

**Datasheet for 009-001-V79-0005****rHuman MIF Protein****Overview**

|                      |                                                                          |
|----------------------|--------------------------------------------------------------------------|
| <b>Description:</b>  | Human Migration Inhibitory Factor Recombinant Protein - 009-001-V79-0005 |
| <b>Item No.:</b>     | 009-001-V79-0005                                                         |
| <b>Size:</b>         | 5 µg                                                                     |
| <b>Applications:</b> | SDS-PAGE, Cellular Assay                                                 |
| <b>Origin:</b>       | Human                                                                    |
| <b>Expressed in:</b> | E. coli                                                                  |

**Product Details**

|                           |                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>        | 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, containing 115 amino acids, with a molecular weight of 12.5 kDa. |
| <b>Synonyms:</b>          | Glycosylation-inhibiting factor (GIF), L-dopachrome isomerase, L-dopachrome tautomerase, Phenylpyruvate tautomerase                                                                                                                                                                                                                                                  |
| <b>Species of Origin:</b> | Human                                                                                                                                                                                                                                                                                                                                                                |
| <b>Expressed in:</b>      | E. coli                                                                                                                                                                                                                                                                                                                                                              |
| <b>Type:</b>              | Recombinant Protein                                                                                                                                                                                                                                                                                                                                                  |
| <b>Low Endotoxin:</b>     | Yes                                                                                                                                                                                                                                                                                                                                                                  |

**Target Details**

|                            |                                                                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name:</b>          | MIF                                                                                                                                                                              |
| <b>Purity/Specificity:</b> | Migration Inhibitory Factor purity was determined to be greater than 97% as determined by HPLC, analysis by UV-Spectroscopy at 280nm, and by reducing and non-reducing SDS-pAGE. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - P07141</a></li></ul>                                                                                             |

## Application Details

|                                |                                                                                                                                                                                                                                        |
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| <b>Tested Applications:</b>    | SDS-PAGE                                                                                                                                                                                                                               |
| <b>Suggested Applications:</b> | Cellular Assay (Based on references)                                                                                                                                                                                                   |
| <b>Application Note:</b>       | Migration Inhibitory Factor Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Migration Inhibitory Factor in immunological assays.                |
| <b>Assay Dilutions:</b>        | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                        |
| <b>Other:</b>                  | Endotoxin Level: Measured by kinetic LAL analysis and is typically $\leq 1$ EU/ $\mu$ g protein. Biologic Activity: The activity was measured in an agarose microdroplet assay using human U937 and production of IL-8 by human PBMCs. |

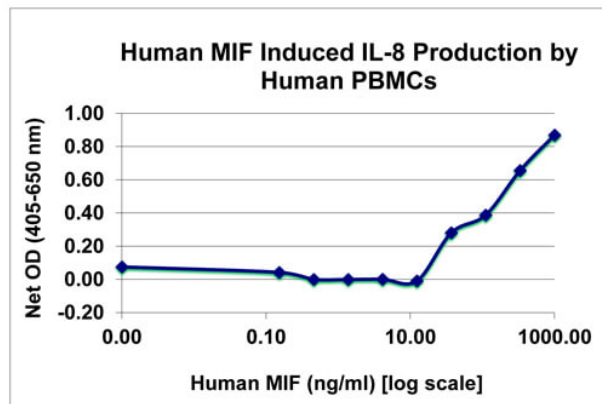
## Formulation

|                               |                                              |
|-------------------------------|----------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                  |
| <b>Buffer:</b>                | 0.01 M Sodium Phosphate, pH 7.5              |
| <b>Preservative:</b>          | None                                         |
| <b>Stabilizer:</b>            | None                                         |
| <b>Reconstitution Volume:</b> | 5 $\mu$ l (5-50 $\mu$ l)                     |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent) |

## Shipping & Handling

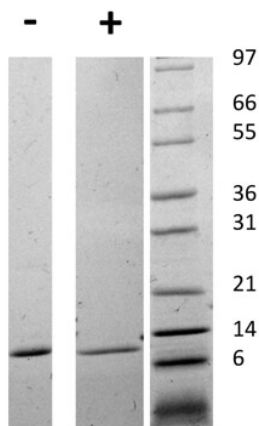
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shipping Condition:</b> | Ambient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Storage Condition:</b>  | Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature. |
| <b>Expiration:</b>         | Expiration date is six (6) months from date of receipt.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Images



#### SDS-PAGE

Bioactivity of Human Migration Inhibitory Factor Recombinant Protein. Human PBMCs were cultured with 0 to 1000 ng/mL Human MIF. Production of IL-8 was measured via ELISA after 24 hours and the linear portion of the curve was used to calculate the ED50. The ED50 of Human MIF is 88 - 132 ng/mL.



#### SDS-PAGE

SDS-PAGE of Human Migration Inhibitory Factor Recombinant Protein. Lane 1: 1 µg Human MIF in non-reducing conditions (-). Lane 2: 1 µg Human MIF in reducing conditions (+). Lane 3: Molecular weight marker. Human MIF has a predicted MW of 12.5 kDa.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.