SANTA CRUZ BIOTECHNOLOGY, INC.

Inhibin β-E siRNA (m): sc-75339

BACKGROUND

Inhibin β-E, also known as INHBE, is a 350 amino acid secreted protein that belongs to the TGFβ superfamily and exists as either a homodimer or a heterodimer via association with other Inhibin subunits. Functioning to inhibit the secretion of follitropin by the pituitary gland, Inhibin β-E is involved in a variety of events throughout the body, including germ cell development, nerve cell survival, Insulin secretion and bone growth. The gene encoding Inhibin β-E maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

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3. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. Immunol. Rev. 181: 20-38.
4. Hashimoto, O., et al. 2002. cDNA cloning and expression of human activin βE subunit. Mol. Cell. Endocrinol. 194: 117-122.
5. Zumkeller, W., et al. 2004. Genotype/phenotype analysis in a patient with pure and complete trisomy 12p. Am. J. Med. Genet. A 129A: 261-264.
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7. Segel, R., et al. 2006. The natural history of trisomy 12p. Am. J. Med. Genet. A 140: 695-703.
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CHROMOSOMAL LOCATION

Genetic locus: Inhbe (mouse) mapping to 10 D3.

PRODUCT

Inhibin β-E 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 Inhibin β-E shRNA Plasmid (m): sc-75339-SH and Inhibin β-E shRNA (m) Lentiviral Particles: sc-75339-V as alternate gene silencing products.

For independent verification of Inhibin β-E (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-75339A, sc-75339B and sc-75339C.

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

Inhibin β-E siRNA (m) is recommended for the inhibition of Inhibin β-E 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Inhibin β-E gene expression knockdown using RT-PCR Primer: Inhibin β-E (m)-PR: sc-75339-PR (20 µl, 600 bp). 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.