

**DESCRIPTION**

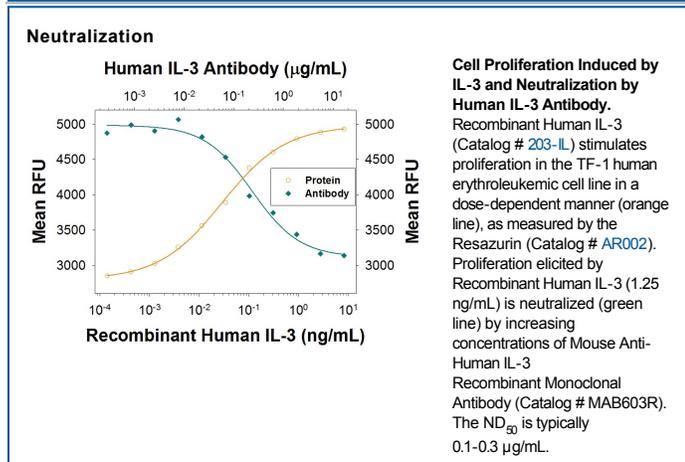
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-3 in ELISAs and Western blots. In sandwich ELISAs, no significant cross-reactivity or interference with recombinant human (rh) IL-1 $\alpha$ , rhIL-1 $\beta$ , recombinant mouse (rm) IL-1 $\beta$ , rhIL-2, rhIL-3 R $\alpha$ , rhIL-3 R $\beta$ , rmIL-3, rhIL-4, rmIL-4, rmIL-5, rhIL-6, rmIL-6, rhIL-7, rmIL-7, rhIL-8, bovine FGF acidic, bovine FGF basic, rhG-CSF, rhGM-CSF, rmGM-CSF, rhLIF, hPDGF, porcine PDGF, human TGF- $\beta$ 1, porcine TGF- $\beta$ 1, rhTGF- $\beta$ 1, porcine TGF- $\beta$ 2, porcine TGF- $\beta$ 1.2, rhTNF- $\alpha$ , or rhTNF- $\beta$ was observed. Does not neutralize the biological activity of rmIL-3.
<b>Source</b>	Recombinant Monoclonal Mouse IgG <sub>1</sub> Clone # 4815R
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-3 Ala20-Phe152 Accession # P08700
<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.

Human IL-3 Sandwich Immunoassay		Reagent
<b>ELISA Capture</b>	2-8 $\mu$ g/mL	Human IL-3 Antibody (Catalog # MAB603R)
<b>ELISA Detection</b>	0.1-0.4 $\mu$ g/mL	Human IL-3 Biotinylated Antibody (Catalog # BAF203)
<b>Standard</b>		Recombinant Human IL-3 (Catalog # 203-IL)
<b>Neutralization</b>	Measured by its ability to neutralize IL-3-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> <b>140</b> :323. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.1-0.3 $\mu$ g/mL in the presence of 1.25 ng/mL Recombinant Human IL-3.	

**DATA**



**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 is a pleiotropic factor produced primarily by activated T cells that can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors. In addition, IL-3 also affects the functional activity of mature mast cells, basophils, eosinophils and macrophages. Because of its multiple functions and targets, it was originally studied under different names, including mast cell growth factor, P-cell stimulating factor, burst promoting activity, multi-colony stimulating factor, thy-1 inducing factor and WEHI-3 growth factor. In addition to activated T cells, other cell types such as human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes can also produce IL-3. At the amino acid sequence level, mature human and murine IL-3 share only 29% sequence identity. Consistent with this lack of homology, IL-3 activity is highly species-specific and human IL-3 does not show activity on murine cells.

IL-3 exerts its biological activities through binding to specific cell surface receptors. The high affinity receptor responsible for IL-3 signaling is composed of at least two subunits, an IL-3 specific  $\alpha$  chain which binds IL-3 with low affinity and a common  $\beta$  chain that is shared by the IL-5 and GM-CSF high-affinity receptors. Although the  $\beta$  chain itself does not bind IL-3, it confers high-affinity IL-3 binding in the presence of the  $\alpha$  chain. Receptors for IL-3 are present on bone marrow progenitors, macrophages, mast cells, eosinophils, megakaryocytes, basophils and various myeloid leukemic cells.