

A 3D molecular model of a protein structure, showing a complex, multi-domain architecture with a textured, bumpy surface. The structure is rendered in shades of light green and white, set against a dark green background. The protein is shown in a perspective view, with one part of the structure appearing to be in the foreground and another part receding into the background.

Protein & Antibody Purification

Ordering

Orders may be placed by any of the following methods:

Web: www.nordicbiosite.com

E-Mail: order@nordicbiosite.com

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Protein & Antibody Purification

Protein purification as described in this folder is the process of isolating one or a few proteins from a complex mixture. This mixture could be homogenized tissue for native proteins, serum from antibody production, cell cultures used for protein expression etc. Purification could be performed from larger industrial quantities down to small amounts (mg and ug level). The main technique is usually chromatography.

Nordic BioSite offers a broad range of purification products regardless of the size of your purification project. The content in this folder gives you an overview of what we offer. It also covers the possibility of using magnetic beads for purification, and dialysis for removal of small molecules.

The listed products starts at the purification steps. In addition, upstream extraction equipment (homogenizers, centrifuges etc) or downstream analysis products (gel electrophoresis, specific antibodies, Bradford Assay etc) are offered by Nordic BioSite. A wide range of products not listed in this folder are available, do not hesitate to contact us or visit our website.

Nordic BioSite wants to facilitate your research and here you find products to perform purification of your protein of interest.

Never hesitate to contact us if you have any questions regarding the products we offer. *We are here to help you.*

Chromatography

Chromatography is a technique for separating components or solutes, of a complex mixture. The components to be separated are distributed between two phases: a moving fluid stream (mobile phase) and a contiguous stationary phase.

Size Exclusion Chromatography

Size exclusion chromatography is a chromatographic method in which molecules in solution are separated by their sizes. We provide cross-linked dextran, plain agarose beads and cross-linked agarose beads with various degree of crosslinking, different concentrations and bead size distributions.



Plain Beads	Bead Size	Cat #*	Cross Linked Beads	Bead Size	Cat #*
2% B AGAROSE	50-150µm	A-1020S-500	2% CL AGAROSE	50-150µm	A-1021S-500
4% B AGAROSE	20-50µm	A-1040F-500	4% CL AGAROSE	20-50µm	A-1041F-500
	50-150µm	A-1040S-500		50-150µm	A-1041S-500
	150-350µm	A-1040M-500		150-350µm	A-1041M-500
6% B AGAROSE	20-50µm	A-1060F-500	6% CL AGAROSE	20-50µm	A-1061F-500
	50-150µm	A-1060S-500		50-150µm	A-1061S-500
	150-350µm	A-1060M-500		150-350µm	A-1061M-500
8% B AGAROSE	50-150µm	A-1080S-500	8% CL AGAROSE	50-150µm	A-1081S-500
10% B AGAROSE	50-150µm	A-1100S-500	10% CL AGAROSE	50-150µm	A-1101S-500
	150-350µm	A-1100M-500		150-350µm	A-1101M-500

*The cat# indicates size 500 mL. Other sizes are also available.

We also provide high throughput beads for industrial process separations.

Affinity Chromatography

Rho1D4

Proteins tagged with the epitope sequence of the rho1D4 antibody can be purified with this affinity matrix.

Key features of the Rho1D4 System are:

- The high specificity of the antibody-epitope interaction
- The purified proteins can be used for functional studies, such as characterization of ligand binding and protein-protein interaction.
- Ideal solution for membrane protein research



Name	Size	Cat #
PureCube Rho1D4 Agarose	1 mL	143-33101
PureCube Rho1D4 Agarose	5 mL	143-33102
PureCube Rho1D4 Agarose	10 mL	143-33103
Rho Starter Set 1: PureCube Rho1D4 Agarose + Rho1D4 peptide	1 mL Agarose + 5 mg Peptide	143-33199
Rho1D4 Cartridge	1 x 1 mL	143-33301
Rho1D4 Cartridge	1 x 5 mL	143-33305

The Rho1D4 peptide is available in 5 mg or 25 mg format. Rho1D4 is also available for magnetic bead purification.

His-tag

Immobilized Metal Affinity Chromatography (IMAC) is based on the interaction between certain superficial protein residues with transition metal cations to form chelated complexes.

Nordic BioSite products for working in different conditions, bulk resins, pre-packed columns and cartridges.



Bulk Resins

Name	Size	Cat #
HIGH Density NICKEL*	25 mL	6BCL-QHNi-25
	100 mL	6BCL-QHNi-100
	500 mL	6BCL-QHNi-500
LOW Density NICKEL*	25 mL	6BCL-QLNi-25
	100 mL	6BCL-QLNi-100
	500 mL	6BCL-QLNi-500
NICKEL RAPID RUN**	5 ml	6NiRR-5
COBALT RAPID RUN**	5 ml	6CoRR-5

*Bulk resins charged with Cu, Zn or Co are also available in the formats above.

