

DESCRIPTION

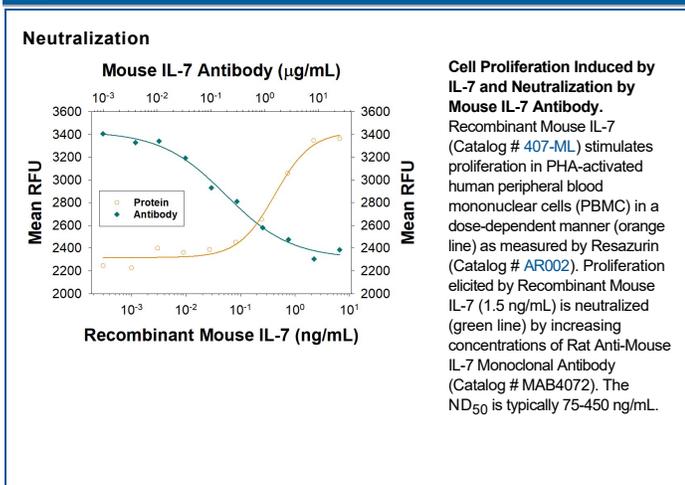
Species Reactivity	Mouse
Specificity	Detects mouse IL-7 in direct ELISAs.
Source	Monoclonal Rat IgG _{2A} Clone # 1005101
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-7 Ser543-Thr870 Accession # Q99814
Endotoxin Level	<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.

Neutralization	Measured by its ability to neutralize IL-7-induced proliferation in PHA-activated human peripheral blood mononuclear cells (PBMC). The Neutralization Dose (ND ₅₀) is typically 75-450 ng/mL in the presence of 1.5 ng/mL Recombinant Mouse IL-7.
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DATA



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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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.

Mouse IL-7 cDNA encodes a precursor protein of 154 amino residues containing a 25 amino acid residue signal peptide. Human IL-7 has approximately 65% amino acid sequence identity with mouse 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_γ are members of the hematopoietin receptor superfamily. Cells known to express IL-7 receptors include pre-B cells, T cells and bone marrow cells.