







PureCube Magnetic Beads

Our magnetic beads are made in our own chemical facilities under a rigorous production process that ensures a homogeneous, high-performance product. Coupled to standard or custom ligands, our MagBeads are a sensitive and scalable solution for protein extraction.

-  Ferrimagnetic core, uniformly coated with agarose
-  Homogeneous in size and low lot-to-lot variation
-  Highly reproducible results with low unspecific binding
-  Suited for purification from dilute samples and pull-down experiments

Quality at the core, performance all around

PureCube MagBeads are an indispensable component of our protein research services, where reliable and reproducible results are of the essence. PureCube MagBeads are ferrimagnetic spheres, coated with 6% cross-linked agarose. The agarose is highly porous, which enables optimal protein interaction, and the matrix is chemically compatible with a number of detergents, buffers, and other additives (Table 1, page 2). The small and homogeneous particle size (medium 30 µm) offers a large interaction surface area that maximizes protein binding and delivers consistent results from one purification run to another. Furthermore, our systematic production process and stringent quality control minimize variation among production lots (Figure 1).

The meticulous production of our magnetic beads is the foundation of our high-performance PureCube MagBeads. High surface area and careful coupling of ligands generates an affinity matrix with high protein binding capacity (Figure 2) that is easy to handle, scalable, and suitable for applications where target protein concentrations are low.

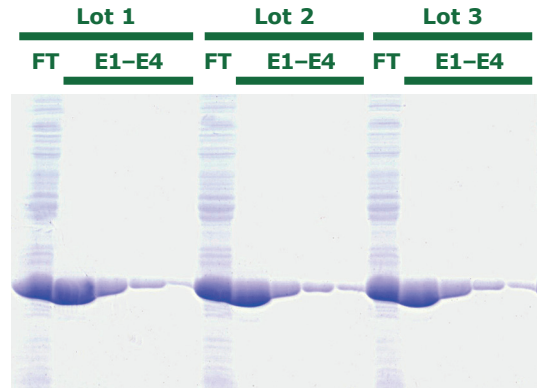


Fig. 1: High reproducibility from lot to lot of PureCube MagBeads. Glutathione-S-transferase expressed in *E. coli* was purified using three different production lots of PureCube Glutathione MagBeads. Each lot generated clean eluates with highly consistent concentrations of target protein.
FT: flow-through; **E1-E5:** elution fractions.

