Recombinant Porcine Granulocyte Macrophage Colony Stimulating Factor (rp GM-CSF)

**Synonyms:** CSF-2, MGI-1GM, Pluripotin-alpha, Molgramostin, Sagramostim

**Introduction:** GM-CSF 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.

**Description:** Recombinant porcine GM-CSF produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 14.4 kDa. Recombinant porcine GM-CSF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.22 µm filtered solution in 25 mM sodium acetate, pH 5.7. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized GM-CSF in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rp GM-CSF although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rp 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.

**Purity:** Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

**Endotoxicity:** The endotoxin level is less than 1 EU / µg determined by LAL method.

**Amino acid sequence:** APTRPPSPVT RPWQHVDAIK EALSLLNNSN DTAAVMNETV DVVCEMFDPQ EPTCVQTRLN LYKQQLRGLSL TRLKSPLTLL AKHYEQHCPL TEETSCETQS ITFKSFKDSL NKFLFTIPFD CWGPVKK

**Biological Activity:** Determined by the dose dependant stimulation of the proliferation TF-1 cell line the ED50 was found to be 15-30 ng/ml.

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