



**Dynabeads® for
Immunoprecipitation**

 invitrogen™

DYNAL®

invitrogen bead separations

Magnetic Separation Technology

Magnetic separation allows for small-scale purification of antibodies and immunoprecipitation of proteins with improved reproducibility and quality of proteins. The Dynabeads® act as a suspendable solid support that can be fixed by the use of a magnet.

Protocols can be scaled to match specific purposes and sample quantity. There is no need for pre-clearing or dilution, and no need for columns, filters, centrifuges, liquid chromatography or other complicated equipment.

Magnetic separation technology can be brought to play at many stages of your proteomic workflows. Isolated proteins are analyzed by mass spectrometry or any other downstream analysis/detection method.

The technology is:

- **Easy, flexible & scalable**
- **Gentle, robust & highly reproducible**
- **For manual & automated protocols**

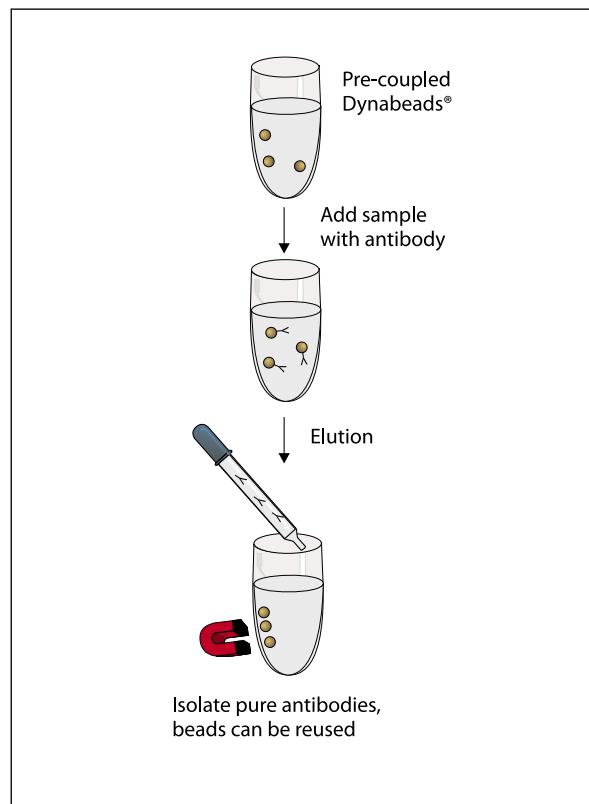


Fig. 1: Magnetic Antibody Purification

Dynabeads® pre-coupled with protein A, protein G or a secondary antibody facilitate small-scale purification of antibodies within minutes. The separated antibodies are eluted in a small volume, and the beads can be reused.

Antibody Purification

Small-scale magnetic purification of antibodies (fig. 1) is easy, rapid and efficient. Within minutes, you can capture pure and highly concentrated antibodies directly from samples such as saliva, ascites, serum and tissue culture or hybridoma supernatants. All you need is Dynabeads® coupled with protein A, protein G or a secondary antibody and a magnet.

Immunoprecipitation

Your captured primary antibody can be cross-linked to the Dynabeads® or used directly for affinity purification of pure target protein, peptides, protein complexes or other antigens (fig. 2).

The benefits of magnetic protein separation are reaped in a wide variety of applications, as documented in numerous publications. For details, protocols and references, please refer to: www.invitrogen.com/dynal

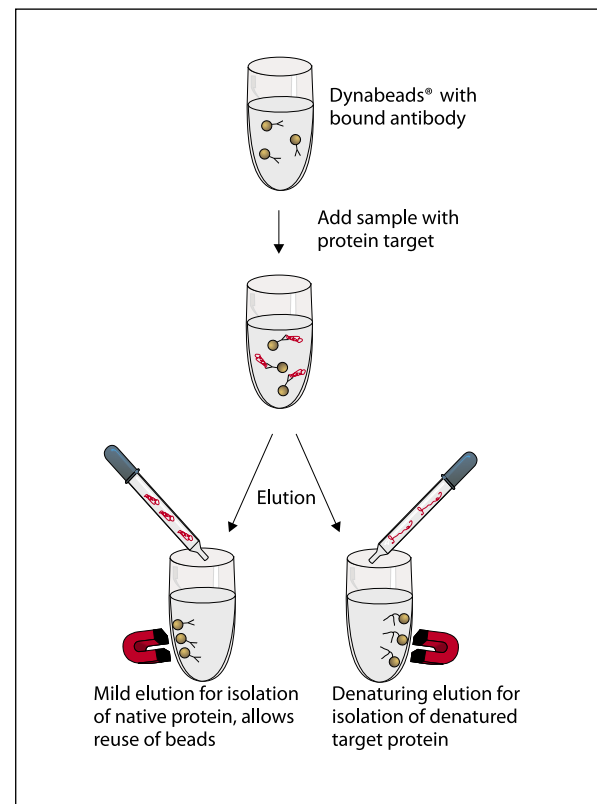


Fig. 2: Immunoprecipitation

Dynabeads® with captured antibody facilitate small-scale precipitation and co-precipitation within minutes. Target proteins/antigens are eluted in a small volume. Depending on your elution regime, the beads can be reused.

Protein Separation

Why go Magnetic?

