

Anti- IL-10 Monoclonal Antibody

Catalog # ABO15023

Product Information

Application	WB, IHC-P
Primary Accession	P18893
Host	Rat
Isotype	Rat IgG1, κ
Reactivity	Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti- IL-10 Monoclonal Antibody . Tested in IHC-P, WB applications. This antibody reacts with Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 μ g/ml.

Additional Information

Gene ID	16153
Other Names	Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, Il10, Il-10
Calculated MW	20641
Application Details	Western blot, 0.25-0.5 μ g/ml, Mouse Immunohistochemistry (Paraffin-embedded Section), 2-5 μ g/ml, Mouse
Source	Eukaryota
Protein Name	Interleukin-10
Contents	PBS, pH 7.0. Contains no stabilizers or preservatives
Clone Names Immunogen	Clone: AFIE-9 Recombinant mouse IL-10
Purification	Immunogen affinity purified.
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	Il10
Synonyms	Il-10

Function

Major immune regulatory cytokine that acts on many cells of the immune system where it has profound anti-inflammatory functions, limiting excessive tissue disruption caused by inflammation. Mechanistically, IL10 binds to its heterotetrameric receptor comprising IL10RA and IL10RB leading to JAK1 and STAT2-mediated phosphorylation of STAT3. In turn, STAT3 translocates to the nucleus where it drives expression of anti-inflammatory mediators. Targets antigen-presenting cells (APCs) such as macrophages and monocytes and inhibits their release of pro-inflammatory cytokines including granulocyte-macrophage colony-stimulating factor /GM-CSF, granulocyte colony-stimulating factor/G-CSF, IL-1 alpha, IL-1 beta, IL-6, IL-8 and TNF. Also interferes with antigen presentation by reducing the expression of MHC- class II and co-stimulatory molecules, thereby inhibiting their ability to induce T cell activation (By similarity). In addition, controls the inflammatory response of macrophages by reprogramming essential metabolic pathways including mTOR signaling (By similarity) (PubMed:[28473584](#)).

Cellular Location

Secreted {ECO:0000250|UniProtKB:P22301}.

Background

Interleukin-10 (IL-10 or IL10), also known as human cytokine synthesis inhibitory factor (CSIF), is an anti-inflammatory cytokine. In humans IL-10 is encoded by the IL10 gene. It is capable of inhibiting synthesis of pro-inflammatory cytokines like IFN-gamma, IL-2, IL-3, TNFalpha and GM-CSF made by cells such as macrophages and regulatory T-cells. IL-10 also displays potent abilities to suppress the antigen presentation capacity of antigen presenting cells. Kim et al. (1992) showed that the mouse IL 10 gene contains 5 exons and spans about 5.2 kb of genomic DNA. Eskdale et al. (1997) mapped the IL10 gene to the junction between 1q31 and 1q32.

Images

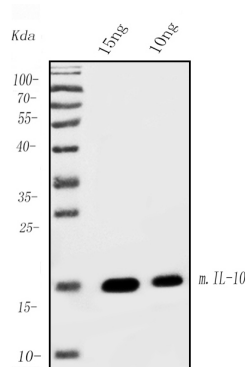
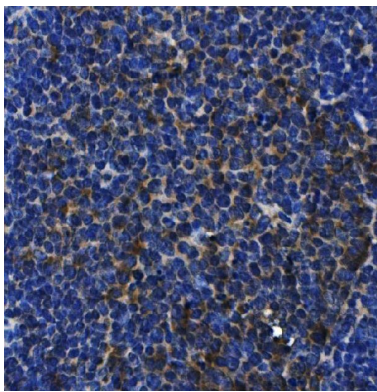


Figure 1. Western blot analysis of IL-10 using anti-IL-10 antibody (M00021-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant mouse IL-10 protein 15ng, Lane 2: recombinant mouse IL-10 protein 10ng. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rat anti-IL-10 antigen affinity purified monoclonal antibody (Catalog # M00021-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rat IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system.

Figure 2. IHC analysis of IL-10 using anti-IL-10 antibody (M00021-1).

IL-10 was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/ml rat anti-IL-10 Antibody (M00021-1) overnight at



4°C. Biotinylated goat anti-rat IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

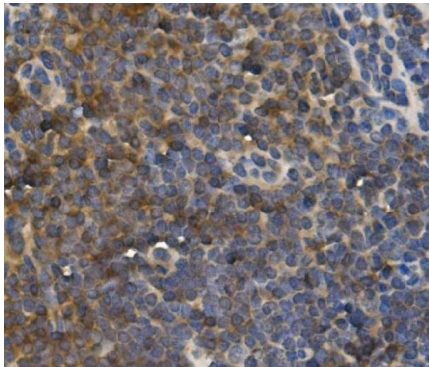


Figure 3. IHC analysis of IL-10 using anti-IL-10 antibody (M00021-1).

IL-10 was detected in paraffin-embedded section of mouse lymphaden tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/ml rat anti-IL-10 Antibody (M00021-1) overnight at 4°C. Biotinylated goat anti-rat IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.