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CLASP2 Rabbit pAb

Catalog # AP98908

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O75122
Other Accession	O75122
Predicted	Rat, Pig, Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	141064
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CLASP2
Epitope Specificity	1201-1294/1294
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the CLASP family.Contains 5 HEAT repeats.
SUBUNIT	Interacts with CLIP2, ERC1, MAPRE3, microtubules, PHLDB2and RSN. The interaction with ERC1 may be mediated by PHLDB2.Interacts with MAPRE1; probably required for targeting to thegrowing microtubule plus ends. Interacts with GCC2; recruits CLASP2to Golgi membranes. Interacts with MACF1 (By similarity).
Post-translational modifications	Phosphorylated by GSK3B. Phosphorylation by GSK3B maynegatively regulate binding to microtubule lattices in lamella.Phosphorylated upon DNA damage, probably by ATM or ATR.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	CLASP2 is a microtubule plus end tracking protein that promotes the stabilization of dynamic microtubules and is required for the polarization of the cytoplasmic microtubule arrays in migrating cells towards the leading edge of the cell. CLASP2 may act at the cell cortex to enhance the frequency of rescue of depolymerizing microtubules by attaching their plus ends to cortical platforms composed of ERC1 and PHLDB2. This cortical microtubule stabilizing activity is regulated at least in part by phosphatidylinositol 3 kinase signaling. CLASP2 also performs a similar stabilizing function at the kinetochore which is essential for the bipolar alignment of chromosomes on the mitotic spindle.

Additional Information

Gene ID	23122
Other Names	CLAP2_HUMAN; CLASP2; Cytoplasmic linker-associated protein 2; Protein Orbit homolog 2 (hOrbit2); KIAA0627; cytoplasmic linker associated protein 2
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000

	-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CLASP2
Synonyms	KIAA0627
Function	Microtubule plus-end tracking protein that promotes the stabilization of dynamic microtubules (PubMed:26003921). Involved in the nucleation of noncentrosomal microtubules originating from the trans-Golgi network (TGN). Required for the polarization of the cytoplasmic microtubule arrays in migrating cells towards the leading edge of the cell. May act at the cell cortex to enhance the frequency of rescue of depolymerizing microtubules by attaching their plus-ends to cortical platforms composed of ERC1 and PHLDB2 (PubMed:16824950). This cortical microtubule stabilizing activity is regulated at least in part by phosphatidylinositol 3-kinase signaling. Also performs a similar stabilizing function at the kinetochore which is essential for the bipolar alignment of chromosomes on the mitotic spindle (PubMed:16866869, PubMed:16914514). Acts as a mediator of ERBB2- dependent stabilization of microtubules at the cell cortex.
Cellular Location	Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle. Golgi apparatus {ECO:0000250|UniProtKB:Q8BRT1}. Golgi apparatus, trans-Golgi network. Cell membrane. Cell projection, ruffle membrane. Cytoplasm, cell cortex. Note=Localizes to microtubule plus ends (PubMed:15631994). Localizes to centrosomes, kinetochores and the mitotic spindle from prometaphase. Subsequently localizes to the spindle midzone from anaphase and to the midbody from telophase (PubMed:16866869, PubMed:16914514). In migrating cells localizes to the plus ends of microtubules within the cell body and to the entire microtubule lattice within the lamella. Localizes to the cell cortex and this requires ERC1 and PHLDB2 (PubMed:16824950). Colocalizes with KANK1 at the cell cortex, likely recruited in cortical microtubule stabilization complexes (CMSC) at focal adhesions rims (PubMed:27410476). The MEMO1-RHOA-DIAPH1 signaling pathway controls localization of the phosphorylated form to the cell membrane
Tissue Location	Brain-specific.

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