Human IL-7 Antibody  
Monoclonal Mouse IgG1 Clone # 7417  
Catalog Number: MAB207

**DESCRIPTION**

**Species Reactivity**  
Human

**Specificity**  
Detects human IL-7 in Western blots. In ELISAs, does not cross-react with bovine FGF acidic, recombinant human (rh) G-CSF, rhGM-CSF, rhIL-1α, rhIL-1β, rhIL-2, rhIL-3, rhIL-4, rhIL-6, recombinant mouse IL-7, rhIL-6, porcine PDGF, rhTNF-α, rhTNF-β, human TGF-β1, or porcine TGF-β1.

**Source**  
Monoclonal Mouse IgG1 Clone # 7417

**Purification**  
Protein A or G purified from ascites

**Immunogen**  
E. coli-derived recombinant human IL-7  
Accession # P13232

**Endotoxin Level**  
<0.10 EU per 1 μg of the antibody by the LAL method.

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 μg/mL</td>
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<tr>
<td>Human IL-7 Antibody</td>
<td>Recombinant Human IL-7 (Catalog # 207-IL) under non-reducing conditions only</td>
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**ELISA Capture**  
2-8 μg/mL  
Human IL-7 Antibody (Catalog # MAB207)

**ELISA Detection**  
0.1-0.4 μg/mL  
Human IL-7 Biotinylated Antibody (Catalog # BAF207)

**Standard**  
Recombinant Human IL-7 (Catalog # 207-IL)

**Neutralization**  
Measured by its ability to neutralize IL-7-induced proliferation in PHA-activated human peripheral blood mononuclear cells (PBMC). The Neutralization Dose (ND50) is typically 0.4-0.8 μg/mL in the presence of 2.5 ng/mL Recombinant Human IL-7.

**DATA**

**Neutralization**

Cell Proliferation Induced by IL-7 and Neutralization by Human IL-7 Antibody.

Recombinant Human IL-7 (Catalog # 207-IL) stimulates proliferation in PHA-activated human peripheral blood mononuclear cells (PBMC) in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL-7 (2.5 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-7 Monoclonal Antibody (Catalog # MAB207). The ND50 is typically 0.4-0.8 μg/mL.

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.
BACKGROUND
IL-7, previously known as pre-B cell growth factor and lymphopoietin-1, was originally purified on the basis of its ability to promote the proliferation of precursor B cells. It has now been shown that IL-7 can also stimulate the proliferation of thymocytes, T cell progenitors and mature CD4+ and CD8+ T cells. IL-7 can induce the formation of lymphokine-activated killer (LAK) cells as well as the development of cytotoxic T lymphocytes (CTL). IL-7 was also shown to induce the V(D)J rearrangement of the T cell receptor β gene in mouse fetal thymocytes. Among myeloid lineage cells, IL-7 can up-regulate the production of pro-inflammatory cytokines and stimulate the tumoricidal activity of monocytes/macrophages. IL-7 is expressed by adherent stromal cells from various tissues.

Human IL-7 cDNA encodes a precursor protein of 177 amino residues containing a 25 amino acid residue signal peptide. Mouse IL-7 has approximately 65% amino acid sequence identity with human IL-7 and both proteins exhibit cross-species activity.

IL-7 bioactivities are mediated by the binding of IL-7 to functional high-affinity receptor complexes. The ligand binding subunit (IL-7R) of the IL-7 receptor complex has been cloned from human and mouse sources. In addition to the membrane-anchored form of the IL-7 receptor, a human cDNA clone that encodes a soluble form of the IL-7R has also been isolated. The γ chain of the IL-2 receptor complex has been shown to be an essential component for IL-7 signal transduction. Both IL-7R and IL-2Rγ are members of the hematopoietin receptor superfamily. Cells known to express IL-7 receptors include pre-B cells, T cells, and bone marrow cells.