

Recombinant Human Migration Inhibitor Factor, His (rHuMIF, His)

PrimeGene Technical Data Sheet

Catalog Number:	601-03H
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 13.5 kDa, a single non-glycosylated polypeptide chain containing 117 amino acids, with 6 × His at the C-terminus.
Quantity:	10µg/50µg/1000µg
AA Sequence:	MPMFIVNTNV PRASVPDGFL SELTQQLAQA TGKPPQYIAV HVVPDQLMAF GGSSEPCALC SLHSIGKIGG AQNRSYSKLL CGLLAERLRI SPDRVYINYY DMNAANVGWN NSTFALE HHH HHH
Purity:	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The specific activity is determined by binding rhCD74 in a functional ELISA.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Endotoxin:	Less than 1 EU/µg of rHuMIF, His 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 °C. Further dilutions should be made in appropriate buffered solutions.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.

Human Migration Inhibitory Factor

Migration Inhibitory Factor (MIF) is a secreted protein without a cleavable signal sequence and is secreted via a specialized, non-classical pathway. It is secreted by macrophages upon stimulation by bacterial lipopolysaccharide (LPS), or by *M. tuberculosis* antigens. 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(a.a.) have also been suggested to contain thiol-protein oxidoreductase activity. MIF has proinflammatory cytokine activity centered around 49 - 65(a.a.). 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 % a.a. identical to mouse, bovine, porcine and rat MIF, respectively.