

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

Cat # ACRP302-P	Human Acrp30 control/blocking peptide # 2	SIZE: 100 ug
Cat # ACRP302-S	Rabbit Anti- Human Acrp30 antiserum # 2	SIZE: 100 ul
Cat # ACRP302-A	Rabbit Anti- Human Acrp30 IgG # 2, aff. Pure IgG	SIZE: 100 ug
Cat # ACRP302-C	Recombinant, purified Human Acrp30 protein for WB	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 adiponectin, 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	20-aa peptide from human Acrp30/ADIPO (gene accession # Q15848, refs 1); Designation (ACRP302-P, control/blocking peptide) conjugated to KLH. Epitope location ~ N-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#ACRP302-S) and IgG, purified over antigen-agarose (Cat # ACRP302-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 IgG

Human Acrp30 (1-244 aa) was expressed in mouse myeloma cells (NSO) and purified (>90%). Recombinant mature protein (19-244 aa, ~25.4 kDa) migrates at ~36 kDa due to glycosylation. For **western blot +ve control (Cat # ACRP302-C)**, it is supplied in SDS-PAGE sample buffer (reduced). This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. If the product has been stored for several weeks, then it is recommended to use 5 ul of fresh 2x sample buffer per 10 ul of protein control solution prior to heating and loading on gels. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. 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 -200C and powder at 40c or -200c..

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 -200c or below.

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.
(see published refs using this antibody at the web site).

Specificity and crossreactivity

Human ACRP301-P sequence is 90% conserved in monkey (macaca), 70% in canine, 65% in feline & rabbit. It is not well conserved in human or rat Acrp30/Adipoq. We recommend the use of anti-mouse Acrp30 (cat # ACRP301-S) for mouse/rat Acrp30. This sequence has no significant sequence similarity with the related protein C1q. Since the epitope to ACRP302-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

ACRP302-S-A-P-C 70808A

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