

Capto adhere in ReadyToProcess colum

Product Information

Cat#No# Ca-282P

Product Overview

These ReadyToProcess chromatography columns are prepacked with Capto adhere chromatography resin and are excellent for intermediate purification polishing and purification after protein A capture. ReadyToProcess columns are validated high-performance bioprocessing columns that are supplied prepacked and ready for use.

Characteristic

Wide operational window of pH and conductivity.

High capacity and productivity in flow-through mode.

Two-step chromatographic process with protein A affinity, saves time and cuts operating costs.

No cross contamination.

Removes contaminants to formulation levels.

Applications

For manufacturing of biopharmaceuticals for clinical phase I and II studies. Depending on the scale of operations, they can also be used for full-scale manufacturing, as well as for preclinical studies.

Maximum operating pressure

3 bar [0.3 MPa] (44 psi)

Metal ion capacity

0.09 to 0.12 mmol Cl⁻ /mL resin

Matrix

Highly cross-linked agarose, spherical

Average particle size

~ 75 µm

Recommended column height

Capto adhere in ReadyToProcess column

200 mm (7.87 in)

Chemical stability

Stable to commonly used aqueous buffers, 1 M acetic acid, 1.0 M NaOH.

pH working range

3 to 12

CIP stability

2 to 14

Autoclavable

17 min at 121°C in 0.05 M phosphate buffer, pH 7, 10 cycles.

Storage

4 to 30°C, 20% Ethanol

Evaluation of Packing

The best method of expressing the efficiency of a packed column is in terms of the height equivalent to a theoretical plate (HETP) and the asymmetry factor (As). These values are easily determined by applying a sample such as 1% acetone solution to the column. Sodium chloride can also be used as a test substance. Use a concentration of 0.8 M NaCl in water with 0.4 M NaCl in water as eluent.

Equilibration

After packing, and before a chromatographic run, equilibrate with loading buffer by washing with at least 5 bed volumes, or until the column effluent shows stable conductivity and pH values.

Regeneration

After each step, elute any reversibly bound material with low pH (e.g., 0.1 M acetate pH 3.0). Regenerate the resin by washing until the column effluent shows stable conductivity and pH values.

Cleaning-in-place

Precipitated hydrophobically bound proteins or lipoproteins: Wash with 1.0 M NaOH at 150 cm/h with reversed flow direction. Contact time 15 to 30 minutes.

Capto adhere in ReadyToProcess colum

Ionically bound proteins: Wash with 0.5 to 2 column volumes of 2 M NaCl with reversed flow direction.

Lipids and very hydrophobic proteins: Wash with 1-propanol 1 to 5% or isopropanol 5 to 30%. 1-propanol has a higher flash point and might be preferred in an industrial environment.

Nucleic acids: Wash with 0.1 M acetate pH 3 for 2 to 5 column volumes followed by equilibration buffer at neutral pH for 1 to 2 column volumes and wash 1.0 M NaOH at 150 cm/h with reversed flow direction.

Contact time 15 to 30 minutes.

Sanitization

To reduce microbial contamination in the packed column, sanitization using 0.5 to 1.0 M NaOH with a contact time of 1 hour is recommended. The CIP protocol for precipitated, hydrophobic bound proteins or lipoproteins removes bound contaminants and sanitizes the resin effectively.

Purification procedures

Adjust pH and conductivity of the Protein A pool to loading conditions for flow-through mode.

Equilibrate the column with loading buffer of the same pH and conductivity as the sample.

Apply sample onto the column. Collect the flowthrough fraction.

Wash out unbound material with loading buffer and collect together with the flowthrough fraction.

Regenerate column to elute bound material.

Clean-In-Place.

Re-equilibrate.

Pack size

2.5 L

Dimensions

126 x 200 mm

Column volume

2.5 L

Column i.d.

126 mm

Functional group



Capto adhere in ReadyToProcess colum

Multimodal strong anion exchanger

Tel: 1-631-559-9269 1-516-512-3133

Fax: 1-631-938-8127

Email: info@creative-biomart.com

45-1 Ramsey Road, Shirley, NY 11967, USA