



SRPX2 siRNA (m): sc-153829

BACKGROUND

SRPX2 (sushi-repeat-containing protein, X-linked 2), also known as BPP, CBPS, PMGX, RESDX or SRPUL, is a 465 amino acid secreted protein expressed in neurons of the brain, including the Rolandic area. It has been suggested that SRPX2 enhances cell motility, migration and adhesion through FAK signaling in gastric and other cancer cells. Localized to the cytoplasm, SRPX2 is a ligand for uPAR (urokinase plasminogen activator), a receptor that is a crucial component of the extracellular plasminogen proteolysis system. SRPX2 may be responsible for Rolandic seizures (RSs) associated with oral and speech dyspraxia and mental retardation (MR). The involvement of SRPX2 in these disorders suggests an important role for SRPX2 in the Perisylvian region critical for language and cognitive development.

REFERENCES

1. Roll, P., et al. 2006. SRPX2 mutations in disorders of language cortex and cognition. *Hum. Mol. Genet.* 15: 1195-1207.
2. Royer, B., et al. 2007. Molecular evolution of the human SRPX2 gene that causes brain disorders of the Rolandic and Sylvian speech areas. *BMC Genet.* 8: 72.
3. Michelucci, R., et al. 2008. Familial epilepsy and developmental dysphasia: description of an Italian pedigree with autosomal dominant inheritance and screening of candidate loci. *Epilepsy Res.* 80: 9-17.
4. Royer-Zemmour, B., et al. 2008. Epileptic and developmental disorders of the speech cortex: ligand/receptor interaction of wildtype and mutant SRPX2 with the plasminogen activator receptor uPAR. *Hum. Mol. Genet.* 17: 3617-3630.
5. Bahi-Buisson, N., et al. 2008. Epileptogenic brain malformations: radiological and clinical presentation and indications for genetic testing. *Rev. Neurol.* 164: 995-1009.
6. Rudolf, G., et al. 2009. From Rolandic epilepsy to continuous spike-and-waves during sleep and Landau-Kleffner syndromes: insights into possible genetic factors. *Epilepsia.* 50: 25-28.

CHROMOSOMAL LOCATION

Genetic locus: *SrpX2* (mouse) mapping to X E3.

PRODUCT

SRPX2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SRPX2 shRNA Plasmid (m): sc-153829-SH and SRPX2 shRNA (m) Lentiviral Particles: sc-153829-V as alternate gene silencing products.

For independent verification of SRPX2 (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-153829A, sc-153829B and sc-153829C.

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 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

SRPX2 siRNA (m) is recommended for the inhibition of SRPX2 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SRPX2 gene expression knockdown using RT-PCR Primer: SRPX2 (m)-PR: sc-153829-PR (20 μ l). 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.