

# PLEKHN1 siRNA (h): sc-88711

## BACKGROUND

PLEKHN1 (pleckstrin homology domain containing, family N member 1) is a 663 amino acid phosphoprotein that contains two pleckstrin homology (PH) domains. Conserved in canine, bovine, mouse and rat, PLEKHN1 exists as three alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 1p36.33. As the largest human chromosome, chromosome 1 makes up approximately 8% of the human genome and contains 260 million base pairs encoding 3,000 genes. Numerous diseases are linked to chromosome 1, such as the rare aging disease Hutchinson-Gilford progeria, familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease and Usher syndrome. Aberrations in chromosome 1 also exist in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

1. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
2. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
3. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
4. McClintock, D., et al. 2006. Hutchinson-Gilford progeria mutant Lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody. *Proc. Natl. Acad. Sci. USA* 103: 2154-2159.
5. Bowden, N.A., et al. 2007. Gene expression profiling in familial adenomatous polyposis adenomas and desmoid disease. *Hered. Cancer Clin. Pract.* 5: 79-96.
6. Meza-Zepeda, L.A., et al. 2008. High-resolution analysis of genetic stability of human adipose tissue stem cells cultured to senescence. *J. Cell. Mol. Med.* 12: 553-563.

## CHROMOSOMAL LOCATION

Genetic locus: PLEKHN1 (human) mapping to 1p36.33.

## PRODUCT

PLEKHN1 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 PLEKHN1 shRNA Plasmid (h): sc-88711-SH and PLEKHN1 shRNA (h) Lentiviral Particles: sc-88711-V as alternate gene silencing products.

For independent verification of PLEKHN1 (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-88711A, sc-88711B and sc-88711C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ 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

PLEKHN1 siRNA (h) is recommended for the inhibition of PLEKHN1 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.

## GENE EXPRESSION MONITORING

PLEKHN1 (D-11): sc-390657 is recommended as a control antibody for monitoring of PLEKHN1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PLEKHN1 gene expression knockdown using RT-PCR Primer: PLEKHN1 (h)-PR: sc-88711-PR (20  $\mu$ 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.