

Recombinant Mouse Macrophage migration inhibitory factor/MIF Protein

Catalog No.: RP01829 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	17319	P34884

Tags
NO-Tag**Synonyms**

GIF; DER6; Glif; Macrophage migration inhibitory factor; MIF

Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Endotoxin
< 0.1 EU/μg**Formulation**

Lyophilized from a 0.22 μm filtered solution of 50mM Tris 150mM NaCl pH8.0.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

Background

MIF (or macrophage migration inhibitory factor) was the first lymphokine/cytokine to be recognized in the pregenomics era (1, 2). Regardless, it is one of the least understood of all inflammatory mediators (1, 3). Human MIF is a 12.5 kDa, 115 amino acid (aa) nonglycosylated polypeptide that is synthesized without a signal sequence (4 - 7). Secretion occurs nonclassically via an ABCA1 transporter (8). The initiating Met is removed, leaving Pro as the first amino acid. The molecule consists of two alpha-helices and six beta-strands, four of which form a beta-sheet. The two remaining beta-strands interact with other MIF molecules, creating a trimer (2, 9, 10). 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 (11). Amino acids 50 - 65 have also been suggested to contain thiol-protein oxidoreductase activity (12).

Basic Information

Description

Recombinant Mouse Macrophage migration inhibitory factor/MIF Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Pro2-Ala115) of mouse Macrophage migration inhibitory factor/MIF (Accession #NP_034928.1)

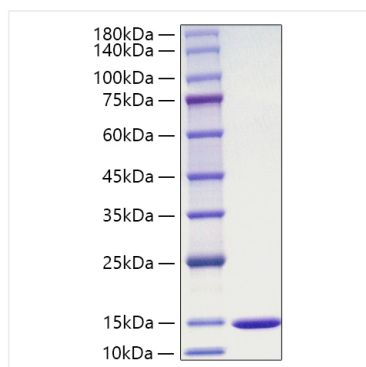
Bio-Activity**Storage**

Store the lyophilized protein at -20°C to -80°C for 12 months. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Contact

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Validation Data



Recombinant Mouse Macrophage migration inhibitory factor/MIF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 10-15 kDa.