ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Adipsin Antibodies

Cat # ADN13-A	Sheep Anti-Human Adipsin protein IgG # 3, aff. Pure IgG	**SIZE**: 100 ug
Cat # ADN12-C	Human Adipsin/Factor D proteins WB +ve control # 2	**SIZE**: 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 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/macrphages. 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	Purified human serum adipsin protein
Ab Host/type	Sheep, Polyclonal, Pure IgG (**cat # ADN13-A**) purified using salt fractionation, ion-exchange and protein-A chromatography
2-ab	**Rabbit Anti-sheep IgG-HRP** cat # 30520 (AP, biotin, FITC conjugates also available)
-ve IgG	Non-immune sheep IgG to be used as –ve control for ELISA, Western or IHC #20006-1

Human adipsin/Factor D (**cat # ADN12-C**) is purified (>95%) from human serum and supplied in SDS-PAGE sample (reduced) buffer for Western blot. This preparation is not biologically inactive. 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 may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the ADN12-C 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 hear repeatedly.

Form & Storage of Peptide and Antibodies

pure IgG

100 ug/100 ul solution	50 ug/50 ul lyophilized powder

Buffer: 100 mM Tris, pH 7.5; contains 0.05% sodium azide
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 antibody at 1-5 ug/ml using ECL. Human 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

The antibody gives a single arc in IEP against the human serum and single precipitin arc in Ouchterlony. Antibody cross-reactivity in various other species has not been studied. Antibodies to rat adipsin peptides are also available (Cat # ADN11-A).

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

This product is for In vitro research use only.

ADN13-A-12-C 70808A

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