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Product Data Sheet

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<b>Cat #</b> SB-002-10	Recombinant Human Granulocyte-Colony Stimulating Factor (G-CSF)	<b>Size:</b> 10 ug
<b>Cat #</b> SB-002-50	Recombinant Human Granulocyte-Colony Stimulating Factor (G-CSF)	<b>Size:</b> 50 ug

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**Background:**

A glycoprotein of MW 20 kDa contains internal disulfide bonds. It induces the survival, proliferation, and differentiation of neutrophilic granulocyte precursor cells and functionally activates mature blood neutrophils. Among the family of colony-stimulating factors, G-CSF is the most potent inducer of terminal differentiation to granulocytes and macrophages of leukemic myeloid cell lines. The synthesis of G-CSF can be induced by bacterial endotoxins, TNF, Interleukin-1 and GM-CSF. Prostaglandin E2 inhibits the synthesis of G-CSF. In epithelial, endothelial, and fibroblastic cells secretion of G-CSF is induced by Interleukin-17.

**Description:**

Recombinant Human G-CSF produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 175 amino acids and having a molecular mass of 18.8 kD.

**Quality Control:**

**Biological activity:** The ED50, calculated by the dose-dependant proliferation of murine NFS-60 indicator cells is less than 0.1 ng/ml, corresponding to a Specific Activity of  $6.0 \times 10^7$  IU/ mg.

**Purity:** Greater than 95% as determined by

(a) Analysis by SEC-HPLC.

(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

**Isoelectric Point:** the main zone between 5.8~6.6 analysis by IEF.

**UV scan:** the maximal absorption wave is 278+/- 3nm.

**Amino-Acid Sequence:** The sequence of the first fifteen N-terminal amino acids was determined and was found to be Met-Thr-Pro-Leu-Gly-Pro-Ala-Ser-Ser-Leu-Pro-Gln-Ser- Phe-Leu-leu.

**Endotoxin:** Less than 0.03ng/ $\mu$ g (0.03IEU/ $\mu$ g) determined by LAL test.

**Formulation:** The protein was lyophilized after extensive dialysis against 10mM sodium acetate buffer pH=4.

**Storage:** Lyophilized rHuG-CSF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuG-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 avoid freeze-thaw cycles.**

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuG-CSF in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100 $\mu$ g/ml, which can then be further diluted to other aqueous solutions

**Usage:**

This item is for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals. If supplied in powder then reconstitute it in 100 ul water for 1 mg/ml stock and store in liquid at 4°C for ~1 week or aliquots in suitable size and store at -20°C for long term storage..

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