

PATJ siRNA (h): sc-43995

BACKGROUND

The membranes of myelinating Schwann cells are joined by tight, gap and adherens junctions, all of which are found in regions of noncompact myelin: the paranodal loops, incisures of Schmidt-Lanterman and mesaxons. Tight junctions help establish polarity in mammalian epithelia by forming a physical barrier that separates apical and basolateral membranes. Pals-associated tight junction protein (PATJ), the human homolog of *Drosophila* Discs Lost, is differentially localized in myelinating Schwann cells. PATJ associates with Claudin-1, CRB1 (a transmembrane protein that plays a role in epithelial cell polarity and photoreceptor development), and Pals1 (a Lin-7 associated protein). The PATJ/Pals1/CRB1 complex can form a tripartite tight junction in epithelial cells crucial to their integrity.

REFERENCES

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3. Roh, M.H., Liu, C.J., Laurinec, S. and Margolis, B. 2002. The carboxyl terminus of zona occludens-3 binds and recruits a mammalian homologue of discs lost to tight junctions. *J. Biol. Chem.* 277: 27501-27509.
4. Hurd, T.W., Gao, L., Roh, M.H., Macara, I.G. and Margolis, B. 2003. Direct interaction of two polarity complexes implicated in epithelial tight junction assembly. *Nat. Cell Biol.* 5: 137-142.
5. Makarova, O., Roh, M.H., Liu, C.J., Laurinec, S. and Margolis, B. 2003. Mammalian Crumbs3 is a small transmembrane protein linked to protein associated with Lin-7 (Pals1). *Gene* 302: 21-29.

CHROMOSOMAL LOCATION

Genetic locus: INADL (human) mapping to 1p31.3.

PRODUCT

PATJ 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 PATJ shRNA Plasmid (h): sc-43995-SH and PATJ shRNA (h) Lentiviral Particles: sc-43995-V as alternate gene silencing products.

For independent verification of PATJ (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-43995A, sc-43995B and sc-43995C.

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

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

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PATJ gene expression knockdown using RT-PCR Primer: PATJ (h)-PR: sc-43995-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.