

Human MIF / GLIF Protein (His Tag)

Catalog Number: 10246-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

GIF; GLIF; MMIF

Protein Construction:

A DNA sequence encoding the human MIF (P14174) (Pro 2-Ala 115) was fused with a polyhistidine tag at the C-terminus and a signal peptide at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Pro 2

Molecular Mass:

The recombinant human MIF consists of 125 amino acids and has a predicted molecular mass of 13.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhMIF is approximately 19 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

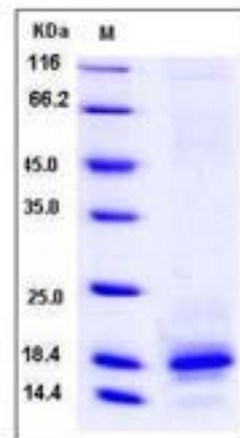
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Macrophage migration inhibitory factor (MIF) is an immunoregulatory cytokine, the effect of which on arresting random immune cell movement was recognized several decades ago. Despite its historic name, MIF also has a direct chemokine-like function and promotes cell recruitment. MIF is an ubiquitously expressed protein that plays a crucial role in many inflammatory and autoimmune disorders. Increasing evidence suggests that MIF also controls metabolic and inflammatory processes underlying the development of metabolic pathologies associated with obesity. Further research has shown that MIF plays a particularly critical part in cell cycle regulation and therefore in tumorigenesis as well. The significance of the role of MIF in a variety of both solid and hematologic tumors has been established. More recently, interest has increased in the role of MIF in the development of central nervous system (CNS) tumors, in which it appears to influence cell cycle control. MIF contributes to malignant disease progression on several different levels. Both circulating and intracellular MIF protein levels are elevated in cancer patients and MIF expression reportedly correlates with stage, metastatic spread and disease-free survival. Blockade of MIF bioactivity successfully inhibited tumor cell growth in vivo and in vitro. MIF plays important roles in the pathogenesis of gastrointestinal, hepatic, and pancreatic disorders.

References

1. Ohkawara T, *et al.* (2005) Pathophysiological roles of macrophage migration inhibitory factor in gastrointestinal, hepatic, and pancreatic disorders. *J Gastroenterol.* 40(2): 117-22.
2. Bach JP, *et al.* (2009) The role of macrophage inhibitory factor in tumorigenesis and central nervous system tumors. *Cancer.* 115(10): 2031-40.
3. Rendon BE, *et al.* (2009) Mechanisms of macrophage migration inhibitory factor (MIF)-dependent tumor microenvironmental adaptation. *Exp Mol Pathol.* 86(3): 180-5.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>