

# SPINK4 siRNA (h): sc-76565

## BACKGROUND

SPINK4 (serine peptidase inhibitor, kazal type 4), also known as PEC-60, is an 86 amino acid secreted protein containing one kazal-like domain, which has been suggested to play a role in central nervous system disorders associated with dopamine dysregulation. Expressed in the gastrointestinal tract, central nervous system, bone marrow and peripheral blood, SPINK4 is moderately expressed in spleen and is encoded by a gene mapping to human chromosome 9p13.3. Human chromosome 9 houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9.

## REFERENCES

1. Metsis, M., et al. 1992. Molecular cloning of PEC-60 and expression of its mRNA and peptide in the gastrointestinal tract and immune system. *J. Biol. Chem.* 267: 19829-19832.
2. Norberg, A., et al. 2003. Identification of the bioactive peptide PEC-60 in brain. *Cell. Mol. Life Sci.* 60: 378-381.
3. Burmeister, T., et al. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. *Haematologica* 92: 1699-1702.
4. Wapenaar, M.C., et al. 2007. The SPINK gene family and celiac disease susceptibility. *Immunogenetics* 59: 349-357.
5. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (rendu-osler disease). *Respiration* 74: 361-378.
6. Axelrod, F.B., et al. 2010. Neuroimaging supports central pathology in familial dysautonomia. *J. Neurol.* 257: 198-206.

## CHROMOSOMAL LOCATION

Genetic locus: SPINK4 (human) mapping to 9p13.3.

## PRODUCT

SPINK4 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPINK4 shRNA Plasmid (h): sc-76565-SH and SPINK4 shRNA (h) Lentiviral Particles: sc-76565-V as alternate gene silencing products.

For independent verification of SPINK4 (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-76565A, sc-76565B and sc-76565C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SPINK4 siRNA (h) is recommended for the inhibition of SPINK4 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  $\mu$ M in 66  $\mu$ 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.