



BMA BIOMEDICALS

Biotinylated 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 α and IL-1 β . 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 defence 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 anti-inflammatory protein in arthritis, colitis, and granulomatous pulmonary disease.

TECHNICAL AND ANALYTICAL CHARACTERISTICS

Product Number:	T-1404 (Lot 02PB1307)
Clone:	1384.92
Host species, isotype:	Mouse IgG1
Quantity:	200 μ g
Format:	Affinity purified, biotinylated, liquid Reconstitute by adding 0.2ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer, and 0.1% (v/v) Kathon™ CG as a preservative.
Stability:	Original vial: 1 year at 4° - 8°C from date of purchase. Stock solution and aliquots thereof: 1 year at -20°C. Avoid freeze-thaw cycles.
Applications:	Tested for ELISA. Approximate working dilution for IHC: ELISA: 2 μ g/ml

	Optimal dilutions should be determined by the end user Please see www.bma.ch for protocols and general
Immunogen:	Recombinant human IL-1Ra.
Protein database:	<u>human-P18510</u>
Antigen distribution:	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.
Specificity:	Human: IL-1 receptor antagonist; negative with human IL-1beta, IL-1 alpha. Other: negative with mouse IL-1Ra, other species unknown.

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. This product contains Kathon™ CG as a preservative.