SANTA CRUZ BIOTECHNOLOGY, INC.

IGSF1 siRNA (m): sc-146185

BACKGROUND

IGSF1 (immunoglobulin superfamily member 1, inhibin-binding protein) is a highly glycolylated immunoglobulin domain-containing protein. IGSF1 has been shown to act as a coreceptor in inhibin signaling, however, it does not appear to be a high-affinity inhibin receptor by itself. May reduce or inhibit activin A signaling and is believed to be necessary in the mediation of specific effects of inhibin B on activin-stimulated transcription. IGSF1 has been found to interact with several members of the ACVR family and possibly some members of the BMPR group. There are three known isoforms of IGSF1, with one and two likely being multi-pass membrane proteins. Isoform 3 is believed to be expressed as a secreted form. Expression is high in pancreas, testis and fetal liver, while heart, prostate and small intestine show only moderate expression. IGSF1 may be found at very low levels in brain, muscle, thymus, ovary, colon, fetal lung and fetal kidney. Isoform 3 has been detected in pituitary gland.

REFERENCES

1. Mazzarella, R., et al. 1998. Cloning and expression of an immunoglobulin superfamily gene (IGSF1) in Xq25. Genomics 48: 157-162.
2. Ioerger, T.R., et al. 1999. Conservation of cys-cys trp structural triads and their geometry in the protein domains of immunoglobulin superfamily members. Mol. Immunol. 36: 373-386.
3. Luo, K., et al. 2001. DIgR1, a novel membrane receptor of the immunoglobulin gene superfamily, is preferentially expressed by antigen-presenting cells. Biochem. Biophys. Res. Commun. 287: 35-41.
4. Tanaka, S., et al. 2002. Detection of autoantibodies against the pituitary-specific proteins in patients with lymphocytic hypophysitis. Eur. J. Endocrinol. 147: 767-775.
5. Chapman, S.C., et al. 2002. Properties of inhibin binding to betaglycan, InhBP/p120 and the activin type II receptors. Mol. Cell. Endocrinol. 196: 79-93.
6. Bernard, D.J., Burns, K.H., Haupt, B., Matzuk, M.M. and Woodruff, T.K. 2003. Normal reproductive function in InhBP/p120-deficient mice. Mol. Cell. Biol. 23: 4882-4891.
7. Xue, F., Zhang, Y., Liu, F., Jing, J. and Ma, M. 2005. Expression of IgSF in salivary adenoid cystic carcinoma and its relationship with invasion and metastasis. J. Oral Pathol. Med. 34: 295-297.

CHROMOSOMAL LOCATION

Genetic locus: Igsf1 (mouse) mapping to X A5.

PRODUCT

IGSF1 siRNA (m) is a target-specific 19-25 nt siRNA 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 IGSF1 shRNA Plasmid (m): sc-146185-SH and IGSF1 shRNA (m) Lentiviral Particles: sc-146185-V as alternate gene silencing 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

IGSF1 siRNA (m) is recommended for the inhibition of IGSF1 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

IGSF1 (F-7): sc-393786 is recommended as a control antibody for monitoring of IGSF1 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 IGSF1 gene expression knockdown using RT-PCR Primer: IGSF1 (m)-PR: sc-146185-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.