Isolate almost any cell type from any species with Secondary Coated Dynabeads®

- All in one tube - no columns or centrifugation needed
- Get high yield, purity and viability of your specific cell subset
- Separate directly from whole blood and bone marrow

Use positive isolation, negative isolation or depletion!

Use this chart to help you select the best Dynabeads® for your antibody and cell type.
**Introduction**

Immunomagnetic cell separation is based on the interaction between unique cell surface antigens and Dynabeads® coated with antibodies that recognise them. Secondary-coated Dynabeads® are coated with a secondary antibody or streptavidin that binds primary monoclonal antibodies (pure or biotinylated, respectively) specific for the target cell of interest. A small amount of primary antibody is required to couple the secondary Dynabeads® and pure cell subsets are separated from whole blood, bone marrow, mononuclear cells (MNC), buffy coats or tissue digests in just 20 minutes, using only a tube and a magnet.

**Principle of cell separation**

Isolate cells directly by coupling the primary antibody onto the secondary-coated Dynabeads® prior to cell separation. In the indirect technique, add primary antibody to the sample and allow to react with the antigen on the target cell(s) (fig.2). Add the secondary-coated Dynabeads® to the labeled cells for cell isolation. They can be used for positive cell isolation for subsequent molecular analysis, depletion or for negatively isolating untouched target cells (fig. 2).

**Positive isolation:** Positively isolate cells from any suspension by adding Dynabeads® coated with a specific antibody. The target cells will bind to the Dynabeads® and are easily separated with a magnet. Use the isolated cells directly in downstream molecular analysis for protein, mRNA and DNA isolation etc. In addition, Dynabeads® with a cleavable linker are available where the beads are detached from the cells before further studies (see CELLection™ info on page 3).

**Depletion:** Remove particular cell subset from a suspension of cells by adding Dynabeads® coated with antibodies against that cell type. This approach can be used to study signalling between cells and also to remove tumour cells from bone marrow in clinical research and therapy.

**Negative isolation:** Negatively isolate cells from an MNC suspension by adding a cocktail of antibodies against antigens on the unwanted cells. Multiple populations of unwanted cells can be depleted simultaneously (fig. 2 - indirect technique). This approach is used in the ready-to-use negative isolation kits for human and mouse cells and the remaining cells are untouched and viable. Isolated cells can be used directly in flow cytometry and for further functional studies.

**Use your own mouse antibodies**

Isolate any cell type from all species except mouse

**Dynabeads® Pan Mouse IgG**

These 4.5 µm beads are coated with a monoclonal antibody specific for the Fc part of all mouse IgG antibody subsets. The monoclonal antibody is a unique human* anti-mouse IgG4. It has a high affinity for mouse IgGs and does not cross-react with IgGs from any other species (e.g. human, rat, pig). Depletion efficiency is high (fig. 3).

These universal Dynabeads® provide you with:

- **consistency** - a monoclonal with broad binding similar to that of a polyclonal
- **cost efficiency** - low price and small amounts of primary antibody required
- **flexibility** - can be used with all mouse IgGs
- **Fc-specificity** - optimal orientation of the added antibody
- **reproducibility** - monosized beads with monoclonal antibodies ensure high batch reproducibility, giving consistent results every time.

**CELLection™ Pan Mouse IgG Kit**

For positive selection of cells with detachment. The antibody coated onto the Dynabeads® in this kit is the same as that described for Dynabeads® Pan Mouse IgG.

---

*invitrogen DYNAL*  
www.dynalbiotech.com
Compatible with flow cytometry and can be used in all functional studies. The Dynabeads® in this kit have a DNA linker attached, which provides a cleavable site for the supplied DNase to remove the beads from the cells. Detached cells are pure and viable and can be used directly in further studies.

Dynabeads® Sheep anti-Mouse IgG
4.5 µm beads coated with polyclonal sheep anti-mouse antibodies that recognise mouse IgG1, IgG2a and IgG2b, but not IgG3.

For clinical use: For *ex vivo* cell separations or modifications as part of clinical trials, a sterile version of this product is available. The Dynabeads® ClinExVivo™ Sheep anti-Mouse product IgG is manufactured under validated aseptic conditions with full quality control and testing for sterility and endotoxins, according to United States Pharmacopeia. It holds a master file from FDA (CBER) and is CE marked (0434) - complying with Medical Device Directive (MDD) 93/42/EEC.

Dynabeads® Goat anti-Mouse IgG
4.5 µm beads coated with a polyclonal goat anti-mouse antibody that recognises all mouse IgG subclasses. Fc-reactive, but not Fc-specific.

Dynabeads® Rat anti-Mouse IgG1
4.5 µm beads coated with a monoclonal rat anti-mouse antibody that recognises mouse IgG1 with high efficiency and specificity.

Dynabeads® Rat anti-Mouse IgM
4.5 µm beads coated with a monoclonal rat anti-mouse antibody that recognises mouse IgM antibodies with high efficiency and specificity. Not recommended for isolating mouse B cells expressing surface IgM.

**Use your own rat antibodies**
Isolate any cell type from all species except rat

Dynabeads® Sheep anti-Rat IgG
4.5 µm beads coated with a polyclonal sheep anti-rat antibody that recognises rat antibodies of all IgG subclasses. Make your own negative isolation kit (for mouse cells).

