GenScript
Make Research Easy

Redefine Your Innovation Efficiency

AmMag™ Quatro ProAb 1300

Automated Protein and Antibody Purification System

- Fully Automated Workflow
- High-Throughput Capability
- Uncompromised Purity and Yield

AmMag™ Quatro ProAb 1300

Transforming Protein and Antibody Purification for Modern Labs

In today's fast-paced life-science and biopharmaceutical research, precision and efficiency are essential. The AmMag™ Quatro ProAb 1300 is designed to elevate your protein and antibody purification workflow by seamlessly integrating cutting-edge magnetic bead technology with intuitive automation—delivering reliability and speed to meet the demands of modern laboratories.

Why Choose AmMag™ Quatro ProAb 1300?

Fully Automated Workflow

From magnetic bead incubation to washing and elution, the Quatro ProAb 1300 automates the entire purification process. Ideal for early-stage R&D screening, it handles protein yields ranging from micrograms to milligrams with ease.

High-Throughput Capability

Process up to 12 samples per run, with individual sample volumes up to 65 mL - maximizing your lab's productivity without compromising quality.

Rapid and Efficient

Complete purification in as little as 30 minutes, drastically cutting down manual labor and freeing you to focus on more critical tasks.

Flexible and Customizable

Easily adjust purification parameters to suit diverse sample types, from low-titer lab flask supernatants to high-density fermentation cultures. The Quatro ProAb 1300 adapts to your needs with a broad dynamic processing range.

Uncompromised Purity and Yield

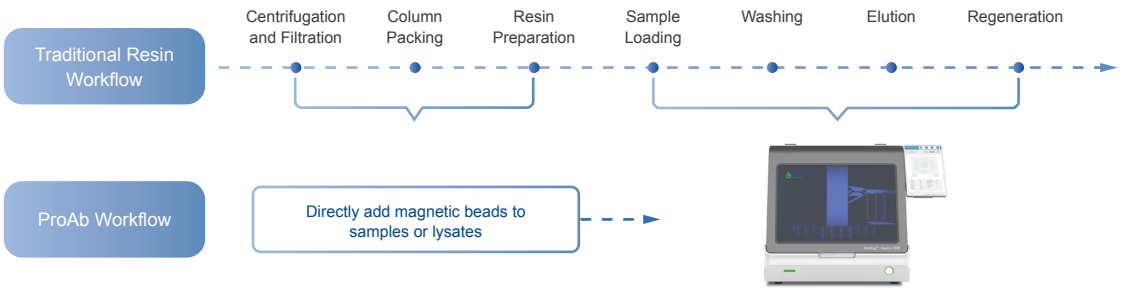
Achieve superior antibody recovery (>83%), exceptional purity (>95%), and excellent activity retention — performance that rivals manual purification methods.

ProAb 1300 Purification Workflow

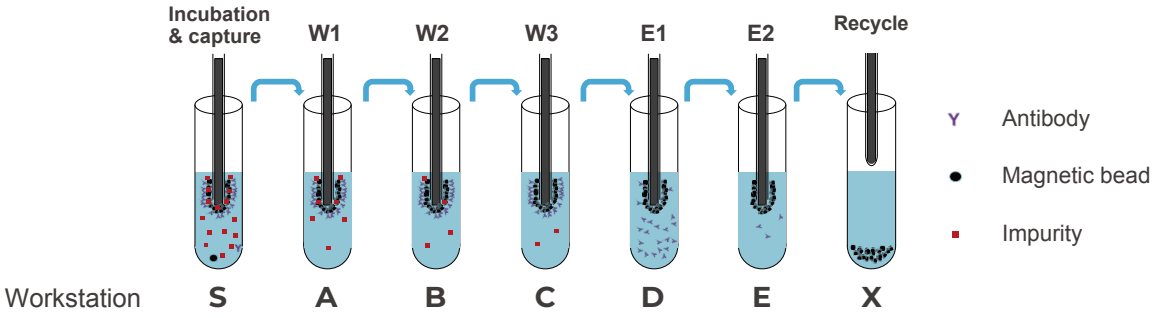
The AmMag™ Quatro ProAb 1300 is expertly engineered for high-throughput, medium-scale protein and antibody purification, handling sample volumes up to 65 mL with unmatched precision and ease. This fully automated system guides your samples through every critical step — from magnetic bead binding and sequential washing to precise elution — completely eliminating manual interventions. By removing labor-intensive, error-prone tasks like manual mixing and repetitive pipetting, the Quatro ProAb 1300 ensures consistency and reproducibility in your results.

