SANTA CRUZ BIOTECHNOLOGY, INC.

AdipoR1 (h): 293T Lysate: sc-111211

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Adiponectin is a circulating hormone secreted by adipocytes that improve 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

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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.B., 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 risk factors in obesity and diabetes. Obes. Surg. 16: 745-751.
7. Haluzik, M.M., et al. 2006. Improvement of Insulin sensitivity after PPARα agonist treatment is accompanied by paradoxical increase of circulating resistin levels. Endocrinology 47: 4517-4524.
8. Blüher, M., et al. 2006. Circulating adiponectin and expression of adiponectin receptors in human skeletal muscle: associations with metabolic parameters and Insulin resistance and regulation by physical training. J. Clin. Endocrinol. Metab. 91: 2310-2316.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ADIPOR1 (human) mapping to 1q32.1.

PRODUCT

AdipoR1 (h): 293T Lysate represents a lysate of human AdipoR1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

AdipoR1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AdipoR1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

RESEARCH USE

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