

# LANPL siRNA (h): sc-75409

## BACKGROUND

The Anp32 family consists of 32 evolutionarily-conserved proteins and is included within the superfamily of leucine-rich repeat (LRR) proteins. Leucine-rich acidic nuclear protein-like (LANPL), also called ANP32E or Cpd1, is a member of the Anp32 family. LANPL is located in the cytoplasm of peripheral blood leukocytes, colon, small intestine, prostate, thymus, spleen, skeletal muscle, liver and kidney. It has also been detected in the nucleus, cytoplasm and membrane of multiple brain regions. Upon phosphorylation, LANPL colocalizes and inhibits protein phosphatase 2A (PP2A), but does not inhibit PP1. LANPL modulates cell signalling and transduction of gene expression to regulate the morphology and dynamics of the cytoskeleton, cell adhesion, neural development and cerebellar morphogenesis.

## REFERENCES

1. Matsubae, M., et al. 2000. Characterization of the nuclear transport of a novel leucine-rich acidic nuclear protein-like protein. *FEBS Lett.* 468: 171-175.
2. Radrizzani, M., et al. 2001. Differential expression of CPD1 during postnatal development in the mouse cerebellum. *Brain Res.* 907: 162-174.
3. Jiang, M., et al. 2002. Molecular cloning and characterization of a novel human gene (ANP32E alias LANPL) from human fetal brain. *Cytogenet. Genome Res.* 97: 68-71.
4. Santa-Coloma, T.A. 2004. ANP32E (Cpd1) and related protein phosphatase 2 inhibitors. *Cerebellum* 2: 310-320.
5. Matilla, A. and Radrizzani, M. 2005. The Anp32 family of proteins containing leucine-rich repeats. *Cerebellum* 4: 7-18.
6. Costanzo, R.V., et al. 2006. ANP32E/Cpd1 regulates protein phosphatase 2A activity at synapses during synaptogenesis. *Eur. J. Neurosci.* 23: 309-324.
7. de Chiara, C., et al. 2007. NMR assignment of the leucine-rich repeat domain of LANP/Anp32a. *J. Biomol. NMR* 38: 177.

## CHROMOSOMAL LOCATION

Genetic locus: ANP32E (human) mapping to 1q21.2.

## PRODUCT

LANPL 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 LANPL shRNA Plasmid (h): sc-75409-SH and LANPL shRNA (h) Lentiviral Particles: sc-75409-V as alternate gene silencing products.

For independent verification of LANPL (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-75409A, sc-75409B and sc-75409C.

## 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

LANPL siRNA (h) is recommended for the inhibition of LANPL 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

LANPL (C-1): sc-514662 is recommended as a control antibody for monitoring of LANPL 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 LANPL gene expression knockdown using RT-PCR Primer: LANPL (h)-PR: sc-75409-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.