

## PRODUCT DATA SHEET



Bioworld Technology, Inc.

### Recombinant Human Granulocyte Colony Stimulating Factor (rHuG-CSF)

Catalog Number: PR1034

Source: Escherichia coli.

Quantity: 2µg/10µg/1.0mg

#### Description

G-CSF is a pleiotropic cytokine best known for its specific effects on the proliferation, differentiation, and activation of hematopoietic cells of the neutrophilic granulocyte lineage. It is produced mainly by monocytes and macrophages upon activation by endotoxin, TNF- $\alpha$  and IFN- $\gamma$ . Other cell types including fibroblasts, endothelial cells, astrocytes and bone marrow stromal cells can also secrete G-CSF after LPS, IL-1 or TNF- $\alpha$  activation. In addition, various carcinoma cell lines and myeloblastic leukemia cells can express G-CSF constitutively.

In humans, two distinct cDNA clones for G-CSF, encoding 207 and 204 amino acid precursor proteins, have been isolated. Both proteins have a 30 amino acid signal peptide and have identical amino acid sequences except for a three amino acid insertion (deletion) at the 35th amino acid residue from the N-terminus of the mature protein. Human G-CSF is 73% identical at the amino acid level to murine G-CSF and the two proteins show species cross-reactivity.

#### Molecular Weight:

Approximately 18.7 kDa, a single non-glycosylated polypeptide chain containing 174 amino acids.

#### Purity:

>98% by SDS-PAGE and HPLC analyses.

#### Biological Activity:

Fully biologically active when compared to standard. The ED50 as calculated by the dose-dependant proliferation of murine NFS-60 indicator cells (measured by 3H-thymidine uptake) is less than 0.1 ng/ml, corresponding to a Specific

Activity of  $\square 1 \times 10^8$  IU/mg.

#### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

#### Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in 10mM sodium acetate buffer pH 4.0.

#### AA Sequence:

T P L G P A S S L P Q S F L L K C L E Q V R K I Q G D G  
A A L Q E K L C A T Y K L C H P E E L V L L G H S L G  
I P W A P L S S C P S Q A L Q L A G C L S Q L H S G L F  
L Y Q G L L Q A L E G I S P E L G P T L D T L Q L D V  
A D F A T T I W Q Q M E E L G M A P A L Q P T Q G A  
M P A F A S A F Q R R A G G V L V A S H L Q S F L E V  
S Y R V L R H L A Q P

#### Endotoxin:

Less than 1EU/mg of rHuG-CSF as determined by LAL method.

#### Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at  $<-20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

#### Storage:

This lyophilized preparation is stable at  $2-8^{\circ}\text{C}$ , but should be kept at  $-20^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at  $2-8^{\circ}\text{C}$ . For maximal stability, apportion the reconsti-

MADE IN CHINA

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tuted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

### Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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