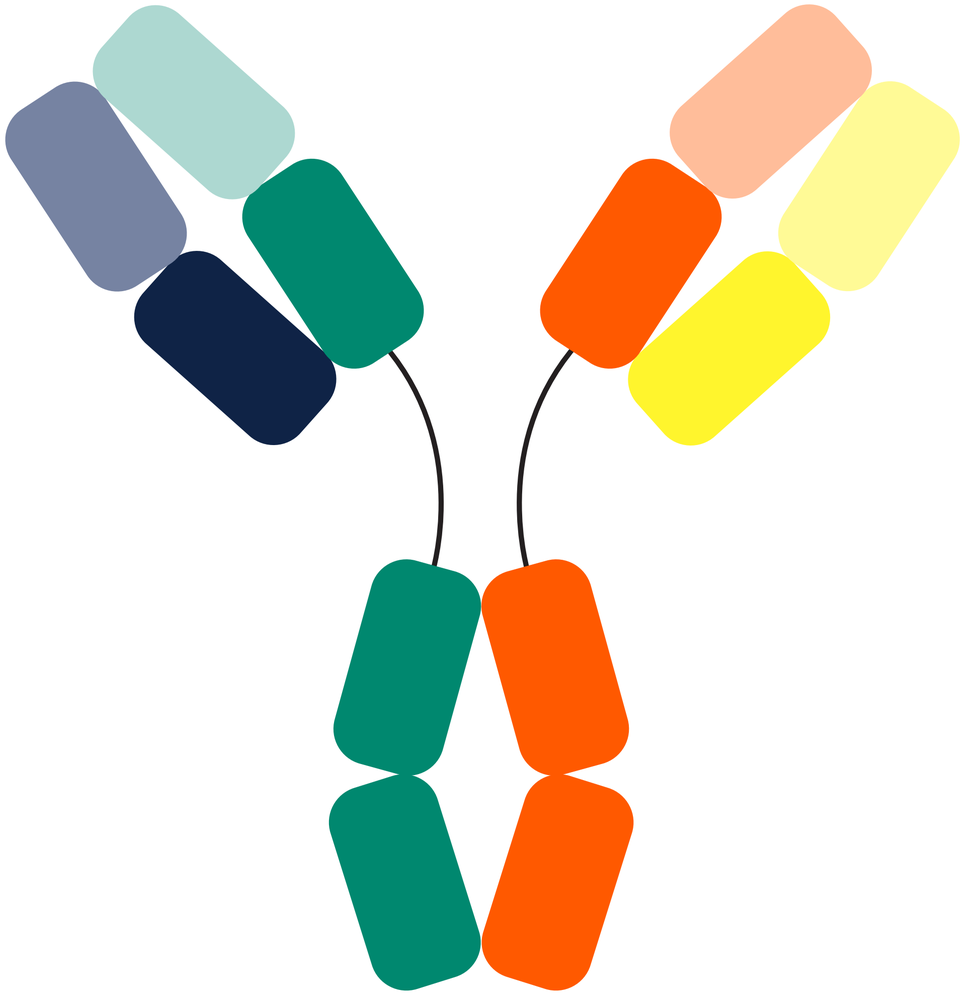
Select an affinity chromatography resin for your antibody

Monoclonal antibody (mAb)

Bispecific antibody (bsAb)

Antibody fragment



cytiva

Quick guide: affinity resins for mAbs, bsAbs, Fabs, and beyond

Development beyond traditional monoclonal antibodies (mAbs) is increasing, and today, we see antibody variants like multispecific and bispecific antibodies and antibody fragments.

In mAb processing, affinity chromatography is used to capture the target molecule based on specific interactions between the chromatography resin and the molecule. For traditional mAbs, protein A chromatography is used to capture antibodies. Depending on the structure of the target antibody and the impurity profile, other ligands, like protein L or variants of protein A, may improve purity. This guide helps you to select a capture resin based on the target molecule.

Click on the molecule that you would like to select resin for:

1 Monoclonal antibody (mAb)

2 Bispecific antibody (bsAb)

3 Antibody fragment

1. Affinity resins for traditional mAbs

Monoclonal antibody (mAb) → **MabSelect PrismA™ resin**
MabSelect PrismA X resin
MabSelect™ SuRe 70 resin

Process volumes, number of batches, clinical stage, and cleaning protocols influence which chromatography resin will be most cost-efficient and productive in a given application.

Our resin specialists are ready to provide a helping hand to select a resin based on productivity and provide access to resin samples.

