BioMag® Plus Goat anti-Mouse & BioMag® Plus Goat anti-Mouse Protein Coupling Kit

DESCRIPTION

BioMag® and BioMag® Plus superparamagnetic microparticles are utilized in the magnetic separation of cells, organelles, proteins, immunoglobulins, nucleic acids, and many other types of molecules in biological and non-biological systems. The irregular shape of BioMag® and BioMag® Plus particles affords a much greater surface area than that of the same size spherical particles. This large surface area results in high binding capacities, allowing efficient target capture with minimal amounts of particles. Additionally, their greater than 90% iron oxide content allows for faster magnetic separations, especially on automated high throughput platforms.

BioMag® Plus particles are similar to conventional BioMag® particles with the distinctions of having reduced size distribution and that all BioMag® Plus particles are offered in kits as the principle component.

Bangs offers the BioMag® Plus Goat anti-Mouse Antibody Coupling Kit for the attachment of antibodies to BioMag® Plus superparamagnetic particles. The contents of the kit are sufficient for five coupling reactions. To use the kit for smaller or larger samples, adjust all volumes in a proportional manner.

CHARACTERISTICS

- Mean Diameter: ~1.5µm
- Particle Concentration: 1 mg/mL
- Binding Capacity: 1 mL (1mg) will bind > 0.20mg of mouse IgG

MATERIAL

Material Supplied
- BioMag® Plus Goat anti-Mouse IgG particles (1 mg/mL in PBS (pH 7.4), 1 mM EDTA, 0.1% (w/v) NaN₃; 25mL)
- Coupling / Wash Buffer (1x PBS, 1% (w/v) BSA, 0.1% (w/v) NaN₃, 1 mM Na₂EDTA; 250mL)
- 15mL conical centrifuge tubes: 5 tubes
- BioMag® MultiSep Magnetic Separator

Material Required
- Monoclonal antibody
- Mixer (rotator)

PROCEDURE

Researchers are advised to optimize the use of particles in any application, as procedures designed by other manufacturer’s may not be ideal.

Coupling Procedure
1. Transfer 5mL aliquot of BioMag® Plus Goat anti-Mouse IgG particles to the 15mL centrifuge tube.
2. Magnetically separate the particles until the solution has cleared.
3. Using a pipette or vacuum aspiration method, carefully remove the supernatant and discard.
4. Remove the container from the magnetic field. Add an equal amount of Wash Buffer to the particles and mix by inversion to resuspend the BioMag® Plus Goat anti-Mouse IgG particles.
5. Repeat Steps 2-4 two more times (for a total of 3 washes).
6. After the last wash, resuspend the particles to the original volume.
7. Determine and add an appropriate amount of monoclonal antibody required for coupling based on the mass of goat anti-Mouse IgG. Generally, antibody concentrations of 20-100 µg/mg of particles have been used successfully.
8. Mix by inversion and place tube on a mixer (rotator). Incubate the sample at room temperature for a minimum of 2 hours or as long as 16 hours when incubated at 2-8°C.

Washing and Diluting Coupled Particles
1. After the incubation, remove the sample from the mixer and magnetically separate the particles from the solution. Carefully remove the supernatant and discard.
2. Resuspend the particles to the coating volume with cold Wash Buffer. Return the flask to a rotator and mix for 30 minutes at room temperature.
3. Repeat Steps 1-2 three more times without the 30 minute mixing step.
4. After the last wash, magnetically separate the BioMag® Plus particles from solution and resuspend the particles with cold Wash Buffer to the volume desired. Store the coupled BioMag® Plus particles at 2-8°C until further testing.
STORAGE AND STABILITY
Store at 2-8°C. Freezing, drying, or centrifuging particles may result in irreversible aggregation and loss of binding activity.

SAFETY
This particle suspension contains sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the Material Safety Data Sheet for more information.

These products are for research use only and are not intended for use in humans or for in vitro diagnostic use.

ORDERING INFORMATION

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<thead>
<tr>
<th>Cat. Code</th>
<th>Description</th>
<th>Size</th>
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<tr>
<td>BP619</td>
<td>BioMag® Plus Goat anti-Mouse IgG</td>
<td>50mL</td>
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<tr>
<td>BP612</td>
<td>BioMag® Plus Goat anti-Mouse Antibody Coupling Kit</td>
<td>1 kit</td>
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Order online anytime at www.bangslabs.com.