

## DESCRIPTION

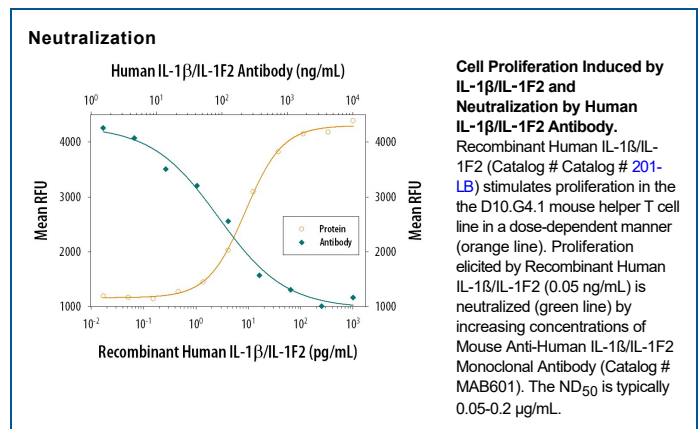
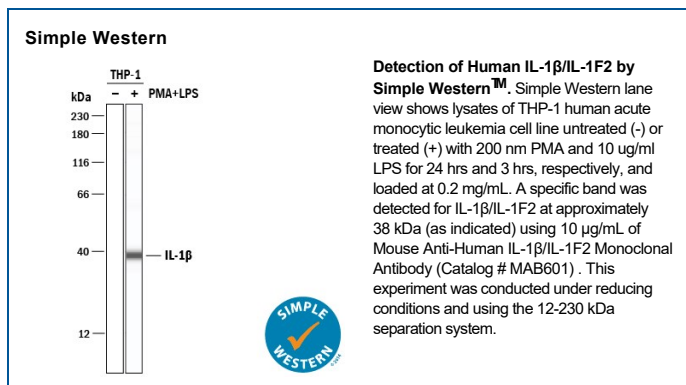
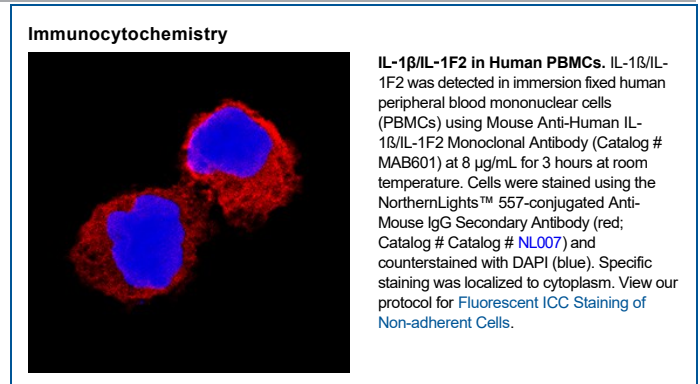
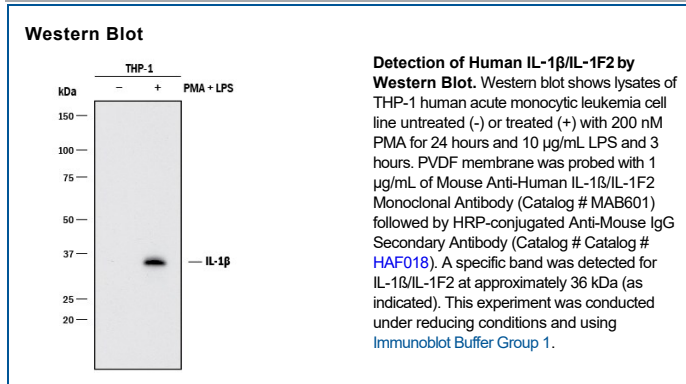
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-1β/IL-1F2 in sandwich ELISAs and Western blots. In sandwich ELISAs, less than 4% cross-reactivity with recombinant rat (rr) IL-1β and less than 0.1% with recombinant porcine (rp) IL-1β, recombinant human IL-1α, rpIL-1α, rrIL-1α, recombinant mouse (rm) IL-1α, and rmIL-1β is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 2805
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-1β/IL-1F2
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

## 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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	TF-1 human erythroleukemic cell line
<b>Human IL-1β/IL-1F2 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Human IL-1β/IL-1F2 Antibody (Catalog # MAB601)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human IL-1β/IL-1F2 Biotinylated Antibody (Catalog # BAF201)
<b>Standard</b>		Recombinant Human IL-1β/IL-1F2 (Catalog # 201-LB)
<b>Neutralization</b>	Measured by its ability to neutralize IL-1β/IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.05-0.2 µg/mL in the presence of 0.05 ng/mL Recombinant Human IL-1β/IL-1F2.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

## BACKGROUND

IL-1 is a name that designates two pleiotropic cytokines, IL-1 $\alpha$  (IL-1F1) and IL-1 $\beta$  (IL-1F2, IL1B), which are the products of distinct genes. IL-1 $\alpha$  and IL-1 $\beta$  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 $\alpha$  and IL-1 $\beta$  are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1 $\alpha$  or IL-1 $\beta$  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 $\beta$  but functions as a decoy receptor and negative regulator of IL-1 $\beta$  activity. IL-1ra functions as a competitive antagonist by preventing IL-1 $\alpha$  and IL-1 $\beta$  from interacting with IL-1 RI. Intracellular cleavage of the IL-1 beta precursor by Caspase-1/ICE is a key step in the inflammatory response. The 17 kDa molecular weight mature human IL-1 $\beta$  shares 96% aa sequence identity with rhesus and 67%-78% with canine, cotton rat, equine, feline, mouse, porcine, and rat IL-1 $\beta$ . IL-1 $\beta$  functions in a central role in immune and inflammatory responses, bone remodeling, fever, carbohydrate metabolism, and GH/IGF-I physiology. IL-1 beta dysregulation is implicated in many pathological conditions including sepsis, rheumatoid arthritis, inflammatory bowel disease, acute and chronic myelogenous leukemia, insulin-dependent diabetes mellitus, atherosclerosis, neuronal injury, and aging-related diseases.

## PRODUCT SPECIFIC NOTICES

This product is covered by one or more patents, including US Patent # 5,681,933.