TrueBlot® Biotin Magnetic Beads

Rockland's TrueBlot® Magnetic Beads are uniform, non-aggregating, super-paramagnetic beads consisting of a ferric oxide core functionalized with various silane groups. The super-paramagnetic nanoparticles are coupled with a biomolecule, such as Biotin, and are specifically designed, tested and quality controlled for magnetic separation, isolation and purification of avidin and streptavidin-labeled components using manual or automatic platforms. Biotin magnetic beads are stable, pre-blocked beads with high binding capacity that provide rapid and efficient biomolecule purification from complex samples.

I. PRODUCT CONTENTS

Contents	Catalog Number	Size
TrueBlot® Biotin Magnetic Beads	B000-18-2	2mL
TrueBlot® Biotin Magnetic Beads	B000-18-5	5mL

II. PRODUCT CHARACTERISTICS

Bead Mean Diameter	5µm
Bead Concentration	5mg/mL
Binding Capacity	≥ 30µg streptavidin/mg of beads

III. STORAGE AND STABILITY CONDITIONS

The Biotin Magnetic Beads should be stored in the refrigerator (2-8°C). The beads must be allowed to reach room temperature (20-25°C) before use. Do not freeze, dry, or centrifuge the particles as it may result in loss of binding activity and/or aggregation. Do not use after the printed expiration date.

IV. INTRODUCTION

TrueBlot® Biotin magnetic beads can be used in immunoassays or molecular diagnostics when avidin, streptavidin is bound to proteins or oligonucleotides. Biotin magnetic beads can also be used in nucleic acid isolation, protein purification, and cell separations. Biotin magnetic particles are incubated with the avidin or streptavidin labeled solution and then separated by magnets. After the unbound particulates are washed from the particles, the bound avidin is eluted from the particles using the elution buffer. The particles are then magnetically separated from the eluted solution, which is removed manually.

V. SAFETY INSTRUCTIONS

Reagent is stored in Phosphate buffered saline, tween detergents, and 0.05% sodium azide as preservatives. Sodium azide may react with lead or copper plumbing to produce metal azides which might cause explosion. To prevent azide accumulation in plumbing, flush with copious amounts of water immediately after disposal.

VI. REQUIRED EQUIPMENT AND REAGENTS

- Magnetic Separators (Cat #'s TMS-15-50; TMS-06; TMS-32)
- Mixer for tilting and rotation of tubes
- Binding/wash buffer: TBS-0.05% Tween 20 or PBS-0.05% Tween 20
- Elution Buffer: 0.1 M Glycine pH 2.0
- Neutralization Buffer: 1M Tris-HCl pH 8.0
- 1.5 mL or 2.0 mL Eppendorf or microcentrifuge vials
- Timer
- Distilled or deionized water

VII. GENERAL CONSIDERATIONS

- Do not centrifuge, dry or freeze the magnetic beads, as this can cause the beads to aggregate and/or lose binding capability.
- Prior to use, ensure that the product has not expired by verifying the expiration date on the label.
- Ensure that reagent bottle caps are replaced tightly after each use to prevent drying of reagents.
- Use a mixer that provides tilting and rotation of the tubes to ensure that the beads do not settle in the tube.
- Avoid air bubbles (foaming) during pipetting.
- Use recommended volume of beads.
- Carefully follow the recommended volumes and incubation times.
- Mistakes in handling the test can cause errors. Possible sources for such errors are inadequate storage conditions of the test reagents, incorrect pipetting sequence or inaccurate volumes of the reagents, insufficient incubation times, and/or insufficient magnetic separation times.

VIII. ANTIBODY ISOLATION PROTOCOL

- Add 100µL (0.5mg) of beads to 1mL of binding buffer in each tube to wash beads.
- Magnetically separate using a magnetic separator for 2 minutes or when the supernatant is clear.
- Remove the supernatant and wash once more by adding 1mL of binding buffer.
- Magnetically separate the beads using a magnetic separator for 2 minutes or when the supernatant is clear. Remove the supernatant.
- Re-suspend particles by adding 450µL of binding buffer.
- Add 50µL of serum or cell culture supernatant to the beads.

  Note: Sample volume can be modified according to user preference. If the sample volume is < 500µL, dilute it to a final volume of 500µL with Binding/Wash Buffer.
- Gently mix using vortex or rotator for 30 minutes.
- Magnetically separate using a magnetic separator for 2 minutes or until the supernatant is clear.
- Remove supernatant and wash with 0.5mL Binding/Wash buffer to remove unbound proteins.

- Magnetically separate using a magnetic separator for 2 minutes or until the supernatant is clear.
- Remove supernatant and wash with 0.5mL Binding/Wash buffer.
- Add 10µL of elution buffer to beads and mix well.
- Incubate at Room Temperature for 10 minutes with occasional gentle mixing or vortexing.
- Separate for 2 minutes and remove the eluent to a new tube containing 15µL of neutralization buffer.

IX. RELATED PRODUCTS

General Use Magnetic Beads	Catalog #	Size (ml)
TrueBlot® Anti-mouse IgG Magnetic beads (5 mg/ml)	00-1811-20 00-1811-50	2 5
TrueBlot® Anti-rabbit IgG Magnetic beads (5 mg/ml)	00-1800-20 00-1800-50	2 5
TrueBlot® Anti-Goat IgG Magnetic Beads (5mg/ml)	00-1844-20 00-1844-50	2 5
TrueBlot® Protein G Magnetic Beads (5mg/ml)	PG00-18-2 PG00-18-5	2 5
TrueBlot® Protein A Magnetic Beads (5mg/ml)	PA00-18-2 PA00-18-5	2 5
TrueBlot® Streptavidin Magnetic Beads (5mg/ml)	S000-18-2 S000-18-5	2 5

Magnetic Bead IP/Purification Kits	Catalog #	Size (tests)
Trueblot® Protein A Magnetic Beads IP/Co-IP Kit	KBA-PA00-18	20
Trueblot® Protein G Magnetic Beads IP/Co-IP Kit	KBA-PG00-18	20
Genomic DNA Magnetic Beads Purification Kit	KOA0912	100

Magnetic Separators	Catalog #	Size (tests)
15/50 ml Tube Magnetic Separator	TMS-15-50	6/3
Multi-6 Microcentrifuge Tube Magnetic Separator	TMS-06	6
Multi-32 Microcentrifuge Tube Magnetic Separator	TMS-32	16