

# HOOK3 siRNA (h): sc-60800

## BACKGROUND

Microtubules mediate the spatial organization of diverse membrane-trafficking systems. The HOOK proteins, HOOK1, HOOK2 and HOOK3, comprise a family of cytosolic coiled-coil proteins that contain conserved N-terminal domains, which attach to microtubules; and more divergent C-terminal domains, which mediate binding to organelles. HOOK3 participates in the organization of the *cis*-Golgi compartment. It exists as a homodimer, most likely mediated through its central coiled-coil domain.

## REFERENCES

1. Walenta, J.H., Didier, A.J., Liu, X. and Kramer, H. 2001. The Golgi-associated HOOK3 protein is a member of a novel family of microtubule-binding proteins. *J. Cell Biol.* 152: 923-934.
2. Shotland, Y., Kramer, H. and Groisman, E.A. 2003. The *Salmonella* SpiC protein targets the mammalian HOOK3 protein function to alter cellular trafficking. *Mol. Microbiol.* 49: 1565-1576.
3. Kaiser, F., Kaufmann, S.H. and Zerrahn, J. 2004. IIGP, a member of the IFN inducible and microbial defense mediating 47 kDa GTPase family, interacts with the microtubule binding protein HOOK3. *J. Cell Sci.* 117: 1747-1756.
4. Sano, H., Ishino, M., Kramer, H., Shimizu, T., Mitsuzawa, H., Nishitani, C. and Kuroki, Y. 2007. The microtubule binding protein HOOK3 interacts with a cytoplasmic domain of scavenger receptor A. *J. Biol. Chem.* 282: 7973-7981.

## CHROMOSOMAL LOCATION

Genetic locus: HOOK3 (human) mapping to 8p11.21.

## PRODUCT

HOOK3 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 HOOK3 shRNA Plasmid (h): sc-60800-SH and HOOK3 shRNA (h) Lentiviral Particles: sc-60800-V as alternate gene silencing products.

For independent verification of HOOK3 (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-60800A, sc-60800B and sc-60800C.

## 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.

## RESEARCH USE

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

## APPLICATIONS

HOOK3 siRNA (h) is recommended for the inhibition of HOOK3 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

HOOK3 (C-10): sc-398924 is recommended as a control antibody for monitoring of HOOK3 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 HOOK3 gene expression knockdown using RT-PCR Primer: HOOK3 (h)-PR: sc-60800-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Dharan, A., Opp, S., Abdel-Rahim, O., Keceli, S.K., Imam, S., Diaz-Griffero, F. and Campbell, E.M. Bicaudal D2 facilitates the cytoplasmic trafficking and nuclear import of HIV-1 genomes during infection. *Proc. Natl. Acad. Sci. USA* 114: E10707-E10716.

## PROTOCOLS

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