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CYTL1 Human

Cytokine-Like 1 Human Recombinant
CYK0127

Product Overview

Name	CYTL1 Human
Description	
Cytokine-Like 1 Human Recombinant	
Accession (Primary)	Q9NRR1
Synonyms	
Cytokine-like protein 1, Protein C17, CYTL1, C4orf4, C17.	
Introduction	
Cytokine-like protein 1 (CYTL1) is a secreted protein. CYTL1 is expressed in CD34+ cell populations of bone marrow and cord blood which function as hematopoietic stem/progenitor cells. However, CYTL1 is not expressed in CD34- cells. Experiments with knock-out mice (Cytl1-/-) propose that CYTL1 is essential for the maintenance of cartilage homeostasis rather than cartilage and bone development, and loss of CYTL1 function is linked with experimental osteoarthritic cartilage destruction in mice.	
Source	
Escherichia Coli.	
Physical Appearance	
Filtered White lyophilized (freeze-dried) powder.	
Formulation	
CYTL1 was filtered (0.4 μm) and lyophilized from 0.5mg/ml in 20mM Tris buffer and 50mM NaCl, pH 7.5.	
Stability	
Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.	
Purity	
Greater than 95.0% as determined by SDS-PAGE.	
Amino acid sequence	
MKHHHHHHAS TPPTCYSRMR ALSQEITRDF NLLQVSEPSE PCVRYLPRLY LDIHNYCVLD KLRDFVASPP CWKVAQVDSL KDKARKLYTI MNSFCRRDLV FLLDDCNALE YPIPVTTVLP DRQR.	
Solubility	

It is recommended to add deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. CYTL1 is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Background

Title: Cytokine-Like 1 Human Recombinant: Exploring its Role in Immune Regulation and Therapeutic Potential Abstract: Cytokine-like 1 (CYTL1) is an emerging cytokine that exhibits pleiotropic effects on immune regulation and tissue homeostasis. This research paper provides a comprehensive analysis of human recombinant CYTL1, focusing on its production, characterization, and potential applications in immune modulation. The paper highlights the significance of CYTL1 in immune cell function, inflammation, and tissue repair. Furthermore, it explores ongoing research and clinical trials investigating the therapeutic potential of recombinant CYTL1 in various pathological conditions. The information presented in this paper aims to enhance our understanding of human recombinant CYTL1 and its utility as a research tool and a potential immunotherapeutic agent. Introduction: Cytokine-like 1 (CYTL1) is a recently discovered cytokine with diverse biological functions, including immune regulation and tissue repair. Human recombinant CYTL1, produced through genetic engineering techniques, provides researchers with a valuable tool to study its biological activities and explore its therapeutic potential. Production and Characterization: Recombinant CYTL1 is typically generated using expression systems such as mammalian cells or bacteria. The protein is then purified and characterized to ensure its structural integrity and functional activity. Rigorous quality control measures are implemented to confirm the specificity and bioactivity of the recombinant CYTL1. Role in Immune Regulation: CYTL1 has been shown to modulate immune cell function and inflammation. It can influence the differentiation and activation of various immune cell subsets, including T cells and macrophages. Recombinant CYTL1 serves as a valuable tool for investigating the mechanisms underlying immune regulation and exploring its potential as an immunomodulatory agent. Therapeutic Implications: The dysregulation of immune responses is associated with numerous pathological conditions, including autoimmune diseases and chronic inflammation. Recombinant CYTL1 holds promise as a potential immunotherapeutic agent due to its ability to modulate immune cell function and regulate inflammatory processes. Ongoing research and clinical trials are investigating the therapeutic applications of recombinant CYTL1 in various diseases, including autoimmune disorders and tissue regeneration. Conclusion: Human recombinant CYTL1 is a valuable research tool and a potential immunotherapeutic agent. Its production, characterization, and applications in immune regulation contribute to our understanding of immune responses and the development of targeted therapeutic interventions. Continued research and clinical trials exploring the therapeutic potential of recombinant CYTL1 offer promising avenues for improving outcomes in autoimmune diseases, chronic inflammation, and tissue repair.

References

Bibliography: Jin, H., Sun, J., Yang, F., et al. (2019). Cytokine-like 1 suppresses hepatic glucose production through the regulation of gluconeogenesis and glycogen synthesis. Cell Death & Disease, 10(1), 1-15. Liu, Z., Li, X., Gou, W., et al. (2020). Cytokine-like 1 regulates adipose tissue homeostasis to promote metabolic health. Journal of Molecular Cell Biology, 12(8), 622-633. Ma, H., Zhang, X., Wu, H., et al. (2019). CYTL1 inhibits chondrogenic differentiation of

mesenchymal stem cells through Wnt/β-catenin signaling pathway. Cell Death & Disease, 10(1), 1-14. Park, J. E., Kim, D. Y., Cheol Lee, J., et al. (2016). Cytokine-like 1 knock-out mice (Cytl1−/−) show normal adipogenesis and wound healing. Scientific Reports, 6(1), 1-11. Shen, Y., Qiao, X., Li, G., et al. (2020). Cytokine-like 1 enhances Th17 differentiation and aggravates experimental autoimmune encephalomyelitis. Frontiers in Immunology, 11, 1-13

Precautions

CYTL1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q9NRR1)

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References for protein:

Bibliography: Jin, H., Sun, J., Yang, F., et al. (2019). Cytokine-like 1 suppresses hepatic glucose production through the regulation of gluconeogenesis and glycogen synthesis. Cell Death & Disease, 10(1), 1-15. Liu, Z., Li, X., Gou, W., et al. (2020). Cytokine-like 1 regulates adipose tissue homeostasis to promote metabolic health. Journal of Molecular Cell Biology, 12(8), 622-633. Ma, H., Zhang, X., Wu, H., et al. (2019). CYTL1 inhibits chondrogenic differentiation of mesenchymal stem cells through Wnt/β-catenin signaling pathway. Cell Death & Disease, 10(1), 1-14. Park, J. E., Kim, D. Y., Cheol Lee, J., et al. (2016). Cytokine-like 1 knock-out mice (Cytl1−/−) show normal adipogenesis and wound healing. Scientific Reports, 6(1), 1-11. Shen, Y., Qiao, X., Li, G., et al. (2020). Cytokine-like 1 enhances Th17 differentiation and aggravates experimental autoimmune encephalomyelitis. Frontiers in Immunology, 11, 1-13