CaptureSelect™ Antibody Magnetic Agarose Beads

Pub. No. MAN0019616 Rev. A.0

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product information

CaptureSelect™ Antibody Magnetic Agarose Beads are high-capacity and high-throughput magnetic affinity particles for antibody purification using manual or robotic magnetic separators. The beads enable the purification and isolation of Fab fragments, antibodies, and antibody subtypes from complex sources such as human plasma, serum, and cell culture supernatants.

Storage

Store all magnetic beads at 2–8°C. Do not freeze.

Specifications

The magnetic beads consist of 6% cross-linked magnetized agarose with a bead size of 25–30 µm that are coupled with a CaptureSelect™ affinity ligand. The product is formulated as a 25% v/v slurry in Tris buffered saline with 0.05% Tween™ 20 and 0.05% sodium azide.

Table 1 Binding specifications, DBC and elution conditions

CaptureSelect™ Affinity Ligand	Binding specificity	Dynamic binding/mL of beads	Recommended elution buffer
CH1-XL	CH1 domain of human IgG	>4 mg human IgG	50 mm Sodium acetate pH 4.0/0.1 M glycine pH 3.0
IgG-Fc (multi-species)	Fc domain of multi-species IgG	>4 mg human IgG	0.1 M glycine (pH 3.0)

Required materials not supplied

Unless otherwise indicated, all materials are available through thermofisher.com.

- Low Protein Binding Collection Tubes, 1.5 mL (Cat. No. 90410)
- Human plasma, serum, and cell culture supernatants
- DynaMag™-2 Magnet (Cat. No. 12321D) or equivalent
- Binding/Wash Buffer: Phosphate buffered saline (PBS) consisting of 10 mM phosphate buffer (pH 7.4) with 150 mM NaCl
- Elution buffer: See Table 1
- Neutralization buffer: High ionic strength alkaline buffer (for example, 1 M Tris, pH 7.5)

Methods

To ensure homogeneity, mix the beads thoroughly before use by repeated inversion, gentle vortexing, or by using a rotating platform. The minimum bead slurry volume that is recommended for antibody purification is 40 µL (10 µL beads).

1. Place 40 µL of slurry (10 µL beads) of CaptureSelect™ Antibody Magnetic Agarose Beads into a 1.5 mL microcentrifuge tube.
2. Add 460 µL of Binding/Wash buffer to the beads, then gently vortex to mix.
3. Place the tube into a magnetic stand to collect the beads against the side of the tube. Remove, then discard the supernatant.
4. Add 0.5 mL of Binding/Wash Buffer to the tube. Invert the tube several times or gently vortex to mix for 1 minute.
5. Collect beads with magnetic stand, then remove and discard the supernatant.

6. For serum or ascites: dilute 50 µL of with 450 µL Binding/Wash Buffer. For cell culture supernatant: add up to 500 µL of supernatant, depending on antibody expression level.

   Note: Sample volume can be modified. If the sample volume is <500 µL, dilute it to a final volume of 500 µL with Binding/Wash Buffer.

   Note: (*Optional*) Reserve a small volume of load for subsequent analysis.

7. Add the diluted sample to the tube containing washed magnetic beads, then gently vortex or invert to mix.

8. Incubate the samples at room temperature while mixing at minimal speed for 10–30 minutes.

9. Collect the ligand-coupled beads with a magnetic stand, then remove the supernatant. The supernatant can be kept for subsequent analysis.

10. Add 500 µL of Binding/Wash Buffer to the tube, mix well, collect the beads with a magnetic stand, then remove the supernatant. Repeat this wash once for a total of two washes.

11. Add 20 to 50 µL of Elution Buffer to the tube (2 to 5 bead volumes), mix well, then incubate 10 minutes at room temperature with occasional mixing.

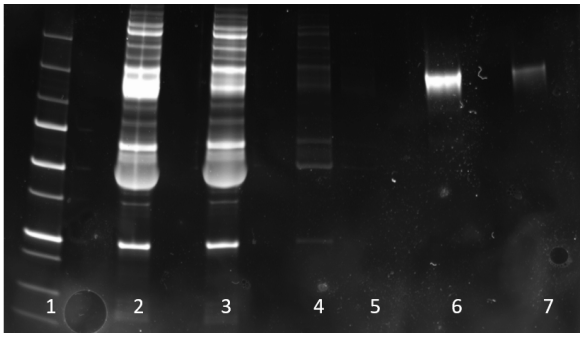
    Note: Add 20–50 µL of Elution Buffer per 10 µL of settled beads. For example, add 40–100 µL for 20 µL settled beads (2 to 5 bead volumes).

12. (*Optional*) Repeat step 11 to ensure complete elution.

13. Collect the beads with a magnetic stand and then remove and save the supernatant that contains the eluted antibody. To neutralize the low pH, add 25 µL of Neutralization Buffer for each 100 µL of eluate.

Example application with CaptureSelect™ Antibody Magnetic Agarose Beads

Figure 1 is an example of an application run with IgG-Fc (multispecies) Magnetic Agarose Beads (loaded with 10x diluted human serum)



Starting material, flow through, and elution fractions analysis:

① Molecular weight marker
② Human serum
③ Flow through
④ Wash 1 (PBS pH 7.4)
⑤ Wash 2 (PBS pH 7.4)
⑥ Elution 1 (pH 3.0)
⑦ Elution 2 (pH 3.0)

Ordering information

CaptureSelect™ Antibody Magnetic Agarose Beads	Amount	Cat. No.
CH1-XL	1 mL (25% slurry)	2883462001
	5 mL (25% slurry)	2883462005
IgG-Fc (multispecies)	1 mL (25% slurry)	2882852001
	5 mL (25% slurry)	2882852005

Customer and technical support

Visit **thermofisher.com/support** for the latest service and support information.

- Worldwide contact telephone numbers
- Product support information
  - Product FAQs
  - Software, patches, and updates
  - Training for many applications and instruments
- Order and web support
- Product documentation
  - User guides, manuals, and protocols
  - Certificates of Analysis
  - Safety Data Sheets (SDSs; also known as MSDSs)

    Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

For more information

For more information on CaptureSelect™ and POROS™ products, go to **www.thermofisher.com/captureselect**.

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at **www.thermofisher.com/us/en/home/global/terms-and-conditions.html**. If you have any questions, please contact Life Technologies at **www.thermofisher.com/support**.

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

The information in this guide is subject to change without notice.

Revision history: Pub. No. MAN0019616

Revision	Date	Description
A.0	13 July 2021	New document covering the line of CaptureSelect™ Antibody Magnetic Agarose Beads.