

# CaptureSelect™ Protein Affinity Resins

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## Product information

CaptureSelect™ affinity resins can be used for the purification and isolation of proteins and/or antibodies and antibody subtypes from complex sources such as plasma, serum, and cell culture supernatants.

 **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/techresources](http://thermofisher.com/techresources).

## Specifications

All resins have a pressure limit of 3 bar.

CaptureSelect™ Affinity Resin	Binding specificity	Resin and particle size	Dynamic binding capacity per mL of resin
AAT (Human)	α-1 anti-trypsin (Human)	Aldehyde-activated agarose, 35 µm	>10.0 mg AAT
ATIII (Human)	Antithrombin (Human)	NHS-activated agarose, 90 µm	>6.0 mg ATIII
C1-inhibitor (Human)	C1 esterase inhibitor (Human)	Aldehyde-activated agarose, 70 µm	>5 mg C1 esterase inhibitor
C-tag (independent of species)	C-terminal 4 amino acid tag E-P-E-A	Aldehyde-activated agarose, 35 µm	±250 nmol protein
Fibrinogen (Human)	Human fibrinogen from human plasma	Aldehyde-activated agarose, 35 µm	>10.0 mg Fibrinogen
FSH	Follicle stimulating hormone	Aldehyde-activated agarose, 70 µm	>3.0 mg FSH
hGH	Human growth hormone	Aldehyde-activated agarose, 70 µm	>3.0 mg hGH

CaptureSelect™ Affinity Resin	Binding specificity	Resin and particle size	Dynamic binding capacity per mL of resin
HSA	Human Serum Albumin	Aldehyde-activated agarose, 70 µm	>15.0 mg HSA
Transferrin (Human)	Human transferrin	Aldehyde-activated agarose, 35 µm	>8.0 mg transferrin

## Conditions for use

All resins have a flow rate of 150 cm/h.

CaptureSelect™ Affinity Resin	Equilibration/wash buffer	Elution buffer
AAT (Human)	PBS, pH 7.2–7.4 (physiological pH and ionic strength)	0.1 M Glycine, pH 3.0
ATIII (Human)		20 mM Tris, 2.0 M MgCl <sub>2</sub> , pH 7.0
C1-inhibitor	PBS, pH 7.2–7.4 (physiological pH and ionic strength)	Neutral pH: 20 mM Tris, pH 7.0, 2.0 M MgCl <sub>2</sub> Acidic pH: 20 mM Citric acid, pH 3.0
C-tag	PBS, pH 7.2–7.4, or other physiological pH buffers. Binding possible in denaturing conditions like Urea (up to 8.0 M) and Guanidine HCl (up to 1.0 M)	Neutral pH: <ul style="list-style-type: none"> <li>• 20 mM Tris, pH 7.0, 2.0 M MgCl<sub>2</sub></li> <li>• 20 mM Tris, pH 7.0, 1.0 M NaCl 50% (v/v) propyleneglycol</li> </ul> Acidic pH: 20 mM Citric acid, pH 3.0
Fibrinogen (Human)	PBS, pH 7.2–7.4 (physiological pH and ionic strength)	20 mM Tris, 50% (v/v) propylene glycol, 1.0 M Arginine, pH 7.4
FSH		20 mM Tris, 2.0 M MgCl <sub>2</sub> , pH 7.4
hGH		20 mM Citric acid, pH 3.0
HSA		Neutral pH: <ul style="list-style-type: none"> <li>• 20 mM Tris, pH 7.0, 2.0 M MgCl<sub>2</sub></li> <li>• 20 mM Tris, pH 7.0, 1.0 M NaCl 50% (v/v) propyleneglycol</li> </ul> Acidic pH: 20 mM Citric acid, pH 3.0
Transferrin (Human)		20 mM Tris, 50% (v/v) propylene glycol, 1.0 M NaCl, pH 7.4

## Instructions for use

- Pack the column.
- Equilibrate with 5 to 10 column volumes (CV) of the equilibration/wash buffer recommended in "Conditions for use" on page 1.
- Prepare and load the sample.
 

The sample loading volume depends on the concentration of the target molecule and the dynamic binding capacity of the resin. See "Specifications" on page 1.

  - Dissolve, dilute, or exchange samples into the equilibration buffer. This is particularly important for large samples (greater than 25% of the column volume).
  - Centrifuge and filter samples (0.22 or 0.45  $\mu\text{m}$ ) before injection.
- Wash with 5 to 10 CV of the equilibration/wash buffer recommended in "Conditions for use" on page 1, or until you see a stable baseline.
- Elute with 5 to 10 CV of the elution buffer recommended in "Conditions for use" on page 1, or until you see a stable baseline.
- Re-equilibrate with 5 to 10 CV of the equilibration/wash buffer recommended in "Conditions for use" on page 1, or until you see a stable baseline.
- Re-equilibrate in equilibration/wash buffer.
 

