Human Granulocyte Colony Stimulating Factor (hG-CSF) (#8930) Datasheet Without Images

**Background**

G-CSF is a hematopoietic cytokine essential for neutrophil development, survival, and egress from bone marrow (1-4). Macrophages and monocytes are the predominant producers of G-CSF (3) and endothelial cells, fibroblasts and neuronal cells can produce G-CSF in response to inflammatory stimuli (3). G-CSF inhibits apoptosis in neutrophils and neurons (4,5). G-CSF stimulates proliferation and differentiation of neuronal progenitor cells (5). G-CSF binding to G-CSFR induces receptor dimerization and activation of Jak1/2 tyrosine phosphorylation (3,6). Signaling is through Stat3, ERK, p38, and Akt (5,6). Absence of functional G-CSF or its receptor in humans and mice causes neutropenia (7,8).

**Endotoxin**

Less than 0.01 ng endotoxin/μg hG-CSF.

**Purity**

>98% as determined by SDS-PAGE of 6 μg reduced (+) and non-reduced (-) recombinant hG-CSF. All lots are greater than 98% pure.

**Source / Purification**

Recombinant human G-CSF (hG-CSF) Thr31-Pro204 (Accession #NP_757373) was expressed in human 293 cells at Cell Signaling Technology.

**Bioactivity**

The bioactivity of recombinant hG-CSF was determined in a M-NFS-60 cell proliferation assay. The ED_{50} of each lot is between 20-150 pg/ml.

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**Background References**


**Cross-Reactivity Key**


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