



Macrophage Migration Inhibitory Factor (MIF), active, human recombinant (rHuMIF)

Catalog No: 08545
Lot No: XXXXX
Source: *E. coli*
Synonyms: Phenylpyruvate tautomerase, Glycosylation-inhibiting factor, GIF, MMIF, MIF

Background

The cytokine Macrophage migration inhibitory factor (MIF) has been identified to be secreted by the pituitary gland and the monocyte/macrophage and to play an important role in endotoxic shock. MIF has the unique property of being released from macrophages and T cells in response to physiological concentrations of glucocorticoids. The secretion of MIF is tightly regulated and decreases at high, anti-inflammatory steroid concentration.

Description

MIF human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 115 amino acids and having a molecular mass of 12.5 kDa. MIF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

MIF was lyophilized from 10 mM sodium phosphate buffer pH-7.5.

Solubility

It is recommended to reconstitute the lyophilized MIF-Protein in sterile 18 MΩ-cm H₂O at a concentration between 0.1 mg-1 mg per 1 ml.

Stability

Lyophilized MIF-protein, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MIF-protein should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

MPMFIVNTNV PRASVPDGF L SELTQQLAQA TGKPPQYIAV HVVPDQLMAF GGSSEPCALC SLHSIGKIGG AQNRSYSKLL
CGLLAERLRI SPDRVYINYY DMNAANVGWN NSTFA

Activity

Human PBMCs were cultured with 0 to 1000 ng/ml human MIF. Production of IL-8 was measured via ELISA after 24 hours. The ED₅₀ which was found to be 88 - 132 ng/ml.

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



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