

## Product Information

### Monoclonal Anti-Interleukin-1 $\alpha$

#### Clone 59015.111

produced in mouse, purified immunoglobulin

Catalog Number **I3778**

### Product Description

Monoclonal Anti-Interleukin-1 $\alpha$  (IL-1 $\alpha$ ) (mouse IgG1 isotype) is derived from a hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified recombinant rat IL-1 $\alpha$ , expressed in *E. coli*. The IgG fraction of ascites fluid was purified by Protein G affinity chromatography.

Monoclonal Anti-IL-1 $\alpha$  may be used for detection and localization of rat interleukin-1 $\alpha$ . The antibody may be used for immunoblotting and ELISA.

Interleukin-1, originally known as lymphocyte activating factor (LAF), activates T cells and lymphocytes, which then proliferate and secrete interleukin-2.<sup>1</sup> IL-1 is primarily released from stimulated macrophages and monocytes, but also is released from several other cell types,<sup>2</sup> and is thought to play a key role in inflammatory and immune responses.<sup>3</sup> Other synonyms for IL-1 include: endogenous pyrogen (EP), mitogenic protein (MP), helper peak-1 (HP-1), T cell replacing factor III (TRF III or TRF<sub>H</sub>), B cell activating factor (BAF) and B cell differentiation factor (BDF).<sup>4</sup> The two closely related agents, interleukin-1 $\alpha$  (IL-1 $\alpha$ ) and interleukin-1 $\beta$  (IL-1 $\beta$ ) bind to the same cell surface receptor, elicit nearly identical biological responses and share 25% homology in their amino acid sequence.

### Reagent

Supplied lyophilized from a 0.2  $\mu$ m filtered solution of phosphate buffered saline (pH 7.4) with 5% trehalose.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Preparation Instructions

To one vial of lyophilized powder, add 1 mL of 0.2  $\mu$ m filtered PBS to produce a 0.5 mg/mL stock solution of antibody. If aseptic technique is used, no further filtration should be needed.

### Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for at least one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing, or storage in "frost-free" freezers.

### Product Profile

**Capture ELISA:** this antibody can be used as a capture antibody in a rat IL-1 $\alpha$  ELISA with a biotinylated detection antibody. It is recommended to use plates coated with 100  $\mu$ L/well of the capture antibody at a concentration of 1  $\mu$ g/mL.

**Immunoblotting:** a working concentration of 1-2  $\mu$ g/mL is recommended using 50 ng/lane of rat IL-1 $\alpha$  under either reducing or non-reducing conditions.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

Endotoxin: <0.1 EU per  $\mu$ g antibody as determined by the LAL method.

### References

1. Gery, I., et al., *J. Exp. Med.*, **136**, 128 (1972).
2. Oppenheim, J., et al., *Immunol. Today*, **7**, 45 (1986).
3. Durum, S., et al., *Ann. Rev. Immunol.*, **3**, 263 (1985).
4. Aarden, L., et al., *J. Immunol.*, **123**, 2928 (1979).

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