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antibody and ELISA experts

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Anti-MIF Antibody Picoband™

Catalog Number: PB9274

About MIF

Macrophage migration inhibitory factor (MIF or MMIF), also known as GIF, is a protein that in humans is encoded by the MIF gene. It is a cytokine released by T-lymphocytes, macrophages, and the pituitary gland that serves to integrate peripheral and central inflammatory responses. MIF gene has 3 exons separated by introns of only 189 and 95 bp, and covers less than 1 kb. The localization of the human gene for MIF is to chromosome 22q11.2. MIF plays a critical role in inflammatory diseases and atherogenesis. It is also involved in cell-mediated immunity and immunoregulation. MIF plays a role in the regulation of macrophage function in host defense through the suppression of anti-inflammatory effects of glucocorticoids.

Overview

Product Name	Anti-MIF Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-MIF Antibody Picoband™ catalog # PB9274. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P14174

Technical Details

Immunogen	E.coli-derived human MIF recombinant protein (Position: P2-A115). Human MIF shares 89% and 90% amino acid (aa) sequence identity with mouse and rat MIF respectively.
Predicted Reactive Species	Bovine
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells, Human

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Anti-MIF Antibody Picoband™ (PB9274) Images

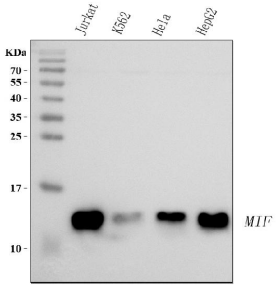

Figure 1. Western blot analysis of MIF using anti-MIF antibody (PB9274).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Jurkat whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human Hela whole cell lysates,
Lane 4: human HepG2 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MIF antigen affinity purified polyclonal antibody (Catalog # PB9274) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MIF at approximately 12 kDa. The expected band size for MIF is at 12 kDa.

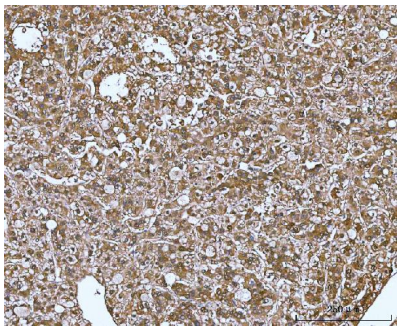

Figure 2. IHC analysis of MIF using anti-MIF antibody (PB9274).
MIF was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MIF Antibody (PB9274) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

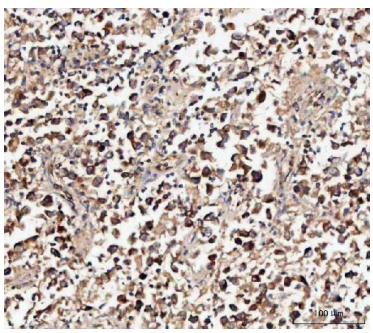

Figure 3. IHC analysis of MIF using anti-MIF antibody (PB9274).
MIF was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MIF Antibody (PB9274) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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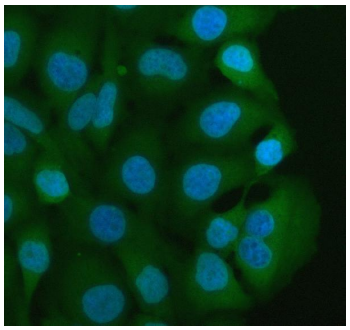

Figure 4. IF analysis of MIF using anti-MIF antibody (PB9274). MIF was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-MIF Antibody (PB9274) overnight at 4°C. DyLight488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

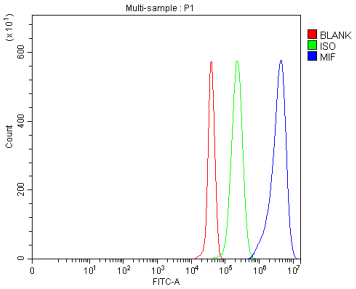

Figure 5. Flow Cytometry analysis of Jurkat cells using anti-MIF antibody (PB9274).
Overlay histogram showing Jurkat cells stained with PB9274 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MIF Antibody (PB9274, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.