# Acrp30 (M5-8(B)-H3): sc-73501



The Power to Question

## **BACKGROUND**

Acrp30 (adipocyte complement-related protein of 30 kDa or AdipoQ) is a secretory protein made exclusively in adipocytes with mRNA induced over 100-fold during adipocyte differentiation. Post-transcriptional modification of Acrp30 yields several oligomeric forms of varying molecular weight, including a monomer, a dimer, a trimer, a hexamer and a polymer. Acrp30 is an abundant serum protein, secreted exclusively from fat cells, and is implicated in energy homeostasis and obesity. Due to the dysregulation of Acrp30 in cases of obesity in humans and mice and the strong structural similarity to TNF $\alpha$ , Acrp30 is a suspected regulator of 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 tumour 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. Post-translational 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.

## **STORAGE**

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

## **SOURCE**

Acrp30 (M5-8(B)-H3) is a mouse monoclonal antibody raised against recombinant Acrp30 of human origin.

## **PRODUCT**

Each vial contains 100  $\mu g$   $lgG_{2b}$  in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

Acrp30 (M5-8(B)-H3) is recommended for detection of Acrp30 of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

# **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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**