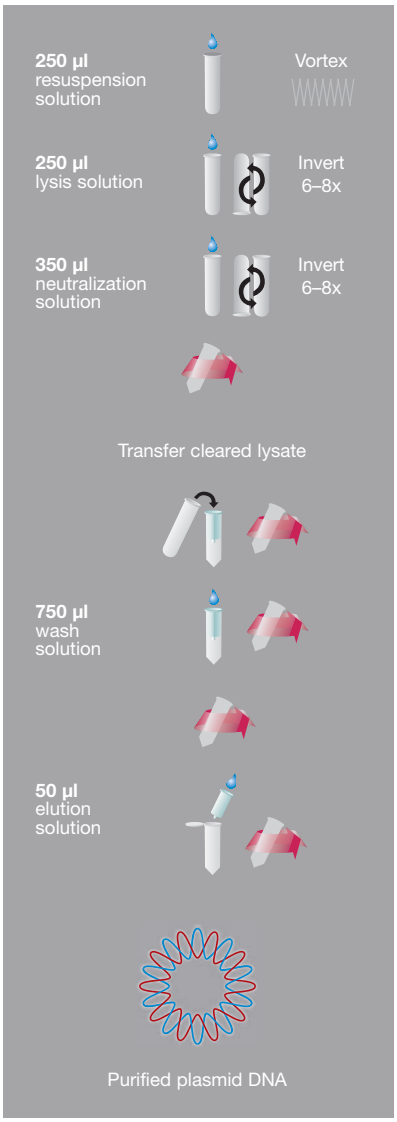
BIO-RAD

Simple, Reproducible Protocol

With the vacuum manifold and column adaptor plate, clarified lysates are added directly to the Aurum mini columns and washed. The purified plasmid is then eluted into a 1.5 ml microcentrifuge tube via centrifugation. The Aurum mini kit can also be used in the spin format, where all steps are carried out via centrifugation. With an easy-to-use protocol overview, you can quickly purify plasmid DNA without lengthy procedures.

Designed for Any Downstream Application

Plasmid DNA purified in the mini format is suitable for any downstream molecular biology application. One of the most purity-sensitive applications is automated sequencing. Plasmid DNA samples isolated with the Aurum plasmid mini kit consistently show long read lengths, high signal intensities, and minimal ambiguities on slab gel (ABI PRISM 377) and capillary (ABI PRISM 3100) sequencing systems.



Aurum Plasmid Mini Kit: Spin Format Protocol Overview*

Growth and Isolation

1. Grow 1–5 ml bacterial culture overnight or ≥16 hr.
2. Measure A_{600} (if higher yield required).
3. Transfer an appropriate volume of culture to a capped 2 ml tube. Centrifuge and decant supernatant.
4. Add 250 µl resuspension solution; vortex.
5. Add 250 µl lysis solution; invert 6–8x.
6. Add 350 µl neutralization solution; invert 6–8x.
7. Centrifuge 5 min to pellet cell debris.

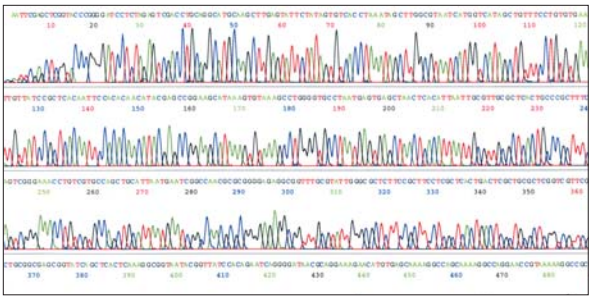
Purification

8. Transfer cleared lysate (supernatant) to mini spin/vacuum column.
9. Centrifuge 1 min to bind plasmid DNA. Decant flowthrough.
10. Add 750 µl wash solution and centrifuge 1 min. Decant flowthrough.
11. Centrifuge additional 1 min to remove residual wash solution.

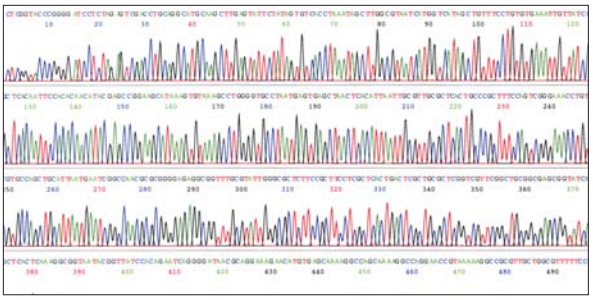
Collection of Purified Samples

12. Transfer mini spin/vacuum column to a clean 1.5–2.0 ml capped tube.
13. Add 50 µl elution solution. Let stand 1 min and then centrifuge 1 min to elute.
14. Purified DNA is ready to use or can be stored at 4°C.

