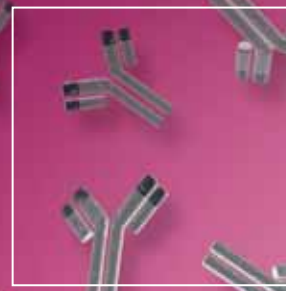




Agilent BioHPLC columns

For the characterization of monoclonal antibodies



No matter what you are looking for - find it with Agilent BioHPLC columns

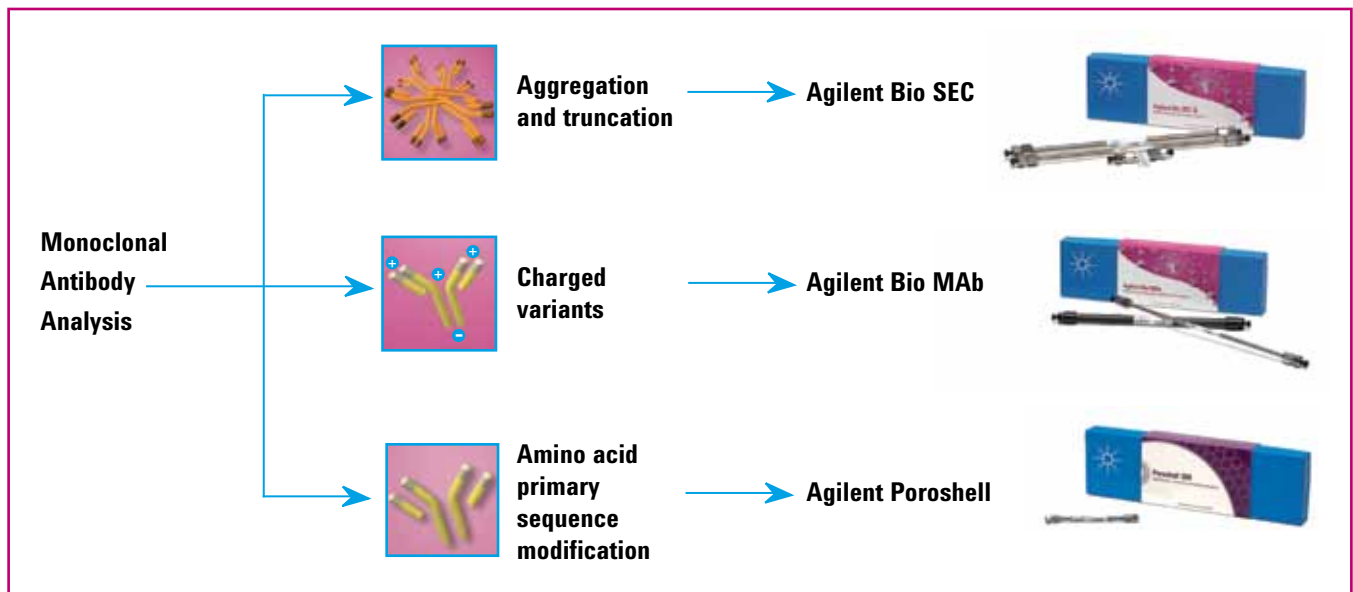
Agilent BioHPLC columns separate monoclonal antibodies with high resolution and reproducibility by size exclusion, ion-exchange, and reversed-phase chromatography.

When you need help with:

- New biological entities and stringent analytical methods, because you must adhere to regulatory demands for “Quality-by-Design”¹
- Biopharmaceutical QC and comprehensive characterization, because you require orthogonal HPLC techniques
- Product-related impurities and their identification, because you are dealing with oxidative or post-translational modifications such as deamidation, aggregation or truncation

Agilent BioHPLC columns are just what you’re looking for.

Which column should I use?



