

AdipoR1 (C-14): sc-46748

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.

CHROMOSOMAL LOCATION

Genetic locus: ADIPOR1 (human) mapping to 1q32.1; Adipor1 (mouse) mapping to 1 E4.

SOURCE

AdipoR1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AdipoR1 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.

Blocking peptide available for competition studies, sc-46748 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AdipoR1 (C-14) is recommended for detection of AdipoR1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-reactive with AdipoR2.

AdipoR1 (C-14) is also recommended for detection of AdipoR1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AdipoR1 siRNA (h): sc-60123, AdipoR1 siRNA (m): sc-60124, AdipoR1 shRNA Plasmid (h): sc-60123-SH, AdipoR1 shRNA Plasmid (m): sc-60124-SH, AdipoR1 shRNA (h) Lentiviral Particles: sc-60123-V and AdipoR1 shRNA (m) Lentiviral Particles: sc-60124-V.

Molecular Weight (predicted) of AdipoR1: 42 kDa.

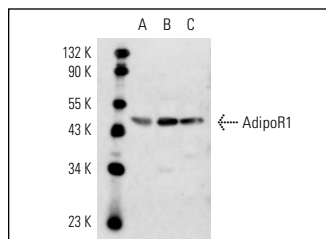
Molecular Weight (observed) of AdipoR1: 49 kDa.

Positive Controls: RD whole cell lysate: sc-364791, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

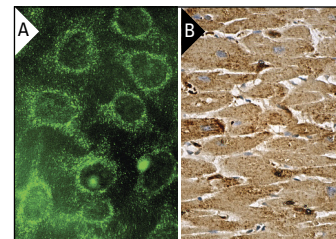
STORAGE

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

DATA



AdipoR1 (C-14): sc-46748. Western blot analysis of AdipoR1 expression in RD (A), Hep G2 (B) and MCF7 (C) whole cell lysates.



AdipoR1 (C-14): sc-46748. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

- Coope, A., et al. 2008. AdipoR1 mediates the anorexigenic and Insulin/leptin-like actions of adiponectin in the hypothalamus. *FEBS Lett.* 582: 1471-1476.
- Konishi, M., et al. 2011. Adiponectin protects against doxorubicin-induced cardiomyopathy by anti-apoptotic effects through AMPK up-regulation. *Cardiovasc. Res.* 89: 309-319.
- Eguchi, R., et al. 2011. Fish oil consumption prevents glucose intolerance and hypercorticotestosterone in footshock-stressed rats. *Lipids Health Dis.* 10: 71.
- Tsukada, T., et al. 2011. Adiponectin receptor-1 expression is associated with good prognosis in gastric cancer. *J. Exp. Clin. Cancer Res.* 30: 107.
- Asensio-López, M.C., et al. 2011. Metformin protects against doxorubicin-induced cardiotoxicity: Involvement of the adiponectin cardiac system. *Free Radic. Biol. Med.* 51: 1861-1871.
- Kasimanickam, V.R., et al. 2013. Associations of adiponectin and fertility estimates in Holstein bulls. *Theriogenology* 79: 766-777.
- Bagley, H.N., et al. 2013. Maternal docosahexaenoic acid increases adiponectin and normalizes IUGR-induced changes in rat adipose deposition. *J. Obes.* 2013: 312153.
- Perri, A., et al. 2013. Adiponectin is expressed and secreted by renal tubular epithelial cells. *J. Nephrol.* E-published.

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.