

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant G-CSF, Rat

Catalog Number: BK0062-50µg

Source: Escherichia coli.

Quantity: 50µg

### Description:

Granulocyte Colony-Stimulating Factor (G-CSF) is a hematopoietic cytokine belonging to the four-helix bundle cytokine superfamily. G-CSF is produced by monocytes, macrophages, fibroblasts, and endothelial cells. Its expression is highly regulated and induced by a variety of agents, including Tumor Necrosis Factor (TNF), Interleukin-1 (IL-1), Interferon  $\gamma$  (IFN- $\gamma$ ), and Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF). G-CSF binds to the CSF-specific high affinity receptors expressed on neutrophilic granulocyte lineage. In vivo G-CSF regulates the production of neutrophilic granulocytes, a critical part of host defense systems, and helps the maturation of leukemic cell lines. G-CSF is widely employed clinically because of its fairly innocuous safety profile. Recombinant rat Granulocyte Colony-Stimulating Factor (rrG-CSF) produced in E.coli is a single non-glycosylated polypeptide chain containing of 194 amino acids. A fully biologically active molecule, rrG-CSF has a molecular mass of 21.4 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Molecular Weight:

21.4 kDa, observed by non-reducing SDS-PAGE.

### Purity:

> 95% by SDS-PAGE analysis.

### Biological Activity:

ED50 < 0.1 ng/mL, measured by a cell proliferation assay using NSF-60 cells, corresponding to a specific activity of >  $1 \times 10^7$  units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against 20mM Citric Acid

### AA Sequence:

MIPLLTVSSLPPSLPLPRS-  
FLLKSLEQVRKIQARNTELLEQLCATY-  
KLCHPEELVLFHGSLGIPKASLSSCSSQAL-  
QQTCKLSQLHSGFLYQGLLQALAGIS-  
SELAPTLDMLHLDVDNFATTIWQQMES-  
LGVAPTVOPTQSTMPIFTSAFQRRAGGVLV-  
TSYLQSFLETAHHALHHLPRPAQKHFPELFSISI

### Endotoxin:

< 0.2 EU/µg, determined by LAL method.

### Reconstitution:

Reconstituted in ddH2O at 100 µg/mL.

### Storage:

Lyophilized recombinant rat Granulocyte Colony-Stimulating Factor (rrG-CSF) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rrG-CSF remains stable up to 2 weeks at 4 °C or up to 3 months at -20 °C.

### Usage:

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