ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Product Specification Sheet

Acrp30 (Adipocyte complement-related protein of 30 kDa) Antibodies

Cat # ACRP307-M Rat Acrp30 monoclonal anti-mouse Acrp30 IgG **SIZE**: 100 ug

Adipose tissue is the largest reservoir of fuel, storing energy in the form of rapidly utilizable triglycerides. Adipocytes synthesize and store energy in periods of nutritional abundance and mobilize lipids during starvation and other times of need. In order to accomplish these complex tasks energy balance, adipocytes express many genes, including Acrp30, involved in lipid metabolism and glucose homeostasis.

Acrp30 (**Adipocyte complement-related protein of 30 kDa**), also known as AdipoQ, APM1, Adiponectin, Gelatin binding protein 28 kDa/GBP28 or adipocyte most abundant gene transcript) was identified as a novel adipocyte-specific synthesized and secreted protein with structural resemblance to complement factor C1q. Like adipsin, Acrp30 secretion is induced ~10-fold during adipocyte differentiation. Plasma levels are reduced in obese humans, and low levels are associated with insulin-resistance. Treatment of db/db mice with TZD increased Acrp30 levels. Acrp30 (mouse 247 aa, rat human 244 aa; chromosome 3q27) consists of a predicted NT-signal sequence 91-14 aa), followed by a 27-aa unique region, and then by 22 perfect Gly-X-Pro or Gly-X-X collagen like repeats, and a globular segment at the C-terminus. Structurally, but at the sequence level, Acrp30 resembles other collagen-like and globular domain proteins (lung surfactant protein and hepatocytes mannan-binding proteins). Acrp30 is proteolytically cleaved at 104 aa to generate the **globular Acrp30 (gAcrp30).** Administration of gAcrp30 into mice fed a diet high in fat and sugar caused substantial weight loss. A marked reduction in plasma triglycerides, glucose, and free fatty acids was attributed due in part to increased fatty acid oxidation by muscle. Full length Acrp30 was less potent than gAcrp30. Therefore, gAcrp30 may open new avenues to control obesity.

Sources of antigen and antibodies

Antigen	Recombinant mouse Acrp30 protein full length
Ab Host/type	Rat, monoclonal IgG2a, Aff pure IgG (**cat # ACRP307-M)**
2-ab	Goat **Anti-Rat IgG-HRP** conjugate Cat # 50320 (AP, biotin, FITC conjugates also available)
-ve control	Cat # 20005-1, Rat (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Peptide and Antibodies

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Buffer: PBS pH 7.4 +0.05% azide

Reconstitute powder in 100 ul water

Storage

Short-term: Liquid , unopened, undiluted vials for less than a week at 4oC and powder up to several months at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for lyophilized items.

Recommended Usage

Western blot: Optimal dilution must be determined by user. We suggest initial testing of antibody at 1-2 ug/ml using ECL. Full length Acrp30 is ~30 kDa. However, recombinant Acrp30 has given a mol wt of ~37 kDa.

ELISA (1:10-50K; 10-100 ng of control peptide/well).

Immunohistochemistry: not tested. We suggest testing of aff pure IgG at 2-20 ug/ml.

Specificity and crossreactivity

Antibody # ACRP307-M is specific for mouse and has minimal reactivity with human protein. We recommend using human Acrp30 antibodies for human Acrp30. Purified mouse acrp30 protein control for WB (#ACRP301-C) can be used as positive control.

General References: (1) Scherer PE et al (1995) JBC 270, 26746; Hu E et al (1996) JBC 271, 10697; Das K et al (2001) BBRC 280, 1120; Fruebis J et al (2001) PNAS 98, 2005; Maeda K et al (1996) BBRC 221, 286, Schaffler A et al (1998) BBA 1399, 187; Schaffler A et al (1999) BBRC 260, 416;

This product is for In vitro research use only.

Related items

Anti-mouse/human adiponectin/acrp30, recombinant purified proteins, **Mouse and Human Acrp30 ELISA kits**, Antibodies to Adiponectin receptors

ACRP307-M 90209A

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com