

GM CSF Mouse

Description: Granulocyte Macrophage Colony Stimulating Factor Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 125 amino acids and having a molecular mass of 14285.35 Dalton. GM-CSF Mouse is purified by proprietary chromatographic techniques.

Synonyms: CSF-2, MGI-1GM, GM-CSF, Pluripoietin-alpha, Molgramostin, Sargramostim.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ala-Pro-Thr-Arg.

Purity: Greater than 98.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

GM-CSF Mouse was lyophilized with no additives.

Stability:

Lyophilized Granulocyte Macrophage Colony Stimulating Factor although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GM-CSF 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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Granulocyte Macrophage Colony Stimulating Factor in sterile 20mM AcOH (acetic Acid) not less than 100

Introduction:

GMCSF is a cytokine that controls the production, differentiation, and function of granulocytes and macrophages. The active form of the protein is found extracellularly as a homodimer. This gene has been localized to a cluster of related genes at chromosome region 5q31, which is known to be associated with interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. Other genes in the cluster include those encoding interleukins 4, 5, and 13. GM-CSF stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils and erythrocytes.

Biological Activity:

The ED50 as determined by the dose-dependant stimulation of the proliferation of murine FDC-P1 cell line is < 0.2 ng/ml, corresponding to a Specific Activity of 5,000,000 IU/mg.

References:

1. Title: Multigene/multisubtype HIV-1 vaccine induces potent cellular and humoral immune responses by needle-free intradermal delivery. Publication: Mol Ther. 2005 Dec;12(6):1197-205.

Epub 2005 Aug 22. PMID: 16112909 Link:

<http://www.nature.com/mt/journal/v12/n6/full/mt20051405a.html> Applications: The Mouse GM-CSF used for 2 purposes: 1. As an adjuvant for DNA vaccine which included seven plasmids encoding nine HIV-1 proteins. The mice were injected with the DNA vaccine together with recombinant mouse GM-CSF. 2. Used in Elisa. 2. Title: Neospora caninum: cloning and expression of a gene coding for cytokine-inducing profilin. Publication: Exp Parasitol. 2010 Aug;125(4):357-62. Epub 2010 Mar 6. PMID: 20211619 Link:

<http://www.sciencedirect.com/science/article/pii/S001448941000086X> Applications: Used for immunoblotting. 3. Title: Intranasal Granulocyte-Macrophage Colony-Stimulating Factor Reduces the Aspergillus Burden in an Immunosuppressed Murine Model of Pulmonary Aspergillosis. Publication: Antimicrob Agents Chemother. 2008 February; 52(2): 716718. Published online 2007 November 5 Link:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2224773/tool=pmcentrez> Applications: GM-CSF as tested a therapeutic potential in a murine model of pulmonary aspergillosis. In summary, this pilot study indicates that GM-CSF administered intranasally may be a novel therapeutic approach for the prevention or treatment of pulmonary fungal infections and may augment the efficacies of antifungal agents. GM-CSF was given intranasal. 4. Title: Dendritic Cell-Based Therapeutic Vaccination against Myeloma: Vaccine Formulation Determines Efficacy against Light Chain Myeloma Publication: The Journal of Immunology February 1, 2009 vol. 182 no. 3 1667-1673 Link:

<http://www.jimmunol.org/content/182/3/1667.full> 5. Title: Pre-clinical Evaluation of a CEA DNA Prime/protein Boost Vaccination Strategy Against Colorectal Cancer. Publication: Article first published online: 21 JUN 2007 DOI:10.1111/j.1365-3083.2007.01945.x Scandinavian Journal of Immunology Volume 66, Issue 1, pages 4351, July 2007 Link: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3083.2007.01945.x/full> 6. Title: Intranasal Granulocyte-Macrophage Colony-Stimulating Factor Reduces the Aspergillus Burden in an Immunosuppressed Murine Model of Pulmonary Aspergillosis. Publication: First published November 2007, doi: 10.1128/AAC.00760-07 Antimicrob. Agents Chemother. February 2008 vol. 52 no. 2 716-718 Link: <http://aac.asm.org/content/52/2/716.full>

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