¹ For more information read the Agilent primer 5990-7001EN ICH Q6B NBE CBER Compliance for Biopharmaceutical Laboratories

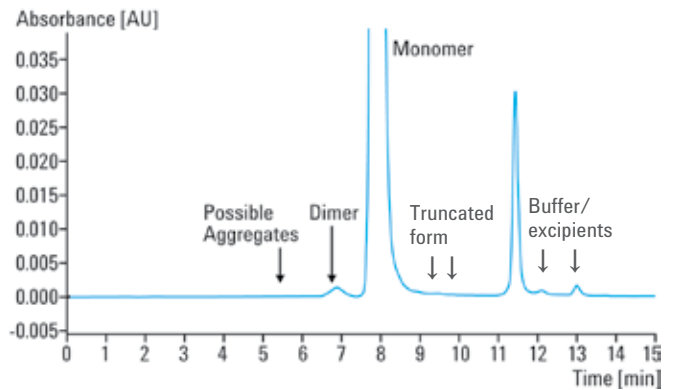




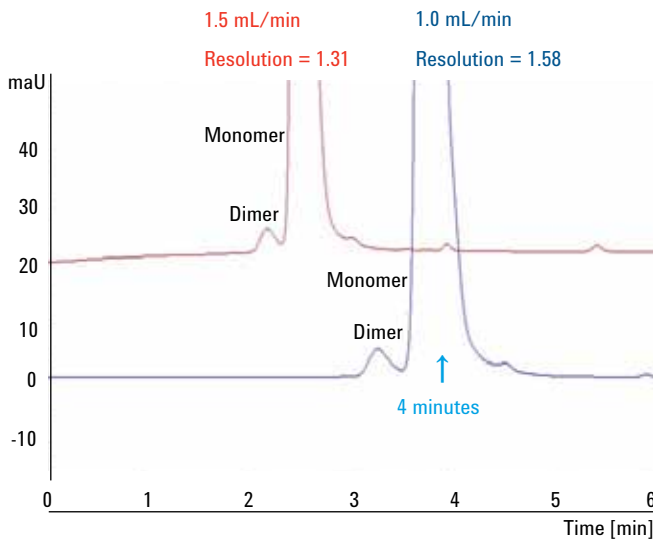
MAb dimers and aggregates can't hide from Agilent Bio SEC columns

- Inert particles reduce non-specific interactions and facilitate size exclusion separations
- Optimized for high-resolution recovery of aggregation and truncation
- Smaller 3- μm particle size increases peak efficiencies and reduces separation times, compared with conventional 5- μm and 10- μm materials

Column: Agilent Bio SEC-3, 300Å 7.8 x 150 mm
 Sample: MAb (2 mg/mL)
 Injection: 5 μL
 Flow rate: 1.0 and 1.5 mL/min (56 bar, 75 bar)
 Eluent: 150 mM sodium phosphate
 Detection: 220 nm

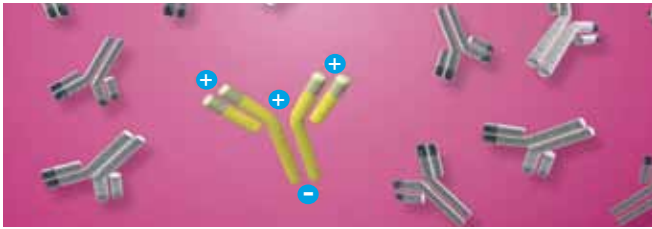


High performance aggregation analysis using the Agilent Bio SEC-3 300Å



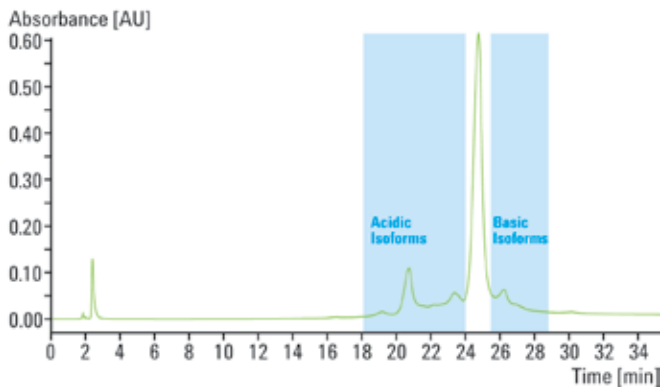
Separation of dimer from monomer using the Agilent Bio SEC-3 300Å 7.8 x 150 mm column in only four minutes

Agilent Bio SEC			
Description	Size (mm)	Particle Size (μm)	Part No.
Bio SEC-3, 300Å	7.8 x 300	3	5190-2511
For rapid separations			
Bio SEC-3, 300Å	7.8 x 150	3	5190-2512
For increased sensitivity (LC/MS)			
Bio SEC-3, 300Å	4.6 x 300	3	5190-2513
Bio SEC-3, 300Å	4.6 x 150	3	5190-2514