Equipped with an intuitive touchscreen and user-friendly visual interface, the system allows you to easily preset protocols and monitor purification progress in real time. This seamless interaction not only enhances operational efficiency but also empowers your team to accelerate innovation in scientific research and biopharmaceutical development.

Traditional Resin vs. ProAb Purification Workflow



ProAb Automated Purification Workflow



Performance

Methodology Consistency

Extensive validation confirms that the AmMag™ Quatro ProAb 1300 delivers consistent, reliable results comparable to conventional manual magnetic bead purification methods. This ensures you benefit from automation without compromising on performance or quality.

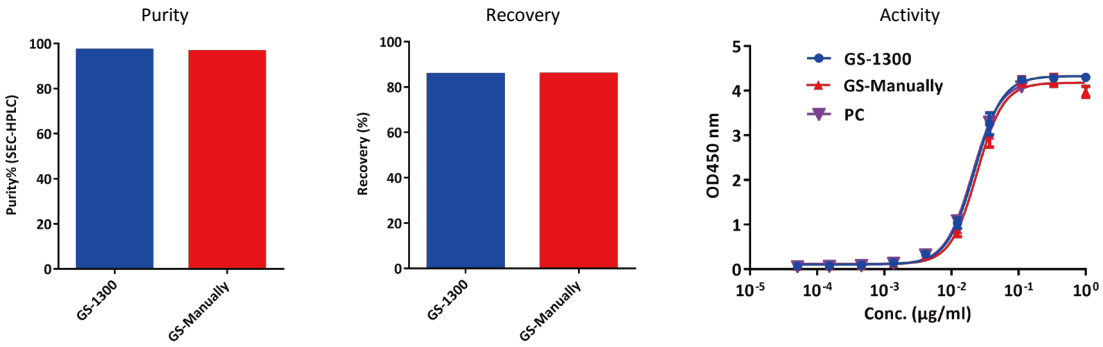


Figure 1: Comparison of purification performance between the AmMag™ Quatro ProAb 1300 Automated System and manual magnetic bead purification. Using 30 mL of CHO cell fermentation broth overexpressing Anti-E2 hIgG (antibody titer 923.3 µg/mL by BLI), samples were purified with 2 mL GenScript Protein A Magnetic Beads (Cat# L00695) via both methods. Analysis of antibody recovery rate, protein purity (SEC-HPLC), and binding activity showed consistent results, with both methods achieving >95% purity and comparable activity to positive controls (PC: protein purification via media; GS-1300: AmMag™ Quatro ProAb 1300; GS-Manual: manual purification).

Consistency Across 12 Samples Per Run

Validation demonstrates that the AmMag™ Quatro ProAb 1300 provides high consistency and repeatability when processing up to 12 samples simultaneously. This ensures uniform, reliable purification results within each run, supporting efficient and dependable high-throughput workflows.

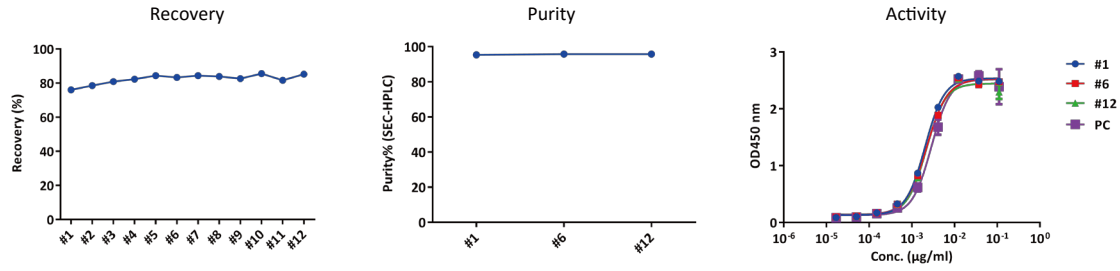


Figure 2: The AmMag™ Quatro ProAb 1300 Automated Purification System demonstrates high consistency across 12 samples processed simultaneously. Using AmMag™ Quatro Elite Protein A Magnetic Beads 2G (Cat# L01074), 12 identical 30 mL CHO cell supernatant samples overexpressing Anti-N protein hIgG were purified in a single run. Protein recovery rate, purity, and activity were measured and showed consistent results across all samples, validating the system's within-run repeatability. (PC: Positive control purified by protein purification media; GS-1300: AmMag™ Quatro ProAb 1300; GS-Manual: manual purification with GenScript magnetic beads.)

Sample Compatibility

Extensive validation confirms the AmMag™ Quatro ProAb 1300 is compatible with a wide range of protein concentrations, from low to high. This versatility makes it ideal for diverse applications — whether you're conducting laboratory research, early-stage R&D screening, or process optimization — ensuring reliable purification across various sample types and conditions.

