

HOOK2 (h): 293T Lysate: sc-112980

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. HOOK2 (also known as HK2) is 719 amino acids in length and exists as a homodimer, most likely mediated through its central coiled-coil domain. HOOK2 may associate with SURF-1 and Zic2, and all three may be potential esophageal cancer tumor antigens. HOOK2 expression is strong in the larynx and the esophagus. Unlike HOOK3, which localizes to the Golgi, HOOK2 localizes to discrete subcellular structures not corresponding to early or late endosomes, mitochondria, Golgi complex, endoplasmic reticulum, lysosomes or multivesicular bodies.

REFERENCES

1. Krämer, H. and Phistry, M. 1999. Genetic analysis of hook, a gene required for endocytic trafficking in *Drosophila*. *Genetics* 151: 675-684.
2. Walenta, J.H., Didier, A.J., Liu, X. and Krämer, H. 2001. The Golgi-associated HOOK3 protein is a member of a novel family of microtubule-binding proteins. *J. Cell Biol.* 152: 923-934.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607824. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Shimada, H., Nakashima, K., Ochiai, T., Nabeya, Y., Takiguchi, M., Nomura, F. and Hiwasa, T. 2005. Serological identification of tumor antigens of esophageal squamous cell carcinoma. *Int. J. Oncol.* 26: 77-86.
5. Simpson, F., Martin, S., Evans, T.M., Kerr, M., James, D.E., Parton, R.G., Teasdale, R.D. and Wicking, C. 2005. A novel hook-related protein family and the characterization of hook-related protein 1. *Traffic* 6: 442-458.
6. Szebenyi, G., Wigley, W.C., Hall, B., Didier, A., Yu, M., Thomas, P. and Krämer, H. 2007. HOOK2 contributes to aggresome formation. *BMC Cell Biol.* 8: 19.
7. Xu, L., Sowa, M.E., Chen, J., Li, X., Gygi, S.P. and Harper, J.W. 2008. An FTS/HOOK/p107^{FHIP} complex interacts with and promotes endosomal clustering by the homotypic vacuolar protein sorting complex. *Mol. Biol. Cell* 19: 5059-5071.

CHROMOSOMAL LOCATION

Genetic locus: HOOK2 (human) mapping to 19p13.2.

PRODUCT

HOOK2 (h): 293T Lysate represents a lysate of human HOOK2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

HOOK2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HOOK2 antibodies. Recommended use: 10-20 µl per lane.

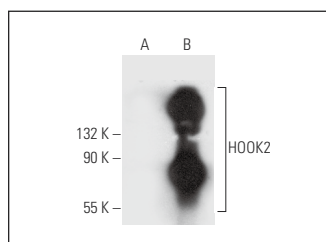
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HOOK2 (G-4): sc-365716 is recommended as a positive control antibody for Western Blot analysis of enhanced human HOOK2 expression in HOOK2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

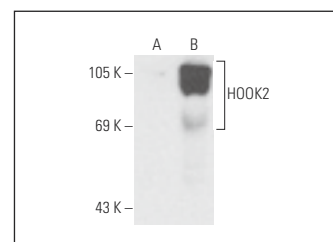
RECOMMENDED SUPPORT REAGENTS

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.

DATA



HOOK2 (G-4): sc-365716. Western blot analysis of HOOK2 expression in non-transfected: sc-117752 (A) and human HOOK2 transfected: sc-112980 (B) 293T whole cell lysates.



HOOK2 (E-4): sc-137107. Western blot analysis of HOOK2 expression in non-transfected: sc-117752 (A) and human HOOK2 transfected: sc-112980 (B) 293T whole cell lysates.

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.