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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
E. coli

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
12.37 kDa

Observed MW
15 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

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

Reconstitution
Centrifμge 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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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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

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

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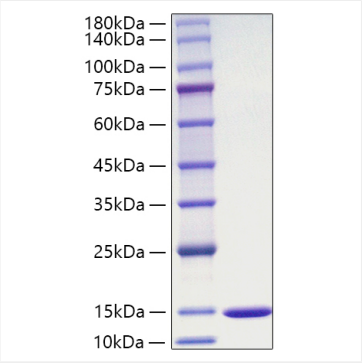
Validation Data



Recombinant Mouse Macrophage migration inhibitory factor/MIF Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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