

Product Specification Sheet

Adipsin Antibodies

Cat # ADN11-P	Rat Adipsin control/blocking peptide # 1	SIZE: 100 ug
Cat # ADN11-S	Rabbit Anti-Rat Adipsin antiserum # 1	SIZE: 100 ug
Cat # ADN11-A	Rabbit Anti-Rat Adipsin IgG # 1, aff. Pure 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. 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 adipsin, 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.

Adipsin is serine protease that is secreted by adipocytes. It is deficient in several animal model of obesity. Adipsin has now been identified as the same protein as complement factor D. **Adipsin, also called ADN or complement factor D or C3 convertase activator or properdin factor D** (precursors: mouse 259-aa; rat 263 aa, human 253 aa, mature protein 26-253, ~22 kDa) cleaves factor B when the latter is complexed with factor C3B, activating the C3BB complex, which then becomes C3 convertase of the alternative pathway. Adipocyte is the major protein secreted by the adipocytes. Unlike rodents, adipsin is also expressed in monocytes/macrophages. Most adipsin is secreted in blood (50 ug/ml in normal lean mice and 50-100 fold less in fat from db/db or ob/ob or MSG (monosodium glutamate-treated mice). Its expression is induced upon differentiation of preadipocytes.

Sources of antigen and antibodies

Antigen	14-aa peptide of rat adipsin/CFAD/Cfd (protein accession # P32038, refs 1) ; Designated (ADN11-P or control peptide) conjugated to KLH
Location	~N-terminus
Ab Host/type	Rabbit Polyclonal, Unpurified antiserum (cat # ADN11-S) and IgG purified over antigen-agarose (Cat # ADN11-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

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 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. Adipsin is ~22 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

Rat ADN11-P sequence is 65% conserved in mouse but much less in human adipsin. We recommend the use of anti-human Adipsin (cat # ADN12-A or ADN13-A) for human adipsin. It Antibody cross-reactivity in various 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 experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com/data/abblock.html).

General References: (1) Zhu L et al (1994) J. Clin. Nvest. 94, 1163; Baker BC et al (1991) 279, 775; Min HY et al (196) Nucl Acid Res. 14, 8879; WhiteRT et al (1992) JBC 267, 9210; Niemann MA et al (1984) Biochem. 23, 2482; Johnson DM et al (1980) Biochem. J. 187, 863; Volanakis Je et al (1980) PNAS 77, 1116;

This product is for In vitro research use only.

ADN11-S-A-P

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