**Use your own rabbit antibodies**
Isolate microorganisms or any cell type from all species except rabbit

Dynabeads® M-280 Sheep anti-Rabbit IgG
2.8 µm beads coated with a polyclonal sheep anti-rabbit antibody that recognises rabbit antibodies of all IgG subclasses. Due to the smaller bead size they are ideal for isolation of microorganisms, as well as cell isolation.

**Use antibodies from *any* species**
Isolate any cell type from all species with detachment

CELLection™ Biotin Binder Kit
4.5 µm beads that bind biotinylated antibodies and are used to positively isolate cells with detachment. The Dynabeads are coated with recombinant streptavidin via a DNA linker which provides a cleavable site for DNase (included in the kit) to remove the beads from the cells. Detached cells are pure and viable and can be used directly in further studies.

---

* The human monoclonal antibody coated onto the Dynabeads® is produced in a hybridoma cell line. The human donor was tested by serology and found free from HIV, HBV and HVC.

**References**


### Product specifications

<table>
<thead>
<tr>
<th>Product name</th>
<th>Antibody/binder</th>
<th>Specificity on beads</th>
<th>Primary antibody need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynabeads® Pan Mouse IgG</td>
<td>monoclonal human* anti-mouse</td>
<td>Fc-specific binding of all mouse IgG subclasses. No cross-reactivity with other species</td>
<td>0.1 - 1 µg /10^7 beads</td>
</tr>
<tr>
<td>CELLection™ Pan Mouse IgG Kit</td>
<td>monoclonal human* anti-mouse</td>
<td>Fc-specific binding of all mouse IgG subclasses (with detachment). No cross-reactivity with other species</td>
<td>0.1 - 1 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® Goat anti-Mouse IgG</td>
<td>polyclonal goat anti-mouse</td>
<td>Binds all mouse IgG subclasses, Fc-reactive</td>
<td>up to 1.5 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® Sheep anti-Mouse IgG</td>
<td>polyclonal sheep anti-mouse</td>
<td>Binds mouse IgG1, IgG2a and IgG2b, Fc-reactive</td>
<td>0.15 - 1.5 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® Rat anti-Mouse IgG1</td>
<td>monoclonal rat anti-mouse</td>
<td>Binds mouse IgG1, Fc-reactive</td>
<td>0.4 - 2 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® Rat anti-Mouse IgM</td>
<td>monoclonal rat anti-mouse</td>
<td>Binds mouse IgM, Fc-reactive</td>
<td>0.4 - 1.5 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® Sheep anti-Rat IgG</td>
<td>polyclonal sheep anti-rat</td>
<td>Binds rat IgG, Fc-reactive</td>
<td>up to 1.5 µg /10^7 beads</td>
</tr>
<tr>
<td>Dynabeads® M-280 Sheep anti-Rabbit IgG</td>
<td>polyclonal sheep anti-rabbit</td>
<td>Binds rabbit IgG, Fc-reactive</td>
<td>0.8 - 3 µg /10^7 beads</td>
</tr>
<tr>
<td>CELLection™ Biotin Binder Kit</td>
<td>recombinant streptavidin</td>
<td>Binds all biotinylated antibodies (with detachment)</td>
<td>0.2 - 2 µg /10^7 beads</td>
</tr>
</tbody>
</table>

* The human monoclonal antibody coated onto the Dynabeads® is produced in a hybridoma cell line. The human donor was tested by serology and found free from HIV, HBV and HVC.

### Ordering information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Number</th>
<th>Product Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynabeads® Sheep anti-Mouse IgG</td>
<td>110.31</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynabeads® Goat anti-Mouse IgG</td>
<td>110.33</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynabeads® Sheep anti-Rat IgG</td>
<td>110.35</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynabeads® Rat anti-Mouse IgG1</td>
<td>110.37</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynabeads® Rat anti-Mouse IgM</td>
<td>110.39</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynabeads® Sheep Mouse IgG</td>
<td>110.41/110.42</td>
<td>5 ml/5 x 5 ml</td>
</tr>
<tr>
<td>Dynabeads® M-280 Sheep anti-Rabbit IgG</td>
<td>112.03/112.04</td>
<td>2 ml/10 ml</td>
</tr>
<tr>
<td>CELLection™ Pan Mouse IgG Kit</td>
<td>115.31</td>
<td>5 ml</td>
</tr>
<tr>
<td>CELLection™ Biotin Binder Kit</td>
<td>115.33</td>
<td>5 ml</td>
</tr>
<tr>
<td>Dynal MPC®-S</td>
<td>120.20</td>
<td>0.2 - 2 ml</td>
</tr>
<tr>
<td>Dynal MPC®-L</td>
<td>120.21</td>
<td>1 - 8 ml</td>
</tr>
<tr>
<td>Dynal MPC®-1</td>
<td>120.01</td>
<td>2 - 35 ml</td>
</tr>
<tr>
<td>Dynal MPC®-50</td>
<td>120.24</td>
<td>15 - 50 ml</td>
</tr>
</tbody>
</table>

Dynal Biotech will not be responsible for violations or patent infringements that may occur with the use of our products.

Dynal Biotech is part of the Invitrogen Corporation.