

**BACKGROUND**

Macrophage Migration Inhibitory Factor (MIF) is a pro-inflammatory cytokine that acts on fibroblasts by inducing IL-1, IL-8 and MMP expression. MIF stimulates NO production and TNF- $\alpha$  release following IFN- $\gamma$  activation of macrophages.

Recombinant human MIF is a non-glycosylated protein consisting of 115 amino acids and having a molecular weight of 12.5 kDa.

**Alternative Names:**

None

**Amino Acid Sequence:**

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

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant human MIF is lyophilized from 10 mM Na<sub>2</sub>PO<sub>4</sub>, pH 7.5.

**Stability:**

Lyophilized human MIF should be stored in a desiccated state below -18°C. Upon reconstitution the product should be aliquoted and stored at below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The biological activity was measured in an agarose microdroplet assay using human U937 cells as targets and was found to be 0.5-1 ug/ml.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

