

CLCF1 Human

Cardiotrophin-Like Cytokine Factor 1 Human Recombinant

CYK0108

Product Overview

Name	CLCF1 Human
Accession(Primary)	Q9UBD9
Description	Cardiotrophin-Like Cytokine Factor 1 Human Recombinant

Target information (Q9UBD9)

Gene Name

About Gene Symbol

Background

Cardiotrophin-Like Cytokine Factor 1 Human Recombinant: A Significant Player in Neuronal Development and Immune Regulation Cardiotrophin-like cytokine factor 1 (CLCF1) has emerged as a crucial player in neuronal development and immune regulation. As a heterodimeric neurotropic cytokine, CLCF1 in complex with cytokine-like factor-1 (CLF-1) has demonstrated vital roles in neuronal development. Studies show that mice lacking this heterodimer exhibit reduced motor neurons and die shortly after birth due to suckling defects. In humans, mutations in the genes encoding for CLCF1 and CLF-1 manifest as Sohar-Crisponi or cold-induced sweating syndrome, with individuals at high risk of early death ¹. CLCF1 also exhibits a significant role in the regulation of hematopoiesis, particularly skewing towards myeloid cell differentiation. It has been demonstrated that in mice, CLCF1 promotes B-cell expansion, enhances humoral responses, and triggers autoimmunity. Further, CLCF1 administration resulted in an increase in circulating myeloid cells, along with augmented hematopoietic progenitor cells in the bone marrow. These findings underscore CLCF1's crucial role in modulating the immune system, particularly in the context of bonemarrow transplants and recovery following sub-

lethal irradiation 2 . Interestingly, CLCF1 is a member of the IL-6 family of cytokines, known for their significant roles in immune regulation and stem cell biology. Like other family members, CLCF1 is secreted as a composite cytokine with CRLF1 and signals through the heterodimerization of the signaling chains LIFR β and gp130. This suggests overlapping functions with leukemia inhibitor factor (LIF), another IL-6 family member. Expression of CLCF1 is documented in lymph nodes, spleen, and circulating lymphocytes, further establishing its role in immune modulation. However, the comprehensive implications of CLCF1 in immune regulation and hematopoiesis remain an active area of investigation 3 . In summary, Cardiotrophin-like cytokine factor 1 human recombinant represents a promising area of research with potential therapeutic implications in neurodevelopmental disorders and immune regulation.