**The Rapid Run™ beads are specially designed for large scale His-tagged protein purifications. Also available in sizes of 25ml, 100ml, 500ml & 1000 ml. Bulk quantities available upon request.

Pre-packed cartridges

Nickel	Size	Cat #	Cobalt	Size	Cat #
NTA	1 mL	143-31301	NTA	1 mL	143-31601
	5 mL	143-31305		5 mL	143-31605
IDA	1 mL	143-30301	IDA	1 mL	143-30601
	5 mL	143-30305		5 mL	143-30605



We also offer Al, Cu, Fe, Zn, resins in pre-packed cartridges.

Pre-packed columns

Name	Size	Cat #
His-COLUMN HIGH Density NICKEL	8x1 ml	6BCL-QHNi-C8
His-COLUMN LOW Density NICKEL	5x5 ml	6BCL-QLNi-C8
His-XL COLUMN HIGH Density NICKEL	8x1 ml	6BCL-QHNi-C5
His-XL COLUMN LOW Density NICKEL	5x5 ml	6BCL-QLNi-C5
RAPID RUN NICKEL	1x1 ml	6RRFNi-Ctg1-X



The pre-packed columns above are also available for Zn, Co and Cu chelating resins.

GST

The GST tag is a 26 kDa protein that binds to glutathione-coupled agarose resins. This tag is considerably larger than the His tag and is often chosen to promote recombinant protein folding.

Name	Size	Cat #
GLUTATHIONE Agarose Resin	10 ml	4B-GLU-10
GLUTATHIONE Agarose Resin Starter Kit	25 ml of GLUTATHIONE Agarose resin and 3 Empty FPLC 8 ml columns.	4BGLU-FPLC8
Glutathione Cartridge	1x1 ml	143-32301
	5x1 ml	143-32303
	1x5 ml	143-32305
	5x5 ml	143-32307

Antibody

Affinity Chromatography is a very important technique in purification of monoclonal and polyclonal antibodies based on the affinity and specificity of Protein A or G to the Fc region of IgG from a variety of species.

Name	Size	Cat #
Protein A Agarose Resin	Bulk: 5, 25, 500mL	PA09-R5 / PA09-R25 / PA09-R100
	Columns 1 or 5mL	PA09-C1-1 / PA09-C5-1
	Test Kit*	PA09-K-01
Protein L Agarose Resin	Bulk: 2, 5 or 10mL	4BCLPL-2 / 4BCLPL-5 / 4BCLPL-10
	Test Kit*	4BCLPL-K-01
Protein G Agarose Resin 4 Rapid Run™	Bulk: 1, 5 25mL	4RRPG-1 / 4RRPG-5 / 4RRPG-25
	Test Kit*	4RRPG-K-01
Protein A Agarose Resin 4 Rapid Run™	Bulk: 5, 25, 500 mL	4RRPA-5 / 4RRPA-25 / 4RRPA-500
Protein A/G Agarose Resin 4 Rapid Run™	Bulk: 0.5, 1, 2mL	4RRPAG-05 / 4RRPAG-1 / 4RRPAG-2

* *Test Kit format with 100 uL of agarose in a pre-packed column. This Test Kit allows the user to pretest the degree of affinity of the antibody before larger scale use.

Biotinylated Biomolecules

Streptavidin is a tetrameric protein containing four biotin-binding sites. Recombinant streptavidin is immobilized on a highly cross-linked fine beaded agarose destined to bind biotinylated biomolecules.

Name	Size	Cat #
STREPTAVIDIN Rapid Run™ Fine	2 ml	6RRF-STV-2
	5 ml	6RRF-STV-5
	10 ml	6RRF-STV-10
Glutathione Cartridge	1x1 ml	143-32301
	5x1 ml	143-32303
	1x5 ml	143-32305
	5x5 ml	143-32307

Custom Resins

Protein-specific purification matrices, which enrich a protein via a specific interacting molecule, are available for custom order.

Affinity Coupling

Nordic BioSite offers Glyoxal and Aminoethyl Beads for affinity coupling in a variety of forms. Please contact Nordic BioSite or visit our website to view all the different options.

Chromatography Accessories

Nordic BioSite offers a complete selection of empty columns and cartridges to be used with our bulk resins.

Empty Mini Columns

This column serves as a tool for purification using small quantities of resin (100 - 250 μ l). It is a single-use format for centrifuge purifications.



Empty Spin Columns

This column serves as a tool for purification using small quantities of resin (50 - 100 μ l). It is a single-use format for purifications with syringe (luer lock system) or by centrifugation.



