Mouse IL-12 (p40/p70)  
Singleplex Bead Kit  
Technical Data Sheet  
Catalog #: LMC0121  Lot #:* 856218

*Note: A letter at the end of the lot number signifies an additional packaging of this same lot.

Intended Use
This kit is comprised of components for the measurement of mouse IL-12 as well as the free p40 subunit in serum, plasma, or tissue culture supernatant. The assay may be run alone or in combination with other Singleplex Bead Kits from Invitrogen. Buffer reagents needed to complete the reaction are sold separately under Catalog #LM80001. These reagents are intended for use in the Luminex® 100™/200™ and the FlexMAP 3D® System This kit is configured for research use only and is not to be used in diagnostic procedures.

Reagents Provided

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th>Lot</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM041</td>
<td>Antibody Bead Concentrate (10X)</td>
<td>856220</td>
<td>0.25 mL-100 tests</td>
</tr>
<tr>
<td>BN041</td>
<td>Biotinylated Ab Conc. (10X)</td>
<td>856219</td>
<td>1 mL-100 tests</td>
</tr>
<tr>
<td>SM039</td>
<td>Ms 20-Plex Standard</td>
<td>780776</td>
<td>2 Vials</td>
</tr>
</tbody>
</table>

**Important note: The concentrations of reconstituted standard are lot-specific. Please verify all concentration values entered in data analysis software.**

Concentration of Reconstituted Standard**:  
- **FGF basic (51,400 pg/mL)**  
- **GM-CSF (8,300 pg/mL)**  
- **IFN-γ (12,700 pg/mL)**  
- **IL-1α (20,900 pg/mL)**  
- **GM-CSF (8,300 pg/mL)**  
- **IFN-γ (12,700 pg/mL)**  
- **IL-1α (20,900 pg/mL)**  
- **IL-2 (17,000 pg/mL)**  
- **IL-1β (17,000 pg/mL)**  
- **IL-6 (15,600 pg/mL)**  
- **IL-10 (16,000 pg/mL)**  
- **IL-12 (10,600 pg/mL)**  
- **IL-23 (10,600 pg/mL)**  
- **IL-17 (2,580 pg/mL)**  
- **IP-10 (14,000 pg/mL)**  
- **KC (140,000 pg/mL)**  
- **MCP-1 (18,200 pg/mL)**  
- **MIG (2,665 pg/mL)**  
- **MIP-1α (13,000 pg/mL)**  
- **TNF-α (12,700 pg/mL)**  
- **VEGF (5,700 pg/mL)**

Reconstitution: Reconstitute with 1 mL Assay Diluent when measuring IL-12 in serum or plasma samples. For other sample types, such as tissue culture supernatants, reconstitute the standard in 1 mL of a solution consisting of 50% Assay Diluent + 50% sample matrix. Allow standard to rehydrate for approximately 10 minutes before further dilution.

Recommended Starting Concentration for Standard Curve: Upon reconstitution, the starting concentration of standard is the value cited above. Make sequential 1:3 dilutions in Assay Diluent (serum/plasma samples) or other appropriate matrix. Use 100 µL per assay. If establishing a Multiplex Assay, this same standard can be used to measure the other related cytokines cited above in a Multiplex Assay format. Refer to the User Manual included in the Buffer Reagent Kit for further information.

For Research Use Only. CAUTION: Not for human or animal therapeutic or diagnostic use.

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LMC0121  
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Performance Characteristics

Note: All data represented below was collected using the Invitrogen buffer kit Catalog #LMB0001.

Analytical Sensitivity: The minimum detectable dose of mIL-12 is <15 pg/mL. This was determined by adding two standard deviations to the mean FI obtained when the zero standard was assayed 30 times.

Typical Standard Curve

Spec.

The following substances were tested and all were found to have no cross-reactivity: mouse IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-10, GM-CSF, IFN-γ, MCP-1, MIP-2, TNF-α; human IL-12.

Precision:

<table>
<thead>
<tr>
<th>Intra-assay (n=16)</th>
<th>Inter-assay (n=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (pg/mL)</td>
<td>5300</td>
</tr>
<tr>
<td>SD</td>
<td>284</td>
</tr>
<tr>
<td>%CV</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Linearity: Mouse serum was spiked with mouse IL-12 and serially diluted in Assay Diluent over the range of the assay. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.97. Tissue culture medium containing 10% fetal calf serum was spiked with mouse IL-12 and serially diluted in a solution consisting of 50% Assay Diluent and 50% tissue culture medium. Linear regression analysis of samples versus the expected concentration yielded a correlation coefficient of 0.99.

Recovery:

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum (mouse)</td>
<td>[✔️]</td>
</tr>
<tr>
<td>EDTA plasma (mouse)</td>
<td>NR</td>
</tr>
<tr>
<td>Citrate plasma (mouse)</td>
<td>NR</td>
</tr>
<tr>
<td>Heparin plasma (mouse)</td>
<td>✔️</td>
</tr>
<tr>
<td>Tissue culture medium with 10% fetal calf serum*</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Notes: 70-130% recovery ([✔️]), 50-69% recovery (−), 131-150% recovery (++) and <50% or >150% recovery (NR - Not recommended) *Analysis performed during product development and with first lots produced.

Correlation to ELISA: A correlation coefficient of 0.99 was calculated when values for tissue culture samples, obtained with the Mouse IL-12 p40/p70 Singleplex Bead Kit, were compared to the Invitrogen ELISA for Mouse IL-12 p40/p70 (cat.# KMC0121, KMC0122). Mouse IL-12 p40/p70 Singleplex Bead Kit x 1.0 = Mouse IL-12 p40/p70 ELISA. Correlation of results obtained with the Mouse IL-12 p40/p70 Singleplex Bead Kit to one’s own system should be determined to arrive at an appropriate multiplication factor.

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