# Mouse IL-11 Antibody

Monoclonal Rat $IgG_{2A}$ Clone # 188520

Catalog Number: MAB418

## DESCRIPTION

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|---|---|
| **Species Reactivity** | Mouse |
| **Specificity** | Detects mouse IL-11 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 10-20% cross-reactivity with recombinant human (rh) IL-11 is observed and no cross-reactivity with recombinant rat CNTF, recombinant mouse (rm) IL-6, rmLIF, rmOSM, rmCT-1, or rhCLC is observed. |
| **Source** | Monoclonal Rat $IgG_{2A}$ Clone # 188520 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | *E. coli*-derived recombinant mouse IL-11<br>Gly23-Leu199<br>Accession # P47873 |
| **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.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

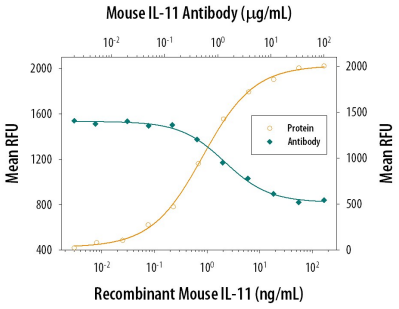
## APPLICATIONS

**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.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 1 µg/mL | Recombinant Mouse IL-11 (Catalog # 418-ML) |
| **Neutralization** | Measured by its ability to neutralize IL-11-induced proliferation in the T11 mouse plasmacytoma cell line. Nordan, R. P. *et al.* (1987) J. Immunol. **139**:813. The Neutralization Dose ($ND_{50}$) is typically 0.5-2.0 µg/mL in the presence of 0.75 ng/mL Recombinant Mouse IL-11. | |

## DATA

**Neutralization**




**Cell Proliferation Induced by IL-11 and Neutralization by Mouse IL-11 Antibody.** Recombinant Mouse IL-11 (Catalog # 418-ML) stimulates proliferation in the T11 mouse plasmacytoma cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse IL-11 (0.75 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse IL-11 Monoclonal Antibody (Catalog # MAB418). The $ND_{50}$ is typically 0.5-2.0 µg/mL.

## PREPARATION AND STORAGE

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| **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.<br>*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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

Interleukin-11 is a pleiotropic cytokine that was originally detected in the conditioned medium of an IL-1α-stimulated primate bone marrow stromal cell line (PU-34) as a mitogen for the IL-6-responsive murine plasmacytoma cell line T1165. IL-11 was also independently discovered as an adipogenesis inhibitory factor (AGIF). The mouse IL-11 cDNA encodes a 199 amino acid precursor polypeptide with a 22 amino acid hydrophobic signal that is processed proteolytically to generate the 177 amino acid mature protein. IL-11 contains no cysteine residues or potential glycosylation sites. IL-11 has multiple effects on both hematopoietic and nonhematopoietic cells. Many of the biological effects described for IL-11 overlap those for IL-6. *In vitro*, IL-11 can synergize with IL-3, IL-4 and SCF to shorten the $G_0$ period of early hematopoietic progenitors. IL-11 also enhances the IL-3-dependent megakaryocyte colony formation. IL-11 has been found to stimulate the T cell dependent development of specific immunoglobulin-secreting B cells. IL-11, in the presence of IL-3 or SCF, has also been shown to stimulate erythropoiesis. Among nonhematopoietic cell populations, IL-11, like IL-6 and LIF, can stimulate the synthesis of hepatic acute-phase proteins. Consistent with the *in vitro* functions of IL-11, *in vivo* administration of human IL-11 in normal mice was found to enhance the generation of Ig producing cells and platelets, and to increase the cycling rates of bone marrow-derived CFU-GM, BFU-E, and CFU-GEMM progenitors. IL-11 exerts its biological activities through binding to a specific high-affinity receptor complex consisting of an IL-11 receptor alpha chain and gp130.



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