

#### DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human IL-18 R $\beta$ /IL-1 R7 in direct ELISAs and Western blots. In direct ELISAs, 15% cross-reactivity with recombinant human (rh) IL-1 RII is observed and 2% cross-reactivity with rhIL-1 R9 is observed. Also in direct ELISAs, no cross-reactivity with rhIL-1 R1, rhIL-1 RacP/IL-1 R3, rhIL-1 R4, rhIL-18 R $\alpha$ /IL-1 R5, rhIL-1 R6, rhIL-1 R8, or recombinant mouse (rm) IL-18 R $\beta$ /IL-1 R7 is observed. In Western blots, approximately 100% cross-reactivity with rmIL-18 R $\beta$ is observed and no cross-reactivity with rhIL-18 R $\alpha$ /IL-1 R5, rhIL-1 RacP/IL-1 R3, rhIL-1 R1, rhIL-1 RII, or rhIL-1 Rrp2/IL-1 R6 is observed. |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 132029   |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human IL-18 R $\beta$ /IL-1 R7<br>Met1-Arg356<br>Accession # O95256   |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm   |
| <b>Formulation</b>        | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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>Recommended Concentration</b>     | <b>Sample</b>                                   |
|-----------------------|--------------------------------------|---|
| <b>Flow Cytometry</b> | 0.25-1 $\mu$ g/10 <sup>6</sup> cells | KG-1 human acute myelogenous leukemia cell line |

#### 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> | <b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</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.

#### PRODUCT SPECIFIC NOTICES

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