

DATASHEET

Name		GM-CSF, PICHIA, REC.HU	
Product	Granulocyte Macrophage-Colony Stimulating Factor Pichia derived, Recombinant Human	Article-No. 40115	
Formulation	White powder - lyophilized from a concentrated (1mg/ml) solution containing 10mM phosphate buffer pH 7.0, 40mg mannitol and 10mg sucrose	Storage	Freezer at -20°C Prevent freeze-thaw cycles

Introduction:

Granulocyte Macrophage-Colony Stimulating Factor 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 Human Granulocyte Macrophage-Colony Stimulating Factor produced in *Pichia Pastoris* is a single, glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 26-32 kDa. rHuGM-CSF Pichia differs from the natural human GM-CSF by a substitution of leucine at position 23 (R to L), and the carbohydrate moiety may be different from the native protein. rHuGM-CSF Pichia is purified by proprietary chromatographic techniques.

Source: *Pichia Pastoris*

Purity: > 97.0% (RP-HPLC & SDS-PAGE)

Solubility:

It is recommended to reconstitute the lyophilised rHuGM-CSF Pichia in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

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Stability:

Lyophilised rHuGM-CSF Pichia, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GMCSF 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).

Amino acid sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Ala-Arg-Ser.

Biological Activity:

The ED₅₀ as determined by the dose-dependent stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) is <0.183ng/ml, corresponding to a Specific Activity of 5 x 10⁶ IU/mg.

Usage:

Our products are intended for lab research only. Not for human, animal or diagnostic use.