SANTA CRUZ BIOTECHNOLOGY, INC.

SRPX siRNA (h): sc-106564

BACKGROUND

X-linked retinitis pigmentosa (XLRP) is a retinal degeneration disorder. The most common form of XLRP has been localized to the gene locus RP3 by linkage and deletion analysis. RP3 maps to chromosome Xp21.1 between CYBB and OTC. The sushi-repeat-containing protein, x chromosome (SRPX) gene, also designated ETX1, resides within this region and is deleted in XLRP patients. There are at least two splice variants of SRPX, one of which contains a 30 amino acid signal peptide. Both variants contain three complement control protein domains, a hydrophobic region for membrane anchorage, and a cytoplasmic carboxy terminus. SRPX is expressed in retina and heart. SRPX is highly homologous to the drs (downregulated by v-src) human homolog, which suggests a role for SRPX as a tumor suppressor.

REFERENCES

1. Musarella, M.A. 1990. Mapping of the X-linked recessive retinitis pigmentosa gene. A review. Ophthalmic Paediatr. Genet. 11: 77-88.
2. Meindl, A., et al. 1995. A gene (SRPX) encoding a sushi-repeat-containing protein is deleted in patients with X-linked retinitis pigmentosa. Hum. Mol. Genet. 4: 2339-2346.
3. Dry, K.L., et al. 1995. Identification of a novel gene, ETX1 from Xp21.1, a candidate gene for X-linked retinitis pigmentosa (RP3). Hum. Mol. Genet. 4: 2347-2353.
4. Meindl, A., et al. 1996. A gene (RPGR) with homology to the RCC1 guanine nucleotide exchange factor is mutated in X-linked retinitis pigmentosa (RP3). Nat. Genet. 13: 35-42.
5. Zito, I., et al. 1999. Identification of novel RPGR (retinitis pigmentosa GTPase regulator) mutations in a subset of X-linked retinitis pigmentosa families segregating with the RP3 locus. Hum. Genet. 105: 57-62.
6. Yamashita, A., et al. 1999. Suppression of anchorage-independent growth of human cancer cell lines by the drs gene. Oncogene 18: 4777-4787.

CHROMOSOMAL LOCATION

Genetic locus: SRPX (human) mapping to Xp11.4.

PRODUCT

SRPX 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 SRPX shRNA Plasmid (h): sc-106564-SH and SRPX shRNA (h) Lentiviral Particles: sc-106564-V as alternate gene silencing products.

For independent verification of SRPX (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-106564A, sc-106564B and sc-106564C.

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

SRPX siRNA (h) is recommended for the inhibition of SRPX 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 SRPX gene expression knockdown using RT-PCR Primer: SRPX (h)-PR: sc-106564-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.