

# Mouse/Rat MIF Antibody

Monoclonal Rat IgM Clone # 811409 Catalog Number: MAB19781

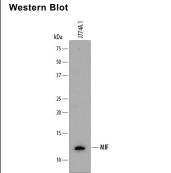
| DESCRIPTION        |  |  |  |
|--------------------|--|--|--|
| Species Reactivity | Mouse/Rat  |  |  |
| Specificity        | Detects mouse MIF in ELISA and Western Blot.   |  |  |
| Source             | Monoclonal Rat IgM Clone # 811409  |  |  |
| Purification       | Protein A or G purified from hybridoma culture supernatant   |  |  |
| Immunogen          | E. coli-derived recombinant mouse MIF Met1-Ala115 Accession # P34884   |  |  |
| Formulation        | ion Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS. |  |  |

#### APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

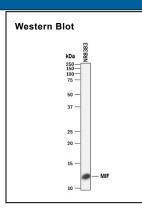
|                | Recommended<br>Concentration          | Sample   |  |
|----------------|---------------------------------------|--|--|
| Western Blot   | 1 μg/mL                               | See Below  |  |
| Flow Cytometry | 0.25 μg/10 <sup>6</sup> cells         | See Below  |  |
| CyTOF-ready    | Ready to be labeled with conjugation. | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. |  |

# DATA



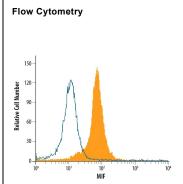
# Detection of Mouse MIF by Western

Blot. Western blot shows lysates of J774A.1 mouse reticulum cell sarcoma macrophage cell line. PVDF membrane was probed with 1 µg/mL of Rat Anti-Mouse/Rat MIF Monoclonal Antibody (Catalog # MAB19781) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for MIF at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.



## Detection of Rat MIF by Western Blot.

Western blot shows lysates of NR8383 rat alveolar macrophage cell line. PVDF membrane was probed with 1 µg/mL of Rat Anti-Mouse/Rat MIF Monoclonal Antibody (Catalog # MAB19781) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for MIF at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.



Detection of MIF in J774A.1 Mouse Cell Line by Flow Cytometry. J774A.1 mouse reticulum cell sacroma macrophage cell line was stained with Rat Anti-Mouse/Rat MIF Monoclonal Antibody (Catalog # MAB19781, filled histogram) or rat IgM isotype control antibody, followed by Allophycocyanin-conjugated anti-rat IgM. To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

## PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

\*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70  $^{\circ}$ C

### Stability & Storage

### Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
  1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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# **Mouse/Rat MIF Antibody**

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#### BACKGROUND

MIF (Macrophage Inhibitory Factor; also GIF) is a 12-13 kDa member of the MIF family of proteins. Although secreted, it possesses no definitive signal sequence. MIF is widely expressed and serves to regulate immune reactions. On macrophages and B cells, MIF binds to a CD74:CD44 complex, initiating downstream signaling. On monocytes, this promotes TNFα production plus IFN-γ-stimulated NO production. On B cells, this promotes B cell survival. MIF also binds to leukocyte CD74:CXCR2 and CD74:CXCR4 heterodimers, initiating T cell and monocyte migration. A tautomerase activity has also been shown for MIF and is suggested to involve the entire length of the molecule. Mouse MIF is 114 amino acids (aa) in length. MIF is phosphorylated at Ser91, and an additional, singular Cys residue is covalently linked to MIF at Cys60. MIF is considered to act as a homotrimer. Full-length mouse MIF shows 90% and 99% aa sequence identity with human and rat MIF, respectively.

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