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
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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 Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	J774A.1 mouse reticulum cell sarcoma macrophage cell line fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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