

## Active Recombinant Human MIF

**Cat. No.** MIF-09H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human MIF was expressed in E.coli.                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | This gene encodes a lymphokine involved in cell-mediated immunity, immunoregulation, and inflammation. It plays a role in the regulation of macrophage function in host defense through the suppression of anti-inflammatory effects of glucocorticoids. This lymphokine and the JAB1 protein form a complex in the cytosol near the peripheral plasma membrane, which may indicate an additional role in integrin signaling pathways. |
| <b>Form</b>             | Sterile Filtered White lyophilized (freeze-dried) powder. Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.                                                                                                                                                                                                                                                                                                     |
| <b>Bio-activity</b>     | Fully biologically active when compared to standard. The specific activity is determined by binding rhCD74 in a functional ELISA.                                                                                                                                                                                                                                                                                                      |
| <b>Molecular Mass</b>   | Approximately 12.5 kDa, a single non-glycosylated polypeptide chain containing 115 amino acids.                                                                                                                                                                                                                                                                                                                                        |
| <b>AA Sequence</b>      | MPMFIVNTNV PRASVPDGFL SELTQQLAQA TGKPPQYIAV HVVPDQLMAF<br>GGSEPCALCSLHSIGKIGG AQNRSYSKLL CGLLAERLRI SPDRVYINYY<br>DMNAANVGWN NSTFA                                                                                                                                                                                                                                                                                                     |

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|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | Less than 1EU/g of rHuMIF as determined by LAL method.                                                                                                                                                                                                                                                                                                                               |
| <b>Purity</b>         | > 97 % by SDS-PAGE and HPLC analyses                                                                                                                                                                                                                                                                                                                                                 |
| <b>Storage</b>        | This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.                     |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                                                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | MIF macrophage migration inhibitory factor (glycosylation-inhibiting factor) [ Homo sapiens (human) ]                                                                                              |
| <b>Official Symbol</b> | MIF                                                                                                                                                                                                |
| <b>Synonyms</b>        | MIF; macrophage migration inhibitory factor; GIF; GLIF; MMIF; phenylpyruvate tautomerase; glycosylation-inhibiting factor; EC 5.3.2.1; Glycosylation-inhibiting factor; Phenylpyruvate tautomerase |
| <b>Gene ID</b>         | 4282                                                                                                                                                                                               |
| <b>mRNA Refseq</b>     | NM_002415                                                                                                                                                                                          |

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|----------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | NP_002406                                                                                              |
| <b>MIM</b>                 | 153620                                                                                                 |
| <b>UniProt ID</b>          | P14174                                                                                                 |
| <b>Chromosome Location</b> | 22q11.23                                                                                               |
| <b>Pathway</b>             | Adipogenesis; Phenylalanine metabolism; Tyrosine metabolism                                            |
| <b>Function</b>            | cytokine activity; dopachrome isomerase activity; phenylpyruvate tautomerase activity; protein binding |

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