SANTA CRUZ BIOTECHNOLOGY, INC.

ADPN (D-5): sc-390251

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 in-creased 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. 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.

CHROMOSOMAL LOCATION

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

SOURCE

ADPN (D-5) is a mouse monoclonal antibody raised against amino acids 191-481 mapping at the C-terminus of ADPN of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ADPN (D-5) is available conjugated to agarose (sc-390251 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390251 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390251 PE), fluorescein (sc-390251 FITC), Alexa Fluor® 488 (sc-390251 AF488), Alexa Fluor® 546 (sc-390251 AF546), Alexa Fluor® 594 (sc-390251 AF594) or Alexa Fluor® 647 (sc-390251 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390251 AF680) or Alexa Fluor® 790 (sc-390251 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, ADPN (D-5) is available conjugated to biotin (sc-390251 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

ADPN (D-5) is recommended for detection of ADPN of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

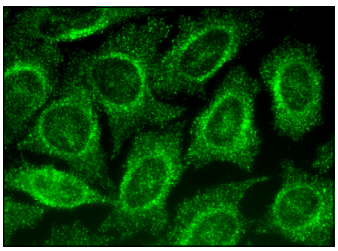
Suitable for use as control antibody for ADPN siRNA (h): sc-60129, ADPN siRNA (m): sc-60130, ADPN shRNA Plasmid (h): sc-60129-SH, ADPN shRNA Plasmid (m): sc-60130-SH, ADPN shRNA (h) Lentiviral Particles: sc-60129-V and ADPN shRNA (m) Lentiviral Particles: sc-60130-V.

Molecular Weight of ADPN: 53 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ADPN (D-5): sc-390251. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.

PROTOCOLS

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