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AmMag™ Block
Cat. No. L00827

Index

I Description....1
II Product Specifications....1
III Instructions For Use....2
IV Troubleshooting....3
V Ordering Information....3
VI Health and Safety Instructions Are Added to the Instructions....4

Warning: Strong Magnetic Field. Interaction with metallic objects may produce Pinch Hazards. Persons with Medical Implants KEEP BACK.

I Description

GenScript's AmMag Block enables protein and antibody purification from cultures up to 1 L in volume using the AmMag SA. Magnetic beads are directly incubated in cultures or lysates to bind the target proteins or antibodies. Once binding is complete, the AmMag Block is used to collect the beads at the bottom of the culture vessel, and the supernatant is discarded. The magnetic beads thus collected are re- suspended in a smaller volume and transferred into 50 ml tubes, to be washed and eluted automatically using the AmMag SA purification system, or manually using the AmMag MR magnetic racks.

II Product Specifications

Components	L00827
Size (LxWxH)	7 x 6 x 3 cm

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860 Centennial Ave. Piscataway, NJ 08854
1-732-885-9188

III Instructions For Use

The following instructions are guidelines to use the AmMag Block with various GenScript magnetic beads.

Please refer to the product manuals for each type of magnetic beads used, for information on their binding capacities and specific buffer formulations recommended for use.

3.1 Magnetic Beads Preparation

1. Dispense the desired volume of magnetic beads into a clean container.
2. Bind the beads to the magnet and remove the storage buffer.
3. Add 10 x volume* sterile wash buffer and mix for 1 min.
4. Bind the beads and remove the wash buffer.
5. Repeat the wash 4 more times.
6. Add to the beads 2x volume of wash buffer. Mix the beads to re-suspend and add to the cell culture. Note: If you are incubating the magnetic beads in cultures or lysates overnight, perform steps 1-6 in sterile environment under a laminar hood if you are incubating the magnetic beads in cultures or lysates overnight.
7. Incubate the beads with the cell culture for the time indicated in Table 1 based on the target concentration.

Note: Volume is calculated based on the volume of settled magnetic beads used. For example, when using 1 ml settled magnetic beads, 1X buffer = 1 ml.

Table 1 – Recommended starting conditions

Antibody concentration in the sample	Less than 0.1 mg/ml	0.1 to 0.25 mg/ml	0.25 – 0.5 mg/ml	0.5mg/ml - 2 mg/ml	Higher than 2 mg/ml
Magnetic beads amount per 1 mg antibody	60 µl settled beads	40 µl settled beads	35 µl settled beads	35 µl settled beads	30 µl settled beads
Incubation time	2 - 16 hours	2-4 hours	1-2 hours	1 hour	1 hour

Note: Please refer to the product manuals of magnetic beads for recommended buffers.

3.2 Purification

1. Add equilibrated magnetic beads to 500 mL-1 L cultures for the binding step.
2. At the end of the binding step, place the culture vessel on the Block. The beads migrate towards the Block. To collect the beads towards the center, slowly swirl the bottle on top of the Block. Most beads are collected towards the magnet within 5 minutes. However, the time of binding may need to be empirically determined, as it can change depending on the amount of the beads, the volume of the medium, material of the culture vessel (glass vessels take longer), and the viscosity of the culture medium.

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3. Once the beads have migrated towards the Block, lift the culture vessel along with the Block to make sure that the beads are still attracted by the magnet. , and pour out the culture medium to discard*.
4. The beads will remain in the culture vessel attracted by the block. Add 40 mL PBS to wash the beads off the culture vessel and transfer them into 50 mL tubes.
5. Some beads may remain attached to the culture vessel. This is normal. Simply repeat step 4 until all the beads have been captured into 50 mL tubes.
6. Once the beads are in 50 mL tubes, use AmMag SA or AmMag MR for further sample purification.

* When newly testing the system, assess the flow through for excess magnetic beads. If beads are detected, save the flow through for processing again with the Block.

IV Troubleshooting

Review the information below to troubleshoot your experiments using the AmMag Ni magnetic beads.

Problem	Possible Cause	Solution
The magnetic beads are sticking on the sides of the culture vessel	The magnetic beads were not treated with surfactants prior to the binding step.	Add Tween 20, Tween 80, Triton-100, or another non-ionic surfactant (0.1-0.5%)
The Block does not capture all magnetic beads	Binding time with the Block is insufficient.	Increase the time to precipitate the magnetic beads towards the Block. Increase contact of the Block magnet with the unbound beads by slowly agitating the culture or lysate by swirling.
	The culture medium or lysate is too viscous.	Dilute the culture medium or lysate, or clarify with DNAse to reduce viscosity.

V Ordering Information

Cat. No.	Product Name
L00827	AmMag™ Block

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VI Health and Safety Instructions Are Added to the Instructions

The AmMag Block is equipped with magnetic elements. The magnetic elements are located with warning labels of strong magnetic fields. People who might be sensitive to strong magnetic waves, including but not limited to people with pacemakers, neurostimulators , insulin pumps or similar devices, or with ferromagnetic implants (e.g., surgical stents, artificial heart valves, prosthetics or metal fragments), should keep distance from the AmMag Block and should consult with medical professional.

The maximum magnetic field intensity on the working face is ≥300mT.

Work area shall be clean before AmMag Block using to avoid iron scraps or small iron blocks being adsorbed by magnetic components which may cause personal injury.

Strong magnetic field warning labels is shown below.

For research use only. Not intended for human and animal therapeutic or diagnostic use.

Manufacturer: Nanjing GenScript Biotech Co., Ltd. No. 28 Yongxi Road, Jiangning District, Nanjing, Jiangsu, China

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860 Centennial Ave. Piscataway, NJ 08854 1-732-885-9188