

Anti-Human IL-1 β Azide Free

PRODUCT SPECIFICATIONS

Catalogue N°	857.260.000 - 200 μ g / 200 μ l 857.260.005 - 500 μ g / 500 μ l
Target species	Human
Specificity	Recognizes natural and recombinant human IL-1 β
Clone	B-B53
Application	ELISA Western Blot
Hybridoma	Myeloma X63/AG.8653 x Balb/c spleen cells
Immunisation	Recombinant human IL-1b
Quantity	200 μ g or 500 μ g (Discovery Size also available please enquire)
Isotype	Mouse IgG1 Kappa light chain
Format	Phosphate-buffered saline. Sterile-filtered through 0.22 μ m. Carrier and preservative free.
Storage	Stable at +2-8°C for 12 months. For longer storage freeze aliquots.
Synonym	IL-1b IL-1beta

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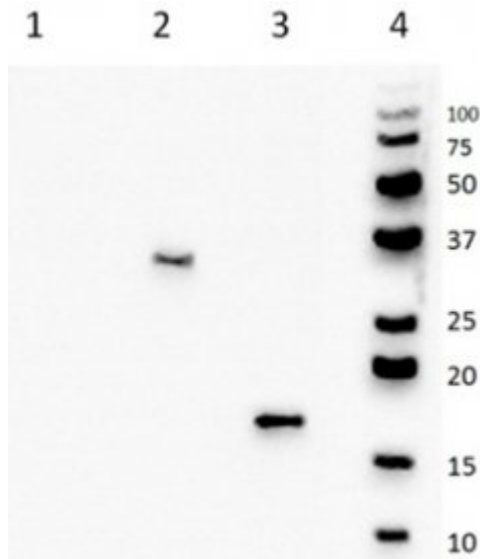
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Western Blot with B-B53

1: lysate of non-activated monocyte + monensin

2: lysate of LPS activated monocyte + monensin

3: recombinant human IL-1 β

4: molecular weight marker

Reduced form

BACKGROUND

Interleukin-1 Beta (IL-1 β) is a member of the interleukin-1 family. This family consists of three structures related polypeptides. The first two are IL-1a and IL-1b, each of which has a broad spectrum of both beneficial and harmful biologic actions, and the third is IL-1-receptor antagonist, which inhibits the activities of interleukin-1.

IL-1 a and b present approximately 25% homology at the amino acid level, but the difference is in their tri dimensional structure. Two distinct receptor types have been isolated, that bind both forms. IL-1 β are synthesized as a larger precursor, with a molecular weight 31kda. The molecular weight of the mature form is 17.5kDa. Unlike IL1a, the IL-1 β precursor show a little or no biological activity in comparison to the mature form.

IL-1 is primarily an inflammatory cytokine. It belongs to a groups of cytokines with overlapping biologic properties (TNFa and IL-6). IL-1, TNF and IL-6 share the ability to stimulate T and B lymphocytes, increase cell proliferation, and initiate or suppress gene expression for several proteins. It exerts their effects by binding to specific receptors.

IL-1 (a and b) have similar biological properties, among them, the ability to induce fever, sleep, anorexia and hypotension. IL-1 stimulates the release of pituitary hormones, increases the synthesis of collagenases, resulting in the destruction of cartilage, and stimulates the production of prostaglandins, leading to decrease in the pain threshold. In addition IL-1 has some host-defense properties. However, whereas IL-1 β is a secreted cytokine, IL-1a is predominantly a cell-associated cytokine.

IL-1 has also been implicated in the destruction of beta cells of the islets of Langerhans, the growth of myelogenous leukaemia cells, and the development of atherosclerotic plaques. It is described in several diseases : sepsis syndrome, rheumatoid arthritis, inflammatory Bowel disease, acute and chronic myelogenous leukaemia, insulino-dependant diabetes mellitus, artherosclerosis.