



Artimmun Analytik GmbH



Product Information Sheet Recombinant Human GM-CSF Protein

Code: PR3367

Plant Cell expression System

For research use only

Not for diagnostic or therapeutic procedures.

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 during host defence and inflammatory reactions. GM-CSF is produced by monocytes, fibroblast, endothelial cells and T-lymphocytes. GM-CSF inhibits neutrophil migration and enhances the functional activity of the mature end-cells. Human GM-CSF is a monomeric protein of 127 amino acids with two N linked and several O-linked glycosylation sites. GM-CSF contains four cysteine residues (positions 54/96 and 88/121). Fully glycosylated GMCSF is biologically more active *in vivo* than the non-glycosylated protein..

Source DNA sequence (Acc. N: NM_000758) encoding the mature human GM-CSF protein sequence with an amino-terminal hexahistidine tag was expressed in *Nicotiana benthamiana* cells.

Mol. Mass rhGM-CSF migrates between 18-27 kDa in SDS-PAGE due to posttranslational modification, in particular glycosylation. This compares with the unmodified GM-CSF from *E.coli* that has a predicted molecular mass of 14,6 kDa..

Carbohydrate purified hGM-CSF consists of 20-50% carbohydrate by weight

Purity >90%, as determined by SDS-PAGE and visualized by silver stain.

Formulation Lyophilized. When reconstituted as suggested below the solution will contain 5% sucrose, 0.15% arginine and optional carrier, e.g. 1% serum albumin (HSA, BSA)..

Solubility Reconstitute in 0,5 mL of sterile ammonium acetate 50 mM pH 5,0.

Storage Lyophilized products should be stored at 2-8 °C. Up on reconstitution GM-CSF should be stored at 4°C for short-term storage and at -20°C for long term storage. Avoid freeze/thaw cycles of solution.

Activity The ED50 rhGM-CSF is 0,02-0,05 ng/mL as measured in a cell proliferation assay using a human growth factor-dependent TF-1 cell line..

Theoretical Sequence

```
HHHHHHAPVPPGEDSKDVAAPHRQPLTSSERIDKQIRYILDGIALRKETCNKSNMCESSKEALAENN  
LNLPKMAEKDGCFCQSGFNEETCLVKIITGLLEFEVYLEYLQNRFESEEQARAVQMSTKVLQFLQKKA  
KNLDAITTPDPTNASLLTKLQAQNWQLQDMTTHLILRSFKFLQSSLRALRQM
```