Recombinant Human GM-CSF Protein

Size / Cat.No.: 100μg / GMP-TL302-0100

Product Name	
Generic Name	Recombinant Human GM-CSF Protein
Synonym	GM-CSF,CSF2,MGC131935.

Product Information	
Protein sequence	NP_000749.2：A18-E144 was expressed with a His-tag at the C-terminus.
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE.
Activity	Measured by the dose-dependent stimulation of the proliferation of TF-1 cells，the specific activity is ≥5.0×10^6IU/mg.
Endotoxin	< 0.1EU per 1 μg of the protein by the LAL method.
Molecular Mass	Predicts a molecular mass of 15.3kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	Lyophilized preparation can be stored at -20 ℃. 6 months at -20℃ under sterile conditions after reconstitution. 12 months at -80℃ under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100μg/mL. Avoid repeated freeze-thaw cycles.

Background

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. GM-CSF also has been shown to induce the differentiation of myeloid dendritic cells (DCs) that promote the development of T-helper type 1 (cellular) immune responses in cognate T cells. As a part of the immune/inflammatory cascade, GM-CSF promotes Th1 biased immune response, angiogenesis, allergic inflammation, and the development of autoimmunity, and thus worthy of consideration for therapeutic target. GM-CSF has been utilized in the clinical management of multiple disease processes.

References

1. Robertson SA. (2007) GM-CSF regulation of embryo development and pregnancy. Cytokine Growth Factor Rev. 18(3-4): 287-98.

2.Waller EK. (2007) The role of sargramostim (rhGM-CSF) as immunotherapy. Oncologist. 12 Suppl 2: 22-6.

3.Clive KS, et al. (2010) Use of GM-CSF as an adjuvant with cancer vaccines: beneficial or detrimental? Expert Rev Vaccines. 9(5): 519-25.