SANTA CRUZ BIOTECHNOLOGY, INC.

TMPRSS13 siRNA (h): sc-96281

BACKGROUND

TMPRSS13 (transmembrane protease serine 13), also known as MSP (membrane-type mosaic serine protease), is a 581 amino acid single-pass type II membrane protein that belongs to the peptidase S1 family and exists as five alternatively spliced isoforms. Isoform 1 and isoform 3 are predominantly expressed in lung, placenta, pancreas and prostate, while isoform 3 is additionally expressed at weak levels in testis and peripheral blood lymphocytes. TMPRSS13 contains one LDL-receptor class A domain, one peptidase S1 domain and one SRCR domain. The gene that encodes TMPRSS13 consists of around 28,817 bases and maps to human chromosome 11q23.3. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

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CHROMOSOMAL LOCATION

Genetic locus: TMPRSS13 (human) mapping to 11q23.3.

PRODUCT

TMPRSS13 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 TMPRSS13 shRNA Plasmid (h): sc-96281-SH and TMPRSS13 shRNA (h) Lentiviral Particles: sc-96281-V as alternate gene silencing products.

For independent verification of TMPRSS13 (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-96281A, sc-96281B and sc-96281C.

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

TMPRSS13 siRNA (h) is recommended for the inhibition of TMPRSS13 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 TMPRSS13 gene expression knockdown using RT-PCR Primer: TMPRSS13 (h)-PR: sc-96281-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.