

HOOK1 (E-6): sc-398233

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. HOOK1, a cytoskeletal linker protein, may play a role in endocytic membrane trafficking. It exists as a homodimer, most likely mediated through its central coiled-coil domain. HOOK1 interacts with VPS18 and is required for spermatid differentiation, in which it is most likely involved in the positioning of the manchette microtubules and the flagellum. HOOK1 localizes primarily to the cytoplasm and does not associate with the Golgi complex, unlike HOOK3, which participates in the organization of the *cis*-Golgi compartment.

REFERENCES

1. Luiro, K., et al. 2004. Interconnections of CLN3, HOOK1 and Rab proteins link Batten disease to defects in the endocytic pathway. *Hum. Mol. Genet.* 13: 3017-3027.
2. Weimer, J.M., et al. 2005. Elevation of HOOK1 in a disease model of Batten disease does not affect a novel interaction between Ankyrin G and HOOK1. *Biochem. Biophys. Res. Commun.* 330: 1176-1181.
3. Simpson, F., et al. 2005. A novel HOOK-related protein family and the characterization of HOOK-related protein 1. *Traffic* 6: 442-458.

CHROMOSOMAL LOCATION

Genetic locus: HOOK1 (human) mapping to 1p32.1; Hook1 (mouse) mapping to 4 C5.

SOURCE

HOOK1 (E-6) is a mouse monoclonal antibody raised against amino acids 309-354 mapping within an internal region of HOOK1 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.

HOOK1 (E-6) is available conjugated to agarose (sc-398233 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398233 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398233 PE), fluorescein (sc-398233 FITC), Alexa Fluor® 488 (sc-398233 AF488), Alexa Fluor® 546 (sc-398233 AF546), Alexa Fluor® 594 (sc-398233 AF594) or Alexa Fluor® 647 (sc-398233 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398233 AF680) or Alexa Fluor® 790 (sc-398233 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

HOOK1 (E-6) is recommended for detection of HOOK1 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).

HOOK1 (E-6) is also recommended for detection of HOOK1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HOOK1 siRNA (h): sc-60796, HOOK1 siRNA (m): sc-60797, HOOK1 shRNA Plasmid (h): sc-60796-SH, HOOK1 shRNA Plasmid (m): sc-60797-SH, HOOK1 shRNA (h) Lentiviral Particles: sc-60796-V and HOOK1 shRNA (m) Lentiviral Particles: sc-60797-V.

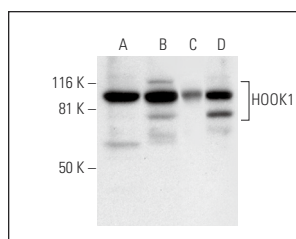
Molecular Weight of HOOK1: 84 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Caco-2 cell lysate: sc-2262 or human testis extract: sc-363781.

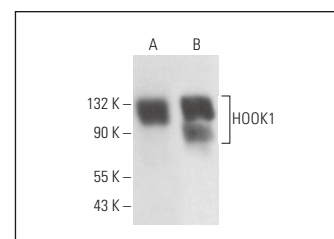
RECOMMENDED SUPPORT REAGENTS

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



HOOK1 (E-6): sc-398233. Western blot analysis of HOOK1 expression in MCF7 (A), Caco-2 (B) and HEK293T (C) whole cell lysates and human testis tissue extract (D).



HOOK1 (E-6): sc-398233. Western blot analysis of HOOK1 expression in WiDr whole cell lysate (A) and mouse testis tissue extract (B).

SELECT PRODUCT CITATIONS

1. Ng, A.S.N., et al. 2022. AKTIP loss is enriched in ERα-positive breast cancer for tumorigenesis and confers endocrine resistance. *Cell Rep.* 41: 111821.

RESEARCH USE

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