Mouse MIF / Migration Inhibitory Factor Protein

Catalog Number: **50066-MNAE**

General Information

Gene Name Synonym:

GIF; Glif

Protein Construction:

A DNA sequence encoding the mouse MIF (P34884) precursor (Pro 2-Ala 115) was expressed, with an initial Met at the N-terminus.

Source: Mouse

Expression Host: E. coli

QC Testing

Purity: > 93 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse MIF consists of 115 amino acids and has a calculated molecular mass of 12.5 kDa. It migrates as an approximately 13 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 0.1 M NaCl, pH 8.4

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:

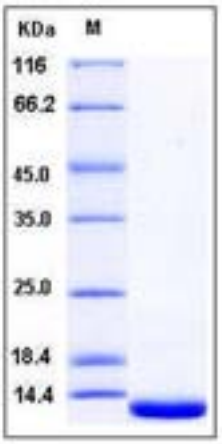
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.