

#### DESCRIPTION

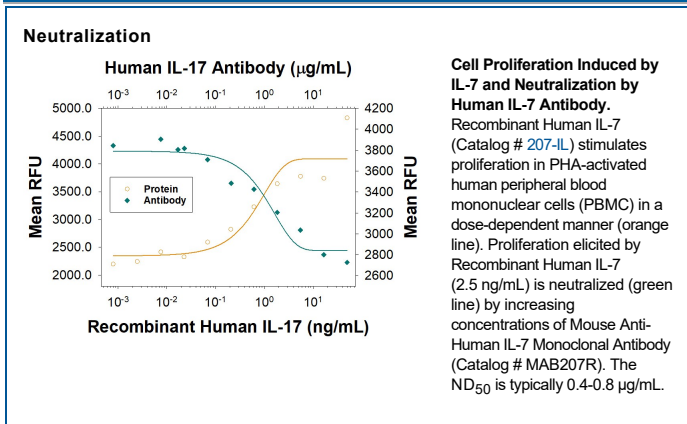
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-7 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Mouse IgG <sub>1</sub> Clone # 7417R
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-7 Accession # P13232
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human IL-7 (Catalog # 207-IL) under non-reducing conditions only
<b>Neutralization</b>		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



#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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<sup>+</sup> and CD8<sup>+</sup> 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-7 R) 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-7 R 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-7 R and IL-2 R<sub>γ</sub> are members of the hematopoietin receptor superfamily. Cells known to express IL-7 receptors include pre-B cells, T cells, and bone marrow cells.