

## DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human IL-11 in direct ELISAs and Western blots.                                                                   |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                                       |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-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>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                       |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                              |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                                           |

## 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.

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| <b>Neutralization</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>   | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## 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.

## PRODUCT SPECIFIC NOTICES

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