Type	Properties	Applications	Variations
Carboxylate-modified magnetic beads	• Can associate with nucleic acids for direct capture. • Surface suitable for conjugation through covalent bonding. • Can capture molecules containing amino groups.	Conjugation or direct binding applications: • Covalent attachment • Affinity purification and pull-down • Nucleic acid isolation and purification • NGS size selection	High-speed version available
Amine-blocked magnetic beads	• Surface suitable for conjugation through covalent bonding. • Non-surfactant, non-protein-blocked surface. • Low non-specific binding.	Conjugation applications, similar to carboxylate-modified beads.	High-speed version available
Oligo(dT)-coated magnetic beads	• Hybridizes with mRNA poly-A tails. • High colloidal stability.	mRNA binding applications: • mRNA extraction and purification • RT-PCR • cDNA library construction • Subtractive hybridization • NGS (RNA sequencing)	•
Streptavidin-coated magnetic beads	• Binds biotinylated ligands such as proteins, nucleic acids, and peptides. • Covalently bound streptavidin coating. • Fast reaction kinetics. • Low non-specific binding. • High throughput and precision.	Immunoassay and molecular biology applications: • Sample preparation and assay development for genomics and proteomics.	High-speed version available Biotin binding ranges: • 2500 to 3500 pmol/mg • 3500 to 4500 pmol/mg 4500 to 5500 pmol/mg
Streptavidin-blocked magnetic beads	• Binds biotinylated ligands such as proteins, nucleic acids, and peptides.	High-specificity biotin binding applications	High-speed version available

	• Non-surfactant, non-protein-blocked surface. • Lower non-specific binding than streptavidin-coated beads via additional blocking of non-specific binding sites.	• Molecular and immunodiagnostics • NGS library preparation	
NeutrAvidin™-coated magnetic beads	• Binds biotinylated ligands such as proteins, nucleic acids, and peptides. • Fast reaction kinetics. • Low non-specific binding. • High throughput and precision.	Alternative to Streptavidin in immunoassay and molecular biology applications: • Sample preparation and assay development for genomics and proteomics.	High-speed version available Biotin binding range: • 3500 to 4500 pmol/mg
Protein A/G magnetic beads	• Binds IgA and IgG proteins • Coating based on IgA/IgG fusion protein. • Broad binding capabilities.	Antibody isolation applications: • Affinity purification and pull-down • Immunoprecipitation	•
Silica-coated magnetic beads	• Reversibly binds nucleic acids based on salt concentration. • Monodisperse particles with narrow size ranges of 400 µm or 700 µm.	Applications with low sample amounts • Nucleic acid extraction for molecular diagnostics applications such as qPCR.	•
Mag-sepharose	• Broad range of ligand options. • Porous, providing greater surface area than other magnetic beads.	Convenient alternative to sepharose columns, with protein purification applications including: • Affinity purification or capture • Immunoprecipitation	•

منبع :

cytivalifesciences.com/en/us/news-center/magnetic-beads-a-simple-guide-10001