Adiponectin (HEK) Human, Goat Polyclonal Antibody

Product Data Sheet

Source of Antigen: HEK293
Host: Goat

Cat. No.:
RD184023100 (0.1 mg)

Other names: Adipocyte C1q and collagen domain-containing protein, Adipocyte complement-related 30 kDa protein, ACRP30, Adipose most abundant gene transcript 1 protein, apM-1, Gelatin-binding protein, ADIPOQ, ACDC, APM1, GBP28

Research topic

Animal studies, Cardiovascular disease, Diabetology - Other Relevant Products, Energy metabolism and body weight regulation

Preparation

The antibody was raised in goat by immunization with the recombinant Human Adiponectin.

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**DYKDD DDK**

Glu 1 to Gln 5 were confirmed by N-terminal sequencing.

Species Reactivity

Human
Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human Adiponectin.

Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE**.

Reconstitution

Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration

See vial label.

Lot Number

See vial label.

Quality Control Test

Indirect ELISA - to determine titer of the antibody
SDS PAGE - to determine purity of the antibody

Applications

ELISA, Western blotting

Introduction to the Molecule

Adiponectin, also known as Acrp30, AdipoQ and GBP-28, is a 244 aminoacid protein. It is the product of the apM1 gene, which is physiologically active and chiefly expressed in adipose cells. The protein belongs to the soluble defense collagen superfamily. It has a collagen-like domain structurally homologous with collagen VIII and X. It has a C1q-like complement factor globular domain. Adiponectin forms homotrimers, which are the building blocks for higher order complexes found in the serum. Together these complexes make up approximately 0.01% of the total serum protein. AdipoR1, an adiponectin receptor, is abundantly expressed in skeletal muscle, whereas another of its receptors,AdipoR2, is predominantly expressed in the liver. Paradoxically, adipose tissue-expressed adiponectin levels are inversely proportioanl to the degree of adiposity. Adiponectin concentrations is unproportional to glucose, insulin, triglyceride concentrations, liver fat content and body mass index. However it is proportional to high-density lipoprotein-cholesterol levels, hepatic insulin sensitivity and insulin-stimulated glucose disposal. Adiponectin has been shown to increase insulin sensitivity and decrease plasma glucose by increasing tissue fat oxidation. A notable feature of adiponectin is that low levels of its serum predict type 2 diabetes independently of other risk factors. Adiponectin also inhibits the inflammatory processes of atherosclerosis suppressing adhesion and cytokine molecules in vascular endothelial cells and macrophages, respectively. This adipokine acts as a backbone of newly formed collagen in myocardial remodelling after ischaemic injury. Furthermore, it stimulates angiogenesis by promoting cross-talk between AMP-activated protein kinase and Akt signalling in endothelial cells. Low serum adiponectin levels are found in patients with coronary artery disease. Moreover, high circulating levels of adiponectin are associated with decreased risk of myocardial infarction, independent of other factors. In general, adiponectin has the potential to become a clinically relevant parameter to be measured routinely in individuals at risk for type 2 diabetes, atherosclerosis and the metabolic syndrome.

References to this Product

- Stefan N, Fritsche A, Weikert C, Boeing H, Joost HG, Haring HU, Schulze MB. *Plasma Fetuin-A Levels and the Risk of Type 2 Diabetes.* Diabetes. 2008 Jul 15;

Note

This product is for research use only.

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