Acrp30 (Adn3): sc-66124



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, and 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.
- 2. 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.
- 7. Wang, Y., Lam, K.S., Chan, L., Chan, K.W., Lam, J.B., Lam, M.C., Hoo, R.C., Mak, W.W., Cooper, G.J. and Xu, A. 2006. Posttranslational modifications of the four conserved lysine residues within the collagenous domain of Adiponectin are required for the formation of its high molecular weight oligomeric complex. J. Biol. Chem. 281: 16391-16400.

CHROMOSOMAL LOCATION

Genetic locus: ADIPOQ (human) mapping to 3q27; Adipoq (mouse) mapping to 16.

STORAGE

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

SOURCE

Acrp30 (Adn3) is a mouse monoclonal antibody raised against recombinant Acrp30 of human origin.

PRODUCT

Each vial contains 100 μg lgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Acrp30 (Adn3) is recommended for detection of Acrp30 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for Acrp30 siRNA (h): sc-43600.

Molecular Weight of Acrp30: 30 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243 or MIA PaCa-2 cell lysate: sc-2285.

RESEARCH USE

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

PROTOCOLS

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

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