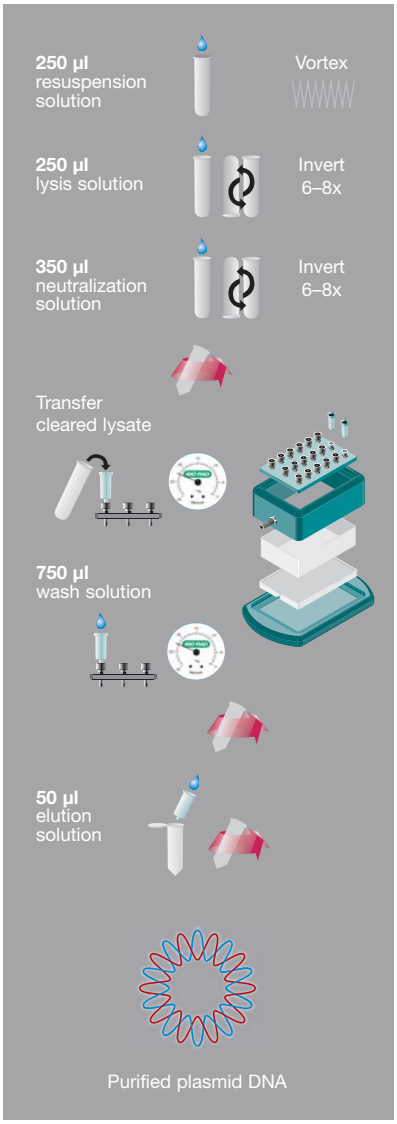
* For complete protocol, consult instruction manual.



A pGEM plasmid transcription vector purified with the Aurum plasmid mini kit and sequenced on an ABI PRISM 377 DNA sequencer.



A pGEM plasmid transcription vector purified with the Aurum plasmid mini kit and sequenced on an ABI PRISM 3100 DNA sequencer.



Aurum Plasmid Mini Kit: Vacuum Format Protocol Overview*

Growth and Isolation

1. Grow 1–5 ml bacterial culture overnight or ≥16 hr.
2. Measure A_{600} (if higher yield required).
3. Transfer an appropriate volume of culture to a capped 2 ml tube. Centrifuge and decant supernatant.
4. Add 250 µl resuspension solution; vortex.
5. Add 250 µl lysis solution; invert 6–8x.
6. Add 350 µl neutralization solution; invert 6–8x.
7. Centrifuge 5 min to pellet cell debris.

Purification on Aurum or Comparable Manifold

(See exploded view for proper setup of manifold.)

8. Transfer cleared lysate (supernatant) to mini spin/vacuum column.
9. Apply vacuum at –20 to –23" Hg to bind plasmid DNA. Turn vacuum off.
10. Add 750 µl wash solution and reapply vacuum until all liquid has passed through column.
11. Transfer mini spin/vacuum column to a 2 ml wash tube. Spin 1 min to remove residual wash.

Collection of Purified Samples

12. Transfer mini spin/vacuum column to a clean 1.5–2.0 ml capped tube.
13. Add 50 µl elution solution. Let stand 1 min and then centrifuge 1 min to elute.
14. Purified DNA is ready to use or can be stored at 4°C.

* For complete protocol, consult instruction manual.

Specifications

	Vacuum Format	Spin Format
Method	Silica membrane	Silica membrane
Assay time	<10 min	10–12 min
Yield (high copy number)	>20 µg	>20 µg
Purity (accuracy over ≥650 bases on an Applera ABI PRISM 3700 fluorescent capillary sequencer)	>99%	>99%

Ordering Information

Catalog #	Description
732-6400	**Aurum Plasmid Mini Kit**, 100 preps, includes plasmid-binding mini columns, 100 capless collection tubes, 100 capped sample tubes, reagents, protocol overview, instructions
732-6470	**Aurum Vacuum Manifold**, includes column adaptor plate, 4 replacement luer caps, A stage and B stage, waste collection tray, vacuum regulator and gauge, tubing, protocol overview, instructions

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