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Protocol

# TrueBlot® Streptavidin 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 Streptavidin, and are specifically designed, tested and quality controlled for magnetic purification of biotin-labeled components using manual or automatic platforms. Streptavidin magnetic beads are stable, pre-blocked beads with high binding capacity that provide rapid and efficient biomolecule purification from complex samples.

## Compatible Products

| Product | Size | Item No. |
|---|---|---|
| TrueBlot® Streptavidin Magnetic Beads | 2 mL | S000-18-2 |
| TrueBlot® Streptavidin Magnetic Beads | 5 mL | S000-18-5 |

**Note:** The Streptavidin Magnetic Particles 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 they may result in loss of binding activity and aggregation. Do not use after the printed expiration date.

## Product Characteristics

| | |
|---|---|
| Bead Mean Diameter | 0.5 µm |
| Bead Concentration | 5 mg/mL |
| Binding Capacity | ≥ 60 µg biotin/mg of beads |

## Reagents & Equipment Required

| Product |
|---|
| 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: 1 M Tris HCl, pH 8.0 |
| Magnetic Separators (#MS-15-50; TMS-06; TMS-32) |
| Mixer for tilting and rotation of tubes |
| 1.5 mL or 2.0 mL Eppendorf or microcentrifuge vials |
| Distilled or deionized water |

## Procedure for Antibody Isolation

1. Add 100 µL (0.5 mg) of beads to 1 mL of binding buffer in each tube to wash beads.
2. Magnetically separate the beads using a magnetic separator for 2 minutes or when the supernatant is clear.
3. Remove the supernatant and wash once more by adding 1 mL of binding buffer.
4. Magnetically separate the beads using a magnetic separator for 2 minutes or when the supernatant is clear and remove the supernatant.
5. Re-suspend beads by adding 450 µL of binding buffer.
6. Add 50 µL of serum or cell culture supernatant to the beads.
   **Note:** Sample volume can be modified according to user preference. If the sample volume is < 500 µL, dilute it to a final volume of 500 µL with binding/wash buffer.
7. Gently mix using vortex or rotator for 30 minutes.
8. Magnetically separate using a magnetic separator for 2 minutes or when the supernatant is clear.
9. Remove supernatant and wash with 0.5 mL binding/wash buffer to remove unbound proteins.
10. Magnetically separate using a magnetic separator for 2 minutes or when the supernatant is clear.
11. Remove supernatant and wash with 0.5 mL binding/wash buffer.
12. Add 100 µL of elution buffer to beads and mix well.
13. Incubate at room temperature for 10 minutes with occasional gentle mixing or vortexing.
14. Separate for 2 minutes and remove the eluent to a new tube containing 15 µL of neutralization buffer.

## Notes

- Do not centrifuge, dry or freeze the magnetic beads, as this can cause the beads to aggregate and lose the binding capability.
- Prior to use, ensure that the product has not expired by verifying that the date of use is prior to 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 and carefully follow the recommended volumes and incubation times.
- Mistakes in handling the test can also cause errors. Possible sources for such errors can be: 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.

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