SANTA CRUZ BIOTECHNOLOGY, INC.

resistin siRNA (m): sc-39723

BACKGROUND

The cysteine-rich, adipose tissue-specific, secretory factor resistin (resistance to Insulin, also known as ADSF) is a secreted hormone that potentially links obesity to diabetes. Resistin is rich in serine and cysteine residues and contains a unique cysteine repeat motif. Resistin and the resistin-like molecules share the characteristic cysteine composition and other signature features. Resistin-like α is a secreted protein that has restricted tissue distribution and is most highly expressed in adipose tissue. Another family member, resistin-like β, is a secreted protein expressed only in the gastrointestinal tract, particularly in the colon, in both mouse and human. Resistin-like β expression is highest in proliferative epithelial cells and is markedly increased in tumors, suggesting a role in intestinal proliferation.

REFERENCES

1. Kim, K.H., et al. 2001. A cysteine-rich adipose tissue-specific secretory factor inhibits adipocyte differentiation. J. Biol. Chem. 276: 11252-11256.
2. Flier, J.S. 2001. Diabetes. The missing link with obesity? Nature 409: 292-293.
3. Steppan, C.M., et al. 2001. The hormone resistin links obesity to diabetes. Nature 409: 307-312.
4. Steppan, C.M., et al. 2001. A family of tissue-specific resistin-like molecules. Proc. Natl. Acad. Sci. USA 98: 502-506.
5. Vendrell, J., et al. 2004. Resistin, adiponectin, ghrelin, Leptin, and pro-inflammatory cytokines: relationships in obesity. Obes. Res. 12: 962-971.
6. Banerjee, R.R., et al. 2004. Regulation of fasted blood glucose by resistin. Science 303: 1195-1198.
7. Patel, S.D., et al. 2004. Disulfide-dependent multimeric assembly of resistin family hormones. Science 304: 1154-1158.
8. Steppan, C.M., et al. 2004. The current biology of resistin. J. Intern. Med. 255: 439-447.

CHROMOSOMAL LOCATION

Genetic locus: Retn (mouse) mapping to 8 A1.1.

PRODUCT

resistin siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see resistin shRNA Plasmid (m): sc-39723-SH and resistin shRNA (m) Lentiviral Particles: sc-39723-V as alternate gene silencing products.

For independent verification of resistin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-39723A, sc-39723B and sc-39723C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

resistin siRNA (m) is recommended for the inhibition of resistin expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor resistin gene expression knockdown using RT-PCR Primer: resistin (m)-PR: sc-39723-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kim, S.J., et al. 2007. Resistin is a key mediator of glucose-dependent Insulinotropic polypeptide (GIP) stimulation of lipoprotein lipase (LPL) activity in adipocytes. J. Biol. Chem. 282: 34139-34147.
2. Shyu, K.G., et al. 2022. Exosomal MALAT1 derived from high glucose-treated macrophages up-regulates resistin expression via miR-150-5p downregulation. Int. J. Mol. Sci. 23: 1095.

RESEARCH USE

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