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Products	Mouse G-CSF, research grade. Recombinant mouse granulocyte colony-stimulating factor.								
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Content in µg	Order no.								
2	130-094-039								
10	130-094-040								
100	130-094-041								
Biological activity	The ED ₅₀ is ≤0.05 ng/mL corresponding to an activity of ≥2×10 ⁷ U/mg. Note: The ED ₅₀ was determined by dose-dependent stimulation of the proliferation of mouse M-NFS-60 cells.								
Primary structure	Single, non-glycosylated polypeptide chain (179 amino acid residues including N-terminal methionine).								
Molecular mass	19.0 kDa.								
Source	Produced in <i>E. coli</i> .								
Product format	Lyophilized from a filtered (0.2 µm) buffer solution.								
Stabilizer	None.								
Purity	>97% as determined by SDS-PAGE analysis.								
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.								
Storage	Lyophilized Mouse G-CSF, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.								
Reconstitution	It is recommended to reconstitute lyophilized Mouse G-CSF, research grade with deionized sterile-filtered water to a final concentration of 0.04–1.0 mg/mL in a minimal volume of 50 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.								

1.1 Background information

Granulocyte colony-stimulating factor (G-CSF) is a hematopoietic growth factor that affects proliferation and differentiation especially of progenitors of the neutrophil and granulocyte

lineages. It is produced mainly by monocytes and macrophages and a variety of other cells like astrocytes, fibroblasts, and endothelial cells in response to specific stimulation, for instance by endotoxin, TNF-α, and IFN-γ. Furthermore, G-CSF enhances the survival and influences the immunological functions of mature neutrophils. Thus, in addition to its properties as a hematopoietic growth factor G-CSF also acts as a mediator of host defense against infections, and inflammatory response.

1.2 Applications

Mouse G-CSF can be used for a variety of applications, including:

- Growth promotion and differentiation of cells of the neutrophil lineage.
- Induction of colony formation of normal and leukemic bone marrow cells in soft agar cultures.

Optimal concentration for a specific application should be determined by a dose-response experiment.

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