

Attractin siRNA (h): sc-77343

BACKGROUND

Mahogany (MG), originally identified as a protein involved in pigmentation, acts in conjunction with melanocortin receptors to suppress diet-induced obesity. Mahogany contains a single transmembrane domain, and it is expressed in a broad range of tissues, including the hypothalamus and pigment cells. Mutations within the mahogany gene were shown to rescue agouti-lethal-yellow mutant mice from obesity. The extracellular domain of mouse mahogany is the ortholog of the human protein attractin. Attractin (also designated DPPT-L) is a human serum glycoprotein and is a member of the CUB family of cell adhesion and guidance proteins. Attractin is expressed on activated T cells and is released from the cells 48 to 72 hours after activation.

REFERENCES

1. Miller, K.A., et al. 1997. Genetic studies of the mouse mutations mahogany and mahoganoid. *Genetics* 146: 1407-1415.
2. Duke-Cohan, J.S., et al. 1998. Attractin (DPPT-L), a member of the CUB family of cell adhesion and guidance proteins, is secreted by activated human T lymphocytes and modulates immune cell interactions. *Proc. Natl. Acad. Sci. USA* 95: 11336-11341.
3. Dinulescu, D.M., et al. 1998. Mahogany (mg) stimulates feeding and increases basal metabolic rate independent of its suppression of agouti. *Proc. Natl. Acad. Sci. USA* 95: 12707-12712.
4. Nagle, D.L., et al. 1999. The mahogany protein is a receptor involved in suppression of obesity. *Nature* 398: 148-152.

CHROMOSOMAL LOCATION

Genetic locus: ATRN (human) mapping to 20p13.

PRODUCT

Attractin siRNA (h) 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 Attractin shRNA Plasmid (h): sc-77343-SH and Attractin shRNA (h) Lentiviral Particles: sc-77343-V as alternate gene silencing products.

For independent verification of Attractin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77343A, sc-77343B and sc-77343C.

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

Attractin siRNA (h) is recommended for the inhibition of Attractin expression in human 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

Attractin (D-8): sc-514084 is recommended as a control antibody for monitoring of Attractin 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 Attractin gene expression knockdown using RT-PCR Primer: Attractin (h)-PR: sc-77343-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.