

## DESCRIPTION

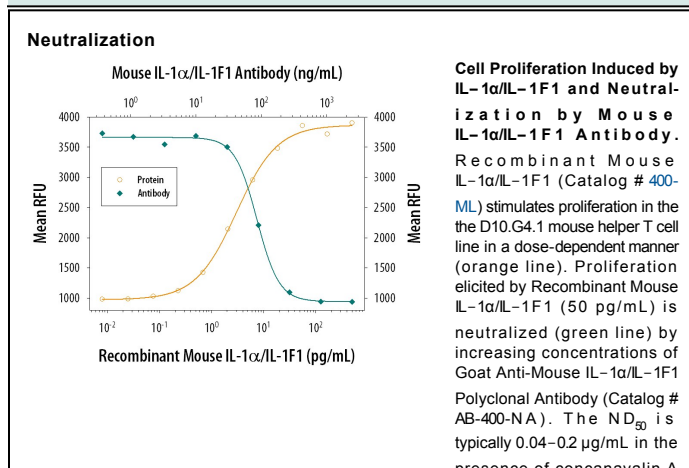
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects IL-1 $\alpha$ /IL-1F1 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant rat IL-1 $\alpha$ is observed, 5% cross-reactivity with recombinant porcine IL-1 $\alpha$ is observed, and no cross-reactivity with recombinant human (rh) IL-1 $\alpha$ is observed. Neutralizes the biological activity of recombinant mouse (rm) IL-1 $\alpha$ , but will not neutralize the biological activity of rhIL-1 $\alpha$ , rhIL-1 $\beta$ , or rmIL-1 $\beta$ .
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Protein A or G purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant mouse IL-1 $\alpha$ /IL-1F1 ser6-ser161 Accession # Q62161
<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.

## 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>	1 $\mu$ g/mL	Recombinant Mouse IL-1 $\alpha$ /IL-1F1 (Catalog # 400-ML)
<b>Neutralization</b>	Measured by its ability to neutralize IL-1 $\alpha$ /IL-1F1-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J. A. <i>et al.</i> (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M. J. <i>et al.</i> (eds): IRL Press. 272. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.04-0.2 $\mu$ g/mL in the presence of 50 pg/mL Recombinant Mouse IL-1 $\alpha$ /IL-1F1 and 1.25 $\mu$ g/mL concanavalin A.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 1 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>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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-1 is a name that designates two proteins, IL-1 $\alpha$  and IL-1 $\beta$ , that are the products of distinct genes, but recognize the same cell surface receptors. IL-1 $\alpha$  and IL-1 $\beta$  are structurally related polypeptides that show approximately 25% homology at the amino acid level. Both proteins are produced by a wide variety of cells in response to stimuli such as those produced by inflammatory agents, infections, or microbial endotoxins. The proteins are synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17.5 kDa. The specific protease responsible for the processing of IL-1 $\beta$ , designated interleukin 1 $\beta$ -converting enzyme (ICE), has been described. Mature human and mouse IL-1 $\beta$  share approximately 75% amino acid sequence identity and human IL-1 $\beta$  has been found to be active on murine cell lines.

IL-1 $\alpha$  and IL-1 $\beta$  are potent pro-inflammatory cytokines that induce a wide variety of biological activities on different cell types. Two distinct types of IL-1 receptors have been identified and cloned from human and mouse cells. The IL-1 receptor type I is a 80 kDa transmembrane protein with demonstrated IL-1 signaling function. The IL-1 receptor type II is a 68 kDa membrane protein with a relatively short cytoplasmic tail and has no signaling function. The type II receptor acts as a decoy target for IL-1, inhibiting IL-1 activities by preventing the binding of IL-1 to the type I receptor. A soluble version of the type II receptor is induced by anti-inflammatory agents such as glucocorticoids, IL-4 and IL-13.