

## PRODUCT INFORMATION SUMMARY

### ANTI-IL1 ALPHA

M650020	Purified Antibody	(Clone C42)	0.2 mg
M660020	Purified Antibody	(Clone C12)	0.2 mg

#### SPECIFICITY:

Human interleukin 1 (IL 1)-alpha, a product of activated macrophages and other cell types, which modulates a broad spectrum of immune and inflammatory responses by its ability to regulate proliferation, maturation, or functional activity of a wide variety of cell types.

Protein purification from various cell sources has yielded IL 1 biological activity in polypeptides with molecular weights ranging from two to 75 kilodaltons. cDNA cloning of IL 1 from human monocytes has shown that the biological activities of this cytokine do not reside in a singular molecular entity but rather in a class of at least two distinct proteins referred to as IL 1-alpha and IL 1-beta. Although these two proteins exhibit an amino acid homology of only 26%, both forms of IL 1 bind to the same cell surface receptor and appear to have identical biological activities (6). IL 1-alpha initially is synthesized as a 31 kilodalton intracellular precursor which is post-translationally processed to yield a mature 17 kilodalton protein.

**IMMUNOGLOBULIN CHAIN COMPOSITION:** IgG1, kappa chains (both clones).

**SOURCE:** Murine ascites fluid.

**CLONES:** Derived from hybridization of murine myeloma (NS-1) cells with spleen cells from BALB/c mice immunized with yeast-derived recombinant human interleukin 1.

**PURIFICATION METHOD:** Protein A affinity chromatography.

#### RESEARCH APPLICATIONS:

Functional neutralization of IL 1-alpha.

Western Blot analysis; Development of quantitative immunoassays;

Immunoaffinity purification of IL 1-alpha.

**CHARACTERIZATION:**

Enzyme immunoassay working dilutions (1mg/ml):

Clone C12 -- 1:10,000

Clone C42 -- 1:10,000

**CROSS-REACTIVITY:**

Cross-reactivity with other cytokines (including IL 1-beta, IL 2, GM-CSF, TNFs alpha and beta, IFNs alpha, beta, and gamma) was not observed in quality control testing.

**NEUTRALIZING ACTIVITY:**

One microgram of purified monoclonal anti-IL 1-alpha, Clone C12, can neutralize 6.25 nanograms of IL 1-alpha (specific activity of  $1 \times 10^7$  units/mg). One microgram of purified anti-IL 1-alpha, Clone C42, can neutralize 2.0 nanograms of IL 1-alpha.

Neutralization assay is based on the inhibition of an increase of proliferation of phytohemagglutinin-stimulated mouse thymocytes as measured by tritiated thymidine incorporation. One unit of activity is defined as the amount of interleukin 1-alpha required for a one-fold increase in cellular proliferation under assay conditions.

**HANDLING AND STORAGE:**

Lyophilized, purified monoclonal antibody upon reconstitution with 0.2 ml of distilled water will be in a medium containing 0.01M phosphate-buffered saline, pH 7.4. These preparations are **preservative and carrier protein-free**, and should be diluted in a protein-containing or other stabilizing medium to a concentration suitable for use in specific protocols. Lyophilized reagents should be stored at  $-20^{\circ}$  C until reconstitution. All reagents in a liquid state should be stored at  $2-8^{\circ}$  C **with addition of preservative** (0.1% sodium azide or similar) as suitable for application, when not in use. Small aliquots may be frozen, at high concentration, for long-term storage. Purified anti-IL 1-alpha is provided free of stabilizing agents and preservatives to facilitate conjugation and immediate use in functional and immunological assays.

**WARRANTY:**

Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the product label description.

**RESEARCH USE ONLY**