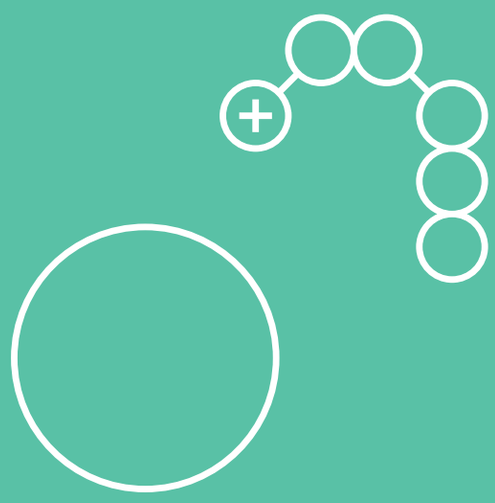
Bio-Works

WorkBeads
Ion Exchange Resins

WorkBeads – Next generation chromatography resins

WorkBeads™ are Bio-Works' advanced agarose- based resins, designed for purification of biomolecules.

They are produced in several different bead sizes and porosities for both preparative research and bioprocess manufacturing scales. This allows seamless scalability and reproducible results.



WorkBeads Ion Exchange Resins

WorkBeads resins for ion exchange chromatography (IEX) are designed for research and industrial scale purification of biomolecules by utilizing the difference in their charge.

These resins demonstrate high-resolution separation while giving low back-pressure to facilitate both capture and polishing purification applications in standard lab and bioprocess columns.

WorkBeads ion exchange resins are designed to provide superior purity and binding capacity. But don't take our word for it... the results speak for themselves.

Advantages of WorkBeads ion exchange resins:

- **High throughput and purity**
- **Reliable and reproducible results**
- **High chemical stability for efficient cleaning-in-place**

WorkBeads IEX resins exhibit consistently high Dynamic Binding Capacities

Dynamic Binding Capacity (DBC) refers to the amount of target molecule that binds to the resin under specified flow conditions before the resin is saturated and breakthrough occurs.

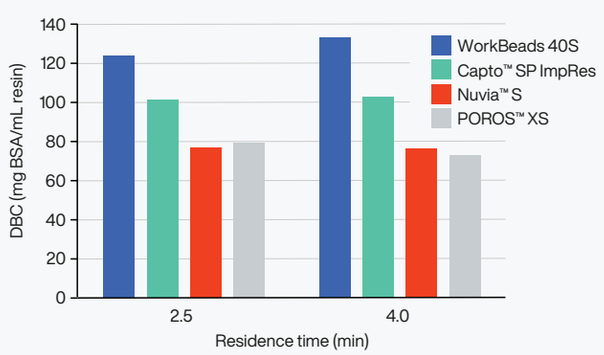
The DBC determines how much resin will be required to purify a specific amount of target molecule, making it an important characteristic to consider when selecting a resin.

Typical Dynamic Binding Capacities for WorkBeads IEX resins

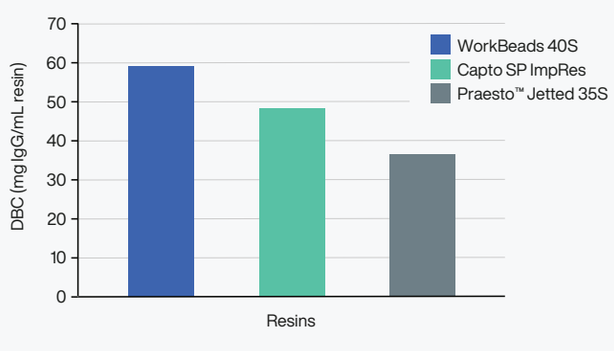
WorkBeads 40Q	50 mg BSA/mL
	45–60 mg ASO[1]/mL
WorkBeads 40S	70 mg IgG_1/mL
	130 mg BSA/mL
	160 mg peptide 39 aa/mL
WorkBeads 40 DEAE	40 mg BSA/mL
WorkBeads 40 TREN	50 mg BSA/mL
	10–15 mL cell lysate[2]/mL (DBC—impurities)

[1] Antisense oligonucleotides
[2] Depending on cell type and culturing condition

