SANTA CRUZ BIOTECHNOLOGY, INC.

ADPN (H-291): sc-134755

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ADPN, a member of the Adiponutrin family, displays lipase activity that is dependent upon the presence of an activated serine residue. D-glucose elicits a seven-fold increase in ADPN mRNA levels, and Insulin has a slight effect on ADPN expression in the presence or absence of glucose. The glucose-induced increase in ADPN expression can be reversed by factors known to raise intracellular cAMP. mRNA ADPN levels are negatively correlated with fasting glucose levels and subjects with high ADPN mRNA levels have increased Insulin sensitivity, implicating ADPN in obesity and diabetes. ADPN gene expression in humans is highly regulated by changes in energy balance. In mice adipocytes, ADPN parallels the expression of fatty acid synthase (FAS) and Srebp1c, a variant of Srebp1.

REFERENCES

1. Baulande, S., et al. 2001. Adiponutrin, a transmembrane protein corresponding to a novel dietary- and obesity-linked mRNA specifically expressed in the adipose lineage. J. Biol. Chem. 276: 33336-33344.
2. Polson, D.A. and Thompson, M.P. 2003. Adiponutrin mRNA expression in white adipose tissue is rapidly induced by meal-feeding a high-sucrose diet. Biochem. Biophys. Res. Commun. 301: 261-266.
3. Polson, D. and Thompson, M. 2003. Adiponutrin gene expression in 3T3-L1 adipocytes is downregulated by troglitazone. Horm. Metab. Res. 35: 508-510.
4. Wiesner, G., et al. 2004. Food restriction regulates adipose-specific cytokines in pituitary gland but not in hypothalamus. J. Endocrinol. 180: R1-R6.
5. Polson, D.A. and Thompson, M.P. 2004. Macronutrient composition of the diet differentially affects leptin and adiponutrin mRNA expression in response to meal feeding. J. Nutr. Biochem. 15: 242-246.
6. Liu, Y.M., et al. 2004. Adiponutrin: a new gene regulated by energy balance in human adipose tissue. J. Clin. Endocrinol. Metab. 89: 2684-2689.

CHROMOSOMAL LOCATION

Genetic locus: PNPLA3 (human) mapping to 22q13.31; Pnpla3 (mouse) mapping to 15 E2.

SOURCE

ADPN (H-291) is a rabbit polyclonal antibody raised against amino acids 191-481 mapping at the C-terminus of ADPN of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ADPN (H-291) is recommended for detection of Adiponutrin (ADPN) of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ADPN siRNA (h): sc-60129, ADPN shRNA Plasmid (h): sc-60129-SH and ADPN shRNA (h) Lentiviral Particles: sc-60129-V.

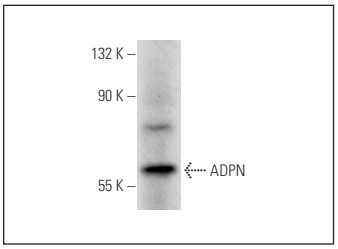
Molecular Weight of ADPN: 53 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ADPN (H-291): sc-134755. Western blot analysis of ADPN expression in mouse liver tissue extract.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.