SANTA CRUZ BIOTECHNOLOGY, INC.

Acrp30 (1G12): sc-53910



The Power to Question

BACKGROUND

Acrp30 (adipocyte complement-related protein or AdipoQ) is a secretory protein that is made exclusively in adipocytes and whose mRNA is induced over 100-fold during adipocyte differentiation. Acrp30 is an abundant serum protein secreted exclusively from fat cells, and is implicated in energy homeostasis and obesity. Due to the dysregulation in various forms of obesity in humans and mice, as well as its strong structural similarity to TNF α , Acrp30 is currently under study as an important molecule involved in whole body energy homeostasis. In addition, regulated exocytosis of Acrp30 appears to require phosphatidylinositol-3-kinase activity, since Insulin-stimulated Acrp30 secretion is blocked by pharmacologic inhibitors of this enzyme.

REFERENCES

- Scherer, P.E., Williams, S., Fogliano, M., Baldini, G. and Lodish, H.F. 1995. A novel serum protein similar to C1q, produced exclusively in adipocytes. J. Biol. Chem. 270: 26746-26749.
- Shapiro, L. and Scherer, P.E. 1998. The crystal structure of a complement-1q family protein suggests an evolutionary link to tumor necrosis factor. Curr. Biol. 8: 335-338.
- Bogan, J.S. and Lodish, H.F. 1999. Two compartments for Insulin-stimulated exocytosis in 3T3-L1 adipocytes defined by endogenous Acrp30 and Glut4. J. Cell Biol. 146: 609-620.
- 4. Kappes, A. and Loffler, G. 2000. Influences of Ionomycin, dibutyryl-cycloAMP and tumor necrosis factor α on intracellular amount and secretion of apM1 in differentiating primary human preadipocytes. Horm. Metab. Res. 32: 548-554.
- Das, K., Lin, Y., Widen, E., Zhang, Y. and Scherer, P.E. 2001. Chromosomal localization, expression pattern and promoter analysis of the mouse gene encoding adipocyte-specific secretory protein Acrp30. Biochem. Biophys. Res. Commun. 280: 1120-1129.
- Fruebis, J., Tsao, T.S., Javorschi, S., Ebbets-Reed, D., Erickson, M.R., Yen, F.T., Bihain, B.E. and Lodish, H.F. 2001. Proteolytic cleavage product of 30 kDa adipocyte complement-related protein increases fatty acid oxidation in muscle and causes weight loss in mice. Proc. Natl. Acad. Sci. USA 98: 2005-2010.

CHROMOSOMAL LOCATION

Genetic locus: ADIPOQ (human) mapping to 3q27.3.

SOURCE

Acrp30 (1G12) is a mouse monoclonal antibody raised against amino acids 15-244 of Acrp30 of human origin.

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.

PRODUCT

Each vial contains 50 $\mu g~lg G_1$ in 500 $\mu l~PBS$ with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Acrp30 (1G12) is recommended for detection of Acrp30 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Acrp30 siRNA (h): sc-43600, Acrp30 shRNA Plasmid (h): sc-43600-SH and Acrp30 shRNA (h) Lentiviral Particles: sc-43600-V.

Molecular Weight of Acrp30 monomer: 30 kDa.

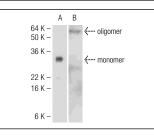
Molecular Weight of Acrp30 polymer: 250 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



Acrp30 (1612): sc-53910. Western blot analysis of fulllength recombinant human Acrp30 (Å) and mouse liver tissue extract (B). Arrows indicate the oligomer and monomer of mAcrp30 protein in mouse liver.

PROTOCOLS

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