10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CCP110 Antibody

Catalog # ASC11478

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O43303
Other Accession	NP_001185951, 312222737
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	113424
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CCP110 antibody can be used for detection of CCP110 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 5 g/mL.

Additional Information

Gene ID	9738
Other Names	Centriolar coiled-coil protein of 110 kDa, Centrosomal protein of 110 kDa, CP110, Cep110, CCP110, CEP110, CP110, KIAA0419
Target/Specificity	CCP110; Two isoforms of CCP110 are known to exist; this antibody will only detect the longer isoform
Reconstitution & Storage	CCP110 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CCP110 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CCP110
Synonyms	CEP110, CP110, KIAA0419
Function	Necessary for centrosome duplication at different stages of procentriole formation. Acts as a key negative regulator of ciliogenesis in collaboration with CEP97 by capping the mother centriole thereby preventing cilia formation (PubMed:17681131, PubMed:17719545, PubMed:23486064, PubMed:30375385, PubMed:35301795). Also involved in promoting ciliogenesis. May play a role in the assembly of the mother centriole subdistal

	appendages (SDA) thereby effecting the fusion of recycling endosomes to basal bodies during cilia formation (By similarity). Required for correct spindle formation and has a role in regulating cytokinesis and genome stability via cooperation with CALM1 and CETN2 (PubMed:16760425).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q7TSH4} Note=Recruited early and then associates with the growing distal tips Recruited to the mother centriole by KIF24 (PubMed:21620453). Removed from centrioles by TTBK2, leading to initiation of ciliogenesis and localizes only to the daughter centriole in ciliated cells. In cytotoxic T lymphocytes remains associated with the mother centriole during docking of the centrosome at the immunological synapse upon target contact (By similarity). Recruited at the distal end of the mother centriole by MPHOSPH9 (PubMed:30375385) {ECO:0000250|UniProtKB:Q7TSH4, ECO:0000269|PubMed:21620453, ECO:0000269|PubMed:30375385}
Tissue Location	Highly expressed in testis. Detected at intermediate levels in spleen, thymus, prostate, small intestine, colon and peripheral blood leukocytes.

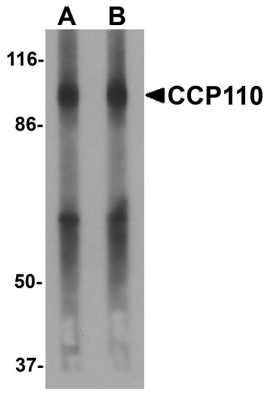
Background

CCP110 Antibody: CCP110 is a centrosomal protein required for the centrosome to function as a microtubule organizing center and plays an essential role in centrosome duplication. It is a target of cyclin-dependent kinases (CDKs); disruption of CCP110 phosphorylation leads to unscheduled centrosome separation and polyploidy. CCP110 is also a target of SCF (Cyclin F) ubiquitin ligase complex, leading to its degradation, suggesting that this complex controls centrosome homeostasis and mitotic fidelity through CCP110 degradation. The centriolar kinesin Kif24 also interacts with CP110 and remodel microtubules and regulate ciliogenesis.

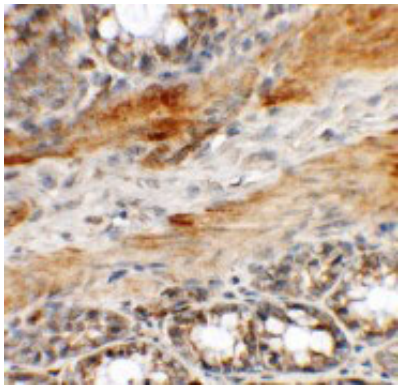
References

Chen Z, Indjeian VB, McManus M, et al. CP110, a cell cycle-dependent CDK substrate, regulates centrosome duplication in human cells. Dev. Cell 2002; 3:339-50.
D'Angiolella V, Donato V, Vijayakumar S, et al. SCF (Cyclin F) controls centrosome homeostasis and mitotic fidelity through CP110 degradation. Nature 2010; 466:138-42.
Kobayashi T, Tsang WY, Li J, et al. Centriolar kinesin Kif24 interacts with CP110 to remodel microtubules and regulate ciliogenesis. Cell 2011; 145:914-25.

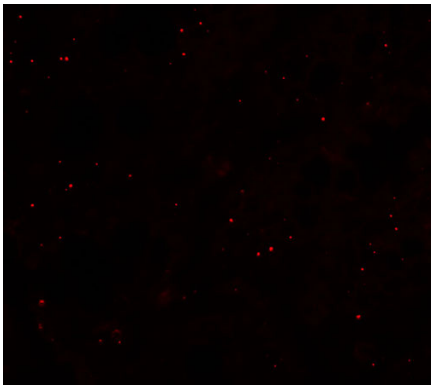
Images



Western blot analysis of CCP110 in human colon tissue lysate with CCP110 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of CCP110 in rat colon tissue with CCP110 antibody at 5 µg/mL.



Immunofluorescence of CCP110 in rat colon tissue with CCP110 antibody at 20 µg/mL.

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