If the column will not be used immediately, store the resin in 20% ethanol at 4°C (39°F), stable for up to 1 year.

## Example application with CaptureSelect™ AAT affinity resin

Refer to [www.lifetechnologies.com/captureselect](http://www.lifetechnologies.com/captureselect) for additional examples.

Resin: AAT

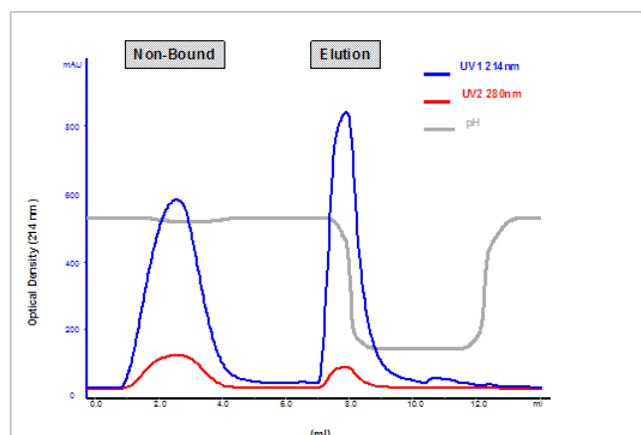
Sample: Human serum

Equilibration and wash buffer: PBS, pH 7.4

Elution buffer: 20 mM Tris, 2.0 M  $\text{MgCl}_2$ , pH 7.0

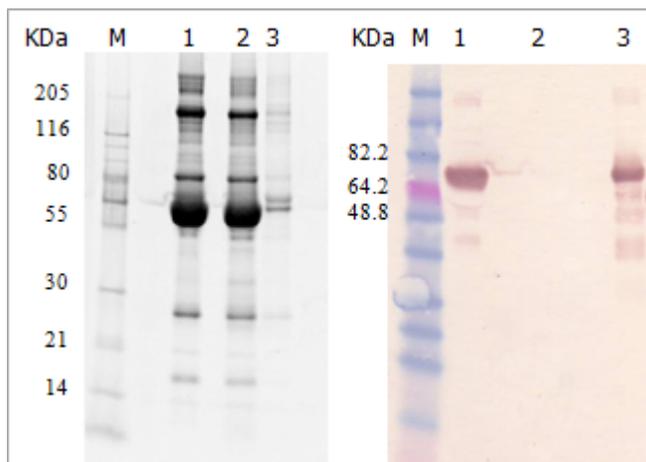
Flow: 150 cm/h

Starting material, non-bound fractions, and elution pool analysis: SYPRO™ Ruby gel-stained SDS-PAGE and Western blot



1 Cycle is:

- 10 column volumes (CV) equilibration
- Sample loading
- 10 CV wash out unbound sample
- 5 CV elution
- 10 CV re-equilibration



M: Molecular weight marker

1: Human Serum

2: Flow through fraction

3: Elution fraction ( $\text{MgCl}_2$ , pH 7.0)

Antibodies for Western blot:

Mouse anti human AAT

Goat anti Mouse AP Conjugate

## Ordering information

CaptureSelect™ Affinity Resin	Cat. no.
AAT (Human)	191287005 (5 mL) 191287010 (10 mL) 191287050 (50 mL)
ATIII (Human)	190317005 (5 mL) 190317010 (10 mL) 190317050 (50 mL)
C1-inhibitor (Human)	194340005 (5 mL) 194340010 (10 mL) 194340050 (50 mL)
C-tag	191307005 (5 mL) 191307010 (10 mL) 191307050 (50 mL) 1913070500 (500 mL)
C-tag pre packed columns	491307001 (five 1-mL columns) 491307005 (one 5-mL column)
Fibrinogen (Human)	191291005 (5 mL) 191291010 (10 mL) 191291050 (50 mL)
FSH	194318005 (5 mL) 194318010 (10 mL) 194318050 (50 mL)
hGH	190316005 (5 mL) 190316010 (10 mL) 190316050 (50 mL)
HSA	191297005 (5 mL) 191297010 (10 mL) 191297050 (50 mL)
Transferrin (Human)	191306005 (5 mL) 191306010 (10 mL) 191306050 (50 mL)

## Customer and technical support

Visit [thermofisher.com/techresources](http://thermofisher.com/techresources) for the latest in services and support, including:

- Worldwide contact telephone numbers
- Product support, including:
  - Product FAQs
  - Software, patches, and updates
- Order and web support
- Product documentation, including:
  - 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.lifetechnologies.com/captureselect](http://www.lifetechnologies.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 found on Life Technologies' website at [www.lifetechnologies.com/termsandconditions](http://www.lifetechnologies.com/termsandconditions). If you have any questions, please contact Life Technologies at [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

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

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