

DESCRIPTION

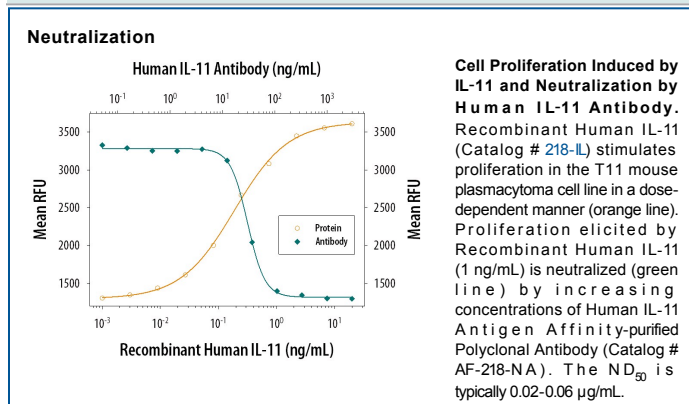
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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human IL-11 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant mouse (rm) IL-11 is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human IL-11 Pro22-Leu199 Accession # P20809 |
| 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. |

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 Human IL-11 (Catalog # 218-IL) |
| Neutralization | | Measured by its ability to neutralize IL-11-induced proliferation in the T11 mouse plasmacytoma cell line. Nordan, R. P. <i>et al.</i> (1987) <i>J. Immunol.</i> 139 :813. The Neutralization Dose (ND ₅₀) is typically 0.02-0.06 µg/mL in the presence of 1 ng/mL Recombinant Human IL-11. |

DATA



PREPARATION AND STORAGE

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|--------------------------------|---|
| 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 | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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-1 α -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 human IL-11 cDNA encodes a 199 amino acid residue precursor polypeptide with a 21 amino acid residue hydrophobic signal that is processed proteolytically to generate the 178 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 G₀ 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 cell. 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 having an apparent molecular mass of 150 kDa. Although the IL-11 binding subunit of the receptor complex has not yet been cloned, evidence suggests that, similar to IL-6, leukemia inhibitory factor, oncostatin M, and ciliary neurotrophic factor, IL-11 utilizes the IL-6 signal transducer, gp130, for signal transduction.