

Anti-Human IL-10 Azide Free

PRODUCT SPECIFICATIONS

Catalogue N°	855.100.000 - 200µg / 200µl 855.100.005 - 500µg / 500µl
Target species	Human
Specificity	Recognises both natural and recombinant human IL-10
Clone	B-S10
Application	ELISA Immunohistochemistry Functional assay
Hybridoma	Myeloma X63/AG.8653 x Balb/c spleen cells
Immunisation	Recombinant human IL-10
Quantity	200µg or 500µg (Discovery Size also available please enquire)
Isotype	Mouse IgG1 Kappa light chain
Format	Phosphate-buffered saline. Sterile-filtered through 0.22 µm. Carrier and preservative free
Storage	Stable at +2-8°C for 12 months. For longer storage freeze aliquots.
Biological Activity	Blocks IL-10 induced inhibition of IL-6 synthesis on LPS activated monocytes

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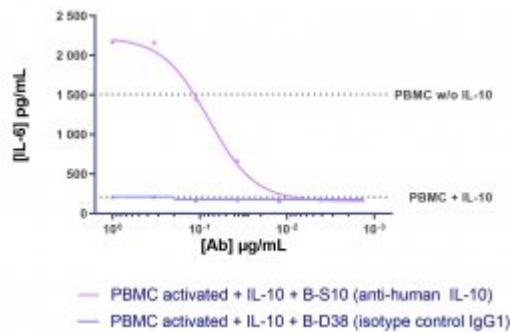
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The isotype control antibody has no effect on IL-10 inhibition of IL-6 synthesis whilst the B-S10 antibody (anti-human IL-10) increases IL-6 secretion by PBMC activated LPS. B-S10 blocks the inhibition of IL-6 synthesis by IL-10 and increases IL-6 synthesis.

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BACKGROUND

Interleukin-10 is a pleiotropic cytokine playing an important role as a regulator of lymphoid and myeloid cell function. Due to the ability of IL-10 to block cytokine synthesis and several accessory cell functions of macrophages this cytokine is a potent suppressor of the effector functions of macrophages, T-cells and NK cells. In addition, IL-10 participates in regulating proliferation and differentiation of B-cells, mast cells and thymocytes. The primary structure of human IL-10 has been determined by cloning the cDNA encoding the cytokine.

The corresponding protein exerts 160 amino acids with a predicted molecular mass of 18.5 kDa. Based on its primary structure, IL-10 is a member of the four - helix bundle family of cytokines. In solution human IL-10 is a homodimer with an

apparent molecular mass of 39 kDa. Although it contains an N-linked glycosylation site, it lacks detectable carbohydrates. Recombinant protein expressed in *E. coli* thus retains all known biological activities. The human IL-10 gene is located on chromosome 1 and is present as a single copy in the genome. The human IL-10 exhibits strong DNA and amino acid sequence homology to the murine IL-10 and an open reading frame in the Epstein- Barr virus genome, BCRF1 which shares many of the cellular cytokine's biological activities and may therefore play a role in the host- virus interaction.

The immunosuppressive properties of IL-10 suggest a possible clinical use of IL-10 in suppressing rejections of grafts after organ transplantations. IL-10 can furthermore exert strong anti-inflammatory activities.

IL-10 in disease

IL-10 expression was shown to be elevated in **parasite infections** like in *Schistosoma mansoni*, *Leishmania*, *Toxoplasma gondii* and *Trypanosoma* infection. Furthermore, high IL-10 expression was detected in **mycobacterial infections** as shown for *Mycobacterium leprae*, ***Mycobacterium tuberculosis*** and ***Mycobacterium avium*** infections. High expression levels of IL-10 are also found in **retroviral infections** inducing immunodeficiency.

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