

## DESCRIPTION

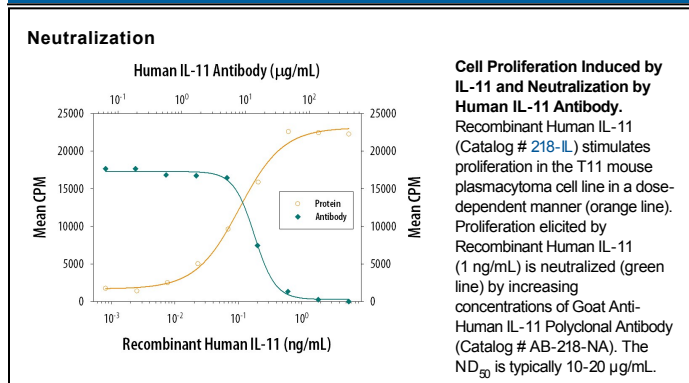
|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects human IL-11 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 25% cross-reactivity with recombinant mouse IL-11 is observed. |
| <b>Source</b>             | Polyclonal Goat IgG  |
| <b>Purification</b>       | Protein A or G purified  |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-11<br>Pro22-Leu199<br>Accession # P20809  |
| <b>Endotoxin Level</b>    | <0.10 EU per 1 µg of the antibody by the LAL method.   |
| <b>Formulation</b>        | 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   |
|-----------------------|---------------------------|--|
| <b>Western Blot</b>   | 1 µg/mL                   | Recombinant Human IL-11 (Catalog # 218-IL)   |
| <b>Neutralization</b> |                           | Measured by its ability to neutralize IL-11-induced proliferation in the T11 mouse plasmacytoma cell line. Nordan, R. P. and M. Potter (1986) <i>Science</i> <b>233</b> :566. The Neutralization Dose (ND <sub>50</sub> ) is typically 10-20 µg/mL in the presence of 1 ng/mL Recombinant Human IL-11. |

## DATA



## PREPARATION AND STORAGE

|                                |   |
|--------------------------------|---|
| <b>Reconstitution</b>          | Reconstitute at 1 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.   |
| <b>Stability &amp; Storage</b> | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

Interleukin 11 is a pleiotropic cytokine that was originally detected in the conditioned medium of an IL-1 $\alpha$ -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 G<sub>0</sub> 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.