

MIF (S-18): sc-16966

BACKGROUND

Macrophage migration inhibitory factor, known as MIF or glycosylation-inhibiting factor, is a secreted, homotrimeric, pro-inflammatory cytokine that modulates macrophage and T cell function and is an important regulator of host response to infection. MIF is expressed at sites of inflammation, which suggests that it plays a role in regulating macrophage function in host defense. MIF is produced by the pituitary gland and is found in monocytes, macrophages, differentiating immunological cells in the eye lens and brain, and fibroblasts. Elevated levels of MIF protein are detected in the plasma of patients with severe sepsis or septic shock, a condition where MIF influences endotoxic shock by enhancing the production of other inflammatory cytokines including tumor necrosis factor α (TNF α), interleukin-1 (IL-1) and interferon- γ (IFN- γ). MIF promotes the systemic inflammatory response by counter-regulating glucocorticoid-mediated inhibition of immune-cell activation and proinflammatory cytokine production. MIF may mediate tissue destruction through the induction of proteinases.

REFERENCES

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- Paralkar, V., et al. 1994. Cloning the human gene for macrophage migration inhibitory factor (MIF). Genomics 19: 48-51.
- Bernhagen, J., et al. 1994. Purification, bioactivity, and secondary structure analysis of mouse and human macrophage migration inhibitory factor (MIF). Biochemistry 33: 14144-14155.
- Lubetsky, J.B., et al. 1999. Pro-1 of macrophage migration inhibitory factor functions as a catalytic base in the phenylpyruvate tautomerase activity. Biochemistry 38: 7346-7354
- Onodera, S., et al. 1999. High expression of macrophage migration inhibitory factor in the synovial tissues of rheumatoid joints. Cytokine 11: 163-167.
- Benigni, F., et al. 2000. The proinflammatory mediator macrophage migration inhibitory factor induces glucose catabolism in muscle. J. Clin. Invest. 106: 1291-1300.
- Calandra, T., et al. 2000. Protection from septic shock by neutralization of macrophage migration inhibitory factor. Nat. Med. 6: 164-170.

CHROMOSOMAL LOCATION

Genetic locus: MIF (human) mapping to 22q11.23; Mif (mouse) mapping to 10 C1.

SOURCE

MIF (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MIF of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16966 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MIF (S-18) is recommended for detection of MIF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MIF (S-18) is also recommended for detection of MIF in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for MIF siRNA (h): sc-37137, MIF siRNA (m): sc-37138, MIF shRNA Plasmid (h): sc-37137-SH, MIF shRNA Plasmid (m): sc-37138-SH, MIF shRNA (h) Lentiviral Particles: sc-37137-V and MIF shRNA (m) Lentiviral Particles: sc-37138-V.

Molecular Weight of MIF: 13 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Y79 cell lysate: sc-2240 or THP-1 cell lysate: sc-2238.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **MIF (D-2): sc-271631** or **MIF (11): sc-130329**, our highly recommended monoclonal alternatives to MIF (S-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **MIF (D-2): sc-271631**.