

#73109 Store at -20C

Mouse G-CSF Recombinant Protein

10 µg



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
19.1	#P09920	12985

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

Endotoxin levels are less than or equal to 1 EU / 1 µg mG-CSF.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant mouse G-CSF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant mG-CSF was determined in an NFS-60 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 50 pg/mL.

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Background References

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2. Demetri, G.D. and Griffin, J.D. (1991) *Blood* 78, 2791-808.
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4. van Raam, B.J. et al. (2008) *Blood* 112, 2046-54.
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Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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