# Adiponectin Human, Rabbit Polyclonal Antibody

## Product Data Sheet

**Source of Antigen:** *E. coli*
**Host:** Rabbit

**Cat. No.:**
RD181023220 (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, Chronic renal failure, Coronary artery disease, Diabetology - Other Relevant Products, Energy metabolism and body weight regulation

### Preparation

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

### Amino Acid Sequence

The immunization antigen (26.4 kDa) is a protein containing 242 AA of recombinant Human Adiponectin. N-Terminal His-tag, 12 extra AA (highlighted).

**MRGSHHHHHH GS**GHDQETTT QGPGVLLPLP KGACTGWMAG IPGHPGHNGA PGRDGRDGTP GEKGEKGDPG LIGPKGDIGE
TGVPGAEGPR GFPGIQGRKG EPGEGAYVYR SAFSVGLETY VTIPNMPIRF TKIFYNQQNH YDGSTGKFHC NIPGLYYFAY
HITVYMKDVK VSLFKKDKAM LFTYDQYQEN NVDQASGSVL LHLEVGDQVW LQVYGEGERN GLYADNDNDS TFTGFLLYHD TN

### 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.

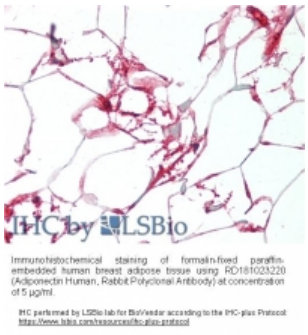
## Quality Control Test

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

## Applications

Immunohistochemistry, Western blotting

## Antibodies application




## Introduction to the Molecule

Adiponectin, also referred to as Acrp30, AdipoQ and GBP-28, is a recently discovered 244 aminoacid protein, the product of the *apM1* gene, which is physiologically active and specifically and highly expressed in adipose cells. The protein belongs to the soluble defence collagen superfamily; it has a collagen-like domain structurally homologous with collagen VIII and X and complement factor C1q-like globular domain. Adiponectin forms homotrimers, which are the building blocks for higher order complexes found circulating in serum. Together, these complexes make up approximately 0.01% of total serum protein. Adiponectin receptors AdipoR1 and AdipoR2 have been recently cloned; AdipoR1 is abundantly expressed in skeletal muscle, whereas AdipoR2 is predominantly expressed in the liver. Paradoxically, adipose tissue-expressed adiponectin levels are inversely related to the degree of adiposity. Adiponectin concentrations correlate negatively with glucose, insulin, triglyceride concentrations, liver fat content and body mass index and positively with 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. Of particular interest is that low adiponectin serum levels predict type 2 diabetes independent of other risk factors. Adiponectin also inhibits the inflammatory processes of atherosclerosis suppressing the expression of adhesion and cytokine molecules in vascular endothelial cells and macrophages, respectively. This adipokine plays a role as a scaffold of newly formed collagen in myocardial remodelling after ischaemic injury and also 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. Altogether, adiponectin has the potential to become a clinically relevant parameter to be measured routinely in subjects at risk for type 2 diabetes, atherosclerosis and the metabolic syndrome.

## References to this Product


- Christiansen T, Paulsen SK, Bruun JM, Ploug T, Pedersen SB, Richelsen B. *Diet-induced weight loss and exercise alone and in combination enhance the expression of adiponectin receptors in adipose tissue and skeletal muscle, but only diet-induced weight loss enhanced circulating adiponectin.* J Clin Endocrinol Metab. 2010 Feb;95 (2):911-9


## Note

This product is for research use only.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