

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-3 R $\beta$ in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant mouse IL-3 R $\alpha$ or recombinant human IL-3 R $\alpha$ is observed. Cross-reactivity with AIC2B was not tested.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 130710
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse IL-3 R $\beta$ His23-Trp440 Accession # P26954
<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>Mouse IL-3 R<math>\beta</math> Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 $\mu$ g/mL	Mouse IL-3 R $\beta$ Antibody (Catalog # <a href="#">MAB5491</a> )
<b>ELISA Detection</b>	0.1-0.4 $\mu$ g/mL	Mouse IL-3 R $\beta$ Biotinylated Antibody (Catalog # <a href="#">BAF549</a> )
<b>Standard</b>		Recombinant Mouse IL-3 R $\beta$ Fc Chimera (Catalog # <a href="#">549-R3</a> )

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 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 mIL-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. Both the  $\alpha$  and the  $\beta$  subunits are members of the cytokine receptor superfamily (3).

## 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. Schrader, J.W. in *Cytokine Reference*, (2001) J.J. Oppenheim and M. Feldmann, eds. Academic Press, New York, p. 1899.