

HOOK2 (G-4): sc-365716

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. It exists as a homodimer, most likely mediated through its central coiled-coil domain. HOOK2 may associate with SURF1 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., et al. 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., et al. 2005. Serological identification of tumor antigens of esophageal squamous cell carcinoma. *Int. J. Oncol.* 26: 77-86.

CHROMOSOMAL LOCATION

Genetic locus: HOOK2 (human) mapping to 19p13.2; Hook2 (mouse) mapping to 8 C3.

SOURCE

HOOK2 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 151-185 within an internal region of HOOK2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HOOK2 (G-4) is available conjugated to agarose (sc-365716 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365716 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365716 PE), fluorescein (sc-365716 FITC), Alexa Fluor® 488 (sc-365716 AF488), Alexa Fluor® 546 (sc-365716 AF546), Alexa Fluor® 594 (sc-365716 AF594) or Alexa Fluor® 647 (sc-365716 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365716 AF680) or Alexa Fluor® 790 (sc-365716 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365716 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HOOK2 (G-4) is recommended for detection of HOOK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HOOK2 siRNA (h): sc-60798, HOOK2 siRNA (m): sc-60799, HOOK2 shRNA Plasmid (h): sc-60798-SH, HOOK2 shRNA Plasmid (m): sc-60799-SH, HOOK2 shRNA (h) Lentiviral Particles: sc-60798-V and HOOK2 shRNA (m) Lentiviral Particles: sc-60799-V.

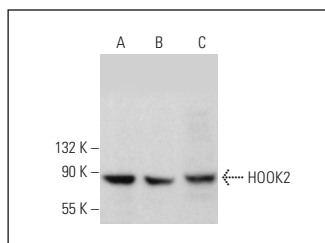
Molecular Weight of HOOK2: 83 kDa.

Positive Controls: HOOK2 (h): 293T Lysate: sc-112980, EOC 20 whole cell lysate: sc-364187 or SH-SY5Y cell lysate: sc-3812.

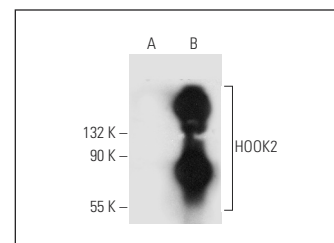
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



HOOK2 (G-4): sc-365716. Western blot analysis of HOOK2 expression in EOC 20 (A), Neuro-2A (B) and SH-SY5Y (C) whole cell lysates.



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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

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