Contact us



Note: Evaluation in experimental trials is always needed to determine the optimal resin. Affinity for Fibro PrismA adsorber will be the same as for MabSelect PrismA resin, the use for Fibro versus resin will depend on the process scenarios such as batch size, frequency of producing, clinical phase, etc.

2. Affinity resins for bsAb

bsAb

Domains not known

Screen/evaluate
a) MabSelect PrismA resin
b) MabSelect VH3 resin
c) MabSelect VL resin
d) MabSelect mild elution resin (elutes at ~pH 5)

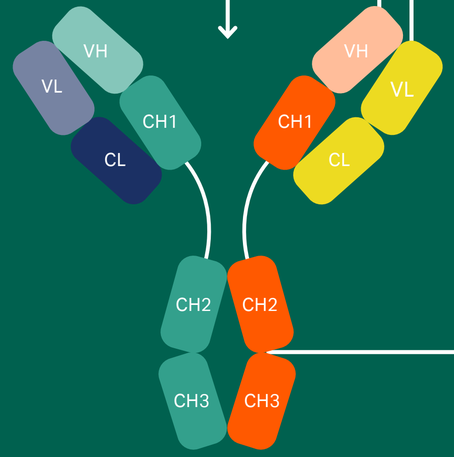
Symmetric

pH sensitive antibodies

MabSelect mild elution resin
(elutes at ~pH 5)

Asymmetric

Find differences between the different parts of the molecule to enable separation of target and impurities



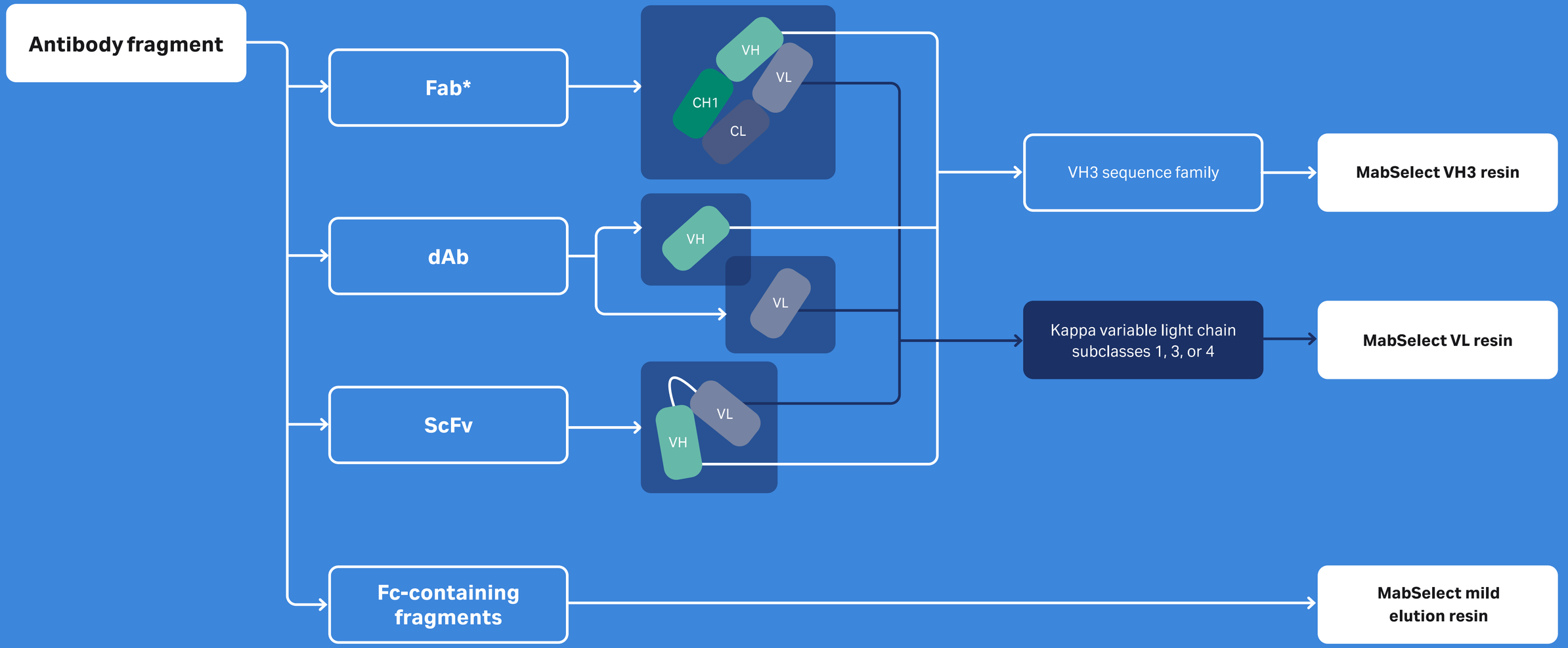
VH3 sequence family on one arm → **MabSelect VH3 resin**

