SANTA CRUZ BIOTECHNOLOGY, INC.

TSPAN8 siRNA (h): sc-95856

BACKGROUND

TSPAN8 (tetraspanin 8), also known as TM4SF3 or CO-029, is a 237 amino acid multi-pass membrane protein that belongs to the tetraspanin family of transmembrane proteins and is thought to play a role in signal transduction events that influence cell development, activation, growth and motility. Localized to the cell membrane, TSPAN8 is expressed in colon, gastric, renal and pancreatic cancers, strongly suggesting a role in cancer formation and metastasis. The gene encoding TSPAN8 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

1. Szala, S., et al. 1990. Molecular cloning of cDNA for the human tumor-associated antigen CO-029 and identification of related transmembrane antigens. Proc. Natl. Acad. Sci. USA 87: 6833-6837.
2. Gwynn, B., et al. 1996. Genetic localization of Cd63, a member of the transmembrane 4 superfamily, reveals two distinct loci in the mouse genome. Genomics 35: 389-391.
3. Serru, V., et al. 1999. Selective tetraspan-integrin complexes (CD81/α4β1, CD151/α3β1, CD151/α6β1) under conditions disrupting tetraspan interactions. Biochem. J. 340: 103-111.
4. Berditchevski, F. 2001. Complexes of tetraspanins with integrins: more than meets the eye. J. Cell Sci. 114: 4143-4151.

CHROMOSOMAL LOCATION

Genetic locus: TSPAN8 (human) mapping to 12q21.1.

PRODUCT

TSPAN8 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 TSPAN8 shRNA Plasmid (h): sc-95856-SH and TSPAN8 shRNA (h) Lentiviral Particles: sc-95856-V as alternate gene silencing products.

For independent verification of TSPAN8 (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-95856A, sc-95856B and sc-95856C.

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

TSPAN8 siRNA (h) is recommended for the inhibition of TSPAN8 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.

GENE EXPRESSION MONITORING

TSPAN8 (1E5): sc-293317 is recommended as a control antibody for monitoring of TSPAN8 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-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (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 TSPAN8 gene expression knockdown using RT-PCR Primer: TSPAN8 (h)-PR: sc-95856-PR (20 µl, 416 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Akiel, M.A., et al. 2016. Tetraspanin 8 mediates AEG-1-induced invasion and metastasis in hepatocellular carcinoma cells. FEBS Lett. 590: 2700-2708.

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.