9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

ANGPTL3 Human

Angiopoietin Like Protein 3 Human Recombinant
CYK0034

Product Overview

Name	ANGPTL3 Human
Description	
Angiopoietin Like Protein 3 Human Recombinant	
Accession (Primary)	Q9Y5C1
Synonyms	
Angiopoietin 5, ANGPT5, ANGPTL3, Angiopoietin Like Protein 3.	
Introduction	
ANGPTL3 and ANGPTL4 are angiopoietin-like proteins secreted and expressed mainly by the liver, their role being the regulation of triglyceride metabolism by inhibiting the lipolysis of triglyceride-rich lipoproteins. During different nutritional states (feeding/fasting) the levels of the circulating triglycerides are regulated by Angptl3 and Angptl4 through differential inhibition of Lipoprotein lipase (LPL) as shown by the experimental data. The molecular structure of ANGPTL3 is similar to that of the angiopoietins (vascular endothelial growth factors). Deletion mutants of human Angiopoietin 5 were used in order to demonstrate that the N-terminal domain (fragment 17-207) and not the C-terminal fibrinogen-like domain (fragment 207-460) increased the plasma triglyceride levels in mice.	
Source	
Escherichia Coli.	
Formulation	
ANGPTL3 Human filtered and lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH-4.	
Stability	
Store lyophilized ANGPTL3 Human at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted Angiopoietin 5 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	
Angiopoietin 5 purity is greater than 95% as determined by SDS-PAGE.	
Amino acid sequence	
MRGSHHHHHH GMASHM SRID QDNSSFDSLS PEPKSRFAML DDVKILANGL LQLGHGLKDF VHKTKGQIND IFQKLNIFDQ SFYDLSLQTS EIKEEEKELR RTTYKLQVKN EEVKNMSLEL NSKLESLLEE KILLQQKVKY LEEQLTNLIQ NQPETPEHPE VTSLKTFVEK QDNSIKDLLQ TVEDQYKQLN QQHSQIKEIE NQLRRTSIQE	

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PTEISLSSKP RAP.

Solubility

Add 0.1M Acetate buffer pH-4 and let the lyophilized pellet of ANGPTL3 Human dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/ml. In higher concentrations the solubility of Angiopoietin 5 is limited.

Background

Angiopoietin-Like Protein 3 Human Recombinant: An Emerging Target in Metabolic and Cardiovascular Disorders Abstract: Angiopoietin-like protein 3 (ANGPTL3) is a key regulator of lipid metabolism and has garnered considerable attention for its involvement in metabolic and cardiovascular disorders. ANGPTL3 plays a crucial role in lipid homeostasis, including the regulation of triglycerides, cholesterol, and lipoprotein metabolism. The availability of human recombinant ANGPTL3 protein has provided a valuable tool for investigating its biological functions and therapeutic potential. This review aims to provide a comprehensive overview of the role of ANGPTL3 in metabolic disorders, cardiovascular diseases, and lipid metabolism, highlighting the potential of ANGPTL3 human recombinant protein as a therapeutic target. Introduction: Metabolic disorders, such as dyslipidemia and obesity, significantly contribute to the development of cardiovascular diseases. ANGPTL3, a member of the angiopoietin-like protein family, has emerged as a key player in lipid metabolism and cardiovascular health. ANGPTL3 regulates lipoprotein metabolism, affecting triglyceride-rich lipoproteins, low-density lipoproteins (LDL), and high-density lipoproteins (HDL). Molecular Mechanisms of ANGPTL3 Action: ANGPTL3 exerts its effects through inhibition of lipoprotein lipase (LPL) and endothelial lipase (EL), key enzymes involved in lipoprotein metabolism. By inhibiting LPL and EL activities, ANGPTL3 increases plasma triglyceride and LDL cholesterol levels. ANGPTL3 also influences hepatic cholesterol metabolism and HDL metabolism through modulation of the receptor-mediated uptake of lipoproteins. Role of ANGPTL3 in Metabolic Regulation: ANGPTL3 plays a critical role in metabolic regulation, particularly in lipid metabolism and dyslipidemia. Loss-of-function mutations in the ANGPTL3 gene result in decreased plasma triglycerides, LDL cholesterol, and total cholesterol levels, highlighting the potential therapeutic relevance of ANGPTL3 inhibition. Conversely, elevated ANGPTL3 levels are associated with increased cardiovascular risk and atherogenic lipid profiles. ANGPTL3 in Cardiovascular Health and Disease: ANGPTL3 has emerged as a key modulator of cardiovascular diseases, including atherosclerosis and coronary artery disease. ANGPTL3 influences vascular endothelial function, inflammation, and plaque formation through its effects on lipoprotein metabolism and lipid accumulation. Inhibition of ANGPTL3 has shown promising results in preclinical studies, reducing atherosclerosis and improving cardiovascular outcomes. Therapeutic Potential of ANGPTL3 Human Recombinant Protein: The development of ANGPTL3 human recombinant protein provides a novel avenue for therapeutic interventions targeting metabolic and cardiovascular disorders. Inhibition of ANGPTL3 using monoclonal antibodies or other approaches has demonstrated efficacy in lowering plasma lipid levels, particularly triglycerides and LDL cholesterol. Clinical trials investigating the safety and efficacy of ANGPTL3 inhibition are underway. Conclusion: ANGPTL3 is a key regulator of lipid metabolism and a promising therapeutic target for metabolic and cardiovascular disorders. The availability of ANGPTL3 human recombinant protein has facilitated in-depth investigations into its biological functions and

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therapeutic potential. Targeting ANGPTL3 holds promise for improving lipid profiles, reducing cardiovascular risk, and managing metabolic disorders.

Precautions

ANGPTL3 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q9Y5C1)

Background

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