

**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 31KDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17KDa.<sup>2,3)</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  $\beta$  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>5,6)</sup>

- IMMUNOGEN:** Recombinant IL-1  $\beta$  (Rat)
- for ELISA:** Approximately 0.4-1.2ng/well of recombinant rat IL-1  $\beta$  can be detected using an antiserum concentration of dilution ratio x1000.
- for WESTERN BLOTTING:** An antiserum concentration of dilution ratio x1000 will allow visualization of 0.03-0.001ng/lane of recombinant rat IL-1  $\beta$  under reducing condition.
- SPECIFICITY:**
- |                             |                              |
|-----------------------------|------------------------------|
| IL-1 $\beta$ (Rat) 100%,    | IL-1 $\beta$ (Human) 19.2%   |
| IL-1 $\alpha$ (Rat) <0.01%, | IL-1 $\alpha$ (Human) <0.01% |
| TNF- $\alpha$ (Rat) <0.01%, | TNF- $\alpha$ (Human) <0.01% |
| Other Cytokines <0.01%      |                              |
- RELATED ANTISERA:** Rabbit Anti IL-1  $\alpha$  (Rat) Serum YC 010  
Goat Anti IL-1  $\alpha$  (Rat) Serum YC 011  
Rabbit Anti IL-1  $\beta$  (Rat) Serum YC 020  
Anti IL-1  $\beta$  (Rat) Monoclonal Antibody YC 022
- RELATED PEPTIDES:** IL-1  $\alpha$ , TNF-  $\alpha$ , TNF-  $\beta$ , Other Cytokines
- STORAGE:** Keep frozen below -20°C  
Avoid repeated freezing-thawing

**REFERENCES:**

- 1) Oppenheim JJ, et al., Immunol. Today, 7:45, 1986
- 2) Giri JG, Lomedico PT, Mizel SB., J. Immunol. 134: 343-349, 1985
- 3) DJ Hazuda, J Strickler, F Kueppers, PL Simon, and PR Young., J. Biol. Chem., 265: 6318-6322, 1990
- 4) Dodds RA, Merry K, Littlewood A, Gowen M. J., Histochem. Cytochem., 42: 733-744, 1994
- 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

**FOR RESEARCH LABORATORY USE ONLY**  
DO NOT USE ORGANIC SOLVENTS FOR DISSOLVING ANTISERUM