SANTA CRUZ BIOTECHNOLOGY, INC.

TCAF2 siRNA (m): sc-141503

BACKGROUND

TRPM8 (transient receptor potential cation channel, subfamily M, member 8) is a multi-pass membrane protein that is expressed at high levels in prostate. TRPM8 functions as a receptor-activated cation channel that is permeable to monovalent cations (such as sodium and potassium) and divalent Ca^{2+} and is involved in the detection of temperature sensations (such as the feeling of coolness) throughout the body. TRPM8 is overexpressed in prostate tumors, as well as in colon, breast and lung cancers. TCAF2 (TRPM8 channel-associated factor 2), also known as FAM115C or FAM139A, is a 919 amino acid plasma membrane protein that is expressed as three alternatively spliced isoforms and belongs to the TCAF family. TCAF2 isoform 2 is expressed in prostate and strongly expressed in cancerous prostate tissue, and inhibits TRPM8 channel activity. TCAF2 promotes TRPM8 trafficking to the cell surface. TCAF1 consists of a peptidase M60 domain and is encoded by a gene located on human chromosome 7q35.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Tcaf2 (mouse) mapping to 6 B2.1.

PRODUCT

TCAF2 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 TCAF2 shRNA Plasmid (m): sc-141503-SH and TCAF2 shRNA (m) Lentiviral Particles: sc-141503-V as alternate gene silencing products.

For independent verification of TCAF2 (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-141503A, sc-141503B and sc-141503C.

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

TCAF2 siRNA (m) is recommended for the inhibition of TCAF2 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 TCAF2 gene expression knockdown using RT-PCR Primer: TCAF2 (m)-PR: sc-141503-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.