

DESCRIPTION

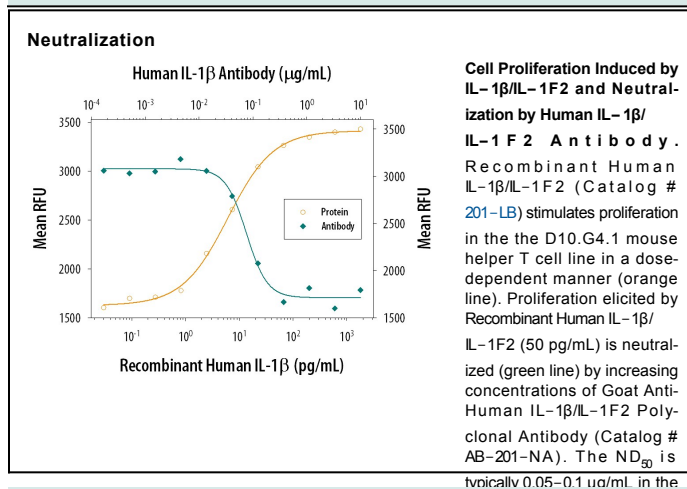
Species Reactivity	Human
Specificity	Detects human IL-1 β /IL-1F2 in ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant rhesus monkey is observed, and approximately 50% cross-reactivity with recombinant mouse IL-1 β , recombinant rat IL-1 β , recombinant canine IL-1 β , recombinant equine IL-1 β , recombinant feline IL-1 β , and approximately 20% cross-reactivity with recombinant porcine IL-1 β and recombinant cotton rat IL-1 β is observed.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	<i>E. coli</i> -derived recombinant human IL-1 β /IL-1F2 Ala117-Ser269 Accession # NP_000567
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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
Western Blot	1 μ g/mL	Recombinant Human IL-1 β /IL-1F2 (Catalog # 201-LB)
Immunocytochemistry	5-15 μ g/mL	Immersion fixed human peripheral blood lymphocytes
Neutralization	Measured by its ability to neutralize IL-1 β /IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J.A. <i>et al.</i> (1987) in <i>Lymphokines and Interferons</i> , a Practical Approach. Clemens, M.J. <i>et al.</i> (eds): IRL Press. 272. The Neutralization Dose (ND ₅₀) is typically 0.05-0.1 μ g/mL in the presence of 50 pg/mL Recombinant Human IL-1 β /IL-1F2 and 1.25 μ g/mL concanavalin A.	

DATA



PREPARATION AND STORAGE

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

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:

1. Allan, S.M. *et al.* (2005) *Nat. Rev. Immunol.* **5**:629.
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3. Kornman, K.S. (2006) *Am. J. Clin. Nutr.* **83**:475S.
4. Isoda, K. and F. Ohsuzu (2006) *J. Atheroscler. Thromb.* **13**:21.
5. March, C.J. *et al.* (1985) *Nature* **315**:641.
6. Auron, P.E. *et al.* (1984) *Proc. Natl. Acad. Sci. USA* **81**:7907.
7. Martinon, F. and J. Tschopp (2007) *Cell Death Differ.* **14**:10.

PRODUCT SPECIFIC NOTICES

This product is covered by one or more of the following U.S. patents: 4,766,069, 5,510,462, 5,681,933, 4,762,914, 5,474,899, 5,789,185, 5,484,887, 5,122,459, 5,001,057, 5,077,219, 5,286,847.