SANTA CRUZ BIOTECHNOLOGY, INC.

SCHIP1 siRNA (h): sc-78275

BACKGROUND

SCHIP1 (schwannomin interacting protein 1) is a 487 amino acid protein that localizes to the cytoplasm and contains a coiled-coil domain through which it self-associates. Existing as several alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 3, SCHIP1 is expressed in brain tissue and is thought to play a role in axon function. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

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2. Goutebroze, L., et al. 2001. Assignment of the schwannomin-interacting protein 1 (SCHIP1) gene to human chromosome band 3q25 by *in situ* hybridization and with somatic cell hybrids. Cytogenet. Cell Genet. 94: 96-97.
3. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
4. Kwa nicka-Crawford, D.A., et al. 2006. IQCJ-SCHIP1, a novel fusion transcript encoding a calmodulin-binding IQ motif protein. Biochem. Biophys. Res. Commun. 350: 890-899.
5. Scoles, D.R. 2008. The merlin interacting proteins reveal multiple targets for NF2 therapy. Biochim. Biophys. Acta 1785: 32-54.
6. Martin, P.M., et al. 2008. Schwannomin-interacting protein-1 isoform IQCJ-SCHIP-1 is a late component of nodes of Ranvier and axon initial segments. J. Neurosci. 28: 6111-6117.

CHROMOSOMAL LOCATION

Genetic locus: SCHIP1 (human) mapping to 3q25.33.

PRODUCT

SCHIP1 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 SCHIP1 shRNA Plasmid (h): sc-78275-SH and SCHIP1 shRNA (h) Lentiviral Particles: sc-78275-V as alternate gene silencing products.

For independent verification of SCHIP1 (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-78275A, sc-78275B and sc-78275C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SCHIP1 siRNA (h) is recommended for the inhibition of SCHIP1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SCHIP1 gene expression knockdown using RT-PCR Primer: SCHIP1 (h)-PR: sc-78275-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.