

**DESCRIPTION**

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-3 R $\alpha$ /CD123 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human IL-3 R $\alpha$ and recombinant mouse IL-3 R $\beta$ is observed.
<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 mouse IL-3 R $\alpha$ /CD123 Ser17-Lys331 Accession # P26952
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ m filtered solution in PBS.

**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>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Mouse IL-3 R $\alpha$ /CD123 Fc Chimera (Catalog # 983-MR)

**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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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 3 (IL-3) is a pleiotropic cytokine produced primarily by activated T cells or mast cells. IL-3 stimulates the proliferation and differentiation of hemopoietic cells including the pluripotent hematopoietic stem cells as well as various lineage-committed cells. The biological effects of IL-3 on the various cell types are mediated by the binding of IL-3 to specific cell surface receptor complexes. The functional high-affinity IL-3 receptor is a heterodimer consisting of a ligand binding  $\alpha$  subunit and the  $\beta$  subunit. The  $\alpha$  subunit alone binds IL-3 with low affinity. The  $\beta$  subunit is required for the high-affinity binding of IL-3 to the heterodimeric receptor complex. The  $\beta$  subunit has also been found to be a component of the high-affinity receptor complex for IL-5 and GM-CSF and is also referred to as the  $\beta$  common ( $\beta$ c) chain. In the mouse, there are two IL-3 R $\beta$  proteins. The first identified mouse IL-3 R $\beta$  was also called AIC2A and binds IL-3 with low affinity (1). The second mL-3 R $\beta$  was referred to as AIC2B (2). AIC2B doesn't bind IL-3 and is the homolog of the human IL-3 R $\beta$ . AIC2A was found to be the result of a gene duplication event. The mouse IL-3 R $\alpha$ , also called SUT-1, will form complexes with either mouse IL-3 R $\beta$  protein (3). Both the  $\alpha$  and the  $\beta$  subunits are members of the cytokine receptor superfamily.

**References:**

1. Itoh, N. *et al.* (1990) *Science* **247**:324.
2. Gorman, D.M. *et al.* (1990) *Proc. Natl. Acad. Sci. USA* **87**:5459.
3. Hara, T. and A. Miyajima (1992) *EMBO J.* **11**:1875.
4. Schrader, J.W. (2001) *Cytokine Reference*, Oppenheim, J.J. and M. Feldmann, eds, Academic Press, New York, p. 1899.