

## Product datasheet

### Anti-MIF antibody [2A10-4D3] ab55445

★★★★★ [2 Abreviews](#) [15 References](#) [5 Images](#)

#### Overview

<b>Product name</b>	Anti-MIF antibody [2A10-4D3]
<b>Description</b>	Mouse monoclonal [2A10-4D3] to MIF
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human, Recombinant fragment
<b>Immunogen</b>	Recombinant full length protein, corresponding to amino acids 1-116 of Human MIF
<b>Positive control</b>	IHC-P: Human lung cell carcinoma tissue. Flow cyt: Jurkat cells.
<b>General notes</b>	<p>This product was changed from ascites to tissue culture supernatant on 24/1/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.40 Constituent: 100% PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	2A10-4D3
<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab55445 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (1)	Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. <b>ab170190</b> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

## Target

### Function

Pro-inflammatory cytokine. Involved in the innate immune response to bacterial pathogens. The expression of MIF at sites of inflammation suggests a role as mediator in regulating the function of macrophages in host defense. Counteracts the anti-inflammatory activity of glucocorticoids. Has phenylpyruvate tautomerase and dopachrome tautomerase activity (in vitro), but the physiological substrate is not known. It is not clear whether the tautomerase activity has any physiological relevance, and whether it is important for cytokine activity.

### Involvement in disease

Genetic variations in MIF are associated with susceptibility to rheumatoid arthritis systemic juvenile (RASJ) [MIM:604302]. An inflammatory articular disorder with systemic-onset beginning before the age of 16. It represents a subgroup of juvenile arthritis associated with severe extraarticular features and occasionally fatal complications. During active phases of the disorder, patients display a typical daily spiking fever, an evanescent macular rash, lymphadenopathy, hepatosplenomegaly, serositis, myalgia and arthritis.

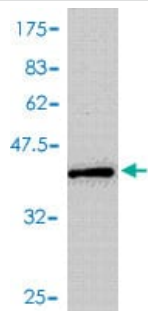
### Sequence similarities

Belongs to the MIF family.

### Cellular localization

Secreted. Cytoplasm. Does not have a cleavable signal sequence and is secreted via a specialized, non-classical pathway. Secreted by macrophages upon stimulation by bacterial lipopolysaccharide (LPS), or by M.tuberculosis antigens.

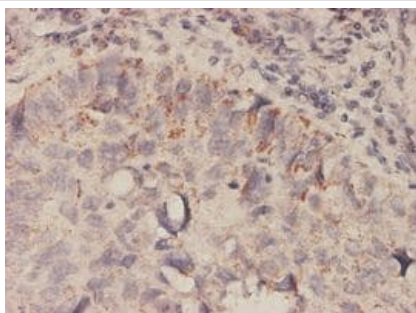
## Images



Western blot - Anti-MIF antibody [2A10-4D3]  
(ab55445)

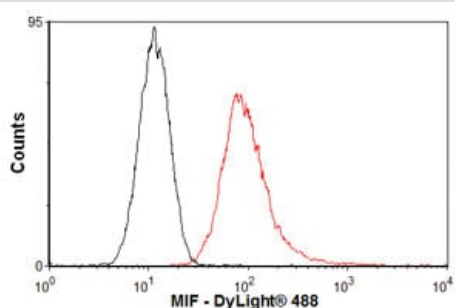
Western blot against tagged recombinant protein immunogen using ab55445 MIF antibody at 1 µg/ml. Predicted band size of immunogen is 38 kDa

**This image was generated using the ascites version of the product.**



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MIF antibody [2A10-4D3]  
(ab55445)

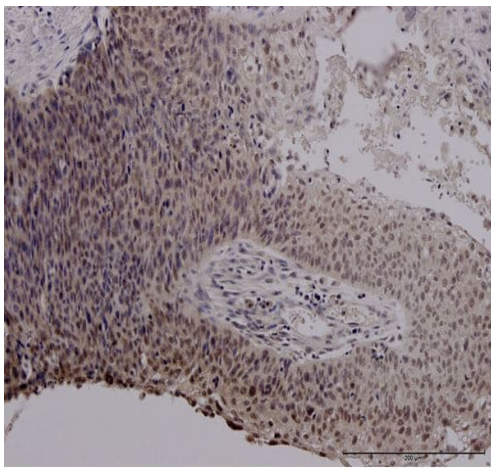
MIF antibody (ab55445) used in immunohistochemistry at 5 µg/ml on formalin fixed and paraffin embedded human lung, adenosquamous cell carcinoma tissue.



Flow Cytometry - Anti-MIF antibody [2A10-4D3]  
(ab55445)

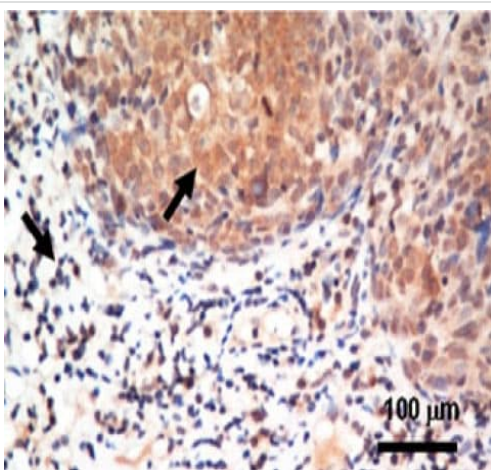
Overlay histogram showing Jurkat cells stained with ab55445 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab55445, 1 µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

**This image was generated using the ascites version of the product.**



Paraffin embedded human lung squamous cell carcinoma tissue stained for MIF using ab55445 at 6 µg/ml in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MIF antibody [2A10-4D3] (ab55445)



Immunohistochemical analysis of Human nasopharyngeal carcinoma, staining MIF with ab55445 at 1/100 dilution.

**This image was generated using the ascites version of the product.**

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MIF antibody [2A10-4D3] (ab55445)

Image from Li J et al., J Biol Chem. 2012 Oct 12;287(42):35484-95. doi: 10.1074/jbc.M112.367532. Epub 2012 Aug 14. Fig 7.; October 12, 2012 The Journal of Biological Chemistry, 287, 35484-35495.

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