SANTA CRUZ BIOTECHNOLOGY, INC.

Puratrophin 1 siRNA (h): sc-93522

BACKGROUND

Puratrophin 1, also known as PLEKHG4 (pleckstrin homology domain containing, family G (with RhoGef domain) member 4), is a 1,191 amino acid protein that contains one DH (DBL-homology) domain and one PH domain. The Puratrophin 1 protein contains multiple domains, such as a pleckstrin-like homology domain, cellular retinaldehyde-binding/triple function domain, a spectrin repeat domain, and a guanine-nucleotide exchange factor domain, suggesting a role in intracellular signaling and cytoskeleton dynamics at the Golgi apparatus. Most strongly expressed in testis and pancreas, the Puratrophin 1 protein is expressed in kidney, Leydig cells in the testis, epithelial cells in the prostate gland and Langerhans islet in the pancreas. Existing as three alternatively spliced isoforms, the Puratrophin 1 gene is conserved in canine, bovine, mouse and rat, and maps to human chromosome 16q22.1. Mutations in the Puratrophin 1 gene are associated with spinocerebellar ataxia 16q22-linked.

REFERENCES

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3. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
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6. Ouyang, Y., et al. 2006. 16q-linked autosomal dominant cerebellar ataxia: a clinical and genetic study. J. Neurol. Sci. 247: 180-186.
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CHROMOSOMAL LOCATION

Genetic locus: PLEKHG4 (human) mapping to 16q22.1.

PROTOCOLS

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

PRODUCT

Puratrophin 1 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 Puratrophin 1 shRNA Plasmid (h): sc-93522-SH and Puratrophin 1 shRNA (h) Lentiviral Particles: sc-93522-V as alternate gene silencing products.

For independent verification of Puratrophin 1 (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-93522A, sc-93522B and sc-93522C.

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

Puratrophin 1 siRNA (h) is recommended for the inhibition of Puratrophin 1 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 Puratrophin 1 gene expression knockdown using RT-PCR Primer: Puratrophin 1 (h)-PR: sc-93522-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.