Recombinant Human IL-12 p40

Product Information
Material Number: 554633
Size: 5 µg
Concentration: 100 µg/ml
Storage Buffer: Frozen aqueous buffered solution containing BSA.

Description
Interleukin-12 (IL-12) is a potent regulator of cell-mediated immune responses. Biologically active IL-12 is secreted by activated B lymphocytes and macrophages as a 70 kD heterodimeric glycoprotein comprised of disulfide-bonded 35 kD (p35) and 40 kD (p40) subunits. The IL-12 p40 monomer shares amino acid sequence homology with the IL-6 receptor. It has been reported that activated PBMC produce a many fold excess of IL-12 p40 monomer over the bioactive p70 heterodimer. The IL-12 p40 monomer has been reported to inhibit binding of IL-12 p70 to the IL-12 receptor, but with 20X less effectiveness than the IL-12 p70 homodimer.

Recombinant human IL-12 p40 protein was purified by immunoaffinity chromatography. The recombinant is > 95% pure, as determined by SDS-PAGE, and an absorbance assay based on the Beers-Lambert law. The endotoxin level is ≤ 0.1 ng/µg of human IL-12 p40, as measured in a chromogenic LAL assay.

This recombinant protein is routinely tested by ELISA. Other applications were tested at BD Biosciences Pharmingen during product development only or reported in the literature.

Preparation and Storage
Store product at -80°C prior to use or for long term storage of stock solutions. Rapidly thaw and quick-spin product prior to use. Avoid multiple freeze-thaws of product.

Recombinant human IL-12 p40 monomer is supplied as a frozen liquid comprised of 0.22 μm sterile-filtered aqueous buffered solution (pH 7.4) and containing at least 1.0 mg/ml biotechnology grade, low endotoxin bovine serum albumin, with no preservatives.

Upon initial thawing the product should be aliquoted into polypropylene microtubes and frozen at -80°C for future use. Alternatively, the product can be diluted in sterile neutral buffer containing not less than 0.5 – 1.0 mg/ml carrier protein** such as human or bovine albumin, aliquoted and stored at -80°C. Failure to add carrier protein or store at indicated temperatures may result in a loss of activity.

Application Notes

Recommended Assay Procedure:

ELISA Standard: This recombinant human IL-12 p40 protein is useful as a quantitative standard for an IL-12 p40 sandwich ELISA. For this assay, the purified C8-3 capture antibody (Cat. No. 551227) can be paired with the biotinylated C8.6 detection antibody (Cat. No. 554660). For specific methodology please visit the protocols sections or the chapter on ELISA in the Immune Function Handbook, both of which are posted on our web site, www.bdbiosciences.com.

Note 1: The ELISA antibody pair is recommended primarily for measuring cytokine from experimental cell culture systems. These ELISA reagents are not recommended for assay of serum or plasma samples. For measuring human IL-12p40 in serum or plasma our Human IL-12p40 OptEIA™ Set (Cat. No. 555171 ) or OptEIA Kit II (Cat. No. 551116) is specially formulated and recommended.

Note 2: Carrier proteins** should be pre-screened for possible effects in an appropriate experimental system. Carrier proteins may effect experimental results due to toxicity, high endotoxin levels or possible blocking activity.
### Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>554660</td>
<td>Biotin Mouse Anti-Human IL-12 (p40/p70)</td>
<td>0.5 mg</td>
<td>C8.6</td>
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<tr>
<td>551227</td>
<td>Purified Mouse Anti-Human IL-12 (p40)</td>
<td>1.0 mg</td>
<td>C8.3</td>
</tr>
</tbody>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to wwwbdbiosciencescommpharminconceptocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

### References


