

### Complement C1q Antibodies

<b>Cat #</b> C1Q11-S	Goat anti-Human C1q protein Antiserum # 1	<b>SIZE:</b> 100 ul
<b>Cat #</b> C1Q11-C	Human C1q protein Western blot +ve control	<b>SIZE:</b> 100 ul

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. The switch from energy storage to expenditure is finely regulated by a variety of hormones. In order to accomplish these complex tasks energy balance, adipocytes express many genes, including adiponectin, involved in lipid metabolism and glucose homeostasis. Many of these genes are finely regulated during adipocyte differentiation and maturation. Several adipocyte-derived proteins act in an autocrine or paracrine fashion to control its own and other cell's cellular physiology.

**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. C1q is serum glycoprotein of 18-polypeptides chains consisting of three non-identical subunits, A (29 kDa), B (26 kDa), and C (24 kDa) in molar ratio of 1:2:2. C1Q in the plasma is complexed with two proenzymes C1r and two C1s molecule to form the first component of complement (C1). Activation of complement via classical pathway is triggered by binding of globular head of C1q to immune complexes containing IgG (Fc-region) or IgM or to a variety of other activating substances, including C-reactive protein, retrovirus, and mitochondria. Subsequent to C1q binding, C1r and C1s are converted to proteolytic enzymes that are responsible to continuation of activation via the classical pathway.

#### Sources of antigen and antibodies

Purified human C1q was used to generate polyclonal antibodies generated in **goats**.

#### **Suggested 2-ab**

**Rabbit Anti-goat IgG-HRP conjugate** Cat # 30220 (AP, biotin, FITC conjugates also available)

# 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control IgG

Purified human serum c1q (>95% pure) was used as positive control. For **Western blot +ve control (Cat # C1Q11-C)** is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **C1Q11-C** for good visibility with antibody Cat # **C1Q11-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 **C1Q11-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 Peptide and Antibodies

##### Form & Storage of Antibodies/Peptide Control

##### Antiserum (unpurified, undiluted)

100 ul/vial solution contains 0.05% sodium azide	50 ul/vial lyophilized powder
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**Reconstitute** in the original vol. of water

##### Storage

**Short-term:** unopened, undiluted vials for less than a week 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 antiserum at 1:1K-1:5K using ECL. Native c1q is ~410 kDa.

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

**Immunohistochemistry:** not tested.

#### Specificity and crossreactivity

Anti-human C1q yielded a single precipitin arc against the whole human serum proteins in immunoelectrophoresis. Antibody cross-reactivity in various other species has not been studied.

**General References:** (1) Loos et al (1980) J. Immunol. 124, 59; Kolb WP et al (1979) J. Immunol. 122, 2103; Petry F et al (1996) Immunogenetics 43, 370; 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.*

C1Q11-S-C

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