

CTRP5 Antibody

Catalog # ASC10339

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9BXJ0
Other Accession	AAQ88749 , 37181891
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	25298
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CTRP5 antibody can be used for the detection of CTRP5 by Western blot at 1 - 4 μ g/mL. Antibody can also be used for immunohistochemistry starting at 10 μ g/mL.

Additional Information

Gene ID	114902
Other Names	CTRP5 Antibody: CTRP5, CTRP5, UNQ303/PRO344, Complement C1q tumor necrosis factor-related protein 5, C1q and tumor necrosis factor related protein 5
Target/Specificity	C1QTNF5; These proteins are often highly modified post-translationally and migrate in SDS-PAGE at positions other than their predicted size.
Reconstitution & Storage	CTRP5 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CTRP5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	C1QTNF5 {ECO:0000303 PubMed:22892318, ECO:0000312 HGNC:HGNC:14344}
Function	Involved in cellular energy homeostasis through the regulation of 5'-AMP-activated protein kinase (AMPK) phosphorylation and activation (PubMed: 19651784 , PubMed: 34887495). In myocytes, it induces adiponectin receptors-independent AMPK phosphorylation and activation, thereby increasing the phosphorylation of acetyl-CoA carboxylase (ACC) and stimulating fatty acid oxidation and glucose uptake (PubMed: 19651784). In

the retinal pigment epithelium (RPE), it acts as antagonist of adiponectin receptor protein 1 (ADIPOR1) and negatively regulates ADIPOR1-dependent AMPK activation (PubMed:[34887495](#)).

Cellular Location

Apical cell membrane. Secreted. Note=Associated with the lateral and apical membranes of the ocular ciliary body and retinal pigment epithelium (RPE).

Background

CTRP5 Antibody: Adipose tissue of an organism plays a major role in regulating physiologic and pathologic processes such as metabolism and immunity by producing and secreting a variety of bioactive molecules termed adipokines. One highly conserved family of adipokines is adiponectin/ACRP30 and its structural and functional paralogs, the C1q/tumor necrosis factor- α -related proteins (CTRPs) 1-7. Unlike adiponectin, which is expressed exclusively by differentiated adipocytes, the CTRPs are expressed in a wide variety of tissues. These proteins are thought to act mainly on liver and muscle tissue to control glucose and lipid metabolism. An analysis of the crystal structure of adiponectin revealed a structural and evolutionary link between TNF and C1q-containing proteins, suggesting that these proteins arose from a common ancestral innate immunity gene. CTRP5 has been suggested to be involved in age-related macular degeneration.

References

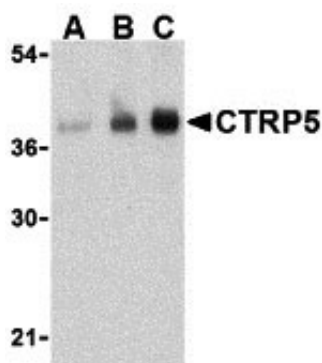
Fantuzzi G. Adipose tissue, adipokines, and inflammation. *J. Allergy Clin. Immunol.* 2005; 115:911-9.

Tsao T-S, Lodish HF, and Fruebis J. ACRP30, a new hormone controlling fat and glucose metabolism. *Euro. J. Pharmacol.* 2002; 440:213-21.

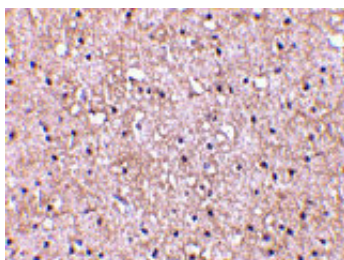
Wong GW, Wang J, Hug C, et al. A family of Acrp30/ adiponectin structural and functional paralogs. *Proc. Natl. Acad. Sci. USA* 2004; 101:10302-7.

Shapiro L and Scherer PE. The crystal structure of a complement-1q family protein suggests an evolutionary link to tumor necrosis factor. *Curr. Biol.* 1998; 8:335-8.

Images



Western blot analysis of CTRP5 in human brain cell lysate with CTRP5 antibody at (A) 1, (B) 2, and (C) 4 µg/mL.



Immunohistochemistry of CTRP5 in human brain tissue with CTRP5 antibody at 10 µg/mL.