

**SM6013S****Monoclonal Antibody to Human Macrophage Migration Inhibitory Factor (MIF)**

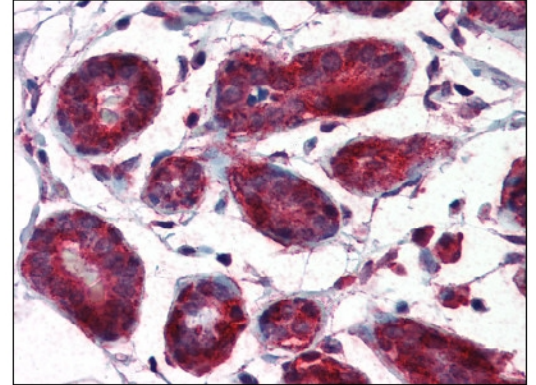
<b>Alternate names:</b>	GLIF, Glycosylation-inhibiting factor, MMIF, Macrophage migration inhibitory factor, Phenylpyruvate tautomerase
<b>Quantity:</b>	50 µl
<b>Concentration:</b>	1.0 mg/ml
<b>Background:</b>	The cytokine Macrophage migration inhibitory factor (MIF) has been identified to be secreted by the pituitary gland and the monocyte/macrophage and to play an important role in endotoxic shock. MIF has the unique property of being released from macrophages and T-cells in response to physiological concentrations of glucocorticoids. The secretion of MIF is tightly regulated and decreases at high, anti-inflammatory steroid concentration.
<b>Uniprot ID:</b>	<a href="#">P14174</a>
<b>NCBI:</b>	<a href="#">NP_002406.1</a>
<b>GeneID:</b>	<a href="#">4282</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	SM10P (for use in human samples), AM03095PU-N
<b>Clone:</b>	4E4
<b>Immunogen:</b>	Recombinant Human MIF (1-114 aa) purified from <i>E. coli</i> .
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction <b>Purification:</b> Affinity Chromatography on Protein G <b>Buffer System:</b> PBS, pH 7.4 containing 0.02% Sodium Azide and 10% Glycerol
<b>Applications:</b>	<b>ELISA.</b> <b>Western blot:</b> 1/500-1/2,000. Recommended starting dilution is 1/1,000. <b>Flow Cytometry.</b> <b>Immunofluorescence/Immunocytochemistry.</b> <b>Immunohistochemistry on Paraffin Sections:</b> 5 µg/ml. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	The antibody recognizes Human MIF. Other species not tested.
<b>Storage:</b>	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
<b>General Readings:</b>	1. Weiser WY, Temple PA, Witek-Giannotti JS, Remold HG, Clark SC, David JR. Molecular cloning of a cDNA encoding a human macrophage migration inhibitory factor. Proc Natl Acad Sci U S A. 1989 Oct;86(19):7522-6. PubMed PMID: 2552447. 2. Bernhagen J, Mitchell RA, Calandra T, Voelter W, Cerami A, Bucala R. Purification,

bioactivity, and secondary structure analysis of mouse and human macrophage migration inhibitory factor (MIF). *Biochemistry*. 1994 Nov 29;33(47):14144-55. PubMed PMID: 7947826.

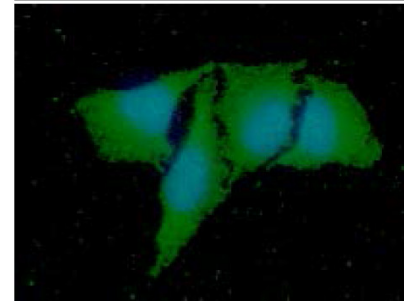
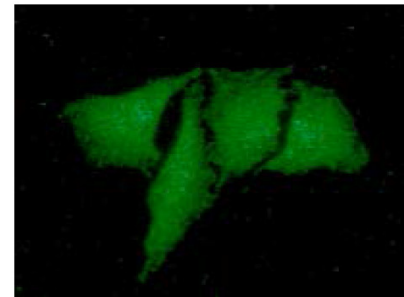
3. Bucala R. MIF rediscovered: cytokine, pituitary hormone, and glucocorticoid-induced regulator of the immune response. *FASEB J*. 1996 Dec;10(14):1607-13. PubMed PMID: 9002552.

**Pictures:**

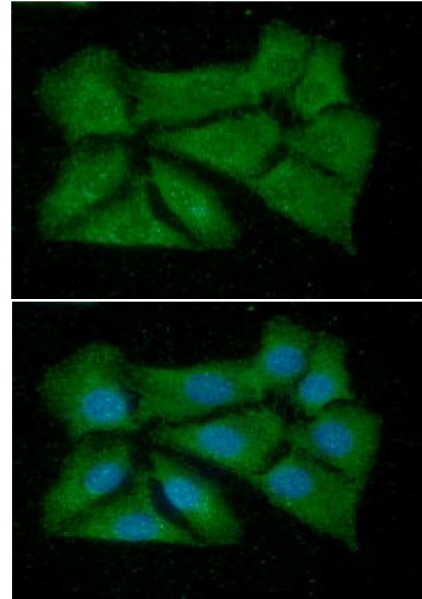
SM6013 MIF antibody staining of Formalin-Fixed, Paraffin-Embedded Human Breast.



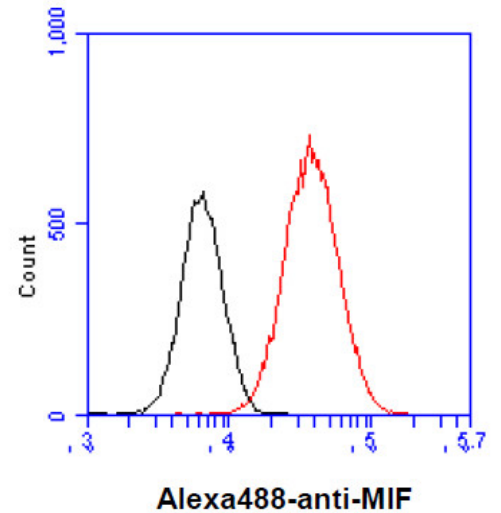
ICC/IF analysis of MIF in HeLa cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human MIF antibody (1/100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).



**ICC/IF analysis** of MIF in Balb/3T3 cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human MIF antibody (1/100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).

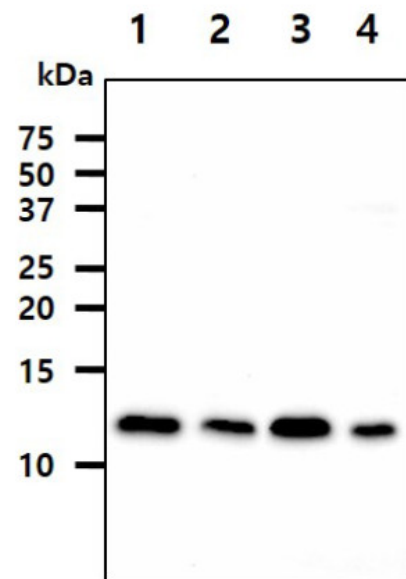


**Flow cytometry analysis** of MIF in HeLa cell line, staining at 2-5ug for  $1 \times 10^6$  cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).



**Western blot analysis:** The cell lysates (40 µg) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human MIF antibody (1/1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1: Jurkat cell lysate.  
 Lane 2: THP-1 cell lysate.  
 Lane 3: HeLa cell lysate.  
 Lane 4: U937 cell lysate.



**Western blot analysis:** The extract of HL-60 was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-Human MIF antibody (1/1,000). Protein was visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

