

AdipoR2 (H-44): sc-99184

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 PPAR α . 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. and Yamauchi, T. 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.
4. Kaltenbach, S., et al. 2005. Adiponectin receptor gene expression in human skeletal muscle cells is not regulated by fibrates and thiazolidinediones. *Int. J. Obes. Relat. Metab. Disord.* 29: 760-765.
5. Chen, M., et al. 2005. Impaired activation of AMP-kinase and fatty acid oxidation by globular adiponectin in cultured human skeletal muscle of obese type 2 diabetics. *J. Clin. Endocrinol. Metab.* 90: 3665-3672.
6. Morínigo, R., et al. 2006. Intra-abdominal fat adiponectin receptors expression and cardiovascular metabolic risk factors in obesity and diabetes. *Obes. Surg.* 16: 745-751.
7. Haluzik, M.M., et al. 2006. Improvement of Insulin sensitivity after PPAR α agonist treatment is accompanied by paradoxical increase of circulating resistin levels. *Endocrinology* 147: 4517-4524.

CHROMOSOMAL LOCATION

Genetic locus: ADIPOR2 (human) mapping to 12p13.33; Adipor2 (mouse) mapping to 6 F1.

SOURCE

AdipoR2 (H-44) is a rabbit polyclonal antibody raised against amino acids 287-330 mapping near the C-terminus of AdipoR2 of human origin.

PRODUCT

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

APPLICATIONS

AdipoR2 (H-44) is recommended for detection of AdipoR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

AdipoR2 (H-44) is also recommended for detection of AdipoR2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AdipoR2 siRNA (h): sc-60125, AdipoR2 siRNA (m): sc-60126, AdipoR2 siRNA (r): sc-156025, AdipoR2 shRNA Plasmid (h): sc-60125-SH, AdipoR2 shRNA Plasmid (m): sc-60126-SH, AdipoR2 shRNA Plasmid (r): sc-156025-SH, AdipoR2 shRNA (h) Lentiviral Particles: sc-60125-V, AdipoR2 shRNA (m) Lentiviral Particles: sc-60126-V and AdipoR2 shRNA (r) Lentiviral Particles: sc-156025-V.

Molecular Weight of AdipoR2: 44 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Kasimanickam, V.R., et al. 2013. Associations of adiponectin and fertility estimates in Holstein bulls. *Theriogenology* 79: 766-777.
2. D'Archivio, M., et al. 2013. ω 3-PUFAs exert anti-inflammatory activity in visceral adipocytes from colorectal cancer patients. *PLoS ONE* 8: e77432.

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.



Try **AdipoR2 (A-3): sc-514045**, our highly recommended monoclonal alternative to AdipoR2 (H-44).