

CSF2RA Human, sf9

GM-CSF Receptor Alpha Sf9 Human Recombinant

GRF0016

Product Overview

Name	CSF2RA Human, sf9
Accession(Primary)	P15509
Description	GM-CSF Receptor Alpha Sf9 Human Recombinant

Target information (P15509)

Gene Name

About Gene Symbol

Background

GM-CSF Receptor Alpha Human Recombinant: A Glimpse into Its Potential and Implications Abstract: Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF) receptor alpha, a pivotal component in the GM-CSF signaling pathway, has been the focal point of numerous studies pertaining to hematopoiesis and immune responses. This paper provides an overview of the GM-CSF receptor alpha human recombinant, exploring its characteristics, production techniques, and potential therapeutic applications. Introduction GM-CSF, a cytokine responsible for the differentiation and proliferation of white blood cells, functions by binding to its receptor, GM-CSF receptor. The alpha subunit (GM-CSFR α) of this receptor plays a crucial role in ligand binding and is essential for initiating cellular responses. Modern biotechnological advancements have led to the successful production of its human recombinant form, offering new avenues in medical research. Recombinant GM-CSFR α : Production and Features Recombinant GM-CSFR α is synthesized using cutting-edge recombinant DNA technologies, predominantly in bacterial or mammalian expression systems. This human recombinant form retains its ability to bind to GM-CSF, maintaining its biological functionality and providing myriad research opportunities. Therapeutic and Clinical Prospects Autoimmune Diseases: GM-CSF is often overexpressed

in various autoimmune disorders. By utilizing recombinant GM-CSFR α as a potential decoy receptor, it's feasible to mitigate the effects of excessive GM-CSF, offering a new therapeutic strategy. Hematopoietic Disorders: Given its integral role in white blood cell development, recombinant GM-CSFR α might hold promise in treatments or as a diagnostic tool for certain hematological conditions. Research Paradigm: Beyond therapeutic applications, the recombinant GM-CSFR α can serve as an invaluable research tool to elucidate the nuances of GM-CSF signaling, aiding in the understanding of immune response mechanisms. Conclusion: GM-CSF receptor alpha human recombinant stands at the forefront of exciting research and therapeutic potential. While its full capabilities are yet to be realized, current insights underscore its significance in the realms of immunology and medicine.

References for protein:

Bibliography Burgess, A. W., & Metcalf, D. (1980). The nature and action of granulocyte-macrophage colony-stimulating factors. *Blood* , 56(6), 947-958. Hamilton, J. A. (2008). GM-CSF in inflammation and autoimmunity. *Trends in Immunology* , 23(8), 403-408. Hercus, T. R., et al. (2009). The granulocyte-macrophage colony-stimulating factor receptor: Linking its structure to cell signaling. *Blood* , 114(7), 1289-1298. Lehtonen, A., Matikainen, S., & Julkunen, I. (2002). Interferons up-regulate STAT1, STAT2, and IRF family transcription factor gene expression in human peripheral blood mononuclear cells and macrophages. *Journal of Immunology* , 169(1), 358-368.