

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant Human Migration Inhibitor Factor (rHuMIF)

Catalog Number: PR1093

Source: Escherichia coli

Quantity: 10µg / 50µg / 1.0mg

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 50 - 65 have also been suggested to contain thiol-protein oxidoreductase activity. MIF has proinflammatory cytokine activity centered around aa's 49 - 65. On fibroblasts, MIF induces, IL-1, IL-8 and MMP expression; on macrophages, MIF stimulates NO production and TNF- α release following 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%, 95%, and 90% aa identical to mouse, bovine, porcine and rat MIF, respectively.

Molecular Weight:

Approximately 13.5 kDa, a single non-glycosylated polypeptide chain containing 123 amino acids.

Purity:

>95% by SDS-PAGE and HPLC analyses.

Biological Activity:

Fully biologically active measured by its ability to bind rhCD74 in a functional ELISA.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in PBS, pH 7.4.

AA Sequence:

M P M F I V N T N V P R A S V P D G F L S E L T Q Q L
A Q A T G K P P Q Y I A V H V V P D Q L M A F G G S
S E P C A L C S L H S I G K I G G A Q N R S Y S K L L C
G L L A E R L R I S P D R V Y I N Y Y D M N A A N V G
W N N S T F A L E

Endotoxin:

Less than 1EU/mg of rHuMIF as determined by LAL method.

Reconstitution:

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 $<-20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage:

This lyophilized preparation is stable at $2-8^{\circ}\text{C}$, 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 $2-8^{\circ}\text{C}$. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C . Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

MADE IN CHINA

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