Recombinant Human IL-2

Product Information
Material Number: 554603
Size: 10 µg
Concentration: 200 µg/ml
Reactivity: QC Testing: Human
Storage Buffer: Frozen aqueous buffered solution containing BSA and glycerol.

Description
Interleukin-2 (IL-2), originally called T cell growth factor (TCGF), is a multifunctional cytokine which can stimulate the differentiation and proliferation of T lymphocytes and other cell types including B lymphocytes, NK cells, LAK cells, and monocytes/macrophages. IL-2 exerts its biological effects by binding to specific receptors expressed by various target cells. Human IL-2 is a 15 kD protein containing 133 amino acid residues. Recombinant human IL-2 (Cat. No. 554603) is supplied as a frozen liquid comprised of 0.22 µm sterile-filtered aqueous buffered solution containing glycerol and bovine serum albumin, with no preservatives. Recombinant human IL-2 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 per µg of human IL-2, as measured in a chromogenic LAL assay.

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. This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Recommended Application Procedure:
Upon initial thawing, recombinant human IL-2 (Cat. No. 554603) 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 - 10 mg/mL carrier protein, such as human or bovine serum albumin, aliquoted and stored at -80°C. For in vitro biological assay use, carrier-protein concentrations of ≥ 1 mg/mL are recommended. For use as an ELISA standard, carrier-protein concentrations of 5 - 10 mg/mL are recommended. Failure to add carrier protein or store at indicated temperatures may result in a loss of activity. Recombinant human IL-2 should not be diluted to less than 10 µg/mL for long term storage. Carrier proteins should be pre-screened for possible effects in each investigator’s experimental system. Carrier proteins may have an undesired influence on experimental results due to toxicity, high endotoxin levels or possible blocking activity.

ELISA Standard: Recombinant human IL-2 (Cat. No. 554603) is useful as a quantitative standard for measuring human IL-2 protein levels using sandwich ELISA with purified 5344.111 (Cat. No. 555051) as a capture antibody and biotinylated B33-2 (Cat. No. 555040) as the detection antibody. To obtain linear standard curves, investigators may want to consider using doubling dilutions of recombinant human IL-2 from 2,000 - 15 pg/mL to be included in each ELISA plate. For measuring human IL-2 in serum or plasma, investigators are highly encouraged to use the BD OptEIA™ Human IL-2 Set (Cat. No. 555190) and BD OptEIA™ Human IL-2 Kit II (Cat. No. 550611 ).

Bioassay: Investigators are advised that the Bioassay application is not routinely tested for this material and are highly encouraged to both titrate this material and include appropriate controls in relevant experiments. An activity range of 0.06 - 1.0 x 10^9 units/mg, encompassing an ED50 = 10 - 150 pg/mL, has previously been reported using CTLL-2 as indicator cells for proliferation, with a unit defined as the amount of material needed to stimulate a half-maximal response at cytokine saturation.

Blocking: Recombinant human IL-2 (Cat. No. 554603) can be useful as a blocking control for flow cytometric analysis when used with a fluorochrome-conjugated antibody, such as PE-conjugated MQ1-17H12 (Cat. No. 559334). Investigators are advised that the blocking application is not routinely tested for this material. Intracellular cytokine staining techniques and the use of blocking controls are described in detail by C.Prussin and D.Metcalfe.

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### Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>555040</td>
<td>Biotin Mouse Anti-Human IL-2</td>
<td>0.5 mg</td>
<td>B33-2</td>
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<tr>
<td>555051</td>
<td>Purified Mouse Anti-Human IL-2</td>
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<td>5344.111</td>
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<td>555190</td>
<td>Human IL-2 ELISA Set</td>
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<tr>
<td>550611</td>
<td>Human IL-2 ELISA Kit II</td>
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<tr>
<td>559334</td>
<td>PE Rat Anti-Human IL-2</td>
<td>100 tests</td>
<td>MQ1-17H12</td>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. This product is manufactured and sold under license from Pestka Biomedical Laboratories, Inc. (d/b/a PBL InterferonSource) and may be used solely as indicated. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics is strictly prohibited. This product is covered by U.S. Patent No. 5,597,901 and Bulgarian Patent No. BG1895.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

### References