

UNC93A siRNA (h): sc-95271

BACKGROUND

UNC93A (unc-93 homolog A), also known as HmUNC-93A, is a 457 amino acid multi-pass membrane protein and human homolog of *C. elegans* unc-93, a protein involved in the coordination and regulation of muscle contraction. Expressed in testis, small intestine, spleen, prostate and ovary, UNC93A is encoded by a gene located on human chromosome 6. Human chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Makino, N., et al. 2001. Isolation and characterization of the human gene homologous to the *Drosophila* headcase (hdc) gene in chromosome bands 6q23-q24, a region of common deletion in human pancreatic cancer. *DNA Seq.* 11: 547-553.
2. Liu, Y., et al. 2002. The human homologue of unc-93 maps to chromosome 6q27-characterisation and analysis in sporadic epithelial ovarian cancer. *BMC Genet.* 3: 20.
3. Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607995. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.

CHROMOSOMAL LOCATION

Genetic locus: UNC93A (human) mapping to 6q27.

PRODUCT

UNC93A 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UNC93A shRNA Plasmid (h): sc-95271-SH and UNC93A shRNA (h) Lentiviral Particles: sc-95271-V as alternate gene silencing products.

For independent verification of UNC93A (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-95271A, sc-95271B and sc-95271C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

UNC93A siRNA (h) is recommended for the inhibition of UNC93A 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 μ M in 66 μ l. 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

UNC93A (F-2): sc-390157 is recommended as a control antibody for monitoring of UNC93A 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 UNC93A gene expression knockdown using RT-PCR Primer: UNC93A (h)-PR: sc-95271-PR (20 μ l). 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.