Active Recombinant Human MIF, His-tagged

Cat. No. MIF-650H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human MIF produced in E. coli is approximately 13.5 kDa, a single non-glycosylated polypeptide chain containing 117 amino acids, with 6×His at C-terminus.
Species	Human
Source	E.coli
Description	Human MIF consists of two α-helices and six β-strands, four of which form a β-sheet. The two remaining β-strands interact with other MIF molecules, creating a trimer. Structure-function studies suggest MIF is bifunctional with segregated topology. The N- and C-termini mediate enzyme activity (in theory). Phenylpyruvate tautomerase activity (enol-to-keto) has been demonstrated and is dependent upon Pro at position 1. Amino acids (a.a.) 50 - 65 have also been suggested to contain thiol-protein oxidoreductase activity. MIF has proinflammatory cytokine activity centered around a.a. 49-65. On fibroblasts, MIF induces,IL-1,IL-8and MMP expression; on macrophages, MIF stimulates NO production and TNF-α release folllowing IFN-γ activation. MIF apparently acts through CD74 and CD44, likely in some form of trimeric interaction. Human MIF is active on mouse cells. Human MIF is 90 %, 94 %, 9 5%, and 90 % aa identical to mouse, bovine, porcine and rat MIF, respectively.
Form	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. The specific activity is determined by binding rhCD74 in a functional ELISA.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Molecular Mass	13.5 kDa
AA Sequence	MPMFIVNTNV PRASVPDGFL SELTQQLAQA TGKPPQYIAV HVVPDQLMAF GGSSEPCALC SLHSIGKIGG AQNRSYSKLL CGLLAERLRI SPDRVYINYY DMNAANVGWN NSTFALEHHH HHH
Endotoxin	Less than 1 EU/μg of rHuMIF, His as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analyses.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw cycles.
Reconstitution	We recommend that this vial be briefy 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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	MIF macrophage migration inhibitory factor (glycosylation-inhibiting factor) [Homo sapiens]
Official Symbol	MIF

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Synonyms	MIF; macrophage migration inhibitory factor (glycosylation-inhibiting factor); GLIF; macrophage migration inhibitory factor; GIF; L-dopachrome isomerase; L-dopachrome tautomerase; phenylpyruvate tautomerase; MMIF;
Gene ID	4282
mRNA Refseq	NM_002415
Protein Refseq	NP_002406
MIM	153620
UniProt ID	P14174
Chromosome Location	22q11.23
Pathway	Adipogenesis, organism-specific biosystem; Phenylalanine metabolism, organism-specific biosystem; Phenylalanine metabolism, conserved biosystem; Tyrosine metabolism, organism-specific biosystem; Tyrosine metabolism, conserved biosystem;
Function	cell surface binding; chemoattractant activity; cytokine activity; cytokine receptor binding; dopachrome isomerase activity; isomerase activity; phenylpyruvate tautomerase activity; protein binding; receptor binding;

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA