

follistatin siRNA (h): sc-39762

BACKGROUND

Follistatin is a high affinity binding protein of activin originally isolated for their role in regulating the release of follicle-stimulating hormone (FSH). Follistatin forms a group of interrelated factors with activins and inhibins, members of the transforming growth factor- β (TGF β) superfamily. Activin, follistatin and activin receptors are expressed in many tissues where they function as autocrine/paracrine regulators of a variety of physiological processes including reproduction. Follistatin is an important regulator of pituitary FSH secretion.

REFERENCES

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2. Hurwitz, J.M., et al. 2004. Inhibins, activins, and follistatin in the aging female and male. *Semin. Reprod. Med.* 22: 209-217.
3. Schneyer, A., et al. 2004. Differential actions of follistatin and follistatin-like 3. *Mol. Cell. Endocrinol.* 225: 25-28.
4. Bilezikjian, L.M., et al. 2004. Autocrine/paracrine regulation of pituitary function by activin, inhibin and follistatin. *Mol. Cell. Endocrinol.* 225: 29-36.
5. Muttukrishna, S., et al. 2004. Activin and follistatin in female reproduction. *Mol. Cell. Endocrinol.* 225: 45-56.
6. de Kretser, D.M., et al. 2004. The role of activin, follistatin and inhibin in testicular physiology. *Mol. Cell. Endocrinol.* 225: 57-64.
7. Jones, K.L., et al. 2004. Activin A and follistatin in systemic inflammation. *Mol. Cell. Endocrinol.* 225: 119-125.
8. Keutmann, H.T., et al. 2004. The role of follistatin domains in follistatin biological action. *Mol. Endocrinol.* 18: 228-240.
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CHROMOSOMAL LOCATION

Genetic locus: FST (human) mapping to 5q11.2.

PRODUCT

follistatin 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 follistatin shRNA Plasmid (h): sc-39762-SH and follistatin shRNA (h) Lentiviral Particles: sc-39762-V as alternate gene silencing products.

For independent verification of follistatin (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-39762A, sc-39762B and sc-39762C.

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 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

follistatin siRNA (h) is recommended for the inhibition of follistatin 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

follistatin (C-8): sc-365003 is recommended as a control antibody for monitoring of follistatin 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 follistatin gene expression knockdown using RT-PCR Primer: follistatin (h)-PR: sc-39762-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Karve, T.M., et al. 2012. BRCA1 regulates follistatin function in ovarian cancer and human ovarian surface epithelial cells. *PLoS ONE* 7: e37697.

RESEARCH USE

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