

Product Specification Sheet

Human Adipsin Protein

Cat # ADN15-N

Human Adipsin/Factor D protein

SIZE: 5 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

Human adipsin/Factor D (**cat # ADN15-N**) is purified (>95%) from human serum from human fluid that has been shown by certified tests to be negative for HbsAg and HIV and HCV. However, all precautions must be taken to avoid contamination.

Form & Storage

It is supplied in PBS, pH 7.4 in liquid or powder form. Store at -20oC. Reconstitute in PBS at no <5 ug/100 ul.

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. Human Adipsin is ~24 kDa.

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

General References: (1) White RT 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; 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.

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