

GMP HumanKine[®] GM-CSF (Recombinant Human)



| | | | |
|-----------------------|----------------------|----------|----------------|
| Animal Component-Free | Human cell expressed | Tag-Free | Endotoxin Free |
|-----------------------|----------------------|----------|----------------|

Product Description

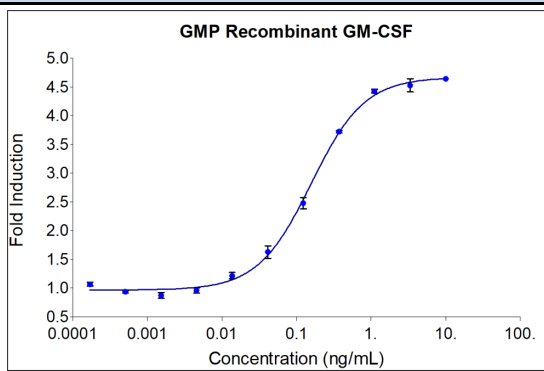
Animal-free Recombinant Human GM-CSF is expressed in human 293 cells with an apparent molecular mass of 15 to 36 kDa. This cytokine is produced in a serum-free, chemically defined media.

| | |
|--------------------|---|
| Alternative Names | Colony stimulating factor, CSF, CSF2, GM CSF, GMCSF, GM-CSF, Molgramostin, Sargramostim |
| Accession Number | P04141 |
| Source | Human Embryonic Kidney cells (HEK293). HEK293-derived GM-CSF protein |
| Adventitious Virus | Master Cell Bank tested Negative for Adventitious Viruses |

Specifications

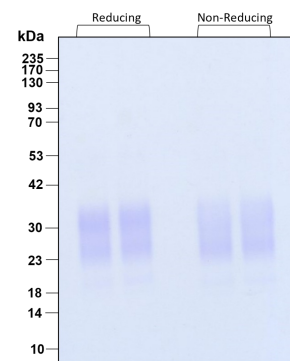
| Test | Method | Specification |
|----------------|---|-------------------------------------|
| Activity | Dose-dependent stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) | 0.08-0.8 ng/mL EC50 |
| Molecular Mass | SDS-PAGE | 15 to 36 kDa, monomer, glycosylated |
| Purity | SDS-PAGE | >95% |
| Endotoxin | LAL | <0.1 EU/μg |
| Mycoplasma | PCR | Not Detected |

Activity Data



GMP Recombinant human GM-CSF (HZ-1002-GMP) stimulates dose-dependent proliferation of the TF-1 human erythroleukemic indicator cell line. Cell number was quantitatively assessed by PrestoBlue[®] Cell Viability Reagent. TF-1 cells were treated with increasing concentrations of GMP recombinant GM-CSF for 72 hours. The EC50 was determined using a 4-parameter non-linear

SDS-PAGE



Purity of recombinant human GM-CSF was determined by SDS- polyacrylamide gel electrophoresis. The protein was resolved in an SDS- polyacrylamide gel in reducing and non-reducing conditions and stained using Coomassie blue.

| Preparation | |
|----------------------|---|
| Shipping Temperature | ambient temperature |
| Formulation | 1x PBS, See Certificate of Analysis for details |
| Reconstitution | Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile 1xPBS pH 7.4 containing 0.1% endotoxin-free recombinant human serum albumin (HSA). |

| Stability and Storage | Product Form | Temperature Conditions | Storage Time (From Date of Receipt) |
|------------------------------------|---------------------------|------------------------|-------------------------------------|
| | Lyophilized | -20°C to -80°C | Until Expiry Date |
| | Lyophilized | Room Temperature | 2 weeks |
| | Reconstituted as per CofA | -20°C to -80°C | 6 months |
| | Reconstituted as per CofA | 4°C | 1 week |
| Avoid repeated freeze-thaw cycles. | | | |

Proteintech GMP Quality Policy HumanKine® GMP Proteins

In vitro recombinant protein production can be prone to variability due to various reasons ranging from quality of raw materials to inconsistency in the process. Therefore, HumanKine®, a proteintech brand's GMP proteins are produced and tested under an ISO 13485 certified quality management system in a clean room facility. Proteintech manufactures the GMP HumanKine® products according to the applicable sections in the following documents: USP Chapter 1043 (Ancillary Materials for Cell, Gene, and Tissue-Engineered Products, USP Chapter 92 (Growth Factors and Cytokines Used in Cell Therapy Manufacturing), WHO TRS, No. 822, 1992 Annex 1 (Good Manufacturing Practices for Biological Products), Ph. Eur. General Chapter 5.2.12, and EudraLex – Volume 4 – Part IV (Guidelines on GMP specific to ATMPs). Proteintech strives to achieve the utmost quality GMP raw material ensuring all applicable guidelines are taken into consideration.

The QMS is built to provide our customers with consistent and pure product delivered by documented processes, qualified personnel, validated processes, qualified equipment, qualified vendors, and a stringent final product release process. Although the final product release process is important, Proteintech performs in-process QC steps after each major manufacturing stage. Production records and facilities may be available for an inspection by approved personnel.

Our GMP policy covers all the aspects of production; from raw materials, facility, equipment, and Instruments to training and personal hygiene of staff. It also guarantees that the process is explicit, validated and well documented for transparency and traceability.

www.ptglab.com

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