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AmMag™ Wand D9

Cat. No. L00799

AmMag™ Wand Sleeve D9

Cat. No. L00800

AmMag™ Wand D12

Cat. No. L00778

AmMag™ Wand Sleeve D12

Cat. No. L00779

Index

I	Description.....	1
II	Product Specifications.....	1
III	Instructions For Use	2
IV	Troubleshooting	4
V	Odering Informations.....	4
VI	Health and Safety Instructions Are Added to The Instructions.....	5

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

I Description

GenScript’s AmMag Wand enables protein and antibody purification from cultures up to 2 L in volume using the AmMag SA. Magnetic beads are directly incubated in cultures or lysates to bind target proteins and antibodies. Once binding is complete, the AmMag Wand is used to collect the beads and transfer them into 50 ml tubes, to be washed and eluted automatically using the AmMag SA purification system, or manually using the AmMag MR magnetic racks.

Cat No.	Product name	Dimensions	Package
L00799	AmMag™ Wand D9	9mm*400mm	1x Wand Only
L00800	AmMag™ Wand Sleeve D9	12mm*300mm	1x Sleeve Only
L00778	AmMag™ Wand D12	12mm*400mm	1x Wand Only
L00779	AmMag™ Wand Sleeve D12	16mm*300mm	1x Sleeve Only

II Product Specifications

The AmMag Wand is available in two sizes- regular(D9) and large (D12).

Each AmMag™ Wand D9 and AmMag™ Wand D12 are to be used with corresponding removable sleeves, which are available for purchase separately as L00800(D9) and L00779(D12).

Assembled AmMag Wands:



Dimensions:

AmMag™ Wand D9 (L00799)- Magnetic rod: 9mm*400mm

AmMag™ Wand Sleeve D9 (L00800): 12mm*300mm (also available separately: L00800)

AmMag™ Wand D12 (L00778)- Magnetic rod: 12mm*400mm

AmMag™ Wand Sleeve D12 (L00779)- 16mm*300mm (also available separately: L00779)

III Instructions For Use

The following instructions are guidelines to use the AmMag™ Wand D9 and AmMag™ Wand D12 with various GenScript magnetic beads. Please refer to the product manuals of 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 1-2 L cultures for the binding step.
2. At the end of the binding step, swirl the wand with the sleeve in the culture to collect magnetic beads. All beads should migrate to the wand within 2 minutes. However, the time of binding may need to be empirically determined, as it may change depending on the amount of the beads and the viscosity of the culture medium.
3. Once the beads have migrated to the wand, take out the wand and place it in a 50 mL tube with 10 mL PBS. Depending on the amount of beads and the starting culture, you may need to add additional buffer in the 50 mL tube to completely re-suspend the beads.
4. Take out the magnetic rod, while leaving the sleeve within the tube.
5. The sleeve will release the magnetic beads into the solution. Agitate the sleeve within the tube to fully release the beads. If necessary, repeat steps 3-4 to capture all magnetic beads into 50 mL tubes.
6. Once the beads are in 50 mL tubes, use AmMag SA or AmMag MR for further sample purification.

IV Troubleshooting

Review the information below to troubleshoot your experiments using the AmMag™ Wand D9 and AmMag™ Wand D12.

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 Wand does not capture all magnetic beads	The culture medium or lysate is too viscous.	Dilute the culture medium or lysate, or clarify with DNase to reduce viscosity.
	Magnetic beads are saturating the magnetic surface of the Wand.	Release the bound magnetic beads into a 50 ml tube, and repeat the capture to collect the remaining magnetic beads.

V Ordering Informations

Cat. No.	Product Name
L00799	AmMag™ Wand D9
L00800	AmMag™ Wand Sleeve D9
L00778	AmMag™ Wand D12
L00779	AmMag™ Wand Sleeve D12

VI Health and Safety Instructions Are Added to The Instructions.

The AmMag Wand 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 Wand and should consult with medical professional.

The maximum magnetic field intensity on the working face of AmMag™ Wand D12 is $\geq 300\text{mT}$.

The maximum magnetic field intensity on the working face of AmMag™ Wand D9 is $\geq 220\text{mT}$.

Work area shall be clean before AmMag Wand 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.

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