SANTA CRUZ BIOTECHNOLOGY, INC.

claudin-23 siRNA (m): sc-142367

BACKGROUND

The claudin superfamily consists of structurally related proteins that are important structural and functional components of tight junctions. Claudin-23, also known as CLDN23 or CLDNL, is a 292 amino acid multi-pass membrane protein that localizes to cell junctions and belongs to the claudin family. Ex-pressed in stomach and placenta, as well as in germinal center B-cells, claudin-23 is thought to exhibit calcium-dependent cell-adhesion activity through which it plays an essential role in tight junction-specific obliteration of the intercellular space. Human claudin-23 shares 80% sequence similarity with its mouse counterpart, suggesting a conserved role between species. Overexpression of caludin-23 is associated with colon tumors, implicating claudin-23 as a possible metastasis factor.

REFERENCES

1. Gress, T.M., et al. 1996. A pancreatic cancer-specific expression profile. Oncogene 13: 1819-1830.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609203. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Katoh, M., et al. 2003. CLDN23 gene, frequently down-regulated in intestinal-type gastric cancer, is a novel member of CLAUDIN gene family. Int. J. Mol. Med. 11: 683-689.
4. Katoh, M. 2005. Epithelial-mesenchymal transition in gastric cancer (Review). Int. J. Oncol. 27: 1677-1683.
5. Ballana, E., et al. 2007. MRPS18CP2 alleles and DEFA3 absence as putative chromosome 8p23.1 modifiers of hearing loss due to mtDNA mutation A1555G in the 12S rRNA gene. BMC Med. Genet. 8: 81.
6. Rikova, K., et al. 2007. Global survey of phosphotyrosine signaling identifies oncogenic kinases in lung cancer. Cell 131: 1190-1203.
7. Gaetje, R., et al. 2008. Differential expression of claudins in human endometrium and endometriosis. Gynecol. Endocrinol. 24: 442-449.

CHROMOSOMAL LOCATION

Genetic locus: Cldn23 (mouse) mapping to 8 A4.

PRODUCT

claudin-23 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 claudin-23 shRNA Plasmid (m): sc-142367-SH and claudin-23 shRNA (m) Lentiviral Particles: sc-142367-V as alternate gene silencing products.

For independent verification of claudin-23 (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-142367A, sc-142367B and sc-142367C.

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

claudin-23 siRNA (m) is recommended for the inhibition of claudin-23 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 60 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 claudin-23 gene expression knockdown using RT-PCR Primer: claudin-23 (m)-PR: sc-142367-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.