

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                                                 |
| <b>Specificity</b>        | Detects mouse IL-1 $\alpha$ in direct ELISAs and Western blots. In direct ELISAs, 100% and 30% cross-reactivity was observed with cotton rat IL-1 $\alpha$ and rat IL-1 $\alpha$ , respectively, and no cross-reactivity with recombinant human (rh) IL-1 $\alpha$ , rIL-1 $\alpha$ , rIL-1 $\beta$ , |
| <b>Source</b>             | Monoclonal Hamster IgG Clone # ALF161                                                                                                                                                                                                                                                                 |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                                            |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse IL-1 $\alpha$                                                                                                                                                                                                                                               |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                                                       |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<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>Neutralization</b>      | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunoprecipitation</b> | Optimal dilution of this antibody should be experimentally determined. |

## 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> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## 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.

## PRODUCT SPECIFIC NOTICES

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