SANTA CRUZ BIOTECHNOLOGY, INC.

resistin-like α siRNA (m): sc-39724

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. Dove, A. 2001. Resistin diabetes. Nat. Biotechnol. 19: 217.
3. Flier, J.S. 2001. Diabetes. The missing link with obesity? Nature 409: 292-293.
4. Steppan, C.M., et al. 2001. The hormone resistin links obesity to diabetes. Nature 409: 307-312.
5. Steppan, C.M., et al. 2001. A family of tissue-specific resistin-like molecules. Proc. Natl. Acad. Sci. USA 98: 502-506.
6. Vendrell, J., et al. 2004. Resistin, adiponectin, ghrelin, leptin, and proinflammatory cytokines: relationships in obesity. Obes. Res. 12: 962-971.
7. Banerjee, R.R., et al. 2004. Regulation of fasted blood glucose by resistin. Science 303: 1195-1198.
8. Patel, S.D., et al. 2004. Disulfide-dependent multimeric assembly of resistin family hormones. Science 304: 1154-1158.
9. Steppan, C.M., et al. 2004. The current biology of resistin. J. Intern. Med. 255: 439-447.

CHROMOSOMAL LOCATION

Genetic locus: Retnla (mouse) mapping to 16 B5.

PRODUCT

resistin-like α 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-like α shRNA Plasmid (m): sc-39724-SH and resistin-like α shRNA (m) Lentiviral Particles: sc-39724-V as alternate gene silencing products.

For independent verification of resistin-like α (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-39724A, sc-39724B and sc-39724C.

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-like α siRNA (m) is recommended for the inhibition of resistin-like α 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.

GENE EXPRESSION MONITORING

resistin-like α (R-18): sc-80324 is recommended as a control antibody for monitoring of resistin-like α gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor resistin-like α gene expression knockdown using RT-PCR Primer: resistin-like α (m)-PR: sc-39724-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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