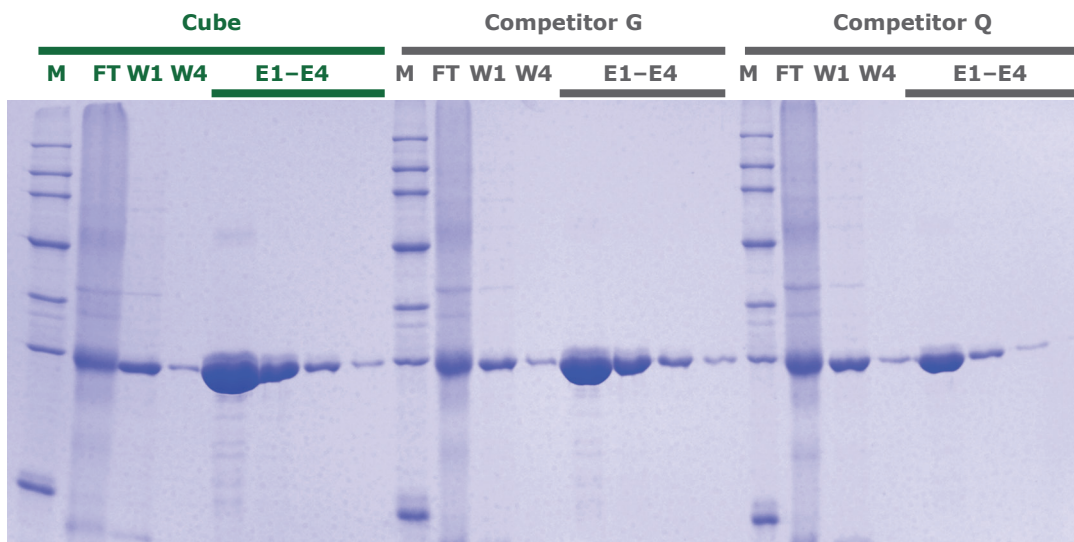


Fig. 2: 46% higher yield obtained with PureCube Ni-NTA MagBeads. SDS-PAGE of GFP expressed in *E. coli* and purified with either PureCube Ni-NTA MagBeads or one of two equivalent affinity matrices from alternative providers. Total protein in 4 elution fractions with PureCube Ni-NTA MagBeads was 46% higher (Cube, E1-E4) than with magnetic beads from Competitor G (E1-E4), which was conversely higher than with the matrix from Competitor Q. **M:** marker; **FT:** flow-through; **W1, W4:** wash fractions; **E1-E4:** elution fractions.

	PureCube IDA & NTA MagBeads	PureCube Glutathione MagBeads	PureCube HiCapacity StrepTactin® MagBeads	PureCube Rho1D4 MagBeads	PureCube Activated MagBeads
Ligand	iminodiacetic acid or nitrilotriacetic acid	Glutathione	StrepTactin	Rho1D4 antibody	various options, e.g. Carboxy- or NHS- functionalized
Loaded Metal Ion	Ni ²⁺ , Co ²⁺ , Cu ²⁺ , Fe ²⁺ , Al ³⁺ , Zn ²⁺ and others	-	—	—	—
Binding capacity	Depends on metal ion (e.g., Ni-NTA 70 mg/mL)	<10 mg/mL	<7 mg/mL	<3 mg/mL	depends on coupled protein/antibody
Compatibility	pH 2-4, urea, methanol, DTT, acetonitrile, & others	pH 2-4, urea, methanol, DTT, acetonitrile, & others	pH 3-12, organic solvents	Tween® 20, Triton™ X-100, CHAPS, ethanol, DM, & others	depends on coupled protein/antibody

Table 1: PureCube Magnetic Beads are available with a comprehensive list of standard ligands and can also be customized.

A broad portfolio to meet your specific needs

PureCube MagBeads are available with a comprehensive list of ligands, covering most affinity tags and protein purification needs (Table 1). The PureCube NTA and IDA MagBeads can be loaded with any metal ion to optimize the binding affinity and specificity for a target protein. GST-tag and Strep-tag® fusion proteins are efficiently purified on our PureCube Glutathione MagBeads and PureCube HiCapacity StrepTactin Magbeads, respectively. Lastly, our PureCube Rho1D4 MagBeads offer an elegant and effective purification system for membrane proteins, based on the highly specific binding of the rho1D4 antibody and the rho1D4 epitope fused to a target protein. If, however, your work requires a target-specific ligand, our flexible production allows us to rapidly and cost-effectively synthesize a custom affinity matrix that meets your specifications. Please contact us for more details about custom resins or if you are interested in bulk amounts of PureCube Magnetic Beads.

Ordering Information

Catalog Number	Product Description
30201	PureCube Ni-IDA MagBeads (1 mL) 5% suspension; 5 mL and larger amounts also available
31201	PureCube Ni-NTA MagBeads (1 mL) 5% suspension; 5 mL and larger amounts also available
31501	PureCube Co-NTA MagBeads (1 mL) 5% suspension; 5 mL and larger amounts also available
32201	PureCube Glutathione MagBeads (1 mL) 25% suspension; 5 mL and larger amounts also available
34201	PureCube HiCapacity StrepTactin MagBeads (1 mL) 5% suspension; 5 mL and larger amounts also available
33201	PureCube Rho1D4 MagBeads (1 mL) 5% suspension; 5 mL and larger amounts also available
50201	PureCube Carboxy MagBeads (1 mL) 25% suspension; 5 mL and larger amounts also available
50401	PureCube NHS-Activated MagBeads (1 mL) 25% suspension; 5 mL and larger amounts also available

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