

PRODUCT INFORMATION



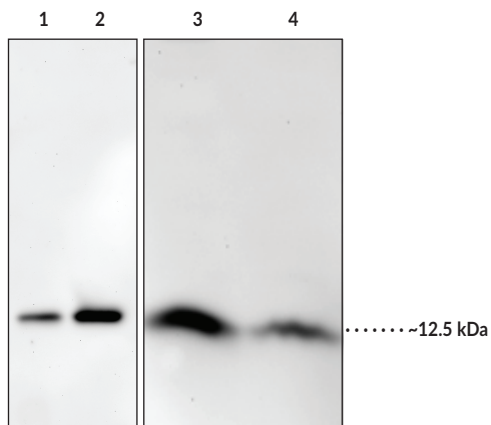
MIF Polyclonal Antibody

Item No. 28717

Overview and Properties

Contents:	This vial contains 500 µl of protein A-purified polyclonal antibody.
Synonyms:	Glycosylation-inhibiting Factor, Macrophage Migration Inhibitory Factor
Immunogen:	Full-length recombinant human MIF protein
Species Reactivity:	(+) Human; other species not tested
Uniprot No.:	P14174
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Applications:	ELISA and Western blot (WB); the recommended starting dilution is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: MIF Protein (10 ng)
Lane 2: MIF Protein (25 ng)
Lane 3: LoVo Cell Lysate (50 µg)
Lane 4: HEK293T Cell Lysate (50 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Macrophage migration inhibitory factor (MIF) is a pro-inflammatory cytokine encoded by the *MIF* gene.¹ It is released from white blood cells upon stimulation by bacterial antigens or glucocorticoids and from the anterior pituitary in response to trauma. MIF binds to CD74 receptors on macrophages, lymphocytes, dendritic, and endothelial cells and stimulates expression and secretion of the pro-inflammatory cytokines TNF- α , IFN- γ , IL-1 β , IL-6, and IL-8, as well as COX-2, chemokine (C-C motif) ligand 2 (CCL2), and nitric oxide. MIF knockdown is protective against LPS-induced shock and MIF pro-inflammatory signaling is positively correlated with arthritis, colitis, and systemic inflammatory response syndrome (SIRS), which is associated with cardiovascular surgery, sepsis, and injury-mediated multiple organ dysfunction syndrome (MODS).^{1,2} MIF is overexpressed in a variety of human cancers, including pancreatic, prostate, breast, colon, brain, lung, and skin, and has been shown to promote hypoxia-induced HIF-1 α stabilization leading to changes in the tumor microenvironment and stimulation of angiogenesis and neovascularization.³ MIF is also an enzymatically active keto-enol tautomerase that is inhibited by isothiocyanates such as sulforaphane.⁴ Cayman's MIF Polyclonal Antibody can be used for ELISA and Western blot applications. The antibody recognizes MIF at 12.5 kDa from human samples.

References

1. Larson, D.F. and Horak, K. Macrophage migration inhibitory factor: Controller of systemic inflammation. *Crit. Care* **10(2)**, 138 (2006).
2. Zernecke, A., Bernhagen, J., and Weber, C. Macrophage migration inhibitory factor in cardiovascular disease. *Circulation* **117(12)**, 1594-1602 (2008).
3. Rendon, B.E., Willer, S.S., Zundel, W., *et al.* Mechanisms of macrophage migration inhibitory factor (MIF)-dependent tumor microenvironmental adaptation. *Exp. Mol. Pathol.* **86(3)**, 180-185 (2009).
4. Healy, Z.R., Liu, H., Holtzclaw, W.D., *et al.* Inactivation of tautomerase activity of macrophage migration inhibitory factor by sulforaphane: A potential biomarker for anti-inflammatory intervention. *Cancer Epidemiol. Biomarkers Prev.* **20(7)**, 1516-1523 (2011).

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