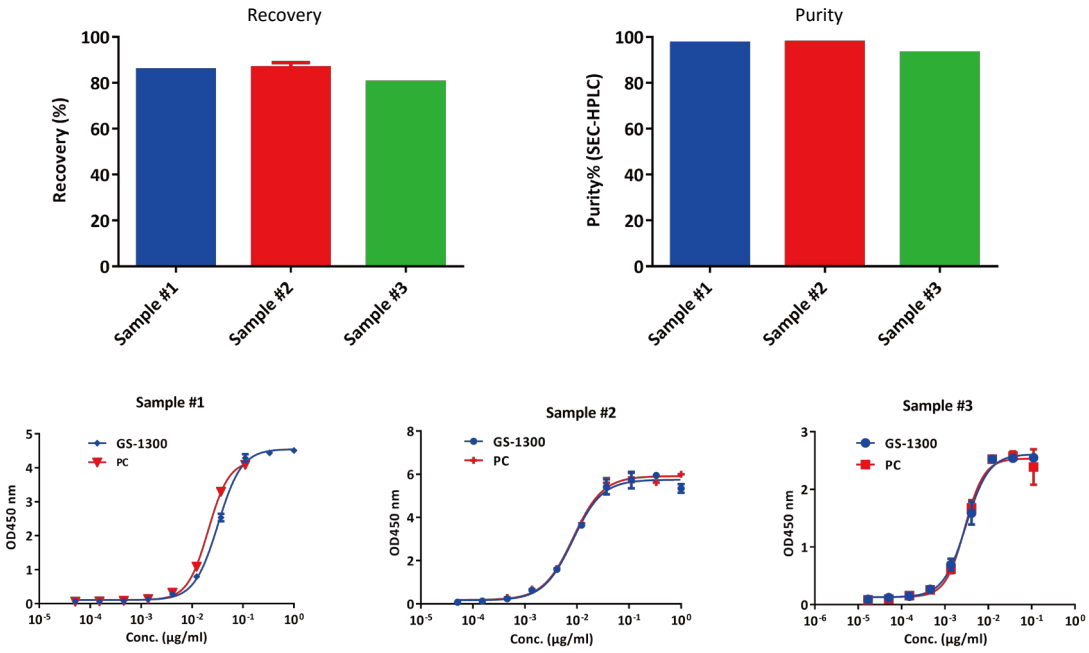
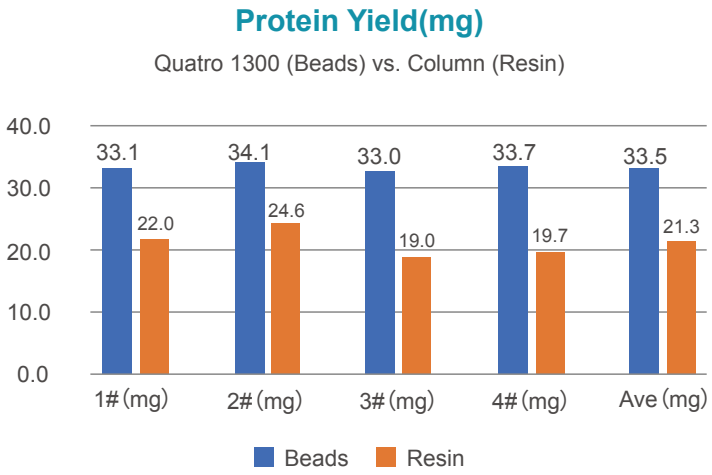


Figure 3: The AmMag™ Quatro ProAb 1300 Automated Purification System demonstrates broad compatibility with protein samples across a wide concentration range. Using AmMag™ Quatro Elite Protein A Magnetic Beads 2G (Cat# L01074), 30 mL supernatants from three different CHO cell lines overexpressing hIgG with antibody titers ranging from 23 μg/mL to 923 μg/mL were purified. Protein recovery rate, purity, and activity measurements confirmed the system's effective performance across low-to-high concentration samples, making it suitable for laboratory research, R&D, and early-stage process optimization. (PC: Positive control purified by protein purification media; GS-1300: AmMag™ Quatro ProAb 1300; GS-Manual: manual purification with GenScript magnetic beads.)

Superior Consistency with Magnetic Bead Purification

Antibody purification using magnetic beads, as implemented in the AmMag™ Quatro ProAb 1300, provides significantly greater consistency and reliability compared to traditional resin-based purification methods. This advanced technology minimizes variability, enhances reproducibility, and delivers high-quality antibodies batch after batch—ensuring dependable results that accelerate your research and development efforts.



