Mouse IL-11 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-418-NA

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-11 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human IL-11 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse IL-11 (R&D Systems, Catalog # 418-ML) Gly23-Leu199 Accession # P47873
Endotoxin Level	<0.1 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.

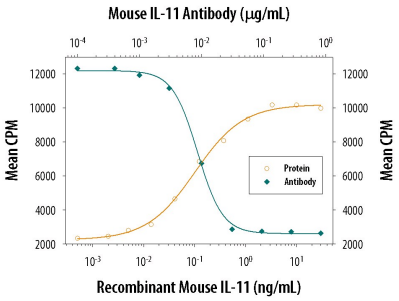
APPLICATIONS

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	0.1 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 0.006-0.012 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 Mouse IL-11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-418-NA). The ND_{50} is typically 0.006-0.012 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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 from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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 residue precursor polypeptide with a 22 amino acid residue hydrophobic signal that is processed proteolytically to generate the 177 amino acid residue 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 rhIL-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.