SANTA CRUZ BIOTECHNOLOGY, INC.

# Peripherin siRNA (h): sc-36211

## BACKGROUND

Peripherin is a type III intermediate filament protein (IFP) that is expressed in peripheral and some central nervous system (CNS) neurons. Peripherin activation is known to be induced by leukemia inhibitory factor (LIF). LIF activates Peripherin by inducing members of Stat transcription factor family to bind to a specific promoter element in the Peripherin gene. IL-6 is also known to induce Peripherin expression. Although it is not essential for neurite formation, Peripherin is necessary for cellular intermediate filament network formation. Peripherin, unlike most intermediate filament proteins, has been reported to be modified by tyrosine phosphorylation.

## REFERENCES


1. Thompson, M.A. and Ziff, E.B. 1989. Structure of the gene encoding Peripherin, an NGF-regulated neuronal-specific type III intermediate filament protein. Neuron 2: 1043-1053.
2. Cui, C., et al. 1995. Peripherin assembles into homopolymers in SW13 cells. J. Cell Sci. 108: 3279-3284.
3. Leconte, L., et al. 1996. Cell type-specific expression of the mouse Peripherin gene requires both upstream and intragenic sequences in transgenic mouse embryos. Brain Res. Dev. Brain Res. 92: 1-9.
4. Sterneck, E., et al. 1996. Interleukin-6 induces expression of Peripherin and cooperates with Trk receptor signaling to promote neuronal differentiation in PC12 cells. J. Neurochem. 67: 1365-1374.
5. Angelastro, J.M., et al. 1998. Peripherin is tyrosine-phosphorylated at its carboxyl-terminal tyrosine. J. Neurochem. 70: 540-549.
6. Lecomte, M.J., et al. 1998. Transcriptional activation of the mouse Peripherin gene by leukemia inhibitory factor: involvement of STAT proteins. J. Neurochem. 70: 971-982.


## CHROMOSOMAL LOCATION

Genetic locus: PRPH (human) mapping to 12q13.12.

## PRODUCT

Peripherin 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 Peripherin shRNA Plasmid (h): sc-36211-SH and Peripherin shRNA (h) Lentiviral Particles: sc-36211-V as alternate gene silencing products.

For independent verification of Peripherin (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-36211A, sc-36211B and sc-36211C.

## RESEARCH USE

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

## 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 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

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

## GENE EXPRESSION MONITORING

Peripherin (A-3): sc-377093 is recommended as a control antibody for monitoring of Peripherin 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 Peripherin gene expression knockdown using RT-PCR Primer: Peripherin (h)-PR: sc-36211-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.