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HOOK3 Antibody

Catalog # ASC11964

Product Information

Application	WB, IHC, E
Primary Accession	Q86VS8
Other Accession	NP_115786, 14165274
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	83126
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	HOOK3 antibody can be used for the detection of HOOK3 by Western blot at 1 - 2 □g/mL. Antibody can also be used for immunohistochemistry at 10 □g/ml.

Additional Information

Gene ID	84376
Other Names	Protein Hook homolog 3, h-hook3, hHK3, HOOK3
Target/Specificity	HOOK3; HOOK3 antibody is human, mouse and rat reactive. HOOK3 antibody is predicted to not cross-react with HOOK1 and HOOK2.
Reconstitution & Storage	HOOK3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	HOOK3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HOOK3 (HGNC:23576)
Function	Acts as an adapter protein linking the dynein motor complex to various cargos and converts dynein from a non-processive to a highly processive motor in the presence of dynactin. Facilitates the interaction between dynein and dynactin and activates dynein processivity (the ability to move along a microtubule for a long distance without falling off the track). Predominantly recruits 2 dyneins, which increases both the force and speed of the microtubule motor (PubMed:25035494, PubMed:33734450). Component of the FTS/Hook/FHIP complex (FHF complex). The FHF complex may function to promote vesicle trafficking and/or fusion via the homotypic vesicular protein sorting complex (the HOPS complex). May regulate clearance of endocytosed receptors such as MSR1. Participates in defining the architecture and localization of the Golgi complex. FHF complex promotes the distribution of

	AP-4 complex to the perinuclear area of the cell (PubMed:32073997).
Cellular Location	Cytoplasm, cytoskeleton. Golgi apparatus. Note=Enriched at the cis-face of the Golgi complex. Localizes to microtubule asters in prophase (PubMed:11238449). Localizes to the manchette in elongating spermatids (By similarity). {ECO:0000250|UniProtKB:Q8BUK6, ECO:0000269|PubMed:11238449}

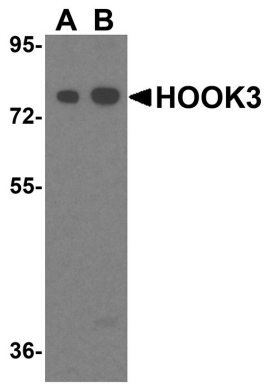
Background

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 mediating the spatial organization of diverse membrane-trafficking systems; their more divergent C-terminal domains mediate binding to organelles (1,2). HOOK3 exists as a homodimer and participates in defining the architecture and localization of the Golgi complex through its central coiled-coil domain (3). HOOK3 may regulate clearance of endocytosed receptors such as MSR1 (3,4).

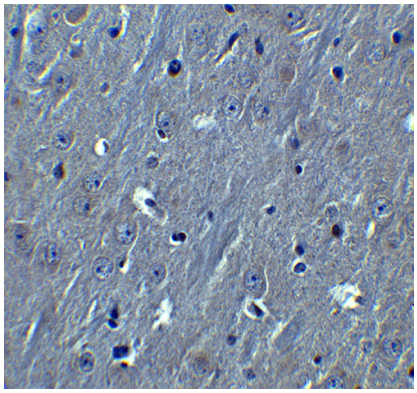
References

Walenta JH, Didier AJ, Liu X, et al. The Golgi-associated hook3 protein is a member of a novel family of microtubule-binding proteins. J. Cell Biol. 2001; 152:923-34.
Sano H, Ishino M, Kr mer H, et al. The microtubule-binding protein Hook3 interacts with a cytoplasmic domain of scavenger receptor A. J. Biol. Chem. 2007; 282:7973-81.
Herrmann L, Wiegmann C, Arsalan-Werner A, et al. Hook proteins: association with Alzheimer pathology and regulatory role of hook3 in amyloid beta generation. PLoS One 2015; 10:e0119423.
Ciampi R, Giordano TJ, Wikenheiser-Brokamp K, et al. HOOK3-RET: a novel type of RET/PTC rearrangement in papillary thyroid carcinoma. Endocr. Relat. Cancer 2007; 14:445-52.

Images



Western blot analysis of HOOK3 in mouse brain tissue lysate with HOOK3 antibody at 1 µg/ml.



Immunohistochemistry of HOOK3 in mouse brain tissue with HOOK3 antibody at 10 µg/ml.

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