# Active Colony Stimulating Factor 3, Granulocyte (GCSF)

*Catalog#:PEV12057*

## 概述（Summary）

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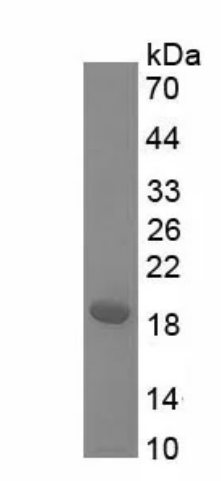
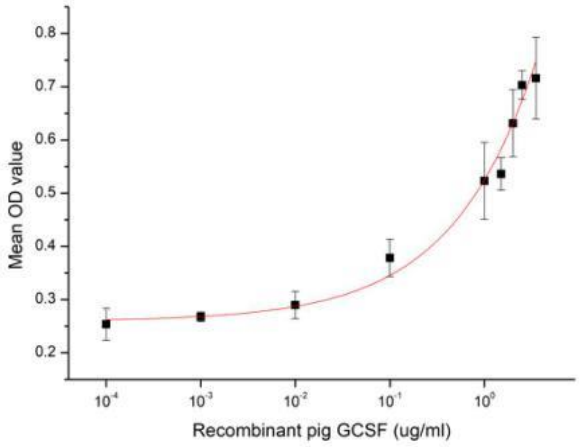
| **别称（Alternative Names）** | CSF3; G-CSF; Granulocyte Colony Stimulating Factor; Pluripoietin; Filgrastim; Lenograstim |
| **纯度（Purity）** | Greater than 95% as determined by reducing SDS-PAGE. |
| **内毒素（Endotoxin level）** | Please contact with the lab for this information |
| **蛋白构建（Construction）** | 【Phe34-Ala193】 |
| **Accession #** | O02837 |
| **表达宿主（Host）** | E.coli |
| **种属（Species）** | Sus scrofa; Porcine (Pig) |
| **预测分子量（Predicted MW）** | 18.9 kDa |
| **制剂（Form）** | Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300. |
| **运输方式（Shipping）** | The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below. |
| **稳定性&储存（Stability &Storage）** | 12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles. |
| **复溶（Reconstitution）** | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex. |
| **背景介绍（References）** | Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This CSF induces granulocytes. |

## 电泳图（SDS-PAGE image）

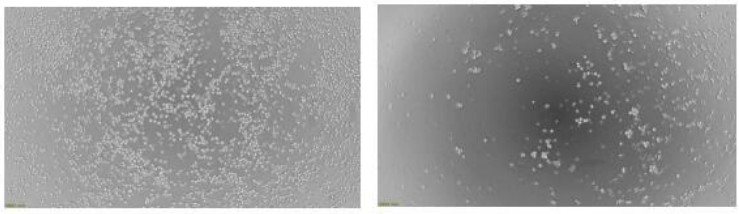



Greater than 95% as determined by reducing SDS-PAGE.

## 活性图（Bioactivity image）




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. In addition, various carcinoma cell lines and myeloblastic leukemia cells can express G-CSF constitutively. In vitro, G-CSF stimulates growth, differentiation and functions of cells from the neutrophil lineage. Consistent with its in vitro functions, G-CSF has been found to play important roles in defense against infection, in inflammation and repair, and in the maintenance of steady state hematopoiesis. The activity of G-CSF is usually measured by a cell proliferation assay using M-NFS 60 mouse myelogenous leukemia lymphoblast cells. M-NFS 60 cells were seeded into triplicate wells of 96-well plates at a density of 8,000 cells/well with 2% serum standard 1640 which contains various concentrations of recombinant pig G-CSF. After incubated for 4 days, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 2-4 hours at 37 °C. Proliferation of M-NFS-60 cells after incubation with G-CSF for 4 days observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8 ) assay after incubation with recombinant pig G-CSF for 4 days. The result was shown in Figure 2. It was obvious that G-CSF significantly increased cell viability of M-NFS-60 cells. The EC50 is 1 ug/ml Figure 2. Cell proliferation of M-NFS-60 cells after stimulated with G-CSF.



A B

Figure 1. Cell proliferation of M-NFS-60 cells after stimulated with G-CSF.
(A) M-NFS-60 cells cultured in 1640, stimulated with 1 ug/ml G-CSF for 4 days;
(B) Unstimulated M-NFS-60 cells cultured in 1640 for 4 days.

## 注意事项（Note）

For Research Use Only , Not for Diagnostic Use.