

μ-protocadherin siRNA (m): sc-152486

BACKGROUND

The mucin-like protocadherin, μ-protocadherin, is a developmentally regulated, single pass type I transmembrane protein that belongs to the cadherin superfamily. It contains four cadherin-like ectodomains, a triply repeating mucin domain, four SH3 binding regions, N- and O-glycosylation sites and a possible C-terminal PDZ binding domain. μ-protocadherin is expressed in various epithelial tissues and localizes to the apical surface along the brush border of the proximal convoluted tubule. It acts as a calcium-dependent cell adhesion molecule mediating cell aggregation and may play a role in the activation of signaling events. Due to alternative splicing at least four isoforms exist for μ-protocadherin. These isoforms vary in the region containing the mucin-like domains. Only the longest isoform contains the triply repeating mucin domain.

REFERENCES

1. Goldberg, M., et al. 2000. μ-protocadherin, a novel developmentally regulated protocadherin with Mucin-like domains. *J. Biol. Chem.* 275: 24622-24629.
2. Paris, M.J. and Williams, B.R. 2001. Characterization of a 500-kb contig spanning the region between c-Ha-Ras and MUC2 on chromosome 11p15.5. *Genomics* 69: 196-202.
3. Goldberg, M., et al. 2002. Identification and expression analysis of the human μ-protocadherin gene in fetal and adult kidneys. *Am. J. Physiol. Renal Physiol.* 283: F454-F463.
4. Goldberg, M., et al. 2003. Biallelic expression of HRAS and MUCDHL in human and mouse. *Hum. Genet.* 112: 334-342.
5. Wang, Y., et al. 2004. Gene expression profiles and molecular markers to predict recurrence of Dukes' B colon cancer. *J. Clin. Oncol.* 22: 1564-1571.

CHROMOSOMAL LOCATION

Genetic locus: Cdh15 (mouse) mapping to 7 F5.

PRODUCT

μ-protocadherin 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 μ-protocadherin shRNA Plasmid (m): sc-152486-SH and μ-protocadherin shRNA (m) Lentiviral Particles: sc-152486-V as alternate gene silencing products.

For independent verification of μ-protocadherin (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-152486A, sc-152486B and sc-152486C.

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.

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

μ-protocadherin siRNA (m) is recommended for the inhibition of μ-protocadherin 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.

GENE EXPRESSION MONITORING

μ-protocadherin (A-11): sc-166953 is recommended as a control antibody for monitoring of μ-protocadherin 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 μ-protocadherin gene expression knockdown using RT-PCR Primer: μ-protocadherin (m)-PR: sc-152486-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.