Yield	1#(mg)	2#(mg)	3#(mg)	4#(mg)	Ave.(mg)	STDev.S	CV%
Beads	33.1	34.1	33.0	33.7	33.5	0.544771	1.63%
Resin	22.0	24.6	19.0	19.7	21.3	2.523169	11.83%

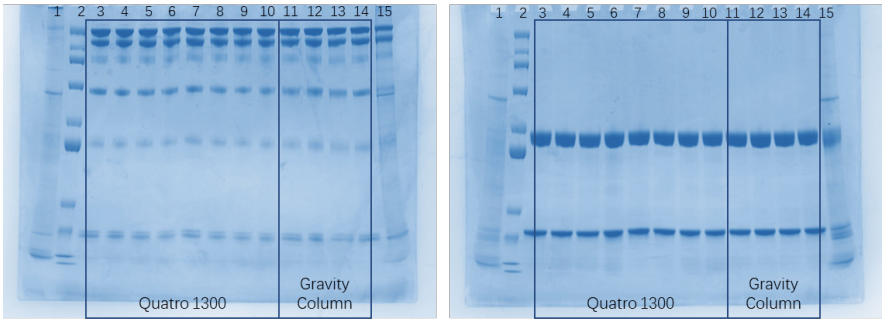
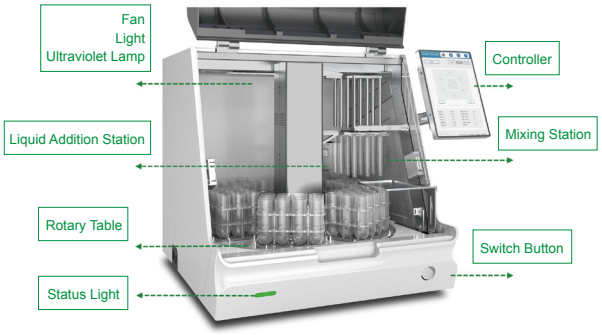
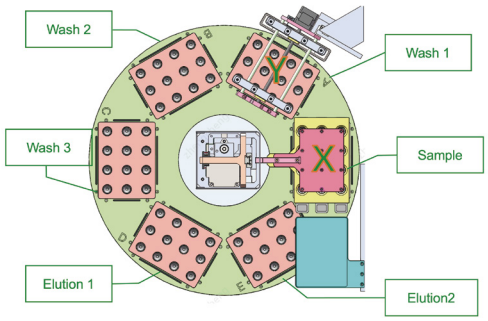


Figure 4: The AmMag™ Quatro ProAb 1300 Automated Purification System demonstrates superior consistency compared to traditional resin-based methods. Using 20 mL of CHO cell supernatant (~30 mg hIgG), samples were purified with either 1.5 mL of GenScript Protein A Magnetic Beads (Cat# L00695) on the AmMag™ Quatro 1300 or 1.5 mL Monofinity A resin in a gravity column. Antibody yield and purity (SDS-PAGE) were analyzed. Results showed significantly lower variability in yield with the Quatro 1300 (CV 1%) versus the resin method (CV 11%), while both methods delivered comparable purity. (Lane 1: Quatro 1300 flowthrough; Lane 2: Ladder; Lanes 3–10: Quatro 1300 purified antibodies; Lanes 11–14: Column purified antibodies; Lane 15: Column flowthrough.)

Internal View and Key Specifications

The AmMag™ Quatro ProAb 1300 features a thoughtfully engineered internal layout designed to support seamless automation, robust performance, and user-friendly maintenance. Its modular design ensures smooth fluid handling, precise magnetic separation, and consistent elution — all optimized for high-throughput antibody and protein purification.





AmMag™ Quatro ProAb 1300 System Parameters

Parameter	Value
Throughput	12 samples per run
Reagent Channels	6
Magnetic Bead Volume (settle beads)	0.5–6 mL (large magnetic rod) 0.1–0.5 mL (small magnetic rod)
Liquid Dispensing Precision (CV)	0.5%
Minimum Dispensing Volume	200 µL
Maximum Dispensing Volume	25 mL tube:10 mL 50 mL tube: 30 mL 100 mL tube: 65 mL
Minimum Elution Volume	3 mL (large rod) 1 mL (small rod)
Compatible Containers	25 mL, 50 mL, and 100 mL tubes
Pipeline Alkali Resistance	0–1 M NaOH
Power Supply	100–240V AC, 50/60 Hz, 600W
Operating Ambient Temperature*	18–32 °C
Operating Ambient Humidity	≤ 85% RH, non-condensing

Parameter	Value
Altitude Limit	≤ 2000 meters
Operating Atmospheric Pressure	50–106 kPa
Dimensions (L × W × H)	Module: 705 × 630 × 670 mm Controller: 382 × 416 × 249 mm
Electrical Safety Standards	EC 61010-1:2001

Operating Ambient Temperature*: When using the equipment at a constant temperature of 4°C, ensure the temperature remains stable at 3-5°C. Otherwise, excessive temperature fluctuations will cause condensation, and structural components may expand or contract due to thermal changes.

