

**Datasheet for 010-001-W22-0010****rMouse SDF-1 alpha/CXCL12 Protein****Overview**

|                      |                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------|
| <b>Description:</b>  | Mouse Stromal Cell-Derived Factor-1 alpha (CXCL12) Recombinant Protein - 010-001-W22-0010 |
| <b>Item No.:</b>     | 010-001-W22-0010                                                                          |
| <b>Size:</b>         | 10 µg                                                                                     |
| <b>Applications:</b> | SDS-PAGE, Cellular Assay                                                                  |
| <b>Origin:</b>       | Mouse                                                                                     |
| <b>Expressed in:</b> | E. coli                                                                                   |

**Product Details**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>        | Stromal Cell Derived Factor-1 alpha (SDF-1α), also called CXCL12, is one of two splice variants made by a wide variety of cells when stimulated by inflammatory cytokines such as, TNF, IL-1 or LPS. SDF-1α signals through the G protein-couple receptor, CXCR4, to recruit activated leukocytes. Human and mouse SDF-1α share 99% sequence identity. Recombinant mouse SDF-1α is a non-glycosylated protein, containing 68 amino acids, with a molecular weight of 7.9 kDa. |
| <b>Synonyms:</b>          | 12-O-tetradecanoylphorbol 13-acetate repressed protein 1 (TPAR1), C-X-C motif chemokine 12, Pre-B cell growth-stimulating factor (PBSF), Thymic lymphoma cell-stimulating factor (TLSF)                                                                                                                                                                                                                                                                                       |
| <b>Species of Origin:</b> | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Expressed in:</b>      | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Type:</b>              | Recombinant Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Low Endotoxin:</b>     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Target Details**

|                            |                                                                                                                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name:</b>          | Cxcl12                                                                                                                                                                                     |
| <b>Purity/Specificity:</b> | Stromal Cell-Derived Factor-1 alpha (CXCL12) purity was determined to be greater than 98% as determined by 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 - Q4FJL5</a></li></ul>                                                                                                         |

## Application Details

|                                |                                                                                                                                                                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b>    | SDS-PAGE                                                                                                                                                                                                                                |
| <b>Suggested Applications:</b> | Cellular Assay (Based on references)                                                                                                                                                                                                    |
| <b>Application Note:</b>       | Stromal Cell-Derived Factor-1 alpha Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Stromal Cell-Derived Factor-1 alpha 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 as determined by its ability to chemoattract human T cells at 50-100 ng/mL.                            |

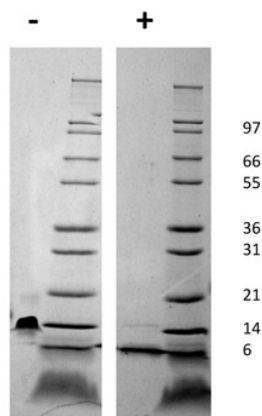
## Formulation

|                               |                                              |
|-------------------------------|----------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                  |
| <b>Concentration:</b>         | 0.1mg/ml                                     |
| <b>Buffer:</b>                | 0.1% Trifluoroacetic acid                    |
| <b>Preservative:</b>          | None                                         |
| <b>Stabilizer:</b>            | None                                         |
| <b>Reconstitution Volume:</b> | 10 $\mu$ l (10-100 $\mu$ l)                  |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent) |

## Shipping & Handling

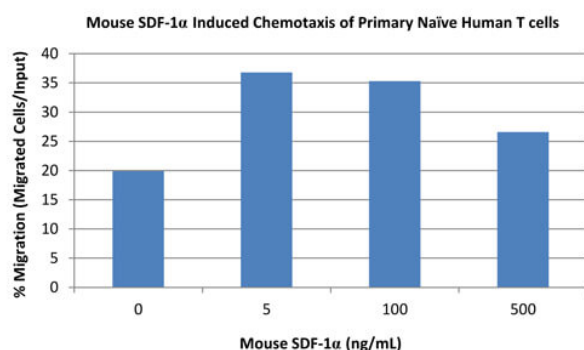
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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

SDS-PAGE of Mouse Stromal Cell-Derived Factor-1 alpha (CXCL12) Recombinant Protein. Lane 1: 1  $\mu$ g Mouse SDF-1 alpha in non-reducing conditions (-). Lane 2: Molecular weight marker. Lane 3: 1  $\mu$ g Mouse SDF-1 alpha in reducing conditions (+). Lane 4: Molecular weight marker. Mouse SDF-1 alpha has a predicted MW of 7.9 kDa.



#### SDS-PAGE

Bioactivity of Mouse Stromal Cell-Derived Factor-1 alpha (CXCL12) Recombinant Protein. Samples of primary naïve human CD3<sup>+</sup> T cells were allowed to migrate to Mouse SDF-1  $\alpha$ /CXCL12 (0, 5, 100, and 500 ng/mL). After 4 hours, cells that migrated were counted using a fluorescent substrate and displayed on the bar graph above. Increased levels of migration over basal were seen in response to Mouse SDF-1 $\alpha$ /CXCL12 starting at 5 ng/mL. This result is comparable to the expected range of 10 ng/mL.

## 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.