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Datasheet for 009-F01-V11-0005

rHuman GM-CSF Protein

Overview

Description:	Human Granulocyte Macrophage Colony Stimulating Factor Recombinant Protein (Animal Free) - 009-F01-V11-0005
Item No.:	009-F01-V11-0005
Size:	5 µg
Applications:	SDS-PAGE, Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Granulocyte Macrophage Colony Stimulating Factor (GM-CSF) is hematopoietic factor produced by endothelial cells, monocytes, fibroblasts and T cells in response to a number of inflammatory mediators. GM-CSF is able to stimulate the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells. GM-CSF can also stimulate some functional activities in mature granulocytes and macrophages. Human and mouse GM-CSF show no cross-reactivity. Recombinant human GM-CSF is a non-glycosylated protein, containing 128 amino acids, with a molecular weight of 14.6 kDa.
Synonyms:	Molgramostin, Pluripoietin-α, MGI1GM, Sargramostim
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	CSF2
Purity/Specificity:	Granulocyte Macrophage Colony Stimulating Factor is produced with no animal-derived raw products, animal free equipment and animal free protocols. Purity was determined to be greater than 95% as determined by analysis by UV-Spectroscopy at 280nm and by reducing and non-reducing SDS-PAGE.

Relevant Links:	• UniProtKB - P04141

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Cellular Assay (Based on references)
Application Note:	Granulocyte Macrophage Colony Stimulating Factor Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Granulocyte Macrophage Colony Stimulating Factor in immunological assays.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/µg protein. Biologic Activity: The activity is determined by the dose-dependent induction of human TF-1 cell proliferation and is typically less than 0.1 ng/mL.

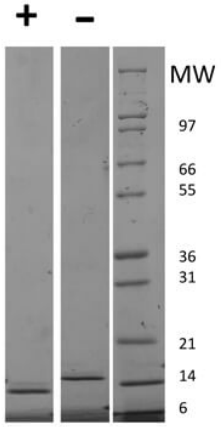
Formulation

Physical State:	Lyophilized
Buffer:	0.01 M Sodium Phosphate, pH 7.5
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	5µl (5-50µl)
Reconstitution Buffer:	Restore with deionized water (or equivalent)

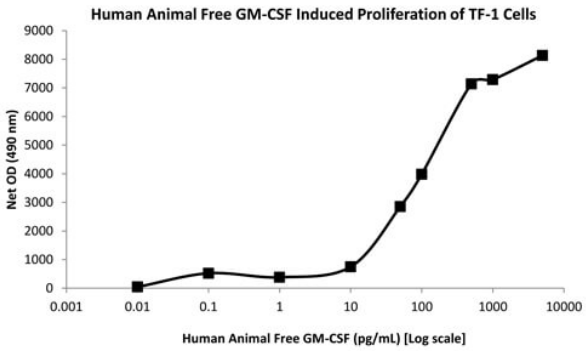
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	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.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE
SDS-PAGE of Human Granulocyte Macrophage Colony Stimulating Factor Animal Free Recombinant Protein. Lane 1: 1 µg Human GM-CSF AF in reducing conditions (+). Lane 2: 1 µg Human GM-CSF AF in non-reducing conditions (-). Lane 3: Molecular weight marker. Human GM-CSF AF is predicted to have a MW of 14.5 kDa.



SDS-PAGE
Bioactivity of Human Granulocyte Macrophage Colony Stimulating Factor Animal Free Recombinant Protein. Serial dilutions of Human GM-CSF AF (starting at 5000 pg/mL) were added to TF1 cells. After 48 hours, cell proliferation was measured and the linear portion of the curve was us used to calculate the ED50. The ED50 of Human GM-CSF AF is between 0.08-0.12 ng/mL. This value is comparable to the typical expected range of 0.1-2 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.