

**Animal-Free Recombinant Human GM-CSF**  
**Catalog # PBG10537****Specification**

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**Animal-Free Recombinant Human GM-CSF - Product Information****Animal-Free Recombinant Human GM-CSF - Additional Information****Description**

GM-CSF is a hematopoietic growth factor that stimulates the development of neutrophils and macrophages and promotes the proliferation and development of early erythroid megakaryocytic and eosinophilic progenitor cells. It is produced in endothelial cells, monocytes, fibroblasts and T-lymphocytes. GM-CSF inhibits neutrophil migration and enhances the functional activity of the mature end-cells. The human and murine molecules are species-specific and exhibit no cross-species reactivity. Recombinant human GM-CSF is a 14.6 kDa globular protein consisting of 128 amino acids containing two intramolecular disulfide bonds and two potential N-linked glycosylation sites.

**Biological Activity**

The  $ED_{50}$  as determined by the dose-dependent stimulation of the proliferation of human TF-1 cells is  $\leq 0.1$  ng/ml, corresponding to a specific activity of  $\geq 1 \times 10^7$  units/mg.

**Authenticity**

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**Endotoxin**

Endotoxin level is  $<0.1$  ng/  $\mu$ g of protein ( $<1$  EU/  $\mu$ g).

**Protein Content**

Verified by UV Spectroscopy and/or SDS-PAGE gel.

**Storage**

-20°C

**Precautions**

Animal-Free Recombinant Human GM-CSF is for research use only and not for use in diagnostic or therapeutic procedures.

**Animal-Free Recombinant Human GM-CSF - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **Animal-Free Recombinant Human GM-CSF - Images**