SANTA CRUZ BIOTECHNOLOGY, INC.

Acrp30 (31): sc-136131

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Acrp30 (adipocyte complement-related protein 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 TNFα, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Acrp30 (31) is a mouse monoclonal antibody raised against amino acids 1-247 representing full length Acrp30 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Acrp30 (31) is available conjugated to agarose (sc-136131 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136131 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

Acrp30 (31) 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 µg per 100-500 µg 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: 30 kDa.

Positive Controls: human adipose tissue extract: sc-363750, human plasma extract: sc-364374 or HeLa whole cell lysate: sc-2200.

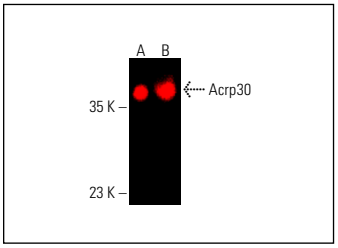
RECOMMENDED SUPPORT REAGENTS

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).

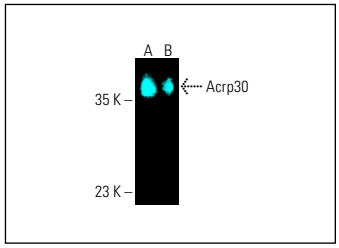
STORAGE

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

DATA



Acrp30 (31): sc-136131. Near-Infrared western blot analysis of Acrp30 expression in human plasma (**A**) and human adipose tissue (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 790: sc-542740.



Acrp30 (31): sc-136131. Fluorescent western blot analysis of Acrp30 expression in human plasma (**A**) and human adipose tissue (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 647: sc-542738.

SELECT PRODUCT CITATIONS

1. Chang, X., et al. 2014. Adiponectin and visfatin may serve as diagnosis markers for metabolic syndrome in Uygur population. Int. J. Clin. Exp. Med. 7: 4322-4326.
2. Atawia, R.T., et al. 2019. Role of arginase 2 in systemic metabolic activity and adipose tissue fatty acid metabolism in diet-induced obese mice. Int. J. Mol. Sci. 20: 1462.
3. Kim, B.M., et al. 2019. Muscat Bailey A grape stalk extract ameliorates high-fat diet-induced obesity by downregulating PPARγ and C/EPBα in mice. Int. J. Mol. Med. 43: 489-500.
4. Rebello, C.J., et al. 2021. MLR-1023 treatment in mice and humans induces a thermogenic program, and menthol potentiates the effect. Pharmaceuticals 14: 1196.
5. Gantov, M., et al. 2021. Beige adipocytes contribute to breast cancer progression. Oncol. Rep. 45: 317-328.
6. Shigemori, K., et al. 2022. Peripheral Aβ acts as a negative modulator of Insulin secretion. Proc. Natl. Acad. Sci. USA 119: e2117723119.
7. Gong, H., et al. 2023. Profiling of N6-methyladenosine methylation in porcine longissimus dorsi muscle and unravelling the hub gene ADIPOQ promotes adipogenesis in an m^6A-YTHDF1-dependent manner. J. Anim. Sci. Biotechnol. 14: 50.
8. Coulter, A.A., et al. 2023. Naringenin and β-carotene convert human white adipocytes to a beige phenotype and elevate hormone-stimulated lipolysis. Front. Endocrinol. 14: 1148954.
9. Matilainen, J., et al. 2024. Increased secretion of adipocyte-derived extracellular vesicles is associated with adipose tissue inflammation and the mobilization of excess lipid in human obesity. J. Transl. Med. 22: 623.

RESEARCH USE

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