

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human IL-1 β /IL-1F2 in Western blots. Shows less than 5% cross-reactivity with recombinant mouse (rm) IL-1 β and rIL-1 β and no cross-reactivity with rIL-1 β , rML-1 α , rhIL-1ra, rML-1ra, or rIL-1 α . |
| Source | Monoclonal Mouse IgG ₁ Clone # 8516 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human IL-1 β /IL-1F2 aa 117-269 Accession # P01584 |
| Conjugate | Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm |
| Formulation | Supplied 0.2 mg/mL 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 | 0.25-1 μ g/10 ⁶ cells | Human peripheral blood mononuclear cells treated with LPS, fixed with paraformaldehyde, and permeabilized with saponin |

PREPARATION AND STORAGE

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| 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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

IL-1 is a name that designates two pleiotropic cytokines, IL-1 α (IL-1F1) and IL-1 β (IL-1F2), which are the products of distinct genes. IL-1 α and IL-1 β 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-1 α and IL-1 β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1 α or IL-1 β 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-1 β but functions as a decoy receptor and negative regulator of IL-1 β activity. IL-1ra functions as a competitive antagonist by preventing IL-1 α and IL-1 β from interacting with IL-1 RI (1 - 4). The human IL-1 β cDNA encodes a 269 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 β -converting enzyme (Caspase-1/ICE) to generate the active cytokine (5-7). The 17 kDa mature human IL-1 β shares 96% aa sequence identity with rhesus and 67-78% with canine, cotton rat, equine, feline, mouse, porcine, and rat IL-1 β .

References:

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