SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM205 siRNA (h): sc-97181

BACKGROUND

Cisplatin is a potent platinum-based anti-neoplastic agent that is believed to form inter- and intrastrand DNA adducts that activate signaling pathways culminating in apoptosis. Cisplatin has been suggested to induce apoptosis through caspase-3 activation and XIAP expression. TMEM205 is a 189 amino acid transmembrane protein that is expressed in liver, pancreas, and adrenal glands. Elevated levels of Rab 8 and TMEM205 in cells may be associated with cisplatin resistance. TMEM205 is suggested to be a biomarker or target in cancer chemotherapy. TMEM205 is encoded by a gene located on human chromosome 19, which consist of around 63 million bases with over 1,400 genes, and makes up over 2% of human genomic DNA.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TMEM205 (human) mapping to 19p13.2.

PRODUCT

TMEM205 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 TMEM205 shRNA Plasmid (h): sc-97181-SH and TMEM205 shRNA (h) Lentiviral Particles: sc-97181-V as alternate gene silencing products.

For independent verification of TMEM205 (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-97181A, sc-97181B and sc-97181C.

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

TMEM205 siRNA (h) is recommended for the inhibition of TMEM205 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

TMEM205 (B-5): sc-514568 is recommended as a control antibody for monitoring of TMEM205 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (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 TMEM205 gene expression knockdown using RT-PCR Primer: TMEM205 (h)-PR: sc-97181-PR (20 µl, 567 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.