



Oncology research

Every drop speaks volumes

Explore solutions to help advance your liquid biopsy oncology research from discovery to diagnostic development

Liquid biopsy biomarker isolation for oncology research

Thermo Fisher Scientific offers robust oncology research solutions for liquid biopsy applications, with targeted magnetic bead–based sample preparation technologies for isolation of nucleic acid, circulating tumor cell (CTC), exosome, and protein biomarkers—enabling reproducible and reliable downstream analyses.



Nucleic acid isolation and target enrichment

Nucleic acids in liquid biopsy samples offer crucial insights into early cancer detection, treatment response, and the development of personalized therapies. Effective isolation techniques are essential to maximize the value of these samples and to support clinical workflow development. Applied Biosystems™ MagMAX™ kits and Invitrogen™ Dynabeads™ streptavidin magnetic beads for nucleic acid isolation and target enrichment enable scientists to:

- Overcome low concentrations of target isolates
- Manage limited sample volumes
- Simplify tedious sample processing
- Enhance the reproducibility and accuracy of biomarker analysis studies
- Reduce noise for specific capture

Featured isolation kits and target enrichment beads

Product	Cat. No.
MagMAX Cell-Free DNA Isolation Kit	A29319
MagMAX Cell-Free Total Nucleic Acid Isolation Kit	A36716
MagMAX Sequential DNA/RNA Kit	A65309
MagMAX FFPE DNA/RNA Ultra Kit	A31881
Dynabeads Streptavidin for Target Enrichment	65605D, 65606D, 65607D
Dynabeads M-270 Streptavidin	65305, 65306



MagMAX nucleic acid isolation kits



Circulating tumor cell isolation

Analyzing CTCs from liquid biopsies is important in cancer research for disease monitoring studies and the development of personalized medicines. With such low numbers of CTCs typically in circulation, highly sensitive methods are necessary to capture and detect them down to a single cell. Invitrogen™ Dynabeads™ magnetic beads for CTC isolation enable:

- Positive, negative, and depletion isolation methods suitable for diverse workflow needs
- Maintenance of cell viability
- Efficient separation and reliable downstream analyses

Featured CTC isolation beads

Product	Cat. No.
Dynabeads Epithelial Enrich	16103D, 16102
Dynabeads MyOne CD45 Leukocyte Depletion	11170D, 11171D
Dynabeads CD3	11152D, 11151D
Dynabeads CD4	11146D, 11145D
Dynabeads CD8	11148D, 11147D
Dynabeads CD14	11150D, 11149D
Dynabeads CD15	11138D, 11137D



Exosome isolation, enrichment, and detection

Exosomes have emerged as a source of valuable information for research into metastatic cancers. Isolation and analysis of exosomes and their subpopulations can be challenging due to their small size and specificity. Targeted and sensitive isolation, detection, and analysis techniques can help address these challenges. Using Dynabeads magnetic beads for exosome isolation helps to:

- Reduce risk of low yield
- Maintain exosome integrity
- Improve reproducibility and consistency of isolation, characterization, and detection

Featured exosome isolation products

Product	Cat. No.
Dynabeads Intact Virus Enrichment	10700D, 10701D
Total Exosome Isolation Kit (from plasma)	4484450
Total Exosome Isolation Reagent (from serum)	4478360
Exosome-Streptavidin Isolation/Detection Reagent	10608D
Exosome-Human EpCAM Isolation Reagent (from cell culture)	10618D



Dynabeads magnetic beads



Protein isolation

Protein analysis in oncology research can support the identification of therapeutic targets and development of diagnostic and prognostic tools. Reliable protein isolation, leveraging modern technologies, is essential to achieve the purity and yield needed for accurate downstream protein analysis. Dynabeads, Invitrogen™ DynaGreen™, and Thermo Scientific™ Pierce™ magnetic beads for protein isolation facilitate:

- Enhanced reproducibility
- High purity and protein yields
- Improved specificity with targeted and customizable immunoprecipitation methods

Featured immunoprecipitation products

Product	Cat. No.
Dynabeads Protein A for Immunoprecipitation	10001D, 10002D, 10008D
Dynabeads Protein G for Immunoprecipitation	10003D, 10004D, 10009D
DynaGreen Protein A/G Magnetic Beads	80104G, 80105G, 80106G
DynaGreen CaptureSelect Anti-IgG-Fc (Multi-Species) Magnetic Beads	80107G, 80108G, 80109G
Pierce Protein A/G Magnetic Beads	88802, 88803
Dynabeads Antibody Coupling Kit	14311D
Dynabeads streptavidin	thermofisher.com/streptavidindynabeads



Dynabeads and DynaGreen magnetic beads; Pierce magnetic beads

Automate your liquid biopsy biomarker isolation

Help maximize efficiency and reproducibility with Thermo Scientific™ KingFisher™ automated purification systems



**KingFisher
Apex system**



**KingFisher
Duo Prime system**



**KingFisher
Flex system**



**KingFisher
Presto system**

As a leading supplier of world-class reagents and instrumentation, we also offer tailored manufacturing solutions for companies developing next-generation products and services. Our experienced OEM and commercial supply team is prepared to support your unique needs, from concept to commercialization.



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