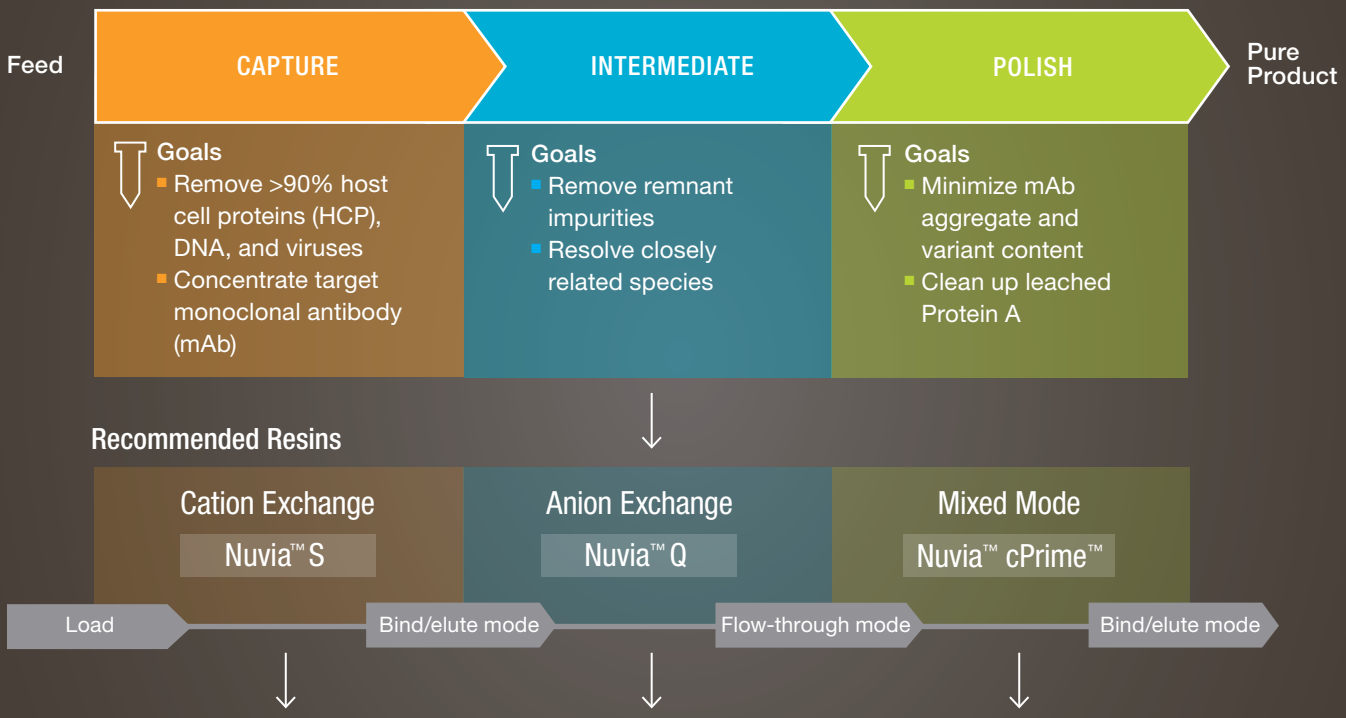
Quick Purification Strategy

Non-Affinity (Cation Exchange) Based Capture



Advantages

- Most of the DNA flows through while the target molecule is captured. This helps in target concentration from the feedstream
- Target molecule is in the flowthrough so less optimization and time are needed
- Can be used in a broad range of process conditions
- Efficient HCP removal

Results

	Feed	Capture	Intermediate	Polish
HCP, ng/mg	6.3 x 10^4	2.6 x 10^3	59	5.5
HC dsDNA, ng/mg	9.3 x 10^4	17	4.1	<0.008
Aggregate %	ND	ND	ND	<0.9

HC dsDNA, host cell dsDNA. ND, not determined.

Refer to experimental details on page 2.

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Monoclonal Antibody Purification Strategy Details

Capture Conditions

Step	Buffer	Column Volume	Flow Rate, cm/hr
Equilibration	20 mM CH_3COONa, 20 mM NaCl, pH 4.7 (buffer A)	15	300
Sample Loading	CHO cell culture supernatant diluted 1:4 with dH_2O; adjusted to pH 4.7 with 1 M phosphoric acid; clarified with 0.2 µm filter	85	300
Wash	Buffer A	15	300
Elution	20 mM sodium acetate, 200 mM NaCl, pH 4.9 (buffer B)	15	300

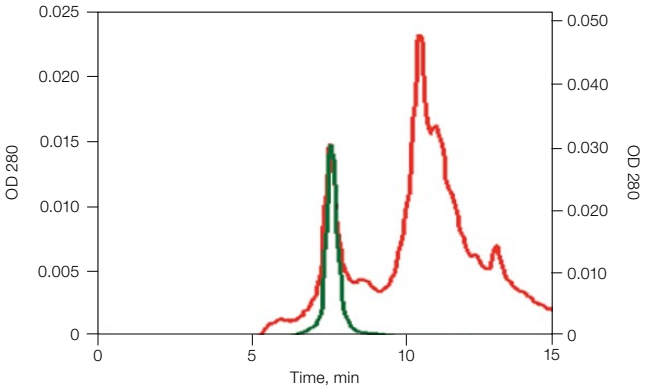
Intermediate Conditions

Step	Buffer	Column Volume	Flow Rate, cm/hr
Equilibration	10 mM sodium phosphate, 10 mM NaCl, pH 7.0 (buffer A)	10	300
Sample Loading	Eluate from Nuvia S Column adjusted to pH 7.0	10	300
Flow-Through Wash	Buffer A	25	300

Flow-through fractions collected.

Polish Conditions

Step	Buffer	Column Volume	Flow Rate, cm/hr
Equilibration	50 mM CH_3COONa, 125 mM NaCl, pH 5.0 (buffer A)	10	300
Sample Loading	Pooled fractions from Nuvia Q Column adjusted to pH 5.0	12	300
Wash	Buffer A	15	300
Elution 1	Salt gradient between buffer A and 50 mM sodium phosphate, 50 mM NaCl, pH 6.2 (buffer B)	15	300
Elution 2	Buffer B	5	300



Three-step purification of mAb1 with Nuvia cPrime Resin. SEC-HPLC comparison of cell culture supernatant (—) and purified mAb1 (—).

Resources

Download bulletin 6241 to get details about this workflow.

Visit **bio-rad.com/web/ProcessResins** to get technical details about the resins used in this workflow.

Visit **bio-rad.com/web/ProcessApplications** to see other applications in which these resins can be used.

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