**DESCRIPTION**

Species Reactivity: Human

Specificity: Detects human IL-1β/IL-1F2 in Western blots. Shows less than 5% cross-reactivity with recombinant mouse (rm) IL-1β and recombinant porcine IL-1β and no cross-reactivity with recombinant rat (rr) IL-1β, rmIL-1α, recombinant human IL-1ra, rmIL-1ra, or rrIL-1α.

Source: Monoclonal Mouse IgG1, Clone # 8516

Purification: Protein A or G purified from hybridoma culture supernatant

Immunogen: E. coli-derived recombinant human IL-1β/IL-1F2

Accession #: P01584

Conjugate: Phycoerythrin

Excitation Wavelength: 488 nm

Emission Wavelength: 565-605 nm

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.

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Concentration</td>
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<tr>
<td>Intracellular Staining by Flow Cytometry</td>
<td>10 µL/10⁶ cells</td>
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**DATA**

Intracellular Staining by Flow Cytometry

Detection of IL-1β/IL-1F2 in Human Blood Monocytes by Flow Cytometry. Human peripheral blood monocytes stimulated with LPS were stained with Mouse Anti-Human CD14 Fluorescein-conjugated Monoclonal Antibody (Catalog # FAB3832F) and either (A) Mouse Anti-Human IL-1β/IL-1F2 PE-conjugated Monoclonal Antibody (Catalog # IC201P) or (B) Mouse IgG1, Phycoerythrin Isotype Control (Catalog # IC002P). 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.
IL-1 is a name that designates two pleiotropic cytokines, IL-1α (IL-1F1) and IL-1β (IL-1F2), which are the products of distinct genes. IL-1α and IL-1β are structurally related polypeptides that share approximately 21% amino acid (aa) identity in human. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1α and IL-1β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1α or IL-1β and then associates with IL-1 R accessory protein (IL-1 R3/IL-1 R AcP) to form a high-affinity receptor complex that is competent for signal transduction. IL-1 RII has high affinity for IL-1β but functions as a decoy receptor and negative regulator of IL-1β activity. IL-1ra functions as a competitive antagonist by preventing IL-1α and IL-1β from interacting with IL-1 RI (1-4). The human IL-1β cDNA encodes a 269 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1β-converting enzyme (Caspase-1/ICE) to generate the active cytokine (5-7). The 17 kDa mature human IL-1β shares 96% aa sequence identity with rhesus and 67-78% with canine, cotton rat, equine, feline, mouse, porcine, and rat IL-1β.

References: