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## **Monoclonal Antibody To Human IL-1Ra** **Interleukin-1 Receptor Antagonist**

Monoclonal antibody 1384 is useful for studying biological effects of IL-1Ra *in vitro*. The interleukin-1 receptor antagonist (IL-1Ra) is a naturally occurring molecule that shares homology with IL-1 $\alpha$  and IL-1 $\beta$ . It binds competitively to IL-1 receptors type I and type II with the same affinity as does IL-1, but does not induce any intracellular response. Two structural variants of IL-1Ra have been described: a 17kDa form that is secreted from monocytes, macrophages, neutrophils, and other cells (sIL-1Ra) and an 18-kDa form that remains in the cytoplasm of keratinocytes and other epithelial cells, monocytes, and fibroblasts (icIL-1Ra). An additional 16-kDa intracellular isoform of IL-1Ra has been described in neutrophils, monocytes, and hepatic cells. Both of the major isoforms of IL-1Ra are transcribed from the same gene through the use of alternative first exons. The production of IL-1Ra is stimulated by many substances including adherent IgG, other cytokines, and bacterial or viral components. The tissue distribution of IL-1Ra in mice indicates that sIL-1Ra is found predominantly in peripheral blood cells, lung, spleen, and liver, while icIL-1Ra is found in large amounts in skin. Studies in transgenic and knockout mice indicate that IL-1Ra is important in host defense against endotoxin-induced injury. IL-1Ra is produced by hepatic cells with the characteristics of an acute phase protein. Endogenous IL-1Ra is produced in numerous experimental animal models of disease as well as in human autoimmune and chronic inflammatory diseases. The use of neutralizing anti-IL-1Ra antibodies has demonstrated that endogenous IL-1Ra is an important natural antiinflammatory protein in arthritis, colitis, and granulomatous pulmonary disease.

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<b>Product Number:</b>	T-1403 (Lot 01PO9501)
<b>Clone:</b>	1384.92
<b>Host species, isotype:</b>	Mouse IgG1
<b>Quantity:</b>	200 $\mu$ g
<b>Format:</b>	Affinity purified, lyophilized  Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), no stabilizer and 0.01% thimerosal as a preservative.
<b>Stability:</b>	Original vial: 1 year at 4° - 8°C  Stock solution: 1 year at -20°C. Avoid repeated thawing and freezing.
<b>Applications:</b>	Tested for ELISA.  Optimal dilutions should be determined by the end user.  Please see <a href="http://www.bma.ch">www.bma.ch</a> for protocols and general information.

<b>Immunogen:</b>	Recombinant human IL-1Ra.
<b>Antigen distribution:</b>	The antigen is produced and secreted by monocytes and macrophages after stimulation with pro-inflammatory cytokines, LPS, and <i>in vitro</i> by immunoglobulins coated to surfaces after an induction phase of 4h. <i>In vitro</i> the quantity of IL-1Ra secreted depends on the dose and type of stimulus.
<b>Specificity:</b>	<b>Human:</b> IL-1 receptor antagonist; negative with human IL-1beta, IL-1 alpha. <b>Other:</b> negative with mouse IL-1Ra, other species unknown.

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### **Selected references**

- Towbin, H. et al., J Immunol Meth **170**:125-135 (1994)  
Dinarello, C.A. and Thompson, R.C., Immunology Today **12**:404 (1991)  
Dinarello, C.A. and Wolff, S.M., New Engl. J. Med. **328**:106 (1993).

For in vitro research only. Caution: this product contains thimerosal, a poisonous and hazardous substance.