Kappa light chain subclasses 1, 3, or 4 on one arm and lambda light chain or kappa light chain subclass 2 on the other → **MabSelect VL resin**

Fc chain knocked on one heavy chain → **MabSelect mild elution resin**

Note: Evaluation in experimental trials is always needed to determine the optimal resin. Affinity for Fibro PrismA adsorber will be the same as for MabSelect PrismA resin, the use for Fibro versus resin will depend on the process scenarios such as batch size, frequency of producing, clinical phase, etc.

3. Affinity resins for antibody fragments



* For bispecific fragments: differences between different parts of the molecules can be utilized to separate target and product related impurities.

Cytiva resins for antibody purification



MabSelect PrismA resin

MabSelect PrismA protein A resin has an optimized high-flow base matrix.

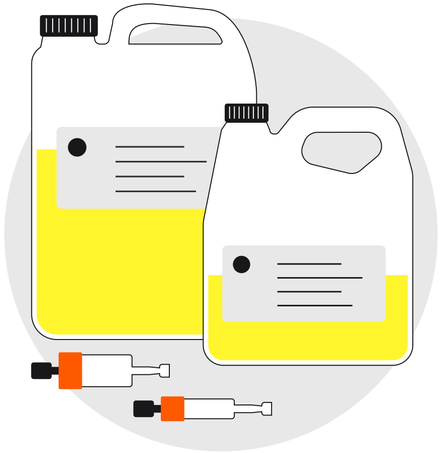
- Enhanced dynamic binding capacity allows high mass throughput in processing of mAbs and many bsAbs.
- Excellent alkaline stability enables efficient cleaning and sanitization using 0.5–1.0 M NaOH for durability and bioburden control.
- High throughput purification and productive processes.



MabSelect VH3 resin

MabSelect VH3 protein A resin interacts only with the variable heavy chain containing the VH3 sequence family. The traditional Fc interaction is removed.

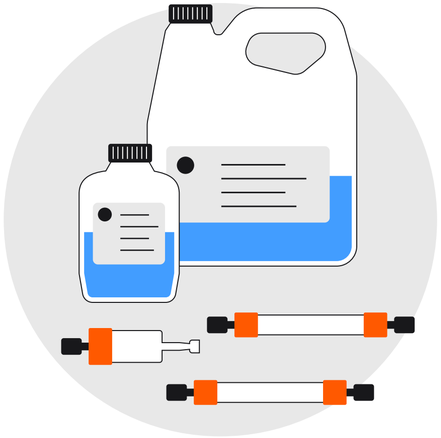
- High binding capacity for fragments and enhanced binding for bsAbs.
- High alkaline stability – stable when cleaned with 0.5 M NaOH, reducing risk for bioburden incidents and providing long resins life time.
- Provides good resolution for product-related impurities in the capture of asymmetric bsAbs with VH3 sequence family on one arm.



MabSelect VL resin

MabSelect VL resin has a redesigned protein L ligand.

- High dynamic binding capacity protein L resin for efficient capture of fragments and bsAbs containing a kappa light chain.
- Stable when cleaned with 0.1 M NaOH, reducing risk for bioburden incidents.
- Provides good resolution for product-related impurities in the capture of asymmetric bsAbs with kappa light chain subclasses 1, 3, and 4 on one arm.



MabSelect mild elution resin

MabSelect mild elution protein A resin is designed to allow antibodies to elute at elevated pH.

- Allows for elution at around pH 5 reducing acid induced aggregation and yield loss of target antibody.
- Stable when cleaned with 0.25 M NaOH for efficient cleaning.
- Specific Fc domain interaction enables removal of product related impurities from asymmetric bsAbs with the Fc domain knocked on one arm.

cytiva.com/chromatography

Cytiva and the Drop logo are trademarks of Life Sciences IP Holdings Corp. or an affiliate doing business as Cytiva. Capto, MabSelect, and MabSelect PrismA are trademarks of Global Life Sciences Solutions USA LLC or an affiliate doing business as Cytiva.

The Danaher trademark is a proprietary mark of Danaher Corporation.

© 2025 Cytiva

For local office contact information, visit cytiva.com/contact

CY35423-27Jun25-FL