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Product Information

Anti-Adiponectin
produced in rabbit, affinity isolated antibody

Catalog Number **A6354**

Product Description

Anti-Adiponectin is produced in rabbit using a synthetic peptide corresponding to amino acid residues 225-244 of human adiponectin with N-terminal added cysteine, conjugated to KLH, as immunogen. The corresponding sequence is identical in monkey and dog, and differs by one residue in mouse and rat adiponectin. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Adiponectin recognizes human and mouse adiponectin. Applications include immunoblotting.

Adipose tissue has important roles in energy storage, fat metabolism and glucose homeostasis. It is a complex highly active metabolic and endocrine organ. Fat cells produce and secrete many physiologically important proteins including several hormones and adipokines. Adiponectin, also designated Adipocyte Complement-Related Protein of 30 kDa (Acrp30), AdipoQ, apM1, Gelatin-binding protein 28 kDa (GBP28), is an adipocyte-specific protein that circulates in the blood stream, where it accounts for approximately 0.01% of all plasma proteins.[1-5] Plasma levels in females exceed those in males. Adiponectin belongs to the complement factor C1q family that belongs to the soluble defense collagen superfamily.[4] It self-associates to form homotrimers that participate in the formation of higher order complexes.[1, 6, 7, 8] Plasma adiponectin levels are usually fairly constant and only marginally affected by food intake. On the other hand they decrease in obese humans, in type II diabetes mellitus patients, and in patients with coronary artery disease. Increased adiponectin levels are associated with type I diabetes mellitus, anorexia nervosa, weight reduction, and chronic renal failure. Adiponectin affects lipid catabolism by increasing fatty acid oxidation in muscle, modulates glucose uptake, alters liver gluconeogenesis and enhances insulin-sensitivity in both muscle and liver. It acts by way of two seven membrane-spanning receptors (AdipoR1 and AdipoR2) homologous to G protein-coupled receptors.[9] AdipoR1 is mainly expressed in skeletal muscle whereas AdipoR2 is primarily detected in liver. T-cadherin may also serve as an adiponectin receptor. Activation of signal transduction pathways is controlled by changes in the oligomerization state of adiponectin. Various adiponectin species differentially activate AMP-activated protein kinase (AMPK) in myocytes and hepatocytes.[7, 8] Adiponectin is induced during adipocyte differentiation and may also play a role in negative growth regulation in myelomonocytic progenitors affecting macrophage differentiation and function.[4] It has also been reported to be involved in endothelial dysfunction as an anti-atherogenic protein.[1]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/ml is determined using human plasma or human placenta, or an extract of differentiated 3T3-L1 mouse cells, and a chemiluminescent detection reagent.

Recommendation: For immunoblotting, it is recommended to dilute the antibody in PBS containing 0.5% non-fat dry milk, for background staining reduction

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test

References

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