DBC (BSA) at different residence times



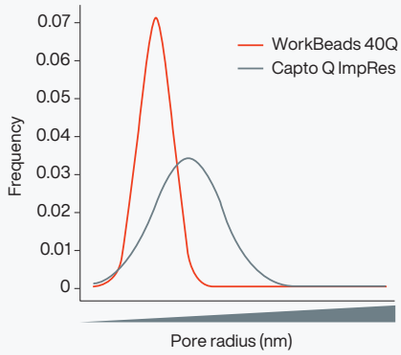
DBC (IgG) at 4 min residence time, pH 5.5



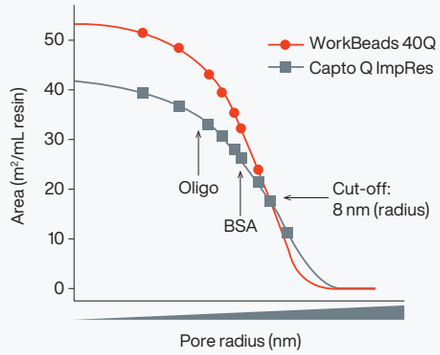
A narrow pore size distribution sets WorkBeads apart

The patented method used to manufacture WorkBeads produces beads with a narrow pore size distribution. This creates a higher available interaction area, resulting in higher binding capacities.

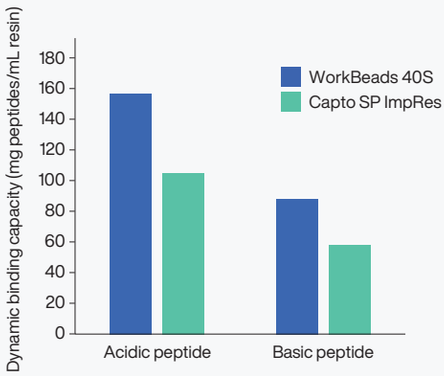
Pore size distribution



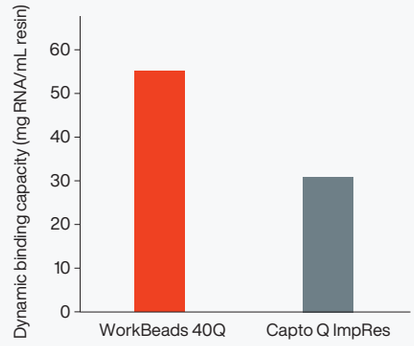
Surface area per volume resin



DBC of peptides: WorkBeads 40S *vs.* Capto SP ImpRes



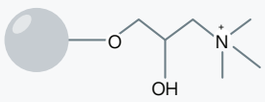
DBC of 45 nt RNA: WorkBeads 40Q *vs.* Capto Q ImpRes



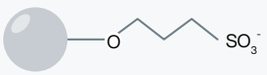
WorkBeads IEX resins are available with a variety of bead sizes and ligand types

WorkBeads IEX ligands

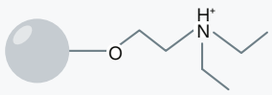
Strong anion
WorkBeads 40Q
WorkBeads 100Q



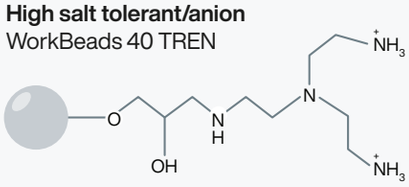
Strong cation
WorkBeads 40S
WorkBeads 100S



Weak anion
WorkBeads 40 DEAE



High salt tolerant/anion
WorkBeads 40 TREN



Spotlight on WorkBeads 40 TREN

TREN's unique selectivity makes it highly effective when used in flow through mode to remove host cell proteins, host cell DNA and viruses:

- 50–70% reduction in HCP
- 99% reduction in HCD
- 3.7 log removal of X-MuLV
- 4.9 log removal of MVM

Bio-Works

WorkBeads resins are available in a variety of formats for research, process development, scale-up and production. Bulk packages are available from 25 mL up to 10 L. GoBio prepacked formats enable turnkey operation in both lab and process-scale environments.

Free Consultation

Have a specialist walk you through the details.

Find your local representative on **bio-works.com/contact**

Scan the QR code for a quick way to contact us.

bio-works.com

Our headquarters is located in Uppsala, Sweden, with production and R&D departments in the same facility. This enables us to offer high flexibility and technical service. The company is certified according to the ISO 9001:2015 quality management system. Bio-Works supplies product information, quality documents, technical support, certificates, statements, vendor audits and regulatory support information.

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