SANTA CRUZ BIOTECHNOLOGY, INC.

AdipoR2 (A-3): sc-514045

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.

CHROMOSOMAL LOCATION

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

SOURCE

AdipoR2 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 61-89 near the N-terminus of AdipoR2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AdipoR2 (A-3) is available conjugated to agarose (sc-514045 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514045 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514045 PE), fluorescein (sc-514045 FITC), Alexa Fluor® 488 (sc-514045 AF488), Alexa Fluor® 546 (sc-514045 AF546), Alexa Fluor® 594 (sc-514045 AF594) or Alexa Fluor® 647 (sc-514045 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514045 AF680) or Alexa Fluor® 790 (sc-514045 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514045 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

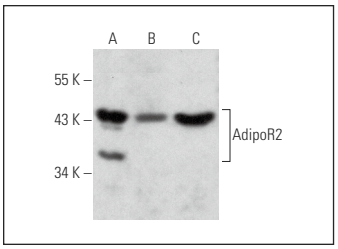
AdipoR2 (A-3) is recommended for detection of AdipoR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

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.

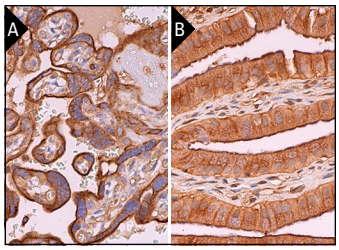
Molecular Weight of AdipoR2: 44 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, L8 cell lysate: sc-3807 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

DATA



AdipoR2 (A-3): sc-514045. Western blot analysis of AdipoR2 expression in Hs 732.Sk/Mu (**A**), L8 (**B**) and KNRK (**C**) whole cell lysates.



AdipoR2 (A-3): sc-514045. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, N., et al. 2018. AdipoRon, an adiponectin receptor agonist, attenuates cardiac remodeling induced by pressure overload. J. Mol. Med. 96: 1345-1357.
2. Philp, L.K., et al. 2020. Adiponectin receptor activation inhibits prostate cancer xenograft growth. Endocr. Relat. Cancer 27: 711-729.
3. Pal, S., et al. 2021. Adiponectin receptors by increasing mitochondrial biogenesis and respiration promote osteoblast differentiation: discovery of isovitexin as a new class of small molecule adiponectin receptor modulator with potential osteoanabolic function. Eur. J. Pharmacol. 913: 174634.
4. Schaffer, A., et al. 2022. The ontogenies of endometrial and myometrial leptin and adiponectin receptors in pregnant rats: their putative impact on uterine contractility. Life Sci. 297: 120465.

RESEARCH USE

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