

#### DESCRIPTION

|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects human IL-18 R $\beta$ /IL-1 R7 in Western blots. In Western blots, approximately 5% cross-reactivity with recombinant mouse IL-18 R $\beta$ is observed and less than 1% cross-reactivity with recombinant human (rh) rhIL-18 R, rhIL-1 RI, rhIL-1 RII, and rhIL-1 Rrp2 is observed. |
| <b>Source</b>             | Polyclonal Goat IgG  |
| <b>Purification</b>       | Antigen Affinity-purified  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human IL-18 R $\beta$ /IL-1 R7<br>Phe20-Arg356<br>Accession # O95256   |
| <b>Formulation</b>        | Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with BSA as a carrier protein. 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>   | 0.1 $\mu$ g/mL                    | Recombinant Human IL-18 R $\beta$ /IL-1 R7 Fc Chimera (Catalog # 118-AP) |
| <b>Flow Cytometry</b> | 2.5 $\mu$ g/10 <sup>6</sup> cells | KG-1 human acute myelogenous leukemia cell line                          |

#### PREPARATION AND STORAGE

|                                |   |
|--------------------------------|---|
| <b>Reconstitution</b>          | Reconstitute at 0.2 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> | <p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

IL-18, originally described as an interferon- $\gamma$  inducing factor (IGIF), is a member of the IL-1 family of cytokines that has multiple immunoregulatory functions. It has potent IFN- $\gamma$  inducing activities and plays a key role in the activation of T helper type 1 (Th1) responses. The functional IL-18 receptor complex consists of two components, the IL-18 R $\alpha$  (IL-1 R5) and IL-18 R $\beta$  (also termed IL-1 R7 and AcPL) subunits. Both subunits are members of the IL-1 receptor superfamily. Although IL-18 R $\alpha$  by itself binds IL-18 with low-affinity and IL-18 R $\beta$  does not bind IL-18 *in vitro*, co-expression of IL-18 R $\alpha$  and IL-18 R $\beta$  is required for high-affinity binding and IL-18 responsiveness. Human IL-18 R $\beta$  cDNA encodes a 599 amino acid (aa) residue precursor type I membrane protein with a 14 aa signal peptide, a 342 aa extracellular region containing three immunoglobulin-like domains, a single transmembrane domain and a 222 aa cytoplasmic domain. Human and mouse IL-18 R $\beta$  share 65% aa sequence identity. The expression of IL-18 R $\beta$  parallels that of IL-18 R $\alpha$  and is detected in numerous tissues including lung, spleen, leukocytes and colon.

#### References:

1. Born, T.L. *et al.* (1998) J. Biol. Chem. **273**:29445.
2. Okamura, H. *et al.* (2000) in *Cytokine Reference*, Vol. 2:1605, Academic Press.