

Got Purification Troubles?

Maximize Monomer Purity and Recovery during mAb Purification



The Challenge

Are mild pH conditions not eluting your antibody from your resin? Are harsh pH conditions causing dimers and aggregates to form and coelute with monomers? These issues could be leading to low monomer purity and recovery.



Purification Tip

Some resins bind target biomolecules very tightly, compromising productivity. Screening multiple resins helps you select the one that provides the right balance of purity and recovery at mild elution conditions.



Our Approach

We tested the efficiency of three commercial mixed-mode resins for the purification of monoclonal antibody (mAb) S (pI ~6.9) from a UNOsphere SUPra Resin eluate containing about 27% aggregated mAb. A solution containing ~10 mg of mAb S was injected onto 1 ml columns. Only Nuvia aPrime 4A Resin produced a mAb S elution at a mild pH of 6.0 with a monomer recovery of about 90% (Figure 1A). The two other resins showed elution of the antibody only at pH 4.0 and with significant contamination from dimers and aggregates (Figures 1B and 1C). Nuvia aPrime 4A Resin provides the optimal balance of simultaneous yield and purity of the target mAb. Refer to Bio-Rad bulletins 7142 and 7193 for details about Nuvia aPrime 4A Resin and this study.

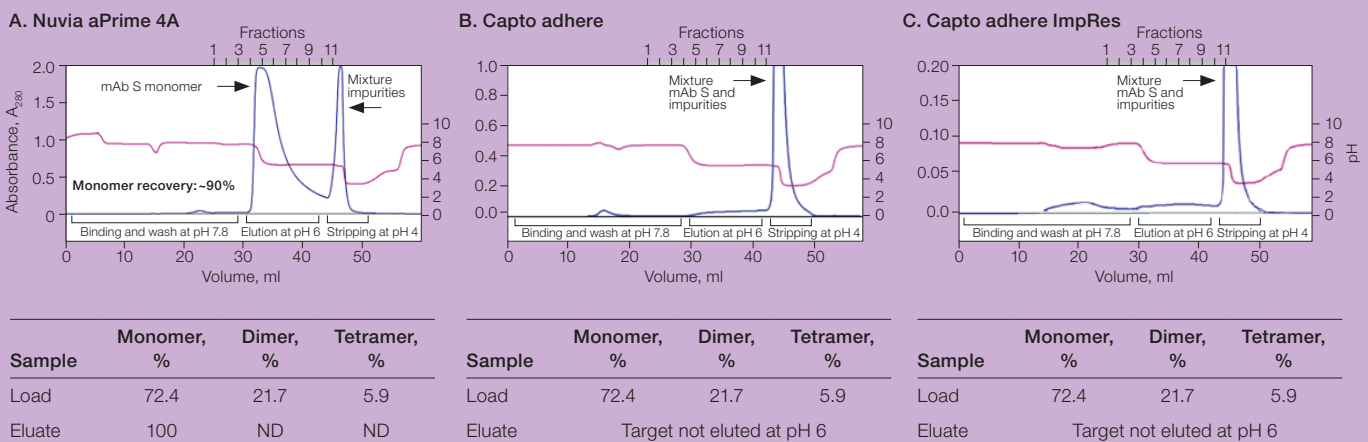


Fig. 1. Elutions of mAb S at pH 6.0. **A**, with Nuvia aPrime 4A Resin, monomer recovery reaches 90%; **B** and **C**, with Capto adhere and Capto adhere ImpRes Resins, mAb S is not eluted at pH 6.0. Bound mAb S is stripped from the column at pH 4.0 in a mixture with dimers and aggregates. OD 280 (—); pH (---).

Go to bio-rad.com/NuviaaPrime4A and explore the various features of Nuvia aPrime 4A Resin!



Innovative Products. Customized Solutions.

Nuvia aPrime 4A Resin

Nuvia aPrime 4A Resin delivers:

- Wide experimental design space
- Optimal product yield and recovery
- Single-step removal of multiple impurities

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Ordering Information

Catalog #	Description
12007397	Nuvia aPrime 4A Resin, 25 ml
12007396	Nuvia aPrime 4A Resin, 100 ml
12007379	Nuvia aPrime 4A Resin, 500 ml
12007380	Nuvia aPrime 4A Resin, 5 L
12007391	Nuvia aPrime 4A Resin, 10 L
12007411	Foresight Nuvia aPrime 4A Plates, 20 µl
12007392	Foresight Nuvia aPrime 4A Column, 1 ml
12007393	Foresight Nuvia aPrime 4A Column, 5 ml
12007394	Foresight Nuvia aPrime 4A RoboColumn Unit, 200 µl
12007395	Foresight Nuvia aPrime 4A RoboColumn Unit, 600 µl

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- Custom resins
- Column packing support
- Global technical support



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