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

SAA2 Human

Serum Amyloid A2 Human Recombinant
CYK0522

Product Overview

Name	SAA2 Human
Description	
Serum Amyloid A2 Human Recombinant	
Accession (Primary)	P0DJI9
Synonyms	
Serum amyloid A-2 protein, SAA2, Amyloid A2 protein.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
The filtered concentrated protein solution was lyophilized from 0.01 M HCl (pH 2.0).	
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.	
Purity	
Greater than 95% as determined by SDS-PAGE.	
Amino acid sequence	
MRSFFSFLGE AFDGARDMWR AYSDMREANY IGSDKYFHAR GNYDAAKRGP GGAWAAEVIS NARENIQRLT GHGAEDSLAD QAANKWGRSG RDPNHFRPAG LPEKY.	
Solubility	
It is recommended to reconstitute the lyophilized SAA2 in 0.01 M HCl (pH 2.0) not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.	
Background	
Serum Amyloid A2 (SAA2), a prominent member of the acute-phase proteins family, has recently emerged as a pivotal player in the intricate web of inflammatory responses and tissue homeostasis. Initially identified as a biomarker of acute-phase reactions, research on SAA2 has expanded, revealing its involvement in various physiological processes, including immunity, lipid metabolism, and tissue repair. This research aims to unravel the multifaceted functions of	

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SAA2, exploring its structural attributes, regulatory mechanisms, and its implications in health and disease. Structural Features of SAA2: SAA2, an isoform of the serum amyloid A protein family, is characterized by its unique pentameric structure. Upon stimulation by pro-inflammatory cytokines such as interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF-α), SAA2 is synthesized and secreted by the liver and extrahepatic tissues. Its pentameric form undergoes conformational changes, facilitating interactions with various cellular receptors and extracellular matrix components, enabling it to partake in diverse biological functions. Immunomodulatory Functions: SAA2 acts as a multifunctional immunomodulatory molecule, regulating both innate and adaptive immune responses. It serves as a chemoattractant for immune cells, guiding them to sites of infection or injury. Additionally, SAA2 influences the differentiation and activation of immune cells, impacting the delicate balance between inflammatory and anti-inflammatory signals. Such intricate immunomodulatory properties make SAA2 a key regulator of immune responses during infection and tissue damage. Metabolic Implications: Beyond its immune functions, SAA2 is implicated in lipid metabolism and cardiovascular health. It interacts with high-density lipoproteins (HDL) and influences cholesterol efflux, contributing to the body's lipid homeostasis. Dysregulation of SAA2 has been associated with atherosclerosis and metabolic disorders, highlighting its importance in maintaining cardiovascular health and metabolic balance. Tissue Repair and Regeneration: Recent studies have illuminated SAA2′s role in tissue repair and regeneration. It promotes cell proliferation and migration, aiding in tissue remodeling after injury. Moreover, SAA2 participates in angiogenesis, facilitating the formation of new blood vessels, which is crucial for tissue repair processes. Its involvement in tissue regeneration underscores its significance in wound healing and recovery from inflammatory damage. Implications in Disease and Therapeutics: Altered levels of SAA2 are associated with various diseases, including chronic inflammatory disorders, cancer, and metabolic syndromes. Understanding the molecular mechanisms underlying SAA2 dysregulation provides insights into disease pathogenesis. Researchers are exploring SAA2-targeted therapies for conditions characterized by chronic inflammation, aiming to modulate its functions for therapeutic benefits. Conclusion: SAA2, once viewed as a marker of acute inflammation, has transcended its initial role, emerging as a versatile regulator in immunity, metabolism, and tissue repair. Its diverse functions, ranging from immune modulation to tissue regeneration, highlight its intricate involvement in physiological processes. By deciphering the complexities of SAA2, scientists pave the way for innovative therapeutic strategies, aiming to harness its regulatory potential for the treatment of inflammatory and metabolic disorders.

Precautions

SAA2 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P0DJI9)

Background

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