Human IL-1α/IL-1F1 Fluorescein-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 4414

Catalog Number: IC200F

100 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-1α/IL-1F1 in ELISAs and Western blots. In ELISAs, this antibody does not cross-react with recombinant human (rh) IL-1β, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, rmIL-1α, -1β, -3, -4, -5, -6, -7, -9, or -13.
Source	Monoclonal Mouse IgG_{2A} Clone # 4414
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human IL-1α/IL-1F1 Ser113-Ala271 Accession # P01583
Conjugate	Fluorescein Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm (FITC)
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

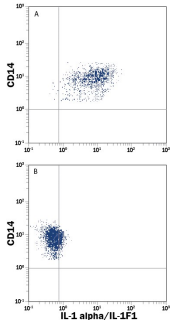
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of IL-1α/IL-1F1 in Human Blood Monocytes by Flow Cytometry. Human peripheral blood monocytes (A) treated with LPS were stained with Mouse Anti-Human IL-1α/IL-1F1 Fluorescein-conjugated Monoclonal Antibody (Catalog # IC200F) and Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # FAB3832P). Quadrant markers were set based on control antibody staining (Catalog # IC002F). (B) Inhibition of Mouse Anti-Human IL-1α/IL-1F1 Fluorescein-conjugated Monoclonal Antibody (Catalog # IC200F) staining by the addition of excess Recombinant Human IL-1α/IL-1F1 (Catalog # 200-LA). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Interleukin 1 (IL-1) is a name that designates two proteins, IL-1α and IL-1β, which are the products of distinct genes, but which show approximately 25% amino acid sequence identity and which recognize the same cell surface receptors. Although IL-1 production is generally considered to be a consequence of inflammation, recent evidence suggests that IL-1 is also temporarily upregulated during bone formation and the menstrual cycle and can be induced in response to nervous system stimulation. In response to classic stimuli produced by inflammatory agents, infections or microbial endotoxins, a dramatic increase in the production of IL-1 by macrophages and various other cells is seen. Cells in particular known to produce IL-1 include osteoblasts, monocytes, macrophages, keratinocytes, Kupffer cells, hepatocytes, thymic and salivary gland epithelium, Schwann cells, fibroblasts, and glia (oligodendroglia, astrocytes, and microglia).

IL-1α and IL-1β are both synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17,000 Da. Neither precursor contains a typical hydrophobic signal peptide sequence and most of the precursor form of IL-1α remains in the cytosol of cells, although there is evidence for a membrane-bound form of the precursor form of IL-1α. The IL-1α precursor reportedly shows full biological activity in the EL-4 assay. Among various species, the amino acid sequence of mature IL-1α is conserved 60% to 70% and human IL-1 has been found to be biologically active on murine cell lines. Both forms of IL-1 bind to the same receptors, designated type I and type II. Evidence suggests that only the type I receptor is capable of signal transduction and that the type II receptor may function as a decoy, binding IL-1 and thus preventing binding of IL-1 to the type I receptor.

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