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

Acrp30 Human (72-244)

Adiponectin (72-244) Human Recombinant
CYK0009

Product Overview

Name	Acrp30 Human (72-244)

Description

Adiponectin (72-244) Human Recombinant

Synonyms

Acrp30, AdipoQ, GBP-28, APM-1, ACDC.

Introduction

Adiponectin is a recently discovered 244 amino acid protein, the product of the apM1 gene, which is physiologically active and specifically and highly expressed in adipose cells (Adipokine). The protein belongs to the soluble defense collagen super family; it has a collagen-like domain structurally homologous with collagen VIII and X and complement factor C1q-like globular domain. APM-1 forms homotrimers, which are the building blocks for higher order complexes found circulating in serum.

Source

HEK293 (Human Embryonic Kidney cell line).

Physical Appearance

White lyophilized (freeze-dried) powder.

Formulation

Filtered (0.4 µm) and lyophilized from 0.5mg/ml in 50mM phosphate Buffer, 75mM NaCl, pH 7.4.

Stability

For long term, store lyophilized AdipoQ 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. The lyophilized protein remains stable for 24 months when stored at -20°C.

Purity

Greater than 98% as determined by HPLC and SDS PAGE.

Amino acid sequence

ETTTQGPGVL LPLPKGACTG WMAGIPGHPG HNGAPGRDGR DGTPGEKGEK GDPGLIGPKG DIGETGVPGA EGPRGFPGIQ GRKGEPGEGA YVYRSAFSVG LETYVTIPNM PIRFTKIFYN QQNHYDGSTG KFHCNIPGLY YFAYHIVYMK DVKVSLFKKD KAMLFTYDQY QENNVDQASG SVLLHLEVGD QVWLQVYGEG ERNGLYADND NDSTFTGFLL YHDTN DYKDDDDK .

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Biological Activity

In vitro gluconeogenesis assay in primary hepatocytes was performed, showing the Adiponectin human derived from mammalian cells can inhibit glucose production. The ED50 was ~6 µg/ml.

Solubility

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

Precautions

Acrp30 Human (72-244) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Adiponectin is a protein produced and secreted by adipose tissue. Adiponectin takes part in regulating glucose levels as well as fatty acid breakdown. Adiponectin ‘s Functions: Anti-Inflammatory Effects - Adiponectin has anti-inflammatory properties that helps mitigate chronic inflammation. Regulation of Glucose and Lipid Metabolism - Adiponectin Enhances insulin sensitivity, helping in regulation of blood sugar levels and also promotes fatty acid oxidation, which helps reduce fat accumulation. Cardiovascular Health - It may influence vascular health and is associated with a lower risk of cardiovascular diseases. Levels and Health Implications: Normal Levels - usually, higher levels of adiponectin are associated with a lower risk of metabolic syndrome, cardiovascular diseases and type 2 diabetes. Low Levels - Reduced adiponectin levels are often linked with obesity, insulin resistance, and other metabolic disorders. Factors Influencing on the Adiponectin Levels: Weight - High body fat (especially visceral fat) can lower adiponectin levels. Diet and Exercise - Regular physical activity and a healthy diet can increase adiponectin levels. Genetics - Genetic factors might also be an influence on an individual adiponectin level. Adiponectin is an important component in metabolic health, therefore continuing the research of its functions and regulation keeps advance our understanding of its role in diseases like diabetes and cardiovascular conditions.