In addition to simplifying your small-scale antibody separation and immunoprecipitations, Dynabeads® magnetic separation technology offers many benefits:

- **Gentle on your target**

Work with concentrated protein solutions in one tube throughout the isolation procedure. Large protein complexes and protein nativity will be preserved.

- **Highly efficient**

The simple procedure is completed within minutes with only a few handling steps, securing minimal loss of sample. Multiple reuse ensures cost-efficiency.

- **Easy to automate**

Superior magnetic handling properties and low sedimentation rate is ideal for automation. Dynabeads® are implemented on a wide variety of liquid handling platforms.

- **True reproducibility**

Dynabeads® are monodisperse, with an inert surface giving minimal non-specific binding. Optimal accessibility and binding kinetics combined with superior magnetic features secure highly reproducible results (fig. 3).

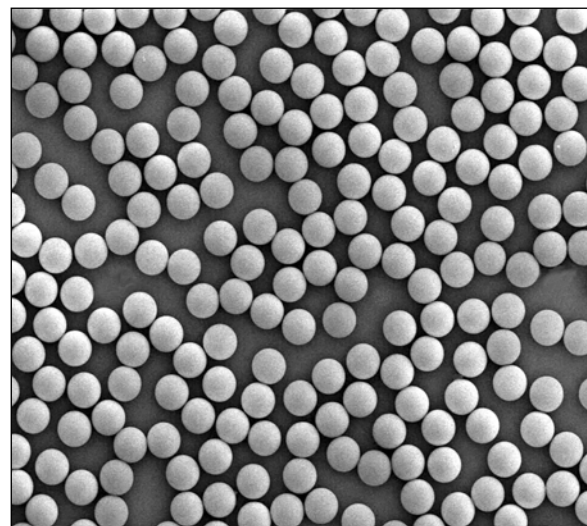


Fig. 3: Unparalleled Reproducibility

The monodispersity of the Dynabeads® offer benefits far beyond their unique visual appearance, ensuring maximum efficacy and reproducibility in your application.

Product Selection Guide

Dynabeads® pre-coupled with protein A, protein G or secondary antibodies are perfectly suited for protein purification. A wide selection of other Dynabeads® are available. Included in the table below are beads with tosyl as a specific surface chemistry and beads coupled with streptavidin. Your specific target protein/antigen, choice of antibody, type of application and separation strategy will determine which product will best apply.

	Dynabeads® Protein A Dynabeads® Protein G	Dynabeads® coupled with Sheep anti-Mouse IgG or Sheep anti-Rabbit IgG	Tosylactivated Dynabeads®	Streptavidin- coupled Dynabeads®
Antibody from species	Human, mouse, rat, bovine, dog, goat, guinea pig, horse, monkey, porcine, rabbit, sheep	mouse or rabbit (respectively)	Any species	Any species (biotinylated)
Antibody orientation on the beads	Fc binding	Random binding	Predominantly Fc binding	Random binding
Binding capacity (per ml beads)	250 µg human IgG	6-70 µg IgG	10-40 µg/ml	5-20 µg biotinylated Ig
Non-specific binding	Low	Low	Low	Low
Pure antibody needed for coupling	No	No	Yes	No
Cross binding needed	Yes, if elution of target alone	Yes, if elution of target alone	No	N.A.
Coupling time	≥ 10 minutes	≥ 30 minutes	≥ 16 hours	≥ 10 minutes

Products for Antibody Purification and Immunoprecipitation

Product	Concentration	Volume	Cat. No.
Dynabeads® Protein A Magnetic beads with coupled recombinant protein A	~ 40 mg/ml	1 ml 5 ml	100-01D 100-02D
Dynabeads® Protein G Magnetic beads with coupled recombinant protein G	~ 30 mg/ml	1 ml 5 ml	100-03D 100-04D
Dynabeads® M-280 Sheep anti-Mouse IgG Magnetic beads with coupled sheep polyclonal antibodies	10 mg/ml	2 ml 10 ml	112-01D 112-02D
Dynabeads® M-280 Sheep anti-Rabbit IgG Magnetic beads with coupled sheep polyclonal antibodies	10 mg/ml	2 ml 10 ml	112-03D 112-04D
Dynal MPC®-S		Unit	120-20D
Dynal MPC®-96S		Unit	120-27

Related Products

Product	Concentration	Volume	Cat. No.
Dynabeads® M-280 Tosylactivated Hydrophobic, 2,8 µm magnetic beads with tosyl groups	30 mg/ml 30 mg/ml 100 mg/ml	2 ml 10 ml 10 ml	142-03 142-04 301-01
Dynabeads® MyOne™ Tosylactivated Hydrophobic, 1 µm magnetic beads with tosyl groups	100 mg/ml	2 ml 10 ml 100 ml	655-01 655-02 655-03
Dynabeads® M-280 Streptavidin Hydrophobic, 2,8 µm magnetic beads with coupled recombinant streptavidin	10 mg/ml	2 ml 10 ml 100 ml	112-05D 112-06D 602-10
Dynabeads® MyOne™ Streptavidin T1 Hydrophobic, 1 µm magnetic beads with coupled recombinant streptavidin	10 mg/ml	2 ml 10 ml 100 ml	656-01 656-02 656-03

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