



Product Information

Granulocyte Colony Stimulating Factor (G-CSF), Mouse Recombinant

Product Number **G 8160**

Product Description

Four distinct colony-stimulating factors (CSFs) promoting survival, proliferation, and differentiation of bone marrow precursor cells have been well characterized: granulocyte/macrophage-CSF (GM-CSF), granulocyte-CSF (G-CSF), macrophage-CSF (M-CSF), and interleukin-3 (IL-3, Multi-CSF).^{1,2} Both GM-CSF and IL-3 are multipotential growth factors, stimulating proliferation of progenitor cells from more than one hematopoietic lineage. In contrast, G-CSF and M-CSF are lineage-restricted hematopoietic growth factors, stimulating final mitotic divisions and the terminal cellular maturation of the partially differentiated hematopoietic progenitors.

Granulocyte CSF^{3,4} is produced by monocytes and fibroblasts. It stimulates granulocyte colony formation, activates neutrophils and mature granulocytes, and promotes differentiation of certain myeloid leukemic cells. Natural G-CSF is a glycoprotein of 177 amino acids and a molecular weight of 19 kDa.⁵ Human and murine G-CSF have about 75% homology and show biological cross-reactivity.

Reagents

Lyophilized from a 0.2 μm -filtered solution of phosphate buffered saline, pH 7.4, containing 250 μg bovine serum albumin (BSA) as a carrier protein.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 μm -filtered PBS containing 0.1% HSA or BSA to a concentration not less than 5 $\mu\text{g}/\text{ml}$.

Storage/Stability

Store at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store at $2\text{-}8\text{ }^{\circ}\text{C}$ for no more than 1 month. For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$ or $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended.

Product Profile

The biological activity of mouse recombinant Granulocyte Colony Stimulating Factor (G-CSF) is measured in a cell proliferation assay using NFS-60, a murine myeloblastic cell line.⁶ The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell-based bioassay.

References

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4. Groopman, J., Cell, **50**, 5 (1987).
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