Empty Columns

Plastic Small Columns: these are specially designed for working with bed volumes of 100-200 μ l.

Plastic Columns: these are specially designed for working with bed volumes of 0.5-2.0 ml.

Plastic Columns XL: these are specially designed for working with bed volumes of 2-6 ml.



Empty Cartridges

The cartridges are a single-use cartridge suitable for FPLC and ÄKTA design™ chromatography systems. Size: 1 ML.



Empty FPLC Columns

We offer four different sizes of single-use columns suitable for FPLC and ÄKTA design™ chromatography systems.

Sizes: 8, 30, 45 and 80 ML.



Empty Syringe Cartridges

Empty Syringe Cartridges are a single-use solution that makes the purification process simple and rapid. With only a syringe and an easily packed 1ml cartridge of the appropriate resin you can begin recovering your purified protein in a very short time. Size: 1 ML.



Beads

Coated Magnetic Particles

Magnetic Particles are relatively uniform in size, spherical in shape and paramagnetic in nature. The paramagnetic nature of the particles allows them to be separated from the rest of the components using a magnet and easily resuspended when removed from the magnet. Nordic BioSite has coated magnetic particles with a variety of ligands such as streptavidin, avidin, neutravidin, protein A, protein G, biotin, or antibodies. All proteins are covalently coupled to the magnetic particles. The coated magnetic particles are supplied as a suspension in phosphate buffer, pH 7.4 with 0.02% sodium azide and available in sizes from 1 μm up to 10 μm depending on coating.

Below is an extract showing some of the different available coatings. Please note that more sizes are available. Most items also come in variants as smooth surfaces or cross-linked.

Cat #	Description	Concentration	Nominal Size	Package Size
VM-40-10	Avidin Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	10 mL
TM-40-10	Biotin Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	10 mL
MM-40-10	Goat anti-Mouse IgG (H&L) Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	10 mL
MMFc-40-10	Goat anti-Mouse IgG (Fc) Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	10 mL
PAM-40-5	Protein A Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	5 mL
PGM-40-5	Protein G Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	5 mL
SVM-40-10	Streptavidin Coated Magnetic Particles	1.0% w/v	4.0-4.5 μm	10 mL

Ferromagnetic particles coated with Streptavidin and various antibodies are available.

We also offer coatings with antibodies for His, GST and Rho1D4 tag purification. In addition, custom conjugated magnetic beads are available upon request.

Magnetic Separators

For Magnetic Beads we recommend EpiMag for 96 well high throughput magnetic bead purification. The EpiMag HT (96-Well) Magnetic Separator allows paramagnetic bead precipitation of liquid samples from various 96-well microplates. It can be used for isolation and purification of nucleic acids and proteins, immunoprecipitation, immunoassays (ELISA), cell sorting, and purification of biomolecules. With the included high throughput (96 Well) adapter (included), this magnetic separator can also be used for most PCR microplates and single 0.2 ml PCR tubes.



The SPHERO™ FlexiMag Separator (Cat. No.:FMS-1000) accommodates tubes ranging from 1.5mL microfuge tube to 200 mL tissue culture bottle. It uses interchangeable tube holders to secure different size tubes and bottles.



Dialysis

Dialysis offers the gentlest type of cleaning of proteins, DNA, RNA as well as Oligos. Dialysis is also a suitable method for desalting and re-buffering.

Nordic BioSite provides Xpress Micro Dialyzer, the worldwide fastest sample purification system for proteins, RNA and DNA. The Xpress Micro Dialyzer can be used in high throughput (simultaneous 96 samples) or for single samples. There is not any need for additional Lab equipment.

The Xpress Micro Dialyzer MD100 & MD300 are systems for sample volume up to 100 μ L and 300 μ L respectively. Xpress Mina Dialyzer MD1000 is for use with sample volume up to 1ml.

Name	Type	Cut Off	Cat #	Size
Xpress Micro Dialyzer MD100	Cartridge	3.5 kDa	232-40071	1 Cartridge
		6-8 kDa	232-40075	1 Cartridge
		12-14 kDa	232-40077	1 Cartridge
	Fingers in microtube	3.5 kDa	232-40782	12 Fingers in Microtube
		6-8 kDa	232-40783	12 Fingers in Microtube
		12-14 kDa	232-40784	12 Fingers in Microtube

The options above are also available for the MD300 system.
The MD1000 system is available for 3.5 kDa.

We can also provide other Dialysis solutions for volumes up to 20 mL.

Please contact Nordic BioSite or visit our website to view all options.



Dialyze single sample in a test tube or multiplex in plate format.

Tell us more about your research
– we can help you reach your goals

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