Find the charged variant using the Agilent Bio MAb column

- Smaller particle sizes including sub-2 μm for better resolution of acidic and basic charged isoforms, compared with 10- μm alternatives
- Also available in PEEK hardware for metal-free separations using the Agilent 1260 Infinity Bio-inert LC
- Polymeric weak cation exchange particles optimized for MABs



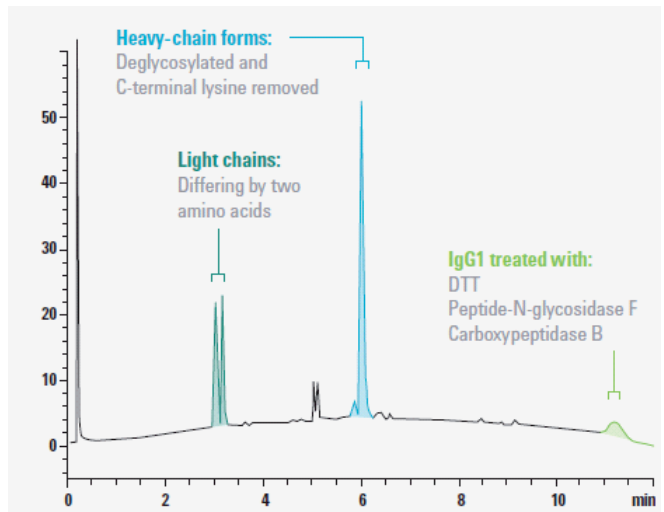
High resolution separation of acidic and basic charge variants using the Agilent Bio MAb NP10 column

Agilent Bio MAb			
Description	Size (mm)	Particle Size (μm)	Part No.
Bio MAb, stainless steel	4.6 x 50	1.7	5190-2401
Bio MAb, stainless steel	4.6 x 50	3	5190-2403
Bio MAb, stainless steel	4.6 x 250	5	5190-2405
For metal-free separations			
Bio MAb, PEEK	4.6 x 250	5	5190-2407
Bio MAb, PEEK	2.1 x 250	5	5190-2411



Identify post-translation modifications

- Poroshell columns with StableBond technology (C18, C8, and C3) for stability at low pH
- Poroshell 300Extend-C18 for unique separations and an additional selectivity choice at high pH



High resolution separations of antibodies using the Agilent Poroshell 300SB-C8 columns, with clear separation between heavy and light antibody chains of a monoclonal antibody treated with DDT, peptide-N-glycosidase F and carboxypeptidase B

Agilent Poroshell			
Description	Size (mm)	Particle Size (μm)	Part No.
Poroshell 300SB-C18	2.1 x 75 mm	5	660750-902
Poroshell 300SB-C8	2.1 x 75 mm	5	660750-906
Poroshell 300SB-C3	2.1 x 75 mm	5	660750-909
Poroshell 300Extend	2.1 x 75 mm	5	670750-902

Agilent solutions for BioHPLC offer maximum flexibility and versatility

For robust and reliable analysis of MABs, use Agilent BioHPLC columns with the Agilent 1260 Infinity Bio-inert Quaternary LC.



Agilent 1260 Infinity Bio-inert Quaternary LC

Additional application note resources

Characterization of monoclonal antibodies on the Agilent 1260 Infinity Bio-inert Quaternary LC by Size Exclusion Chromatography using the Agilent BioSEC columns.

Publication 5990-6414EN

Rapid HPLC Analysis of Monoclonal Antibody IgG₁ Heavy Chains Using ZORBAX Poroshell 300SB-C8.

Publication 5989-0070EN

Choosing a ZORBAX Poroshell Phase (C3, C8, or C18) for Fast Separation of Monoclonal Antibodies.

Publication 5989-0071EN

High Speed and ultra High Speed Peptide Mapping of Human Monoclonal IgG on ZORBAX Poroshell 300SB-C18, C8 and C3.

Publication 5989-0590EN

Additional column options

More column dimensions, pore sizes and particle sizes are available, for more details visit

www.agilent.com/chem/BioHPLC

Find out how to take your MAB analysis to the next level

Agilent BioHPLC products:

www.agilent.com/chem/BioHPLC

Liquid Chromatography and the Agilent 1200 Infinity Series:

www.agilent.com/chem/lc

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