SANTA CRUZ BIOTECHNOLOGY, INC.

AdipoR2 (N-19): sc-46756

The Power to Question

BACKGROUND

Adiponectin is a circulating hormone secreted by adipocytes that improves the metabolism of glucose and lipids, and is expressed at low levels in those with obesity and diabetes. Adiponectin receptors AdipoR1 and AdipoR2, also designated progestin and AdipoQ receptor family members I and II, respectively, regulate fatty acid oxidation and the uptake of glucose by adiponectin. Each receptor activates a unique set of signaling molecules including AMPK, p38 MAPK and PPARα. AdipoR1 has a high affinity for globular adiponectin and low-affinity for full-length adiponectin, while AdipoR2 has an intermediate affinity for both forms. AdipoR1 and AdipoR2 are mainly expressed in liver and muscle. Adiponectin, AdipoR1 and AdipoR2 are all associated with body composition, Insulin sensitivity and metabolic parameters. Physical training increases circulating adiponectin and mRNA expression of AdipoR1 and AdipoR2 in muscle, which may mediate the improvement of Insulin resistance and the metabolic syndrome in response to exercise.

REFERENCES

1. Kadowaki, T., et al. 2005. Adiponectin and adiponectin receptors. Endocr. Rev. 26: 439-451.
2. Bluher, M., et al. 2005. Regulation of adiponectin receptor R1 and R2 gene expression in adipocytes of C57BL/6 mice. Biochem. Biophys. Res. Commun. 329: 1127-1132.
3. Nilsson, L., et al. 2005. Prolactin and growth hormone regulate adiponectin secretion and receptor expression in adipose tissue. Biochem. Biophys. Res. Commun. 331: 1120-1126.

CHROMOSOMAL LOCATION

Genetic locus: ADIPOR2 (human) mapping to 12p13.33.

SOURCE

AdipoR2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of AdipoR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46756 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

PROTOCOLS

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

APPLICATIONS

AdipoR2 (N-19) is recommended for detection of AdipoR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AdipoR2 siRNA (h): sc-60125, AdipoR2 shRNA Plasmid (h): sc-60125-SH and AdipoR2 shRNA (h) Lentiviral Particles: sc-60125-V.

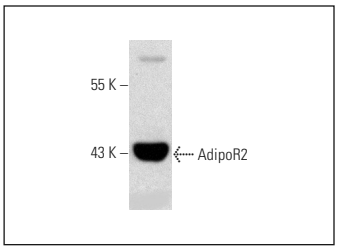
Molecular Weight of AdipoR2: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

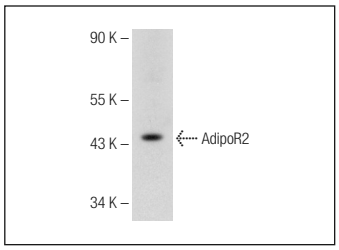
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AdipoR2 (N-19): sc-46756. Western blot analysis of AdipoR2 expression in HeLa whole cell lysates.



AdipoR2 (N-19): sc-46756. Western blot analysis of AdipoR2 expression in F9 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Dos Santos, E., et al. 2008. Adiponectin mediates an antiproliferative response in human MDA-MB 231 breast cancer cells. Oncol. Rep. 20: 971-977.
2. Benaitreau, D., et al. 2009. Antiproliferative effects of adiponectin on human trophoblastic cell lines JEG-3 and BeWo. Biol. Reprod. 80: 1107-1114.
3. Restituto, P., et al. 2010. Adiponectin diminishes platelet aggregation and sCD40L release. Potential role in the metabolic syndrome. Am. J. Physiol. Endocrinol. Metab. 298: 1072-1077.
4. Dos Santos, E., et al. 2012. Adiponectin and leptin systems in human endometrium during window of implantation. Fertil. Steril. 97: 771.e1-778.e1.