Application Areas

Biopharmaceutical R&D: Accelerate the development of antibody drugs, protein therapeutics, and vaccines with fast, efficient purification of plasmids, proteins, and antibodies—streamlining workflows from discovery to early-stage process development.

Academic Research: Enable high-quality research in fields such as cell biology, structural biology, and immunology by delivering consistent, pure biomolecules ideal for downstream analysis and experimentation.

Diagnostic Development: Support the production of high-purity proteins and antibodies for use in diagnostic assays and kit manufacturing, ensuring reliable performance and reproducibility.

AmMag™ ProAb Ordering Table

Category	Cat. No.	Product Name	Size
Device	D00045	AmMag™ Quatro 1300	1 Unit
Consumables	D00065	AmMag™ Quatro 100mL centrifuge tube rack	1 pcs/box
	D00068	AmMag™ Quatro 12-channel large magnetic rod	1 pcs/box
	D00064	AmMag™ Quatro 50ml centrifuge tube rack	1 pcs/box
	D00069	AmMag™ Quatro 12-channel small magnetic rod	1 pcs/box
	D00066	AmMag™ Quatro 100ml Centrifuge Tube Magnetic Separation Rack	1 pcs/box
	D00080	AmMag™ Quatro 25mL centrifuge tube rack	1pcs/box
	D00061	AmMag™ 100mL centrifuge tube	150 pcs/box
	D00060	AmMag™ Four-slot magnetic rod sleeve	30 pcs/box
	D00071	AmMag™ Four-slot small magnetic rod sleeve	30 pcs/box

Category	Cat. No.	Product Name	Size
Consumables	D00072	AmMag™ Quatro 50mL round-bottom centrifuge tube	50 pcs/pack 16packs/box
	D00081	AmMag™ Quatro 25mL round-bottom centrifuge tube	50 pcs/pack 16packs/box
	D00074	AmMag™ Quatro Reagent Bottle And Tubing Kit	6 EA/1 Unit

AmMag™ ProAb Magnetic Beads

Category	Cat. No.	Product Name	Binding Capacity	NaOH tolerance	Repeated Use	Particle size
Protein A Beads	L00695	AmMag™ Protein A Magnetic Beads	>40 mg/mL	0.1 M-0.5 M NaOH	Yes, up to 40 times	45-100 μm
	L01071	AmMag™ Elite Protein A Magnetic Beads	>40 mg/mL	Not alkali-resistant	NO	10-37 μm
	L01074	AmMag™ Elite Protein A Magnetic Beads - 2G	>40 mg/mL	0.1 M-1 M NaOH	Yes, up to 40 times	10-37 μm
	L00273	Protein A MagBeads	>10 mg/mL	Not alkali-resistant	NO	45±5 μm
Nickel beads	L00295	Ni-charged MagBeads	>40 mg/mL	Not alkali-resistant	NO	~40 μm
	L00776	AmMag™ Ni Magnetic beads	>20 mg/mL	1 M NaOH	Yes, up to 40 times	~70 μm
Protein A/G Beads	L00894	Protein A/G Magbeads MX	>30 mg/mL	Not alkali-resistant	NO	30-100 μm
	L00277	Protein A/G MagBeads	>10 mg/mL	Not alkali-resistant	NO	Average 40μm
Protein G Beads	L00673	Protein G MagBeads MX	>30 mg/mL	Not alkali-resistant	NO	45±5 μm
GST beads	L00895	Glutathione MagBeads	>20 mg/mL	Not alkali-resistant	NO	45-100 μm

Why Choose the GenScript Quatro™ Lab Automation Series?

Trusted Worldwide

Built on GenScript's global reputation for quality and reliability, the Quatro™ series delivers proven technology backed by decades of expertise in life science solutions.

Innovation at the Core

Driven by continuous innovation, the Quatro™ series embodies our commitment to solving the evolving challenges of life science research through intelligent, efficient laboratory.

End-to-End Support

From installation to optimization, GenScript offers comprehensive technical support and responsive after-sales service—ensuring you get maximum value and performance from your Quatro™ system.

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