SANTA CRUZ BIOTECHNOLOGY, INC.

HtrA3 siRNA (h): sc-75313

BACKGROUND

HtrA3, also known as PRSP (pregnancy-related serine protease), is a 453 amino acid secreted protein that contains one PDZ domain, one Kazal-like domain and one IGFBP N-terminal domain. Widely expressed with particularly high expression in ovary, heart, placenta and bladder, HtrA3 functions as a probable serine protease that is thought to play an important role in placental development. HtrA3 is downregulated in ovarian tumors, suggesting an alternative role in tumor suppression. HtrA3 exists as two alternatively spliced isoforms, designated short and long. The gene encoding HtrA3 maps to human chromosome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes.

REFERENCES

1. Nie, G.Y., et al. 2003. Identification and cloning of two isoforms of human high-temperature requirement factor A3 (HtrA3), characterization of its genomic structure and comparison of its tissue distribution with HtrA1 and HtrA2. Biochem. J. 371: 39-48.
2. De Luca, A., et al. 2003. Distribution of the serine protease HtrA1 in normal human tissues. J. Histochem. Cytochem. 51: 1279-1284.
3. Nie, G., et al. 2006. Serine peptidase HtrA3 is closely associated with human placental development and is elevated in pregnancy serum. Biol. Reprod. 74: 366-374.
4. Runyon, S.T., et al. 2007. Structural and functional analysis of the PDZ domains of human HtrA1 and HtrA3. Protein Sci. 16: 2454-2471.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 608785. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Narkiewicz, J., et al. 2008. Changes in mRNA and protein levels of human HtrA1, HtrA2 and HtrA3 in ovarian cancer. Clin. Biochem. 41: 561-569.

CHROMOSOMAL LOCATION

Genetic locus: HTRA3 (human) mapping to 4p16.1.

PRODUCT

HtrA3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HtrA3 shRNA Plasmid (h): sc-75313-SH and HtrA3 shRNA (h) Lentiviral Particles: sc-75313-V as alternate gene silencing products.

For independent verification of HtrA3 (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-75313A, sc-75313B and sc-75313C.

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 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

HtrA3 siRNA (h) is recommended for the inhibition of HtrA3 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 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 HtrA3 gene expression knockdown using RT-PCR Primer: HtrA3 (h)-PR: sc-75313-PR (20 µl, 472 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Yoshida, K., et al. 2022. Endoplasmic reticulum stress-regulated high temperature requirement A1 (HTRA1) modulates invasion and angiogenesis-related genes in human trophoblasts. J. Pharmacol. Sci. 150: 267-274.

RESEARCH USE

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