

**BACKGROUND**

Interleukin 1 (IL-1) consists of two proteins, IL-1  $\alpha$  and IL-1  $\beta$ , which are the products of distinct genes, but which recognize the same cell surface receptors. IL-1  $\alpha$  and IL-1  $\beta$  show approximately 25% identity in the amino acid sequence.<sup>1)</sup> Both IL-1  $\alpha$  and IL-1  $\beta$  are synthesized as 31K Da precursors that are subsequently cleaved into proteins with molecular weights of approximately 17KDa.<sup>2b)</sup> Among various species, the amino acid sequences of mature IL-1  $\alpha$  is conserved 60% to 70%, while that of the mature IL-1  $\beta$  is conserved 75% to 78%.<sup>4)</sup> Both IL-1  $\alpha$  and IL-1  $\beta$  have glycosylation sites, but non-glycosylated recombinant products have biological activities similar to the naturally occurring forms of the molecules.<sup>5a)</sup>

**IMMUNOGEN:** Recombinant IL-1  $\alpha$  (Rat)

**for ELISA:** Approximately 0.02-0.05ng/well of recombinant rat IL-1  $\alpha$  can be detected using an antiserum concentration of dilution ratio x10000.

**for WESTERN BLOTTING:**

An antiserum concentration of dilution ratio x1000 will allow visualization of 0.01-0.003ng/lane of recombinant rat IL-1  $\alpha$  under reducing condition.

**SPECIFICITY:**

|                             |                              |
|-----------------------------|------------------------------|
| IL-1 $\alpha$ (Rat) 100%,   | IL-1 $\alpha$ (Human) 24.8%  |
| IL-1 $\beta$ (Rat) <0.01%,  | IL-1 $\beta$ (Human) <0.01%  |
| TNF- $\alpha$ (Rat) <0.01%, | TNF- $\alpha$ (Human) <0.01% |
| Other Cytokines <0.01%      |                              |

**RELATED ANTISERA:**

- Goat Anti IL-1  $\alpha$  (Rat) Serum YC 011
- Rabbit Anti IL-1  $\beta$  (Rat) Serum YC 020
- Goat Anti IL-1  $\beta$  (Rat) Serum YC 021
- Anti IL-1  $\beta$  (Rat) Monoclonal Antibody YC 022

**RELATED PEPTIDES:** IL-1  $\beta$ , TNF-  $\alpha$ , TNF-  $\beta$ , Other Cytokines

**STORAGE:**

- Keep frozen below -20°C
- Avoid repeated freezing-thawing

**REFERENCES:**

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- 5) Dinarello CA., Blood, 77:1627-1652, 1991
- 6) Casagli MC, Borri MG, Bigio M, Rossi R, Nucci D, Bossu P, Boraschi D, Antoni G. Biochem Biophys Res Commun., 162: 357-363, 1989

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