ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

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

□ **Cat #** ACRP301-P	Mouse Acrp30 control/blocking peptide # 1	**SIZE**: 100 ug
□ **Cat #** ACRP301-S	Rabbit Anti-mouse Acrp30 antiserum # 1	**SIZE**: 100 ul
□ **Cat #** ACRP301-A	Rabbit Anti-Mouse Acrp30 IgG # 1, aff. Pure	**SIZE**: 100 ug
□ **Cat #** ACRP301-C	Recombinant Mouse Acrp30 protein WB +ve control	**SIZE**: 100 ul

Adipose tissue is the largest reservoir of fuel, storing energy in the form of rapidly utilizable triglycerides. 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. 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. Full length Acrp30 was less potent than gAcrp30.

Sources of antigen and antibodies

Antigen	15-aa peptide from **mouse Acrp30** (gene accession # Q60994, refs **1**); **Designation (ACRP301-P, control/blocking peptide**) conjugated to KLH.Epitope location ~ N-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#ACRP301-S) and IgG, purified over antigen-agarose (Cat # ACRP301-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Mouse Acrp-30 (full length, 247 aa) was expressed in HEK cells and purified (>95%). For Western blot +ve control (**Cat # ACRP301-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **ACRP301**-C for good visibility with antibody Cat # **ACRP301**-S. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **ACRP301**-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
□ 100ul □ □ solution □ lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
□ 100 ug/100ul □ solution □ lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
□ 100 ug/100 ul □ solution □ lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

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 powder

Recommended Usage

Western blot: Optimal dilution must be determined by user. We suggest initial testing of antiserum at 1:1K-1:5K and aff pure IgG at 1-5 ug/ml using ECL. Full length Acrp30 is ~30 kDa. However, recombinant Acrp30 has higher mol wt due to glycosylation.

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

Immunohistochemistry: We suggest testing of aff pure IgG at 2-20 ug/ml.

Specificity and crossreactivity

Mouse ACRP301-P sequence is not well conserved in human or rat Acrp30/Adipoq. We recommend the use of anti-human Acrp30 (cat # ACRP302-S) for human Acrp30. This sequence has no significant sequence similarity with the related protein C1q. Since the eptiope to ACRP301-S antibody is located near the N-terminus, this antibody will not detect truncated, proteolytically cleaved gAcrp30. Antibody cross-reactivity in various other species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking (use 5-10 ug per 1 ul of antiserum or 1 ug of aff pure IgG) to confirm antibody specificity.

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

Human Acrp30 and gACrp30 ELISA kits

ACRP301-A-C-P 70807A

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