

Adipsin siRNA (m): sc-29647

BACKGROUND

Adipsin is the mouse homolog of the previously described human complement Factor D, a serine protease, which is now designated human Adipsin. Human Adipsin is highly expressed in and secreted by adipose tissue, and it has also been found in monocytes/macrophages. Rodent Adipsin has only been detected in high levels in adipose tissue. Complement Factor B, when complexed with activated complement component C3, has been shown to be cleaved by Adipsin. Low expression of Adipsin has been shown in obese mice with hypothalamic defects, suggesting that obesity may be caused as a result of this systemic disorder.

REFERENCES

1. Lesavre, P.H., et al. 1979. The alternative pathway C3/C5 convertase: chemical basis of factor B activation. *J. Immunol.* 123: 529-534.
2. Niemann, M.A., et al. 1984. Amino acid sequence of human D of the alternative complement pathway. *Biochemistry* 23: 2482-2486.
3. Rosen, B.S., et al. 1989. Adipsin and complement factor D activity: an immune-related defect in obesity. *Science* 244: 1483-1487.
4. White, R.T., et al. 1992. Human adipsin is identical to complement factor D and is expressed at high levels in adipose tissue. *J. Biol. Chem.* 267: 9210-9213.
5. Choy, L.N., et al. 1992. Adipsin and an endogenous pathway of complement from adipose cells. *J. Biol. Chem.* 267: 12736-12741.
6. Platt, K.A., et al. 1994. Independent regulation of adipose tissue-specificity and obesity response of the adipsin promoter in transgenic mice. *J. Biol. Chem.* 269: 28558-28562.

CHROMOSOMAL LOCATION

Genetic locus: Cfd (mouse) mapping to 10 C1.

PRODUCT

Adipsin 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Adipsin shRNA Plasmid (m): sc-29647-SH and Adipsin shRNA (m) Lentiviral Particles: sc-29647-V as alternate gene silencing products.

For independent verification of Adipsin (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-29647A, sc-29647B and sc-29647C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Adipsin siRNA (m) is recommended for the inhibition of Adipsin 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 μ M in 66 μ l. 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

Adipsin (D-3): sc-373860 is recommended as a control antibody for monitoring of Adipsin 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Adipsin gene expression knockdown using RT-PCR Primer: Adipsin (m)-PR: sc-29647-PR (20 μ l). 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.